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

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June 12, 2006

BY ELECTRONIC MAIL AND REGULAR MAIL

Mr. Victor J. Gallo
Senior Advisor & Counsel, Environmental & Regulatory Affairs
Lower Manhattan Development Corporation
One Liberty Plaza, 20th Floor
New York, New York 10006

Re: Draft Deconstruction Implementation Plan and Drawings

Dear Mr. Gallo:

The United States Environmental Protection Agency (EPA) has reviewed the draft Deconstruction Implementation Plan submitted on April 3, 2006, drawings, memoranda, and procedures submitted between April 5, 2006 and May 26, 2006. The following documents were reviewed:

- The Deconstruction Implementation Plan from Bovis Lend Lease (Bovis), ATC, and The John Galt Corp. (Galt) dated March 29, 2006
- March 29, 2006 Thornton-Tomasetti Group (TTG) Memorandum to the Lower Manhattan Development Corporation (LMDC) pertaining to TTG's Response to the EPA Letter dated March 13, 2006
- The Deconstruction of 130 Liberty Street Drawings from LMDC, TTG, and Bovis: T-000, G-101, A-101 through A-105, and A-108 dated March 29, 2006; A-106 dated October 6, 2005; and A-107 dated December 21, 2005
- April 5, 2006 Crane Tie-In Design Calculations – Phase II – Climbing from Stroh Engineering Services, P.C. (Stroh)
- April 10, 2006 Calculations for Favelle/Favco M760D Series 2 Tower Crane – Phase 2 Package from Stroh
- Tower Crane Drawings from Stroh: Sheets 1 through 4 dated April 13, 2006
- April 20, 2006 TTG Memorandum to the New York City Department of Buildings (NYCDOB) pertaining to the Alternate Site Drainage Method (Post Deconstruction)

- Tower Crane Drawings from Stroh: Sheets 1 through 9 dated April 10, 2006. Re-submitted under a transmittal letter from TTG dated April 26, 2006
- Tower Crane Drawing from Stroh: Sheet 1 (Tie-Beam A/B/C Details) dated April 10, 2006 submitted under a transmittal letter from TTG dated April 26, 2006
- Concrete Crusher (Rubblebuster S3R) Cut Sheet submitted by TTG on April 26, 2006
- April 27, 2006 TTG Memorandum to NYCDOB pertaining to Steel Debris Chute Details
- April 27, 2006 TTG Memorandum to NYCDOB pertaining to TTG's Review of the FAVCO M760D Series 2 Tower Crane Design Calculations and Drawings by Stroh
- May 2, 2006 Galt 130 Liberty Street Environmental Work for Crane Tie Supports Procedures
- May 2, 2006 Stroh Letter to NYCDOB pertaining to Tower Crane Installation at Deutsche Bank, 130 Liberty Street
- May 3, 2006 Langan Engineering & Environmental Services (Langan) Response to Objections Letter to NYCDOB
- Re-submitted May 2, 2006 Crane Foundation Drawing from Stroh submitted by TTG on May 4, 2006
- May 26, 2006 Langan Response to Objections letter to NYCDOB
- Revised North Plaza Sheeting Drawings (C-1 through C-4) from Langan, dated April 13, 2006, and re-submitted by TTG on May 26, 2006.

EPA has also consulted with the U.S. Department of Labor Occupational Safety and Health Administration (OSHA), New York State Department of Labor (NYSDOL), and the New York City Department of Environmental Protection (NYCDEP) about the submissions. The regulators' comments incorporated in the enclosed comments pertain to their regulatory practice areas.

NYSDOL, NYCDEP, and EPA focused their review on the regulations related to performance of an asbestos project. EPA's review also concerned containment measures to control potential releases of contaminants, proper procedures for monitoring and waste disposal. OSHA's primary area of review was worker safety and health. The regulators' comments incorporated in this letter do not address the demolition methodology, structural engineering issues regarding the demolition of the building, or the future use of the property. By separate communication, LMDC should be provided with comments by the New York City Department of Buildings (DOB) consistent with DOB's expertise in these areas. As previously stated by the regulators, implementation of proper procedures and careful monitoring of abatement and deconstruction activities by LMDC and its contractors will help prevent the occurrence of a situation that may present an imminent and substantial endangerment to public and worker health and the environment.

The regulators reserve the right to modify the enclosed comments and/or make additional comments about the proposed work if new information becomes available or information, currently known and considered, is changed in whole or in part during the abatement and demolition of the building. The enclosed comments do not pertain to any

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matters not addressed in the documents reviewed. In the event that the drawings or documents have to be supplemented as the project proceeds, the regulators will review and may provide additional comments after we review the supplementary information and documents required to be submitted by LMDC.

To explain the revisions to the draft documents and drawings, EPA requests that LMDC provide the regulators with a separate response to each of the enclosed comments that states: (1) whether and how the comments have been incorporated; (2) if a comment has not been incorporated, the reason it was not incorporated; and, (3) any additional information to address LMDC's response to the enclosed comments. The supplement will facilitate the regulators' review process. Kindly let us know LMDC's schedule for submitting its response.

Sincerely,

P. Evangelista

Pat Evangelista
WTC Coordinator
New York City Response and Recovery Operations

Enclosures

cc: Chris Alonge, NYSDOL w/encl.
Krish Radhakrishnan, NYCDEP w/encl.
Richard Mendelson, OSHA w/encl.
Robert Iulo, NYCDOB w/encl.
Sal Carlomagno, NYSDEC w/encl.

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EPA Comments on the
Draft Deconstruction Implementation Plan Submitted on April 3, 2006, and Drawings, Memoranda, and Procedures Submitted Between April 5, 2006 and May 26, 2006

Draft Deconstruction Implementation Plan Dated March 29, 2006

1. PCB waste streams: The document titled, *Additional Waste Characterization Sampling Summary Report Lower Manhattan Development Corporation*, dated November 10, 2005 stated that one sample of caulking located on level A in a network compartment indicated the presence of PCBs above the TSCA level. This sample was representative of caulking that is found around cable in some or all of the network compartment rooms on level A. Therefore, caulking of this type will be located and removed from the remaining network compartments on level A and disposed of as a PCB regulated and hazardous waste. The Draft Deconstruction Implementation Plan should state how the PCB waste streams in the network compartments in cellar A will be managed, handled, marked, stored, and disposed based on the conclusions drawn in the November 10, 2005 document. The Draft Deconstruction Implementation Plan should also state how the areas in cellar A that contain the PCB caulking will be demarcated to ensure that the abatement contractor segregates this PCB waste stream from the non-PCB waste streams in cellar A.

2. PCB waste streams:

(a) Section 4.4.2.1.3 of the September 7, 2005 Waste Sampling and Management Plan states that materials that have the potential to be PCB-containing (e.g., electric oil-filled switches, transformers, capacitors, caulking, etc.) will be tested for PCB concentration. LMDC also states that at the time that the Waste Sampling and Management Plan was being developed it was not possible to determine the number of samples to be collected since the detailed waste survey had not yet been performed. Once the survey was completed and prior to offsite disposal of PCB-containing materials other than light ballasts, LMDC stated that it would provide the regulators with specific details on its proposed sampling scheme for potentially PCB-containing materials and on the sequence and timing of the sampling relative to the deconstruction activities. The document titled, *Additional Waste Characterization Sampling Summary Report Lower Manhattan Development Corporation*, dated November 10, 2005, discusses the conclusions drawn from the sampling conducted on caulking materials. Has LMDC conducted sampling of the other materials that have the potential to be PCB-containing? If so, please provide the regulators with the specific details on the sampling scheme that was used for any other potential PCB-containing materials and the results and conclusions drawn from this sampling. If not, LMDC should provide details on the proposed sampling scheme and on the sequence and timing of the sampling relative to the deconstruction activities.

