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MCAS EL TORO
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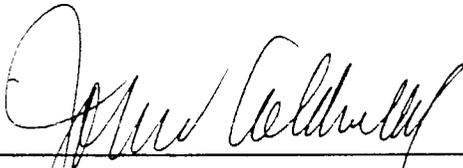
CLEAN TRANSMITTAL/DELIVERABLE RECEIPT

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TO: Ms. Robin Green, Contracting Officer, Code 0232.RG DATE: 21 March 1994
Southwest Division CTO#: 0145
Naval Facilities Engineering Command LOCATION: Santa Ana
Contracts Dept., Room 135 TASK/WORK ELEMENT: _____
1220 Pacific Highway
San Diego, California 92132-5187

FROM: 
John Dolegowski/Project Manager


John Caldwell/Quality Control Manager

DESCRIPTION: Project Note No. 01-F145-109, Contract Task Order (CTO) No. 145, MCAS EI Toro Remedial Investigation/Feasibility Study (RI/FS), Remedial Project Managers (RPM) Meeting.

YPE: Contract Deliverable CTO Deliverable Request For Change/Project Note

CATEGORY: Preliminary Draft Draft Preliminary Final Final

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Copies To: K. Reynolds - Code 1841 w/attach *16* K. Tomeo - CH2M HILL w/attach
J. Allen - Code 0232.JA w/attach File - PMO w/attach
A. Piszkin - Code 1831.AP w/attach File - CTO Notebook/PMO w/o attach
V. Parpiani - MCAS EI Toro w/ attach File - CH2M HILL w/attach
C. Mitchell - MCAS EI Toro w/ attach
K. Frederickson - CH2M HILL w/o attach

Delivered To: Contracting Officer RPM/EIC Date/Time Received

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CONFIRMATION OF:	CONFERENCE X TELECOM OTHER	DATE HELD DATE ISSUED RECORDED BY PLACE	8-10 February 1994 John Dolegowski/CH2M HILL CH2M HILL, Santa Ana, CA
SUBJECT Contract Task Order (CTO) No. 145 Remedial Project Managers (RPM) Meeting MCAS El Toro Remedial Investigation/Feasibility Study (RI/FS)			
PARTICIPANTS: (* DENOTES PART-TIME ATTENDANCE)			
*Mike Arends-CH2M HILL/SCA *John Broderick-RWQCB John Dolegowski-CH2M HILL/SCA Ginny Garelick-Code 1853/VC *Daryl Hernandez-CH2M HILL/SCA Renée Jenneskens-CH2M HILL/SCA *Hooshang Nezafati-CH2M HILL/SCA *Davi Richards - CH2M HILL/CVO *Ken Tomeo - CH2M HILL/SCA Joe Zarnoch - DTSC		Sherrill Beard - DTSC David Crawley - Code 18/SD Chuck Elliott - CH2M HILL/SAC John Hamill - EPA *Roy Herndon - OCWD *Chrisa Mitchell - MCAS El Toro Andy Piszkin - Code 1831.AP *Sebastian Tindall - Bechtel Corp. *Bryant Wong - CH2M HILL/SCA	
ACTION REQ'D. BY	ITEM		
	<p>The Remedial Project Managers (RPM) Meeting for the Marine Corps Air Station (MCAS) El Toro (or Station) Remedial Investigation/Feasibility Study (RI/FS) was held at CH2M HILL in Santa Ana on 08-10 February 1994. Participants represented the following organizations: the Naval Facilities Engineering Command, Southwest Division (SWDIV); MCAS El Toro; U.S. Environmental Protection Agency, Region 9 (EPA); California Regional Water Quality Control Board, Santa Ana Region (SRWQCB); the California Environmental Protection Agency (Cal-EPA) Department of Toxic Substances Control (DTSC); Bechtel Corporation (EPA's consultant); Orange County Water District (OCWD); and CH2M HILL (SWDIV's consultant for the Comprehensive Long-Term Environmental Action Navy ([CLEAN] I Contract). These meeting notes summarize the items discussed at the meeting. A copy of the agenda is attached.</p> <p><u>Action Items</u></p> <p>The following action items are summarized from discussions on 10 February 1994.</p> <ul style="list-style-type: none"> o The Navy will attempt to set up a team building meeting for the MCAS El Toro Team. o The regulatory agencies will review the memorandum prepared by CH2M HILL, applying the SiteWorks field screening approach to Phase II. o CH2M HILL will revise the memorandum on field screening and incorporate new information and regulatory comments. o MCAS El Toro will call The Irvine Company to see if they have placarded wells that pump groundwater contaminated with volatile organic compounds (VOCs). 		

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- o The CLEAN II contractor will revise the Quality Assurance Project Plan (QAPP) for the Phase II RI to include field screening methods after the soil gas survey has been completed.
- o MCAS El Toro will investigate what is needed to prepare a written policy to ensure that construction activities on RI or Resource Conservation and Recovery Act (RCRA) Facility Assessment (RFA) sites will not be conducted prior to a review by Base environmental personnel.
- o MCAS El Toro will take soil samples from the Site 8 soil pile and will verify that the laboratory used for analysis is state certified.
- o The Navy will report back to the Team on a removal action for the gasoline contamination in Agua Chinon Wash.
- o CH2M HILL will present the conclusions of the second round of groundwater monitoring in the Groundwater Monitoring Plan. The results will also be incorporated into the Operable Unit (OU)-1 RI Report.
- o A. Piszkin will tentatively set up an El Toro team building session for the week of March 28.
- o Chrisa Mitchell will try to set up interviews with past MCAS El Toro employees.
- o The Navy will report on the oil/water separators (OWSs) at the Base Realignment and Closure (BRAC) Cleanup Plan (BCP) meeting to be held the week of 14 February 1994; A. Piszkin will provide the Law Cradle report on the OWSs to the agencies.
- o CH2M HILL will plan a presentation on the results of the OU-1 FS groundwater modeling activities.
- o CH2M HILL will plan a technical exchange meeting for the soil gas survey on Tuesday, 01 March 1994.
- o The Navy will initiate biweekly conference calls with the regulatory agencies once the new BRAC Environmental Coordinator (BEC) is on board.
- o Dave Crawley will locate office space at MCAS El Toro for J. Zarnoch and J. Hamill.
- o The Navy will provide a digitized map of MCAS El Toro to EPA and Bechtel.

TUESDAY, 08 FEB 1994

Partnering Issues

It was decided at this time that the meeting would begin at 8:00 a.m. on Wednesday and Thursday, instead of 10:00 a.m. as stated in the agenda. A. Piszkin expressed the

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need to get a lot of work done on OU-1 this week. D. Richards requested that they defer discussion of the OU-1 schedule to Wednesday. She added that there needs to be a firm understanding and consensus regarding the approaches taken to OU-1 and not necessarily the costs. C. Elliott requested that they add the Groundwater Monitoring Plan to the agenda to be discussed.

Potential Early Actions

G. Garelick explained that the technical memorandum she wrote on early actions at MCAS El Toro was an informal look at which sites were considered the highest risk and presumptive remedies to remediate them. J. Hamill responded that he believes the memorandum is a good starting point. In response to G. Garelick's memorandum, he stressed that the EPA still supports the Data Quality Objective (DQO) process but feels uncomfortable with the existing documentation for strata. He added that they would like field screening in conjunction with the DQO process. The agencies feel it will make the field investigation go faster and that it will not increase cost. A. Piszkin requested the team delay the discussion of field screening until Thursday.

