



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 2  
290 BROADWAY  
NEW YORK, NY 10007-1866

January 31, 2005

Ms. Amy Peterson  
Project Manager  
Lower Manhattan Development Corporation  
One Liberty Plaza  
New York, New York 10006

Dear Ms. Peterson:

Enclosed are comments from the United States Environmental Protection Agency (EPA), the New York State Department of Environmental Conservation and the New York State Department of Labor, on the draft Phase 1 deconstruction plan for 130 Liberty Street prepared by the Lower Manhattan Development Corporation (LMDC). EPA's comments address, among other things, implementation of best management practices for all areas of the work during deconstruction, expansion of containment measures to control potential releases of contaminants, and development of a comprehensive air monitoring program to intercept and address releases.

After incorporating changes to the proposed specifications based on these regulatory comments, the updated and revised Phase 1 deconstruction plan should be resubmitted to EPA and the other regulatory agencies for final review as to their acceptability prior to the start of deconstruction work.

As LMDC acknowledged in the Environmental Impact Statement (EIS) for the World Trade Center (WTC) site, 130 Liberty Street was "severely damaged" by the 9/11 collapse of the WTC towers. Further, Chapter 11 of the EIS notes an extensive listing of hazardous materials at the WTC site, and specifies that the deconstruction plan for 130 Liberty Street "would provide site-specific protocols to be followed during the removal of any contaminated dust, debris and materials from the interior of the building." This objective is particularly important given the large number of neighboring residents and workers who could be impacted by releases of such contaminated material.

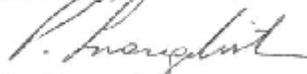
130 Liberty Street, which contains more than 1,400,000 square feet of space, is the most heavily damaged structure remaining after the terrorist attack. The building was directly hit by portions of the facade from the South Tower and by an extensive amount of falling and blown contaminated

debris and dust from the collapse of the WTC towers. As a result, 130 Liberty Street was seriously contaminated both inside and outside with dust and debris containing asbestos, lead and other hazardous substances and contaminants. Safeguards for the prevention of releases into the environment of such hazardous substances and contaminants during the deconstruction process must be employed to prevent a situation that may present an imminent and substantial endangerment to public health and the environment. EPA's principal objective in assessing the draft specifications for Phase I of the deconstruction process has been to identify instances where safeguards against such releases must be strengthened.

In the period following the terrorist attack, and extending to the present, extensive sampling and analyses have been performed of the WTC dust and other materials within 130 Liberty Street, including dust in so-called interstitial spaces above the ceiling, cell systems below the concrete floor and in duct work. Based on these analyses, it is evident that there is significant potential for releases of contamination during both the Phase 1A and the Phase 1B deconstruction if appropriate safeguards are not implemented.

The draft deconstruction specifications set forth "site-specific" protocols by LMDC's contractor for the removal of "contaminated dust, debris and materials." In EPA's judgement, the December 10, 2004 specifications or "protocols" for the work, while adequate in some areas, need to be materially strengthened in several principal respects, as set forth in the enclosed comments.

Sincerely,



Pat Evangelista

WTC Coordinator

New York City Response and Recovery Operations

Enclosures (3)

**DECEMBER 10, 2004**  
**GILBANE DRAFT DECONSTRUCTION PLAN**  
**130 LIBERTY STREET**  
**PHASE I DECONSTRUCTION**  
**FOR LMDC**

**U.S. ENVIRONMENTAL PROTECTION AGENCY COMMENTS**

**GENERAL COMMENTS**<sup>1</sup>

LMDC and its contractors should utilize best management practices in all phases of the deconstruction for 130 Liberty Street so as to prevent any releases of asbestos, hazardous waste or hazardous waste constituents into the environment, which may threaten public health and the environment.

LMDC should ensure the implementation of appropriate identification and management practices for hazardous wastes and hazardous waste constituents and materials throughout the deconstruction.

LMDC should ensure that its contractors comply with all applicable occupational regulations and best management practices to protect the health and safety of the workers.

WTC dust and hazardous constituents present at 130 Liberty Street may present the threat of a release into the environment. The containment measures for Phase IA should be applied to Phase IB. Containment is necessary because analyses of contaminants of potential concern at 130 Liberty Street have shown that the interstitial spaces, which will be exposed during Phase IB, contain contamination that is similar in nature and extent to contamination in areas addressed in Phase IA. The proposed Phase I plan involves removal of some windows on each floor and use of mechanized equipment that will stir up dust. Accordingly, the work in Phase IB would increase the risk of releases of contaminants into the environment if containment is not utilized.

