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MCAS EL TORO
SSIC # 5090.3

State of California

Memorandum

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Date: May 22, 1995

From: CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD - SANTA ANA REGION
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Subject: COMMENTS FOR PHASE II DRAFT REMEDIAL INVESTIGATION WORK PLAN FOR MARINE CORPS AIR STATION EL TORO

GENERAL COMMENTS

The workplan is difficult to follow. Much of it is repetitive because of the use of the DQO format for every site. Also, the presentation of Phase I detected constituents, constituents which exceeded RBCs or MCLs, and COPCs in a narrative form, all in separate locations, is difficult to follow. Statements sometimes are contradictory or unclear. Narrative descriptions and figures do not always agree. Sites are divided into strata for sampling purposes, but they are also called units. It would be clearer if they were just called units.

Table 3-1 lists detected compounds by site; in the individual site work descriptions, however, COPCs are listed by media. Shallow soil COPCs might be different from subsurface COPCs, which might also be different from upgradient and downgradient COPCs for groundwater. It is difficult to tell whether the same analyses will be performed for all media at a particular site. It seems to me that it makes sense to look for the same COPCs in every media at a particular site, even if they weren't detected in all media in Phase I.

SPECIFIC COMMENTS

Site 1 Explosive Ordnance Disposal Range

Groundwater

1. P. A 27 (Appendix A). Still in use. During Phase I, two downgradient wells were installed. Low metals were detected, not much else in groundwater. Based on the hypothesized groundwater flow direction, it appears that one of the downgradient wells, 01_DGMW57, may not be picking up anything. Three more wells are

proposed for Phase II, two upgradient and one in the center of the site. There is no explanation for putting the well in between the two halves of the site. We suggest putting in two downgradient wells on the southwest side of the site and not putting the well in the middle of the site as they propose.

2. P. A-29. Well boring, sampling and design: Why will samples be collected every 5 feet but only analyzed every 10 feet? 30 foot screens are proposed: 20 feet below water table and 10 foot above, PVC casing and stainless steel screens. Slot size and filter pack size determinations are not mentioned will they be based on previous determinations?

Site 2 Magazine Road Landfill

Unit 3: Groundwater Plume

1. P. B-36 (Appendix B). Well 02 DGMW59 is not shown on Figure B-6; also missing is Map B-3 which is referenced on p. B-37 (may be referring to Figure B-2, which shows well locations).

2. On p. B-37 reference is made to a water table well, but its location is not shown.

3. No vadose zone monitoring is proposed because contaminants have already migrated to groundwater. However, you may need to monitor the vadose zone at some point depending on the results of groundwater monitoring. We have several landfills with permanent soil pore-gas probes.

4. Wells will be resampled that did not show TCE during the last monitoring round, to assess horizontal extent of the plume. A decision on additional wells will be made after results are obtained. Subsequent proposed work appears adequate.

Site 3 Original Landfill

Unit 1: Landfill

1. No new monitoring wells are proposed; groundwater flow direction shown is to the northwest--this is quite different from the flow direction at Sites 1 and 2, and needs to be confirmed.

Site 4 Ferrocene Spill Area

As in Site 3, groundwater flow direction to NW-may not be well characterized.

PHASE II

1. Fig. D-2 (Site Plan) does not show locations of monitoring wells or where the deep soil sample was taken. Also, the proposed number of Phase II soil samples shown on Fig. D-2 is not consistent with numbers listed in Table D-2. Also, samples from the stained area will not be analyzed for TFH

   (See general comment about COPCs).

2. Phase II proposes no groundwater monitoring. Will these wells be sampled for another site? If not, or even if they are, they should be sampled for TFH.

3. P. D-7. States that groundwater was only analyzed for VOCs, SVOCs, etc., in Phase I; does not include TFH in the list; however, the list of detected compounds for two of the wells included TFH-gas and TFH-diesel, but the third well did not. It is difficult to tell if the analysis was performed for that well or not. Because of the format of the workplan and the inconsistencies, it is difficult to determine what analyses were performed.

Site 7 Drop Tank Drainage Area No. 2

Unit 3 (New East Pavement Edge): Same as Unit 1, it is already know there is contamination along the pavement edge (lead and SVOCs); why do more sampling there?

Site 8 DRMO Storage Yard

COMMENTS

1. P. H-7. The listed field activities for Phase I do not include any soil sampling for Unit (Stratum) 4, but Figure H-2 and Table H-2 show shallow soil samples taken at three locations.

2. P. H-27. Workplan states that only samples taken at 0 and 2 feet bgs will be analyzed for PCBs. However, according to Table H-2, all samples are to be analyzed for PCBs. There should be a footnote on the table to clarify that.

3. Fig. H-2. The number of samples taken in Unit 1 during Phase I was 8, at only three locations, which seems small considering the size of the area. Please provide the rational for recommending NFRAP its not stated and a clear justification was not given.

Site 9 Crash Crew Pit No. 1

1. P. I-2. The workplan states that one downgradient well was installed, but it is not shown on Fig. I-1, nor is the number of the well given until later in the text.

2. P. I-2. The workplan states that during Phase I, 4 soil samples were collected; this is inconsistent with Table I-1, which lists 2 samples for Phase I.

3. P. I-8. The statement is made that petroleum hydrocarbons detected at site 9 do not appear to pose a threat to groundwater; however, both the on-site well (09_DBMW45 and 09_DGMW75) show TFH-gasoline.

