



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 2

290 BROADWAY

NEW YORK, NEW YORK 10007-1866

October 4, 2007

**BY ELECTRONIC MAIL AND REGULAR MAIL**

Mr. Benn Lewis  
Vice President  
Airtek Environmental Corp.  
39 West 38 Street, 12th Floor  
New York, N.Y. 10018

Re: Comments on Draft "Remediation Phase" for  
Fiterman Hall at 30 West Broadway, New York, NY

Dear Mr. Lewis:

The United States Environmental Protection Agency (EPA) has reviewed the draft "Remediation Phase" documents for Fiterman Hall at 30 West Broadway, New York, New York that were submitted on July 6, 2007, by Airtek Environmental Corp. (Airtek) on behalf of the Dormitory Authority of the State of New York (DASNY) and the City University of New York (CUNY). EPA has also consulted with the U.S. Department of Labor Occupational Safety and Health Administration (OSHA), New York State Department of Environmental Conservation (NYSDEC), New York State Department of Labor (NYSDOL), the New York City Department of Environmental Protection (NYCDEP), and the New York City Department of Buildings (NYCDOB) about the documents submitted for the "Remediation Phase" of the work for Fiterman Hall.

EPA, NYSDOL, and NYCDEP appreciated the opportunity to discuss some of our major comments with you and your consultants and contractors in our conference call on August 16, 2007. A meeting was also held on October 2, 2007 with the parties referenced above and with the New York City Fire Department (FDNY) to discuss FDNY's recommendations for protective fire-safety measures that need to be implemented in Fiterman Hall.

The comments from the NYSDOL and the NYCDEP are provided in the attachment to this letter. EPA's review of the draft "Remediation Phase" documents focused on containment measures to control potential releases of contaminants, proper procedures for air monitoring and waste disposal. NYSDOL and NYCDEP based their reviews on the regulations related to performance of an asbestos project. All the regulators' comments on the draft "Remediation Phase" documents were previously sent to the NYCDOB. The regulators' review of the draft "Remediation Phase" documents is not intended as a review of any structural engineering matters regarding the deconstruction or of the means and methods for structural deconstruction of Fiterman Hall or of any conflicts between the NYCDOB's codes and the current draft version of the "Remediation Phase" documents. The regulators are relying on NYCDOB's expertise in these areas and on its oversight of all of the structural deconstruction related matters for this project.

The attached September 6, 2007 comment letter from the NYSDOL and NYCDEP states that while the comments in this letter and its attachment address concerns of EPA, NYSDOL, and NYCDEP, FDNY may also have recommendations for protective measures that should be utilized to improve fire safety in the building. Many of the concerns of the FDNY were discussed during the meeting with EPA, OSHA, NYSDOL, NYCDEP, NYCDOB, FDNY, DASNY, CUNY, Airtek, Tishman/LIRO, and PAL Environmental that was conducted on October 2, 2007 at the New York City Office of Emergency Management in Lower Manhattan. It is our understanding that the FDNY's concerns will be incorporated into the next submission of the "Remediation Phase" documents. During the October 2 meeting, NYCDOB stated that it will need to review the engineering report on the non-operational sprinkler system to determine what other safety measures may need to be implemented during the Fiterman Hall project. NYCDOB requested a written description of any conflicts between its codes and the current "Remediation Phase" documents. NYCDOB's request may involve the need for additional changes to the draft "Remediation Phase" documents to ensure fire and structural safety in the building. All work with regard to fire and structural safety will be reviewed and accepted by FDNY and NYCDOB, as necessary. As you know as a result of the meeting, we also all agreed to tentatively meet again on October 16, 2007.

The regulators reserve the right to modify the attached comments and/or make additional comments about the proposed work if new information becomes available or information, currently known and considered, is changed in whole or in part during the review process for the "Remediation Phase" documents and during the "remediation and deconstruction" phases of the project. The attached comments do not pertain to any matters not addressed in the documents reviewed. In the event that the plans for the "remediation and deconstruction" have to be supplemented as the project proceeds, the regulators will review and may provide additional comments after we review the supplementary information and documents submitted on behalf of DASNY/CUNY. Any modifications made to the draft "Remediation Phase" documents as a result of future modifications agreed to by NYCDOB, FDNY, and DASNY/CUNY and/or its representatives should be submitted to EPA and the other regulators referenced in this letter for their review and comment.

