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MCAS EL TORO
SSIC # 5090.3

Bechtel

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CLEAN II Program
Bechtel Job No. 22214
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May 1, 1995

Department of the Navy - Southwest Division
Naval Facilities Engineering Command
Environmental Division
1220 Pacific Highway, RM 18
San Diego, CA 92132-5181

Attention: Joseph Joyce BRAC Environmental Coordinator

Subject: Technical Review Comments on Quality Assurance Project Plan (Draft) Phase II
Remedial Investigation/Feasibility Study MCAS El Toro CTO-0059.

Dear Mr. Joyce:

I have attached my comments of the subject document. Overall the QAPP is sound and ready for implementation. Two issues for further discussion prior to that are 1) the definition of field screening and clarification of the percentages used for confirmation, and 2) the method used for hexavalent chromium. I have also noted that XRF and immunoassay tests may find limited application, if none at all based on the agency preference for residential PRGs/RBCs.

I have provided an electronic copy (3.5" diskette) to Agency BCT members to assist them with the inclusion of any of these comments.

I can be reached in Bechtel's San Diego office at (619) 687-8780 or San Francisco at (415) 768-8561; the facsimile number in S.D. is (619) 687-8787 and in S.F. (415) 768-1373.

Sincerely,

BECHTEL NATIONAL, INC.



Dante J. Tedaldi, Ph.D., P.E.
Technical Quality Assurance MCAS El Toro

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Attachments

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Technical Review Comments on Quality Assurance Project Plan (Draft) Phase II
Remedial Investigation/Feasibility Study MCAS El Toro CTO-0059.

1. Page 2-1. The CTO Leader for CTO-0059 is not responsible for the technical execution, oversight and project QC. These activities will be the responsibility of the individual CTO Leaders of the landfills and VOC source area activities.
2. Page 2-1. The CLEAN Organization text and flow chart (Figure 2-1) do not include the Laboratory Coordinator. The coordinator is responsible for the execution and oversight of all laboratory work and therefore should be included in this section.
3. Page 2-2. The acronym BEC represents Base Realignment and Closure (BRAC) Environmental Coordinator, not Base Environmental Coordinator. The acronym BCP represents Base Realignment and Closure (BRAC) Cleanup Plan, not Base Closure Plan.
4. Page 2-2. Section 2.3 should include a description of the role and authority of the Navy Remedial Technology Manager (RTM).
5. Page 3-2. Recent discussions with the BEC and RTM have indicated that PRGs will be used in place of RBCs. In this case, correct the QAPP throughout to account for the new values.
6. Page 3-3. 1st para. 2nd sentence. "...lowest possible detection limit of accurate precision will be implemented." Is the intent to state accurate precision (sic)? Please clarify.
7. Page 3-3. 1st para. 3rd sentence. The Laboratory Coordinator is referenced here for the first time. See the previous comment regarding the coordinator.
8. Page 3-3. The descriptions and definitions under Field Measurements are not consistent with the descriptions elsewhere within this document and the Work Plan. For example, 2nd para. describes FID and PID instrument use as field measurements. However, on the following page these units are described as field screening devices.
9. Page 3-4. See previous comment. In addition, there are two definitions used interchangeably: 1) preliminary field screening and 2) on-site mobile laboratory or field-based laboratory. Later, the definitions change to qualitative and quantitative. Please use consistent terminology throughout and clarify what methods and analyses fall under each type.
10. Page 3-4. 3rd full para. The QAPP should include a detailed discussion of how confirmation would be measured. This information is only touched upon in the Work Plan.

