



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 2

290 BROADWAY

NEW YORK, NEW YORK 10007-1866

February 15, 2011

Mr. Edward A. Gerdtz
Managing Principal
TRC Environmental Corporation
1430 Broadway – 10th Floor
New York, New York 10018

Re: February 10, 2011 Proposed Amendment #18 – Ambient Air Monitoring Program Plan and February 10, 2011 Proposed Amendment #18 - Quality Assurance Project Plan (QAPP) for the Ambient Air Monitoring Program for the 130 Liberty Street Abatement and Deconstruction Project, September 7, 2005, 130 Liberty Street, New York, N.Y.

Dear Mr. Gerdtz:

This is to inform you that the U.S. Environmental Protection Agency (EPA) has completed its review of the February 10, 2011 Proposed Amendment #18 to the September 7, 2005 Section 2 – Ambient Air Monitoring Program Plan of the 130 Liberty Street Abatement and Deconstruction Project and the February 10, 2011 Proposed Amendment #18 to the September 7, 2005 Quality Assurance Project Plan (QAPP) for the Ambient Air Monitoring Program of the 130 Liberty Street Abatement and Deconstruction Project submitted by TRC Environmental Corporation (TRC) on behalf of the Lower Manhattan Development Corporation for 130 Liberty Street in lower Manhattan.

Based on our review, and in consultation with the New York State Department of Labor (NYSDOL) and the New York City Department of Environmental Protection (NYCDEP), EPA accepts the above-referenced proposed amendments.

EPA's acceptance is not intended as a review and/or acceptance of structural engineering and safety matters or requirements for the protection of worker safety and health or for fire protection and safety at 130 Liberty Street. EPA is relying on the New York City Department of Building's, the U.S. Department of Labor Occupational Safety and Health Administration's and the New York City Fire Department's expertise in these areas, respectively.

EPA will continue to work with our regulatory partners to monitor the 130 Liberty Street activities throughout the execution of the project.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Evangelista', written in a cursive style.

Pat Evangelista
Director, Office of Strategic Programs

cc: Richard Mendelson, OSHA
Christopher Alonge, NYSDOL
Krish Radhakrishnan, NYCDEP
Christopher Santulli, NYCDOB
Thomas Kunkel, LMCCC
Michael Weinlein, FDNY
Suzanne Mattei, NYSDEC

QAPP AMENDMENT FORM: Amendment # 18

DATE FORM SUBMITTED: 2/10/11

QAPP Title **Quality Assurance Project Plan for the Ambient Air Monitoring Program**
130 Liberty Street Deconstruction Project
September 7, 2005

AMENDMENT #18

This Amendment presents the rationale for the location and removal of the air monitoring stations for the duration of deconstruction and site activities. These locations as described below represent the anticipated final locations for the remainder of the project.

Station #1 is currently located in the Southwest corner of the site at the sidewalk bridge level. This station will be taken out of service after completion of the following activities: removal of the 1st floor slab and Cellar A slab, the backfilling of the south coin vault and completion of the earthen ramp. In the event these activities have not been completed prior to the removal of the Albany Street Sidewalk bridge, Station #1 will be relocated to the Southwest corner of the site at ground level and renamed Station #24 on a non-working day or Station #24 will be installed and operational prior to the removal of Station #1. The remaining site activities are located in the north plaza area, north of Stations #5 and #23, which will adequately monitor the ambient air for those activities.

Station #2 is currently located in the Southeast corner of the site at the sidewalk bridge level. This station will be taken out of service after completion of the following activities: removal of the 1st floor slab and Cellar A slab and the backfilling of the south coin vault. In the event these activities have not been completed prior to the removal of the Albany Street Sidewalk bridge, Station #2 will be relocated to the Southeast corner of the site at ground level and renamed Station #25 on a non-working day or Station #25 will be installed and operational prior to the removal of Station #2. The completion of the earthen ramp is in the southwest corner of the site and Station #1 will adequately monitor the ambient air for that activity. The remaining site activities are located in the north plaza area, north of Stations #5 and #23, which will adequately monitor the ambient air for those activities. The meteorological tower which is currently located at Station #2 will be relocated to Station #23.

