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Root Comments "Draft Technical Memorandum"
VOIE-IV

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WORK AUTHORIZATION
(R. Ward)

OTHER

TITLE: DTSC COMMENTS "DRAFT TECHNICAL MEMO" VOLUME I-IV, PHASE I RI

AUTHOR: JOE ZARNOCH/DTSC

DATE: 09/01/93

CATEGORY: 3.4

CC:
SAN DIEGO

PASADENA

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Dist: RFPs-(PM, LRCM, CM, PCM 280 PJM) Fax initial RFP to R. Ward, CM, LRCM, PCM, & PM. They will review for CP funds and dist. further w/WAF

MODs, Stop Work Orders- (RCMs, CM, CA, LPjM, PjM, PCM, CSE, 280 PJM)

COMMENTS-(Full set to LRCM, RCM(s), LPjM, PjM, TR, MTPQC cover sheet to others noted). PM to receive full sets of Code 185 comments/top copy of all others.

CLOSE-OUT LETTERS-PM, RCM(s), CM, CA, PCM, CSE, MTPQC, LPjM, PjM)

*LOCATION DESIGNATOR: 1-Pasadena 2-Denver 3-CH2M 4-IT 5-San Diego

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STATE OF CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
 DEPARTMENT OF TOXIC SUBSTANCES CONTROL
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 245 West Broadway, Suite 350
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Date: <i>8/31/93</i>	No. of Pages: <i>9</i> (including cover)
TO: <i>John Polegowski Charles Elliott</i>	CONTACT NO.: ()
FROM: <i>Joe Zarnoch</i>	CONTACT NO.: <i>(310) 590-4878</i>

SUBJECT: *Final Part Three Tech Memo Comments
on Group 4 Sites*

COMMENTS:

John & Charles -

These are the final Group 4 Site comments. The draft version was dated Sept. 3, 1993. Changes from the draft version are marked in the left margin.

P.S. Mailed version to cc's will go out on 9/1/93.

*Thanks,
Joe Z*

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DEPARTMENT OF TOXIC SUBSTANCES CONTROL

Region 4
245 West Broadway, Suite 350
Long Beach, CA 90802-4444



September 1, 1993

Commanding General
Attn: LCDR L. Serafini
Environmental Department, 1AU
Marine Corps Air Station
El Toro, California 92709-5010

Dear Sir:

**PART THREE COMMENTS ON MARINE CORPS AIR STATION [MCAS] EL TORO,
EL TORO, CALIFORNIA, INSTALLATION RESTORATION PROGRAM, PHASE I
REMEDIAL INVESTIGATION, DRAFT TECHNICAL MEMORANDUM**

The California Department of Toxic Substances Control (Department) has completed a third phase of the review of the subject *Draft Technical Memorandum (Technical Memorandum)*, Volumes I through IV, dated May 7, 1993. Based on a memorandum from CH2M Hill dated August 17, 1993, the MCAS El Toro Remedial Investigation (RI) sites have been grouped and prioritized for review during the Data Quality Objective (DQO) process. In order to provide comments in the order the sites are addressed, the Department's comments on Group 4 Sites (Sites 8, 16, 21, 24, 25 & 26) appear below. Sites 24, 25 and 26 are newly proposed sites and as such, were not specifically addressed in the Phase I RI; some comments on these sites are presented below while other comments were presented in the Department's Part One Comments on the *Technical Memorandum* and the letter addressed to Mr. Andy Piszkin, both dated August 27, 1993.

The following comments consist of three sections: I) General Comments, II) Site-Specific Comments, and III) DQO Issues for Phase II Investigations. Comments were prepared by: 1) Joe J. Zarnoch, Project Manager, and 2) Kathleen A. Considine, Associate Engineering Geologist, with concurrence from Stephen G. Belluomini, Senior Engineering Geologist. The DQO issues in Section III are provided for consideration in determining the scope of work for Phase II investigations.

It is understood that the *Technical Memorandum* will not be revised into a final version, however, the Department's comments stated herein should be addressed in the DQO process for Phase II investigations and applicable subsequent documents (e.g., the Phase II RI Workplan and/or the comprehensive RI Report).



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I. GENERAL COMMENTS:

Site 8 downgradient wells exhibited higher levels of TCE than the upgradient wells; however, it is unclear whether Site 8 may be a source of the volatile organic compound (VOC) plume or whether TCE migration from Site 7 or another upgradient source could cause this effect.

Even though no organic or hydrocarbon contamination was found in groundwater at Site 16, the Department believes that this site could be a potential contributor to the benzene/fuel hydrocarbon plume near Sites 13 and 15 and Tank Farm 2.

Based upon the information presented in the *Technical Memorandum*, the Department agrees that Site 21 is not a likely source of the VOC plume.