(b) Section 9.0 of the September 7, 2005 Waste Sampling and Management Plan states that each facility that uses/stores at any one time 45 kilograms of PCBs in containers or one or more PCB transformers or 50 or more large high- or low-voltage capacitors must develop and maintain an annual document log. LMDC states that at the time of the submission of the September 7, 2005 Waste Sampling and Management Plan, the waste survey had not yet been performed, so it was not known if this requirement applied to the building. Please clarify if this requirement will apply for the 130 Liberty Street building. As LMDC states in Section 9.0, if PCB transformers are present at the building, weekly inspections must be performed and inspection logs created/maintained.

3. Preface, page 3 of 23: The preface states that the Draft Deconstruction Implementation Plan will comply with the requirements of "contract documents". What are such requirements in these "contract documents" that they are referenced in the Draft Deconstruction Implementation Plan?

4. Floor designations: The document titled, *Additional Waste Characterization Sampling Summary Report Lower Manhattan Development Corporation*, dated November 10, 2005 stated that settled dust on floors 32, 40, and 41 exceeded the regulatory threshold for cadmium. Please clarify if the building floor designation used in the aforementioned document represented structural floor designations or architectural "elevator button" floor designations (buttons on the elevators did not have a 6th or 13th floor). The Draft Deconstruction Implementation Plan states that building floor designations used in the Draft Deconstruction Implementation Plan shall represent structural floor designations and discusses settled dust on floors 30, 38, and 39 being handled differently. Are the floor designations noted for settled dust characterized as hazardous waste in the Draft Deconstruction Implementation Plan consistent with the floors noted in the abovementioned waste characterization summary report? What floor designation is being used for the north and south hoist operations?

5. Item #1g., page 3 of 23: This bullet item states that dust on the 30th, 38th, and 39th floors is to be treated as universal waste due to the presence of hazardous levels of cadmium. This is not consistent with the September 7, 2005 Waste Sampling and Management Plan. Any dust characterized as a hazardous waste must be managed, handled, packaged, labelled, stored, transported and disposed of as a hazardous waste, not a universal waste, in addition to being managed as asbestos waste pursuant to the Waste Sampling and Management Plan. The Draft Deconstruction Implementation Plan must be revised to be consistent with the September 7, 2005 Waste Sampling and Management Plan.

6. Item #1g., page 3 of 23: The Draft Deconstruction Implementation Plan dated March 29, 2006 states that it was designed to comply with the plans accepted by the regulatory agencies on September 7, 2005. However, the Draft Deconstruction Implementation Plan does not discuss how materials impacted by dust characterized as hazardous waste will be handled on the 30th, 38th, and 39th floors. Section 4.1.3.1 of the Waste Sampling and Management Plan states the following: "Composite samples will be analyzed for all hazardous waste characteristics as identified in Section 4.1.3 of this Plan to determine if

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the dust must be managed as hazardous waste (as well as asbestos waste) and identify whether other deconstruction wastes might be hazardous pending additional waste characterization testing." The Waste Sampling and Management Plan elaborates further in Section 4.1.4.1: "Should results of the waste characterization sampling described in Section 4.1.3 and 4.1.3.1 of this Plan indicate that the settled dust exceeds the regulatory threshold for one or more hazardous waste characteristics, the dust represented by the sample(s) that exceeded the threshold(s), as well as materials impacted by such dust and confirmed through additional testing in accordance with Section 4.2.3 or 4.3.3 of the plan to be a part of a hazardous waste stream, will be managed as both a hazardous waste of the appropriate waste code and asbestos waste." The Draft Deconstruction Implementation Plan must be revised to be consistent with the September 7, 2005 Waste Sampling and Management Plan. If additional sampling of materials impacted by dust characterized as hazardous waste has been conducted, this information should be provided and the conclusions drawn from this additional sampling discussed in the Draft Deconstruction Implementation Plan.

7. Item #13, page 4 of 23 and Item #A.4, page 15 of 23: The discussion on the hardware cloth is not consistent between page 4 and page 15. One of these two bullet items states that hardware cloth has been installed by others on the exterior side of the existing spandrel glass from the 20th floor to the roof level and will either be cleaned or disposed of as asbestos waste." Please provide clarity on what this "hardware cloth" is and consists of. When was it installed and by whom? When will this "hardware cloth" be removed from the building? During Phase I or Phase II? Please provide clarity on if this material is being characterized as a porous or non-porous material. The "hardware cloth" should be sampled, handled, managed, stored, and disposed of, in accordance with the procedures already set forth in the September 7, 2005 Waste Sampling and Management Plan. Stating that "hardware cloth" will be "either cleaned or disposed of as asbestos waste" is not fully consistent with the procedures that would need to be followed for such material, regardless if it is categorized as either a porous or non-porous waste stream.

8. Item C., page 6 of 23: Please clarify if waste is being stored on-site as specified in the September 7, 2005 Waste Sampling and Management Plan and its attachments. For example, is the waste storage area located within the building's loading dock area on the 1st floor? Are two 40 cubic yard six-sided lockable steel waste containers staged in the south portion of the loading dock for waste storage/staging, pending accumulation and/or characterization as stated in the Waste Sampling and Management Plan and its attachments? If not, LMDC should provide specific details for why it has deviated from the Waste Sampling and Management Plan and its attachments.

9. Item C., page 6 of 23: The third sentence should be revised to state that PCB waste, in addition to hazardous and universal wastes, shall be staged at a designated storage location.

10. Item A., page 7 of 23: The abatement of numerous floors, such as, but not limited to, the 38th floor and 39th mechanical equipment rooms, have be done out of sequence as well. LMDC should add all the floors that have been done out of sequence to-date.

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11. Item B., page 7 of 23:

> (a) Deviations from the sequencing will not be at the discretion of LMDC or its contractors or consultants. This must be stricken from the Draft Deconstruction Implementation Plan. The regulators must review any potential deviations from the sequencing.
> (b) Abatement work areas shall not proceed more than one work area below the scaffold air monitoring stations. This should be stated in the Draft Deconstruction Implementation Plan and as an amendment to the September 7, 2005 Ambient Air Monitoring Program Plan and its QAPP.

12. Item C., page 7 of 23: This bullet item should be revised to state that PCB and asbestos waste, in addition to hazardous and universal wastes, shall be handled in accordance with the approved September 7, 2005 plans.

13. Item 1.c., Option B, page 9 of 23: Option B states that personnel decons may be located below a multiple floor containment. How will this be accomplished if the abatement work is occurring downwards from the upper floors to the lower floors?

14. Item 2.c, top of page 10 of 23: This bullet item should be revised to state that PCB, hazardous, and universal waste, in addition to asbestos wastes, will be transported down the hoists and state if, and where, it will be stored on-site prior to final disposal off-site.

15. Item H.2, page 10 of 23: This bullet item states that louvers will be wrapped in two layers of polyethylene to be disposed as asbestos if not cleaned. Since dust on the 38th floor has been characterized as hazardous waste, louver(s) on the 38th floor to be disposed as asbestos waste will also need to be disposed as hazardous waste if not cleaned. This section should be revised to state this fact.

