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MCAS EL TORO  
SSIC NO. 5090.3.A

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Mr. Larry L. Nuzum  
Remedial Project Manager  
Southwest Division Naval Facilities Engineering Command  
Code 018C, 1200 Pacific Highway  
San Diego, California 92132-5190

Subject: REVIEW OF DRAFT RI/FS SAMPLING AND ANALYSIS PLAN  
MCAS EL TORO, EL TORO, CA

Dear Mr. Nuzum:

We have completed our review of the Draft Remedial Investigation/Feasibility Study Sampling and Analysis Plan for the Marine Corps Air Station El Toro, El Toro, California. The document was prepared for the Naval Facilities Engineering Command - Southwest Division.

Our review indicates that the proposed fieldwork effort is especially welcome in regard to Operable Unit 1; however, the proposed fieldwork for Operable Units 2 & 3 is inadequate for the existing data needs of the various sites.

Significant clarification regarding the overall intended scope of both the proposed Phase 1 work and the anticipated Phase 2 efforts was received during the recent meeting with the Navy on November 26 and 27. It is our understanding that, in addition to written comments, this dialogue will be the basis for modifications to the Draft Sampling and Analysis Plan.

The following are general comments which are directed toward the overall Sampling and Analysis Plan and those areas which we feel should be modified in order to fulfill the data needs of the site and to provide an adequate foundation for subsequent activities.

*explain in detail*

**Section 1.0 Objective**

The description of the objectives of the Sampling and Analysis Plan should include its goal. It is our understanding that this goal is to provide adequate data for the fulfillment of the CERCLA requirements for a Remedial Investigation within the agreed-upon timeframe. This goal does not require the removal of all uncertainty regarding the contamination of the soils and/or groundwater which may have resulted from base activities, but should consist of the performance of appropriate investigations properly scoped to provide the essential data sufficient to support an informed risk management decision.

With the proposed fieldwork for OUs 2 & 3 consisting essentially of a Soil Investigation, the subsequent phase is, in itself, the entire Remedial Investigation without a follow-up phase. While we agreed with the listed objectives, it is our position that, with the general exception of OU-1, the proposed Sampling and Analysis Plan is inadequately scoped to accomplish said objectives.

The supposition that an effective reduction in the level of investigative field activities from previously-agreed-to levels (within the Site Investigation Plan of Action) should be considered as an "attempt to streamline potential remedial actions" is difficult, at best, to understand. This comment is in reference to the limited amount of soil sampling proposed. The previous plan of action was developed before MCAS El Toro was on the NPL and without a timeframe for the completion of a RI/FS investigation.

While we acknowledge that additional data collection efforts are necessary, but cannot be properly defined at present, it is difficult to understand how the agreed-upon timeframe can be met by reducing the level of initial site characterization activities.

The initial site characterization efforts should be sufficient to allow the subsequent phase to resolve specific issues, such as the extent of detected contamination or the clarification of unexplained findings, in order to culminate on schedule.

Thus, the proposed approach, which seeks to "provide an indication of the presence/level of contamination at each site" is considered inappropriately scoped, and, with the additional stated purpose of "form(ing) the basis... .. to eliminate sites from future consideration", may be inherently inadequate to fulfill even this limited scope.

Additionally, the workplans and sampling and analysis plans for each phase of the Remedial Investigation should be considered primary documents and submitted for agency review. A timetable for the necessary review process should be determined at the earliest possible date.

Regarding OU-1, it is our position that, with the exception of the lack of the submittal of an intermediate workplan and sampling and analysis plan for the second phase of work, the proposed approach is appropriate and acceptable. It is especially welcome to see the written statement that the sampling of the presently existing MCAS wells will be part of the proposed field activities for OU-1 (Page 1, 3rd paragraph). The inclusion of these wells will provide valuable hydrologic and chemical data for the investigation of the regional aquifer.

*must be in schedule*

A quarterly monitoring program for the groundwater monitoring wells utilized must be instituted regardless of the results of the initial sampling episode. The subsequent sampling rounds will serve to confirm and substantiate the chemical findings obtained from the wells. A modification of the types of analyses performed for subsequent sampling events can be considered once data trends are established.

