



Department of Toxic Substances Control

Agency Secretary
Cal/EPA

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Arnold Schwarzenegger
Governor

November 19, 2004

To Interested Party:

CLASS 2 PERMIT MODIFICATION REQUEST CONCERNING TWO POST-CLOSURE HAZARDOUS WASTE FACILITY PERMITS AT SANTA SUSANA FIELD LABORATORY -- BOEING-ROCKETDYNE AREAS I and III (CAD093365435), AND NASA/BOEING AREA II (CA1800090010)

Thank you for your interest in the Class 2 Permit Modification Request submitted by the Boeing Company (Boeing) to the Department of Toxic Substances Control (DTSC) on May 28, 2003. DTSC received your comments and responded to them in the enclosed Response to Comments Document. A copy of the Response to Comments Document is being sent to all persons who commented on the Permit Modification Request during the comment period.

DTSC approved most of the actions in the Class 2 Permit Modification requested by Boeing. In addition, DTSC also made changes to the Permits consistent with Boeing's request. DTSC's changes and decision is discussed in a letter and attachment sent to Boeing. This letter with attachment is also enclosed with the Response to Comments Document.

DTSC will file a Notice of Exemption in compliance with the requirements of the California Environmental Quality Act (CEQA).

Documents for the Class 2 Permit Modification Request, Response to Comments, and DTSC's decision can be reviewed at the following locations:

- California State University Northridge, Oviatt Library, 18111 Nordhoff Street, Northridge, CA 91330. Contact: Robert Marshall (818) 667-2832;
- Simi Valley Library, 2969 Tapo Canyon Road, Simi Valley, CA 93063. Contact: Martha Gifford (805) 526-1735;
- Los Angeles Public Library - Platt Branch, 23600 Victory Boulevard, Woodland Hills, CA 91367. Contact: Lynn Light (818) 340-9386.

RESPONSE TO COMMENTS DOCUMENT

CLASS 2 PERMIT MODIFICATION REQUEST POST-CLOSURE HAZARDOUS WASTE FACILITY PERMITS SANTA SUSANA FIELD LABORATORY AREAS I AND III - BOEING AREA II - NASA/BOEING

November 19, 2004

INTRODUCTION

The Boeing Company (Boeing) submitted a Class 2 Permit Modification Request (Request) to the Department of Toxic Substances Control (DTSC) dated May 28, 2003. A Public Comment Period occurred from June 3, 2003 to August 4, 2003 which allowed the public to review and comment on Boeing's Request to modify two Post-Closure Hazardous Waste Facility Permits for the Santa Susana Field Laboratory (SSFL), located in Simi Hills, Ventura County, California. Boeing held an "open house" public meeting on July 2, 2003. During the Public Comment Period, DTSC received comments on a variety of issues and developed this "Response to Public Comment Document" to respond to comments concerning Boeing's Class 2 Permit Modification Request. DTSC issues this document with the decision to approve parts of the permit modification request.

THE PERMIT MODIFICATION REQUEST

Boeing's Request proposed to modify two Post-Closure Hazardous Waste Facility Permits issued for SSFL in 1995. Both Permits cover closed surface impoundments and groundwater treatment systems at SSFL. One permit is for Areas I and III, owned and operated by The Boeing Company-Rocketdyne Power and Propulsion (previously by Rockwell International), while the other permit is for Area II, owned by the National Aeronautics and Space Administration (NASA) and co-operated by NASA and Boeing. Boeing's request to modify the two Post-Closure Permits can be generalized as follows:

- Update the groundwater monitoring program for the nine closed surface impoundments to meet current regulations. This includes the detection monitoring program and evaluation monitoring program for each impoundment.
- Redesignate wells with existing groundwater monitoring wells that will meet the requirements for groundwater monitoring program under California Code of Regulations, title 22, division 4.5, chapter 14, article 6 "Water Quality Monitoring and Response Programs for Permitted Facilities" (Article 6).
- Construct three new monitoring wells where wells did not exist that adequately satisfy groundwater monitoring regulations.
- Update the sampling constituent to match known site conditions.
- Update the sampling frequencies and constituent lists to meet the Article 6 requirements.
- Update the groundwater sampling and analysis plan to include:
 - updated laboratory analysis
 - updated sample retrieval methods
- Submit rewritten sections of the Post Closure Permit Attachment A to be consistent with regulatory language in state regulations.
- Provide clarification language for the description of the groundwater remediation facilities.
- Provide administrative corrections and updates, as appropriate.

