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CERTIFIED MAIL

December 22, 2004
In reply refer to 2004RC03548



Mr. Watson Gin, P.E.
Deputy Director
Hazardous Waste Management Program
Department of Toxic Substances Control
1001 I Street
P.O. Box 806
Sacramento, CA 95812-0806

RE: Request for Review of Class 2 Permit Modification of Two Post Closure Permits
Boeing Rocketdyne Santa Susana Field Laboratory Areas I and III (EPA ID No.
CAD093365435) and NASA Santa Susana Field Laboratory Area II (EPA ID No.
CA1800090010)

Dear Mr. Gin:

The Boeing Company (Boeing) and National Aeronautical Space Administration (NASA) respectfully submit this request in accordance with 22 CCR section 66271.18 for review of the Class 2 Permit Modification of the two Post Closure Permits described above. Pursuant to Section 25200 of the California Health and Safety Code, the California Department of Toxic Substances Control (DTSC) issued two Hazardous Waste Facility Post-Closure Permits (PCPs) for the Santa Susana Field Laboratory (SSFL). "*Hazardous Waste Facility Post-Closure Permit NASA, Santa Susana Field Laboratory, Area II*" (PC-94/95-3-03), and "*Hazardous Waste Facility Post-Closure Permit Rocketdyne, Santa Susana Field Laboratory, Areas I and III*" (PC-94/95-3-02) (hereinafter "*Post-Closure Permits*"), which correspond to the EPA ID numbers noted above, have an effective date of May 11, 1995, and expire May 11, 2005.

Boeing and NASA submitted a proposed Class 2 modification to the Post-Closure Permits in response to a DTSC directive dated February 27, 2003. The proposed permit modification was intended to address DTSC comments relating to the groundwater monitoring program for the site's nine former surface impoundments, each of which are currently under post-closure care. DTSC issued the approved permit modification on November 19, 2004, with certain exceptions and changes. For the reasons set forth below, Boeing and NASA request DTSC to accept review of the permit modification and schedule a hearing on the merits.

I. INTRODUCTION

As explained more fully below, Boeing and NASA are seeking review of the permit modification on technical and factual grounds. Additionally, the permit modification raises a substantial policy consideration: how to regulate closed surface impoundments at a corrective action site, when releases to the subsurface from both SWMUs and impoundments may have occurred. As revised by DTSC, the modification imposes millions of dollars of new groundwater monitoring to address closed surface impoundments. Yet the revised monitoring program is not supported by the vast amounts of groundwater data submitted to the DTSC or the site hydrogeology. Nor does it appear to consider that the RCRA corrective action program is currently being used to address the historical releases from SWMUs and areas of concern throughout the facility, oftentimes adjacent to the closed surface impoundments. Specifically, in imposing the new requirements Boeing and NASA believe that DTSC did not adequately consider:

- more than 15 years of monitoring data that have already been provided to the agency;
- the site history, conditions and hydrogeologic environment;
- historical actions that have taken place at the surface impoundments (e.g., surface impoundment closure activities including excavation and backfilling, risk assessment and closure) and additional work performed during the RCRA facility investigations that have already been completed or are underway at SSFL;
- the fact that over the past 10 years concentrations of chemicals in groundwater are typically stable or decreasing at or adjacent to the impoundments and;
- the vastly improved understanding of site conditions resulting from extensive investigations, some of which are ongoing.

At the same time, the permit modification imposes a substantial financial burden: additional sampling and analyses will increase costs *by more than one million dollars in the first year alone*, and more than six million dollars over the next ten years. Given the vast amount of data already provided to DTSC at this site, and the relatively minor contribution of all but two of these impoundments to site-wide groundwater impacts¹, these additional costs are unreasonable. Without relief, Boeing and NASA will be forced to spend millions of dollars conducting unnecessary and redundant sampling with no corresponding benefit to human

¹The relatively minor contribution of these impoundments (excluding Delta and ABSP) to site-wide groundwater impacts is attributed to the fact that the majority of them are not associated with the large rocket engine test stands where analysis of historical data indicates that most of the releases would have occurred. Additionally, all impoundments except for Delta have been excavated to bedrock, and these sources have been removed.



health or the environment. Accordingly, Boeing and NASA request the DTSC to accept review of the permit modification and schedule a hearing on the merits.