The following draft “Remediation Phase” documents were reviewed by the regulators in order to understand and evaluate the procedures for the “Remediation Phase”:

- Regulatory Submittal Part I(R) – Remediation Work Plan, dated July 3, 2007
- Regulatory Submittal Part IV(R) – Remediation Phase Waste Sampling and Management Plan, dated July 3, 2007, and
- Response to Regulator Comments, submitted on July 6, 2007 with the draft “Remediation Phase” documents


The Draft “Remediation Phase” documents reference work that is intended to be performed during the “Deconstruction Phase.” Specifically, the draft Remediation Phase” procedures state that heavy machinery and equipment, such as generators, elevator motors, and cooling tower components, and asbestos mastic on block kneewalls will be removed and disposed as asbestos-contaminated material (ACM) during the “Deconstruction Phase”. Kindly note that this letter and the regulators’ comments should not be construed of as a review of any “Deconstruction Phase” procedures. The regulators reserve the right to request further information about deconstruction procedures and to provide additional comments when all the proposed plans for the “Deconstruction Phase” have been developed and submitted to the regulators for review.

To explain the proposed revisions to the draft “Remediation Phase” documents in support for the “remediation and deconstruction” of Fiterman Hall, EPA requests that DASNY/CUNY provide the regulators with a separate response to each of the attached comments that states: (1) whether the comment has been incorporated into the revised draft “Remediation Phase” documents; (2) if a comment has not been incorporated, the reason it was not incorporated; and, (3) any additional information that explains DASNY/CUNY’s response to the attached comments. Your response to the attached comments will facilitate the regulators’ review process. In your response, kindly inform the regulators of DASNY/CUNY’s schedule for submitting the revised draft “Remediation Phase” documents in support of the “remediation and deconstruction” of Fiterman Hall, and the other deliverables referenced in this letter.

After DASNY/CUNY and its consultants have an opportunity to review the regulators' comments and this letter, please let me know if you would like to discuss them during a teleconference or at a meeting. We look forward to your response to our comments prior to the commencement of any "Remediation Phase" work.

If you have any questions please contact Mr. Emmet Keveney of my staff at (212) 637-3459.

Sincerely,



Pat Evangelista  
WTC Coordinator  
New York City Response and Recovery Operations

Attachment

cc: Richard Mendelson, OSHA w/encl.  
Suzanne Mattei, NYSDEC w/encl.  
Chris Alonge, NYSDOL w/encl.  
Krish Radhakrishnan, NYCDEP w/encl.  
Richard Rosen, NYCDOB w/encl.  
Max Lee, NYCDOB w/encl.  
Robert Iulo, NYCDOB w/encl.  
Mike Weinlein, FDNY, w/encl.  
Richard Dalessio, DASNY w/encl.  
Max Pizer, CUNY w/encl.

**Regulatory Submittal Part I(R)  
Remediation Work Plan  
Dated July 3, 2007**

**GENERAL COMMENTS:**

1. **Airtek's response to EPA comment No. 4:** As discussed during the August 16, 2007 conference call, and during a site walk along the perimeter of the south side of the Fiterman Hall building the subsequent week, Airtek should develop a strategy and submit with the next submission of the Remediation Work Plan appropriate procedures for dealing with the gash area and those non-gash areas that may potentially need to be abated and demolished under containment.
  
2. **Airtek's response to EPA comment No. 5:** Please explain further how the Gaylord boxes will be sealed. What type of encapsulant is being used? Is there any issue with the encapsulant potentially being too tacky and impacting the ability of the Gaylord boxes from being decontaminated upon removal from the remediation work areas? How does the encapsulant ensure that the cardboard Gaylord boxes do not become saturated with water and lose its structural integrity to hold the waste streams within them? This should be clarified and any sections that discuss the usage of Gaylord boxes should be revised, as needed, based on any modifications made to the approach based on these questions.

**SPECIFIC COMMENTS:**

**Section 3.5: USEPA Notification**

3. **Airtek's response to EPA comment No. 7:** During the June 19, 2007 meeting we stated that a "sample" notification could be submitted as Attachment III until the official one is submitted since the remediation plans had not been accepted and it may have been premature to estimate a new start date for the abatement project. Since the project did not start on May 1, 2007, as specified in the latest notification sent to EPA, please cancel the current notification and re-notify once a final date can be determined after the remediation plan is accepted. Place the final notification into Attachment III after work commences as an amendment to the Remediation Work Plan.

**Section 6.0: Remediation Operations**

4. Please provide clarity on the level of PPE to be used during abatement activities for the project as was discussed during our August 16, 2007 conference call.

**Sections 6.1.3 and 6.8: Exposed Building Components and Exposed Building Components (Second Floor through Fifteenth Floor)**

5. **Response to EPA comments No. 15 and No. 35:** The language added with regard to light ballasts and potting material by Airtek to Sections 6.1.3 and 6.8 of the Remediation Work Plan should be revised since Airtek stated during the August 16, 2007 conference

call that the procedures for handling, managing, storing, and disposing of light ballasts and potting materials that may potentially contain PCBs will be provided in the next submission of the Remediation WSMP as opposed to a future amendment. It is recommended that the Remediation Work Plan specify that this information can be found in Regulatory Submittal Part IV(R), Remediation Phase, Waste Sampling and Management Plan.