Boeing's request included various documents which were available during the public comment period at designated repositories. Available documents included:

- ATTACHMENT 1: "Hazardous Waste Facility Post Closure Permit, PC-94/95-3-02 (Boeing) -- Attachment A", [NOTE: this document is a redline/strikeout of changes to the hazardous waste facility post closure permit for SSFL Area I / III, CAD093365435]
- ATTACHMENT 2: "Hazardous Waste Facility Post Closure Permit, PC-94/95-3-03 (NASA) -- Attachment A", [NOTE: this document is a redline/strikeout of changes to the hazardous waste facility post closure permit for SSFL Area II, CA1800090010]
- ATTACHMENT 3: "Regulated Unit Water Quality Sampling on Analysis Plan, Santa Susana Field Laboratory, Ventura County", dated May 2003
- REPORT: "Supplemental Data Summary for the Water Quality Sampling and Analysis Plan, Santa Susana Field Laboratory, Ventura County, California", dated May 2003, three volumes.
- HAZARDOUS WASTE FACILITY POST CLOSURE PERMIT, Permit Number PC-94/95-3-02, Issued to The Boeing Company, Rocketdyne Propulsion and Power for the Santa Susana Field Laboratory, Areas I and III, Simi Hills, Ventura County, EPA ID Number CAD093365435, Effective May 11, 1995, last modified November 9, 2001.
- HAZARDOUS WASTE FACILITY POST CLOSURE PERMIT, Permit Number PC-94/95-3-03, Issued to National Aeronautics and Space Administration (NASA) and to The Boeing Company, Rocketdyne Propulsion and Power for the Santa Susana Field Laboratory, Area II, Simi Hills, Ventura County, EPA ID Number CA1800090010, Effective May 11, 1995, last modified November 9, 2001.

BACKGROUND

Historically, Rockwell-Rocketdyne and NASA tested rocket engines at the Santa Susana Field Laboratory in Areas I, II and III. After testing the rockets, various chemicals and solvents were used to clean the engines and parts. The wastewater would flow down a series of surface impoundments connected by channels. Nine of these surface impoundments, or ponds, were designated as regulated facilities under the Resource Conservation and Recovery Act (RCRA). Rockwell closed the surface impoundments between 1984 to 1989 by removing the waste in the impoundments, removing the impoundment's liners, and excavating much of the underlying soil found to be contaminated with chemicals including a class of chemicals known as volatile organic compounds, or VOCs. The VOC contaminants included the chlorinated solvent called trichloroethylene, or TCE. Although the surface impoundments were "closed", contamination was left in the bedrock (fractured sandstone) and the groundwater. Because all of the contamination was not removed, DTSC issued a post closure permit which required, among other activities:

- construction of a cap over the footprint of the surface impoundments to prevent percolation of water through the surface impoundments.
- maintenance of the integrity of the caps for the duration of the post closure care.
- monitoring for each regulated facility which includes background monitoring, point-of-compliance monitoring, detection monitoring and evaluation monitoring. These monitoring programs follow the requirements of the California Code of Regulations, title 22, division 4.5, chapter 14, article 6 "Water Quality Monitoring and Response Programs for Permitted Facilities" (Article 6).
- integration with the corrective action program.

DETERMINATION of the MODIFICATION REQUEST

DTSC made the following determination on Boeing's Request for a Class 2 Permit Modification:

- DTSC incorporated the DTSC-suggested language to make sections of the permit consistent with regulatory language.
- DTSC agreed to add most of the proposed wells to the groundwater monitoring program. DTSC has agreed to remove some of the current wells from the program while deciding to keep other current wells in addition to the new proposed wells.
- DTSC agreed to the plan to construct three new monitoring wells
- DTSC agreed to remove the permit condition for videotaping selected wells because this conditions has already been met.
- DTSC reinstated many of the wells back into various monitoring programs. In other words, DTSC denied Boeing's proposal to remove many wells from the Post Closure Permits's groundwater monitoring program (although these wells would have continued to be monitored for other programs). DTSC reinstated some of these wells back to their originally assigned program. Many other wells were reinstated in the evaluation program located in the unaffected media, sometimes referred to as 'sentinel wells'. Sentinel wells are outside the area impacted by the regulated unit and are used to indicate when contamination might reach that area, if it does at all.
- DTSC added existing wells into the monitoring program which were already constructed and being monitored but were not part of the monitoring programs under the previously issued Post Closure Permits.

DTSC made a number of changes to Boeing's Permit Modification Request. These changes are briefly discussed above. A more detailed explanation can be found in the attachment to the decision letter DTSC sent to Boeing -- "Attachment A to the Letter of Determination for the Class 2 Permit Modification Request, The Boeing Company, Santa Susana Field Laboratory". A copy of Attachment A has been attached to this Response to Comments Document.

PUBLIC COMMENTS

DTSC reviewed the public comments received during the public comment period. The public comments associated with Boeing's Class 2 Permit Modification Request are addressed in the next section of the Response to Public Comment Document. DTSC received the following public comment documents:

- (Walsh) Letter from Christina Walsh, West Hills Property Owners Association, Inc., to Jose Kou, Department of Toxic Substances Control, dated June 21, 2003.
- (Felkins) E-Mail from Madeline Felkins, madelinefelkins@yahoo.com, to Stephen Baxter, sbaxter@dtsc.ca.gov, sent 6/26/2003 12:21 PM.
- (Crawford) Phone conversation from Liz Crawford working for Supervisor Linda Parks, Ventura County, District 2 to Stephen Baxter, Department of Toxic Substances Control, held on August 1, 2003.
- (Parks) Letter from Linda Parks, Board of Supervisors, County of Ventura, District 2 to Jose Kou, Department of Toxic Substances Control, dated August 4, 2003.