The proposed air monitoring plan for Phase I is not acceptable in its current form. The air monitoring plan is fragmented into more than one plan, and it is unclear which plan, or which

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<sup>1</sup> Please note that these Comments relate to the Phase I deconstruction plan, dated December 10, 2004. The U.S. Environmental Protection Agency has not received a draft deconstruction plan for Phase II, and EPA reserves its right to comment on that document when it is provided to the regulators. EPA also reserves its right to make additional comments about the Phase I deconstruction plan.

specific elements of each plan, would be followed during the deconstruction work. The separate plans must be merged into one comprehensive air monitoring plan for Phase I and resubmitted so that the adequacy of that monitoring plan can be assessed.

## **SECTION 1: WASTE SAMPLING AND MANAGEMENT PLAN**

### **General Comments**

Phase I of the deconstruction may result in the generation of hazardous waste. Accordingly, LMDC, as the current owner of the property, should file a hazardous waste notification revision with the U.S. Environmental Protection Agency (EPA) pursuant to the Resource Conservation and Recovery Act (RCRA).

LMDC should provide EPA and the New York State Department of Environmental Conservation (NYSDEC) with an estimate of the monthly volume of RCRA regulated hazardous waste that is expected to be generated during the deconstruction process based on the material inventories and the deconstruction schedule that have been prepared.

If LMDC, and/or its contractors, generate greater than 100 kg./mo. of hazardous waste during the deconstruction process, they would be required to comply with, among other things, 6 New York Code Rules and Regulations (NYCRR) Part 373, Subpart 373-3, Section 373-3.3(b). (*See also* 40 C.F.R. Section 265.31 - Maintenance and Operation of Facility). LMDC would be required to implement best management practices to minimize the possibility of any sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil or surface water which could threaten human health or the environment.

### **Building Components - Page 3**

In the list of miscellaneous building components, the term “Bagged accumulated waste” is not defined or discussed. Please identify what this waste is; what is its source, and how it will be managed.

### **Waste Characteristic Specifics**

#### **Asbestos-Containing Building Materials (ACBM) - Page 9, Second Paragraph**

If fire doors are potentially ACBM, they need to be handled as such until proven otherwise. Similarly, EPA recommends that the specifications provide for managing potential hazardous wastes as hazardous until a hazardous waste determination is made.

## **Analytical Methods and Sample Collection Frequency**

### **Page 10, Second Bullet**

This item refers to Method 9045C. This method is used for Soils and Waste (including non-aqueous liquids) with less than 20% water. The current inventory of miscellaneous building materials to be removed (Appendix 2) includes containers of unknown materials, and it is likely that MSDS sheets will be unavailable for them. A method for testing aqueous liquid corrosives should also be listed (Method 9040B) for these unknown materials.

### **Page 11**

The statement that “Building components would generally not be considered as possible RCRA characteristic wastes except for the potential that exists due to impacts by WTC dust.” is only correct in so far as it excludes the miscellaneous building components listed in Subpart 4.4 (Miscellaneous Building Components)..

### **Porous Deconstruction Waste**

#### **Suspended Ceiling Tiles, Carpeting and Fiberglass Insulation, Gypsum Wallboard, Sprayed on Fireproofing and Exterior Mesh/Netting - Pages 17 & 18**

Replace “. . . *them* it will be handled” with “*then* it will be handled” in all three subparts.

The following change is suggested to the portion of the sentence specified in the above referenced subparts, . . . “in accordance with appropriate regulatory requirements ~~for the waste type~~ determined to apply to the waste.”

### **Miscellaneous Building Components**

#### **PCB Light Ballasts and other PCB Wastes - Page 22**

Fluorescent Light Ballast and other PCB-containing equipment are subject to the PCB regulations at 40 C.F.R. Part 761.

The proposed Deconstruction Plan specifies that all fluorescent light ballasts without a “No PCBs” mark would be handled and disposed as PCB waste. This procedure does not address potential PCB contamination of “potting material,” as explained below.

Fluorescent light ballasts contain a small capacitor and other electrical components which are encased in a tar-like substance that is commonly known as “potting material.” Prior to July 1, 1979, PCB was the dielectric fluid of choice in the small capacitors that were used by light ballast manufacturers. After July 1, 1979, the manufacture of PCB capacitors was not

authorized. Each fluorescent light ballast manufactured between July 1, 1978 and July 1, 1998 that did not contain PCBs was required to be marked with the statement “No PCBs.” At the time this requirement was promulgated, the regulatory focus was on the fluid content of the capacitor. In the 1990's, EPA learned that the “potting material” in pre-1978 ballasts was frequently contaminated with PCBs at levels exceeding 50 parts per million (ppm). The presence of a “No PCBs” label on a ballast, especially if it was manufactured in the years immediately following 1978, would not provide assurance that the “potting material” was not contaminated with PCBs. (Such “potting material” at contamination levels exceeding 50 ppm may also constitute New York State hazardous waste pursuant to 6 NYCRR, Part 371, Section 371.4(e).)

When large numbers of such capacitors or ballasts are collected prior to disposal, EPA recommends that they be disposed as PCB waste. Fluorescent light ballasts with “potting material” that is contaminated with PCBs above the regulated level of 50 ppm, even if the capacitors within them do not contain PCBs, would be PCB articles and would be regulated for disposal as PCB waste.

