

RWQCB Comments

September 13, 2004



California Regional Water Quality Control Board

San Francisco Bay Region

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Protection

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Arnold Schwarzenegger
Governor

Date: September 13, 2004
File No. 2199.9026 (MBR)

Department of Toxic Substances Control
Attn: Salvatore Ciriello
700 Heinz Avenue, Suite 200
Berkeley, California 94612

SUBJECT: Draft RCRA Corrective Measures Study Report for Lawrence Berkeley National Laboratory, dated July 2004. Berkeley, Alameda County

Dear Mr. Ciriello;

The San Francisco Bay, Regional Water Quality Control Board (Water Board) staff has reviewed the above referenced document and has prepared the attached comments.

Please contact me at (510) 622-2411 if you have any questions or comments.

Sincerely,

Michael Bessette Rochette
Groundwater Protection Division

Attachment: Water Board Comments

SAN FRANCISCO BAY REGIONAL WATER QUALITY CONTROL BOARD**Subject: Draft Corrective Measures Study Report, July 2004, Berkeley Lab****General Comments:**

- 1) The Department of Energy (DOE) has proposed regulatory-based media cleanup standards based on corrective action objectives including the protection of the potential drinking water supply beneficial use for groundwater. However, based on Resolution 88-63, this corrective action objective protecting groundwater as a potential drinking water supply is only proposed for specific areas of Berkeley Lab where well yields exceed 200 gallons per day. From a review of Figures 2.2-1 and 2.2-2 depicting estimated well yields from the upper and lower geologic units and the statement on page 20, "Therefore, areas where groundwater is present solely in the Great Valley Group, the Orinda Formation or the Mixed Unit are considered to not represent potential sources of drinking water", it appears that proposed areas where the corrective action objectives include the drinking water supply are very limited.

Water Board staff request DOE provide a site-wide geological map, with cross sections, specifically delineating the areas where the corrective action objective of protecting groundwater as a potential drinking water supply is and is not proposed. Also include all contaminated soil areas and all contaminated groundwater plumes.

Furthermore, DOE has identified hydrogeologic units that have well yields less than 200 gallons per day and has proposed that the potential drinking water beneficial use in these units is not applicable. This non-drinking water evaluation is also proposed for areas where a higher yielding upper hydrogeologic unit is underlain by a lower yielding hydrogeologic unit of less than 200 gallons per day. Using this upper/lower assessment is problematic since the most significant amounts of contamination are in the upper unit with higher yield and basing cleanup standards on characteristics of the relatively less contaminated lower unit is inappropriate.

- 2) In general, Water Board staff is in agreement with the recommended corrective measure alternatives for the groundwater units where the drinking water beneficial use is a corrective action objective; however, Water Board staff recommends the CMS be revised to incorporate the development of a subsequent Groundwater Monitoring and Management Plan. This document should include, at a minimum, identification of the vertical and lateral extent of current VOC contamination plume, a proposal for perimeter groundwater monitoring wells to assure that migration beyond current plume margins does not occur, a proposal for specific surface water monitoring, and a proposal of Berkeley Lab future management controls to prevent any potential risks exposures associated with contaminated groundwater.
- 3) DOE has based the development of risk-based media cleanup standards for Lawrence Berkeley National Laboratory (Berkeley Lab), in part, on institutional land use controls. However, the institutional land use is not defined, nor are the permitted or un-permitted activities defined. The text should be revised to address this deficiency.

Specific Comments:

- 1) Page xi: What type of land use is the land cost of \$100/square foot based on?

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- 2) **Page 20, Second paragraph:** The statement "Therefore, areas where groundwater is present solely in the Great Valley Group, Orinda Formation or Mixed Unit are considered to not represent potential sources of drinking water" is too broad and is not consistent with State policy defining drinking water sources.
- 3) **Page 30, Section 3.3, first paragraph:** Groundwater monitoring wells proposed as superfluous for monitoring compliance and approved by the Water Board shall be "properly destroyed." This issue should be addressed in the recommended Groundwater Monitoring and Management Plan.
- 4) **Page 31, Section 3.4, third paragraph:** Revise text, here and in all other references, stating that a determination of technical impracticability of groundwater cleanup requires Water Board approval.
- 5) **Figures:** In addition to the figure requested in General Comment 2, Water Board staff requests an additional Site-wide Map showing all soil and groundwater areas of concern evaluated in the CMS including the various Module boundaries.