11. Page 3-4. 3rd full para. The text states that QA/QC for field screening is similar to Level D requirements. It is not clear if this refers to Preliminary Field Screening or Mobile Laboratory Analyses.
12. Page 3-5. The text should indicate what the definition of “..detection limits adequate for risk assessment purposes” is. It would seem that detection limits would be adequate to meet PGRs. If that is the case then include the note.
13. Page 3-5. The second sentence under 3.2.1.4 is redundant with the sentence which immediately follows.
14. Table 3-2 and Table 4-2 (notes) The acronym BOD represents Biochemical Oxygen Demand, not Biological Oxygen Demand.
15. Table 3-2. The table should include a note that all methods are USEPA except for Chromium hexavalent which is by Standard Methods for the Examination of Water and Wastewater-APHA/AWWA/WPCF.
16. Page 4-1. Section 4.3, 2nd to last sentence. All glass containers including VOA vials will be provided with Teflon®-lined caps or Teflon® septa.
17. Table 4-1 and Table 4-2. The footer of the tables is incorrect. See the comment above regarding Teflon® septa.
18. Page 6-1. Section 6.1. The text should identify which QC samples will be used for the field screening program. It does not appear feasible to have the same level of QC for field screening as for off-site analyses. For example, will matrix spikes and matrix spike duplicates be analyzed in the field?
19. Page 6-1. Section 6.1.1. 2nd para. Suggest revision of the 1st sentence to read, “Duplicates of aqueous samples will be...” and deletion of the sentence which immediately follows.
20. Page 6-1. Section 6.1.2. Last sentence. Trip blanks cannot be used “...to detect any problems caused by sample handling and shipment.” Suggest revision as follows, “Trip blanks will be used to detect contamination introduced during sample handling and shipment.”
21. Page 6-2. 1st, 2nd, and 3rd paragraphs. The discussion of preservatives used in the field should be clarified. Clarify that all preservatives used will be included in the blanks; however, a separate blank for each class of analyses will be used. Thus, an HCl blank would be supplied for the VOCs and an H₂SO₄ blank would be supplied for TRPH.
22. Page 6-6. SOP 15 is listed on page 6-4. The summary of SOP 15 is absent and should be provided.

23. Page 7-2. The discussion related to precision and accuracy should not include the 3rd and 4th bullet items. Blanks are not used in the assessment of precision and accuracy. They are however, an integral part of the QA/QC program.
24. Page 7-2. Section 7.3. The 2nd bullet item should include the words "...matrix spike..." between "...results from laboratory [insert] duplicates,"
25. Page 7-2. Replace the first sentence as follows, "Accuracy and precision of analytical techniques will be assessed through MS and MSD samples (respectively) prepared by the laboratory from field samples."
26. Page A1-2. 1st para. The current investigatory approach proposes to use residential risk values only. Therefore, it appears that XRF will not be suitable and would not be used at all. Is this correct?
27. Page A1-3. The text states that all immunoassay samples with detectable concentrations and a minimum of 5 percent of the nondetects will be further analyzed by the mobile laboratory or a fixed based laboratory. This statement is inconsistent with the discussions of other quantitative work presented on page 3-4.
28. Page A1-3. The text interchangeably uses ppm and the definitive unit mg/kg. Be consistent and use mg/kg.
29. Page A1-3. The 2nd to last sentence states that immunoassay kits would only be used when industrial RBCs (PRGs) are used for screening. Since the Work Plan does not identify industrial scenarios, it seems that the immunoassay kits would never actually be used as part of the Phase II work. Is that correct?
30. Page A1-4. Last sentence of 1st para. The text states that "A minimum of 10 percent of the samples collected in the field and analyzed will be submitted to a certified CLP laboratory for confirmation." Other statements in this document and the Work Plan indicate that a minimum of 10 percent of the positive detects for analyses conducted in the mobile laboratory would be sent to an off-site laboratory. The sentence should be corrected to be consistent with the rest of the plans and the term "certified CLP laboratory" should be removed and replaced with "...state- and NFESC-certified..."
31. Page A1-4. Table B-2 is referred to on this page. The Table serves no discernible purpose and should be removed.
32. Page A1-6. 3rd para. The discussion of Method 8280 deviates from analytical methods to health and safety procedures. This deviation is not consistent with the preceding and following method discussions. Delete the 3rd, 6th and 7th sentences.

33. Page A1-6. For the discussion of TTLC and STLC delete the 1st sentence. This sentence is incorrect in that it presupposes that hazardous constituents are leaching into groundwater and TTLC does not provide indications of leachability potential, only STLC can be used for that purpose. Suggestion for the combination of sentences 2 and 3 is, "The soluble threshold leachate concentration measurement determines those minerals/metals that are soluble under the Waste Extraction Test conditions and simulates the leaching process that can occur in a landfill."
34. Table B-1. Page B-10. Analysis of chromium hexavalent by SM17 3500 is a colorimetric procedure not by ICP. SM 3500 does not specify a detection limit and it is unclear where the 500 µg/kg and 500 µg/L detection limits were obtained. These detection limits are above the CAL-modified PRG of 200 µg/kg and 160 µg/L. EPA 218.6 analysis of chromium hexavalent by ion chromatography can achieve a detection limit of 0.3 µg/L. EPA 218.5 analysis of chromium hexavalent by GFAA can achieve a detection limit of 2 µg/L.