II. SITE-SPECIFIC COMMENTS:

Site 8 - DRMO Storage Yard

1. Appendix B8.1 (Site Description)

This section of the report should provide a summary of the excavation due to the PCB spill, including a summary of the analytical results. Describe the depth of the excavation and indicate if fill material was used to grade the area back to the original surface elevation. If applicable, include the source of the fill material. According to the *Initial Assessment Study of Marine Corps Air Station, El Toro, California (IAS)*, dated May 1986, several cubic yards (about 10,000 pounds) of PCB contaminated soil adjacent to ramp 633 was excavated to a depth of one foot and transported for off-Station disposal.

Concerning the Storage Yard, the *Technical Memorandum* states that "... the heaviest staining [was observed in aerial photographs] in the southeastern portion." A review of Plate 12 of the *Draft Final Sampling and Analysis Plan Amendment (SAP Amendment)*, dated August 26, 1992, indicates this may be true for the Old Salvage Yard.

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2. Appendix B8.5.2.2 (Stratum 1 - East Portion of Storage Yard)

The *Technical Memorandum* states that "The highest TFH and TRPH concentrations occur at the central portion of the stratum at 08_ST3 and 08_STDB; the concentrations are highest at the ground surface and decrease with depth". While this may be true, especially for 08_ST3 (since a 2-foot depth sample was collected), it may not necessarily be true for 08_STDB.

3. Appendix B8.5.3.5 (Stratum 4 - PCB Spill Area)

This section states that "Two PCBs (PCB 1254 and PCB 1260) were detected, with concentrations ranging from 303 to 1,820 ug/kg." Yet Table B8-2 indicates PCB-1254 detected up to 3,020 ug/kg in 08_PCB3 (at the surface). Please make the necessary corrections in applicable subsequent documents.

4. Appendix B8.9 (Summary and Conclusions)

On page B8-20, the *Technical Memorandum* states that "TCE and benzene have not been detected in the soils at Site 21 [sic]"; it appears that Site 8 was intended.

This section states that "It does not appear that the soil contamination detected at Site 8 is a potential contributor to VOC regional groundwater contamination (OU-1)". Yet Section 4.8 (Site 8 (OU-3) - DRMO Storage Yard) states that "Site 8 may be contributing to the chlorinated-VOC groundwater plume."

Site 16 - Crash Crew Pit No. 2

1. Figure B16-1

The site map should include the locations of the former secondary pit, the drain line from the main pit to the secondary pit, the former fire extinguisher training pit, the current fire fighting pits (please note that Plate 16 of the *SAP Amendment* identifies the pits as Buildings 850 & 851), and underground storage tanks (USTs) #850A, 850B and 850C (RCRA Facility Assessment (RFA) Solid Waste Management Units/Areas of Concern (SWMUs/AOCs) 288, 289 & 290).

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2. Appendix B16.5.2.4 (Stratum 3: Drainage Channel)

The text at the top of page B16-12 is unreadable.

3. Appendix B16.6.3 (Analytical Results)

The second paragraph incorrectly states that TFH-diesel and TFH-gasoline decrease with depth in boring 16_AB213. The highest detected TFH-diesel concentration (40,000 ppm) was at the 50-foot depth; only one sample deeper at 60-feet was collected. The concentration of TFH-gasoline at 60-feet (4,690 ppm) is very similar to the concentration detected at 10-feet (5,540 ppm).

Site 21 - Materials Management Group, Building 320

1. Appendix B21.6.3 (Analytical Results)

This section states that visible contamination was noted on the boring log for 21_DGMW90 at 30 and 80 feet below ground surface; yet apparently the 30-foot depth sample was not analyzed because the results do not appear in Table B21-3.

III. DOO ISSUES FOR PHASE II INVESTIGATIONS:

Site 8 - DRMO Storage Yard

1. Only one boring (a 25-foot boring) was located in the possible stained areas identified in the *SAP Amendment* (see Plate 12).
2. Although the detected concentrations of PCBs in Stratum 1 were low (up to 1 ppm), nevertheless, the results indicate the presence of PCBs outside of the PCB Spill Area (Stratum 4). Higher concentrations of PCBs may exist in surficial soil directly adjacent to the PCB Spill Area.

The *Technical Memorandum* does not discuss the depth of the excavation in the PCB Spill Area. Were the samples collected in fill material used to return the area back to the original surface elevation?

PCBs, with concentrations of up to 20 ppm, were also found in Stratum 3.

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3. Three Drum Storage Areas (RFA SWMUs/AOCs 104, 105 & 106) located in the Storage Yard northeast of Building 360) should be evaluated for possible investigation in Phase II.
4. VOCs increase in groundwater downgradient of this site, indicating that it may be a source; however, it is unclear whether Site 8 may be a source or whether TCE migration from Site 7 could cause this effect. The pattern of TCE in wells at or near Site 8 is generally consistent with the hypothesis that Site 7 (or areas adjacent to Site 7 such as the "refurbishing or rework" hangars) is/are a primary TCE source. An exception is well 08_UGMW29 which exhibited a TCE concentration of 20 ppb; one would expect a slightly higher concentration in this well to support the hypothesis. A second round of groundwater sampling data will be useful in evaluating TCE concentration trends. A soil gas survey(s) may also be useful in locating potential source areas near Sites 7 and 8.

