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## **Scaffold Erection Operation Week 13 to Week 16 Data Validation Report**

**Week 13 to Week 16 Sampling Period  
07/23/07 to 08/19/07**

**The Remediation and Deconstruction of Fiterman Hall  
30 West Broadway  
New York, New York**

**Prepared By:**

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## **General:**

This report provides a summary of the Week 13 to Week 16 (07-23-07 to 08-19-07) data validation conducted in support of the Scaffold Erection Operation (SEO) of the project being conducted at 30 West Broadway, New York, NY per the approved Environmental Community Air Monitoring Plan (ECAMP) dated March 16, 2007 and the associated Quality Assurance Project Plan (QAPP) dated March 16, 2007.

Week 13 to Week 16 include:

Week 13:	07-23-07 to 07-29-07
Week 14:	07-30-07 to 08-05-07
Week 15:	08-06-07 to 08-12-07
Week 16:	08-13-07 to 08-19-07

Per the ECAMP and QAPP, sampling has been conducted for the following parameters:

- Airborne Particulate PM-2.5
- Reference Method for PM-2.5
- Airborne Particulate PM-10
- Reference Method for PM-10
- Asbestos
- Mercury (Vapor and Total)
- Metals
- Silica
- Dioxins/Furans
- PAHs
- PCBs

## **Project Quality Objectives:**

The project quality objectives (POQs) detailed in the QAPP for the project were met in all cases, except for the following:

1. Asbestos – Six samples (FH-080607-01 to FH-080607-06) collected on 08/06/07 in Week 15, and one sample (FH-081507-08) collected on 08/15/07 in Week 16 were overloaded with particulates and could not be analyzed with PCMe and TEM methods. These samples were analyzed with Modified VDI-Richtlinien (VDI-3492) methods according to the protocol. The results indicated no asbestos was detected in the samples. The lab report for the VDI-3492 analysis results is attached with the SEO Week 13 to Week 16 Data Summaries.
2. Silica – Primary Peak Interference: Due to primary peak interference in the laboratory, Quantification Limits (QL) for Silica (Quartz) were greater than the Target Air Quality Levels and EPA Trigger Levels for that analyte in six samples (FH-072507-34, FH-072607-34, FH-072907-34, FH-080307-32, FH-080407-33,

and FH-081607-35) collected on 07/25/07, 07/26/07, and 07/29/07 in Week 13, on 08/03/07 and 08/04/07 in Week 14, and on 08/16/07 in Week 16. (Reference: EMSL Analytical Inc. Technical Document: #SILICA-2006-01)

3. Organics – Due to the lab shipping error, the media used for the PAHs field/trip blank (FH-081207-55) on 8/12/07 in Week 15 was broken and was voided. Additionally, due to a lab error, duplicate samples (FH-081807-69, FH-081807-70, and FH-081807-71) collected on Station #1 on 8/18/07 in Week 16 were not analyzed.

### **QA Reviews:**

Data from the SEO Week 13 to Week 16 has been subjected to the following QA reviews:

Field Technician (Joseph Walsh): 100% of field sampling data and field analysis data have been reviewed and verified by the field technician recording the data. This includes review and signature on the chains-of-custody, and review and signature on the field calibration manual.

Field Sampling Coordinator (designee – Christine Chen): 100% field calibration manual notes, field sampling forms, and COCs reviewed/verified. Sample calibration, collection, handling, preservation, and storage procedures were reviewed for compliance with the protocols described in the QAPP. Deviations were documented and Project QA Officer notified.

Data Manager (designee – Christine Chen): 100% of documentation provided by each analytical laboratory supporting the project reviewed. Deviations are documented, Project QA Officer notified.

Fixed Laboratory QA Review: It is Airtek's belief that 100% of all fixed laboratory data has been subject to internal review as detailed in Section 16.1.3.1 of the QAPP.

Project QA Officer (Clifford Cooper, CIH): 100% evaluation of data and potential usability issues related to deviations and deficiencies documented by staff reviews as detailed in this document.

Project Manager (Benn Lewis): Overall review of field operations, field documentation, field equipment function, fixed laboratory performance, data collection and presentation.

### **Conclusions:**

1. Per Section 16.2 of the QAPP, the following data usability parameters have been met:

Precision: No duplicate sample sets resulted in values above the quantitation limits of the methodologies employed. Valid precision values cannot be calculated.