Station #2000 is the quality assurance location which is collocated with Station #2. Station #2000 will be removed from service at the same time as Station #2. Since the inception of the program in 2005, the quality assurance location has been in continuous operation for the collection of collocated samples. These data have been used to define the precision of the sampling and analyses methods as prescribed in the QAPP (September 2005). Based on the precision data collected to date (See Attachment A to this Amendment), there is no further need for a quality assurance location once Station #2 has been removed from service.

Station #5 is currently on the roof top of the two-story Firehouse 10-10 House on 124 Liberty Street. This station is unaffected by this amendment and will remain in this location for the remainder of the project.

Station #23 is currently in the Northwest corner of the site (Washington St./Cedar St.) at the sidewalk bridge level. Prior to the removal of the Washington Street Sidewalk bridge, Station #23 will be relocated to ground level at its current location and renamed Station #26 on a non-working day or Station #26 will

QAPP AMENDMENT FORM: Amendment # 18

be installed and operational prior to the removal of Station #23.

Sections of QAPP Affected:

Amendment #17, Figure 7-1 (Site Location Map and Proposed Ambient Air Monitoring Locations): This figure will change due to the future elimination of Stations #1, #2 and #23 and potential addition of Stations #24, #25 and #26. Footnotes on this figure will be revised, as appropriate. A revised Figure 7-1 is attached to this Amendment.

Amendment #17, Figure 7-3 (3-Dimensional View of Air Monitoring Stations from the South): This figure will change due to the future elimination of Stations #1 and #2 and potential addition of Stations #24 and #25. A revised Figure 7-3 is attached to this Amendment.

Amendment #17, Figure 7-4 (3-Dimensional View of Air Monitoring Stations from the North): This figure will change due to the future elimination of Station #23 and the addition of Station #26. Footnotes on this figure will be revised, as appropriate. A revised Figure 7-4 is attached to this Amendment.

Amendment #17, Table 7-3 (Phase II – Structural Deconstruction Phase Sampling and Analysis Summary): Column 1 of this table will be revised to show that one roof top location will be sampled and one ground/street level sample will be sampled. Changes regarding target parameters and sampling frequencies are addressed in Amendments #13 and #14.

Amendment #17, Table 14-1 (Locations of Monitoring Stations): The table has been updated to include footnotes for Stations #1, #2, #23, #24, #25 and #26 showing the new dates of operation. A revised Table 14-1 is attached to this Amendment.

Amendment #17, Table 7-4a (Monitoring Station Summary): The table has been updated to include revised footnotes and or dates of operation for Stations #1, #2, #23, #24, #25 and #26 and the revised locations for the meteorological ground level station. A revised Table 7-4a is attached to this Amendment.

Date Implemented: February 2011

ATTACHMENT A: AMENDMENT #18 (February 2011)

| 130 Liberty Street: Summary of Collocated Sample RPDs | | |
|---|----------------------------|--------------|
| COPC | Number of Collocated Pairs | Average RPD* |
| PM10 | N = 1784 | 17.6% |
| Dioxin TEQ | N = 98 | 17.63% |
| Antimony | N = 165 | 7.55% |
| Barium | N = 31 | 10.28% |
| Cadmium | N = 9 | 9.22% |
| Copper [e] | N = 173 | 43.42% |
| Lead | N = 184 | 12.81% |
| Manganese | N = 184 | 12.90% |
| Nickel | N = 179 | 8.50% |
| Zinc | N = 184 | 14.81% |

Notes:

COPC = Contaminant of Potential Concern

TEQ = Toxicity Equivalent

*: Relative Percent Difference using the equation $\%RPD = (abs(X1 - X2) * 2 / (X1 + X2)) * 100\%$;

where X1 = Original Station value, X2 = Duplicate Station value.

