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August 14, 2008

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COMMENTS ON NOTICE OF INTENT TO PREPARE AN ENVIRONMENTAL IMPACT STATEMENT (EIS) FOR REMEDIATION OF AREA IV OF THE SANTA SUSANA FIELD LABORATORY

Dear Ms. Jennings:

Thank you for the opportunity to comment on the subject document. The Department of Energy (DOE) has made great strides toward a comprehensive environmental analysis and cleanup plan. The Department of Toxic Substances Control (DTSC) has several comments on the information needed to complete that work.

Foremost among those is the observation that there are significant outstanding and unanswered questions about DOE's plans to integrate the EIS into the corrective action schedule for the SSFL as a whole. On one hand DOE asserts that it exercises prepotent authority over radiologic cleanup and is not subject to the requirements of SB 990 as it pertains to radiologic control. On the other, DOE advances no such argument with respect to chemical cleanup, but nevertheless intends to proceed with an EIS that will address both chemical and radiologic cleanup, knowing full well that DTSC must approve the selection of remedies designed to address chemical contaminants directly or coincidentally, and will be in no position to do so ahead of completing its own California Environmental Quality Act (CEQA) review. As a practical matter, our analysis cannot precede completion of the investigation (RFI) and technology evaluation (CMS) phases of the SSFL project. According to schedule developed under the August 2007 Consent Order signed by DOE, the State's CEQA review will not be completed until November 2014. The remedy to be preferred in the EIS will therefore not be implementable until about 2015 at the earliest, and there is no guarantee that it will be the remedy ultimately chosen by DTSC. While it may be possible to segment the cleanup of soils across the SSFL in various ways, the situation is more complicated for groundwater given the need for a single comprehensive and cohesive site-wide cleanup strategy. Why then should DOE hasten to complete what is essentially a provincial

EIS? Why not instead direct the supporting funds toward the completion of the survey required by H.R. 2764, which will provide information vital to our collective understanding of site conditions and enable DOE to produce a much better NEPA document?

The comments by DTSC offered verbally at the July 24, 2008 scoping meeting in Sacramento are not repeated here because they are already matters of record and, we assume, will be considered by DOE along with our written comments. The following remarks summarize DTSC's primary areas of concern following a careful review of the Notice of Intent and the associated Data Gap Analysis Report (comments from the California Department of Public Health are reflected here as well). Attached for your consideration and reference are the supporting comments from DTSC staff experts in identified disciplines.

A. Summary of Comments from the Hydro-Geology Staff

1. Some of the screening values used for rural residential Preliminary Remediation Goals (PRGs) may not be in compliance with Senate Bill 990 requirements. This recent legislation became California law effective January 1, 2008 (Stats. 2007, c. 729, Sec. 1) and is codified at California Health and Safety Code, Section 25359.20 et seq.. A copy of this language is attached for your reference. Hereinafter, this law will be referenced as SB 990 as a matter of convenience. The appropriate agricultural rural residential PRGs should be used. The use of more conservative agricultural rural residential PRGs as screening values will likely result in identification of more data gaps.
2. Knowledge of historical site process information has increased, largely as a result of historical documents recently made available by Boeing. The Data Gap Analysis Report heavily relies on the Historical Site Assessment (HSA; Sapere Consulting, Inc., 2005). The HSA, however, does not incorporate much of the historical site information that has been more recently provided. This recently available historical chemical use and release information is critical for better understanding and defining chemical use areas. It is thus not clear that the Data Gap Analysis Report utilized this recent information. For example, the Report indicates that 200 documents were reviewed for the data gap analysis.
3. DOE needs to obtain and review the historic documents provided with the several Group RFI Area Reports affecting Area IV. Because of the large volume of this data, these documents should be obtained directly from Boeing. There are tens of thousands of historical documents available for Area IV that describe historical chemical and/or radionuclide usage and releases. Because it is not clear that this information has been fully utilized in the data gap analysis, there is concern that the chemical use areas may not be sufficiently defined. Sufficient definition of chemical

use areas is needed in order to determine the data needs as part of the data gap analysis.

4. A key component of the data gap evaluation process involves identification of constituents of interest (COI). DTSC concurs with establishing a COI list, but does not concur with the screening process. The potential COIs are first listed as all chemicals for which samples were analyzed in soil at Area IV. The list is then reduced by removing chemicals that were analyzed, but not detected. Chemicals that were detected but at concentrations less than the established background values were also removed. Also, chemicals with maximum concentrations less than one-tenth the PRGs were removed from the COI list. In addition, chemicals without available toxicity criteria were removed from the COI list. Chemicals that were infrequently detected were also removed from the COI list.

DTSC does not concur with this process of removing chemicals from the COI list. The criteria appear to assume that characterization is sufficiently complete to justify the screening process. Characterization is not complete, and a significant amount of sampling is ongoing as part of the RFI. Chemicals that have not been detected may be detected in the future. Chemicals that have not been detected at concentrations exceeding their associated background values may be detected at elevated concentrations in the future. Also, certain chemicals having no significant toxicity can be important solvents and/or carriers for chemicals or radionuclides into the environment. Removal of these chemicals from the COI list would effectively limit characterization of releases, particularly to groundwater, associated with non-toxic carriers.

