



Jared Blumenfeld
Secretary for
Environmental
Protection



Department of Toxic Substances Control

Meredith Williams, Ph.D.
Acting Director
8800 Cal Center Drive
Sacramento, California 95826-3200



Gavin Newsom
Governor

November 19, 2019

Mr. David Dassler
The Boeing Company
5800 Woolsey Canyon Road
Canoga Park, California 91304-1148

Mr. John Jones
Department of Energy
Energy Technology Engineering Center
4100 Guardian Street, Suite 160
Simi Valley, California 93063

Mr. Peter Zorba
National Aeronautics and Space Administration
5800 Woolsey Canyon Road
Canoga Park, California 91304-1148

GROUNDWATER CORRECTIVE MEASURES STUDY REPORTS AND GROUNDWATER
RISK ASSESSMENTS, SANTA SUSANA FIELD LABORATORY, VENTURA COUNTY,
CALIFORNIA

Dear Messrs. Dassler, Jones, and Zorba:

The purpose of this letter is to provide additional direction and guidance to The Boeing Company (Boeing), The United States Department of Energy (DOE), and the National Aeronautics and Space Administration (NASA) regarding the preparation of the Groundwater Corrective Measures Study (CMS) Reports and the Groundwater Risk Assessments for the Santa Susana Field Laboratory (SSFL).

Groundwater Corrective Measures Study Reports

The California Department of Toxic Substances Control's (DTSC's) selection and documentation of groundwater corrective measures at SSFL must involve evaluating a

range of alternatives designed to achieve the following three CMS performance standards:

- 1) protect human health and the environment;
- 2) achieve media cleanup objectives; and
- 3) remediate release sources¹ (see footnote 1).

DTSC must be able to select corrective measures on a site-by-site basis from alternatives that meet these standards but may achieve the standards differently. There is a sliding scale along which the long-term effectiveness and contaminant removal are balanced in comparison to cost and implementability. The CMS should present a full range of alternatives.

The groundwater cleanup objective is aquifer restoration (State Water Resources Control Board Resolutions 68-16 and 92-49). State Water Resources Control Board Resolutions 68-16² (see footnote 2), 88-63³ (see footnote 3), and 92-49⁴ (see footnote 4); and the Water Quality Control Plan: Los Angeles Region Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties⁵ (see footnote 5) should be referenced and considered as applicable regulatory requirements in the CMS Reports. The final groundwater cleanup goals for SSFL will be established based on a combination of Maximum Contaminant Levels (MCLs), cumulative human health risk, ecological risk, and background concentrations⁶ (see footnote 6). The control of contaminant sources that continue to add mass to groundwater must also be considered and addressed, both in the vadose zone and in groundwater.

¹ United States Environmental Protection Agency Office of Solid Waste, 2000. Fact Sheet #3: Final Remedy Selection for Results-Based RCRA Corrective Action. March.

² State Water Resources Control Board, 1968. Resolution No. 68-16: Statement of Policy with Respect to Maintaining High Quality of Waters in California. October 28.

³ State Water Resources Control Board, 1988. Resolution No. 88-63: Sources of Drinking Water. May 19.

⁴ State Water Resources Control Board, 1992. Resolution No. 92-49: Policies and Procedures for Investigation and Cleanup and Abatement of Discharges under Water Code Section 13304. June 18. Amended on April 21, 1994 and October 2, 1996.

⁵ Water Quality Control Plan: Los Angeles Region Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties (Basin Plan), including any amendments. https://www.waterboards.ca.gov/losangeles/water_issues/programs/basin_plan/

⁶ MWH, 2014. Final Standardized Risk Assessment Methodology Revision 2 Addendum, Santa Susana Field Laboratory, Ventura County, California. August. Attachment 1, Table 3-1: Groundwater Comparison Concentrations for Metals and Selected Inorganic Compounds.

Groundwater Risk Assessment Reports

Boeing, DOE, and NASA must perform groundwater risk assessments for each Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) site associated with either groundwater contamination that exceeds an aquifer goal, or a contaminant source that could possibly reach groundwater. The risk assessments should use the methodology included in the most recent DTSC-approved version of the Standardized Risk Assessment Methodology (SRAM). The current version is the Final SRAM Revision 2 Addendum, SSFL, Ventura County, California, dated August 2014 (MWH, 2014). Each site-specific groundwater risk assessment must determine the total risk and hazard to the Suburban Resident associated with the beneficial use of Site groundwater. Additionally, each site-specific groundwater risk assessment must evaluate cleanup to MCLs. If the cumulative risk associated with cleanup to MCLs for a site exceeds a one in one million lifetime cancer risk and/or the hazard index exceeds 1, it will be necessary to determine the required cleanup levels for that site to achieve a cumulative lifetime cancer risk of equal to or less than one in one million and a hazard index of 1.

If you have any questions regarding these directions and guidance provided above, please contact me via email at Mindy.Mathias@dtsc.ca.gov or at (916) 255-3656.

Sincerely,



Mindy Mathias, P.E.
Santa Susana Field Laboratory Unit
Department of Toxics Substances Control

cc: (see next page)

Messrs. Dassler, Jones, Zorba
November 19, 2019
Page 4 of 4

cc: (via email)

Michael Bower
The Boeing Company
Michael.o.Bower2@boeing.com

Stephanie Jennings
Department of Energy
Stephanie.Jennings@emcbc.doe.gov

Renee Purdy
Los Angeles Regional Water Quality Control
Board (LA Water Board)
Renee.Purdy@waterboards.ca.gov

Hugh Marley
LA Water Board
Hugh.Marley@waterboards.ca.gov

Russ Colby
LA Water Board
Russ.Colby@waterboards.ca.gov

Sophie Froelich
LA Water Board
Sophie.Froelich@waterboards.ca.gov

Arthur Heath
LA Water Board
Arthur.Heath@waterboards.ca.gov

Cassandra Owens
LA Water Board
Cassandra.Owens@waterboards.ca.gov

Cris Morris
LA Water Board
Cris.Morris@waterboards.ca.gov

Jillian Ly
LA Water Board
Jillian.Ly@waterboards.ca.gov

Grant Cope
Department of Toxic Substances Control
Grant.Cope@dtsc.ca.gov

Steven Becker
Department of Toxic Substances Control
Steven.Becker@dtsc.ca.gov

Roger Paulson
Department of Toxic Substances Control
Roger.Paulson@dtsc.ca.gov

Paul Carpenter
Department of Toxic Substances Control
Paul.Carpenter@dtsc.ca.gov

Julie Lincoln
Department of Toxic Substances Control
Julie.Lincoln@dtsc.ca.gov

Laura Rainey
Department of Toxic Substances Control
Laura.Rainey@dtsc.ca.gov

Tom Seckington
Department of Toxic Substances Control
Tom.Seckington@dtsc.ca.gov

Brian Faulkner
Department of Toxic Substances Control
Brian.Faulkner@dtsc.ca.gov

Donald Greenlee
Department of Toxic Substances Control
Donald.Greenlee@dtsc.ca.gov