S. Tindall referenced a sentence in G. Garelick's memo stating that the agencies did not provide feedback during the DQO process. S. Tindall repudiated this comment, stating that there were eight to ten memorandum providing comments distributed during the summer. G. Garelick responded that she is only aware of one, five-page memorandum from the agencies that concurred with the technical directions stated in the DQO position papers.

J. Zarnoch handed out three papers (attached): Field Screening at RI/FS Strata - Potential Changes to Strategies Proposed in the Draft Phase II RI Work Plan, Non-RI/FS Priority Sites, and Potential Removals at RI/FS Sites. He added that the field screening costs will be reduced if certain strata are removed. C. Elliott distributed a table (attached) listing proposed sites for early removal and for screening. He emphasized that this was not the Navy's position, but his own ideas proposed for discussion.

G. Garelick facilitated a discussion of potential early actions at MCAS El Toro sites and compiled a table of potential sites and actions on chart paper. J. Hamill suggested using G. Garelick's memorandum as a guideline, proceeding site by site and referring to the papers distributed by C. Elliott and J. Zarnoch. A. Piszkin announced that \$2 million are designated for the RFI next year at MCAS El Toro. John Broderick responded to G. Garelick's suggestion in her technical memorandum that they pull all the oil/water separators. He explained that they could run into Clean Water Act violations and that future users may want to keep the OWSs. G. Garelick responded that she had intended that only the ones not being used would be pulled and only if they were sources of contamination. J. Broderick said it makes it difficult to set cleanup priorities without an Environmental Impact Report (EIR) and a Reuse Plan. A. Piszkin responded that approximately 400 underground storage tanks (USTs) need to be pulled because they are out of compliance. He added that the OWSs and USTs are separately funded compliance issues,

J. Zarnoch suggested that A. Piszkin and G. Garelick make two lists; one listing priorities and one listing potential early removals. J. Hamill said that he had been told

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that there was a shortage of funds for the RI/FS, so why is money available for other programs. A. Piszkin replied that the Navy wants to set priorities. J. Zarnoch stated that if the Desalter project focuses on the southwest quadrant, they will not be able to treat the benzene plumes in the southeast. He continued that the Navy can't transfer property until remediation has taken place, therefore, the Navy may need a parallel system.

J. Zarnoch announced that J. Hendron/Orange County Environmental Health Management Agency (OCEMA) will be at CH2M HILL next week at the BRAC meeting to talk about four UST sites. J. Broderick stated that the certificate of tank removal comes from the RWQCB. The RWQCB can oversee the tank pull if the county is not available.

C. Elliott suggested putting contaminated soil on top of the Site 2 landfill. J. Broderick agreed that Site 2 would be a good, cost-effective option. He said the EPA would ask for a guarantee that MCAS El Toro would cap the landfill in accordance with a Chapter 15 if they used Site 2. He added that C. Elliott's proposal has been used at other bases. J. Dolegowski expressed concern about putting contaminated soil on Site 2, because the ground is very coarse-grained and contaminants could leach out or contaminated sediment could be washed away from the site. He suggested treating the soils at Site 5, the Perimeter Road Landfill, prior to storing it at Site 2. J. Broderick responded that if the soils were disposed of at Site 5, it would have to be covered with a Chapter 15 cap. He emphasized that because it was an old quarry and gravel pit, it would be a bad place to put a landfill. He suggested Site 17 as an alternative. J. Dolegowski suggested that if the contaminated soil is disposed of on Site 2, the site should be capped quickly thereafter. J. Broderick stated that Site 2 is a difficult place to put a permanent cap. J. Dolegowski said he was in favor of bioremediation.

J. Zarnoch asked if Site 5 would need a deed restriction. J. Hamill responded that a deed restriction was not needed if there were no bad contaminants. J. Broderick replied that a Chapter 15 cap would be asked for if disposal occurred on Site 5. S. Tindall stated he agreed with J. Dolegowski that Site 2 is not a good place to dispose waste. He recommended Site 1 because it is a landfill, and the geology is better suited. J. Zarnoch asked that the team focus on the fact that they have options for locations, but agree that this is a good approach. A. Piszkin added that this is a good strategy. He stated that one problem with Site 1 is that they may want to reuse the land some day, possibly for residential development. J. Dolegowski added that Site 1 is mostly clay and is not as permeable as Site 2. J. Hamill asked to decide the location of the landfill at a later date. J. Broderick added that if any treatment is done, it should be onsite, and a check should be done afterwards to ensure there is no residual waste. A. Piszkin reiterated that he is hesitant to lock into Site 1 in case it can be used in the future.

J. Dolegowski asked A. Piszkin to give a brief explanation of the Navy "worst first" list. A. Piszkin explained that the list prioritizes EPA National Priority List (NPL) and non-NPL sites for funding, focusing on those sites most affecting humans. Eleven MCAS El Toro sites are on the "worst list." G. Garelick stated that the list had been developed as a "worst first" for removals. J. Hamill said the team had originally decided to prioritize the sites because of funding constraints. He asked what is driving the decision if we are not in this situation anymore. He also stated that he believed field

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screening needed to be done in order to prioritize the sites. J. Broderick responded that the Navy needs to do removal actions because of the funding priorities. S. Tindall supported J. Hamill's belief that field screening needs to be done. He stated that the agencies do not feel the data from Phase I are defined enough to make a valid decision. C. Elliott disagreed and stated he believed that if one went through each site, one would see that they are sufficiently well-defined to set priorities. J. Zarnoch reminded the team that they can use field screening for confirmation after removal.

S. Tindall suggested continuing field screening with removal action. J. Zarnoch replied that one can't apply field screening to all sites due to costs, and reiterated that not as many confirmation samples are needed. J. Hamill stated that if field screening were not used, we'd have to come back for confirmation samples. S. Tindall reiterated that the soil needs to be characterized first and then removed. A. Piszkin responded that he doesn't want to go out and do an expedited characterization. He wants to proceed with some removals. G. Garelick added that removal action is going on concurrently with the RI and the Navy wasn't planning on doing characterization because it isn't authorized for funding. J. Zarnoch stated that the Navy doesn't need concurrence from the agencies to proceed with removals. J. Hamill asked to look into presumptive remedies for all sites.

Based on the group discussion led by G. Cummings, a table was prepared that summarized all potential sites for removal actions and identified the top 10 priority sites (attached). Much of the information was provided from memorandum on potential early action prepared by J. Zarnoch. Included on the list are RI sites, RFA sites, UST and aboveground storage tank (AST) sites, and other areas of environmental concern.

Schedule

J. Zarnoch handed out an updated MCAS El Toro schedule (attached) and noted that the version he distributed the previous week had an error. J. Hamill stated that the schedule is contingent on what happens with the transition of the RI/FS from the Jacobs Team to Bechtel. A. Piszkin replied that there will soon be a letter coming out regarding the transition of CLEAN from Phase I to Phase II. J. Hamill stated that EPA's position is that they will support the transition to Bechtel if the schedule is not impacted.

Phase II Field Work

Due to the delay in the planned start date for the Phase II RI field investigation, the requirement for an Amendment to the Phase II Sampling and Analysis Plan (SAP) is not longer needed. The CLEAN II contractor will incorporate the results of the soil gas investigation into the revised Phase II Work Plan. J. Dolegowski stated that the 3-month estimate for the Phase II field work stated by EPA last summer, assuming field screening were utilized, was unrealistic. He said the estimated duration is 6 months for the Phase II RI field work and that did not include contracting and utility clearance. S. Tindall agreed with J. Dolegowski that the field work will take 6 months. J. Hamill officially requested that the field work be pushed back 3 months, meaning there will be a 9-month delay.