### **Section 6.1.8: Stairwell C and First Floor Clean Zone Clearance Criteria**

**6. Response to EPA comment No. 20:** Airtek states that the following language was added to section 6.1.8:

“At the end of this settling period, the Owner’s Environmental Consultant and PAL superintendent will perform a visual inspection of the First Floor Clean Zone and C Stairwell work areas. The Owner’s Environmental Consultant will make a determination as to whether or not the area passes visual inspection. Once the work area has passed the OEC visual inspection, an OEC representative will contact the regulators to schedule a regulatory visual inspection of the work area. Twenty-four hour notice shall be provided to the regulators prior to the date of inspection. After the area has passed regulatory visual inspection, aggressive clearance air sampling will be performed by the Owner’s Environmental Consultant.”

However, this language was not added to this section. Please incorporate this language to the section. Please attempt to provide the regulators with greater than twenty-four hour notice for any final visual inspections, to the extent practicable, during the project.

**7. Response to EPA comment No. 21:** Please ensure that the number of metals air samples collected for final air clearance of Stairwell C is consistent with the number of asbestos samples being requested by NYSDOL as discussed during the August 16, 2007 conference call.

8. Additionally, as discussed during the August 16, 2007 conference call, please ensure that while determining the distribution of final air clearance sampling locations per floor that some of those sampling locations be at least in proximity to Stairwells A and B since these stairwells will be encompassed into each floors’ abatement work area.

### **Section 6.5: Establishment of Interior Containment (Second Floor through Fifteenth Floor)**

**9. Response to EPA comment No. 27:** Please provide clarity on the location of the HEPA filters on the intake bay flaps. Based on our August 16, 2007 conference call, Airtek has agreed to provide a drawing/sketch to provide further details on the intake bay flaps and the location of their HEPA filters.

### **Section 6.7.2: Non-Porous, Cleanable Material**

10. **Response to EPA comment No. 31:** Airtek added a new subsection to the Remediation Work Plan not previously seen, Section 6.7.3, Porous Items for Disposal.

This new section states the following: “Any porous items encountered that are not practical to shred **or to manually dismantle for disposal** will be wrapped in two layers of six-mil poly, properly labeled, processed through the waste decontamination facility and loaded into the asbestos waste trailer parked in the existing loading dock for disposal of as asbestos waste or in accordance with any waste characterization results.”

What is the implication of “or to manually dismantle for disposal” in the above added text? If the porous item can be manually dismantled, how will it be disposed? As previously noted, any porous materials encountered, mantled or dismantled, should be handled and disposed of as asbestos waste at a minimum, and depending on any final waste characterization results that may have been or may be conducted for that waste stream. Please provide further clarity in this new subsection.

### **Section 6.8: Exposed Building Components (Second Floor through Fifteenth Floor)**

11. **Response to EPA comment No. 36:** The following new language has been proposed for section 6.8 (3<sup>rd</sup> paragraph, page 35 of redline version): “In situations where it is more practical to shred cleanable items, such items will be shredded and disposed as ACM waste.” As noted in previous comments to Airtek pertaining to final disposal of waste streams, the aforementioned revised language should note that it will be disposed as ACM, at a minimum, and based on any final representative hazardous waste characterization sampling that has been or will be conducted for that waste stream.

### **Section 6.9: Interior Walls and Ceiling Systems (Floors Two through Fifteen)**

12. **Response to EPA comment No. 42:** Airtek added the language that we requested for Section 6.9. However, we indicated that similar language should also be added to Sections 6.10 (Ventilation Shafts) and 6.1.3 (Exposed Building Components) since these sections presently do not discuss the potential of encountering porous materials, such as, but may not be limited to, porous insulation material within duct works and vents. These sections should be revised to incorporate language specifying that any porous materials encountered will be handled and disposed of as asbestos waste at a minimum, and depending on any final waste characterization results that may have been or may be conducted for that waste stream.

### **Section 6.19: Spandrel Mastic, Kneewall, Brick & Mortar**

13. The last sentence of this new section to the Remediation Work Plan states that if brick and mortar are not impacted by ACM or suspect WTC dust then these materials will be disposed of as conventional construction and demolition (C&D) waste. Please clarify if such a conclusion has been drawn based on the waste characterization sampling

that was to be conducted during the pilot test program for the removal of mastic conducted at the beginning of the scaffold erection operations phase.

**Section 6.21: Work Area Clearance Criteria**

14. It is recommended that the following ***bold italic*** language be added to the last sentence of the second paragraph of Section 6.21 as Airtek has noted for other portions of the Remediation Work Plan: “When work area conditions are acceptable to the Owner’s Environmental Consultant, ***and after the area has passed regulatory visual inspection,*** aggressive air sampling will be conducted.”

