Response to EPA Comments

Regulatory Submittal Part I(R)
Remediation Work Plan
Dated January 8, 2008

Section 6.1: Establishment of Clean Zone

1. Response to EPA comment No. 7: Page 13 of the redlined version of the Remediation Work Plan was revised to discuss the critical barriers for the electric closets adjacent to stairwell C. However, this section still has not been revised to clarify what the critical barriers to be installed on all stairwells, with the exception of stairwell C, will consist of to seal them off from the Clean Zone. Please provide details in this section on what the "critical barriers" for the stairwells, with the exception of stairwell C, will consist of based on any input you may have received from the FDNY.

Critical barriers will not be installed over the entrances to Stairwells A & B because these areas will be part of the containment of the upper floors. The entrances to the stairwells are inside the remediation work area.

The following revision has been made to Section 6.1:

"Remediation of the core and Stairwells A & B will not take place at this time because it will be necessary to utilize the elevators and stairwells during remediation operations on the upper floors. The core and Stairwells A & B will be incorporated into the modified full containment of all upper interior floors. Modified full containment refers to a containment consisting of negative pressure ventilation equipment and critical barriers installed on windows and openings or penetrations leading to the outdoor environment."

Section 6.1.8: First Floor Clean Zone Clearance Criteria

2. Response to EPA comment No. 11: Airtek's response to comments states that the Attachment V, Diagram SS-2, Remediation Phase Logistics Plan, has been revised to indicate the location of the exterior waste storage facility. EPA requested that Section 6.1.8 of the Remediation Work Plan be revised to reference the drawing that shows the location of the waste storage area to be used on the outside of the west side of the building. EPA recommends that the second to last paragraph of this section be revised to include the reference to Attachment V, Diagram SS-2, Remediation Phase Logistics Plan, in addition to Attachment XV, for the location of the waste storage area at the site.

For clarity the end of Section 6.1 detailing post clearance activities in the Clean Zone has been given a number and title. This new section is Section 6.1.9 First Floor Clean Zone and Stairwell C Post Clearance Activities.

The following revision has been made to Section 6.1.9:

"To view diagrams of the waste storage facility refer to Attachment V, Diagram SS-2 and

Attachment XV."

Section 6.2: Upper Level & Basement Level Access

3. Response to EPA comment No. 12: Airtek's response to comments states that the "Configuration of the Clean Zone" diagram in Attachment V has been revised to indicate the location of the secondary personal decontamination. EPA recommends that the end of Section 6.2 of the Remediation Work Plan be revised to include the reference to the "Configuration of the Clean Zone" diagram in Attachment V for the location of the secondary personal decontamination.

The following revision has been made to Section 6.2:

"To view a diagram of the secondary personal decontamination facility refer to Attachment V, Diagram entitled "Configuration of the Clean Zone."

Section 6.4: Establishment of Interior Containment (Basement Level & Second Floor through Fifteenth Floor)

4. Response to EPA Comment No. 13: Attachment V, Remediation Operations Logistics Plans has drawings for the set back roofs. One of these drawings (i.e., page 5 of 8 of the pdf file) is titled, "6th Floor Set Back Roof", and states to refer to Section 6.13.2 of the Remediation Work Plan. Section 6.13.2 discusses the set back roof that is located on the 5th floor. Please revise the figure to designate the proper floor location for the set back roof (i.e., the 5th floor).

The diagram in Attachment V, entitled "6th Floor Set Back Roof" has been revised to correctly identify the area as the 5th Floor Set Back Roof. Please refer to the revised Attachment V to view this revision.

Section 6.5: Shredder Installation

5. Response to EPA comment No. 14: Airtek's response to comments states that the shoring engineering for the shredded installation will be provided to the New York City Department of Buildings (NYCDOB) once the remediation phase documents have been accepted. Please provide all of the regulators with a copy of the final shoring engineering documents for the shredder once they are accepted by the NYCDOB.

A copy of the final NYC DOB approved shredder shoring engineering will be provided to the regulators.