Soil Gas

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A. Piszkin went over the soil-gas survey schedule. S. Tindall suggested having the state/EPA personnel participate in onsite audits. J. Dolegowski replied that the agencies are welcome to visit during the field work, but it would be difficult to change technical directions at that time due to the aggressive schedule. J. Zarnoch asked the authors of the soil gas survey to look at comments for Phase II Work Plan and the final RFA comments.

BCP

A. Piszkin stated that the El Toro Team will go over the BCP schedule next week. J. Zarnoch requested a preliminary draft. D. Hernandez replied that it will be sent out Federal Express to the agencies on Thursday, and they will receive it on Friday. A. Piszkin added that it will be rewritten in September or October and it will be updated every 6 months. C. Mitchell mentioned the need to get legal review, and A. Piszkin stated that he would request the Navy attorney to attend the BCP meeting next week if possible.

Groundwater Monitoring Plan

A. Piszkin stated that the Groundwater Monitoring Plan was scheduled for early April. J. Dolegowski requested the due date be the end of April or mid-May, so that the Contract Task Order (CTO) #0145 staff could concentrate on the Soil Gas Work Plan. J. Zarnoch replied that the new date was acceptable.

EBS, CERFA

In regards to the MCAS El Toro Environmental Baseline Study (EBS) and the Community Environmental Response Facilitation Act (CERFA) Report, A. Piszkin stated that they are not due until Spring of 1995. J. Broderick reminded the team that an EBS must be done in order to do a CERFA. A. Piszkin asked that, for now, the CERFA not be concurrent with the EBS, so that the agencies can get comments back on the EBS. He added that base closure is driven by both the EBS and CERFA. S. Tindall questioned why all three documents are not combined. Sherrill Beard/DTSC replied that she felt one can do an EBS and CERFA at the same time since MCAS Tustin is doing this now. D. Hernandez added that the CERFA is extremely specific on how it addresses clean sites. G. Garelick said MCAS El Toro has a lot of information and MCAS Tustin does not. A. Piszkin stated that the CERFA is scheduled for completion in September 1994.

RAB

In regards to the Restoration Advisory Board (RAB), A. Piszkin related that the applications were due 14 February 1994, and so far, C. Mitchell had received over 30 applications. The first meeting to discuss how the advisory board should be run will be at the end of March; the following meeting will be in May. J. Broderick expressed the importance of bringing the RAB up to speed and taking them out to the station to show them around and make them familiar. He added that people can't give input if they've not been brought up to speed. He further suggested monthly RAB meetings.

Phase II Work Plan



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A. Piszkin stated that the CLEAN II contractor (Bechtel) will begin revision of the Phase II RI Work Plan in May. A 3-month overlap of the current Bechtel Project Team (providing technical support to EPA) and the Bechtel Phase II RI Project Team is planned. The 3-month overlap period will begin when the contract is funded for the Phase II RI Project Team. This period is currently planned for May to July 1994. J. Dolegowski suggested having a meeting prior to starting the Bechtel contract to plan the transition. S. Tindall suggested that Bechtel have the opportunity to participate in the soil gas investigation so that they are better prepared to revise the Phase II Work Plan. A. Piszkin agreed to do this.

A. Piszkin suggested having a facilitator attend one of the RPM Meetings to assist in team building. J. Dolegowski suggested a separate team building meeting.

WEDNESDAY, 09 FEB 1994

D. Richards made a presentation on the MCAS El Toro Operable Unit (OU)-1 FS. She explained that the objective of the presentation was to reach an explicit understanding of how the FS will be written.

The presentation was divided into four parts: (1) the scope of OU-1; (2) the draft alternatives, (3) the aquifer cleanup goals, and (4) the agreement on the schedule for OU-1.

Scope of OU-1

D. Richards listed four topics to consider in determining the scope of OU-1: (1) Other concurrent remedial response programs, (2) Time constraints, (3) Contaminants to be addressed, and (4) The geographic extent. Other remedial response programs are relevant because OU-1 is not intended to solve all the environmental problems at El Toro. Time constraints include: the Desalter coming online in early 1996; the need for a ROD in 1994; and the fact that we are dealing with mobile contaminants. She pointed out that with regard to the contaminants to be addressed the definition of OU-1 has not changed in the last year. It is "Groundwater on- and -off Station that is contaminated with constituents that have migrated from sites at MCAS El Toro." Based on the Phase I RI results, the contaminants that fit this definition are VOCs. Other results suggest there may be localized problems that may need to be addressed in OU-2, but that have not migrated to pose a regional problem at present. Examples are elevated metals (e.g., Nickel at Site 12, Cadmium at Site 7) and total dissolved solids (TDS) at Site 16:

D. Richards then spoke about the geographic extent within the scope of OU-1. She emphasized contaminant mobility as a consideration because the higher levels of the more mobile contaminants, the VOCs, in the Southwest quadrant, can be expected to reach the Desalter wells in the relatively near future. By contrast, the Trichloroethylene (TCE) detected downgradient of Site 2 and the benzene detected near Site 3/4 cannot be expected to reach the Desalter wells until much later, perhaps as long as 20 years.



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D. Richards then reiterated that the purpose of the FS is to support the selection of a protective, cost-effective, implementable remedy. It's not to design the remedy or to apportion responsibility and costs between OCWD and the Navy.

Draft Alternatives

The first alternative is No Action: (the situation before the Desalter Project). The second is the Desalter alone. Alternative 3a is the Desalter and three shallow extraction wells in the southwest quadrant of MCAS El Toro, with the extracted groundwater piped to the Desalter Treatment facility without pretreatment. Alternative 3b is the same as Alternative 3a, but with pretreatment to remove VOCs before piping to Desalter. Alternative 4a is the Desalter and seven shallow extraction wells in the Southwest quadrant of MCAS El Toro, with the extracted groundwater piped to the Desalter Treatment facility without pretreatment. Alternative 4b is the same as 4a but with pretreatment to remove VOCs before piping to the Desalter. D. Richards stressed that she needs a consensus on these five alternatives **written** down today.

A brief discussion followed of advantages and disadvantages of pretreatment before discharge to the Desalter. R. Herndon pointed out that there are considerations in addition to cost that must be considered, such as public acceptance of adding this more highly contaminated groundwater to the influent to a potable water treatment system. D. Richards said that these issues will be discussed in the FS.

D. Richards presented the technical rationale to the draft alternatives: Containment of high concentrations of VOCs ("control of migration"); Reduction of VOCs by the Desalter in the main production aquifer (zone of compliance); Decrease of the vertical gradient from on-Station shallow aquifer. An additional benefit will be mass removal. "Source control" of the highest VOC concentrations in the southwest quadrant will not be addressed in OU-1 and must be addressed in OU-2 following the Phase II RI.

Two approaches to groundwater remediation for VOCs will be evaluated in the FS: (1) Reliance on the Desalter alone (Alternative 2), and (2) Hydraulic containment (Alternatives 3 and 4) of the most elevated levels of VOCs upgradient of the Desalter wells. The first approach would require a much longer time to achieve a significant reduction in VOC levels upgradient of the Desalter because the Desalter wells would begin to draw the higher levels of VOCs into currently less contaminated or uncontaminated zones. The second approach would allow the Desalter to begin to reduce VOC levels throughout the groundwater contamination plume downgradient of the wells that would be installed in Alternatives 3 and 4.

Alternatives 3 and 4 have the same approach and purpose; Alternative 4 calls for additional wells to address the current uncertainty about contaminant distribution.

Assuming a consensus from today's meeting, she said, the alternatives presented will be carried out through a detailed analysis for the OU-1 FS.