**Regulatory Submittal Part IV(R)**  
**Remediation Phase**  
**Waste Sampling and Management Plan**  
**Dated July 3, 2007**

**Section 6.2 Lead Based Paint Waste**

1. **Response to EPA comment No. 1:** Airtek added a section to the Remediation Phase Waste Sampling and Management Plan (Remediation WSMP) to address the management and final disposal of lead-based paint waste streams. This new section discusses the procedures to be followed for a lead painted bumper pole. However, Section 5.5, Lead-Based Paint Survey, of the February 28, 2007 Preliminary Environmental Characterization Report, states that a survey for lead-based paint (LBP) conducted throughout the facility had determined lead-painted materials remained in the following portions of Fiterman Hall: one loading dock fender post (addressed in Section 6.2 of the Remediation WSMP), one basement ceramic sink, and one section of a building column. Please clarify in Section 6.2 of the Remediation WSMP how these additional lead-based paint waste streams will be managed, characterized, handled, stored, and disposed. Please be cognizant that portions of the Remediation Work Plan may be impacted as well and should be revised as appropriate.

**Section 2.4 Universal Wastes**

2. **Response to EPA comment No. 3:** Airtek stated during the August 16, 2007 conference call that the procedures for handling, managing, storing, and disposing of light ballasts and potting materials that may potentially contain PCBs will be provided in the next submission of the Remediation WSMP as opposed to a future amendment as originally stated in its response to comments. Please revise the Remediation WSMP to include this information.

3. Section 2.4 should be re-written with respect to the reference to “PCB” correlated with light ballasts and potting material so it is clear that Airtek does not plan to handle light ballast and/or potting material with PCBs as universal waste and please ensure that any PCB waste managed and stored on-site will be segregated from the universal waste storage area presently shown in the figure of Attachment B, Waste Storage Area.

**Section 3.1.5 Roofing Materials**

4. The assumptions (i.e., ACM) being made for all of those materials encompassing the edge of the roof(s) at the gash area on the south/southwest side of the building where the roof membrane was compromised should be stated in this section.

### **Section 4.3 Remediation Process Liquids**

5. This section states that testing of characterization phase remediation process liquids were determined to meet NYC sewer discharge criteria. Please clarify if DASNY/CUNY is required to obtain a NYC discharge/dewatering permit from NYCDEP prior to discharging into the sewer. If so, please state so in this section and provide the regulators with the status of the timing on obtaining the permit.

### **Section 6.9 Roofing Materials**

6. **Response to EPA comment #5:** There appears to be a conflict between what is stated in response to EPA comment #5 (i.e., the 14<sup>th</sup> floor ACM roofing will be handled during the deconstruction phase) and Section 6.9 which implies that it will be done during the remediation phase. Please clarify and revise the plan as necessary.

7. This section should state the approach to be taken for the cooling tower fill that Airtek states is assumed to be ACM-contaminated and treated as such. Airtek should also state in this section in what phase will it be removed from the roof.

8. Please summarize the approach to be taken for the edge of the roofs at the gash area on the south/southwest of the building where the roof membrane was compromised and clarify in what phase this work will be conducted as specified in Airtek's response to EPA comment No. 5.

### **Section 6.6 Refrigerant-containing Equipment**

9. On July 17, 2007, we informed Airtek, DASNY, and CUNY, via e-mail, that the existing NYSDOL variance that Airtek referenced expired in June 2007. Consequently, a new variance or variance re-opener would need to be submitted to the NYSDOL. Additionally, EPA recommended again to Airtek, DASNY, and CUNY that if Airtek and/or DASNY/CUNY was proposing to remove refrigerant during the scaffold erection operations phase as opposed to during the remediation phase, Airtek/DASNY should submit an amendment to the finalized Scaffold Plan to address the removal of the refrigerant during the scaffold erection operations phase and specify the procedures that will be followed and submit the amendment for the regulators' review. EPA and NYSDOL have not received anything to date. Consequently, please clarify what is Airtek's and DASNY/CUNY's plan for removing the refrigerant. What phase will it be done in and please revise/amend the relevant documents accordingly.

### **Section 7.0 Transportation Requirements**

10. Airtek stated during the August 16, 2007 conference call that the procedures for handling, managing, storing, and disposing of light ballasts and potting materials potentially contaminated with PCBs will be provided in the next submission of the Remediation WSMP as opposed to a future amendment. Consequently, Section 7.0 should be revised to discuss the transportation requirements for any potential PCB waste based on the conclusions of the light ballast potting material testing.



**New York State Department of Labor**

Eliot Spitzer, *Governor*

M. Patricia Smith, *Commissioner*

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September 6, 2007

Pat Evangelista  
WTC Coordinator  
New York City Response and Recovery Operations  
US EPA – Region II  
290 Broadway  
New York, NY 10007-1866

**Re: Comments on Asbestos/WTC Dust Portion of  
Regulatory Submittal Part I(R) Remediation Work Plan dated July 3, 2007  
Fiterman Hall Building  
30 West Broadway  
New York, NY**

Dear Pat,

The Department has received and reviewed the revised July 3, 2007 Regulatory Submittal Part I(R) Remediation Work Plan document, as it relates to asbestos material (ACM) and WTC dust/residue removal/cleanup procedures.