Responses to these comment are provided below. DTSC combined similar comments under general headings. The name in the parentheses indicates the source of the comment. The comment numbering is for reference only. The following headings include:

- COMMENT (1): REDUCTION IN MONITORING WELLS
- COMMENT (2): EASING OF PERMIT LANGUAGE
- COMMENT (3): POINT OF COMPLIANCE and DETECTION MONITORING WELLS
- COMMENT (4): ADEQUATE WELL SEALS
- COMMENT (5): DETECTION and EVALUATION MONITORING
- COMMENT (6): SAMPLING FREQUENCY
- COMMENT (7): CHANGING / RE-DESIGNATING /ADDING MONITORING WELLS
- COMMENT (8): PURPOSE OF THE PERMIT
- COMMENT (9): REASON FOR LANGUAGE AND WELL CHANGES
- COMMENT (10): INSTALLATION OF NEW WELLS WITH DTSC OVERSIGHT
- COMMENT (11): TEMPORARY AUTHORIZATION / PERCHLORATE DISCOVERIES

RESPONSE TO COMMENTS

COMMENT (1): REDUCTION IN MONITORING WELLS

(Parks) My comments are twofold, both in regards to the proposed reduction in the number of monitoring wells, and in regards to the proposed modified reporting language. Regarding the number of proposed monitoring wells, it appears the number and location of wells will be greatly diminished. It is essential that there be a sufficient number of wells adopted into the new monitoring program to give adequate data.

RESPONSE TO COMMENT (1):

There are nine closed surface impoundments at SSFL that require post-closure care. Part of the required post-closure care includes a groundwater monitoring program for each impoundment. The monitoring requirements are called "Article 6" because of the section of regulation that describes the requirements. The Article 6 requirements include 1) background wells to judge the conditions before being impacted by the impoundments; 2) "point of compliance" monitoring wells located at the very edge of the impoundments; 3) detection monitoring wells to detect the presence of a release or continued release from the impoundment; and 4) evaluation monitoring wells to assess the impacts of a release from the impoundments. The location and designation of these wells are described in the post-closure permit and supporting documentation.

The Permit Modification Request proposes to redesignate the existing monitoring wells plus construct three new monitoring wells. The Permit Modification Request does not remove any wells from being monitored at SSFL. Information from the newly designated wells will be used specifically to monitor the nine closed surface impoundments. In addition, information from these wells will continue to be used for other monitoring programs at SSFL.

The two 1995 Permits contained a combined total of 66 wells for the groundwater monitoring program of the nine closed surface impoundments. Although all of the wells provide valuable monitoring information, a review of the 1995 wells indicated their location did not adequately support the Article 6 groundwater monitoring program for the surface impoundments. The modification proposes new well designations to better support the Article 6 monitoring requirements.

Boeing's proposed modifications present a combined total of 43 monitoring wells for the nine closed surface impoundments. Although this is a significant reduction in the total number of wells, the placement of the 43 wells is more appropriate than many of the previous 66 wells. In addition, three new monitoring wells are proposed. It should be noted that all of the existing wells will continue to be monitored. The information from the chosen 43 wells will be used for complying with Article 6.

DTSC agreed to accept most of Boeing's proposed wells for upgrading the groundwater monitoring program of the nine closed surface impoundments. The one exception is well PZ-003 which DTSC has instructed to be either

completely retrofitted or abandoned. DTSC also accepted the removal of some wells from the monitoring program, but reinstated many of them. Some were reinstated in the existing programs. Many were placed as evaluation wells outside of the affected media. DTSC also added some wells to some of the programs. As approved by DTSC, the monitoring programs for both permits now total 102 groundwater monitoring wells. Details of DTSC's changes are contained in Attachment A to the Letter of Determination.

DTSC reviewed the previous and proposed wells before deciding on which wells are most appropriate to comply with Article 6. Future information gathered from these monitoring wells will be used to judge the adequacy of the new configuration. DTSC expects future modifications to the Article 6 monitoring programs as new information is received.

NOTE: "Article 6" refers to the California Code of Regulations, title 22, division 4.5, chapter 14, article 6 "Water Quality Monitoring and Response Programs for Permitted Facilities."

COMMENT (2): EASING OF PERMIT LANGUAGE

(Walsh) [Boeing's Class 2 permit Modification Request] states that Rocketdyne proposes revisions, described in Attachment 1 and 2 to the text of [Post Closure Permit Nos. PC-94/95-3-02 and PC-94/95-3-03] that would affect the groundwater monitoring programs for the nine former Resource Conservation and Recovery Act (RCRA) surface impoundments (Regulated Units). The intent is to:

1. Update the groundwater monitoring systems for the nine regulated units and
2. Update the groundwater sampling and analysis plan for the regulated units.