II. THE MONITORING NETWORK, FREQUENCY AND ANALYSIS IMPOSED IN THE MODIFICATION IS NOT SUPPORTED BY AVAILABLE DATA

Throughout the final permit modification, DTSC has increased the number of wells in the monitoring network, the list of target analytes, and the frequency of sampling. These revisions to the proposed modification do not adequately consider the comprehensive data that already have been submitted to DTSC that should serve as a baseline for groundwater monitoring at the impoundments and allow for a *reduction* in sampling analytes and frequency. Even more compelling is the fact that the data developed over the past 10 years show that concentrations of chemicals in groundwater at and around the surface impoundments are typically stable or decreasing. DTSC offers no rationale for increasing the monitoring requirements in light of these data.

A. The Permit Imposes Excessive Constituents of Concern Analysis That Does Not Adequately Consider Historical Data

The permit modification significantly increases the monitoring frequency required for Constituents of Concern over that proposed by Boeing. *Post-Closure Permits, Table 4 and Table 7*. With regard to the number of constituents, the modification requires Boeing and NASA to analyze for the complete list of Constituents of Concern (COCs) as the minimum analytical suite for analysis. Given the history of the site and the data developed to date, there appears to be no justification for imposing this requirement. The comprehensive data that have been provided to DTSC document the historical record of sampling that has been conducted pursuant to the Post-Closure Permits, the site-wide monitoring program, and other programs at the facility. These data demonstrate that certain COCs have not been detected in groundwater in the vicinity of individual impoundments. The data should offer a baseline for determining an appropriate analytical suite for the monitoring program. DTSC's inclusion of a blanket requirement for all COCs on quarterly frequency does not consider the comprehensive, historical water quality analyses.

Based on the available data, Boeing believes that the complete Constituents of Concern analyses should be required only once initially to determine an appropriate analytical suite, "Monitoring Parameters". Then, in order to ensure that the analytical suite continues to be appropriate, the complete Constituents of Concern analyses should be repeated on a five-year frequency.



B. Requiring Quarterly Monitoring Disregards Historical Sampling and Water Quality Trends

The specified quarterly sampling frequency for all COCs during the first year of monitoring also is inappropriate, as the modification seemingly assumes that this is a new project. *Post-Closure Permits, Section H. 2 and Table 7*. As noted above, the comprehensive data that have been provided document the historical record of sampling that has been conducted pursuant to the Post-Closure Permits, the site-wide monitoring program, and other programs at the facility. These data include thousands of samples taken at regular intervals from wells over many years. Boeing proposed semi-annual groundwater sampling because the need for a quarterly monitoring frequency is not justified by the observed stability in groundwater quality, as documented by the comprehensive historical data provided to DTSC (e.g. quarterly and annual groundwater monitoring reports). DTSC has the authority in 22 CCR 66264.97(e)(12) to allow semi-annual sampling.

C. The Monitoring Network Includes Existing Wells Unrelated to the Regulated Units

The permit modification includes approximately 58 additional groundwater monitoring wells that have been installed and monitored by Boeing and NASA for site-wide or other groundwater investigations unrelated to the Regulated Units in the Post-Closure Permits' groundwater monitoring program. *Post-Closure Permits, Table 7*. The Agency has added "Evaluation Monitoring Wells" to the required monitoring for specific regulated units without any hydrogeologic basis for their inclusion. A specific example of this is the inclusion of wells RD-49A, RD-49B and RD-49C as wells in the affected media associated with the ABSP impoundment. These wells are nearly 1000 feet from the impoundment and may have been impacted by inadvertent releases from facilities and operations unrelated to the ABSP impoundment that currently are being monitored through the RCRA Facilities Investigation program. Neither the DTSC Letter of Determination nor other comments on the proposed modification offer a technical or regulatory basis for including these wells.