The Department has discussed aspects of the documents with the New York City Department of Environmental Protection (DEP), and DEP concurs with the Department's comments on the submitted documents. Several significant items within the work plan must still be revised to address Departmental concerns.

**Global Comments (Revisions necessary throughout work plan)**

- *Throughout the document, reference is included for Owner's Environmental Consultant (OEC) visual inspection and air sampling duties. However, all references to duties of the OEC must also reference the certified handler role of the OEC personnel (i.e. The OEC Project Monitor shall perform the visual inspection, the OEC Air Sampling Technician shall collect air samples). In addition all references to the Contractor's representative or Contractor's superintendent must be revised to "Contractor's asbestos supervisor". These revisions must be completed throughout the document.*
- *Throughout the document, use of Gaylord waste containers/boxes is proposed with encapsulation of the container's exterior surface to render the surface cleanable. However, encapsulation of the container's porous exterior has not been proven to render the porous material watertight and cleanable. Other methods such as application of exterior layers of sealed plastic sheeting must be utilized to make the waste container watertight. This procedure must be revised throughout the document.*
- *Throughout the document statements are included regarding continual wetting of materials that typically resist wetting. Following is an example of a representative statement within the document: "Water will be applied continually as a means of dust control during the removal of interior*



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sheetrock walls, ceiling systems or other non-asbestos materials that do not absorb water.” All such statements must be revised to indicate continual wetting “prior to and during removal” for “sheetrock walls, ceiling systems, or other non-asbestos or potentially contaminated” materials.

Thus, the representative statement would be revised to: “Water will be applied continuously as a means of dust control prior to and during the removal of interior sheetrock walls, ceiling systems or other non-asbestos or potentially contaminated materials.” All similar statements must be revised accordingly throughout the document.

- Throughout the document the following statement is included regarding the use of HEPA-exhausted power tools: “Any power tools used to disturb asbestos containing material will be equipped with HEPA filter exhaust ventilation.” This statement must be revised to also include “potentially contaminated material”.

Thus, the statement would be revised to: “Any power tools used to disturb asbestos containing material or potentially contaminated material will be equipped with HEPA filter exhaust ventilation.” This statement must be revised throughout the document.

- Throughout the document reference to TEM clearance criteria is as follows: “...when all samples for a given floor area meet the seventy structures per square millimeter TEM standard” All references to TEM clearance criteria throughout the document must be revised to indicate less than seventy structures per square millimeter.
- Throughout the document logistical drawings are referenced for decontamination facility & barrier locations at various regulated abatement work areas. However, drawing references are not included within the various sections for each work area and representative descriptive narrative within the document. Reference to the appropriate logistical drawing must be included for each work area to allow the reader ease of reference to the logistics for each specific work area.
- Throughout the document a 75% safety factor is used for negative air machine flow calculations. The Department has historically found a more accurate safety factor is typically 50%. Please provide appropriate backup for the use of the 75% safety factor. A test study of the abatement contractor’s typical negative air machines may be completed and the data provided as justification of the safety factor to the Department. Typical data to be submitted would include volumetric flow rate measurements for the exhausts of several negative air machines with representative exhaust tubing (similar length as anticipated for this project) attached to each machine. The reduction in actual measured flow from the manufacturer’s indicated capacity for each machine could be used to generate the representative safety factor necessary for a typical negative air machine used by the abatement contractor for this asbestos project.
- Throughout the document the following representative statement is included for work areas that will be subject to increased engineering controls including 8 air changes per hour: “However, since the elevator machine rooms or shredder zone are part of the one containment work area where air volume will be changed four (4) times per hour in accordance with ICR 56, it will not be possible to maintain a constant air volume exchange of eight (8) air changes per hour.” This statement must be removed throughout the document, as it will confuse the reader. The intent of the calculated 8 air changes per hour for a portion of a work area, is to add increased engineering controls where piston effects or shredding/pulverizing activities may occur. The increased engineering controls are to aid with control of any potential elevated airborne fiber levels within the work area and to maintain adequate negative air flow within the containment enclosure.



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- Throughout the document reference is made to the cleaning of various non-porous items/components. Following is a representative statement from the document: "If attempts to clean the above listed items are not successful or possible due to compromised condition, they will be wrapped in two layers of poly, properly labeled, processed through the waste decontamination facility and disposed of as asbestos waste or in accordance with waste characterization results." The potential condition of inaccessible void spaces within the item/component (e.g. raised flooring components with interstitial spaces, hollow core doors., etc) must be added to this statement throughout the document.