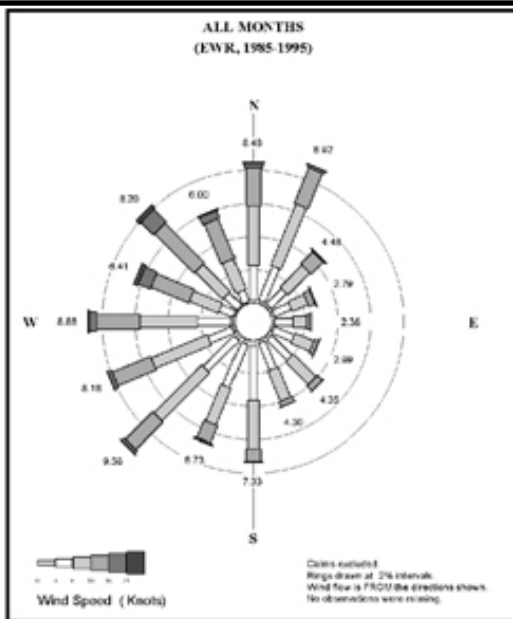
a - Results for PM 2.5, PCBs and mercury (total) not presented. Monitoring for these parameters was discontinued per Amendment # 8 (July 2009).

b - Results for beryllium, chromium, asbestos, silica and PAHs (as B(a)P equivalent) not presented. QAPP (September 7 2005) specifies that % RPD data reflect only sample pairs where results in both samples are $\geq 5x$ the QL. Results for these parameters in collocated pairs were routinely not detected and/or below these QAPP criteria.

c - Average RPD values include all collocated pair results that are $\geq 5x$ the QL.

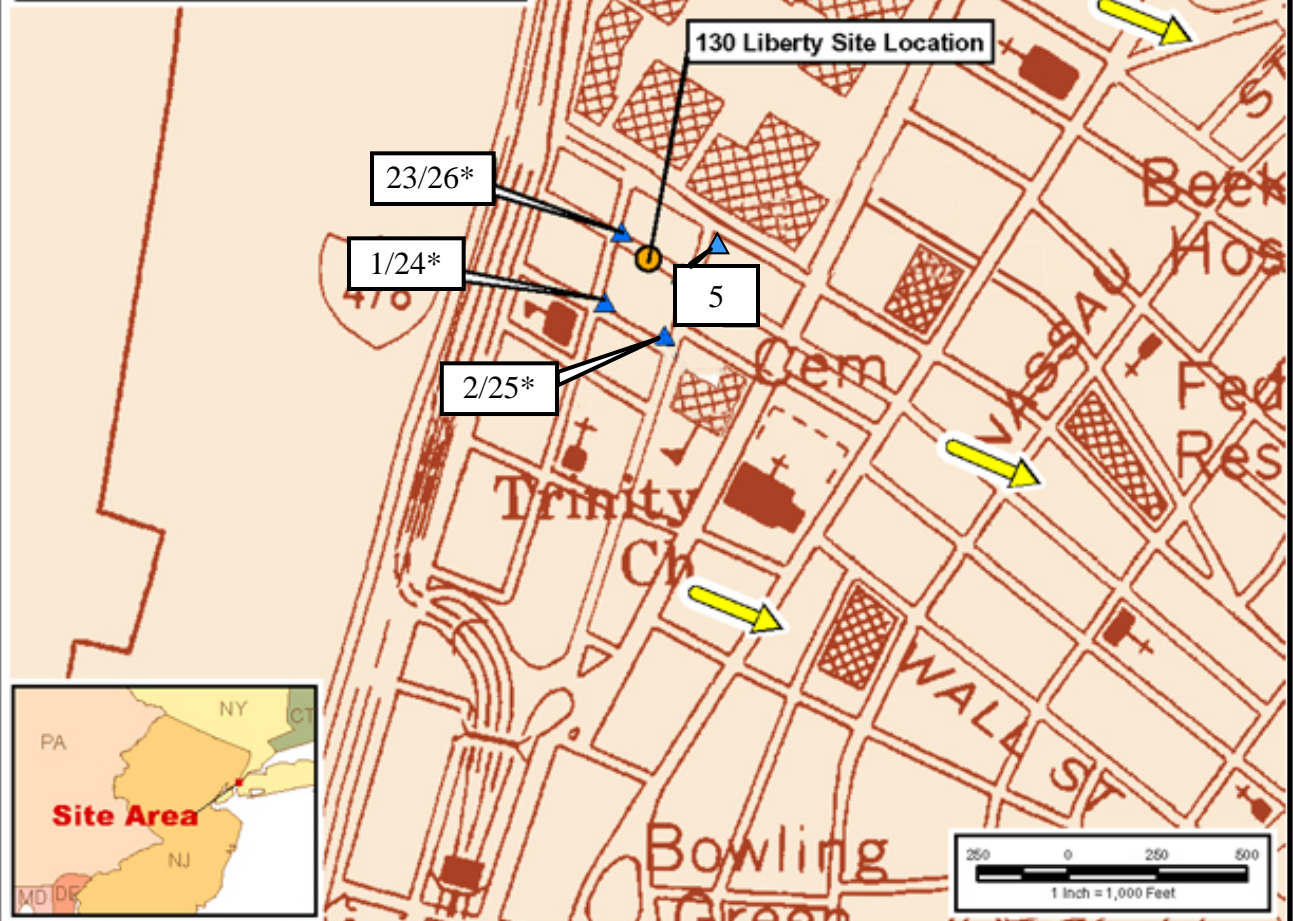
d - Performance criteria in QAPP specify a data quality objective (DQI) for % RPD of $\leq 40\%$. All of the parameters listed above meet this DQI with the exception of copper.