Section 6.6: Simultaneous Work Procedures

6. Response to EPA comment No. 15: Airtek's proposed language for Section 6.1.8 does not fully indicate at what stage the waste decon facility at the existing loading dock will be dismantled. Section 6.6 states that waste decontamination facility at the existing loading dock will be dismantled once the primary waste decon is fully operational. Please add additional language to Section 6.1.8 to clarify the dismantling of the aforementioned decon.

For clarity the end of Section 6.1 detailing post clearance activities in the Clean Zone has been given a number and title. This new section is Section 6.1.9 First Floor Clean Zone and Stairwell C Post Clearance Activities.

The following statement is included in Section 6.1.9:

"The waste decontamination facility at the existing loading dock will be dismantled when the Primary Waste Decontamination Facility, described below in Section 6.6 is fully operational."

Section 6.12.1: Extension of Interior Containment; Section 6.12.2: Tent Procedures; and Section 6.12.3: Gash Focused Cleaning Procedure:

7. Response to EPA comment Nos. 19 and 22: Please clarify which set of procedures are planned to be used for the first, seventh, and eighth floors of the gash area since Sections 6.12.1 (Extension of Interior Containment), 6.12.2 (Tent Procedures), and 6.12.3 (Gash Focused Cleaning Procedures) implies that more than one procedure will be used on these three floors. Section 6.12.1 states that the extension of the interior containment to incorporate the gash area will be performed on the first, seventh, and eighth floors of the gash area. If this is the case, please clarify the proposal to also use the procedure specified in Section 6.12.3 (for the 1st, 7th, and 8th floors) if the gash areas of those three floors are being incorporated into the interior work area for abatement activities by the extension of the interior containment as proposed in Section 6.12.1? Does the proposal to use the procedures specified in Section 6.12.3 for the 1st, 7th, and 8th floors pertain to solely cleaning of the exterior of the walls that are proposed to be extended pursuant to the procedures specified in Section 6.12.1 and/or prep work prior to the extension of these walls towards the exterior scaffolding? If so, would the procedures specified in Section 6.12.3 also apply to the 4th floor walls which will be shifted towards the exterior scaffolding of the building? Please clarify the above questions within the appropriate section(s) of the Remediation Work Plan.

The following revision has been made to Section 6.12:

"Please note that on some levels in the Gash Area it will be necessary to perform multiple remediation procedures. Which procedures to be implemented will be decided by the Contractor and OEC NYS DOL certified project designers. To view diagrams of the Gash Area indicating which remediation procedures will be utilized, refer to Attachment XIV - Gash Area Containment Diagrams."

The following revision has been made to Section 6.12.1:

"The focused cleaning procedure outlined below in Section 6.12.3 will be performed in areas where walls will be installed to remove any dust that may be present prior to installation of the barriers."

The following revision has been made to Section 6.12.2:

"At each location where porous surfaces, items, components and materials are present NYS DOL and NYC DEP certified asbestos handlers will perform the focused cleaning procedure outlined below in Section 6.12.3 on non-porous surfaces to remove any residual dust in areas where tent enclosures will be constructed. NYS DOL and NYC DEP certified asbestos handlers will then construct tent enclosures of two layers of poly and metal studs fully enclosing the affected impacted items, components and materials."

The following revision has been made to Section 6.12.3:

"Building components that are present in the gash area including the external facing surface of the solid wall barriers that are sealing the Building interior. The external facing surface of existing solid wall barrier will not be cleaned by the focused cleaning procedure in areas where they will be incorporated into the interior containment. On containment extension floors, the focused cleaning procedure will be performed in areas where barrier walls will be installed to extend the interior containment."

8. Response to EPA comment No. 19: The diagrams for the 7th and 8th floors (i.e., Attachment XIV, GAD-07 and GAD-08, respectively) only show the proposal to extend the interior containment as discussed in Section 6.12.1. This appears to contradict with Section 6.12.3 which states that the gash area focused cleaning procedures will also be used on these floors in addition to the extension of interior containment procedures specified in Section 6.12.1. Please clarify and revise the appropriate sections, drawings, etc., as necessary.

The following revision has been made to Section 6.12.1:

"The focused cleaning procedure outlined below in Section 6.12.3 will be performed in areas where walls will be installed to remove any dust that may be present prior to installation of the barriers."