Thus, the representative statement would be revised to the following: "If attempts to clean the above listed items are not successful or possible due to compromised condition or inaccessible void spaces within the items/components, they will be wrapped in two layers of poly, properly labeled, processed through the waste decontamination facility and disposed of as asbestos waste or in accordance with waste characterization results."

### Specific Comments

#### REGULATORY SUBMITTAL PART I – WORK PLAN

- 3.2 NYS DOL NOTIFICATION

*This section indicates that the Regulatory Submittal Part I shall comply with ICR 56 as amended January 11, 2006. All references within the work plan to ICR 56 must include the current adopted version (as amended March 21, 2007).*

*All references to the NYS DOL "Variance Petition" must be revised to "Variance Decision", as inclusion of the Variance Decision is necessary as requirements are included within the document that are not consistent with the requirements of ICR 56.*

- 3.3 NYS DOL VARIANCE APPLICATIONS

*All references to the NYS DOL "Variance Petition" must be revised to "Variance Decision", as inclusion of the Variance Decision is necessary as requirements are included within the document that are not consistent with the requirements of ICR 56.*

- 4.1 ELECTRIC

*This section indicates that electric panels will be installed at each level required in Stairwell C after cleaning and clearance is completed in the stairwell. The panels will be attached to the electrical closets through the adjoining wall in Stairwell C. However, no drawing detail or other information is provided regarding the possible breach to contaminated interior areas during these procedures. What measures will be employed to prevent any potential breach from the contaminated interior areas to the cleaned stairwell during this work?*

*An elevation drawing for Stairwell C with all electrical panels/closets identified and a description of the protective measures to be employed during this work to prevent any potential breach from interior contaminated areas, shall be provided.*

- 4.2 PLUMBING

*This section includes information for waste water disposal. However, nothing is included regarding the sanitary sewer discharge point within the building for filtered waste water, temporary storage location*



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for drummed waste water, specific details of the temporary storage drums, location of the 5 micron waste water filtering system, routing of unfiltered waste water to the 5 micron filtering system, or routing of filtered waste water to the sanitary sewer discharge point. Please provide all specific details regarding the collection, filtering, routing, temporary storage and proposed sanitary sewer discharge point for the waste water generated on this project.

- 4.5 ELEVATOR SERVICE

This section indicates that manometers will be installed to document pressure differential in the elevator machine rooms portion of the work area. However, a manometer must be installed at each elevator machine room within the work area. This section must be revised accordingly.

- 6.0 REMEDIATION OPERATIONS

Previous DOL comment: Throughout the work plan submittal, requirements are included for “NYS DOL and NYC DEP licensed asbestos handlers”. As previously indicated and as per ICR 56, asbestos contractors must be licensed and each individual handler must be appropriately trained and certified. The work plan requirements must be changed globally throughout the work plan document to indicate “asbestos contractor licensing and handler certification shall be consistent with NYS DOL ICR 56 requirements, as well as NYC DEP requirements”.

- Provided Response: ...the following language has been added to Section 6.0 “For all asbestos abatement activities on this project, asbestos contractor licensing and handler certification shall be consistent with NYS DOL ICR 56 requirements, as well as NYC DEP requirements.”

Current DOL Comment: This wording was not found within section 6.0. Please revise this section accordingly.

- 6.1 ESTABLISHMENT OF CLEAN ZONE

This section indicates, “Evidence of negative air pressure shall be demonstrated by a manometer in the first Floor Clean Zone work area.” However, nothing is mentioned regarding installation of a manometer within the Stairwell C portion of the Clean Zone. This section must be revised to include manometers within both the first floor and stairwell C portions of the Clean Zone.

- 6.1.1 CLEANING AND CLEARANCE OF STAIRWELL C

This section indicates, “prior to construction of the tunnel, the wood panels will be encapsulated in order to render the surfaces cleanable.” As the temporary hardwall tunnel will be constructed within a contaminated area, similar to prefabricated decontamination system requirements [56-7.5(b)(7)], the wood panels must be sealed with an adequate thickness of marine paint or something similar that will render the surfaces of the plywood sealed, non-porous and cleanable. In addition, non-porous cleanable metal studs shall be used instead of wood studs.

A drawing for segregation of Stairwell C access, including tunnel and decontamination system locations, must be provided. In addition, an elevation drawing for Stairwell C must be included that shows the configuration of the Stairwell C work area including negative air unit and exhaust locations.

This section indicates that only 5 TEM clearance air samples will be collected. It is preferred that one air sample per floor be collected, but at least 10 TEM clearance air samples distributed throughout the Stairwell C work area must be collected.