e - Average % RPD value for copper 43.4 % exceeds data quality objective of 40%. Variability was confirmed to be attributable to laboratory analysis at low level concentrations and not associated with the sample collection process. Copper concentrations typically measured during the term of the program were well below both Target Air Quality Levels (10,000 ng/m³) and USEPA Site Specific Trigger Levels (100,000 ng/m³). For example, the average or mean concentration of copper measured in all of the collocated pairs is 186 ng/m³. As a result, the precision of the method as defined by the % RPD was not a factor in demonstrating compliance with these levels during the term of the program. There were no exceedances of either the Target Air Quality Level or the USEPA Site Specific Trigger Level for copper during the term of the monitoring program.



Legend

▲ Monitoring Locations



LEGEND:

← AVERAGE WIND DIRECTION

SOURCE:
USGS 7.5 Minute Series (Topographic) Quadrangles: Jersey City, NJ-NY
Wind Roses for Newark International Airport, 1985-1995

PROJECT:
130 LIBERTY STREET
DECONSTRUCTION PROJECT

* Station #1 will be taken out of service after completion of the following activities: removal of the 1st floor slab and cellar A slab, the backfilling of the south coin vault and completion of the earthen ramp. In the event these activities have not been completed prior to the removal of the Albany Street Sidewalk bridge, Station #1 will be relocated to the Southwest corner of the site at ground level and renamed Station #24 on a non-working day or Station #24 will be installed and operational prior to the removal of Station #1. Station #2 will be taken out of service after completion of the following activities: removal of the 1st floor slab and the backfilling of the south coin vault. In the event these activities have not been completed prior to the removal of the Albany Street Sidewalk bridge, Station #2 will be relocated to the Southeast corner of the site at ground level and renamed Station #25 on a non-working day or Station #25 will be installed and operational prior to the removal of Station #2. Prior to the removal of the Washington Street Sidewalk bridge, Station #23 will be relocated to ground level at its current location and renamed Station #26 on a non-working day or Station #26 will be installed and operational prior to the removal of Station #23.

Site Location Map for
Ambient Air Monitoring Locations
130 Liberty Street
New York, New York
Updated Feb, 2011: QAPP Amendment #18



Wannalancit Mills
650 Suffolk Street
Lowell, Ma. 01854
(978) 970-5600

Drawn: BP

Checked: ED

SCALE: AS SHOWN
Date 2/10/2011

FIGURE
7-1



* Station #1 will be taken out of service after completion of the following activities: removal of the 1st floor slab and cellar A slab, the backfilling of the south coin vault and completion of the earthen ramp. In the event these activities have not been completed prior to the removal of the Albany Street Sidewalk bridge, Station #1 will be relocated to the Southwest corner of the site at ground level and renamed Station #24 on a non-working day or Station #24 will be installed and operational prior to the removal of Station #1. Station #2 will be taken out of service after completion of the following activities: removal of the 1st floor slab and Cellar A slab and the backfilling of the south coin vault. In the event these activities have not been completed prior to the removal of the Albany Street Sidewalk bridge, Station #2 will be relocated to the Southeast corner of the site at ground level and renamed Station #25 on a non-working day or Station #25 will be installed and operational prior to the removal of Station #2.