The following revision has been made to Section 6.12.3:

"Building components that are present in the gash area including the external facing surface of the solid wall barriers that are sealing the Building interior. The external facing surface of existing solid wall barrier will not be cleaned by the focused cleaning procedure in areas where they will be incorporated into the interior containment. On containment extension floors, the focused cleaning procedure will be performed in areas where barrier walls will be installed to extend the interior containment."

9. Response to EPA comment No. 22: The diagram for the 15th floor (i.e., Attachment XIV, GAD-15) only shows the proposal to use a tent enclosure as discussed in Section 6.12.2. This appears to contradict with Section 6.12.3 which states that the gash area focused cleaning

procedures will also be used on this floor in addition to the tent enclosure specified in Section 6.12.2. Please clarify and revise the appropriate sections, drawings, etc., as necessary.

The following revision has been made to Section 6.12.2:

"At each location where porous surfaces, items, components and materials are present NYS DOL and NYC DEP certified asbestos handlers will perform the focused cleaning procedure outlined below in Section 6.12.3 on non-porous surfaces to remove any residual dust in areas where tent enclosures will be constructed. NYS DOL and NYC DEP certified asbestos handlers will then construct tent enclosures of two layers of poly and metal studs fully enclosing the affected impacted items, components and materials."

10. Response to EPA comment Nos. 19 and 22: Attachment XIV, GAD-02, is the 2nd floor gash area diagram. This diagram states that the south/southeast corner of the 2nd floor is open to the area below (i.e., the 1st floor). Please clarify if this area will be enclosed as part of the abatement activities that will be conducted on the 1st floor during the Remediation Phase. If so, please clarify in the drawing, and/or in an appropriate section(s) of the Remediation Work Plan, how this area will be enclosed since two separate procedures are proposed to be used for the area directly below this opening on the 1st floor (i.e., one portion using the extension of the modified full containment of interior work and one portion is proposing to use a tent enclosure).

The following revision has been made to Section 6.12.1:

"On the First Floor south side double height area the barriers will be installed up to the underside of the Third Floor slab in order to fully enclose this area within the interior containment."

The following revision has been made to Section 6.12.2:

"Tent enclosures on the First Floor south/southeast side will be constructed up to the underside of the Third Floor slab to fully enclose this area within the tent."

11. Response to EPA comment Nos. 19 and 22: Attachment XIV, GAD-01 and GAD-02, are the 1st floor and 2nd floor gash area diagrams, respectively. These two diagrams show that there is a stairwell between the 1st and 2nd floors. Please clarify in an appropriate section(s) of the Remediation Work Plan the approach to be taken for this stairwell and the sequencing of this work (e.g., will it be handled with the work that will be conducted for the 1st floor using the extension of interior containment, will it be sealed or not from the 2nd floor, etc.).

The following revision has been made to Section 6.12.1:

"The stairwell between the 1st and 2nd Floors in the Gash Area will be incorporated in the extension of the interior containment on the First Floor. The Stairwell will be sealed off from the Second Floor level with critical barriers."

12.Response to EPA comment No. 19: In general, since Airtek is proposing to use a set of three procedures to address the gash area, and the procedure proposed for a given area (e.g., piping going from one floor to another floor below) may vary from floor to floor (e.g., tent procedure on one floor and extension of interior containment on the floor below for piping entering through each floor via a column), Airtek should ensure that all openings and building penetrations will be sealed properly pursuant to the specified proposed procedures for that specific area on that given floor to avoid any potential breach onto the other floors.

The following revision has been made to Section 6.12:

"All penetrations between floors in the Gash Area will be sealed with either two (2) layers of poly or fire retardant expanding foam."