### **Universal Waste -Mercury Switches - Pages 25-26**

Subpart 4.4.2.3.2 (Components) does not clearly specify if the mercury switches for disposal are solely from thermostats. Page 26 of the plan only states that “Mercury switches are commonly used in thermostats.” EPA and NYSDEC’s Universal Waste Rule applies only to certain mercury-containing thermostats, not to all mercury switches. Therefore, a hazardous waste determination must be made for all non-thermostat mercury switches prior to transportation and disposal.

### **Miscellaneous Stored Containers**

#### **Disposal - Page 31, First Paragraph**

In regards to the statement that . . . “[i]t will be the responsibility of the generator of the material to determine the appropriate treatment, storage or disposal facility (TSDF) to which the materials will be shipped based on waste profiles.” Under RCRA, any hazardous wastes generated by Gilbane at 130 Liberty Street would also be considered to have been cogenerated by LMDC. Accordingly, LMDC would be a co-generator of the waste and also liable for mismanagement of that waste.

#### **Transportation - Pages 31-32**

An additional statement needs to be incorporated into this subpart to state that only transporters with RCRA identification numbers will be used to transport hazardous wastes unless the generator is a conditionally exempt small quantity generator.

Bullet Items: Delete the last two bullets since they were specified earlier in the list of bullet items.

## **SECTION 2: AMBIENT AIR MONITORING PROGRAM**

### **Critical Elements Needed in a Monitoring Plan:**

Although EPA cannot fully assess the adequacy of the air monitoring plan, and thus cannot provide all of its comments on the plan until LMDC clarifies exactly what is proposed, there are several significant tasks that need to be addressed as part of the plan. Those tasks are as follows:

**a) Fine Particles**

Fine particles (PM<sub>2.5</sub>) must be sampled because of known health effects due to such particles. Reconstruction/deconstruction equipment and processes will also generate PM<sub>2.5</sub>. It is essential that these emissions be controlled and do not further contribute to the already unhealthful levels of fine particles in lower Manhattan.

**b) Neighborhood Monitoring Sites**

Monitoring needs to be conducted in the neighborhoods surrounding the deconstruction site to provide assurances to the community that LMDC is taking all feasible steps to reduce the impact on the neighborhood. EPA recommends placement of monitors in the vicinity of the residential neighborhoods of Battery Park City; the schools in the vicinity of the intersection of Chambers and West Streets; and the commercial (and mixed use) areas to the east and south of the building.

**c) Metals**

Monitoring should be conducted for antimony, barium, beryllium, chromium, mercury (particulate fraction) and nickel in addition to the other metals listed. These six metals can be associated with Phase I activity and/or were previously detected during EPA's air monitoring in the vicinity of the WTC. With the exception of mercury, the metals were included in the proposed listing of metals in the proposed monitoring plan prepared by TRC.

**d) Background**

Both continuous and Federal Reference Method (FRM) particulate monitors should operate on-site for at least a 2-week period prior to the beginning of the work. In addition to a co-located PM<sub>10</sub> FRM monitor, include a co-located PM<sub>2.5</sub> FRM monitor. Information from these monitors will help in estimating the contribution of the deconstruction work to ambient air quality.

e) **Asbestos Analysis**

All asbestos samples relating to background and phase out activities should be analyzed by transmission electron microscopy (TEM). Structure counts should be recorded according to the Asbestos Hazard Emergency Response Act (AHERA) counting rules (total asbestos structures > 0.5 microns in length and the subset of total structures that is > 5 microns in length).

f) **Action Levels**

The section is incomplete with regard to the following matters: Action levels for PM<sub>2.5</sub>, asbestos, and other contaminants of potential concern must be included for acceptance by EPA prior to work initiation. The procedures for notification to EPA of an exceedance of any action level must be provided. The notification should define the level of the exceedance, the potential source(s), the type of response and the time frame for response to the exceedance. Action levels are also needed for modification of engineering controls/work practices, as well as for work stoppage in response to an exceedance so as to protect public health and the environment.

g) **Laboratory Turn-Around-Time**

The five day turn-around-time (TAT) conflicts with the TAT for asbestos listed in the asbestos specification, which lists the TAT as 24 hours. Provide EPA with a listing by analyte of the TAT and the reporting schedule and frequency for each analyte.

**Sampling and Monitoring**

**Integrated Samplers**

Indicate where filters will be stored and how they will be transported.

**Reporting**

EPA will need access to the website which will contain the air monitoring data (Teamlink website).

**SECTION 3: EMERGENCY ACTION PLAN**

**General Comment**

The Emergency Action Plan for Phase I should be revised to provide a detailed contingency plan for emergencies and abatement/demolition related problems related to 130 Liberty Street. The proposed plan does not contain all of the components required in a contingency plan (e.g.,

no discussion of arrangements with local hospitals - although some are listed in Appendices A, B and E; no mention of submitting copies of the plan to local authorities, notification procedures, etc.)

