

**Response to Comments Submitted by Roberta Blank (EPA)  
on the Operable Unit 1 Baseline Risk Assessment  
for the Draft RI Report for  
NAS Moffett Field, California**

**General Comments:**

1. Noted
2. The background concentrations have been changed to match those presented in Table 3.5-1.
3. While intermediate results are shown rounded off, the calculations have been performed in a spreadsheet which maintains all values to 16 significant figures but reports results to the number of significant figures specified by the user. Therefore, the accuracy of the calculations is not affected by the presentation of intermediate results.
4. The toxicity and background values have been modified as requested in the specific comments.
5. Metals data were from filtered samples. No unfiltered data are currently available.

**Specific Comments:**

1. A complete description of the types of waste at Site 2 is given in Section 1.5.2 of the report.
2. A table (7.2-11) showing CRQLs and PRGs has been added to the text.
3. The AirSWAT data have not been validated by formal CLP protocol because the SWAT program does not require it. This does not mean that the data are not valid. While validated data are preferred for a baseline risk assessment, the data are available and have, therefore, been utilized. The reader is informed of the unvalidated status of the data so that this fact may be considered in using these results in making risk management decisions.
4. Background metals in the groundwater in this area come from the soil and in some cases from salt-water intrusion. The leachate is also expected to acquire metals from the soil; therefore, a comparison to background is appropriate. However, truly comparable background does not exist in a situation such as this; therefore, the comparison to background has been removed at the request of the reviewer. Text has been added to the report explaining that some natural metals are expected in the leachate.
5. This screening process is applicable only to the surface soil where only 10 samples have been collected. Because of this small number of samples, a single detection results in a

10 percent frequency of detection but is not necessarily indicative of wide-spread contamination. As noted in RAGS carrying chemicals which have been detected only once in a medium only confounds the results of the risk assessment and distracts from the dominant risks presented by the site. No Class A carcinogens have been eliminated by this method. The elimination of these chemicals serves to simplify the presentation of the results while still providing adequate information to the risk manager for making decisions.

6. Inadequate background data are available for a T-test or other rigorous statistical analysis to be performed. Due to the presence of large amounts of fill material, the shallow water table, and the presence of several large industrial facilities in the vicinity of Moffett Field, the collection of enough background data to support such a test would be time consuming, expensive, and provide little additional information. Conducting a T-test when the environmental media are so variable may in fact give the reader a false sense of accuracy. Therefore, given the amount of background data available, the natural variability of the area, and the fact that metals are not expected to be site-related chemicals at this site, the background comparison used is adequate.

PCE has been removed from the list of chemicals of potential concern in the text.

7. The text has been reviewed and modified as necessary. As noted previously, the background comparison performed is adequate for this site.
8. Agreed. The requested change has been made.
9. Agreed. The requested change has been made.
10. The AirSWAT data have not been validated by formal CLP protocol because the SWAT program does not require it. This does not mean that the data are not valid. While validated data are preferred for a baseline risk assessment, the data are available and have, therefore, been utilized. The reader is informed of the unvalidated status of this data so that this fact may be considered in using these results in making risk management decisions.
11. The paths adjacent to the landfills are not passable during the rainy season due to standing water and mud. The sentence in the text will be modified to include this.

The estimated frequency of exposure may also be an overestimate because it presumes that when the field crew reported seeing a visitor approximately once per week it was always the same person. Because there is no one at the site whose primary function is to count individuals, the observations made by the field crews (who are very familiar with the area) are the best information available for estimating potential exposure frequency.

The 39-week exposure frequency is intended to represent a reasonable potential future exposure frequency. During years with abnormally cold or wet winters, the exposure

frequency may be less; during dry years the exposure frequency may be more. The current weather is a hint that droughts do not last forever. As noted above this exposure frequency presumes that the approximately weekly visitations observed by the field crews present at the site were always made by the same person.

12. The discussion of a lead RfD has been removed from the report. Lead is not present in any of the media carried through the quantitative risk assessment. This has been clarified in the text.
13. The Cancer Slope Factors have been corrected as requested.

To be health protective, all of the chromium detected at the site has been assumed to be present as Cr<sup>+6</sup>. In reality, only a fraction of the total chromium may be in the +6 form. This assumption is likely to overestimate risk because the +6 form of chromium is known to be unstable in the environment. The only form of nickel shown to be carcinogenic is nickel subsulfide in refinery dust. Refinery operations have never been performed at Moffett Field; therefore, there is no reason to believe that nickel would be present in this form. For this reason, nickel has not been evaluated as a potential carcinogen at this site.

14. The RfDs have been corrected as appropriate. Several RfDs noted by the reviewer could not be verified as noted below:

**Oral RfDs**

1,4-Dichlorobenzene	No value is given in IRIS or HEAST (1992 or 1991 annuals)
Trichloroethene	No value is given in IRIS or HEAST (1992 or 1991 annuals)
Thallium	No value is given in IRIS or the 1992 HEAST. A value of $7 \times 10^{-5}$ mg/kg-day is given in the 1991 HEAST

**Inhalation RfDs**

Benzene	No value is given in IRIS or HEAST (1992 or 1991 annuals)
Xylene	No value is given in IRIS or the 1992 HEAST. A value of $9 \times 10^{-2}$ mg/kg-day is given in the 1991 HEAST
Cobalt	No value is given in IRIS or HEAST (1992 or 1991 annuals)

Where appropriate, the EPA has developed RfDs based on cross-route extrapolation. This extrapolation may or may not include the application of an additional uncertainty factor. It is often inappropriate, however, to extrapolate across exposure routes. A discussion of the potential uncertainty in the risk characterization due to the lack of toxicity data for one exposure route has been added to the text.

15. Agreed. The tables have been revised as requested.
16. Agreed. The tables have been revised as requested.

17. Agreed. The tables have been revised as requested.
18. Agreed. The tables have been revised as requested.
19. TO-14 is the air method for volatiles specified by the AirSWAT program.
20. Agreed. The appendix has been revised as requested.
21. Agreed. The appendix has been revised as requested.
22. Agreed. The appendix has been revised as requested.
23. Agreed. The appendix has been revised as requested.