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Aquifer Cleanup Goals

D. Richards pointed out that CERCLA requires groundwater to be restored to its beneficial uses within a reasonable period of time ("Reasonable" is open to interpretation). She stated that the Federal Facilities Agreement (FFA) team needs to agree upon an approach at this time, so that the alternatives will reflect the intent. However, there is no need to settle on specific numeric goals for compliance at this time. If an interim ROD for OU-1 is planned, there is the possibility of deferring specific, numeric aquifer cleanup goals beyond the ROD.

FS Schedule

D. Richards briefly presented both the FFA schedule and the latest schedule proposed by the Navy. The FFA schedule calls for a Draft ROD to be presented to the Agencies on for review 25 December 1995; the schedule being proposed by the Navy would call for concurrent Agency/Navy review in May 1995. In accordance with the NCP, a draft RI/FS goes to public comment accompanied by a proposed plan outlining the remedial response recommended by the parties to the FFA, she said. A discussion of the schedule was deferred until later in the day.

Second Round of Groundwater Monitoring

J. Hamill asked if data from the second round of groundwater monitoring were being incorporated into the OU-1 FS. J. Dolegowski stated that groundwater analyses from the last few monitoring wells were received in December 1993. Monthly water levels have been collected over the last year. J. Dolegowski stated that the second round of monitoring data did not significantly change the conclusions pertaining to the hydrogeology and groundwater contamination contained in the Phase I RI Technical Memorandum. Additional monitoring wells will be installed during the Phase II RI field investigation, and this data could be used to optimize the FS alternative during remedial design/remedial action (RD/RA). Joe Zarnoch asked that the FS analysis include the VOC contamination detected in shallow groundwater from well IDP-2.

J. Hamill asked if new data would change the results and conclusions of the groundwater model. J. Dolegowski replied that it would not. R. Herndon stated that both the OCWD and CH2M HILL groundwater model concluded that groundwater contamination emanating from MCAS El Toro would be captured by the Desalter Project in the principal aquifer. He added that additional shallow extraction wells could be added, if necessary, based upon operational data. There will be an immediate impact caused by the Desalter project in the near term on the shallow aquifer where the high TCE concentrations have been detected. He supported the alternative of installing shallow extraction wells in the on-Station source areas.

J. Hamill asked if D. Richards was asking the regulators which alternative they wanted. D. Richards replied that she just needs concurrence on the alternatives to be evaluated. The purpose of the FS is to support eventual remedy selection.

Database Copy for EPA

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S.Tindall commented that the EPA continues to ask the Navy to provide a copy of the MCAS El Toro database and a digitized map for their use in analysis. He stated that EPA made a request for data as recently as 1 month ago. He feels EPA is being asked to make decisions from anecdotal reports. J. Dolegowski stated that EPA and the other regulatory agencies have been provided with updates on the groundwater monitoring data on three occasions: A hard copy summary of the entire database in August 1993, summary tables of changes between the first and second round in November 1993 as requested by J. Zarnoch, and updated VOC plume maps provided in the Phase II RI Work Plan (Nov. 1993). During the Data Quality Objectives (DQOs), all available groundwater quality data were used for each site. J. Hamill commented that the EPA is not receiving the data being requested, and he requested that the Navy get the digitized maps to them. J. Dolegowski responded that a copy of the El Toro environmental database was provided to EPA in August 1993. The sample location coordinates should have been in the database. J. Dolegowski asked S. Tindall what exactly they have received up to this point. S. Tindall responded that he'll have someone go back and look at exactly what's there. A. Piszkin responded that he'll call today to request the digitized maps.

Data Required to Support OU-1 FS

J. Broderick stated he was reluctant to support decisions for the FS until four rounds of groundwater monitoring data have been collected. He stated that his understanding was that three rounds of monitoring would be completed prior to the FS and a fourth round would be completed later. C. Elliott responded that the Phase I Work Plan stated that one round of monitoring for all parameters would be completed. The list of parameters would then be evaluated and the second round would comprise a focused list of analytical methods. R. Herndon asked if we can limit the OU-1 FS to VOCs and whether there is sufficient data to proceed with a decision.

J. Hamill said the team had agreed on a presumptive remedy ROD for OU-1. S. Tindall commented that more data must be collected in Phase II and that the appropriate vehicle at this time is an interim ROD. An interim ROD leaves the door open for modifications later, he said. J. Zarnoch asked J. Broderick if an interim ROD is an acceptable option. J. Broderick said it was not unacceptable. S. Tindall said that he is concerned that if the Desalter Project is publicized as a remedy and later on we must add more extraction wells, the decision will be criticized. S. Tindall stressed that we must make sure people know this is a partial remedy.

J. Broderick expressed concern that Site 18 data will not be addressed. D. Richards and J. Dolegowski said that all groundwater data would be addressed, either in OU-1 or in a later OU.

A brief discussion followed about how the data should be presented in the RI. J. Zarnoch requested MCL information to accompany plume maps; R. Herndon requested a table with the side-by-side data from rounds one and two.

Discussion of FS Alternatives

S. Beard asked whether D. Richards was asking the team to decide on a particular alternative or to agree on the alternative list. D. Richards responded that she needs to

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know if the team agrees that this set of alternatives makes sense to evaluate in the FS. Basically, she needs concurrence on the approach. S. Beard said that she was confused between "alternatives" and "approaches." D. Richards responded that she's been using the word "alternative" in the narrow "FS sense" and, "approach" in a broader sense. (For instance, alternatives three and four are a different implementation of the same approach, [i.e., on-Station shallow extraction/containment]. There are two approaches: the Desalter alone, which is approach #1, and approach #2 which adds shallow extraction containment wells.)

J. Hamill said that he doesn't understand why D. Richards needs a consensus now. He believes that the FS analysis will answer the question. D. Richards explained that the requirements for compliance are open to interpretation. For instance, someone could argue that the Desalter, over a very long period of time, would lower all the VOC concentrations sufficiently. The counter argument is that to reach compliance in a reasonable period of time would require on-Station shallow extraction/containment wells. S. Tindall asked D. Richards to explain the time frame on this. D. Richards responded that if shallow extraction/containment wells are installed, a significant reduction of VOC levels in the main production aquifer might occur within decades. She added that without shallow extraction wells, it will take much longer. J. Dolegowski pointed out that the vertical movement caused by the Desalter would also pull VOCs into the fine-grained layer underlying the Station.

S. Tindall added that the reason he asked the question is to point out the uncertainty and the need for the FS to deal with it.

Availability of Data Required for Decisions

A discussion followed on the subject of whether the group were being asked to make decisions without having had support material provided ahead of time. D. Richards stated that none of the information she had presented was new and that her request was more accurately for "input" for the direction of the FS rather than "decisions," which would more logically follow an actual review of the FS. S. Tindall expressed concern that EPA's comments on the Phase 1 RI Technical Memorandum have not been addressed. J. Dolegowski replied that RI now in preparation is for OU-1 only; Bechtel will prepare the overall site RI and will presumably address EPA's comments at that time.

Discussion of Approach for Groundwater Remediation in OU-1

A. Piszkin said the Navy has a preference for shallow extraction/containment wells. J. Hamill said he shares this preference. D. Richards agreed and added that this is the kind of guidance she needs. J. Hamill asked if the team hasn't agreed to proceed on the basis of a presumptive remedy. D. Richards responded that the presumptive remedy in this case is for "pump and treat" and we have an efficient list of alternatives to implement this remedy. She reiterated that even for a Final ROD, it is the approach that is considered final, not the specific design details like the actual number of wells. Following the ROD, there will be a design phase, (including pump tests, etc.), during which the number and exact location of wells will be confirmed. J. Zarnoch asked whether we shouldn't go ahead and optimize the extraction wells by putting them where we've found the highest concentrations of VOC now, rather than using just a

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containment approach. D. Richards replied that we don't have the data to do source control now but we can contain the highest concentrations found thus far.