16. Item I., page 10 of 23: Item I. is not consistent with Drawing A-107, Interior Abatement Sequence Notes, Note # 12. Please clarify which procedure will be followed and revise either the drawings or the Draft Deconstruction Implementation Plan accordingly.

17. Items J. and K.5, page 11 of 23: Item J should have more detail as was provided in item K.5.

18. Item L.1, page 11 of 23: This bullet item states the following: "Masonry walls that remain in place shall be cleaned and cleared with the work area." Please clarify in this section what masonry walls will remain for the Phase II activities.

19. Item L.2, page 11 of 23: This bullet item discusses accessing and cleaning all sides of duct work. What about inside the ducts or is this implied with the statement "cleaned on all sides"?

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20. Item L.4, page 12 of 23: The language used for constructing the barrier for the mechanical shafts is not consistent with the approach specified for the elevator shafts in Item K.5, page 11 of 23. Please clarify.

21. Item O., page 12 of 23: This bullet item states the following: "All porous materials shall be handled as asbestos, with the exception of dust on floors 30 and 38/39." This section does not clarify how the dust, as well as materials impacted by such dust, will be managed and disposed of on the 30th, 38th, and 39th floors. The Draft Implementation Plan states on page 3 of 23 that the dust on floors 30, 38, and 39 has hazardous levels of cadmium. As specified in the September 7, 2005 Waste Sampling and Management Plan, any dust characterized as a hazardous waste, as well as materials impacted by such dust and confirmed through additional testing, must be managed, handled, stored, and disposed of as a hazardous waste, in addition to being managed as asbestos waste. The Draft Deconstruction Implementation Plan must be revised to be consistent with the September 7, 2005 Waste Sampling and Management Plan. If additional sampling of materials impacted by dust characterized as hazardous waste has been conducted, this information should be provided and the conclusions drawn from this additional sampling discussed in the Draft Deconstruction Implementation Plan.

22. Item O., page 12 of 23: The last sentence of this bullet item should be revised to state that PCB waste, in addition to hazardous and universal wastes, shall be handled with more stringent handling and disposal requirements.

23. Items P.2 and P.3, page 12 of 23: These two bullet items state that non-porous items not cleaned will be double bagged or wrapped for disposal as asbestos waste. Since dust on the 30th, 38th and 39th floors has been characterized as hazardous waste, non-porous items not cleaned on the 30th, 38th, and 39th floors would need to be disposed as hazardous waste, in addition to asbestos waste, unless additional sampling of materials impacted by dust characterized as hazardous waste has been conducted and concluded that the non-porous items were not hazardous waste. This information should be provided and the conclusions drawn from this additional sampling discussed in the Draft Deconstruction Implementation Plan.

24. Item R.3, page 13 of 23: Since dust on the 30th, 38th and 39th floors has been characterized as hazardous waste, those objects in the mechanical equipment rooms not cleaned and double wrapped on the 30th, 38th, and 39th floors would need to be disposed as hazardous waste, in addition to asbestos waste. This bullet item should be revised to state this fact.

25. Item T., page 14 of 23: What provisions are in-place to identify, assess, and address any fireproofing that may potentially become apparent during the Phase II activities, which may not have been apparent during the previous abatement work conducted during Phase I?

26. Item U., page 14 of 23: Since dust on the 30th, 38th and 39th floors has been characterized as hazardous waste, fireproofing and porous materials on the 30th, 38th, and 39th floors would need to be disposed as hazardous waste, in addition to asbestos waste, unless additional testing of the fireproofing and porous materials on the 30th, 38th, and 39th floors has been conducted and concluded that these waste streams are not characterized as hazardous waste. If additional sampling of materials impacted by dust characterized as hazardous waste has been conducted, this information should be provided and the conclusions drawn from this additional sampling discussed in the Draft Deconstruction Implementation Plan.

27. Item V.2, page 14 of 23: Since dust on the 30th, 38th and 39th floors has been characterized as hazardous waste, wire pulled from the raceways, if any, or elsewhere on the 30th, 38th, and 39th floors would need to be disposed as hazardous waste, in addition to asbestos waste, if this waste stream is not planned to be cleaned. This bullet item should be revised to state this fact.

28. Item W, page 14 of 23: Please clarify in this section what interior masonry walls will remain for the Phase II activities.

29. Item W, page 14 of 23: Will any of the interior masonry walls remaining for Phase II contain any interstitial spaces? If so, how will LMDC remove dust/debris from within the interstitial spaces during Phase I? What type of contingency plan does LMDC have in place to identify, assess, and address any potentially contaminated hidden interstitial spaces and voids that become apparent during the non-abatement phase of this project?

30. Item A.3, page 15 of 23: Since dust on the 30th, 38th and 39th floors has been characterized as hazardous waste, broken glass, if any, removed, not cleaned, and double bagged for disposal on the 30th, 38th, and 39th floors would need to be disposed as hazardous waste, in addition to asbestos waste. This bullet item should be revised to state this fact.

31. Item B.2 and B.5, page 15 of 23: Since dust on the 30th, 38th and 39th floors has been characterized as hazardous waste, aluminum column enclosures/sections on the 30th, 38th, and 39th floors would need to be disposed as hazardous waste, in addition to asbestos waste, if they are not cleaned prior to being double wrapped for disposal. This bullet item should be revised to state this fact or state that the aluminum column enclosures/sections will be cleaned prior to being double wrapped for disposal as asbestos waste.

32. Item C.3, page 16 of 23: This item states that glass removed from the building in large sections will be downsized on the floor. How will the glass be "downsized"? Provide details.

33. Item D, page 16 of 23, Roof cleaning and abatement: Bullet item D should be revised to be consistent with the revised protocol LMDC and its consultants are currently developing.

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34. Items D.3.b and D.3.c, page 16 of 23: These bullet items should be removed since the revised protocols LMDC and its consultants are currently developing states that the stone ballasts will not be used on-site as backfill and will not be disposed as conventional construction waste.

35. Item D.3.a, page 16 of 23: This bullet item states that the stone ballast shall be disposed as asbestos waste. Clarify in the Draft Deconstruction Implementation Plan if waste characterization sampling of the dust has occurred on the lower and upper roofs of the building and the conclusions drawn from this sampling. As specified in the September 7, 2005 Waste Sampling and Management Plan, if any dust is characterized as a hazardous waste, then materials impacted by such dust and confirmed through additional testing, must be managed, handled, stored, and disposed of as a hazardous waste, in addition to being managed as asbestos waste.

36. Item D.8, page 16 of 23: The procedures specified for handling wastewater in this bullet item is not fully consistent with the September 7, 2005 Waste Sampling and Management Plan and its attachments. The procedures specified for handling wastewater in the Draft Deconstruction Implementation Plan must be revised to be consistent with the September 7, 2005 Waste Sampling and Management Plan and its attachments. For example, Section 4.1.2.3 of the Waste Sampling and Management Plan states the following: "Any free-flowing wash-down water/liquids will be collected and containerized for further management. All wash-down water/liquids will be filtered to five microns to remove asbestos and other particulates. Filtered wash-down water/liquids will be sampled to determine their hazardous waste characteristics and any other specific disposal facility and/or sanitary sewer testing requirements. All collected wash-down water/liquids will be subject to off-site disposal if indicated by the waste characterization results." Please provide a copy of the NYCDEP discharge permit C-3935 referenced in this section. Please verify if wastewater is being handled as specified in the Waste Sampling and Management Plan and its attachments? If not, please provide specific details for why LMDC has deviated from the Waste Sampling and Management Plan and its attachments. Is the waste water holding tank(s) located on the southwest corner of the building on the 1st floor as stated in drawing SK-02 of the Waste Sampling and Management Plan and its attachments? If not, please explain why it is not located there.

