Department of Toxic Substances Control

Alan C. Lloyd, Ph.D.
Agency Secretary
Cal/EPA

8800 Cal Center Drive
Sacramento, California 95826-3200

Arnold Schwarzenegger
Governor

June 30, 2005

Mr. Arthur J Lenox
The Boeing Company
6633 Canoga Avenue
P.O. Box 7922
Canoga Park, California 91309-7922

CLARIFICATION OF RCRA FACILITY INVESTIGATION (RFI) REQUIREMENTS, SANTA SUSANA FIELD LABORATORY, VENTURA COUNTY, CALIFORNIA

Dear Mr. Lenox:

This letter is a follow-up regarding clarification of RFI requirements discussed in meetings on April 4, 2005 (soil background) and April 20, 2005 (general RFI Characterization issues) between DTSC and Boeing. RFI requirements clarified during the meetings included the following:

i. Modify the Soil Background Data Set
ii. Sampling at pole mounted transformers
iii. Need to resurvey topography after RFI sampling completed if any changes have occurred (i.e. minor grading, building demo or interim measures).
iv. Need to characterize artificial fill placed after RFI sampling completed (i.e. Old Conservation Yard (OCY) “unknown” fill source).
v. Soil Sampling prior to Corrective Measures Study (CMS) to further define clean-up boundaries
vi. Inclusion of DOE radiological data in RFI Reports
vii. Providing a bibliography and access to DOE reports

The following has been agreed to:

i. Soil Background Data Set.

Samples from BG03 location differ chemically and geologically from background samples from onsite formations and will be removed. Prior DTSC site decisions using soil background will not be affected by this data set modification for the RFI. All remaining existing background sample locations will remain in the dataset.

GA:mm
GA36W.065

Boeing will collect additional samples at existing background sample locations to augment the existing soil background dataset for metals not analyzed during previous sampling events or replace sample data that had elevated analytical detection limits.

Information regarding the supplemental Soil Background Sampling is summarized in a letter from Boeing to DTSC dated April 8, 2005, which details the locations and analysis of the samples. Additional background locations or sampling depths are not required.

Results from the proposed sampling that show an order of magnitude or greater difference for metal concentrations (i.e. the dataset) will be evaluated further for possible anthropogenic impacts and acceptability before the data is incorporated into the background data set. Boeing and DTSC will use best professional judgment in determining acceptability of supplemental metal results. The final soil background data set from this and earlier sampling will be published in a separate report for DTSC review and approval.

The Standard Risk Assessment Methodology (SRAM) will use 95% UCL of 99% percentile (or max if lower) and the Wilcoxon Rank Sum (WRS) Test per SRAM Workplan (2005) for risk assessment.

Characterization will also use the 95% UCL of the 99 percentile (or max if lower) along with other site information (e.g., sampling data trends, risk assessment findings, historical operations) in a best professional judgment approach to make additional sampling decisions.

ii. PCB sampling at pole mounted transformers

The soil beneath onsite Boeing pole mounted transformers (installed prior to 1980) will be visually inspected for staining.

At locations where there is a single pole-mounted transformer (installed pre-1980) and no staining or leakage is identified, soil sampling/analysis for PCBs would not be conducted. If, however, staining of the soil is identified, then soil sampling will be conducted.

Where two or more transformers (installed prior to 1980) are or have been mounted on a pole(s) above an unpaved surface, then soil sampling will be conducted regardless of staining conditions on the poles or transformers. This approach is suggested due to the combined volume of multiple transformers.

If, the ground surface beneath the two or more mounted transformers (installed pre-1980) is covered with asphalt or concrete and staining is not identified, then soil sampling/analysis for PCBs will not be conducted. If, however, staining is identified on the paved surface, then soil sampling will be conducted.

If PCBs are detected from nearby SWMUs, samples will also be collected beneath pole mounted transformers adjacent to or within the SWMU.

A map showing all onsite Boeing owned pole mounted transformers will be prepared. Pole mounted transformers installed prior to 1980 will be identified (based on available information).

The RFI report(s) will have an affirmative statement summarizing the results of the pole mounted investigation within/near the reporting area.

All SSFL transformer inspection, sampling, and data will be reported to the DTSC. All reports will be signed by licensed professional (standard practice).

iii. Need to resurvey topography after RFI sampling completed if any changes have occurred (i.e. significant and minor grading, building demolition or interim measures).

For the Old Conservation Yard (OCY) site:

The RFI report will identify estimated extent of fill placement area and depth. The extent of fill in the Old Conservation Yard will be mapped and shown on a figure in the RFI report. Instead of re-surveying, depth estimates of the fill at OCY will be supported with hand auger data collected from 2 to 3 locations to document existing soil conditions. A note will also be provided on the figure that describes the topographical changes relative to fill.

Other RFI site locations:

In areas where significant changes in topography occur (due to import of fill material or building demolition), Boeing will resurvey the topography and provide information regarding the thickness and extent of fill at SWMUs and AOCs. Where resurveys are not conducted, Boeing will map in the extent of the fill. The figures will be modified to show the most recent topographic changes. In summary, these include: (1) text to describe amount of fill and/or topographic changes, (2) a figure showing the extent and location of fill material, along with a note to describe topographic changes; (3) hand

auger data will be collected to confirm fill depth in areas of broad fill placement (small building demolitions will be noted but not checked with hand auger).