13.Response to EPA comment Nos. 19 and 22: Attachment XIV, GAD-03, is the 3rd floor gash area diagram. This diagram states that there at least three locations designated as "column with insulated pipes" and at least one location designated as "column with open electrical conduit" where Airtek is proposing to use the gash area focused cleaning procedures specified in Section 6.12.3. Sheet No. GAD-03 proposes the usage of tent enclosures as specified in Section 6.12.2 for similar openings such as "column with holes & porous cement inside"; and, Sheet No. GAD-04 proposes the usage of the extension of modified full containment of interior work procedures specified in Section 6.12.1 for the three locations designated as "column with insulated pipes" on the floor directly above the 3rd floor. Please clarify the rationale for proposing the gash area focused cleaning procedures specified in Section 6.12.3 over one of the other two procedures specified in Sections 6.12.1 and 6.12.2 for the aforementioned areas noted on the 3rd floor.

The following revision has been made to Section 6.12:

"The Contractor and OEC NYS DOL certified project designers have determined the procedures to be used to remediate the Gash Area based on the concentration of surfaces, items, components and materials in relation to the size and layout of the areas where they are present. Given that the conditions in the Gash Area vary from level to level, the below set of procedures will be implemented as deemed necessary by the Contractor and OEC NYS DOL certified project designers to address the removal of impacted surfaces, items, components and materials that are not capable of being cleaned. For instance areas where there is a large concentration of the above listed surfaces, items, components and materials that are not capable of being cleaned in close proximity to each other the interior containment will be extended. In areas where the above listed surfaces, items, components and materials that are not capable of being cleaned are spread sporadically making the extension of the interior containment inefficient, the remediation will be performed by tent procedures. In areas where there are only surfaces, items, components and materials that are non-porous and capable of being cleaned, the focused cleaning procedure will be performed.

Please note that on some levels in the Gash Area it will be necessary to perform multiple remediation procedures. Which procedures to be implemented will be decided by the Contractor and OEC NYS DOL certified project designers. To view diagrams of the Gash Area indicating which remediation procedures will be utilized, refer to Attachment XIV - Gash Area Containment Diagrams."

14. Response to EPA comment Nos. 19 and 22: Attachment XIV, GAD-09, is the 9th floor gash area diagram. This diagram states that there is at least one of three locations designated as "columns with fiberglass pipes" at the southern end of the gash area that appears to be outside of the area that Airtek proposes the usage of the tent enclosure specified in Section 6.12.2. Please clarify the rationale for not proposing one of the two procedures specified in Sections 6.12.1 and 6.12.2 for this area.

GAD-09 has been revised to incorporate the noted column into the extension of the interior containment of the 9th Floor. To view this revision, refer to Attachment XIV, Diagram GAD-09.

15. Response to EPA comment Nos. 19 and 22: Attachment XIV, GAD-12, is the 12th floor gash area diagram. This diagram states that there is at least one of six locations designated as "columns with fiberglass pipes inside" at the southern end of the gash area that appears to be outside of the area that Airtek proposes the usage of the tent enclosure specified in Section 6.12.2. Please clarify the rationale for not proposing one of the two procedures specified in Sections 6.12.1 and 6.12.2 for this area.

GAD-12 has been revised to incorporate the noted column into the extension of the interior containment of the 12th Floor. To view this revision, refer to Attachment XIV, Diagram GAD-12.

16. Response to EPA comment Nos. 19 and 22: Attachment XIV, GAD-13, is the 13th floor gash area diagram. This diagram states that there is at least one location designated as "column with hole inside" and one of three locations designated as "columns with insulated pipes" at the southern end of the gash area that appear to be outside of the areas that Airtek proposes the usage of the tent enclosures specified in Section 6.12.2. Please clarify the rationale for not proposing one of the two procedures specified in Sections 6.12.1 and 6.12.2 for these areas.

GAD-13 has been revised to incorporate the noted columns into the extension of the interior containment of the 13th Floor. To view this revision, refer to Attachment XIV, Diagram GAD-13.

17. Response to EPA comment Nos. 19 and 22: Attachment XIV, GAD-14, is the 14th floor gash area diagram. This diagram states that there is at least one of three locations designated as "columns with fiberglass pipes" at the western end of the gash area and one of three locations designated as "columns with fiberglass pipes" at the southern end of the gash area that appear to be outside of the areas that Airtek proposes the usage of the tent enclosures specified in Section 6.12.2. Please clarify the rationale for not proposing one of the two procedures specified in Sections 6.12.1 and 6.12.2 for these areas.