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*Similar to the comment for Section 4.1 Electric, this section indicates that electric panels will be installed at each level required in Stairwell C after cleaning and clearance is completed in the stairwell. However, no drawing detail or other information is provided regarding the possible breach from contaminated interior areas during these procedures. What measures will be employed to prevent any potential breach from the contaminated interior areas to the cleaned stairwell during this work?*

- 6.1.2 NON-FIXED ITEMS

*This section does not include the requirement that items/components with hidden or inaccessible void spaces, which can not be completely cleaned/decontaminated, must be disposed of as asbestos waste at a minimum.*

- 6.1.7 CLEANING AND CLEARANCE OF THE FIRST FLOOR CLEAN ZONE

*This section must be revised to explain the specifics (when & how) for breakdown of tunnel for Stairwell C. Also, drawings shall be included for the first floor clean zone work that indicate the decontamination facility & barrier locations both at the beginning of abatement and for any significant configuration change of the abatement work area.*

- 6.1.8 STAIRWELL C AND FIRST FLOOR CLEAN ZONE CLEARANCE CRITERIA

*This section is not labeled appropriately. Stairwell C clearance is already described in Section 6.1.1. Thus, this section should be more appropriately labeled "First Floor Clean Zone Clearance Criteria". However, this section appears to be a repeat of the information included within Section 6.21. If both sections include the same requirements and criteria, one section should be eliminated and all references to the eliminated section must be changed accordingly.*

- 6.2 UPPER LEVEL ACCESS

*This section indicates that, "the upper level access area will be established simultaneously with the commencement of remediation operations on the First Floor Clean Zone". However the specific details of the work area preparation that will be completed to allow access are not included (i.e. personal and waste decontamination facilities established, isolation barriers installed, negative air established, and the extent of the work area defined, etc.) These details must be included within this section and a logistical drawing with this information must be provided for the work area.*

- 6.3 SHREDDER INSTALLATION

*This section indicates that access is needed to install shoring for the shredder. However the specific details of the work area preparation that will be completed to allow access are not included (i.e. personal and waste decontamination facilities established, isolation barriers installed, negative air established, and the extent of the work area defined, etc.) These details must be included within this section and a logistical drawing with this information must be provided for the work area. The logistical drawing referenced within this section, does not include this shoring work. In addition, once work area preparation is complete to allow for shoring access, will the negative-pressure containment remain in-place until the basement abatement is complete? Also, what waste decontamination facility will be used for any waste generated during the shoring procedures?*

*This section indicates that surfaces where shoring will be installed will be abated as necessary, cleaned and then encapsulated. The encapsulation of removal surfaces prior to obtaining satisfactory clearance air results is not acceptable. This section must be revised appropriately.*



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- **6.5 ESTABLISHMENT OF INTERIOR CONTAINMENT (SECOND FLOOR THROUGH FIFTEENTH FLOOR)**

*This section must be revised to explain the specifics (when & how) for breakdown and switchover of decontamination facility units for this work area. Obviously one decontamination facility unit can't be broken down, prior to the next unit being installed and made operational. These requirements must be clarified within this section. Also, drawings shall be included for each stage of decontamination facility & barrier placement indicated for this work area.*

*This section indicates "evidence of negative air pressure shall be demonstrated by manometers in the Floors 2 through 15 work area. However the specific number of manometers isn't included. A minimum of one manometer per floor shall be installed and maintained for this work area. This section must be revised accordingly.*

*This section indicates that eight intake bays will be installed on the east and west sides of each floor. Further clarification of intake bay locations including a representative floor plan drawing must be provided. Appropriate detailed plan drawings must also be included to clearly illustrate the design of the individual dampers. Are the intake bays to provide additional make-up air sources at each floor of the work area, or the entire make-up air source for each floor? Describe the intended airflow for each floor and stairwell of the work area as it relates to the use of the intake bays. How will the intake bay airflow for each floor be balanced to maintain appropriate negative airflow through the attached decontamination facility, stairwells and each floor?*

*This section indicates that "elevator enclosure sheds will be installed and placed under negative pressure". The intended purpose of these sheds must be adequately described. Appropriate detailed plan drawings must be included to clearly illustrate the design of the individual elevator sheds.*

- **6.6 SIMULTANEOUS WORK PROCEDURES**

*This section must be revised to explain the specifics (when & how) for breakdown and switchover of decontamination facility units for this work area. Obviously one decontamination facility unit can't be broken down, prior to the next unit being installed and made operational. These requirements must be clarified within this section.*

*This section indicates that a primary waste decontamination facility will be constructed at the west side of elevator bank A, and this decontamination facility will be connected to the shredder area, the barrier at the elevator lobby, and stairwell B. However, this is confusing as identification of the individual decontamination facility chambers was not identified within this section or on any plan drawing. The response to comments indicates that the individual chambers of the primary waste decontamination facility are identified on the Logistics Plan Drawing "Configuration of the Clean Zone", but this information was not apparent on the referenced drawing. The individual decontamination facility chambers must be identified on the appropriate plan drawing, and this section must include a description of how this facility will be utilized to serve all three entrance points. In addition, indicate how waste stream control will be maintained within the primary waste decontamination facility.*

