



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 9  
75 Hawthorne Street  
San Francisco, CA 94105-3901**

**April 1, 2009**

Ms. Cindy Caulk  
Partial Consent Decree Program Coordinator  
Aerojet General Corporation  
10951 White Rock Road, Suite B  
Rancho Cordova, CA 95670

RE: Agency Comments on final draft Remedial Investigation/Feasibility Study for  
Perimeter Groundwater Operable Unit.

Dear Ms. Caulk:

The Environmental Protection Agency (EPA), Regional Water Quality Control Board and Department of Toxic Substances Control (collectively "Agencies") have reviewed the March 23, 2009 responses to Agency comments on the August 2008 Drafts for the Perimeter Groundwater Operable Unit Remedial Investigation/Feasibility Study (RI/FS).

Overall, Aerojet's responses to Agencies Comments are satisfactory. We are including a number of suggestions to improve clarity and congruency with Agency approaches. We note that several of Aerojet's responses state the comment will be addressed in the final. Also there may be changes resulting from the suggestions in this letter or from those received from an individual Agency after these comments. Assuming that the changes proposed in the March 23<sup>rd</sup> response are made completely and correctly, we do not feel that additional Agency review of the corrections or changes to the draft RI/FS report is necessary as such changes are unlikely to affect the conclusions. As always, the Agencies will consider information and comments provided through the public comment period in developing the Record of Decision for the Perimeter Operable Unit.

Our first suggestion on the March 23 Aerojet response is that we would find it useful to see site-specific uncertainties summarized. This discussion should identify major assumptions / issues, discuss the uncertainty associated with each, and describe how this uncertainty is expected to affect the estimate of risk. Sources of uncertainty that should be addressed include (but are not limited to) 1) impact of not combining risks for different media, 2) impact of using the 2004 PRG vs. 2008 RSL table for screening, and 3) impact of not having a final TCE toxicity value.

The best way to summarize these site-specific issues may be to present a table similar to EXHIBIT 6-21 in Risk Assessment Guidance for Superfund, Part A (page 6-51, EPA 1989). This table highlights potential uncertainties, the affect of the uncertainty on risk estimates, and also includes an estimate of the magnitude of the impact (low, moderate, or high). As a general guideline, uncertainties marked "low" may affect risk estimates by less than one order of magnitude, "moderate" may affect risk estimates by one order of magnitude, and marked "high" may affect risk estimates by more than one order of

We recommend that two of the statements presented in the Response to Comments discussion regarding cumulative risk estimates should be deleted:

Section 3.5 of the PGOU Lands Baseline Risk Assessment will be updated with the discussion below. While the point-by-point risk assessment procedure assists with delineating risk domains to facilitate remedial action considerations, cumulative risk across both bulk soil and soil vapor locations cannot be estimated because virtually none of the samples are co-located. ~~*In addition, risk assessments are based on chronic, long-term exposures over an areal extent. Therefore, the summing of point-by-point risk estimates is inappropriate and contrary to standard risk assessment practices and guidance.*~~

...However, based on the nature and magnitude of the risk results, it is unlikely that this uncertainty would substantially affect the interpretation of the data and results. ~~*In fact, it is highly unlikely that the risk has been substantially underestimated.*~~

Our review of Aerojet's proposed responses on ecological risk indicates that these sections are also acceptable. We would note the Region 6 RCRA combustion guidance (Screening Level Ecological Risk Assessment Protocol, Appendix E) as a source of toxicity reference values has not been nationally accepted as an authoritative source of risk assessment guidance. However the individual toxicity reference values in Appendix E are acceptable if there are no other nationally vetted benchmarks for specific contaminant/media combinations.

Consistent with paragraph 5 of the Partial Consent Decree, within sixty days of receipt of this notice Aerojet shall resubmit the Final RI/FS report. We look forward to completion of the PGOU risk assessment and RI/FS.

Should you have any questions on this correspondence, please contact me at (415) 972-3176, Alex MacDonald at 464-4625 or Ed Cargile at 255-3703.

Sincerely,



Kevin P. Mayer  
Site Cleanup Section 2 (SFD-7-2)

cc: Ed Cargile, CALEPA/DTSC  
Alex MacDonald, CALEPA/RWQCB  
Gary Riley, EPA