NYC 9/11 Public Portal Document

QAPP AMENDMENT FORM

DATE FORM SUBMITTED: 10/7/05

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

[redacted]

Concentration of mercury field spike was increased from 50 ng to 150 ng.

Reason for Amendment:

Accurate recoveries were not always achievable at the lower spike level of 50 ng due to background levels (< 15 ng) of mercury present in the media. Increasing the spiking level to 150 ng will cause the background levels of mercury to be negligible when calculating recoveries of field spikes. This new spiking level results in a mercury concentration of approximately 250 ng/m^3 with the volumes of 0.6 m^3 currently being sampled. This concentration is just below the Target Air Quality level of 300 ng/m^3 and will therefore provide more useful accuracy data at the project action level.

Sections of QAPP Affected:

8.2.1, Field Precision Objectives: Change 50 ng/trap to 150 ng/trap beginning with samples from Phase I

8.2.2, Field Accuracy Objectives: Change 50 ng/trap to 150 ng/trap beginning with samples from Phase I

10.3.4, Field Spikes, Total Mercury: Change 50 ng/trap to 150 ng/trap beginning with samples from Phase I

Date Implemented:

September 2005 (Phase I)

[redacted]

Samples for respirable silica will be collected for 24 hours instead of eight hours. Sample volumes will therefore increase from approximately 1.0 m^3 to 2.88 m^3.

Reason for Amendment:

The sample collection time for respirable silica was increased from eight to 24 hours due to the need to accommodate two work shifts. Based on discussions with the analytical laboratory (EMSL Analytical), the increased sample volume will not cause problems for the respirable silica analysis. The only potential problem (which will be monitored by TRC) is if the filter becomes overloaded with particulate causing resistance which may affect the pump flow rates. Pre and post calibrations performed by TRC will monitor for this potential scenario. If this problem occurs, sampling times will be reduced and replaced with an additional subsequent sample to ensure proper monitoring of silica during the two work shifts.

Sections of QAPP Affected:

6.3.3.1, Definition of Exceedances: The reference to an eight-hour value for silica should be removed.

Tables 7-2 and 7-3: Silica should be deleted from the list of analyses collected each work shift and added to the list of analyses collected on a 24-hour basis.

Table 8-1: The estimated volume to be collected for silica will increase from 1.0 m^3 to 2.88 m^3. The quantitation limit for silica will decrease from 5 ug/m^3 to 2 ug/m^3 (with quantitation limits of 7 ug/m^3 for the rare forms of crystalline silica [cristobalite and tridymite]).

Section 10.2.4, Respirable Crystalline Silica and Dust: The time of collection will be changed from eight hours to 24 hours for a resulting total air volume of approximately 2.88 m^3.

Table 12-1: The estimated sample volume will change from 1.0 m^3 (2.0 - 2.1 L/min. for 8 hours) to 2.88 m^3 (2.0 - 2.1 L/min. for 24 hours).

Date Implemented:

September 21, 2005 (Phase I)

CITY_DEP_WORBY_CANNATA_SUBP_000059047

NYC-WTC_000423693

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The sample numbering scheme was slightly modified as follows:

(1) Asbestos samples identifications were appended with "A" and "B" to indicate work shift 1 and 2, respectively.
(2) The field duplicate identification scheme was changed. The current location of the collocated sample is Station 10. The sample identification for the collocated sample will be "ST 100" instead of "ST10a" and ST10b" for the original and collocated samples, respectively.

Reason for Amendment:

Due to the addition of a second work shift, a mechanism was needed to easily identify asbestos samples collected during each work shift. The addition of this identification scheme results in a change to the field duplicate identification scheme in order to avoid confusion.

Sections of QAPP Affected:

Table 14-1: Modifications described above will be applied.

Date Implemented:

The asbestos work shift sample identification scheme was implemented from September 19 through September 23, 2005. This scheme was discontinued on September 26, 2005 when Amendment #4 was implemented. The field duplicate identification scheme was implemented on September 28, 2005 (Phase I)

[redacted]

Samples for asbestos will be collected for the duration of the work shift which may vary depending on the Contractor schedule. Currently the total shift duration is 13 hours instead of eight hours on Monday through Friday and will remain at eight hours on Saturdays and Sundays. Sample volumes on Monday through Friday will therefore increase from approximately 2.88 m^3 to 4.68 m^3.

Reason for Amendment:

The sample collection time for asbestos was increased from eight to 13 hours on Mondays through Fridays due to the need to accommodate two overlapping work shifts. Based on discussions with the analytical laboratory (EMSL Analytical), the increased sample volume will not cause problems for the asbestos analysis unless the filter becomes overloaded with particulate causing the need for SEM analysis. If filter overloading becomes an issue as the project progresses, two asbestos samples will be collected for 6.5 hours each to try and avoid the need for the SEM analysis (increased sampling and analytical costs).

Sections of QAPP Affected:

6.3.3.1, Definition of Exceedances: The reference to an eight-hour value for asbestos should be removed for samples collected Mondays through Fridays.

Tables 7-2 and 7-3: The sample frequency for asbestos should be modified to state once per day for enough hours to monitor during all work shifts.

Table 8-1: The estimated volume to be collected for asbestos will increase from 2.88 m^3 to 4.68 m^3.

Section 10.2.3, Asbestos: The time of collection will be changed from eight hours to 13 hours on Mondays through Fridays for a resulting total air volume of approximately 4.68 m^3.

Table 12-1: The estimated sample volume will change from 2.88 m^3 (6 L/min. for 8 hours) to 4.68 m^3 (6 L/min. for 13 hours) on Mondays through Fridays.

Date Implemented:

The change in asbestos sampling time was implemented from September 26 through October 5, 2005. This sampling modification was discontinued on October 6, 2005 when Amendment #5 was implemented.

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[redacted]

The flow rate for asbestos sampling will be reduced from 6 Liters/minute to approximately 3.7 Liters/minute on Monday through Friday. In addition, the sampling flow rate will stay at 6 Liters/minute on Saturdays and Sundays when eight-hour samples are collected. The sampling times will remain the same as indicated in Amendment # 4. Note going forward the flow rate of samples will be adjusted from 1 to 10 liters per minute, based on the anticipated Contractor work shift duration for that day to attain a sample volume of approximately 2.88 m^3. Sample volumes on Monday through Friday will therefore decrease from approximately 4.68 m^3 to approximately 2.88 m^3.

Reason for Amendment:

As agreed upon in a teleconference with EPA on October 5, 2005, the flow rate for asbestos sampling was reduced on Monday through Friday to avoid the collection of excessive volume and possible overloading of the filters. The reduced flow rate allows for the achievement of the 2.88 m^3 volume which was approved in the September 7, 2005 version of the QAPP. This volume is the minimum volume needed by the laboratory to ensure the required analytical sensitivity is achieved.

Sections of QAPP Affected:

Section 10.2.3, Asbestos: The flow rate for asbestos sampling will be reduced from 6 Liters/minute to approximately 3.7 Liters/minute on Monday through Friday for a resulting total air volume of approximately 2.88 m^3.

Table 12-1: The flow rate for asbestos sampling will be reduced from 6 Liters/minute to approximately 3.7 Liters/minute on Monday through Friday for a resulting total air volume of approximately 2.89 m^3.

Date Implemented:

The change in asbestos sampling flow rate was implemented on October 6, 2005.