*At the end of this section within the last listed bullet, reference to the "Primary Decontamination Facility" is included. This reference must be revised to "Primary Waste Decontamination Facility".*



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- 6.13 REMEDIATION OF ROOF LEVELS

*This section indicates that a visual inspection will be performed by the Owner's Environmental Consultant (Project Monitor), after the cleaning of stone ballast and roof surfaces to verify the cleaning has been fully completed. However, nothing is included regarding clearance air sampling requirements. The satisfactory project monitor visual inspection must be used in combination with the most recent daily abatement air sample results. This information must be revised to indicate, "after removal and cleanings are complete and a minimum drying period has elapsed, an authorized and qualified Project Monitor shall determine if the area is dry and free of visible asbestos debris/residue. If the results of the visual inspection is determined to be satisfactory and the most recent daily abatement air sample results meet 56-4.11 clearance criteria, the work area shall be dismantled to allow access by other trades."*

- 6.13.6 GASH AREA ROOFING

*This section indicates that a ten-foot demarcation area from the gash area shall be used at all roof levels to designate the remediation zone for ballast cleaning and roofing membrane removal. Please explain the rationalization for the ten-foot requirement. If an investigation was completed that gives a basis for this determination, please provide all pertinent details. If no investigation was completed, please describe how this approach was formulated.*

- 6.14 ELEVATOR SHAFTS

*This section indicates that the elevator cars will be brought to the bottom of the shafts and dismantled. However the specific details of the work area preparation that will be completed to allow dismantling of elevator cars are not included (i.e. personal and waste decontamination facilities established, isolation barriers installed, negative air established, and the extent of the work area defined, etc.) These details must be included within this section and a logistical drawing with this information must be provided for the work area. In addition, once work area preparation is complete to allow for elevator car dismantling, will the negative-pressure containment remain in-place until the basement abatement is complete? Also, what waste decontamination facility will be used for any waste generated during the dismantling procedures and how will waste be transferred from the work area?*

- 6.17 REMEDIATION OF BASEMENT LEVEL

*This section indicates that the basement level abatement and cleaning will be completed last. However the specific details of the work area preparation that will be completed to allow basement level abatement and cleaning are not included (i.e. personal and waste decontamination facilities established, isolation barriers installed, negative air established, and the extent of the work area defined, etc.) These details must be included within this section and a logistical drawing with this information must be provided for the work area. In addition, if the containment enclosure was established during previous work (shredder shoring, elevator car dismantlement, etc.) and has been maintained until abatement and cleaning of the basement could proceed, a summary of these details must be included within this section. Also, how will waste be transferred from the work area to the waste decontamination area on the first floor?*

- 6.20 FINAL CLEANING & CLEARANCE

*This section indicates that stairwell A & B will be cleaned and cleared simultaneously with the various 3 floor blocks of the upper floors. An elevation drawing for Stairwells A & B and the 3 floor groupings*



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*indicating decontamination system locations, barrier locations, negative air unit and exhaust locations must be included to illustrate the phasing of the cleaning and clearance for each intermediate stage of work for the upper floors. Only a portion of these details were apparent on plan drawing CB-1. This plan drawing must be revised appropriately and referenced within this section*

*Also, the sequence for cleaning and clearance of the First Floor Shredder Area and the Basement cleaning and clearance is unclear. This section must be revised to clarify the intended sequence of activities.*

**FDNY Concerns**

While the above listed comments address concerns of the Department and NYC DEP, the FDNY may also have substantial concerns that must be addressed. A copy of the work plan documents must be provided to the FDNY and a meeting with FDNY and DASNY representatives scheduled to address any potential concerns. Some of the FDNY concerns may include an operational standpipe, an owner representative knowledgeable with the specifics of all operational building systems to be available on-site 24/7, on-site storage of abatement preparation materials, temporary storage of abatement generated waste, non-combustible waste containers, use of fire-rated plywood for barrier construction, decontamination system enclosure construction and location, maintaining adequate fire egress routes from each work area, emergency exit construction, location of negative air machine main disconnect, etc.

Please note that if an unanticipated situation is encountered during the ACM removal and WTC dust/residue cleanup during implementation of the remediation work plan, which requires additional relief from 12 NYCRR 56, the owner's asbestos project designer firm must submit a reopening request to the site-specific variance decision as necessary, or submit an additional site-specific variance petition to address the situation. If you have any questions please contact our office at (518) 457-1536.

Sincerely,

Handwritten signature of Christopher G. Alonge in blue ink.

Christopher G. Alonge, P.E.  
Associate Safety and Health Engineer

ec Krish Radhakrishnan, P.E. - NYC DEP  
Gil Gillen – USDOL/OSHA  
Robert Iulo – NYC DOB  
Richard Fram – NYS DEC  
Norma Aird – NYS DOL  
Benn Lewis - Airtek  
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