D. The Monitoring Network Inappropriately Includes Wells Owned by Parties Other Than NASA or Boeing

The permit modification includes several monitoring wells that are not owned or controlled by NASA or Boeing (e.g., OS-26). "*Hazardous Waste Facility Post-Closure Permit Rocketdyne, Santa Susana Field Laboratory, Areas I and III*" (PC-94/95-3-02), Table 7. The permit should include only Boeing or NASA-owned wells.



E. The Sampling and Analysis Requirements Include Constituents Not Associated with the Impoundments or Otherwise Inappropriate

(1) Perchlorate. Perchlorate was not a chemical identified to have been used at any of the nine closed surface impoundments. Supporting documentation has been provided previously to the DTSC indicating that perchlorate impacts at SSFL are not associated with the impoundments. *Post-Closure Permits, Table 4.*

(2) Phthalates. The phthalates are known common laboratory contaminants and were not known to be used at the closed surface impoundments. *Post-Closure Permits, Table 4*

(3) Sulfuric Acid. Sulfuric acid per se cannot be determined in water. Sulfate and pH are already being analyzed for. *Post-Closure Permits, Table 4.*

(4) Napthene/Naphthene. We assume DTSC means to refer to Napthene/Naphthene and not Naphthalene. Napthenes identified in relation to chemical use at the impoundments are a generic group of hydrocarbons characterized by saturated carbon atoms in a ring structure (also called cycloparaffin or cycloalkane). Naphthalene is a poly-aromatic hydrocarbon which can be determined using EPA method 8260B (chemical formula C₁₀H₈). *Post-Closure Permits, Table 4.*

(5) Hydrazine. Hydrazine, Monomethyl Hydrazine, and UDMH are unstable and have short half-lives in the environment and are no longer utilized at SSFL. Boeing has previously sampled and analyzed groundwater in the vicinity of the impoundments for breakdown or daughter products (e.g., formaldehyde and n-nitrosodimethylamine). However, the DTSC requirement for hydrazine analysis is premature and inappropriate at this time since their proposed new method requires additional evaluation to determine their accuracy and availability of reliable commercial laboratories to perform the proposed analysis. Furthermore, the Department of Health Services has not certified analytical methodologies and the applicability of the test methods proposed by DTSC. *Post-Closure Permits, Table 4.*

(6) Sodium Azide. Sodium Azide per se cannot be determined in water. Sodium is specified for analysis as a background general water quality parameter. The Department of Health Services has not certified analytical methodologies for azide and the applicability of the azide test methods proposed by DTSC would require additional evaluation as to their accuracy and the availability of commercial laboratories to perform the proposed test methods. *"Hazardous Waste Facility Post-Closure Permit Rocketdyne, Santa Susana Field Laboratory, Areas I and III" (PC-94/95-3-02), Table 4.*



F. The Modification Imposes Improper Analytical Methods

There are two instances in which DTSC imposes improper analytical methods:

(1) 1,3-Dinitrobenzene using 8260B. SW846 does not list 1,3-dinitrobenzene as an approved analyte by method 8260B. *Post-Closure Permits, Table 4*.

(2) Hydrazine, MMH, UDMH. California Department of Health Services has not identified certified analytical methods for Hydrazine, Monomethylhydrazine, and Unsymmetrical Dimethylhydrazine (UDMH). Technical methods for analyzing these constituents are under study. *Post-Closure Permits, Table 4*.

G. The Modification Citation for Concentration Limits is Incorrect

The reference to 22 CCR 66264.97(3)(11)(B) appears to be more appropriately 22 CCR 66264.97(e)(11)(B). *Post-Closure Permits, Table 4*.

III. THE MODIFICATION CONTAINS SEVERAL FACTUAL ERRORS OR OMISSIONS

In addition to the technical errors cited above, the modification contains several factual errors or omissions.

A. DTSC has rejected well HAR-24 as a Background Well at APTF. Boeing provided supporting documentation indicating that HAR-24 is located hydraulically upgradient of the APTF impoundments. In rejecting HAR-24 as a background well, DTSC provides no supporting documentation indicating that the impacts at HAR-24 are the result of releases from the APTF impoundments rather than other sources. "*Hazardous Waste Facility Post-Closure Permit Rocketdyne, Santa Susana Field Laboratory, Areas I and III*" (PC-94/95-3-02) Table 2.

