Department of Toxic Substances Control

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Agency Secretary
Cal/EPA

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May 3, 2005

Mr. David Chung
Environmental Remediation
The Boeing Company
6633 Canoga Avenue
Post Office Box 7922
Canoga Park, California 91309-7922

CONDITIONAL APPROVAL FOR THE RCRA FACILITY INVESTIGATION WORKPLAN ADDENDUM AMENDMENT, FORMER LIQUID OXYGEN (LOX) PLANT SITE, SURFACE FLUX AND AMBIENT AIR MONITORING, SANTA SUSANA FIELD LABORATORY (SSFL), VENTURA COUNTY, CALIFORNIA

Dear Mr. Chung:

The Department of Toxic Substances Control (DTSC) staff have reviewed the Resource Conservation Recovery Act Facility Investigation (RFI) Work Plan (Workplan) Addendum Amendment, LOX Plant Site (Solid Waste Management Units; SWMUs 4.5 and 4.6), dated February 21, 2005. The Workplan was prepared by The Boeing Company's (Boeing's) consultant, Montgomery Watson Harza, Incorporated. The LOX RFI site occupies approximately six acres and is located in the northern portion of the SSFL. During the 1960's the facility was used to manufacture liquefied air for use in liquid rocket propellant testing. The facility was removed in the early 1970s.

The LOX RFI site boundary includes the former LOX Plant which occupies the majority of the LOX RFI site, and two SWMUs which occupy less than 1 acre combined. SWMU 4.5, a former waste oil sump and clarifier is located immediately west of the former LOX Plant. SWMU 4.6, a former Asbestos and Drum Disposal Area are located west of the former LOX Plant and northwest of the former waste oil sump. Previous RFI investigations indicate the presence of elevated Volatile Organic Compounds (VOCs) in soil gas and soil matrix samples collected from the north central portion of the former LOX Plant. The objective of this Workplan is to assess the fugitive vapor emissions from the known elevated VOC source area to ambient air in the former LOX Plant area.

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To meet the objectives, Boeing proposes to collect ambient air samples, flux chamber samples, and soil matrix and vapor samples. The various sampling media will be analyzed for selected chemical and geotechnical parameters to better understand previous sample results and to determine the flux rate of VOCs emitting from soil in the elevated source area of the former LOX Plant.

Boeing submitted an earlier version of the Workplan to DTSC on December 2, 2004. On January 12, 2005, DTSC and Ventura County Air Pollution Control District staff met with representatives of Boeing and their consultants to conduct a site visit and present Workplan comments. The following items were requested by DTSC staff during the meeting and were incorporated in the Workplan:

- Use selective ion monitoring when conducting United States Environmental Protection Agency Method TO-15 for VOC analyses of flux chamber and ambient air sample analysis.

- Move ambient air sample number 4 east, upstream, and closer to the VOC source area.

- Collect soil matrix confirmation samples for VOCs at location LXSV73 instead of LXSB18.

- Remove the reference on page 10, second bullet which states that the upwind concentration may be subtracted from the downwind concentrations when assessing the emissions contribution for LOX.

- Collect soil matrix samples at various depth intervals at location LXBS16 to complete a moisture profile at this location. Boeing moved this task to location LXSBS13. Given the proximity of the two locations DTSC finds this change acceptable as long as the new sampling location is not in a zone of previously disturbed soil from the previous soil borings.

- Collect additional soil matrix samples at LXSV73 to compare with previous soil vapor VOC results.

The following items were requested by DTSC staff during the meeting and were not incorporated in the Workplan:

- Include barometric pressure in the suite of meteorological monitoring parameters.

- Collect soil matrix samples at 1, 2.5, 5, and 7.5 feet below the ground surface at location LXSBS70. The samples should be analyzed for VOCs to provide a comparison of soil matrix VOC results with previous soil vapor results, and provide a vertical profile of contaminant concentrations to better understand the subsurface soil vapor flux in the source area.

- An inactive utility line trending east-west along the north boundary of the former LOX Plant was identified in the field. Explain the former content of the line and the duration of activity.

- Collect soil matrix samples across the inactive utility line mentioned in the previous item. Analyze the soil samples for geotechnical parameters to understand the soil mechanics of the utility line backfill material. The results of this effort will aid in understanding whether the utility backfill material is a vapor conduit, potentially contributing to the migration of elevated VOCs away from the source area.

- The Workplan shall clearly state that although SWMUs 4.5 and 4.6 are located in the LOX RFI site, they are not the focus of this Workplan. Additional characterization will be required for the SWMUs and the source area as well.

- The RFI Report for work outlined in the Workplan shall clearly describe the lateral and vertical extent of any ground disturbance, excavation, and backfill of the LOX area. Include field observations made during grading in 1996 when the site was “regraded to conform to the natural topography”. Provide a map depicting the locations of the requested information. DTSC needs to know if soil vapor sample locations are from undisturbed soil or backfill. This information will be needed for comparing soil vapor data with soil matrix data.

- Section 1.1 indicates "near-surface groundwater does not occur in the vicinity of the LOX site." During the site visit on January 12, 2005, DTSC staff requested Boeing to measure piezometer PZ-095 for the presence of water. Piezometer PZ-095 is located in the central portion of LOX and is historically dry. This request was initiated in response to recent heavy rains. The RFI report for this site shall identify the results of this measurement. In addition, the RFI report shall include a summary of historical annual precipitation measurements, including the 2004/2005 rainy season, for the site. Based on the data provided, the RFI report should identify whether the sampling event described in the Workplan follows a significant rainy season compared to normal or typical rain years.

DTSC hereby approves the Workplan with the condition that the items mentioned above will be incorporated in the Workplan or RFI Report as mentioned. You may notify your contractors to begin work.

If you have any questions regarding this letter, please contact me at (916) 255-3602.

Sincerely,

Peter H. Bailey, R.G.
Engineering Geologist
Northern California Permitting and Corrective Action Branch

cc: Mr. Gerard Abrams, Department of Toxic Substances Control
Mr. James Pappas, Department of Toxic Substances Control
Mr. Stephen Baxter, Department of Toxic Substances Control
Ms. Terri Thomas, Ventura County Air Pollution Control District
Mr. David Bacharowski, Los Angeles Regional Water Quality Control Board
Ms. Laura Rainey, Department of Toxic Substances Control

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Author	Reviewer	Reviewer	Reviewer	Reviewer	Site Name/File Code	TYPIST
P. Bailey 255-3602	P. Bartarseh 255-3609	J. Pappas 255-3572			22120 300232-48 MPC 37 Rocketdyne, Santa Susana Field Laboratory C	Janice Klaschen 255-3574 Michele McKenzie 255-3907 PB06W.045

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