## **SECTION 6: ASBESTOS ABATEMENT PLAN**

### **General Comment**

The management structure for the abatement and demolition contractors and their subcontractors should be provided showing the management organization for Phase I, including but not limited to, management on each of the floors, the loading dock, the elevators and the Demolition Debris Chute.

### **Part 1 - General**

#### **Phasing of Work - Page 4**

The overall plan for Phase I should incorporate containment in both Phase IA and Phase IB to ensure that there is no release of hazardous constituents into the environment from open portions of the building.

The Phase I plan lacks procedures to ensure that the work of the contractors and subcontractors is coordinated to facilitate implementation of the work in an orderly manner. Prepare a coordination plan showing, at a minimum, the sequencing of the work, a time line for Phase IA and IB-type activities on each floor, and the total time for completion of each activity.

The plan does not provide any information on the manner in which mold and bacterial contamination will be addressed. Such information should be included in the Phase I plan.

An engineering report addressing, among other things, the effects of wind forces and wind pressures on the building during abatement and demolition should be prepared by a New York State certified engineer based on the specifications, as revised in accordance with the regulators' comments, and submitted to the appropriate regulatory agencies prior to the commencement of Phase I work. The report should confirm that the revised specifications adequately address the effects of wind forces on the building throughout the deconstruction.

The plan for Phase I should identify the disposal facility or facilities for hazardous waste, construction and demolition debris and other waste types. The plan should state all waste will be handled, transported, stored off-site and disposed of in accordance with all applicable regulations.

## **Utilities and Site Requirements**

### Wastewater - Page 5

Wastewater and spent filters will be generated during the asbestos abatement. Section 1 of the Deconstruction Plan, Waste Sampling and Analysis, does not address the wastewater and/or spent wastewater filters that will be generated by the Abatement Contractor. This, and any other solid waste generated, must be subject to a hazardous waste determination prior to disposal.

### Job Site Postings - Page 6

The requirement in the plan to keep “A copy of all Material Safety Data Sheets (MSDS) for hazardous chemicals used during the asbestos project” indicates that hazardous chemicals will be used. Any wastes generated during the use of such hazardous chemicals must be managed in compliance with all applicable RCRA requirements.

## **Part 2 - Products**

### Materials - Subpart C. and O. - Page 22

Surfactants are required to be non-toxic and non-hazardous. Paragraph O. states that acceptable foam or viscous liquid shall be non-toxic and shall not require special disposal. Other materials such as caulking sealant, encapsulant, foam sealant, and spray adhesive do not have this requirement. As stated in the previous comment, spent materials must be managed in compliance with RCRA including waste determination, storage, transportation and disposal.

## **Part 3 - Execution**

### Personnel Protection and Decontamination Procedures

Page 35, Item 14 Aggressive air sampling techniques are required for asbestos air clearance sampling. If samples are “too overloaded to analyze,” collecting air clearance samples without using aggressive sampling techniques would not reveal the actual levels of airborne asbestos concentrations. After recleaning, the subsequent round(s) of clearance air sampling should be performed with aggressive air sampling techniques to give the actual levels of asbestos, if any, remaining.

### Removal of Asbestos-Containing Building Material

Page 39 A plan stating the criteria for determining whether waste material is clean and may be disposed of as non-ACBM needs to be developed. In LMDC’s proposed plan, the contractor appears to have the option to clean and dispose of waste as non-ACBM or to bag waste and

take it out as ACBM. The plan needs to state whether carpet and ceiling tile are to be treated as ACBM or non-ACBM, and how they will be removed and disposed of.

Page 42 Building deconstruction (Phase IB & II) should not be allowed to commence prior to completion of asbestos abatement if deconstruction activities would disturb or prevent access to the asbestos.

Step 3 Final Air Clearance Testing and Re-establishment of Area - Page 54

Item 3b: The plan does not state whether PCM or TEM analysis will be used for final air clearance testing. All final air clearance monitoring samples should be analyzed using TEM with an air clearance criteria of <70 s/mm squared.

**Disposal and Transportation of Asbestos-Contaminated Waste - Page 56**

Item 2: The plan should state whether 30 cubic yard containers are the only size containers to be used to remove debris off-site.

Figure 1, First Floor Plan Location of Waste Decontamination Chamber and Proposed Demolition Chute

Provide detailed schematics showing the precise location of the chute and the interior construction. Provide an explanation of how the contractor will address clogging of the chute, excess water collecting at the base of the chute, dust control and containment measures to prevent a release into the environment, and other contingency measures.

**SECTION 7: SOFT STRIP/INTERIOR GUT (PHASE IB) PLAN**

**I. Scope of Work**

The plan for Phase IB lacks a detailed description of the procedures and operations for the Phase IB work. The scope of the work conducted under full containment should be expanded.