37. Item A.3., page 17 of 23: This bullet item states that the "engineer of record" shall have a representative on-site to monitor compliance with the "Deconstruction Plan". What about the Deconstruction Implementation Plan, the drawings provided to the regulators on April 5, 2006, the memorandum from Thornton-Tomasetti Group to LMDC, dated March 29, 2006, and the other drawings and/or specifications provided to NYCDOB and the other regulators? Who will monitor compliance with these items? Will all of these items be added as an addendum to the "Deconstruction Plan"? What will be the role of TRC and ATC if the "engineer of record" will now be overseeing compliance of the "Deconstruction Plan"? Please fully clarify.

38. Items A.5, page 17 of 23 and # C.3.a, page 19 of 23: Bullet item A.5 on page 17 is

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not consistent with bullet item C.3.a on page 19 with regards to the usage of ultra low sulfur diesel fuel. Bullet item A.5 on page 17 states that diesel powered equipment with a rating above 50HP shall use the ultra low sulfur diesel fuel while bullet item C.3.a on page 19 states that all diesel powered equipment shall use ultra low sulfur diesel fuel. Clarify the usage of ultra low sulfur diesel fuel for this project.

39. Item A.6.ii., page 17 of 23: This bullet item states that the top of the chutes will be screened, reduced, or similarly restricted to eliminate the potential of the chute clogging with concrete masonry material. Won't debris potentially roll-off the screen(s) instead and build-up in the vestibules? What is meant by "reduced, or similarly restricted"? What steps will be taken if the chutes do become clogged?

40. Item A.6.vi., page 17 of 23: This bullet item states the following: "After surveying the vestibule areas, it has been determined that chute locations should not impact walker ducts and raceways within the concrete floor slabs." Why has LMDC chosen the word, "should," as it pertains to impacting the walker ducts and raceways? If a survey has been conducted, should not LMDC know with a degree of certainty if walker ducts and raceways will be impacted? What did the "survey" consist of? Please clarify. What contingency plan does LMDC have in place for assessing and addressing any walker ducts and raceways that do become impacted that were not originally anticipated to be impacted?

41. Items A.6.vii. and A.6.viii, top of page 18 of 23: These bullet items state that the drop zone area will be protected with 1" thick steel street plates and a 1" thick steel plate "door". No drawing(s) has been provided which shows the dimension of the area to be protected, how the steel plates and steel "door" will be positioned to protect the area, and how the mechanical equipment will move into and out of the "area to be protected" to transport the crushed concrete and masonry as fill throughout the cellar. This information should be provided.

42. Item A.6.ix, page 18 of 23: This bullet item states that access to the "receiving area shall be controlled with workers using two way radios at the top and bottom of the chute". Is this adequate for worker protection? Has the impact of construction noise been factored into the usage of the two-way radios to control access?

43. Item A.6.xi, page 18 of 23: This bullet item states that minimal horizontal loads will be applied to the chute system. How have any potential issues associated with vertical loads been addressed?

44. Item A.8, page 18 of 23: This bullet item states that the deconstruction work shall be performed in accordance with project-specific requirements dictated by construction documents. What "construction documents" does this pertain to?

45. Item B.4., page 18 of 23: What type of containers will be used to place bundles of steel into to be lifted by the tower crane to the North Plaza lay-down area?

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46. Item B.5., page 18 of 23: Have the means and methods been requested by NYCDOB of how the decking material will be separated from the concrete?

47. Item B.6., page 18 of 23: Will the crushed concrete and masonry be used for fill elsewhere on-site besides Cellar 'A' and Cellar 'B'? Will non-crushed concrete and masonry transported to ground level using the hoists or tower crane be used as fill in the cellars or elsewhere on-site?

48. Item C.3.a, page 19 of 23: This bullet item states that a "NY Professional Engineer" shall approve equipment to be used on elevated slabs. Is the "NY Professional Engineer" a separate individual from the "Engineer of Record" that LMDC states will be the on-site compliance monitor? If so, who is it and has this information been provided to NYCDOB for its review and acceptance?

49. Item C.3.a.i., page 19 of 23: This bullet item states that one portable concrete crushing plant will be used. This is not consistent with the drawings which state that two portable concrete crushing plants will be used. Please clarify and revise the Draft Deconstruction Implementation Plan or the drawings accordingly. Clarify if the load from two crushing plants has been factored into the live loads being imposed on the existing structure, that the engineer of record is aware of this relevant fact, and if this information has been provided to the NYCDOB for its review and acceptance.

50. Item 8, page 22 of 23: This bullet item states that "light iron and other materials" will be placed in steel containers and hoisted off of the building. Please clarify what will actually be placed into the steel containers.

51. Item 10.b, page 22 of 23: This bullet item states that concrete will also be lowered to grade using the tower crane and used as backfill in the basement areas. Will the concrete be crushed concrete or slabs of concrete? If it is slabs of concrete, is NYCDOB aware of this fact and do they believe it is acceptable to be used for backfill based on the future land use for the property?

52. Crushed concrete and masonry used on-site as backfill: How will LMDC demonstrate that the concrete and masonry demolition debris can be used as uncontaminated fill based on the future land use for the property? The hazardous waste characteristic sampling specified in the September 7, 2005 Waste Sampling and Management Plan would assist LMDC on determining if its waste streams would need to be handled, transported, and disposed of as a hazardous waste at a RCRA Subtitle C treatment, storage, or disposal facility but would not necessarily assist LMDC on determining if certain waste streams could be used on-site as uncontaminated fill.

53. Item 12, page 22 of 23 and March 29, 2006 memorandum from the Thornton-Tomasetti Group: Was DOB provided the allowable equipment floor loading from the engineer of record and accepted the calculations? How is LMDC verifying that weight(s) will not be exceeded on each floor? How is LMDC verifying the weight of the concrete crushers if they have not been leased yet?

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54. Item F.4, page 23 of 23: This bullet item states that a "permanent system of fogging nozzles" will be installed within the concrete receiving areas in the basement. No details have been provided on this "permanent system of fogging nozzles". Provide details on the system to be used to minimize dust in the basement areas from the free-falling crushed concrete and masonry debris and the movement of this material in the basement for backfill.

55. Item G.1, page 23 of 23: This bullet item is not consistent with drawing A-105-4 or drawing A-108-3. Drawing A-105-4 shows the cellar slabs being left-in-place for Cellars 'A' and 'B'. Drawing A-108-3 shows the slab of cellar 'A' and a portion of the first floor slab being removed while the Draft Deconstruction Implementation Plan states that the walls and the basement floor slabs shall be removed from the two sub-grade basement areas. Please clarify and revise either the drawings or the Draft Deconstruction Implementation Plan accordingly.

56. Noise Levels for Workers: Section 2.13.2 (Hearing Conservation) of the September 7, 2005 Health and Safety Plan (HASP) states the following: "If any Subcontractor exposes his employees the noise levels above 85 dBA, the Subcontractor must establish a written Hearing Conservation Program developed by a competent person as required by 29 CFR 1926.101 and 29 CFR 1910.95". Will noise levels exceed 85 dBA? If so, what is the timing of the subcontractor(s) developing a written Hearing Conservation Program prior to the initiation of Phase II activities? Will it be added as an addendum to the HASP?

