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December 7, 2011

Mr. Michael Bower  
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### APPROVAL TO PROCEED WITH FOUR LABORATORY TREATABILITY STUDIES FOR CHATSWORTH OPERABLE UNIT MEDIA AT THE SANTA SUSANNA FIELD LABORATORY VENTURA COUNTY, CALIFORNIA

Dear Mr. Bower:

The Department of Toxic Substances Control reviewed the information submitted under the cover of letter titled Treatability Study Work Plans for Santa Susana Field Laboratory, dated November 9, 2011.

With one exception, the information included in the November 9, 2011 submittal sufficiently addresses the DTSC's questions and comments on the proposed laboratory treatability study work plans. Based on whole of the information submitted to date, DTSC approves the four proposed laboratory study work plans:

- Rock Core Thermal Treatment Testing;
- Permanganate ISCO Laboratory Treatability Study;
- Characterization of the Microbial Populations from Fractured Rock Cores; and
- Laboratory Evaluation of Biostimulation to Treat Chlorinated Ethenes in the Chatsworth Formation.

The one outstanding item is the Permanganate ISCO Laboratory Treatability Study Work Plan. The work plan is issued as a draft and needs to be re-submitted as a final document for the administrative record. Additionally, the November 9, 2011 letter and supporting information need to be submitted electronically to DTSC.

Boeing is still developing addenda for the Bedrock Vapor Extraction Treatability Study, and the In-situ Chemical Oxidation Treatability Study. Those documents will be

reviewed by DTSC as they become available. It is also understood that DTSC has given approval for Boeing to proceed with contractor procurement and subsequent project development for the field tests, and that contractor plan products will be submitted to DTSC for review.

DTSC's conditional approval letter of April 29, 2011 referenced four technologies proposed for study including:

- A vapor extraction field test in unsaturated bedrock;
- A field study of in-situ chemical oxidation in CFOU groundwater, including a laboratory study of the geochemical effects on CFOU rock core;
- A laboratory study of enhanced biological reduction of VOCs using CFOU rock core and groundwater; and
- A laboratory study of thermal treatment on CFOU rock core.

The actual number of tests included in the Treatability Study Work Plans for Santa Susana Field Laboratory, dated November 9, 2011 is six; two field studies and four laboratory studies.

The field studies include:

- A vapor extraction field test in unsaturated bedrock;
- A Permanganate ISCO field study in CFOU groundwater,

The laboratory studies include:

- Permanganate ISCO Laboratory Treatability Study;
- Rock Core Thermal Treatment Testing;
- Characterization of the Microbial Populations from Fractured Rock Cores; and
- Laboratory Evaluation of Biostimulation to Treat Chlorinated Ethenes in the Chatsworth Formation.

The reason for the difference is that DTSC's conditional approval letter of April 29, 2011 treated the in-situ chemical oxidation field and laboratory tests as a single study. The Biostimulation laboratory test and the microbial characterization study were also referenced to as a single test.

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If you have any issues or questions, please contact me at 916-255-3702 or  
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Sincerely,



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Department of Toxic Substances Control

cc: (via e-mail)

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