Accuracy: Where applicable, laboratory percent recoveries were within tolerance per the QAPP.

Sensitivity and Quantitation Limits: As noted in this document, Quantitation limits for Silica (Quartz) were above the Target and Trigger levels in seven samples due to primary peak interference. An explanatory technical document is attached.

Completeness:

Field Data: Field Data are 100% complete for the sampling period of Week 13 to Week 16.

Lab Data: No single analytical parameter resulted in a completeness ratio of less than 87.50% (Organics data). The Lab Data for Week 13 to Week 16 as a whole exceeded 99.60%.

Notes:

1. Two additional community monitoring stations (Station #7 and Station #8) became fully operational on 8/15/07 in Week 16 per the QAPP.
2. Elevated Background Contaminant Levels:

Silica: The SEO Week 13 to Week 16 revealed that localized background levels of silica can exceed the USEPA Trigger and Target levels irrespective of site activity at Fiterman Hall. Ten elevated background levels of Silica were recorded on the following date:

Week 13:

July 23<sup>rd</sup>, 2007 – Station #1 = 24 ug/m<sup>3</sup>

July 23<sup>rd</sup>, 2007 – Station #2 = 36 ug/m<sup>3</sup>

July 29<sup>th</sup>, 2007 – Station #5 = 29 ug/m<sup>3</sup>

Week 14:

July 30<sup>th</sup>, 2007 – Station #6 = 11 ug/m<sup>3</sup>

August 2<sup>nd</sup>, 2007 – Station #5 = 13 ug/m<sup>3</sup>

August 3<sup>rd</sup>, 2007 – Station #5 = 13 ug/m<sup>3</sup>

August 4<sup>th</sup>, 2007 – Station #6 = 20 ug/m<sup>3</sup>

Week 15:

August 7<sup>th</sup>, 2007 – Station #3 = 13 ug/m<sup>3</sup>

Week 16:

August 13<sup>th</sup>, 2007 – Station #4 = 30 ug/m<sup>3</sup>

August 17<sup>th</sup>, 2007 – Station #2 = 15 ug/m<sup>3</sup>

**Contaminant-Specific Narratives:**

**Airborne Particulate PM-2.5:**

PM-2.5 particulate sampling was conducted using eight Met-One EBAM monitors, one at each of the community monitoring stations designated by the ECAMP/QAPP. All eight monitors were calibrated prior to Week 13 to Week 16 of the SEO. Data collected as ten-minute averages are attached. Summary sheets providing EBAM PM-2.5 24-hour averages are included in the attached SEO Week 13 to Week 16 Data Summaries.

**Reference Method for PM-2.5:**

A Rupprecht & Patashnick TEOM PM-2.5 monitor was collocated with the EBAM PM-2.5 monitor at Sampling Station #1 (Sidewalk Bridge Level NW Corner) and operated for SEO Week 13, and at Station #2 (Sidewalk Bridge Level SW Corner) and operated for SEO Weeks 14 to 16 to comply with the ECAMP/QAPP requirement for an EPA reference method for EBAM data. TEOM PM-2.5 data collected as thirty-minute averages is attached (TEOM PM-2.5 data July 23<sup>rd</sup> to August 19<sup>th</sup>, 2007). Summary sheets providing TEOM PM-2.5 24-hour averages are included in the attached SEO Week 13 to Week 16 Data Summaries. Based on review of the data to date, it has been determined that application of a correction factor is not necessary at this time.

**Airborne Particulate PM-10:**

PM-10 particulate sampling was conducted using eight Met-One EBAM monitors, one at each of the community monitoring stations designated by the ECAMP/QAPP. All eight monitors were calibrated prior to Week 13 to Week 16 of the SEO. Data collected as ten-minute averages are attached. Summary sheets providing PM-10 24-hour averages are included in the attached SEO Week 13 to Week 16 Data Summary.

**Reference Method for PM-10:**

A Rupprecht & Patashnick TEOM PM-10 monitor was collocated with the EBAM PM-10 monitor at Sampling Station #2 (Sidewalk Bridge Level SW Corner) and operated for SEO Week 13, and at Station #1 (Sidewalk Bridge Level

NW Corner) and operated for SEO Weeks 14 to 16 to comply with the ECAMP/QAPP requirement for an EA reference method for EBAM data. TEOM PM-10 data collected as 30-minute averages is attached (TEOM PM-10 data July 23<sup>rd</sup> to August 19<sup>th</sup>, 2007). Summary sheets providing TEOM PM-10 24-hour averages are included in the attached SEO Week 13 to Week 16 Data Summaries. Based on review of the data to date, it has been determined that application of a correction factor is not necessary at this time.