B. DTSC also rejects well HAR-11 as a Background Well at ABSP. As with HAR-24, Boeing has provided supporting documentation indicating that HAR-11 is located hydraulically upgradient of the ABSP impoundment. Again, DTSC provides no supporting documentation indicating that the impacts at HAR-11 are the result of releases from the ABSP impoundment rather than other sources. "*Hazardous Waste Facility Post-Closure Permit NASA, Santa Susana Field Laboratory, Area II*" (PC-94/95-3-03) Table 2.

C. ES-33 is misidentified as an STL-IV-1 Evaluation Monitoring Program Well. Boeing proposed HAR-33 as an Evaluation Monitoring Well for



STL-IV-1. "Hazardous Waste Facility Post-Closure Permit Rocketdyne, Santa Susana Field Laboratory, Areas I and III" (PC-94/95-3-02) Table 6 and Table 7.

D. References to SPA-1 and SPA-2 are transposed. The SPA-1 impoundment is located approximately 400 feet west of the SPA-2 impoundment. "Hazardous Waste Facility Post-Closure Permit NASA, Santa Susana Field Laboratory, Area II" (PC-94/95-3-03) Table 1, Table 2, Table 5, Table 6, Table 7, and applicable text associated with the Tables.

IV. DTSC SHOULD ADOPT FEDERAL RULES FOR GROUNDWATER MONITORING AT POST-CLOSURE/CORRECTIVE ACTION SITES

As noted throughout the foregoing comments, the permit modification fails to consider the ongoing corrective action at SSFL and the fact that the impoundments are among many historic sources of groundwater impacts at the site. Most of the issues raised in this request for review illustrate the difficulties that arise at sites undergoing both post-closure and corrective action, where both the impoundments and the SWMUs contribute to site-wide impacts.

Regulation of the impoundments at SSFL within the ongoing corrective action program could eliminate the costly, duplicative sampling and analysis imposed under this modification, and would harmonize the impoundments with the site-wide groundwater remedy. USEPA has recognized that where both closed surface impoundments and SWMUs are sources of releases, groundwater monitoring requirements designed for the impoundments do not provide sufficient flexibility to decide on remedies that reflect the conditions and complexities of the entire site, and may unnecessarily impede cleanup. See 63 Fed. Reg. 56710 (Oct. 22, 1998). Boeing and NASA request that, as a policy matter, DTSC adopt the federal regulations and "eliminate some of the problems Regions and States have encountered where two sets of requirements apply at a cleanup site - requirements for closure at the regulated unit, and corrective action requirements at the SWMUs." 63 Fed. Reg. at 56710, 56724 (Oct. 22, 1998).

V. CONCLUSION

All of the issues raised in this request for review arose from the changes that DTSC made to the permit modification after the public comment period. The permit modification as proposed by Boeing and NASA in May of 2003 and opened to public comment reflected the site conditions and vast amounts of groundwater data already generated at this site. By contrast, the permit modification issued on November 19, 2004 imposes numerous financially burdensome requirements that are not supported technically, or by voluminous historical data. The additional sampling and analyses required by the permit modification will, however, increase



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the costs of groundwater monitoring by over one million dollars in the first year alone and several millions of dollars over the next ten years.

For all of the reasons described above, Boeing and NASA respectfully request that DTSC accept review of this Permit Modification and schedule a hearing on the merits. In the alternative, Boeing and NASA request that DTSC direct permitting staff to reconsider the original sampling proposal submitted in May of 2003, in which the monitoring network, sampling frequency and target analyte list for the closed surface impoundments are more technically appropriate considering the historical data and our unique site conditions.

Thank you for considering this matter and please call me at your earliest convenience to discuss our request. My phone number is (818) 586-2577.

Sincerely,

// original signed by //

Steve Lafflam
Division Director
Safety, Health and Environmental Affairs

With the concurrence of:

// original signed by //

David Herda, Manager
NASA Resident Office

SRL:AJL:bjc

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cc: Jose Kou, DTSC
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