My concern with this request is that page after page of the documents they have altered, or rather, "cleansed" the language so that it no longer contains references to "plume" or "contamination" or "detection", "release" or words like "inadequate", etc. Based on these language changes, it would seem that down the road when this permit is referenced, it will appear as if there are no unusual issues for concern with regard to the property.

These language changes continue throughout the document and it seems clear that the language changes do not change the content or intent of the permit, other than to remove inflammatory detail based language, that references existing problems. The changes do not indicate resolve but rather a decision to remove the details and just say that they will do "things properly" on a general, broad basis.

(Parks) My comments are twofold, both in regards to the proposed reduction in the number of monitoring wells, and in regards to the proposed modified reporting language. Regarding the proposed language changes, I believe in many instances the changes provide for clearer reporting. However, I note that mentions of "plume," "contamination," and other phrases very specific to the site seem to have been eliminated, in favor of more generalized language. As I'm sure you'll agree, it is important for monitoring and reporting that the language explicitly reflects the state and history of the site.

RESPONSE TO COMMENT (2):

DTSC continually reviews the permits and submitted reports concerning the nine closed surface impoundments at the Santa Susana Field Laboratory. While reviewing these documents, DTSC noticed many inadequacies concerning the groundwater monitoring plan for the nine closed surface impoundments. After researching and discussing these inadequacies, DTSC instructed Boeing to submit a permit modification which would correct these inadequacies (letter dated February 27, 2003). The changes in the permit dealing with well designations and sampling procedures are Boeing's proposal to address the inadequacies in the groundwater monitoring.

Aside from addressing inadequacies, language changes were made for two other reasons. First, while researching the groundwater monitoring, DTSC became aware that text in the permit (specifically in Attachment A, which DTSC wrote) used language inconsistent with current regulations which resulted in different interpretations of the requirements or incorrect definition of terms. DTSC informed Boeing of these inconsistencies and supplied Boeing with correct language-changes (e-mail and attachments sent November 6, 2002). DTSC instructed Boeing to include these changes with their permit modification request.

Secondly, Boeing proposed additional changes outside of the groundwater monitoring issues and DTSC's suggested language changes. Some of these changes involved clarification. A few changes were made to delete permit conditions that Boeing felt no longer applied.

DTSC reviewed the proposed language changes before deciding which ones to accept, modify or deny. Importance is placed on permit conditions which are meant to protect human health and the environment. For judging the language that is used, DTSC considers the following:

- Does the language adequately present the permit condition or support the permit condition?
- Does the language follow the intent of the law and/or regulation?
- Is the language enforceable?

Within the scope of the permit modification request, DTSC believes the approved language in the final post closure permits satisfies these criteria. Although terms may have been changed, moved and/or deleted (plume, contamination, detection, inadequate, etc), the final permit maintains, and often increases the responsibilities upon Boeing and NASA to properly perform the post closure care of the nine closed surface impoundments.

COMMENT (3): POINT OF COMPLIANCE and DETECTION MONITORING WELLS

(Walsh) For example:

1. Page 41 of Attachment A, under general requirements 1a, it used to say *"The point of compliance wells are not in detection monitoring since a release has already been detected. The detection monitoring wells are located at the boundary of the known contaminant plume and are listed in Table 2."*
 - i. 1a now reads: *"In conjunction with an evaluation monitoring program or a corrective action program, the Owner and/or Operator shall continue to conduct a detection monitoring program as necessary to provide the best assurance of the detection of subsequent released from the regulated unit."*
 - ii. It seems that this statement just says that they will do "as necessary without defining what is necessary or by what standards they will base "acceptable" on.

RESPONSE TO COMMENT (3):

This comment refers to the Post Closure Permit Attachment A, Part V, Section G.1.a. This proposed change is one of several proposed changes in the Permit language which DTSC suggested to Boeing to make the Permit language consistent with current regulations. In this case, the change is consistent with the California Code of Regulations, title 22, section 66264.91 subsection (c). This change was coordinated with changes to other sections of the Permit that discussed the two groundwater monitoring programs.

The pre-modified version incorrectly takes the point-of-compliance wells out of the detection monitoring program, and confuses detection monitoring requirements with evaluation monitoring requirements, and incorrectly releases the facility from performing detection monitoring. The modified language corrects the language and requires the facility to perform both detection monitoring and evaluation monitoring.

A detection monitoring program is designed to detect a release from a hazardous waste unit. Point-of-compliance wells are detection wells placed along the down-gradient edge of the unit known as the "point-of-compliance" (as prescribed by California Article 6 regulations). Detection and point-of-compliance monitoring continues as long as waste remains in the unit and/or contamination from the unit remains unremediated.