In addition to well 08_UGMW29, wells 18_BGMW05D, 18_PS4, and 18_PS3 exhibited TCE concentrations of 39, 34, and 56 ppb, respectively. Potential TCE migration from Site 8 would not be expected to impact these wells. TCE migration via drainage channels from Site 7 or other source areas upgradient of Site 8 may be responsible for the presence of TCE in these wells.

The RCRA Facility Assessment Draft Preliminary Review/Visual Site Inspection Report, dated July 3, 1991, indicates a records review showed that spent TCE from the degreaser tank inside Building 359 was dumped to the storm drain. Do the records indicate the total volume of TCE that was dumped? Does the storm drain proceed east past Site 8 towards Aqua Chinon Wash?

The Department recommends that a complete description of potential source areas upgradient of Site 8 be provided during the DQO process for Phase II investigations (and prior to the DQO process for a soil gas survey). The description should include the Motor Pool area. The Motor Pool area appears to be a relatively new facility with concrete bays and asphalt pavement; please also provide a complete description of the use(s) of this area prior to the current Motor Pool facility.

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Site 16 - Crash Crew Pit No. 2

1. USTs #850A, 850B and 850C (RFA SWMUs/AOCs 288, 289 & 290, respectively) located south of the current fire fighting pits should be evaluated for possible investigation in Phase II. The current fire fighting pits should also be evaluated for possible investigation; please provide construction details for the current fire fighting pits. Could concrete expansion gaps or cracks result in releases to subsurface soils? Concrete expansion gaps are visible in the circular pit. Apparently concrete in the adjacent pit is incapable of withstanding high temperatures; has this resulted in past releases?
2. Phase I soil sampling was apparently concentrated in the area of the main pit; based on the pit locations in Figure 3-8 of the IAS, it appears that the secondary pit, located southeast of the main pit, was not investigated. Plate 16 of the SAP Amendment indicates that the deep boring (completed as well 16_DBMW52) was proposed within the secondary pit; however, Figure B16-1 of the Technical Memorandum indicates that the well was relocated to the north. The SAP Amendment states that only the upgradient and downgradient wells were relocated. Moreover, a recent site visit, during which the location of the drain line from the main pit to the secondary pit was observed, indicates that 16_DBMW52 is located upgradient of the main and secondary pits.
3. Analysis for organolead should be considered in future characterizations.
4. TFH-diesel, TFH-gasoline, TRPH and BTEX concentrations generally increase with depth at 16_PT1, 16_PT2 and 16_PT3; these samples were collected to a maximum depth of 4-feet. Significant concentrations of TFH-diesel and TFH-gasoline were found in nearby angle boring 16_AB213 in samples collected to a maximum depth of 60-feet.
5. This site may be contributing to the benzene plume located to the southwest near Tank Farm 2. At Site 16, fuel contaminated soils are observed down to at least 60 feet. Wells at the site show non-detect for groundwater contaminants, but two are upgradient and well 16_DGMW81 is not directly downgradient. Please

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see Figure A1-4f and notice the contours for the detected benzene plumes near Tank Farms 2 and 5. One of the benzene plumes is located upgradient of Site 16 and the other is located downgradient. If groundwater flow at Site 16 is similar to conditions at these other two locations, it is likely that 16 DGMW81 would not detect contaminants from Site 16. There are no wells between Site 16 and the benzene plume near Tank Farm 2. Well 13 UGMW32 is located slightly upgradient of Tank Farm 2; this well exhibited the highest concentration of benzene detected during Phase I (730 ppb). Is well 13 UGMW32, albeit upgradient of Tank Farm 2, being impacted by Tank Farm 2 or is there another benzene source such as Site 16? Other than waste oil, what were the other contents of the Tank Farm 2 USTs? Are the contents of these USTs likely to cause a release of benzene detected in well 13 UGMW32? Site 16 should receive further study.

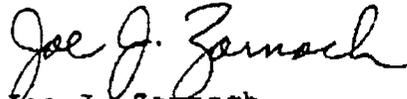
Site 21 - Materials Management Group, Building 320

1. According to Plate 19 of the *SAP Amendment*, soil samples were not located within the possible stain area in the northwest portion of the yard observed in a 1952 aerial photograph.
2. The IAS indicates that chemical supply drums were also stored next to a parking lot across the street from Building 320. Where is this area and was it investigated in Phase I or the RFA?
3. Is RFA SWMU/AOC 94 (Drum Storage Area), which was excluded from further consideration in the RFA, essentially the same as Site 21?
4. What would account for the 2,556 ppm detection of TRPH in the upgradient surface soil sample at 21_UGS?

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If you have any questions concerning these comments, please contact me at (310) 590-4878.

Sincerely,



Joe J. Zarnoch
Associate Hazardous Materials
Specialist
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