Approach to Remedial Action for OU-1

OU-1 will not directly address remediation of the source(s) of VOCs in groundwater. Additional investigation and remediation of source areas will be performed in Phase II of the RI/FS and under other concurrent environmental programs at the Station, such as the investigation of the contaminant source(s) at Sites 13, 14, and 15 under the California Leaking Underground Fuel Tank (LUFT) regulations. The OU-1 FS is proceeding before completion of these investigations in order to take advantage of the benefits of the Orange County Water District (OCWD) Irvine Desalter Project, due to come on line in early 1996, as well as to mitigate potential adverse effects of the Desalter Project.

The OU-1 Feasibility Study will evaluate: (1) hydraulic containment of the shallow groundwater contaminated with higher levels of VOCs in the southwest quadrant of the Station, and (2) containment and reduction of VOC concentrations in groundwater in the main production aquifer of the Irvine Subbasin by the Desalter Project. The target volume to be evaluated for containment will be defined on the basis of groundwater modeling currently being performed.

Interim ROD (Record of Decision)

Because the investigation of groundwater at MCAS El Toro is not complete, the parties to the MCAS El Toro Federal Facilities Agreement (FFA) agree that the above definition and approach are valid only to reach an interim Record of Decision (ROD).

Groundwater Modeling Meeting

J. Hamill pointed out that the agencies have not yet seen the groundwater modeling results. J. Dolegowski offered to set up a presentation. J. Broderick said that there is no basis to argue against or for the FS, because the completed groundwater modeling results and the second round of sampling have not been seen. A. Piszkin asked for an update on the modeling in 3 weeks. J. Dolegowski replied he would see to this. R. Herndon said he is satisfied with what's been done. J. Hamill asked if R. Herndon would go along with additional wells, and he said he doesn't have a problem with that unless it's an exorbitant cost. A. Piszkin requested that DTSC set up a meeting with CH2M HILL for an update on the groundwater modeling activities.

RI/FS Schedule Discussion

J. Hamill asked to go over the FS schedule quickly. D. Richards handed out a draft schedule based on concurrent information she put together after she Navy/agency review. J. Broderick said the agencies are entitled to 60 days review of documents and that he won't agree to anything less than 60 days. J. Broderick said that for reviews, the FFA specifies he gets 60 days for the RI, 60 days for the FS, 60 days for the proposed plan, and 60 days for the ROD. However, he said the review times can overlap; (i.e., if he has the RI and the FS review times overlapping by a month, that would be acceptable).

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R. Herndon asked J. Broderick if he needs 60 days and, if so, why. J. Broderick replied that it is what they had negotiated. J. Zarnoch supported this statement. D. Richards stated that a new schedule would need to be developed. D. Richards stated that she anticipates many comments, which is normal for a document of this size, but that she is not anticipating identification of fatal flaws by the time the document reaches the agencies and that she hasn't heard any identified fatal flaws during today's discussions.

G. Garelick asked R. Herndon to enlighten the team on the schedule for the Desalter. R. Herndon replied that it can be built without the Navy's help and go through to construction. However, it will take some time after the ROD is signed to design and construct the on-Station wells and they won't do much good if the Desalter goes online first. G. Garelick asked R. Herndon if the spade is going to hit the ground in 1 year. R. Herndon replied that it will, and stated that it should be finished in 2 years. J. Broderick stated that the shallow extraction/containment wells might still be effective even if they were installed after the Desalter.

C. Elliott stated that the groundwater monitoring plan will be written this spring and will recommend additional monitoring wells. It might be possible to make some of them large enough to double as extraction wells and place them where they could be used as OU-1 on-Station extraction wells, which could be installed next winter.

D. Richards stated that from the discussion that has gone on today, she believes there's a consensus, probably pending more specific evaluation, that putting in on-Station shallow extraction/containment wells is a good idea. She felt this gave her enough guidance to proceed with the FS. J. Zarnoch asked if it would be possible to ever see whether the concentrations in the main production aquifer were in compliance because it would require turning off the Desalter pumps to allow desorption to equilibrate and allow a representative groundwater sample. R. Herndon stated that the Desalter pumps will be on 90 percent of the year, so they could arrange to have a pump off for approximately one week; but a very long period (approximately 4 months), probably wouldn't be possible. D. Richards stated that it will not be necessary to spell out in the ROD what the actual method of proving compliance will be. J. Zarnoch said it isn't required in the ROD, but it should be.

J. Hamill asked D. Richards if she feels she can proceed. She replied that she does and she added that it sounds like there's a building consensus that shallow extraction/containment should be included.

Discussion of Adequacy of Communications

J. Hamill commented that strong opinions have been raised at this meeting and he feels we need to have a team building session and use this meeting as an example. J. Dolegowski asked for an extra day to be tacked onto the next meeting for team building. A discussion of team communications followed. J. Dolegowski asked whether with good communications, it might be possible to shorten the schedule to reach a ROD sooner. S. Tindall suggested regular, detailed input on the FS. J. Broderick expressed doubt whether this approach would be effective since it wasn't for the DQOs.



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Aquifer Cleanup Goals

J. Broderick asked whether the team were aware that in California, the basin plans for groundwater designate beneficial uses. He said that the new Santa Ana Basin plan is out for public review, the public meeting was postponed to 11 March, and that it will probably be sent to the state board and approved and in place by this summer. G. Garelick asked J. Broderick if this will affect OU-1. R. Herndon replied he didn't think it will affect it. D. Richards pointed out the difference between a goal and a cleanup standard. J. Broderick stated that in California, the "goal" is zero and the standard is using the best available technology or what you can actually meet.

S. Tindall expressed concern with the decisions being made: The team is willing on the basis of its knowledge so far to proceed only to an Interim ROD to address VOCs in the Southwest quadrant; the FS must reflect this. D. Richards said she understands and reiterated that it must be made clear that there will be continuing monitoring and that additional responses (i.e., additional extraction wells) can be added in the future and still be consistent with the ROD. She added that it can be addressed also by acknowledging that these things will be looked at under other OUs.

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The meeting started with a discussion of the schedule for the OU-1 FS groundwater modeling. It was decided that a technical meeting would be held to present the results of the modeling to the regulatory agencies on Monday, 07 March. J. Dolegowski suggested inviting R. Herndon.

Soil-Gas Survey

Funding

J. Lovenburg stated that work on the soil-gas had not officially started because it was not yet funded; however, funding was anticipated this week. J. Lovenburg asked A. Piszkin if there was a recent update on funding. A. Piszkin stated he believed the survey would be funded this week or next week.

Overview of Handout

J. Lovenburg handed out and described some information on the soil gas survey (attached). He presented a preliminary schedule based on the assumption that the soil gas survey will be funded this week. He stated that the first page of the handout is the general scope of fieldwork; the second page is a list of areas of concern identified during the DQO process, which may be investigated during the soil-gas survey; and the third part is a more detailed scope of work based on the technical proposal submitted to the Navy.

Discussion on the Merits of the Soil-Gas Survey

J. Zarnoch asked if the team were comfortable proceeding with the soil-gas survey. The group began a discussion on the merits of the soil-gas survey. J. Zarnoch

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indicated that although he believes the survey is the preferred alternative to locate vadose zone "hot spots," it may not matter if vadose zone "hot spots" are identified because the Desalter wells will intercept groundwater contamination. C. Elliott responded that J. Zarnoch is raising a good point. C. Elliott added that the soil-gas survey may not give a reliable indication of vadose zone contamination; however, he added it may be useful and may enable us to find the source(s). J. Hamill agreed.