An evaluation monitoring program evaluates the impacts of releases from a hazardous waste unit. The evaluation monitoring program determines the extent of the impact out to the plume edge and monitors its progress. It is evaluation monitoring wells that may be located at the plume edge, not detection monitoring wells as suggested by the pre-modified language.

The evaluation monitoring program continues until a corrective action remedy is implemented that will remediate the impacts. Meanwhile, the facility is required to perform both an evaluation and detection monitoring program, as now stated in the modified language.

Like this previous example, most of the changes suggested by DTSC was to make the Permit language consistent with the regulations found in the California Code of Regulations, title 22, division 4.5, chapter 14, article 6 "Water Quality Monitoring and Response Programs for Permitted Facilities" (Article 6).

COMMENT (4): ADEQUATE WELL SEALS

(Walsh) For Example:

2. Page 41 under 1e, it used to say "*Not all current wells have adequate seals to prevent the borehole from acting as a conduit for the vertical migration of contamination.*"
 - i. 1e now reads: "*All monitoring wells shall be constructed properly to enable collection of representative groundwater samples.*"

RESPONSE TO COMMENT (4):

This comment refers to the Post Closure Permit Attachment A, Part V, Section G.1.e. The original permit language with proposed strikeout changes are as follows:

- e. All monitoring wells shall be constructed properly to enable collection of representative groundwater samples. ~~Not all current wells have adequate seals to prevent the borehole from acting as a conduit for the vertical migration of contamination. The Owner and/or Operator will videolog all Chatsworth Formation wells included in this program to determine if the wells have adequate seals and provide a document, 1 year from the effective date of this Permit, which demonstrates that all wells in the monitoring program have adequate seals and are not acting as conduits for vertical migration of contaminants.~~ Extraction wells and water supply wells are not subject to this requirement.

Boeing proposed to delete this text which appears to remove a permit condition. DTSC reviewed the permit language and information in the facility file before deciding whether to accept, deny or modify the proposed modification.

The sentence "*Not all current wells have adequate seals to prevent the borehole from acting as a conduit for vertical migration of contamination*" appears to be a possibility rather than a statement of fact. Two permit conditions are given: 1) to videolog all Chatsworth Formation wells included in this program to determine if the wells have adequate seals; and 2) to provide a document, 1 year from the effective date which demonstrates that all wells in the monitoring program have adequate seals and are not acting as conduits for vertical migration of contaminants.

The Post Closure Permit was issued in April 1995 and became effective in May 1995. Boeing subsequently video-logged (video-recorded) the wells which were recorded on VHS tape and submitted to DTSC. Boeing then submitted the following document: "Video Log Compendium, Chatsworth Formation Wells in Detection Monitoring and Evaluation Monitoring Programs, Post-Closure Permit", dated June 7, 1996. This document was submitted in accordance with the requirements of the Post-Closure Permits. It indicated that the wells were video-logged as required by the permit. It reported the findings and indicated that no problems were observed. There is no record to indicate that DTSC made any additional requirements for this issue.

The first sentence "*All monitoring wells shall be constructed properly to enable collection of representative groundwater samples.*" is a summary of the regulations in the California Code of Regulations, title 22, section 66264.97 "General Water Quality Monitoring and Systems Requirements", specifically subsections (b)(4) through (b)(7):

§66264.97. General Water Quality Monitoring and System Requirements.

(b) Groundwater Monitoring System.

- ...
- (4) All monitoring wells shall be cased and constructed in a manner that maintains the integrity of the monitoring well bore hole and prevents the bore hole from acting as a conduit for contaminant transport.
 - (5) The sampling interval of each monitoring well shall be appropriately screened and fitted with an appropriate filter pack to enable collection of representative groundwater samples.
 - (6) For each monitoring well the annular space (i.e., the space between the bore hole and well casing) above and below the sampling interval shall be appropriately sealed to prevent entry of contaminants from the surface, entry of contaminants from the unsaturated zone, cross contamination of saturated zones and contamination of samples.
 - (7) All monitoring wells shall be adequately developed to enable collection of representative groundwater samples.

DTSC decided to accept the proposed edit as submitted by Boeing. The video taping of wells was a one-time permit requirement that has been satisfied. The one-time videotaping was needed because the wells proposed in the 1995 Permit were already constructed and suspected of being poorly constructed and/or damaged. Videotaping new wells is usually not performed. Boeing submitted the required document to DTSC. Therefore, these permit conditions are no longer needed and DTSC has decided to accept the removal from the post closure permit.

DTSC decided to further modify this proposed change by adding a reference to the well construction regulations in section 66264.97(b)(4)-(7).

