



The Louis Berger Group, Inc.

**Initial Building Characterization Study
130 Liberty Street
New York, New York**

Addendum #1

**Sampling and Analysis Plan (SAP); Quality Assurance Project Plan
(QAPP); and Health and Safety Plan (HASP)**

In its role as an Environmental Consultant, the Louis Berger Group, Inc. (Berger) was retained and authorized by the Lower Manhattan Development Corporation (LMDC) to conduct an *Initial Building Characterization Study* (the “Study”) at the building located at 130 Liberty Street (the “Building”), which is scheduled for cleaning and deconstruction. This document amends the existing SAP, QAPP, and HASP, dated August 2004, because of additions to the original scope of work that include testing for mercury vapor and additional testing for asbestos in settled dust.

There were no deviations from the Site Specific Health and Safety Plan; Amendment # 1 to the HASP is enclosed. The Sampling and Analysis Plan and Quality Assurance Project Plan are being amended to include sampling for the following contaminants and procedures used:

Mercury Vapor

As an addition to the original scope of work, one hundred fifty-three (153) direct reading samples for mercury vapor were collected using the Jerome Meter 431-X. The Jerome 431-X mercury vapor analyzer uses a patented gold film sensor for accurate detection and measurement of toxic mercury vapor in the air. This handheld instrument was carried to locations where mercury vapor may be present due to contaminated dust. The sampling was performed on several floors of the building on September 3, 2004 during an approximately 8-hour time period, with approximately 4 hours of actual sampling time. Each of the floors where sampling was performed are represented in the following table:

Location	Sample Type	No. of Samples
Floor 1	Vac	2
Floor M	Vac	1
Floor 2	Vac	1
Floor 3	Vac	2



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Location	Sample Type	No. of Samples
Floor 4	Vac	1
Floor 5	Vac	5
Floor 7	Vac	1
Floor 8	Vac	1
Floor 9	Vac	1
Floor 10	Vac	1
Floor 11	Vac	1
Floor 14	Vac	1
Floor 15	Vac	1
Floor 17	Vac	1
Floor 18	Vac	1
Floor 20	Vac	1
Floor 21	Vac	1
Floor 22	Vac	1
Floor 24	Vac	1
Floor 25	Vac	1
Floor 27	Vac	1
Floor 28	Vac	1
Floor 30	Vac	1
Floor 31	Vac	1
Floor 32	Vac	1
Floor 34	Vac	1
Floor 35	Vac	1
Floor 36	Vac	1
Floor 39	Vac	1
Floor 40	Vac	2
Floor 41	Vac	3



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Asbestos in Dust

An additional 40 samples of the settled dust were collected using the ASTM Standard D 5755-95 Micro-vacuum techniques and will be analyzed for asbestos using the Transmission Electron Microscopy (TEM) method. Due to the limitation of the micro-vacuum sample collection method for asbestos, the intended use of the method will be to determine only the presence or absence of asbestos particulates. The following are some of the procedures used in the collection of the additional samples of settled dust from random locations throughout the Building:

- A sampling template of 100 square centimeters (cm²) was used at sample locations;
- The flow rate of the pump with the cassette attached was set above 2 liters per minute;
- Vacuuming began inside the template and passes were made for the entire sampling time and intersected at right angles; sampling continued until there was no visible dust or for a minimum of 2 minutes, and debris or particles greater than 1 mm in diameter were avoided; and
- Upon completion of sampling at a location, the cassette was sealed by turning the cassette upright, turning off the pump, and sealing the top of the cassette.



**SITE SPECIFIC HEALTH AND SAFETY PLAN
AMENDMENT DOCUMENTATION**

Project Name: 130 Liberty Street **Project No.:** JG2310

Amendment No.: 1 **Date:** 9/13/04

Amendment Revises: Page: 3; Table 4 **Section:** 1.2; 3.0

Task(s) Amendment Affects:* Site characterization and survey

**(Attach new/revised Job Safety Analyses)*

No additional hazards will be introduced by the new tasks; existing HASP cover hazards of new tasks.

Reason For Amendment:

**Add new tasks: (1) Mercury vapor sampling with Jerome 431-X Direct Reading Instrument, and
and (2) Asbestos bulk sampling using micro-vacuum technique.**

Amendment: *(Attach separate sheet(s) as necessary)*

Mercury Vapor

As an addition to the original scope of work, direct reading samples for mercury vapor will be collected using the Jerome Meter 431-X. The sampling will be performed on several floors of the building during an approximately eight (8) hour time period, with approximately four (4) hours of actual sampling time.

Asbestos

An additional forty (40) samples of the settled dust will be collected using the ASTM Standard D 5755-95 Micro-vacuum Techniques for Asbestos and will be analyzed using Transmission Electron Microscopy.

Completed by: Kevin J. McMahon, CIH **Approved by:** o/s/b