GAD-14 has been revised to incorporate the noted columns into the extension of the interior containment of the 14th Floor. To view this revision, refer to Attachment XIV, Diagram GAD-14.

18. Response to EPA comment Nos. 19 and 22: Attachment XIV, GAD-15, is the 15th floor

gash area diagram. This diagram states that there is at least one of two locations designated as "columns with fiberglass pipes" at the southern end of the gash area that appears to be outside of the area that Airtek proposes the usage of the tent enclosure specified in Section 6.12.2. Please clarify the rationale for not proposing one of the two procedures specified in Sections 6.12.1 and 6.12.2 for this area.

GAD-15 has been revised to incorporate the noted column into the extension of the interior containment of the 15th Floor. To view this revision, refer to Attachment XIV, Diagram GAD-15.

Section 7.0: Anticipated Waste Generation

19. Response to EPA comment No. 29: Airtek states in its response to EPA comment No. 29 that it proposes to store asbestos waste in the holding areas of the waste decontamination facilities. During the February 14, 2008 meeting between EPA, NYSDOL, NYCDEP, NYCDOB, FDNY, PAL, Airtek, DASNY, CUNY, and Tishman/LIRO, the NYSDOL indicated that storage of this waste stream in the waste decontamination facilities would potentially impact proper egress through this area. It is recommended that Airtek should add additional language to the third paragraph of Section 7.0 of the Remediation Work Plan to provide further clarity on the storage of the asbestos waste if an asbestos waste trailer is either full or not present and please ensure that the FDNY is comfortable with the location(s).

The following revision has been made to Section 6.0:

"Remediation work processes will be controlled by the Contractor so that directly after Gaylord boxes are full and sealed they will be moved from the work area, decontaminated and loaded into asbestos waste trailers. All full boxes will be moved out of the work area by the end of every day.

In the event of an emergency where waste trailers are unavailable and boxes of debris will remain in the work area the Contractor will immediately cease generation of further waste. Remaining boxes of debris will be organized in a manner that does not impede egress. The Contractor will notify the FDNY immediately and inform the FDNY's designated representatives of the situation and the location and quantity of all boxes of debris in the building. The Contractor will work diligently to resolve the emergency in an expeditious manner so that waste flow can resume."

This revision has also been made to Section 7.0:

"Remediation work processes will be controlled by the Contractor so that directly after Gaylord boxes are full and sealed they will be moved from the work area, decontaminated and loaded into asbestos waste trailers. All full boxes will be moved out of the work area by the end of every day.

In the event of an emergency where waste trailers are unavailable and boxes of debris will remain in the work area the Contractor will immediately cease generation of further waste. Remaining boxes of debris will be organized in a manner that does not impede egress. The

Contractor will notify the FDNY immediately and inform the FDNY's designated representatives of the situation and the location and quantity of all boxes of debris in the building. The Contractor will work diligently to resolve the emergency in an expeditious manner so that waste flow can resume."

This revision has also been made to Section 9.0:

"Remediation work processes will be controlled by the Contractor so that directly after Gaylord boxes are full and sealed, they will be moved from the work area, decontaminated and loaded into asbestos waste trailers. All full boxes will be moved out of the work area by the end of every day. In the event of an emergency where waste trailers are unavailable and boxes of debris will remain in the work area the Contractor will immediately cease generation of further waste. Remaining boxes of debris will be organized in a manner that does not impede egress. The Contractor will notify the FDNY immediately and inform the FDNY's designated representatives of the situation and the location and quantity of all boxes of debris in the building. The Contractor will work diligently to resolve the emergency in an expeditious manner so that waste flow can resume."

Comment [AD1]: FDNY 2/27 Meeting Comment

Section 9.0: Fire Protection

20. Airtek's response to comment No. 2 from the FDNY with regard to the reconfiguration of the barriers on floors 3, 13, and 14 to allow fire department access states that the diagrams of the reconfigured barriers will be provided to FDNY once the reconfiguration is completed. Airtek should provide copies of the diagrams to all of the regulators once the reconfiguration is completed since personnel from various city, state, and federal agencies/departments will be accessing the building and it would be necessary for them to understand the reconfiguration of the barriers on these floors to avoid unnecessary exposure to the exterior damaged gash area. Once the diagrams are completed, the Remediation Work Plan should be amended to incorporate this information and these diagrams should be referenced in the sixteenth bullet item of Section 9.0 as part of the amendment.