COMMENT (5): DETECTION and EVALUATION MONITORING

(Walsh) For Example:

3. Part V, Page 25 Introduction, it used to say: *“In conjunction with the evaluation monitoring program, the owner and/or Operator will conduct a detection monitoring program at the limit of the plume to provide the best assurance of the plume definition and containment.”*

- i. Now reads: *“Consequently, the Owner and/or Operator shall institute an evaluation monitoring program.”*

RESPONSE TO COMMENT (5):

This comment refers to the Post Closure Permit Attachment A, Part V, Section A, second paragraph. DTSC suggested this language change. Boeing incorporated DTSC's suggested language, unchanged, into the permit modification. DTSC's suggested language change was:

The Owner and/or Operator shall conduct a monitoring and response program for each regulated unit, as required by California Code of Regulations, title 22, section 66264.91. The specific elements of each monitoring and response program are discussed below and are summarized in Table 2 - Water Quality Monitoring Program. The Owner and/or Operator will institute an evaluation monitoring program since there exists statistically significant evidence of a release from the surface impoundment areas. The specific elements of each monitoring and response program are discussed below and are summarized in Table 2 - Water Quality Monitoring Program. In conjunction with the evaluation monitoring program, the Owner and/or Operator will conduct a detection monitoring program at the limit of the plume to provide the best assurance of plume definition and containment. Consequently, the Owner and/or Operator shall institute an evaluation monitoring program.

This paragraph established Boeing and NASA's responsibility to institute an evaluation monitoring program. A detection monitoring program is designed to detect the release. Evaluation monitoring determines the extent of the impact from a release. Other sections of the permit require Boeing and NASA to institute both detection and monitoring programs, therefore “In conjunction with an evaluation monitoring program...” is redundant and can be removed. Detection monitoring is conducted at or near the edge of the unit, not necessarily at the limit of a plume. For evaluation monitoring, plume definition must be performed inside, outside and near the plume limit. DTSC's suggested edits removed redundancies, shifted issues to more appropriate sections of the permit and corrected inconsistent language.

COMMENT (6): SAMPLING FREQUENCY:

(Walsh)

4. Attachment A, Page 38 Part F used to say: *“Unless all constituents of concern at the point of compliance are reduced to “non detectable” for non naturally occurring organic species and to background for any naturally occurring organic and inorganic species, the Owner and/or Operator shall monitor point of compliance wells RS8, HAR 14, HAR 15 and HAR 7 for all Appendix IX constituents annually as specified in table 2 (22 CCR 66264 Appendix IX).*
 - i. Now reads: *“The owner and/or Operator will analyze samples on the frequency and for those constituents listed in Table 2. The Owner and/or Operator may propose modifications to the list of Appendix IX constituents and the sampling locations after the first year.”* It no longer indicates the basis and gives them the opportunity to stop doing so based on future proposed modifications.

RESPONSE TO COMMENT (6):

This comment refers to text in the Post Closure Permit Attachment A, Part V, Section F. The proposed modification is consistent with DTSC's suggested changes. DTSC suggested these changes to reduce redundancy, be consistent with regulations and to avoid possible conflicts with other parts of the permit or laws.

The following conditional phrase is misleading: “unless all constituents of concern at the point of compliance are reduced to “non detectable” for non naturally occurring organic species and to background for any naturally occurring organic and inorganic species, ...” Existing regulations require the sampling for Appendix IX constituents at point of compliance with no mention of this condition.

Point of compliance monitoring points are discussed elsewhere in the Permit in both current and added text. Therefore, the listing of point of compliance wells in section V.F is redundant and could potentially set up a conflict if not removed.

The regulatory citation to Appendix IX was moved to a newly added paragraph inserted before this paragraph.

Appendix IX is a long list of industrial chemicals which are manufactured throughout the country and known to present health risks. Federal and state regulations require Appendix IX sampling under prescribed conditions.

COMMENT (7): CHANGING / RE-DESIGNATING / ADDING MONITORING WELLS

(Walsh)

5. Attachment A, Page 27 is there the list of wells and their designation, as either Background, Monitoring or detection wells. Page after page the well designations have changed adding new wells in place of old wells, but then, the old wells are not off line, but rather re-designated under a different purpose. Please clarify what the proposed achievement would be to alter the monitoring well designations so many wells at one time.

RESPONSE TO COMMENT (7):

Over 400 groundwater monitoring wells are installed in and around the Santa Susana Field Laboratory (SSFL). These wells support several groundwater monitoring programs. A monitoring well is often used for multiple groundwater monitoring programs.

Regulations require specific groundwater monitoring for each of the nine closed surface impoundments under the two Post Closure Permits. These groundwater monitoring requirements are in the California Code of Regulations, title 22, division 4.5, chapter 14, article 6 “Water Quality Monitoring and Response Programs for Permitted Facilities” (Article 6). Article 6 describes three monitoring programs:

- 1) Detection monitoring program: Designed to detect releases from a hazardous waste management unit. (point-of-compliance monitoring is often included under detection monitoring)

- 2) Evaluation monitoring program: Designed to determine and evaluate the impacts of a release, if one has occurred.
- 3) Corrective action monitoring program: Used to evaluate and monitor the effectiveness of a corrective action remedy after a remedy has been selected and implemented.