Drawings, Memorandums, and Procedures Submitted Between April 5, 2006 and May 4, 2006:

57. Drawings T-000, G-101, and A-101 through A-108, state the following: "Progress Set Subsequent to DOB Approval." It is our understanding that NYCDOB had not approved all of the drawings at the time of submission to the regulators so it is inappropriate to indicate that these drawings have been submitted subsequent to receiving NYCDOB's approval.

58. Buffer Zone: The minimum buffer zone designation on the drawings between the abatement work area and the deconstruction work area is not consistent with the Draft Deconstruction Implementation Plan. The Draft Deconstruction Implementation Plan states on page 17 of 23 that a minimum distance of five floors will be maintained. Drawing A-103-2 (Section: Typical Deconstruction Zone) shows a four floor buffer zone between the abatement work area and the deconstruction work area. Drawings G-101-2 (Deconstruction/Abatement Sequence) and A-102-3 (Sequence 3: Deconstruction) state the following: "Maintain minimum 4 floors of buffer between abatement and deconstruction activities." This should be clarified and either the Draft Deconstruction Implementation Plan or the drawings should be revised.

59. Drawing A-102-1 (Sequence 1: Scaffolding Erected): Item #8 states the following:

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"Set up monitoring of cellar foundation walls." What does this refer to? No details have been provided and should be provided to understand what activities will be occurring with regards to the cellar foundation walls.

60. Drawing A-102-2 (Sequence 2: Abatement):

(a) Item #5 mentions the installation of demolition vibration monitoring equipment. Is a plan or protocol being developed for what will be the association between the vibration levels being monitored and its impact on the Phase I and Phase II activities? Will the demolition monitoring equipment assist in determining if certain levels of vibration may impact the integrity of the critical barriers and potential emissions of dust?
(b) Item #6: Details should be provided on how LMDC is containing water used for dust control at each level of demolition and within the cellar.
(c) Item #8 states that waste water will be collected and tested during abatement before discharge into sewer system. Will this testing follow the procedures set forth for "wash-down water/liquids" and "waste water" in the September 7, 2005 Waste Sampling and Management Plan and its attachments? If not, what is being done?

61. Drawing A-102-3 (Sequence 3: Deconstruction): Item #1 is not consistent with the Draft Deconstruction Implementation Plan. Item #1 states that work will be occurring on two floors at a time in a stepped sequence and will continue during deconstruction of the building structure. The Draft Deconstruction Implementation Plan describes three floors at a time being involved during deconstruction activities. This should be clarified and either the Draft Deconstruction Implementation Plan or the drawings should be revised.

62. Drawing A-103-1 (Building Section):

(a) Will "water containment barriers" be placed solely on floors 30, 20, and 10 as specified in this drawing? This is not specified in the Draft Deconstruction Implementation Plan. Page 17 of 23 of the Draft Deconstruction Implementation Plan discusses "protection" "where required" and "as warranted". Please clarify the minimum floor locations where a "water containment barrier" will be placed.

(b) No details are provided on what the "water containment barrier" will entail. Details should be provided.

63. Drawing A-103-2 (Section: Typical Deconstruction Zone):

(a) This drawing is not consistent with the Draft Deconstruction Implementation Plan. This drawing shows two crushers being used on two separate floors while the Draft Deconstruction Implementation Plan only notes one crusher being used

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on one floor. Please clarify and revise either the drawings or the Draft Deconstruction Implementation Plan accordingly.

(b) One of the notes for this drawing states the following: "Scaffold extends maximum of 1 frame above demo level." What determination has been made to ensure that the spacing of the needle supports/tie-ins for the scaffolding to the building is appropriate for the requirement to extend the scaffolding one frame above the demo level?

64. Drawing A-103-2 (Section: Typical Deconstruction Zone): This drawing shows two crushers being placed directly over the chutes while the Draft Deconstruction Implementation Plan shows a single crusher being placed at the opposite end of the building while heavy equipment transports the crushed clean debris to the chute opening. Further, the Draft Deconstruction Implementation Plan shows heavy equipment from the floor above the crusher depositing debris through a small opening of the floor above directly into the crusher. Please clarify exactly where will the crushers be located, how will debris be placed into the crushers, and how will the crushed debris be placed into the chutes.

65. Drawing A-103-2 (Section: Typical Deconstruction Zone): This drawing provides details on additional hardwood protection being added to the scaffolding but does not show what, if any, additional protection LMDC is proposing for the vestibules where the chutes will be located to prevent debris from falling outward towards the exterior hoists and the ground as debris is being transported and placed into the chutes.

66. Drawing A-104-1 (Typical Floor Plan – Deconstruction): What additional safety precautions, if any, does LMDC plan to take for personnel needing to get off the hoists to gain access to the floor and pass by the openings in the chutes on floors where debris is being transported by heavy equipment and placed into the chutes? Does LMDC plan to isolate the chute and the equipment transporting debris to the chute so as to not impact the movement of personnel onto and off of the floors being demolished?

67. Drawing A-105-4 (Section Detail of Cellar A & B):

(a) The drawing is not consistent with the Draft Deconstruction Implementation Plan or drawing A-108-3. The drawing shows the cellar slabs being left-in-place for Cellars 'A' and 'B'. Drawing A-108-3 shows the slab of cellar 'A' and a portion of the first floor slab being removed while the Draft Deconstruction Implementation Plan states that the walls and the basement floor slabs shall be removed from the two sub-grade basement areas. Please clarify and revise either the drawings or the Draft Deconstruction Implementation Plan accordingly.

(b) One of the notes for this drawing, and note # 11 on drawing A-108-4 (Step 4: Continue Backfilling to Meet Surrounding Sidewalk Grade Elevations), states the following: "LMDC will monitor and address the water accumulation as required during the deconstruction of the building." How will this be accomplished? What will

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constitute excessive water and what actions will LMDC take if excessive water exists? No details have been provided.

68. Drawing A-106 (Building Evaluations): The legend has two categories which state: "broken glass" and "no glass/plywood in place". Has plywood been placed onto broken glass openings in addition to openings where no glass exists? If so, the legend should be revised to note this fact.

69. Drawing A-107, Interior Abatement Sequence Notes, Note # 1: Note #1 states that abatement will proceed from top to bottom. Since some of the abatement work is being conducted out of order from this sequence, this note should be revised to note this fact.

70. Drawing A-107, Interior Abatement Sequence Notes, Note # 4: Note #4 is not consistent with the Draft Deconstruction Implementation Plan which also discusses an "Option B". Please clarify if there are two options for personnel decons as stated in the Draft Deconstruction Implementation Plan or solely one as stated in the drawings and revise the relevant submittals accordingly.

71. Drawing A-107, Interior Abatement Sequence Notes, Notes # 7 & #8: Note #7 states that waste water will be collected at the waste barrier level, abated, and discharged into the city sewer system.

(a) Are the "water barrier" and the "waste barrier level" the same "protection" discussed in bullet item #4 on page 17 of 23 of the Draft Deconstruction Implementation Plan? If so, the Draft Deconstruction Implementation Plan should be revised to state that the waste water will be collected at the "barrier" and describe how the water will be collected.
(b) Will testing occur of the water prior to the discharge into the city sewer system? If so, will this testing follow the procedures set forth for "wash-down water/liquids" and "waste water" in the September 7, 2005 Waste Sampling and Management Plan and its attachments? If not, what is being proposed? This should be clarified more fully in the Draft Deconstruction Implementation Plan and add some clarifying language to note #7.
(c) How will waste water discussed in Note #7 be segregated from storm water discussed in Note #8? How will storm water be collected?