4. In reference to the above comment, since no groundwater monitoring is proposed and these wells are part of the base wide VOC investigation, will they be sampled for petroleum hydrocarbons as well as VOCs?

5. P. I-24. Since the pits were originally 3 to 4 feet deep and are now filled in, it might be better to take more samples in the interval from 2 to 5 feet rather than right at the surface or at 10 feet.

Site 10 Petroleum Disposal Area

1. P. J-5. States that soil samples were taken from six locations in Units 1 and 2. The locations are not marked on Fig. J-2, and the numbers do not agree with Table J-1 on P. J-23.

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Site 11 Transformer Storage Area

1. P. K-16. Fuel and petroleum hydrocarbons are listed as COPCs for the site, but are not listed in Table K-2, Soil Sampling and Analysis.

2. Fig. K-2 shows the drainage ditch ending at the edge of Bldg. 369. Could PCBs have moved further off the site? No sampling is proposed beyond the edge of the building.

3. Will the groundwater plume investigation also look for PCBs, at least in wells that could be impacted?

Site 12 Sludge Drying Beds

1. No mention is made of groundwater sampling. Will this site be part of the VOC plume investigation?

Site 13 Oil Change Area

1. This site is not part of the groundwater plume investigation. Will there be any groundwater monitoring, since none is included as part of Phase II?

Site 14 Battery Acid Disposal Area

1. P. N-25. No mention of groundwater until Tier 3 of the sampling, and then only if subsurface sampling or modeling suggest potential for impact. Groundwater in this area is already contaminated, so it should be sampled as part of some investigation (this area is not part of the VOC source investigation).

Site 15 Suspended Fuel Tanks

1. P. 0-6. TRPH in shallow soil was detected at 23,000 mg/kg. Is this below RBCs?

2. P. 0-23. Benzene exceeded MCLs in groundwater, but will not be sampled as part of Tier 1. If it is believed that this is part of a plume from another site, it was not mentioned. Rather, the statement was made that groundwater will be investigated if soil data indicate potential impacts to groundwater are possible.

Site 16 Crash Crew Pit No. 2

1. P. P-9. States that no COPCs exceed RBCs in shallow soil. Is there an RBC for diesel? (75,000 seems extreamly high.)

2. P. P-ii. According to Step 7, one deep boring will be drilled in the area of boring 16AB213, where contamination was found to 60 feet bgs; however, there is no mention of a boring in the Tier 1 activities. Since it is known that contamination is below 10 feet in at least one location, why doesn't Tier 1 include more subsurface sampling?

Site 17 - Communication Station Landfill

1. Fig. Q-2. Downgradient well 17_DGMW82 is located right where the landfill curves to the west; if groundwater flow direction is to the west northwest as shown on Fig. Q-2, it is possible that the well is not intercepting groundwater from the site.

2. Fig. Q-2. We could not locate 7 shallow soil sampling locations.

3. P. Q-21, Step 5, No. 8. States that if it is determined by actual sampling that COPCs extend to the water table, then groundwater beneath the site will be investigated. On Fig. Q-2, p. Q-5, the locations of two more proposed wells are given. This is misleading, given the statement above. Also, Title 23, Chapter 15 requires groundwater and vadose zone monitoring of landfills.

4. Fig. Q-2, p. Q-5. The location of well New 2 may not be optimal for picking up contamination from the landfill. Could it be moved to the northeast?

5. The plan proposes vadose zone monitoring below the landfill only if groundwater has not been impacted. (Slant borings, cased to collect leachate/gas.) Again, Chapter 15 requires vadose zone monitoring.

Site 19 Aircraft Expeditionary Refueling

1. P. R-2."Northwest stained area" should read, "northeast stained area."

2. P. R-4. Page is missing.

3. P. R-27. Additional soil sampling proposed; no groundwater monitoring until Tier 3, and then only if impacted soil is not limited to the vadose zone or vadose zone modeling suggests a potential for migration. We believe groundwater should be sampled on a regular basis during the investigation, to give a more complete picture of gradients, flow direction and contaminant loads.

Site 24 VOC Source Area

1. There are six abandoned water wells identified. Have the six wells been properly abandoned? If the wells have not beenproperly closed they may be contributing to groundwater contamination by creating conduits from the surface to the groundwater.

2. Fig. W-2. It is difficult to distinguish between the colors on the figure for 50 to 500 ug/L TCE and greater than 500 ug/L TCE.

3. Fig. W-2 and Map W-11. Neither map shows soil gas survey points.

Soil Gas Sampling

1. Fig. W-2 and Map W-11. The groundwater TCE hot spot and the soil gas TCE hot spot are in different areas. (What are the thoughts on this?) Very little soil gas sampling is proposed in the area of the groundwater hot spot. Is this because little was found in the original survey? The sampling points for the original survey are not shown on either of these maps.

Groundwater

1. Map W-12. Not sure why New 5 is needed where it is. Also, how well is plume defined to the northwest and at the southern edge?

Subsurface Stratigraphy

1. P. W-53. Plan does not specify type of geophysical logging.

Site 25 Drainages

Fig. X-1.

1. Figure does not show Phase I sampling points. Are Phase II sampling points identical?

If you have any questions please call me at (909) 782-4998.

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