Fill will not be placed above known areas of elevated soil concentrations resulting in estimated unacceptable risks.

Re-surveying will be conducted at areas where significant soil disturbance has occurred at SWMUs or AOCs. For example, following significant soil excavations at Interim Measures clean up activities (FSDF, Building 203 and Happy Valley) surveying was conducted. In addition, building demolition at SWMU and AOC locations that involve extensive soil movement (e.g., Building 4059) may warrant surveying to ensure excavation boundaries are documented so that subsequent RFI soil sampling will be performed and located correctly. If surveying information is not available, then the report should clearly indicate this and existing figures and photos will be used to document excavation boundaries.

The above requirements for mapping and re-surveying apply to SWMUs and AOCs sites investigated during the RFI.

iv. Fill from unknown sources, regardless of thickness, must be documented and adequately characterized when emplaced after RFI sampling is completed.

Boeing will provide statements in the RFI report that will either describe (1) the origin of the fill material (when documentation is available), or (2) state that the origin of the fill is unknown (if documentation does not exist). Boeing will provide supporting data that demonstrate that the fill is not impacted (e.g., sampling data, visual observations during construction, boring or trench logs, or photographs), photographs or other documentation that describes the current condition of the fill material. The RFI report will provide a statement (signed by an appropriate licensed professional) affirming that the fill is not impacted and does not pose a risk to human health or the environment.

In the case of the Old Conservation Yard site, analytical data of the fill material, description of DTSC-directed investigation of the berm soils subsequently used as fill material, and photographs will be included in the revised RFI report.

v. Soil Sampling prior to CMS to further define clean up boundaries

During the course of RFI sampling, it may be efficient to defer further sampling of an impacted area in a SWMU to the CMS or CMI phase of work provided <u>sufficient</u> characterization has been completed to delineate the volume and extent of

contamination. This is predicated upon the assumption that (1) the risks posed by the impacted area will require remediation and (2) existing RFI characterization results enable a volumetric estimate that would not change CMS evaluation of appropriate cleanup technologies, or CEQA-related determinations (i.e. the characterization should be sufficient that the volumes estimated generally are within a factor of 10).

The Old Conservation Yard site has a localized area that meets these criteria. RFI sampling has identified an area that has elevated dioxin concentrations in soil that will require remediation (excavation is presumed). The source of the dioxins is from burned and charred telephone poles and the extent of impacts is based on visual indicators (e.g. location of charred poles, the lateral extent is partially bounded with paved surfaces and bedrock). Since the extent and volume of the impacted soils is discernable and the soils will need to be removed then it may be efficient to defer further sampling until after the cleanup action (i.e., CMI) at which time more complete confirmation sampling will be conducted.

The remaining two DOE issues (i.e., vi. inclusion of radiological data in RFI Reports, and vii. providing an Area IV bibliography and access to DOE reports), still need to be resolved and we look forward to hearing from you soon.

If you have any questions regarding these issues, please do not hesitate to give me a call at (916) 255-3600.

Sincerely,

Gerard J Abrams, C.HG.
Senior Engineering Geologist
Northern California Permitting and Corrective Action Branch

cc: Mr. Stephen Baxter
Department of Toxic Substances Control
1011 Grandview Avenue
Glendale, California 912101-2205

Ms. Laura Rainey
Department of Toxic Substances Control
5796 Corporate Avenue
Cypress, California 90630

GA:mm
GA36W.065

Author	Gerard Abrams 255-3600	Reviewer	P. Batarseh 255-3609	Reviewer	J. Pappas 255-3574	Reviewer		Reviewer		Site Name/Code P	TYPIST	Michele McKenzie 255-3907 RFI Letter GA36W.065 GAGA GA

June 30, 2005

Mr. Arthur J Lenox
The Boeing Company
6633 Canoga Avenue
P.O. Box 7922
Canoga Park, California 91309-7922

CLARIFICATION OF RCRA FACILITY INVESTIGATION (RFI) REQUIREMENTS, SANTA SUSANA FIELD LABORATORY, VENTURA COUNTY, CALIFORNIA

Dear Mr. Lenox:

This letter is a follow-up regarding clarification of RFI requirements discussed in meetings on April 4, 2005 (soil background) and April 20, 2005 (general RFI Characterization issues) between DTSC and Boeing. RFI requirements clarified during the meetings included the following:

viii. Modify the Soil Background Data Set
ix. Sampling at pole mounted transformers
x. Need to resurvey topography after RFI sampling completed if any changes have occurred (i.e. minor grading, building demo or interim measures).
xi. Need to characterize artificial fill placed after RFI sampling completed (i.e. Old Conservation Yard (OCY) “unknown” fill source).
xii. Soil Sampling prior to Corrective Measures Study (CMS) to further define clean-up boundaries
xiii. Inclusion of DOE radiological data in RFI Reports
xiv. Providing a bibliography and access to DOE reports

The following has been agreed to:

vi. Soil Background Data Set.

Samples from BG03 location differ chemically and geologically from background samples from onsite formations and will be removed. Prior DTSC site decisions using soil background will not be affected by this data set modification for the RFI. All remaining existing background sample locations will remain in the dataset.

GA:mm
GA36W.065

GA:mm
GA36W.065