Gypsum wall board (GWB) and the mechanical, electrical and plumbing (MEP) associated with the exterior walls throughout the building should be cleaned and removed during Phase IB.

The plan for Phase IB should include removal of the main heating, ventilation and air conditioning ducts and equipment and MEP after thorough cleaning prior to disposal.

A diagram showing the locations of materials expected to be addressed on each floor should be prepared for Phase IB.

#### **IV. Health and Safety**

The plan should state who is responsible for monitoring Phase IB work and shutting down the work. State the standards that have been established to stop work and to resume work after a stoppage, and who will provide notice to the governmental entities.

#### **VIII. Work Area Engineering Controls**

The GWB/sheet rock walls and encapsulated sprayed-on fireproofing up to the curtain wall should be removed under containment.

Provide detailed plans and specifications for the water filtration and disposal system for water used to wet down the debris before the waste water is sent to the sanitary sewer. Explain how waste water generated on the floor being abated or demolished is to be collected, and also explain how such waste water will be disposed of.

As part of the revised specifications, provide a descriptive plan for removal of windows for ventilation purposes, the type and use of filters and any hard surface barriers to be installed and other aspects, including the number of windows to be removed per floor and the manner in which the overall procedure will be consistent with containment. Are Merv 6 filters HEPA filters? When filters are removed at the end of each shift, will hard surface barriers be installed?

It is recommended that make-up air be pumped into each floor via the stairwells instead of opening or removing windows.

#### **X. Execution**

##### **Pre-deconstruction Preparation**

##### **1. Establish Rubbish Chutes**

The plan proposes that debris generated during Phase IB will be dropped down a Demolition Debris Chute. Explain in detail the measures that will be implemented to prevent a release from the dumping of large volumes of waste down the Demolition Debris Chute. We are concerned that the disposal shaft not be a source of dust release and that any potential release is addressed in Phase 1B and Phase II.

For materials that are brought down using a crane with a skip pan or material hoist, the plan should provide details on the engineering controls that would be used to prevent liquid debris from spilling on the street, and the engineering controls that would be used to prevent visible emissions.

When temperatures are below 32 degrees Fahrenheit, and the use of water is suspended, state

how many air filtration devices per floor will be used.

## **Deconstruction**

### **1. Work Sequence**

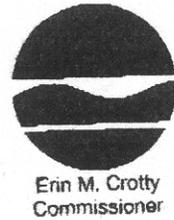
The deconstruction work sequence for GWB, MEP, etc., needs to state in detail the manner in which all the material will be cleaned prior to deconstruction.

Once spray-on-fireproofing is removed, how will it be handled? Provide specific details. State what available information is needed for the contractor to conclude that the spray-on-fireproofing is dust free.

### **2. Debris Handling in the Work Area**

During debris handling in work area, when debris is loaded into the 30 cubic yard container via Komatsu WA95, what will be done to keep the sharp metal objects from puncturing the liner? Provide specific details. State what contingency plans are in place to handle liquid debris spillage on the street during transportation to the disposal site. Provide copies of any such plans. Explain whether metal/steel that is going to be recycled will be cleaned after it is taken out of the bottom of the chute. If so, explain how.

**New York State Department of Environmental Conservation**  
**Division of Solid and Hazardous Materials, 9<sup>th</sup> Floor**  
625 Broadway, Albany, New York 12233-7250  
Phone: (518) 402-8651 • FAX: (518) 402-9024  
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January 20, 2005

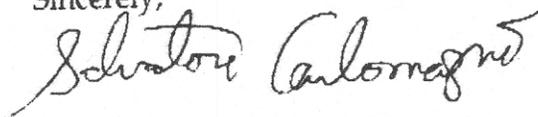
Mr. Pat Evangelista  
United States Environmental  
Protection Agency - Region 2  
290 Broadway  
New York, NY 10007-1866

Dear Pat:

Enclosed are the New York State Department of Environmental Conservation's comments on the Draft Deconstruction Plan for 130 Liberty Street. The comments address air, solid waste and RCRA issues.

If you should have any questions relating to the comments, please contact me at 518-402-8655.