J. Zarnoch stated that if vadose zone contamination was detected by soil-gas, soil vapor extraction (SVE) is a remediation option. A discussion began regarding the feasibility of locating a SVE system under the tarmac if contamination was detected there. A. Piszkin asked D. Crawley about a vacuum extraction piping system under the tarmac. D. Crawley pointed to accessible areas on the Site 24 map. C. Elliott stated that an extraction system will be a problem if it ends up in the middle of the runway. J. Dolegowski commented that the tarmac serves to confine soil-gas which could aid the effectiveness of an extraction system.

J. Dolegowski commented on his previous reservations about the soil-gas survey schedule proposed by Bechtel last summer. He said that the previous proposed schedule of 2 months was much too short. He stated that now enough time has been allotted to conduct the survey properly.

A. Piszkin said the results of the soil-gas survey will help to locate monitoring wells, improve remedial design, and locate extraction wells. C. Elliott added the results will also help focus the Phase II investigation.

Cost

J. Zarnoch inquired about the cost of soil-gas survey. J. Dolegowski responded that the cost of the soil-gas survey has not yet been broken out of the overall cost modification but that it will exceed \$1 million.

Schedule

J. Lovenburg presented the overall soil-gas survey schedule (as displayed in the handout). He indicated the schedule is generally consistent with J. Zarnoch's schedule. He suggested a technical exchange meeting prior to writing the Soil-Gas Work Plan to get input from the regulatory agencies. In March, the Work Plan and Health and Safety Plan will be prepared. He noted that the review periods are short; 1 week for the Navy and 1 week for the agencies. J. Hamill asked if the review periods could be combined. May and June is when the soil-gas survey will occur. In July, the sample analysis, database, and validation will finish up. Report review will begin in August and the soil-gas report should be completed in September.

J. Zarnoch asked A. Piszkin about completing procurement within the schedule. A. Piszkin said it should not be a problem. J. Dolegowski added that procurement will start immediately after being funded. J. Dolegowski went over the subcontracts: soil-gas, field thermal desorption-gas chromatography/mass spectrometer (TD GC/MS), utility clearance, air knife, fixed laboratory sample analysis, and data validation.



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D. Crawley expressed concern that the present May to early June field work schedule is compressed and did not leave much time for down time. He explained this is a problem because there is a major reserve exercise scheduled for July and August at MCAS El Toro; moving up the schedule a little would help. A. Piszkin agreed and added that finishing sampling on the tarmac first is important. S. Beard expressed concern that the sampling could be completed in 5 weeks.

Potential Source Areas

J. Lovenburg started a discussion of potential VOC source areas (referring to map on wall). He noted that in addition to Site 24, it will include Site 25 (Bee Canyon and Agua Chinon Washes). He pointed out potential VOC source areas including Solid Waste Management Units (SWMUs), the abandoned industrial waste water line, and the main groundwater contamination area.

J. Zarnoch asked that Building 369 and two nearby storm drain grates be added to the map. He added that the storm drains are apparently connected to Bee Canyon Wash. He also suggested including Building 324 and the associated storm drains. J. Lovenburg said CH2M HILL might have Geographic Information System (GIS) coverage of storm drains.

Scope of Field Work

J. Hamill inquired if the discussion would include the field screening approach. J. Dolegowski explained that 1,000 soil-gas samples will be collected and analyzed by a field GC. Two hundred soil samples will also be collected and analyzed by a field TD GC/MS. In addition, 20 percent of the 200 soil samples (40 samples), will also be sent to a fixed laboratory for analysis. J. Lovenburg indicated that this is essentially a three-tiered approach similar to what the EPA has suggested in review comments. A. Piszkin indicated that the focus of the soil-gas survey is VOCs. J. Hamill indicated he would like to investigate other analytes besides VOCs. J. Lovenburg indicated that although VOCs are the analytical group of concern, other analytes in the soil will be investigated using the TD GC/MS. J. Dolegowski agreed and said these are the same assumptions as last summer.

J. Zarnoch asked about delineating fuel hydrocarbon contamination in soil. J. Dolegowski said that the Gcs will utilize both an electron capture detector (ECD) and a flame ionization detector (FID) detectors to analyze for both chlorinated solvents and petroleum hydrocarbons. S. Beard requested that J. Lovenburg address the DTSC review comments on the soil-gas investigation.

J. Lovenburg summarized the overall scope of the field work (as summarized on the first page of the handout):

- o Five hundred soil-gas locations at depths of 10 and 20 feet
- o Approximately 5 weeks to collect the samples
- o Two hundred soil samples will be collected and analyzed by a field TD GC/MS



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- o Forty soil samples will be sent to a fixed lab for analysis

J. Lovenburg discussed the soil-gas survey field processes. He summarized the field personnel that will be involved (as presented on the handout). The process includes:

1. A survey team will mark locations in the field based on the Work Plan.
2. A geophysical subcontractor will conduct a utility clearance.
3. If needed, a coring subcontractor will cut through concrete.
4. A nondestructive air knife will be used to a depth of 7 feet for further utility clearance. J. Lovenburg noted that Jacobs Engineering Group Inc. (JEG) has a requirement to hand auger to 7 feet for the utility check. Barstow has successfully used a nondestructive air knife by Ventura Petroleum Services for utility clearance purposes. After the hole is drilled, it will be filled back in until the next step.
5. A direct push rig will be used to collect soil gas or soil samples at 10 and 20 feet.
6. The soil-gas sample will be analyzed for VOCs by GC. The soil samples will be analyzed by TD GC/MS and used as confirmation samples.
7. The data will be analyzed to determine subsequent follow up sample locations (in "hot spots").

After the new sample locations are selected, the cycle will be repeated. J. Lovenburg mentioned that information would be used to assist with the Phase II Sampling Plan Amendment.

Site Access Issues

D. Crawley discussed site access issues. He added that there will be many logistical difficulties getting to sources on the tarmac area that he will work out. He noted that because operations will have to shuffle aircraft to allow access for the survey that we will need to use a "hit and run" approach to minimize the disturbance of operations. He said he has set up meetings with various personnel about access. He said a couple of critical taxiways will have to be closed off because the Station is concerned about the creation of FOD (foreign objects and debris). Some work may have to go be completed on weekends.

D. Crawley said the Station will not need to stop operations in other nontarmac areas except possibly closing off some streets. J. Dolegowski asked D. Crawley if we can collect samples inside buildings. D. Crawley said it will impact the hangar doors but it can be coordinated. J. Dolegowski inquired whether there are any aircraft in the hangars that are very sensitive to dust. D. Crawley said yes but samples can be collected inside anyway. J. Dolegowski expressed concern about the dust that the air knife produces. D. Crawley said he does not anticipate FOD problems.

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Air Knife and Utility Clearance

A discussion about the air knife followed. J. Hamill asked about the operation of the air knife, if it is established, and how well it has worked. J. Lovenburg said it has been established at Barstow for utility purposes. G. Garelick asked about the success of the air knife at Barstow. J. Lovenburg said the production rate is about 25 locations/day and it had been successfully used to locate utilities. J. Zarnoch asked about drilling through cobbles. J. Lovenburg replied that the contractor will move over slightly if the air knife meets refusal because of a cobble. S. Beard expressed that the team is constrained by the 7 feet of augering and that she would like to change it. J. Beard added that there is only 3 feet of buffer between the bottom of augered hole and the first sample. J. Lovenburg stated that Target Environmental feels safe with a 2-foot cushion. S. Beard inquired about the operation of the air knife. J. Lovenburg said it uses high pressure air. He indicated he will pursue more information from the subcontractor. A. Piszkin indicated that the air knife has been used before and that the hole will be repacked immediately after drilling. J. Dolegowski suggested sampling side-by-side holes with and without the air knife to compare the effects of the air knife. S. Beard agreed that a test is a good idea.