Although they have different purposes, these programs often share many of the existing wells with other programs.

DTSC reviewed the groundwater monitoring programs for the nine closed surface impoundments which are detailed in the two post closure permits and supporting documentation. The review found that the monitoring program was inadequate and no longer met the requirements of Article 6 monitoring. DTSC discussed the issues internally and with technical contractors hired by Boeing and NASA to determine the best way to upgrade the monitoring system to meet regulations. Because of the large number of existing wells, many of the existing wells could be used to satisfy the monitoring regulations. Where wells were lacking, new wells were proposed. The changes in the post closure permits reflect the redesignation of the wells and the addition of three new wells.

For the two post closure permits, Boeing requested to separate the wells into their respective permit, rather than each permit carrying the well description of the other. DTSC accepted this modification because it organized the well designations into their appropriate permit and made it easier to administratively handle them.

The final well designation improves the groundwater monitoring program for the nine closed surface impoundments. Future adjustments may be needed based on the information gathered by these wells.

COMMENT (8): PURPOSE OF THE PERMIT

(Walsh) The Department of Energy is in the position of being the polluter as well as the agency charged with the radioactive cleanup and in many ways, has tied the hands of the EPA in their goal of protecting the public from contamination from this site. This permit request illustrates the risk involved when government agencies are self regulating where in this case, it would appear that the time and money being spent, are not to clean up, but rather to cleanse history. This is clearly contrary to what the intent of the cleanup process should, and must be about:

To properly document and cleanup any contamination that poses a public health risk and to help prevent further health risks in the future by documenting both the processes handled properly and those that were not, so those mistakes are not doomed to be repeated.

RESPONSE TO COMMENT (8):

Federal law gives the U.S. Department of Energy (USDOE) the lead agency authority for remediation of contaminated at USDOE sites involving radioactive contamination. However, the permit modification under consideration does not involve radioactive contamination nor remediation performed by USDOE. The post closure permit regulates the nine closed surface impoundments located in SSFL Areas I, II and III, under the operations and/or ownership of The Boeing Company and/or NASA. Both post closure permits are governed by federal and state laws and regulations. DTSC has lead authority to enforce these laws and regulations for the post closure permitting of these nine closed surface impoundments and the remediation of the releases from these units.

The primary purpose of a permit is to set conditions on the operation, maintenance and care of a permitted unit. Permits contain a summary of supporting information, including history and current status, which support the current permit conditions. However, the permits do not contain the complete history of a facility nor all actions and activities that are not directly related to the permit conditions. The history and information on a facility is maintained in the administrative file record, which in this case is located at the DTSC Glendale Office.

DTSC strives to maintain the language of a permit so that the language:

- adequately presents the permit condition or supports the permit condition;
- follows the intent of applicable laws and/or regulations;
- is enforceable.

COMMENT (9): REASON FOR LANGUAGE AND WELL CHANGES

(Walsh) Respectfully, we request a detailed explanation as to the purpose of these language changes, along with how they will benefit the long-term goal of the cleanup project, as well as, well re-designations (so many), and a detailed well by well explanation for each change.

RESPONSE TO COMMENT (9):

The purpose of these permit modification requests can be placed into four categories:

- revising permit language concerning ground water monitoring so that language will be consistent with current regulations;
- adjusting and upgrading groundwater monitoring programs to adequately comply with regulations;
- edit language to clarify existing status and/or conditions;
- edit text and format for miscellaneous administrative corrections.

DTSC identified inadequacies concerning the groundwater monitoring plan for the nine closed surface impoundments. After researching and discussing these inadequacies, DTSC officially instructed Boeing to submit a permit modification correcting these inadequacies in a letter dated February 27, 2003. The changes in the permit dealing with well designations and sampling procedures are Boeing's proposal to address the inadequacies in the groundwater monitoring.

While researching the groundwater monitoring, DTSC became aware that text in the permit (specifically in Attachment A of the existing permits) used language inconsistent with current regulations. DTSC informed Boeing of these inconsistencies and supplied Boeing with proposed language changes (e-mail and documents sent November 6, 2002). DTSC instructed Boeing to include these changes with their permit modification request.

Boeing proposed additional changes outside of the groundwater monitoring issues and DTSC's suggested language changes. Some of these changes involved clarification. A few changes were made to delete permit conditions that no longer applied.

While adjusting the permit and incorporating modifications, DTSC needed to reformat the permit. Text was relocated, tables added and sections renumbered.

COMMENT (10): INSTALLATION OF NEW WELLS WITH DTSC OVERSIGHT

(Parks) It is essential that all new wells are installed under the direct supervision of DTSC.

RESPONSE TO COMMENT (10):

For new wells under DTSC lead authority, DTSC reviews the work plans, and is usually present during the drilling, installation, and field verification of the well construction.