### **Asbestos:**

Asbestos air samples were collected as provided for in the ECAMP/QAPP. All samples were delivered in good condition to the contract Laboratory (EMSL). Analyses were conducted by TEM (AHERA) and PCMe methodologies. Field blanks are analyzed and reported only in the case where asbestos is detected in the field samples for the subject time period. No asbestos was detected during Week 13 to Week 16 of the SEO; no field blanks were analyzed or reported. Method blanks were provided by the laboratory as required by the methodology. Summaries of all asbestos data are included in the attached SEO Week 13 to Week 16 Data Summaries.

#### Notes:

1. Six samples (FH-080607-01 to FH-080607-06) collected on 08/06/07 in Week 15, and one sample (FH-081507-08) collected on 08/15/07 in Week 16 were overloaded with particulates and could not be analyzed with PCMe and TEM methods. These samples were analyzed with Modified VDI-Richtlinien (VDI-3492) methods according to the protocol. The results indicated no asbestos was detected in the samples. The lab report for the VDI-3492 analysis results is attached with the SEO Week 13 to Week 16 Data Summaries.

### **Mercury:**

Per the ECAMP/QAPP, monitoring was conducted for both mercury vapor and mercury particulate (total) throughout Week 13 to Week 16 of the SEO.

**Mercury Vapor:** Mercury Vapor was monitored per the ECAMP/QAPP with an Ohio Lumex RA 915+ real-time monitor. Summaries of the data recorded in the field are included in the attached SEO Week 13 to Week 16 Data Summaries.

**Particulate Mercury:** Particulate mercury was monitored by the use of Iodated Carbon Traps (ICT). Per the ECAMP/QAPP, two (2) “Spike” samples were run during Week 13 to Week 16 of the SEO.

**Metals:**

Metals sample collection was conducted in accordance with the ECAMP/QAPP. All samples were received in good condition at Severn Trent Laboratories. All Lab QA criteria were met. No further qualification of data was required. Summaries of the data recorded in the field are included in the attached SEO Week 13 to Week 16 Data Summaries. Copies of the laboratory data packages are attached.

**Silica:**

Silica air sample collection was conducted in accordance with the ECAMP/QAPP. All samples were received in good condition at EMSL Laboratories. All Lab QA criteria were met. No further qualification of data was required. Summaries of the data recorded in the field are included in the attached SEO Week 13 to Week 16 Data Summaries. Copies of the laboratory data packages are attached.

Ten (10) background exceedance levels for Silica were detected on 07/23/07, 07/29/07, 07/30/07, 08/02/07, 08/03/07, 08/04/07, 08/07/07, 08/13/07, and 08/17/07 as follows:

Week 13:

FH-072307-29	= 24 ug/m <sup>3</sup>
FH-072307-30	= 36 ug/m <sup>3</sup>
FH-072907-33	= 29 ug/m <sup>3</sup>

Week 14:

FH-073007-34	= 11 ug/m <sup>3</sup>
FH-080207-33	= 13 ug/m <sup>3</sup>
FH-080307-33	= 13 ug/m <sup>3</sup>
FH-080407-34	= 20 ug/m <sup>3</sup>

Week 15:

FH-080707-31	= 13 ug/m <sup>3</sup>
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Week 16:

FH-081307-32	= 30 ug/m <sup>3</sup>
FH-081707-30	= 15 ug/m <sup>3</sup>

## **Organics:**

Samples were collected on 07/24/07, 07/30/07, 08/12/07, and 08/18/07 for Dioxins/Furans, PAHs and PCBs analyses. All samples were received in good condition at Severn Trent Laboratories except for one PAHs field/trip blank collected on 8/12/07. All Lab QA criteria were met. No further qualification of data was required. Summaries of the data recorded in the field are included in the attached SEO Week 13 to Week 16 Data Summaries. Copies of the laboratory data packages are attached.

### Notes:

1. Due to the lab shipping error, the media used for the PAHs field/trip blank (FH-081207-55) on 8/12/07 in Week 15 was broken and was voided.
2. Due to a lab error, duplicate samples (FH-081807-69, FH-081807-70, and FH-081807-71) collected on Station #1 on 8/18/07 in Week 16 were not analyzed.