72. Drawing A-107, Interior Abatement Sequence Notes, Note # 9: Note #9 is not consistent with item L.3 on page 11 of 23 of the Draft Deconstruction Implementation Plan. The drawings should be revised to ensure that barriers are installed for exposed shafts at both the upper and lower levels of the shaft within an abatement containment work area.

73. Drawing A-107, Interior Abatement Sequence Notes, Note # 12: Note #12 is not consistent with item 'I' on page 10 of 23 of the Draft Deconstruction Implementation Plan. Please clarify which procedure will be followed and revise either the drawings or the Draft Deconstruction Implementation Plan accordingly.

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74. Drawing A-107, Deconstruction Sequence Notes, Notes # 6 & 9: Notes #6 and #9 are not consistent with page 20 of 23 of the Draft Deconstruction Implementation Plan. The drawing discusses cuts at 45 inches from top of slab while the Draft Deconstruction Implementation Plan discusses a cut at 40 inches. Please clarify and revise either the drawings or the Draft Deconstruction Implementation Plan accordingly.

75. Drawing A-107, Deconstruction Sequence Notes, Note # 7: Note #7 states the following: "Place concrete debris into containers and remove from floor via chutes." This is not consistent with the Draft Deconstruction Implementation Plan which discusses only placing crushed concrete and masonry into the chutes. How will it be possible to fit a container into a 30 inch diameter chute opening? Please clarify what will and will not be placed into the chutes and revise the submittals accordingly.

76. Drawing A-108-4 (Step 4: Continue Backfilling to Meet Surrounding Sidewalk Grade Elevations), Note #7: Note #7 states that the concrete slabs of the first floor will be removed. This is not consistent with the Draft Deconstruction Implementation Plan which states that the basement floor slabs and walls will be removed. Please provide clarity on what slabs and walls will be removed and revise either the drawings or the Draft Deconstruction Implementation Plan accordingly.

77. What safety precautions will be conducted in cellar 'B' for personnel conducting dust control, moving crushed debris on floor, etc.?

78. Drawing C-1 (Sheet Planning): Preparation Prior to Start of Sheeting Work (by Others):

(a) Drawing C-1 received by Thornton-Tomasetti on May 4, 2006 stated in items # 2 and #3 that the first floor would undergo asbestos abatement and that the plywood sheeting on the first floor level would be removed prior to the sheeting work. Reference to the first floor was removed from items #2 and #3 in the revised drawing C-1 received by Thornton-Tomasetti on May 26, 2006. However, the "Sheeting and Backfill Sequence" notes on the revised C-1 drawing still states that steel sheets will be installed at the first floor level; and, the "Notes" section of the revised C-1 drawing still states in item #8 that steel sheeting is connected at all three levels. Please clarify if sheeting will be installed on the first floor. If so, please clarify why LMDC believed it needed to abate and remove the plywood sheeting on the first floor prior to the installation of the steel sheets on the drawings received by Thornton-Tomasetti on May 4, 2006 but that these activities did not need to occur on the drawings received by Thornton-Tomasetti on May 26, 2006.
(b) Please explain the sequencing of items #1 and #2. How will the demolition of the portion of the coin vault and associated steel framing that are within the interior of the building commence first without impacting cellar A and cellar B that still need to undergo abatement activities and final clearance sampling? Describe how the areas still to be abated that abut the portion of the coin vault to be demolished

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will not be impacted or exposed during the demolition of the portion of the coin vault that extends into the interior of the building.

(c) Item #3 states that plywood sheeting on north face of building, cellar B, and cellar A will be removed. Does this plywood sheeting pertain to critical barriers for abatement areas? If so, it could not be removed until the abatement work has been completed on those floors and final clearance samples are acceptable. What plywood sheeting is planned to be removed from the "north face of the building"? The entire north side of the building? Please explain.

(a) When does LMDC plan to clean the exterior portions of the building that will be concealed by the proposed sheeting? Will any of the exterior of the building (e.g., aluminum column covers and fascia) need to be removed prior to the placement of the sheeting and what would be the timing of abating those exterior areas? Please explain.

79. Drawing C-1 (Sheet Planning): Notes:

(a) Note #5 states that "recycled concrete aggregate" may be used as backfill. Will this "recycled concrete aggregate" come from off-site or on-site. Please explain. How is LMDC demonstrating that it is acceptable to be used as uncontaminated backfill based on the future land use for the property?

80. FFC M760D Tower Crane Installation: Part Plan and Details for Floors 11, 19, and 35: Sheets 3, 4, and 6 of 9: These sheets state the following: "remove ex. conc. floor and metal deck as required." Will the existing concrete floor and metal deck need to be removed for tower crane tie-in installation for floors 11, 19, and 35? Will it need to be removed for floors 5 and 27? If so, are these additional areas that will need to be abated out of sequence? If so, when will this occur? Will it be done pursuant to the current NYSDOL variances or will LMDC need to submit a new variance for these activities? Will the removal of a portion of the concrete flooring and metal duct on these floors impact any walker ducts? If so, how will the remaining portions of the walker ducts for those floors be sealed until the walker ducts for the entire floor are abated? Please fully explain.

81. Galt's May 2, 2006 Environmental Work for Crane Tie Supports Memorandum: If existing concrete floors and metal decking will need to be removed prior to crane tie-ins on various floors, this memorandum will need to be updated to provide specific details on the procedures that will be followed.

82. Concrete Crusher Cut Sheet: One of the options noted on the cut sheet is a "dust suppression system". Is that an option that is planned to be used for the concrete crushers for this project?

83. Concrete Crusher Cut Sheet: Section 2.13.2 (Hearing Conservation) of the September 7, 2005 Health and Safety Plan (HASP) states the following: "If any Subcontractor exposes his employees the noise levels above 85 dBA, the Subcontractor must establish a written Hearing Conservation Program developed by a competent person

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as required by 29 CFR 1926.101 and 29 CFR 1910.95". A table titled, "Speed, Capacity, Pressures & Weight," on the concrete crusher cut sheet states that the performance sound level and the sound levels at operators position will be above 85 dBA. Since this is the case, has a Hearing Conservation Program been developed? If not, what is the timing of the subcontractor(s) developing a written Hearing Conservation Program prior to the usage of the concrete crusher? Will it be added as an addendum to the HASP?

84. Concrete Crusher Cut Sheet: A table titled, "Feed Material (Type and Size)," states that the concrete crusher can handle "concrete (hard and with reinforcing steel)" and concrete (soft and without steel)". Please confirm that the concrete and masonry that LMDC plans to process with the concrete crusher will not contain reinforcing steel or metal decking.

85. Site Drainage Memorandum: The following is stated in the memorandum: "In accordance with the EPA plan, the approved backfill shall be graded to promote storm water surface runoff to the west, south and east." What "EPA plan" is LMDC referring to? Please explain.

86. LMDC provided the regulators a chart titled "130 Liberty Street – Regulator Submittal Matrix". This matrix has a submittal titled "Backfill Protocol" and the matrix states that it has not been submitted. When will it be submitted and what is it? Please explain.

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OSHA COMMENTS
130 LIBERTY STREET DECONSTRUCTION IMPLENTATION PLANS, DRAWINGS, AND COIN VAULT

- Falls down shafts or from unprotected sides or edges: This is significant because of the proposed use of chutes.