*mention quarterly monitoring*

Similarly, it is appreciated that a specific stated use of the data for the monitoring wells installed at the OU-3 sites will be to delineate contamination which has been caused by "specific site activities", in addition to addressing the specific site itself. It is our position that the presently acknowledged number of sites should be considered inherently incomplete. This is due to the possibility that past and/or present activities may have had contaminant discharges which are either unknown, unreported, or undocumented. It is our understanding that, upon acquisition of relevant data, new sites will be adequately investigated.

*RFA*

Regarding OU-4, it is requested that, in order to avoid any future confusion, the description of the sites to be considered within OU-4 be rewritten to reflect that which is listed within the appendices of the Federal Facilities Agreement for MCAS El Toro.

*?*

**Section 4.0 Rationale for Sample Locations, Number of Samples, and Analytical Parameters**

The initial sampling effort is described as "provid(ing) an indication of the presence/level of contamination" and "not designed to fully delineate the extent of contamination at each site, only to determine if contamination is present." From the recent meetings, it is now understood that this description is perhaps best described as misleading, and does not reflect the Navy's actual position.

*Rewrite*

As commented on earlier, it is our position that the sampling rationale for this phase of the Remedial Investigation should not be retarded in scope due to the lack of existing data, but rather should strive to develop an appropriate level of understanding regarding contamination on base.

*make this happen*

Although an effort to "fully delineate the extent of contamination" would be premature, this initial sampling effort should provide more than "an indication of the presence of contamination" by generating a sufficient level of data to either describe the type and extent of contamination present in an initial manner or determine that contamination was not detected with an initial, although appropriate, level of confidence.

Only with such an initial effort will the Remedial Investigation be able to be adequate performed to the necessary level in the agreed-upon timeframe.

#### Section 4.1 Groundwater Sampling Points

The selection of sites for the installation of monitoring wells with OUs 2 & 3 is described as being where "the volume of waste reported and the mobility of those wastes indicate the need for sampling of groundwater at the site." Therefore, it follows that, at those sites where monitoring wells are proposed, significant volumes of contaminants were discharged or releases of contaminants with substantial mobility occurred. Since monitoring wells are proposed at essentially all of the twenty-one sites within these two Operable Units, discharges of these types apparently have occurred at the majority of these sites. This understanding indicates that the proposed level of shallow soil sampling is cursory.

With the understanding that the subsequent phase of the investigation plans to characterize the extent of contamination within the vadose zone, the proposal to do limited soil sampling for chemical analysis in the borings for the monitoring wells is acceptable.

It is requested that, if possible, this sampling be performed with a five-foot sampler in order to provide the on-site geologist with the greatest possible amount of soil sample to observe for indication of lithologic variation and evidence of contamination.

#### Section 6.1.3

In contrast to the text, Section 6.4.3 does not describe the criteria by which soil samples will be selected for chemical analysis.

**Section 6.4.1.3            Groundwater Sampling  
                                 Groundwater Sampling During Drilling**

In addition to the field tests described, relevant geochemical and contaminant data should be generated by the performance of similar chemical analyses as those proposed for typical monitoring well groundwater samples. Although these groundwater samples are not obtained by the standard protocol, these samples do provide an opportunity to obtain data in a portion of the subsurface which will not be accessible when the monitoring wells are completed.

*incorporated*

**Section 6.4.2            Soil Sampling  
Section 6.4.2.1        Subsurface Soil Samples  
                                 Sampling Method**

Regarding the use of the two samplers described in the text, how will the decision of which sampler is to be utilized made prior to knowing whether that particular sample will be retained for chemical analysis? Consideration should be given to utilizing the California sampler in all sampling situations.

**Section 6.4.3            Organic Soil Gas Vapor Samples**

A description of the specific selection criteria for determining which soil samples are to be submitted for chemical analysis should be included in this section.

**Section 6.5            Disposal of Wastes**

Regarding the selection of an appropriate attenuation factor, site specific data should be used to generate such a factor, rather than the arbitrary selection of an attenuation factor of 100 times, which has no substantiation.

If you should have any questions regarding this matter, please contact me for clarification.

Sincerely,



Kenneth R. Williams  
Associate Engineering Geologist  
Special Projects Section

KRW/ms

cc: John Hamill - U. S. EPA  
Manny Alonzo - Dept. of Health Services