Sincerely,



Salvatore Carlomagno  
Regional Solid & Hazardous Materials Engineer  
Region 2

Enclosure

SC.pl

# **New York State Department of Environmental Conservation**

## **Comments on Deutsche Bank Draft Deconstruction Plan**

**January 6, 2005**

### **SOLID WASTE**

1. General: There should be a single listing or table of all of the types of solid waste produced from this site, what they are classified as, the method/means for that determination, its ultimate disposal/recycling location(s), and expected intermediate processing/handling steps, if any.
2. Porous Deconstruction Waste:
  - Page 14, Section 4.2.2, discusses “levels in excess of regulatory requirements for disposal as general C&D.” What are they? Also, carpet is excluded from definition of C&D debris.
  - Page 15, Sprayed-on Fireproofing - We assume that friable asbestos is the constituent of concern that is being encapsulated. Even if the friable asbestos is encapsulated, the material is not eligible for C&D disposal. There are additional concerns if this waste is processed prior to disposal.
  - Page 17, Section 4.2.4.1, needs to mention disposal options for C&D debris and non-C&D wastes (i.e., carpeting, encapsulated sprayed-on fireproofing).
  - Page 18, Section 4.2.4.4 - Needs to mention disposal option as C&D debris, if applicable.
3. Non-Porous Deconstruction Waste - Page 20, Section 4.3.4 - Potential recycling facilities are not identified.
4. Miscellaneous Components
  - Page 23, PCB wastes: Electrical fixtures containing hazardous liquids such as florescent light ballasts or transformers are excluded from definition of C&D debris.
  - Page 27, Refrigerant-containing Material: This material would be considered an appliance and is excluded from definition of C&D debris.

- Page 28, Fire Extinguishers: Should also contact manufactures for discharged fire extinguishers. Material would be considered an appliance and is excluded from definition of C&D debris.
  - Page 30, Miscellaneous Stored Containers: States that “the materials will be handled, packaged, labeled, transported, and disposed of in accordance with the appropriate regulatory requirements for the waste type determined to apply to that waste stream. The plan should provide a table indicating these requirements for the various containers that are likely to be encountered (e.g., antifreeze, cleaning solutions, paint, corrosion inhibitor, etc.).
5. Transportation Requirements, Page 31: The plan has to indicate that all hazardous and asbestos wastes will be transported out using Part 364-permitted haulers.

## **AIR**

**Note: The plan under review is for Phase I only. Phase I involves the removal of interior, non-structural building elements and systems only. Monitoring results from this effort will be a necessary input for the design of the Phase II plan.**

1. General Concerns:
- The action level for realtime PM monitoring is based on the 24-hour standard of  $150 \mu\text{g}/\text{m}^3$  for  $\text{PM}_{10}$ . The particle size distribution of the emissions associated with Phase I deconstruction is not a known parameter. If it turns out that the major portion of particles are in the fine particulate range ( $<2.5 \mu$ ), then the 24-hour standard of  $65 \mu\text{g}/\text{m}^3$  for  $\text{PM}_{2.5}$  would be exceeded, and the action level proposed may not be sufficiently protective.
  - Another concern is the consequence of using an action level based on a daily standard for a project that may take many months or years to complete. For long-term projects it is appropriate to use the annual standard as an action level in order to avoid potential violations of the ambient annual standard for both PM-10 and PM-2.5.
  - It is not known if or how the USEPA is going to designate the background monitoring sites. If the sites are undesignated, that makes data comparisons with the existing ambient network data and public interpretation of the data problematic. The USEPA could designate the sites as special purpose, micro-scale or even as middle-scale. These designations carry implications as to the future use of the data and need to be discussed before the project begins.

## 2. Specific Comments

- Monitoring Sites: A site location map with prevailing wind directions should be provided.
- Asbestos Analysis: The five-day laboratory turn around time for PCM asbestos samples is excessively long. The laboratory should be able to provide turn around time of 24 hours so that corrective actions can be promptly taken should operational problems arise.
- Task-specific: It is not clear what remedial activities and events will trigger silica sampling.
- Background Monitoring: The background concentration of any pollutant in the New York City metropolitan area can vary to a large extent. Regional transport and meteorological conditions often lead to a pollutant trend on the order of two-to-four days. Therefore, the proposed three-day duration of background monitoring may not be adequate. The continuous background monitoring should operate around the clock. Fugitive emissions once the building envelope is compromised could easily occur at off-shift times.
- Quality Assurance: If sample collocation is not performed during work activities, it would be advisable to do so, both prior and subsequent to the project. There should be a Quality Assurance Project Plan that provides more detail on quality assurance activities. For example, frequency of calibrations are not identified.
- Data Reporting - A method of making the air quality data that is generated available to the public and regulatory authorities should be considered. Suggestion: Monitoring data promptly posted on a website and regulatory authorities provided access to the monitoring database on a near realtime basis.

## **RCRA**

1. Last paragraph of Page 5: ELAP certification for labs is required in New York State. See 6 NYCRR 370.1(f).
2. First full paragraph of Page 6: Hazardous wastes must be managed in compliance with hazardous waste regulations when they are first generated. See USEPA guidances 11424 and 11841 (available at [www.epa.gov.rcraonline](http://www.epa.gov.rcraonline)). Hence, proper management of a hazardous waste is required regardless of when analytical results are received or selection of disposal facilities is made.