- Struck-by hazard: Falling materials. Although the plan calls for laborers with radios at the top and bottoms, the opportunity remains for miscommunication or lack of coordination. This is a concern due to the noise from the crushers and other mechanical equipment at the top of the chute.

- Struck-by hazard: Material handling equipment. The use of mechanical equipment on the slabs is necessary, but the presence of laborers on foot creates the potential for accidents. This potential is increased if laborers will be manning hose lines around the crusher. Noise levels will increase the hazard.

- Fall hazards: Material handling equipment. Stop logs (i.e., temporary curbs) need to be installed around openings (and maintained as the demolition progresses).

- Health hazard: The crusher will undoubtedly create a noise hazard (which also will inhibit communication).

- Health hazard: Once the containment is removed and demolition begins, the removal of the concrete and steel will create exposures to dust, silica, and metals. It is important not to lose sight of these hazards while so much attention is being paid to the remediation activities.

- Collapse hazard: Although we have no reason to doubt the engineering calculation, there is a potential for overloading floors (or portions thereof, or individuals bays). It is important to remember that the dead load of existing floors becomes a live load when they are removed and debris piled on lower floors. The deconstruction plan does not identify method of deconstruction for activities. How are the steel spandrels going to be removed on floors which have been deconstructed?

- Fire prevention: During torch cutting.

- Machine guarding: For concrete crusher, including lockout-tagout during downtime (i.e., clearing jams).

- Struck by hazard: Adherence to the sequence for systematic removal of steel & other building components is important. Competent persons should act as monitors, including separation of operations (i.e., keeping ground workers away from the operation when beams and columns are notched and pulled down).

- Coin Vault: Deconstruction plan does not identify means and methods of completing the deconstruction. What equipment will be used? What are the expected live and dead loads on the floors

when the vault is being removed? Is shoring required to add support to the Cellar A level?

- Is the entire coin vault being removed?

- Crushers: Is there clearance to the ceilings to safely put concrete into the crusher? The crushers seems to be approximately 7-8′ at height. Will the loaders be able to safely dump the concrete into the crusher? Is the discharge height of the crusher adequate on the floors?

- Chute: How is the 1″ steel plate going to be attached to the chute and how will it operate?

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April 25, 2006

Pat Evangelista
WTC Coordinator
New York City Response and Recovery Operations
US EPA
Region 2
290 Broadway
New York, NY 10007-1866

Re: Department Comments on Bovis/John Galt Deconstruction Implementation Plan – 130 Liberty Street & Plan Drawings, dated March 29, 2006
New York, NY

Dear Pat,

The Department has received the Structural Deconstruction submittal as provided by LMDC via e-mail on April 3, 2006, and plan drawings provided by mail. The Bovis/John Galt Corp Deconstruction Implementation Plan and Plan drawings have been reviewed by the Department, as it relates to asbestos project activities. The comments within this letter are in addition to the April 7, 2006 Department letter outlining concerns with the submittal package LMDC cover letter.

Several significant items within the plan and drawings must still be revised for consistency with the existing asbestos project site-specific variance decisions, and to address other Departmental concerns.

The Department has discussed concerns regarding the plan and drawings with the NYC DEP, and the Department provides the following general and specific comments, to be included with your comments on the entire referenced plan and drawings.

General Comments

- The information contained within the notes on the plan drawings regarding asbestos project activities, is not consistent with the information contained within the implementation plan. These two documents must be consistent and also comply with all procedures and conditions included within the approved site-specific variances for this asbestos project. In addition, plan drawing notes must be revised to clearly indicate which notes apply to the asbestos project and which ones apply to non-asbestos project activities.
- All necessary tie-ins for the tower crane shall be completed as per the requirements of the site-specific variance decisions and amendments/reopenings/clarifications relating to "hoist/scaffold tie-ins", including the use of negative pressure tent enclosures as necessary.

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- Any disturbance to ACM or WTC debris/dust/residue during regulated abatement work area preparation shall be completed consistent with the requirements of industrial Code Rule 56 (ICR 56) and any pertinent site-specific variance decision(s).
- Regarding the installation of chutes for transfer of non-asbestos project concrete debris from non-asbestos project areas, a variance reopening request must be submitted and approved which addresses appropriate procedures for installation of any chute access holes that may impact walker ducts/raceways within the various floor systems.
- During non-asbestos project structural deconstruction work, provisions must be included to identify, assess and address any potentially contaminated hidden interstitial spaces and voids that become apparent, which may not have been apparent during the previous asbestos project work.
- Regarding the structural deconstruction occurring concurrently with the asbestos abatements projects on floors below, the Department is concerned that potential exists for excess vibration and related forces that may impact lower floors. As a safety measure, the Department recommends the LMDC require suspension of abatement work during the topmost floor structural deconstruction. If vibration and related forces during the structural deconstruction are found not to be a significant concern, then abatement would be allowed to resume.

Specific Comments

- Section II - Site Logistics, B. Subsection: This subsection indicates that "Existing building elevators shall be grounded and weights and cables shall be removed". As this work is asbestos project activity, it must be performed consistent with ICR 56 and the pertinent site-specific variance decision(s). Appropriate work area preparation, engineering controls and work methods must be utilized for any potential WTC dust/debris/residue disturbance, including dismantlement and decontamination of elevator system components.
- Section II - Site Logistics, C. Subsection: This subsection indicates that asbestos waste will not be stored on-site. However, temporary storage of generated waste at each regulated abatement work area is the current work practice of the asbestos abatement contractor. The intended limitations on temporary waste storage at each regulated abatement work area must be included within this section. All generated waste must be removed from each regulated abatement work area, prior to commencement of the project monitor visual inspection and initiation of clearance air monitoring. At no time shall temporarily stored waste bags/containers obstruct any work area exit.
- Section III – Environmental Abatement – Interior, B. Subsection: This subsection indicates that any "deviations to sequencing…shall be at our discretion, with knowledge and approval by the LMDC and their consultants." All pertinent regulatory agencies must also be notified of any proposed deviation to the identified project sequencing.
- Section III – Environmental Abatement – Interior, 1. Personnel Decons Subsection: This subsection indicates that one of two decontamination system enclosure configuration options will be utilized for each regulated abatement work area. However, within option B it was not apparent how the stairwell (part of the three floor regulated abatement work

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area) would be segregated from the remainder of the building and cleaned, abated, as part of the regulated abatement work area. Regardless of the option selected, the installed personal decontamination enclosure systems must be attached and contiguous to each regulated abatement work area, and the configuration of decontamination system enclosures must comply with Industrial Code Rule 56 (ICR 56) and the pertinent site-specific variance decision. In addition, even if option A is selected, appropriate procedures for isolation of the stairwells (consistent with ICR 56 and the appropriate site-specific variance decision) and inclusion of specified portions of the stairwells within each regulated abatement work area must be provided.