A multi-media evaluation should be conducted to ensure that all COIs listed for any specific environmental media are also included as COIs for other environmental media. Comparison of the COI list for soil and groundwater suggests that this multi-media evaluation was not conducted. For example, anions are listed as COIs in groundwater (fluoride, nitrate-N, and perchlorate), but are not listed for soil.

5. The groundwater investigation activities at the site are ongoing. The groundwater conditions at the site are complex and are not well understood. Therefore, the information presented and the conclusions reached in the report regarding the extent of contaminants and the need for additional data should be considered as an approximation based on current understandings. It is certain that as additional groundwater data are collected and the RCRA Facility Investigation (RFI) reports are submitted, additional data gaps will be identified and additional investigation work will need to be conducted.

6. Temporary monitoring points do not provide temporal data that is often critical in understanding the overall groundwater quality. Therefore, DTSC does not recommend the use of temporary points beyond that of a screening tool.
7. The Data Gap Report states "If contamination at concentrations significantly above an MCL is detected, the multi-channel well (DOE7) in rock shall be installed." The Data Gap Report does not specify what concentrations would be deemed significant. DTSC would consider any concentration above MCL significant.
8. There is connectivity between these surface water bodies and the groundwater that needs be evaluated. Groundwater wells adjacent to the R2 and Silvernale Ponds should also be sampled for radionuclides.
9. Figure 3-2 SSFL Area IV Preliminary Conceptual Model for Ecological Receptors The figure implies that onsite groundwater will not be assessed. Please clarify why.
10. The bedrock at the site is permeable and is highly fractured so the term "barrier" is not appropriate.
11. Data should be evaluated dividing groundwater into perched groundwater and regional Chatsworth groundwater rather than the arbitrary divisions of "near-surface" and "Chatsworth".
12. Direct exposure to groundwater should be considered a complete pathway due to occurrence of artesian conditions in Area IV and the possible presence of seeps.
13. Further detailed comments on the Data Gap Report are attached.

B. Summary of Comments from the Human and Ecological Risk Division Staff

1. Sampling of Area IV will need to address both human and ecological risk assessment requirements. The appropriateness of the selected Environmental Screening Levels (ESL) and PRG concentrations needs to be addressed prior to this sampling. Once this is resolved, DTSC will likely accept the described approach in which the lower value (PRG or ESL) is used to determine sampling needs. A summary table of the ESL's and their source for each ecological receptor in Area IV should be provided in the Data Gap Report and future ecological assessments based upon it.
2. The dioxin congener Toxicity Equivalency Factors (TEFs) used in the report need to be from most recent revision of the WHO dioxin publication (Van den Berg et al 2006).

3. Be advised that new background levels for metals and dioxins in soil are being developed for the SSFL site. This information will be provided when it is complete and will supersede the current levels referenced on page E-8 of the Data Gap Report.
4. SB 990 requires an assessment of potential exposures under other, more health conservative, scenarios. These scenarios will result in the inclusion of pathways, i.e., ingestion of meat, milk, eggs, and water, which will then result in increased estimates of potential exposure.
5. The data for the basis of the recommendations for the Corrective Measures Study (CMS) are incomplete.
6. All complete pathways and all chemicals of potential concern must be included in the risk assessment.
7. The human health sections of the risk assessments will be evaluated on the basis of the pathways, Constituents of Potential Concern (COPCs), Exposure Point Concentrations (EPCs), and parameters selected to estimate potential exposures under the scenarios required by SB 990.
8. Further detailed comments on the Data Gap Report are attached.

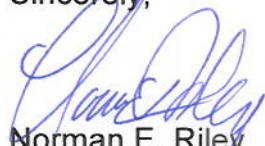
Summary of Department of Public Health Comments

1. California Department of Public Health has regulatory oversight for Building 4100 in Area IV.
2. SB 990 requires that residual radioactivity not exceed suburban residential or rural residential (agriculture) Environmental Protection Agency (EPA) preliminary remediation goals (PRG). The Data Gap Report does not address SB 990 criteria. SB 990 references published values which are default and are conservative for residual radioactivity. The Data Gap Report references site specific values and are less conservative than the default parameters. Reference should be made to the default agriculture scenario.
3. Provide listing of all radionuclides generated during reactor operation and pare the list down using industry acceptable methods (i.e. radiological half-life).
4. Use new background values for SSFL site. This will alleviate any errors introduced by using generic correction factors.
5. Further detailed comments on the Data Gap Report are attached.

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We look forward to meeting with you and your NEPA consultants on August 18, 2008 to discuss these comments and the preparation of the EIS following the completion of the comment period. You may also to contact Gerard Abrams at (916) 255-3600 if you have any questions regarding these comments.

Sincerely,



Norman E. Riley
SSFL Project Director

Enclosures

Text of SB 990
Comment Memo of Laura Rainey, PG
Comment Memo of Thomas Seckington, CHG
Comment Memo of Brian Faulkner, Ph.D.
Comment Memo of T. R. Hathaway, D.A.B.T.
Comment Memo of Jerry Hensely, CHP RHB

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