3. Top three bullets on Page 10:

- P Even though it does not specifically involve use of an analytical method, the Department recommends a brief statement that a DOT oxidizer is also a D001 hazardous waste, since an "oxidizer" is listed in Attachment 2 as being on the 41st floor. (The second-to-last paragraph on Page 21 equates "full RCRA characteristics in accordance with 40 CFR 261" to what is described here on Page 10, but Part 261 has pathways that are not mentioned on Page 10, including the DOT oxidizer pathway described above.)
- P Test method 9040 should be specified instead of 9045, since both the Department and USEPA regulations specify 9040. Also, the analytical test for corrosion rate should also be listed.
- P Sections 7.3.3 and 7.3.4 are proposed to be removed. See October 30, 2002 Federal Register (p 66265).

4. Top paragraph on Page 19:

- "Non-porous construction-generated waste" is identified elsewhere (top of Page 20 and middle of Page 3) as including window units that are removed for crane and man-hoist connections. Per the February 11, 2004 Federal Register (p 6569), it is possible that the windows are of a type that were manufactured with selenium as an ingredient to reduce solar heat transmission. Hence, those window units could thereby be inherently hazardous (i.e., D010). ASIDE: If any *shattered* windows are of a type that contained selenium, selenium should be added to the COPC (contaminants of potential concern) list described on Page 4 (and referenced repeatedly throughout Section 1).
- Painted surfaces might also fail TCLP due to pigments containing Cd, Cr, (i.e., items may fail TCLP for more metals than just Pb).

- 5. Item 4.4.2.3 on Page 25: Only mercury *thermostats* are eligible for the Department's and USEPA's universal waste rule. A USEPA proposal to add other mercury-containing equipment to the UWR has not yet been promulgated.
- 6. Between 4.4.2.6 and 4.4.2.7 on Page 28: The writeup jumped over "bagged accumulated waste," which was listed on Page 3 between "refrigerants" and "diesel fuel."
- 7. Item 4.4.2.7 on Page 28: Diesel fuel that is *disposed of* would potentially be D001 hazardous waste due to low flashpoint (i.e., <140°F), since references list a flashpoint range of 110-190°F.

8. Item 4.4.2.11.2 and .3 on Page 31:
  - A pressure gauge is not believed to be of use in determining the amount of propane remaining in a cylinder because propane liquifies under pressure.
  - Both oxygen and propane going for *disposal* would be hazardous waste (D001).
9. Page 2 of Attachment 2: No miscellaneous building materials are listed for the 40<sup>th</sup> Floor.
10. First paragraph on Page 8 and elsewhere: Meeting both the hazardous waste management and disposal requirements AND the Part 360 asbestos management and disposal requirements simultaneously for the same waste may not always be possible because of potentially conflicting requirements (e.g., double bagging).



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BLDG. 12 RM. 154

January 7, 2005

Pat Evangelista  
US EPA  
290 Broadway  
New York, NY

**Re: General Comments on Asbestos Abatement/WTC Dust Cleanup Portion of  
Gilbane Deconstruction Plan, dated 12/10/04  
Vacant High Rise Office Building  
130 Liberty Street  
New York, NY**

Dear Pat,

The Department has reviewed the December 10, 2004 Gilbane Deconstruction Plan, as it relates to asbestos material (ACM) removal and cleanup of the WTC dust. Several significant items within the plan must be revised to address Departmental concerns.

The Department has discussed concerns regarding the plan with the NYC DEP, and the Department provides the following general comments on the plan, to be included with your comments on the entire referenced plan. Specific comments will not be provided by the Department until these more general issues have been appropriately addressed and the plan revised as necessary.

**General Comments**

- Regarding the cleanup or disturbance of any interior or exterior WTC dust/residue including WTC dust/residue within any interior interstitial spaces, as the Department has previously indicated, all handling or disturbance of ACM or WTC dust/residue at the site is considered an asbestos project as defined by Industrial Code Rule 56 (ICR 56).
- A comprehensive asbestos demolition survey must be completed for the entire building and submitted as indicated within ICR 56. This comprehensive asbestos demolition survey is necessary prior to the development of a final asbestos project design and deconstruction plan. The "deconstruction" is a demolition project, thus a comprehensive asbestos demolition survey of the entire building, including access and characterization of all interstitial spaces is required by ICR 56. Attempting to complete a thorough asbestos abatement project design without a comprehensive asbestos survey for the building may ultimately result in improper handling of materials.