- Section III – Environmental Abatement – Interior, H. Louvers subsection: Regarding the removal of louvers within the mechanical rooms, ACM louvers must be removed within the regulated abatement work area and disposed of as asbestos waste by appropriate legal method. It is not acceptable, as indicated in the plan, for the ACM louvers to be "cleaned and left in place, to be cleared with the work area".
- Section III – Environmental Abatement – Interior, M. Negative air unit subsection: The minimum required air changes per hour must be consistent with the pertinent site-specific variance decision. Four air changes per hour is not sufficient for all regulated abatement work areas.
- Section III – Environmental Abatement – Interior, O. Porous material handing subsection: This subsection indicates that "All porous materials shall be handled as asbestos, with the exception of dust on floors 30 and 38/39". There is no exception for the dust on floors 30 and 38/39 allowed within the site-specific variance decision.
- Section III – Environmental Abatement – Interior, P. Non-porous material handling subsection: Wood is listed within this subsection as a non-porous material and must be deleted, as it is considered a porous material.
- Section III – Environmental Abatement – Interior, R. Mechanical Equipment Rooms subsection: All power tools used to drill, cut, or otherwise potentially disturb WTC dust/debris/residue during equipment dismantlement in regulated abatement work areas, shall be manufacturer equipped with HEPA-filtered local exhaust ventilation.
- Section III – Environmental Abatement – Interior, V. Floor Cell Systems subsection: The specific cleaning and inspection requirements detailed within site-specific variance decision 05-0427, Decision Amendment#2 must be referenced for the walker ducts/raceway cleaning and inspection work.
- Section III – Environmental Abatement – Interior, Y. After confirmation of "clean air" subsection: The reference within this subsection to "clean air" must be changed to "satisfactory visual inspection and clearance air samples results", to be consistent with ICR 56 and the site-specific variance decisions. Also, reference to procedures for maintaining barriers in stairwells must also be added to this subsection.
- Section IV – Environmental Abatement – Exterior, A. Cleaning of Exterior Surfaces of the Curtain Wall subsection: This subsection indicates "Roof cleanup shall be performed on a floor-by-floor basis". This information must be revised to be consistent with the pertinent site-specific variance decision.

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- Section IV – Environmental Abatement – Exterior, B. Removal of Non-friable asbestos caulking materials subsection: Reference must be included regarding the requirements for negative pressure enclosure requirements as indicated within site-specific variance 05-0427, variance amendment #3.

  "For all aluminum column cover and fascia removals where the interior surface has not been cleaned and decontaminated prior to the scheduled cover/fascia removal, the work area preparation, removal, cleaning and clearance, shall occur within negative pressure tent enclosures, as per the conditions of the original variance decision and previous reopenings/amendments/clarifications."

- Section IV – Environmental Abatement – Exterior, D. Roof cleaning and abatement subsection: Procedures referenced must include following all pertinent procedures and conditions of site-specific variance decisions 05-0427 and 05-0813. In addition, roof insulation is typically porous and can not be cleaned and disposed of as conventional waste.

- Section V – Phase II Structural Deconstruction – A. Overview, Steel Debris Chute Subsection: This subsection indicates, "In the event that floor cells will be impacted, or could potentially become impacted, a negative pressure enclosure shall be constructed to perform the work opening the slab and cleaning the impacted cell system components." However, site-specific variance decision 05-0427, condition #66 clearly indicates:

  "For interior negative pressure tent enclosure work areas necessary for installation of interior concrete chutes (to be used for transport of "Clean" concrete slab debris from non-asbestos project work areas), the entire intended path of the chute within contaminated floors/areas/spaces must be abated, cleaned and cleared prior to chute installation. The project design for this work must be submitted to the Department and approved prior to commencement of tent enclosure preparation. It is recommended that appropriate approvals be obtained from applicable federal, state and local agencies regarding use and installation of cranes, hoists and non-asbestos project chutes proposed to be used on the project."

  In addition, the marked-up variance decision attachment (page 12) clearly indicates **"see variance conditions"** for specific requirements on "installation of interior concrete chute to be used to transport concrete slab debris generated during clean phase II activities only".

The required asbestos project design for the non-asbestos project chute installation portion of work, as required by the variance decision, was never submitted to the Department and thus was never approved. If the intended vertical path for the chute was cleaned/decontaminated as a result of the approved tent enclosure work to allow for installation of the floor-by-floor decontamination system enclosures, a potentially clean vertical path for these chutes may now exist within the cleaned "decontamination enclosure hoist vestibules". However, the walker ducts and raceways have not been cleaned, so chute installation may still impact contaminated portions of the building. A variance reopening request must be submitted to adequately address this issue. In

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addition, the Department must be adequately notified prior to installation of the chute access holes.

- Plan Drawings – Sheet A107, Interior Abatement Sequence, Note 4: This note indicates that two personnel decontamination enclosure systems are to be constructed per three floor containment work area. The plan drawings notes and implementation plan procedures are not consistent with regard to installation and location of personal decontamination systems per regulated abatement work area, and must be revised accordingly.
- Plan Drawings – Sheet A107, Interior Abatement Sequence, Note 7: This note indicates that water barriers are to be provided every 10 floors. Isolation barriers must be installed at each regulated abatement work area to prevent water migrating from each work area. If this note pertains to non-asbestos project deconstruction work, it must be identified accordingly.
- Plan Drawings – Sheet A107, Interior Abatement Sequence, Note 10. This note regarding cleaning of the floor cell systems is not in the correct sequence, as negative air is not established until note 11. The sequence of notes and content of each note must be consistent with the appropriate site-specific variance decision.
- Plan Drawings – Sheet A107, Exterior Abatement Sequence, Note 6. This note is in reference to column covers, caulking and spandrel cover removals. Reference to required asbestos project removal procedures as per the appropriate site-specific variance decision and reopenings/amendments/clarifications, including the use of negative pressure enclosures as necessary, must be included.

The Department and the NYC DEP anticipate that these issues will be appropriately addressed within a revised version of the plan and drawings, as well as within a variance reopening request as necessary. If you have any questions regarding these comments please contact the Department at (518) 457-1536.

Sincerely,

Christopher G. Alonge, P.E.
Senior Safety and Health Engineer

ec Krish Radhakrishnan, P.E. - NYC DEP
Gil Gillen – USDOL/OSHA
Robert Iulo – NYC DOB
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04-0427, 05-0813

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George E. Pataki, **Governor**

NYS Department of Labor
Workforce New York
Put us to work for you

Linda Angello, **Commissioner**

May 22, 2006

Pat Evangelista
WTC Coordinator
New York City Response and Recovery Operations
US EPA
Region 2
290 Broadway
New York, NY 10007-1866

Re: Department Comments on The John Galt Corp Environmental Work for Crane Tie Supports Submittal, dated May 2, 2006
130 Liberty Street
New York, NY

Dear Pat,

The Department has received the Environmental Work for Crane Tie Supports abatement procedures submittal, sent by mail on May 4, 2006. The submittal has been reviewed by the Department, as it relates to asbestos project activities.

The Department has discussed concerns regarding the plan and drawings with the NYC DEP, and provides the following general comments, to be included with your comments on the submittal.

Comments

- The information contained within the submittal regarding asbestos project activities, does not include all the procedures and conditions included within the approved site-specific variances for this portion of the asbestos project. A reference must be added that requires all necessary tie-ins for the tower crane to be completed as per the requirements of the site-specific variance decisions and amendments/reopenings/clarifications relating to “hoist/scaffold tie-ins”, including the use of negative pressure tent enclosures as necessary.
- In addition, the submittal must be revised to clearly indicate which tasks/procedures apply to the asbestos project and which ones apply to non-asbestos project activities.

The Department and the NYC DEP anticipate that these issues will be appropriately addressed within a revised version of the submittal. If you have any questions regarding these comments please contact the Department at (518) 457-1536.

Sincerely,

Christopher G. Alonge, P.E.
Senior Safety and Health Engineer

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