**3-Dimensional View of Air Monitoring
Stations from The South
130 Liberty Street
New York, New York
Updated Feb, 2011: QAPP Amendment #18**



Wannalancit Mills
650 Suffolk Street
Lowell, Ma. 01854
(978) 970-5600

Drawn: BP

Checked: LD

SCALE: AS SHOWN

Date: 2/10/2011

**FIGURE
7-3**



* Station #23 will be relocated to ground level at its current location and renamed Station #26 on a non-working day or Station #26 will be installed and operational prior to the removal of Station #23.

**3-Dimensional View of Air Monitoring
Stations from the North
130 Liberty Street
New York, New York**
Updated Feb, 2011: QAPP Amendment #18



Wannalancit Mills
650 Suffolk Street
Lowell, Ma. 01854
(978) 970-5600

Drawn: BP
Checked: LD

SCALE: None
Date: 2/10/2011

**FIGURE
7-4**

Table 14-1. Sample Numbering Scheme
Updated: February 2011 (QAPP Amendment #18)

| Sample Locations | Numbering Scheme |
|---|----------------------------------|
| Station 1 ¹³ | parameter – ST 1 – mmddyy |
| Station 2 ¹⁴ | parameter – ST 2 – mmddyy |
| Station 3 ¹ | parameter – ST 3 – mmddyy |
| Station 4 ¹¹ | parameter – ST 4 – mmddyy |
| Station 5 ⁸ | parameter – ST 5 – mmddyy |
| Station 6 ² | parameter – ST 6 – mmddyy |
| Station 7 ² | parameter – ST 7 – mmddyy |
| Station 8 ² | parameter – ST 8 – mmddyy |
| Station 9 ² | parameter – ST 9 – mmddyy |
| Station 10 ³ | parameter – ST 10 – mmddyy |
| Station 11 ⁶ | parameter – ST 11 – mmddyy |
| Station 12 ⁷ | parameter – ST 12 – mmddyy |
| Station 13 ⁵ | parameter – ST 13 – mmddyy |
| Station 14 ⁴ | parameter – ST 14 – mmddyy |
| Station 15 ⁴ | parameter – ST 15 – mmddyy |
| Station 16 ⁴ | parameter – ST 16 – mmddyy |
| Station 17 ⁴ | parameter – ST 17 – mmddyy |
| Station 20 ¹² | parameter – ST 20 – mmddyy |
| Station 21 ⁹ | parameter – ST 21 – mmddyy |
| Station 22 ¹⁰ | parameter – ST 22 – mmddyy |
| Station 23 ¹⁵ | parameter – ST 23 – mmddyy |
| Station 24 ¹³ | parameter – ST 24 – mmddyy |
| Station 25 ¹⁴ | parameter – ST 25 – mmddyy |
| Station 26 ¹⁵ | parameter – ST 26 – mmddyy |
| Field/Trip Blanks | parameter – FBB – mmddyy |
| Field Duplicates | Append “0” to original sample ID |
| Cooler Temperature Blank | “Cooler Temperature Blank” |
| Example Sample Location ID: PAH-ST1-082205 | |
| Example Field Duplicate Pair ID: PAH-ST10-082205/PAH-ST100-082205 | |

- 1 – In use from 9/14/05 through 9/16/05
- 2 – In use from 9/14/05 through 9/28/05 and 7/6/06 through 9/21/06
- 3 – In use from 9/16/05 through 01/04/10
- 4 – In use from 9/14/05 through 5/30/09
- 5 – In use from 10/5/05 through 4/24/10
- 6 – In use from 10/5/05 through 7/11/2010
- 7 – In use from 10/6/05 through 7/20/2010
- 8 – In use from 9/14/05 through 11/16/10 and 12/1/10 to current
- 9 – In use from 4/25/10 through 11/16/10
- 10 – In use from 7/12/10 through 11/16/10
- 11– In use from 9/16/05 through 12/31/10
- 12– In use from 9/14/05 through 12/1/10

13- Station will be taken out of service after completion of the following activities: removal of the 1st floor slab and cellar A slab, the backfilling of the south coin vault and completion of the earthen ramp. In the event these activities have not been completed prior to the removal of the Albany Street Sidewalk bridge, Station #1 will be relocated to the Southwest corner of the site at ground level and renamed Station #24 on a non-working day or Station #24 will be installed and operational prior to the removal of Station #1.