J. Zarnoch asked D. Crawley about the maximum depth of the utilities at MCAS El Toro. D. Crawley said utilities are found at various depths. The question was raised as to whether JEG's augering requirement could be waived because it would save time. S. Beard replied that because it is a military base, we do not know exactly where the utilities are. J. Dolegowski stated that utilities were hit twice during the RFA investigation; there is a real uncertainty at MCAS El Toro. J. Lovenburg said JEG is firm on the hand augering to a depth of 7 feet.

S. Beard expressed concern that the 3-foot cushion between the bottom of the air knifed hole and the first sample could be affected by the injected air. J. Dolegowski stated that the time required to hand auger to 7 feet is too long, particularly the last 2 feet. J. Dolegowski asked S. Beard if she had a problem with air knifing to seven feet and taking a sample at 12 feet instead of 10 feet, thus increasing the cushion to 5 feet. S. Beard replied that it seemed very deep for the first sample. J. Dolegowski said Target indicated that the deeper you go, the better the soil-gas sample. S. Beard commented that she felt better about twelve than ten feet. J. Hamill suggested talking about the air knife at the technical meeting. A. Piszkin commented that the air knife was deemed cheaper, faster, and ended in a cleaner hole than hand augering when going to a depth of 7 feet. He added that it has been successfully used at MCAS Yuma and MCAS Barstow. A. Piszkin and G. Garelick asked J. Lovenburg to talk to Ventura Petroleum Services. J. Zarnoch thought that adjustments can be made so that the air knife works. S. Beard said she feels the problem can be addressed easily. J. Lovenburg remarked that in preliminary discussions with Ventura Petroleum Services, they did not have any research on the effects of the air knife.

Sample Depth Discussion

A brief discussion on soil-gas sample depths occurred. S. Beard expressed reservations about the sample depths of 10 and 20 feet; she feels this issue has been avoided. S. Beard indicated that a 5-foot rather than 10-foot sample depth may be better because contamination might be shallower. She also inquired about eliminating



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the 20-foot sample also. J. Dolegowski and C. Elliott reminded the team that it had previously suggested that CH2M HILL collect samples from depths of 10 and 20 feet. J. Dolegowski indicated that depth profiles could also be completed. S. Beard suggested the team might want to consider different sample depths depending on the source area. J. Lovenburg said deeper borings could be substituted for shallower samples. He reiterated that this issue could be addressed at the soil-gas technical exchange meeting.

Soil-Gas Technical Exchange Meeting

S. Beard asked J. Lovenburg about when a technical exchange meeting for the soil-gas could be scheduled. J. Lovenburg explained that CH2M HILL will need 1 week to prepare for the meeting after funding has been obtained in order to have a first cut at locating the samples based on the number of budgeted samples. He encouraged the group to look at their maps and come up with ideas about sample locations for the meeting. J. Dolegowski encouraged S. Beard to provide input. J. Lovenburg explained that the purpose of the meeting should be to optimize the survey within the funded constraints: two rigs and approximately ten locations per day/per rig. J. Dolegowski, S. Beard, C. Elliott, and D. Crawley all reiterated their concerns about completing the work within the scheduled time.

J. Zarnoch asked the team to consider confirmation soil samples. He asked if we want to try and get a range of concentrations here or focus on nondetects. S. Beard commented that she has concerns about the soil-gas survey but is aware of the constraints and thinks it's off to a good start. J. Lovenburg expressed hope that the team could come to a consensus at the technical meeting.

A. Piszkin asked if 22 February is a good day for the technical meeting. The date for the technical meeting was set for Tuesday, 22 February from 10:00 a.m. to 3:00 p.m.

VLEACH

S. Beard asked if the VLEACH model will be rerun. J. Dolegowski said that CH2M HILL has not been instructed to do so. J. Dolegowski stated that vadose zone contaminant transport modelling methods were evaluated in detail during the DQOs. He added that the use of the VLEACH model was described in a position paper that was distributed and approved by the agencies.

CLEAN I to CLEAN II Transition

A. Piszkin began by explaining how the transition from the CLEAN I to CLEAN II contracts would affect the RI process at MCAS El Toro. The Navy's goal was to have a contract with Bechtel in place in time to produce the Phase II Work Plan. There would be a 3-month transition period in which there would be two separate groups within Bechtel: one group working on the Phase II Work Plan under the CLEAN II contract, and one group providing technical oversight for EPA. S. Tindall would be part of this latter group and after the transition period, he would no longer be involved with MCAS El Toro. The group working on the Phase II Work Plan would, in effect, be a consultant to the entire BCP Team, and would revise the planning documents in a way that would incorporate the comments and concerns of everyone on the team.

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After the transition period, the Bechtel team would serve as a research arm for the BCP Team. A budget would be established to allow this Bechtel group to work for the entire BCP Team.

J. Dolegowski commented that having two Bechtel teams working at the same time would present a difficult conflict of interest problem. J. Hamill agreed and said that, in effect, Bechtel would be overseeing themselves. A. Piszkin said that the teams would be independent, and that the Bechtel oversight group would review the documents at the same time as the Navy and agencies. J. Dolegowski pointed out that the DQO process had shown that it was difficult for the BCP Team to reach consensus on technical issues and maintain the consensus over a period of time. J. Hamill said that these problems would be made worse by the fact that EPA would no longer have a technical oversight contractor. A. Piszkin pointed out that J. Hamill would have to do more of the hands-on review himself. J. Zarnoch asked whether J. Hamill would transition out of involvement on the Barstow project. J. Hamill said that was no longer working on Barstow as of the previous week.

J. Zarnoch said that he, A. Piszkin, and J. Hamill needed to look at the schedule. There were only 3 months for the Bechtel Team to get up to speed and revise the Phase II Work Plan. A. Piszkin replied that he agreed with C. Elliott's earlier comment that major differences between the Navy and agencies could be whittled down before the Bechtel Team begins to revise the documents. C. Elliott agreed and said that, based on work already accomplished during this meeting regarding early actions and expanded field screening, he did not think there were insurmountable differences remaining over the Work Plan. A. Piszkin said that he wanted to get the BCP completed before beginning the process of ironing out the differences on the Work Plan. J. Dolegowski stressed that it was important to build on the agreements that had already been reached during the DQO process. J. Zarnoch said that the response should be delayed until after Bechtel has come up to speed, but before they have begun rewriting the documents. C. Elliott said that there were two things to consider in the response to comments: the official response mandated by the FFA; and the agreement on issues that could be handled in a position paper to be presented to Bechtel. He went on that the process of attaining this agreement could begin soon to avoid losing time. J. Dolegowski pointed out that even if Bechtel wrote a response to comments, it was important for CH2M HILL to also write a response to document the Navy's position in the wake of the DQO process.

A. Piszkin asked whether the agencies had looked at the Work Plan from an ecological perspective. J. Hamill said that Roxy Barnett had looked at it for EPA, and she had some concerns. A. Piszkin said that a person at MCAS El Toro was also looking at it. The approach followed at sites such as Site 2, where Gnat Catchers have been found, may have to be modified.