A copy of the revised drawings will be submitted to the regulators. An amendment will be provided to incorporate any changes into the remediation work plan.

**List of Proposed Changes to be made to Final
Regulatory Submittal Part I(R)
Remediation Work Plan
Submitted January 21, 2008**

1. Proposed change No. 2 states that the gash area section of the Final Remediation Work Plan will be changed to state that the seven (7) extra gash penetrations and their inspections are already completed. Information pertaining to the location of the seven additional façade openings made in the gash area, the procedures followed to make the openings, the conclusions of the visual inspections of these seven openings, clarity on which, if necessary, one of the three procedures outlined in Sections 6.12.1 through 6.12.3 will be used for any of these seven areas, and their potential impact on the scope, procedure, and sequencing of work in the gash area should be included in the revised Remediation Work Plan.

The following revision has been made to Section 6.12:

"Further, seven additional façade openings have been created in locations in the Gash Area where it was not required to create openings in the brick for scaffold attachment. These additional façade openings were created for further visual inspection for suspect WTC dust within the façade to be performed by the OEC NYS DOL certified project monitor. These additional openings were subject to visual inspection by the OEC NYS DOL certified project monitor. No suspect WTC dust was found to be present in the seven additional façade openings."

2. The proposal to add additional language as noted in proposed change No. 6 is not necessary. The regulators have the opportunity to inspect any of the areas undergoing the abatement procedures specified in the Remediation Work Plan.

Noted.

EPA Comments from 2/27/2008 Meeting

Lead Containing Items (Section 6.11.1)

The following revision has been made to Section 6.11.1:

> "Workers will utilize proper PPE for the duration of lead removal activities. In the Basement Level there is one porcelain sink that contains lead. On the 4th Floor there is one lead painted column. The entire sink will be removed and disposed of as lead containing material. The lead paint will be removed from the column and disposed of as lead containing waste. This lead removal will be performed in during the asbestos abatement activities on the Basement Level and the 4th Floor. A drop cloth consisting of a single layer of 6mil poly will be placed in an area adjacent to the sink in the

Basement. NYS DOL and NYC DEP certified asbestos handlers who also hold valid US EPA Lead Certification will remove the sink from its mounting utilizing manual means and transport it to the Primary Waste Decontamination Facility. The exterior surfaces of the sink will be cleaned by HEPA vacuuming and wet wiping in the Primary Waste Decontamination Facility wash room. Once it has been decontaminated, the sink will be placed in a lead waste drum and transported to the exterior waste storage facility for temporary storage prior to disposal as lead waste. If sizing (breaking up of the sink) is required prior to packaging of the sink, sizing will be conducted in an environmental tent containment outside the building. Wet methods will be utilized to control dust within the tent.

The lead paint on the 4th Floor column is applied to plaster material which is assumed asbestos contaminated. The affected lead painted plaster will be removed from the 4th Floor column during the asbestos abatement activities on the 4th Floor. The affected lead painted plaster will be removed from the column by manual or mechanical means. Plaster debris from the lead painted column will be kept separate from other waste, collected and double bagged in asbestos bags. Bags of lead painted column debris will be sealed with duct tape and placed into drums made of a durable and cleanable material. The drums will be transported to the Primary Waste Decontamination Facility and fully decontaminated. After decontamination, the drums containing lead painted plaster debris will be TCLP'd for lead. The drums will then be transported to the lead chamber of the exterior waste storage facility for temporary storage. If TCLP results indicate there is lead present, the drums of lead containing plaster debris will be disposed of as lead waste. If TCLP results are negative for lead the drums of lead containing plaster debris will be disposed of as asbestos waste at a minimum or in accordance with any waste characterization results."

Please note also that First Floor Clean operations (6.1.6, 6.1.7 and 6.1.8) have been re-sequenced so that the lead-painted bumper pole is now abated after First Floor Clean Zone environmental clearance.