Currently, there are over 400 groundwater monitoring wells installed in or around the Santa Susana Field Laboratory. The proposed permit modification calls for the construction of three new monitoring wells. As part of DTSC's oversight, DTSC will review and approve the well construction work plan for new wells. The driller takes detailed notes while constructing the well which must be submitted to DTSC. DTSC reviews the construction logs and verification measurements to determine the wells applicability to the monitoring program.

DTSC staff attempts to witness the construction of every well. However, schedule conflicts and limited staffing may prevent DTSC from being present at all drilling operations. The driller attempts to construct and install the well according to the approved well construction work plan. If DTSC is available, DTSC may assist the drilling operation if unforeseen problems arise. Field measurements after installation verifies the proper installation of the well. If well construction/installation differs from the approved work plan, then DTSC must reconsider the usefulness of the well to the program that the well was meant to support.

COMMENT (11): TEMPORARY AUTHORIZATION / PERCHLORATE DISCOVERIES

(Felkins) DTSC has now announced that Boeing/Rocketdyne must find sources of perchlorate contamination from SSFL sites(s). Has this announcement changed the now premature public comment period regarding Boeing Temporary Authorization Request for perchlorate ion exchange resin vessels at field laboratory? Until source of perchlorate from site(s) is probed, and source(es) from SSFL are investigated and discovered, Temporary Authorization Request must be denied as the companies state emphatically that they are not responsible for perchlorate contamination in Simi wells and therefore should not be granted TAR to treat sources before all contaminant sources are discovered, probed for off-site migration, and all data published and made available to the public and stored for accessible reference for all future purposes.

RESPONSE TO COMMENT (11):

DTSC included Ms. Felkins' comment because it was received during the comment period for the Class 2 Permit Modification Request and the message refers to a comment period. However, during the comment period for the Class 2 Permit Modification, Boeing submitted a separate Temporary Authorization Request asking for temporary modification to an existing treatment system and allowing water from a pumping test to be treated before discharging. A Class 2 Permit Modification Request requires a public notice and a comment period, while a Temporary Authorization Request only required a public notice. Boeing chose to combine both public notices.

DTSC responded to Ms. Felkins' directly with an e-mail from Stephen Baxter sbaxter@dtsc.ca.gov, sent on June 27, 2003. Although the Temporary Authorization is not a part of the Class 2 Permit Modification, DTSC decided to include the response in this document because it was linked to the comment period in Ms. Felkins' message. Mr. Baxter's responding e-mail is repeated below.

Ms. Madeline Felkins.

Thank you for your e-mail dated June 26, 2003. The Department of Toxic Substances Control shares your concerns with the recent discoveries of perchlorate outside the boundary of the Santa Susana Field Laboratory (SSFL). Accordingly, we sent written notice to the Boeing Company which requires Boeing to investigate this matter and report back to DTSC on their findings. This information will be used to determine what further actions will be needed.

The temporary authorization will not affect, or be affected by the recent perchlorate discoveries north of Santa Susana Field Laboratory. The activities of the temporary authorization will occur in the southeast portion of SSFL, far from the area of the recent perchlorate issues. A "pumping test" will be performed on Corehole C-1 to determine the groundwater flows in the southeast portion of SSFL. Since the pumping test involves pumping groundwater out of Corehole C-1, and since the groundwater in the area is contaminated, the temporary authorization allows Boeing to use an existing groundwater treatment system to treat the water from Corehole C-1. The ion-exchange vessels are used to remove any perchlorate that may be in the water. Later, the vessels will be sent off-site for proper disposal. The pumping test and temporary authorization does not interfere with the on-going investigation into perchlorate found outside the SSFL boundary.

DTSC also received a request for what is called a Class 2 Permit Modification. Simply put, the groundwater monitoring around nine, closed surface impoundments will be improved and sampling methods will be updated. Because these changes involve two permits that were issued by DTSC, regulations require formal procedures to modify the permits. Like the temporary authorization, the Class 2 Permit Modification is not involved with, nor does it interfere with the on-going investigation into perchlorate found outside the SSFL boundary. If you are interested in getting more information about the Class 2 Permit Modification, Boeing will be holding an "open house" public meeting on Wednesday, July 2, between 7:00 p.m. and 8:00 p.m. at the Boeing Employee Fitness and Recreation Center, 8500 Fallbrook Avenue, West Hills, CA 91304.

Thank you for your interest in these issues. I hope my response helps.

– Stephen Baxter, P.E.
– Department of Toxic Substances Control.

DTSC granted Boeing's Temporary Authorization Request in a letter dated June 30, 2003. The authorization period started August 5, 2003 to accommodate the 30-day appeal period. Originally the pumping test was to be completed by November 25, 2003. To accommodate additional data gathering, DTSC extended the Temporary Authorization Period to the full 180 days allowed by regulations, to be completed by February 1, 2004. The pumping test was halted shortly before February 1 and the modifications to the treatment system have been dismantled.