RFA Status

A. Piszkin asked whether the Draft Final RFA Report goes final after 30 days, even though the agencies have commented on the Draft Final. He did not want to revise the Draft Final. Sites investigated during the RFA that need further attention will be dealt with under the BCP process. J. Zarnoch replied that if these sites were officially rolled into the BCP process, then they will have been dealt with as far as the RFA was



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concerned. That way, the RFA would be complete to the satisfaction of DTSC. He hoped this could be accomplished before the end of the fiscal year. A. Piszkin said that there would be section of the BCP that lists a program to deal with every outstanding environmental issue at MCAS El Toro. This would be discussed during the BCP meeting to be held the following week, and should address the RFA concerns.

Field Screening Costs

C. Elliott distributed a memorandum that applied an approach developed by SiteWorks, Inc. and Target Environmental to MCAS El Toro in all details, including grid spacing, categories of sites, three-phase approach, time constraints, instrument capabilities, and costs. The conclusion of the analysis is that, if the SiteWorks approach is applied at MCAS El Toro, the Phase II RI would cost about \$17 million for the shallow soil investigation, and \$27.9 Million for the total Phase II RI, or about three times as much as the approach outlined in the Phase II Work Plan.

J. Dolegowski pointed that the time constraints in the SiteWorks approach, namely completing the work within 180 days, required that field crews work 7 days a week, and that no costs were included for overtime or equipment breakdowns. C. Elliott added that costs for Quality Assurance/Quality Control (QA/QC) sampling had also not been included, or that additional samples brought about by "real-time" data were also not included. Also, there remained concerns regarding detection limits that were orders of magnitude above risk-based concentrations, and chemicals of concern that could not be analyzed by the SiteWorks approach. Available data from the Phase I RI and the RFA provide no indication that a large undiscovered source of contamination exists in the soil at MCAS El Toro. The main remaining concern is whether contaminated soil provides a risk to humans through contact or ingestion. In view of the present level of understanding and funding difficulties, decisionmakers should carefully consider whether it is really necessary to spend \$17 million to investigate shallow soil at RI sites.

J. Hamill said he would pass on the results of the cost estimate for the SiteWorks approach to EPA. J. Dolegowski suggested cutting costs by not doing a full analysis of all soil samples, because we have already selected chemicals for further investigation during the DQO process. J. Dolegowski stated that EPA comments on the Phase II Work Plan suggest following the SiteWorks approach. J. Hamill said it would not be practical to implement it if it costs this much. C. Elliott said that he felt that perhaps a happy medium could be found where field screening would be expanded at many of the RI sites, but that the complete SiteWorks approach would not be adopted. J. Dolegowski requested feedback from EPA on this suggestion. He said that he would like to see a compromise and end up with a reasonable document with which everyone would be happy. J. Zarnoch said a third option to expand field screening while further reducing costs would be to incorporate immunoassay techniques. C. Elliott pointed out that detection limits were also higher than risk standards with immunoassay techniques.

J. Dolegowski said that we still need to flush out the details of the SiteWorks approach. The CH2M HILL Team investigating the approach had received some information that conflicted with the material presented by Dr. Robbat at the RPM



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meeting. The latest information now needs to be verified. C. Elliott reiterated that the team should just be a good consumer and take the SiteWorks presentation with a "grain of salt." J. Hamill agreed that the information presented by SiteWorks should be reviewed before the approach was adapted. J. Zarnoch stated that he was sure that we could cut down on number of samples and agree on a good solid approach if we reviewed the sites together. It may take a week-long meeting, but a feasible, cost-effective approach could be worked out. C. Elliott replied that he feels it's worth a try. A. Piszkin said he did not think that the complete SiteWorks approach was the team's desire for MCAS El Toro. He agreed that the team should work out the approach before the transition to CLEAN II.

A. Piszkin told the team that he was working with Jeff Allen/Code 0232.JA about funding for MCAS El Toro and the execution plan for 1994. He said he had concerns on some of the dates, and solicited agency input in regard to what the scope should be.

Groundwater Monitoring Plan

J. Zarnoch distributed a suggested outline for the Groundwater Monitoring Plan (attached). He said that some of the issues that need to be addressed by the team include the following: (1) How to summarize existing data; (2) What are our expectations regarding the groundwater monitoring plan content, such as frequency of sampling, number of wells to be sampled, analyses, sampling procedures, etc.; (3) Whether there is interest in a technical meeting to iron out the details; and (4) The process by which the plan will be reviewed.

J. Dolegowski commented that the plan probably will not go into the same detail that a full Sampling and Analysis Plan (SAP) would provide. J. Zarnoch asked whether a SAP would be included for future sample events. J. Dolegowski said that a sampling plan was not a goal of this document. C. Elliott pointed out that CH2M HILL had not been funded yet and therefore, did not have time to put much thought into the monitoring plan. Susan Diehl/CH2M HILL will be the Task Manager for the plan. As a start, data from the first sampling rounds would be summarized. C. Elliott requested feedback from the agencies on how they want these data presented, and what format would be established for the future presentation of data. H. Nezafati pointed out that the OU-1 RI Report would provide a summary of the existing data.

S. Beard commented that it may be a good idea to collect another complete round of groundwater samples from all the monitoring wells similar to the first two rounds. A. Piszkin said that he did not want to fund another complete set of analyses. C. Elliott said the team had agreed the previous summer that two complete rounds were sufficient, in view of the historic OCWD data, and that the issue should be considered closed. J. Hamill agreed. A. Piszkin added that the purpose of the monitoring plan is to focus future sampling efforts. J. Zarnoch stated that J. Broderick believes that four complete sample rounds are necessary. He further suggested that we look at what the other facilities are doing in regards to this. C. Elliott said that the discussion should be deferred until a data summary has been prepared.

J. Zarnoch said the monitoring plan should be a relatively brief document. The bulk of the summary and analysis should be provided in the OU-1 RI Report. Also, the Navy



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needs a clear understanding with the agencies on exactly how the data would be summarized. Previous summaries had not always been well received by the regulatory agencies. J. Dolegowski stated that originally it was thought that the groundwater monitoring plan would be funded last Fall, so that the second round of groundwater sample data could be analyzed prior to beginning the OU-1 RI Report. Now that the funding is arriving, the RI Report is nearly due. S. Beard said that a data summary could be accomplished in the RI Report, and attached to the monitoring plan as an appendix. C. Elliott suggested that the monitoring plan was the place to analyze the data with the goal of reducing the number of wells to sampled and the analyses to be performed.

Discussion then followed on the format of the presentation of the data. J. Zarnoch requested that examples of various formats be provided for review. J. Dolegowski requested that J. Broderick be consulted and that consensus be reached. A. Piszkin said that in the meantime, the Navy and CH2M HILL could be formulating the plan. J. Zarnoch requested a hard copy of the validated data for DTSC, for the regional board, for the EPA, and for the file. J. Dolegowski said that a list would be prepared and a diskette would be distributed that would include the OCWD data.

A. Piszkin reiterated that he felt strongly that two complete rounds of data were sufficient. J. Dolegowski agreed that because of the high cost of performing complete sample rounds that future efforts should be focused. J. Zarnoch said that he would call J. Broderick to see if he would agree on only two rounds.

Additional discussion focused on the format of the data presentation and the issue of whether more complete rounds were necessary. J. Zarnoch said he would discuss the constituents to be sampled and the frequency with J. Broderick. J. Dolegowski requested that the agencies come to some agreement within 2 weeks on whether it would be necessary to perform more rounds of monitoring. A. Piszkin responded that he wanted CH2M HILL to begin work on the data summary and analysis immediately. S. Beard asked how often CH2M HILL felt the wells should be sampled at this stage of understanding. J. Dolegowski recommended monitoring them every 6 months but cutting down the number of analyses. J. Zarnoch reiterated that he would try to call J. Broderick find out what was being done at other facilities.

Attachments

Distribution

Nonparticipant Distribution

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