14- Station 2 will be taken out of service after completion of the following activities: removal of the 1st floor slab and Cellar A slab and the backfilling of the south coin vault. In the event these activities have not been completed prior to the removal of the Albany Street Sidewalk bridge, Station #2 will be relocated to the Southeast corner of the site at ground level and renamed Station #25 on a non-working day or Station #25 will be installed and operational prior to the removal of Station #2.

15- Station 23 will be relocated to ground level at its current location and renamed Station #26 on a non-working day or Station #26 will be installed and operational prior to the removal of Station #23.

Table 7-4a (QAPP Amendment #18)
Monitoring Station Summary, 130 Liberty Street Deconstruction as of February 2011

| Station | | Location Description in Plan | | Location Description in QAPP | | Actual Location | Actual Level | Start-up Date |
|------------------------------------|--|--|------------------|--------------------------------------|----------------------------|---|--------------|---------------|
| | | | | Site Location | Direction From 130 Liberty | | | |
| Ambient Air Monitoring Stations | | | | | | | | |
| Station 1 | Southwest of building (Washington St./Albany St.) at ground level | Ground Level - Washington Street/Albany Street | Southwest Corner | Southwest Area | Sidewalk Bridge | 9/14/2005 | | |
| Station 2 | Southeast of building (Albany St./Greenwich St.) at ground level | Ground Level - Albany Street/Greenwich Street | Southeast Corner | Southeast Area | Sidewalk Bridge | 9/14/2005 | | |
| Station 4 | Northwest of building (Washington St./Cedar St.) at ground level | Ground Level - Washington Street/Cedar Street | Northwest Corner | Northwest Area | Street | 9/14/2005 | | |
| Station 5 | Off-site roof top location (124 Liberty Street - FDNY 10-10 House) | Roof Top Off Site - 124 Liberty Street/FDNY 10-10 House | Northeast | Firehouse #10 | Roof | 9/14/2005 | | |
| Station 10 | Not suggested in Plan - Replaced Station 3 | Not suggested in QAPP - Replaced Station 3 | | North Side | Sidewalk Bridge | 9/19/2005 | | |
| Station 11 | Off-site roof top location (90 Trinity Place – School) | Roof Top Off Site - 90 Trinity Place - School | Southeast | 90 Trinity Place | Roof | 10/5/2005 | | |
| Station 12 | Off-site roof top location (110 Greenwich Street) | Roof Top Off Site - 110 Greenwich Street | South | 110 Greenwich Street | Roof | 10/6/2005 | | |
| Station 13 | Off-site roof top location (85 West Street – Marriott Hotel) | Roof Top Off Site - 85 West Street - Marriott Hotel | Southwest | Marriott Hotel 38th Floor | Roof | 10/5/2005 | | |
| Station 14 | Each side at elevation on scaffolding (Phase I and II only) | Scaffolding at Building; Floating Elevation | Southwest Corner | West Face - South end at corner | Scaffolding | In effect on 10th floor as of 11/19/05; in effect on 20th floor as of 12/11/05; in effect on 30th floor on 1/10/07; in effect on 20th floor on 3/11/07 with exception of silica which remained on 30th floor until 6/14/07; silica in effect on 29th floor on 6/15/07; in effect on 15th floor on 6/25/07 through 5/30/09 with the exception of silica which floated between the 29th and 22nd floor (**) | | |
| Station 15 | Each side at elevation on scaffolding (Phase I and II only) | Scaffolding at Building; Floating Elevation | Southeast Corner | South Face - East end at corner | Scaffolding | | | |
| Station 16 | Each side at elevation on scaffolding (Phase I and II only) | Scaffolding at Building; Floating Elevation | Northeast Corner | East Face - North end at corner | Scaffolding | | | |
| Station 17 | Each side at elevation on scaffolding (Phase I and II only) | Scaffolding at Building; Floating Elevation | Northwest Corner | North Face - West end at corner | Scaffolding | | | |
| Station 20 | Not suggested in Plan - Replaced Station 10 | Not suggested in QAPP - Replaced Station 10 | Northeast Corner | Northeast Area | Sidewalk Bridge | 1/4/2010 | | |
| Station 21 | Not suggested in Plan - Replaced Station 13 | Not suggested in Plan - Replaced Station 13 | Southwest | Marriott Hotel 4th Floor | Roof | 4/25/2010 | | |
| Station 22 | Not suggested in Plan - Replaced Station 11 | Not suggested in Plan - Replaced Station 11 | East | O'Hara's -120 Cedar Street 5th Floor | Roof | 7/12/2010 | | |
| Station 23 | Not suggested in Plan - Replaced Station 4 | Not suggested in Plan - Replaced Station 4 | Northwest | Northwest Area | Sidewalk Bridge | 1/3/2011 | | |
| Station 24 | Not suggested in Plan - Replaced Station 1 | Not suggested in Plan - Replaced Station 1 | Southwest Corner | Southwest Area | Street | NA | | |
| Station 25 | Not suggested in Plan - Replaced Station 2 | Not suggested in Plan - Replaced Station 2 | Southeast Corner | Southeast Area | Street | NA | | |
| Station 26 | Not suggested in Plan - Replaced Station 23 | Not suggested in Plan - Replaced Station 23 | Northwest | Northwest Area | Street | NA | | |
| Meteorological Monitoring Stations | | | | | | | | |
| Roof Station | Roof top of 130 Liberty Street until onset of deconstruction, at which point the station will be collocated with one of the off site rooftop air monitoring stations | Roof top of 130 Liberty Street until onset of deconstruction, at which point the station will be collocated with one of the off site rooftop air monitoring stations | | Building Roof | Roof | In effect as of 9/14/05. Moved to the Marriott Hotel roof, 38th floor on 2/27/07. Moved to the Marriott Hotel roof, 4th floor on 4/25/10, moved to Station 20 on 11/17/10 , moved to Station 2 on 12/2/10. | | |
| Ground Station | Not Suggested in Plan | Not Suggested in Plan | | North Side | Sidewalk Bridge | 11/2/2005 - station relocated 1/4/2010 | | |
| Ground Station | Not Suggested in Plan | Not Suggested in Plan | | Northeast Area | Sidewalk Bridge | 1/4/2010 | | |
| Ground Station | Not Suggested in Plan | Not Suggested in Plan | | Southeast Area | Sidewalk Bridge | 12/2/2011 | | |