**Asbestos Project Design Issues**

- The asbestos project design procedures within each phase of the plan require

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clarification and definition. Concerns include:

- Procedures for isolating abatement areas from non-work areas with specific references to the installation of isolation barriers, airlocks, partitions, and elevator barriers.
  - Definition of areas not requiring cleanup of WTC dust/residue.
  - Provisions for addressing discovery of ACM or WTC dust/residue within hidden areas/spaces.
- 
- One large portion of the asbestos project design that appears deficient, is the cleaning of WTC dust from interstitial spaces other than above ceiling interstitial spaces. The asbestos project design must address removal of ACM and cleanup of all WTC dust/residue at the building; this includes all interstitial spaces. If WTC dust/residue is located within interstitial spaces, the cleanup of this dust/residue must also be included as part of the asbestos project. Prior to deconstruction of remaining building elements by non-certified personnel, all ACM and WTC dust/residue must be removed from that floor/area/space of the building scheduled for deconstruction activities.
  - According to the asbestos project design, four floors are encompassed in each regulated abatement work area. Appropriate procedures for stairwells and shafts connecting the floors must also be included within the asbestos project design. Specifically, methods of isolation, work area preparation procedures, calculations for negative pressure ventilation equipment, and air sampling requirements should be included for all regulated abatement work areas within the asbestos project design.
  - A pre-cleaning of all surfaces within each regulated abatement work area is required by ICR 56, prior to the removal of in-place ACM. Therefore, clean up of WTC debris/residue after the removal of in-place ACM is not acceptable. As the WTC debris/residue is known to contain asbestos fibers, this issue along with appropriate pre-cleaning procedures must be addressed within the asbestos project design, as well as the site-specific variance.
  - The encapsulation of non-ACM fireproofing with a bridging encapsulant is also a concern to the Department. If it is known that WTC dust/residue is located on the exposed fireproofing surfaces, then the WTC dust/residue must be removed, including all contaminated fireproofing, as post-abatement deconstruction activities will disturb all remaining non-ACM fireproofing including any encapsulated WTC dust/residue.
  - The cleaning of porous items for disposal as non-ACM waste is also a concern to the Department. Non-porous items are typically cleanable, and porous items are typically not cleanable. An acceptable plan for testing porous materials would be difficult to develop since WTC dust contamination was not homogeneous and not

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evenly distributed throughout the building. Cleaning of porous items/components should not be an option. The removal of porous items/components should be completed as part of the asbestos project, as HEPA-vacuumping and wet cleaning of WTC dust/residue from porous surfaces may not remove WTC dust/residue at pores/spaces within the item/component.

- The air monitoring requirements and procedures for the project must be clearly established. A schedule of sampling and locations for sampling should be identified.
  - TEM sampling is recommended if problems are anticipated with using PCM air sampling methodology (e.g. overloading, excessive non-asbestos airborne dust).
  - Methodology references appear inconsistent. There is a reference to “inside” samples and a reference to the applicable sections of the rules. ICR 56-17 requires both “inside” and “outside” air sampling for each regulated abatement work area, dependent upon the stage of the asbestos project for that specific work area.
  - ICR 56 requires aggressive clearance air sampling procedures. If the air samples are unsatisfactory due to being “overloaded”, the area must be re-cleaned and another set of clearance air samples collected and analyzed, as per ICR 56-17.9.

Terminology

- The definitions used in the asbestos project design should correspond to state or federal regulatory definitions. For example asbestos containing building material is a federal regulatory defined term. The definition in the specification differs. Regulated abatement work area cleanup procedures are defined in ICR 56-15, including final cleaning procedures. The term as used in the plan refers to removing abatement equipment (demobilizing) from the site.
- The responsibilities and functions of the abatement contractor, the general contractor (or demolition contractor), the abatement contractor supervisor, the project designer, the project monitor, the air sampling technician, and the asbestos inspector must be clearly identified, and should correspond to the appropriate asbestos handler category role/requirements as indicated within ICR 56-2.2. For example: the air sampling technician should collect all necessary area air samples and compile all area air sample results, an inspector should determine the exact quantities and locations of ACM identified within the asbestos demolition survey, the asbestos project designer should complete a comprehensive asbestos project design based upon all asbestos demolition survey information, etc.

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Controlled Demolition/deconstruction Plan and Procedures not part of the Asbestos Project

- NYC DEP Rules permit the topmost floor demolition after the asbestos project is satisfactorily completed for the entirety of the top three floors. Additional floors may be demolished provided ACM abatement is always at least two floors below the level of demolition. The Department recommends using the city rules as a guideline.
- Use of an HVAC or elevator shaft for a waste chute during demolition/deconstruction activities, is also a concern to the Department. Prior to commencement of any controlled demolition/deconstruction procedures, the affected shaft must first be cleaned of all WTC dust/residue, all ACM removed and satisfactory air clearance obtained, then the shaft must be adequately isolated from the lower floors of the building with ACM removal and WTC dust/residue cleanup not yet complete. Demolition workers can't proceed through contaminated portions of the building to access floors/areas/spaces that are scheduled for controlled demolition. The asbestos project design must include all necessary ACM removal and WTC dust/residue cleanup within the affected shaft, prior to commencement of demolition/deconstruction activities.

The Department anticipates that these issues will be appropriately addressed within a revised version of the plan. The owner's asbestos project designer firm must address any necessary deviations from ICR 56 with a reopening to the existing site-specific variance, or submission of an additional site-specific variance petition, for the ACM abatement and WTC dust/residue cleanup portion of the overall project.

Sincerely,



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Senior Safety and Health Engineer

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