

TITLE: JMM'S RESPONSE TO COMMENTS FROM
EPA

AUTHOR: JAMES M. MONTGOMERY ENGINEERS INC.

DATE: 03/31/90

CATEGORY: # 3.3

M600

M600
M60050.000790
MCAS EL TORO
SSIC # 5090.3

21-MAR 90

JMM's Response to Comments from EPA

Item 1: The investigation was broken down into on- and off-station components at the direction of the Southwestern Division of the Naval Facilities Engineering Command as specified in the Scope of Work. JMM agrees that the characterization of the sources on-station is critical for the remedial investigations being conducted off-station. An on-station remedial investigation will address the contaminant sources.

Item 2: General structure of the report will remain the same, since an additional work plan is to be prepared.

Item 3: Well screen intervals on the figures would make figures unreadable and would be confusing to the reader.

Item 4: Off-station contaminant sources are currently not known in the vicinity of the station. The work plan provides for identification of these sources in the area.

Item 5: Topographic lines have been added to figure 3-1.

Item 6: Approximate groundwater flow lines have been included on figures 3-2, 3-3 and 3-4.

Item 8: Text has been clarified.

Item 9: Geologic cross-sections should be included in the remedial investigation report, but is not considered part of the scope of work for this work plan.

Item 10: There are three aquifer tests proposed in this work plan, as well as specific capacity tests for each well proposed to be installed during the remedial investigations. Results of these tests will provide additional hydrogeologic information, and will be interpreted in the RI report that will follow investigation. Previous reports by JMM and Orange County Water District have also addressed the hydrogeology of the area.

Item 11: See Item 9. A fence diagram should be included in the remedial investigation report, but should not be a part of this work plan.

Item 12: See the purpose of selecting the operable units at the end of paragraph 1, Section 1.

Item 14: Source of contamination for OU-I and OU-II will be addressed in the on-station site-specific remedial investigation.

Item 15: The exact source locations may not be identified in this remedial investigation; however, generalized locations will be identified. In reference to a soil gas investigation,

JMM's experience with soil gas investigations in this area has shown that it is not effective since it is a heavily irrigated area.



Page Two

Item 16: Reference to the use of an on-site gas chromatograph has been added to the text, and the use of an HNu meter for soil screening has been deleted.

Item 17: Literature search has been expanded to include investigation of the history of solvent use in the area.

Item 18: Information on the groundwater model has been added to the text.

Item 21: Text on soil sampling methods has been expanded.

Item 22: Air rotary drilling methods were considered, but was not chosen because the introduction of air into the formation would have a much greater impact by volatilizing the low concentration VOCs in groundwater than drilling mud. The wells will be developed sufficiently to remove any drilling fluid introduced during drilling operations.

Item 23: JMM disagrees with EPA's suggestion that soil samples be collected in the saturated zone for VOC analyses. Analysis of samples collected in the water bearing strata are not representative of soil contamination. An in-situ groundwater sample may be collected instead.

Item 24: Lithologic and geophysical logs from the borings, as well as logs from surrounding wells, will be adequate to select screened intervals for the wells, since the hydrogeology in the area is fairly well understood.

Item 25: Deep cement grout to be tremied in place; text changed.

Item 26: Well centralizers will be recommended; text changed.

Item 27: The slot size and sand pack material will be selected to prevent fine sediments from entering the wells.

Item 28: Recommendation has been incorporated into text.

Item 29: Loss of drilling fluid estimated by the volume of bentonite mud used during drilling each day and by each well.

Item 30: Recommendation has been incorporated into text.

Item 31: Text has been clarified.

Item 32: Recommendation has been incorporated into text.

Item 33:

- 1) The duration of 72 hours was selected because this length of test was performed at well TIC-55 nearby and adequately stressed the aquifer.
- 2) Water levels in the agricultural and monitoring wells are measured on a monthly and quarterly basis and will provide the antecedent trends desired.
- 3) The selection of each observation well for the aquifer tests are discussed in Sections 3.3.1, 3.3.2, and 3.3.3 for each operable unit.
- 4) The selection of the test pumping rate will be determined during the specific capacity testing of each well.
- 5) Discharge of test waters is discussed in Section 5.1 of the Waste Management section.
- 6) Observation wells will be purged and developed.
- 7) Outlying wells not influenced by pumping will be monitored to evaluate any changes in the hydrostatic head due to outside influences.
- 8) If test waters are released to the channels, recharge will be minimal because channels are lined from the base to the San Diego Creek.
- 9) The impacts of the well storage, delayed yield and well penetration will be observed during the specific capacity tests. The aquifer tests will then be designed to account for any observed impacts. The influence from local irrigation wells can be minimized by communicating with the Irvine Company prior to the aquifer testing.
- 10) Selection of analytical methods will be done following completion of the test results, depending on the measured behavior of the aquifer during pumping.

Item 34 and 35: The creek bed is not anticipated to be dry. Actual sampling locations will be finalized based on accessibility to undisturbed sections of the creek during the remedial investigation.

Item 36: Soil cuttings will also be analyzed for EP toxicity metals. The text has been changed.

Item 37: Pump test water will be handled like development water. Portable tanks may need to be utilized, depending upon the capacity of the treatment system.

Item 38: There is not a solvent rinse of sampling devices because no oily wastes are anticipated to be encountered during the off-station remedial investigation.

Item 39: Text has been changed to include a more detailed description of the lithologic logs.