Notes:
There was a minor move of the Meteorological Ground Level Station on 4/24/2007 due to construction logistics; however, the location description remains the same.
The Meteorological roof top station was taken out of service on 11/16/10.
The Meteorological Ground Level station will be relocated to Station 23 when Station 2 is taken out of service.
Stations 3, 4, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 20, 21 and 22 are no longer in service.
Station #1 will be taken out of service after completion of the following activities: removal of the 1st floor slab and cellar A slab, the backfilling of the south coin vault and completion of the earthen ramp. In the event these activities have not been completed prior to the removal of the Albany Street Sidewalk bridge, Station #1 will be relocated to the Southwest corner of the site at ground level and renamed Station #24 on a non-working day or Station #24 will be installed and operational prior to the removal of Station #1. Station #2 will be taken out of service after completion of the following activities: removal of the 1st floor slab and Cellar A slab and the backfilling of the south coin vault. In the event these activities have not been completed prior to the removal of the Albany Street Sidewalk bridge, Station #2 will be relocated to the Southeast corner of the site at ground level and renamed Station #25 on a non-working day or Station #25 will be installed and operational prior to the removal of Station #2. Prior to the removal of the Washington Street Sidewalk bridge, Station #23 will be relocated to ground level at its current location and renamed Station #26 on a non-working day or Station #26 will be installed and operational prior to the removal of Station #23.

** As per the Ambient Air Monitoring Plan Amendment #5, the location of the silica monitors will move with deconstruction.
Plan - Ambient Air Monitoring Plan, Section 2 of the Deconstruction Plan submitted September 7, 2005
QAPP - Ambient Air Monitoring Quality Assurance Project Plan