

M60050.000881 MCAS EL TORO SSIC # 5090.3		PROJECT NOTE NO. PN-0145-87 CLE-C01-01F145-I2-0062		PROJECT NO. 01-F145-H6	
CONFIRMATION OF:		CONFERENCE X TELECOM OTHER	DATE HELD DATE ISSUED RECORDED BY PLACE	9-10 June 1993 29 June 1993 S. Diehl/CH2M HILL Santa Ana	
SUBJECT		Contract Task Order (CTO) No.145 DQO Meeting Minutes MCAS El Toro RI/FS			
PARTICIPANTS: (* DENOTES PART-TIME ATTENDANCE)					
See list on last page		TITLE:	DQO MEETING MINUTES		
		AUTHOR:	SUSAN DIEHL/CH2M HILL		
		DATE:	06/29/93		
		CATEGORY:	11.5		
ACTION REQ'D. BY	ITEM				
	<p>The second meeting on Data Quality Objectives (DQOs) for the Marine Corps Air Station (MCAS) El Toro Remedial Investigation/Feasibility Study (RI/FS) was held in Santa Ana, CA at CH2M HILL on 9-10 June, 1993. Participants represented the following organizations:</p> <p>the Naval Facilities Engineering Command, Southwest Division (SOUTHWESTDIV); MCAS El Toro; the U.S. Environmental Protection Agency (EPA); the California Regional Water Quality Control Board, Santa Ana Region (RWQCB-SAR); the California Department of Toxic Substances Control (DTSC); Bechtel Environmental, Inc. and CH2M HILL. These meeting notes summarize the decisions reached, the action items, and the discussion of the meeting.</p> <p>Decisions Reached</p> <ul style="list-style-type: none"> o The cutoff depth for surface soils is set at 10 feet below ground surface. o One week before the start of any sampling event the agencies need to be informed by phone. o The next Managers' Meeting will be combined with the Technical Review Committee (TRC) Meeting on 29 or 30 June. o Draft Phase II planning documents will be due on 9 November; agency comments on the documents will be due on 10 December; and the draft final documents will be due on 10 January 1994. 				

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	<p>Action Items</p> <ul style="list-style-type: none"> o The Navy will send a letter to EPA by 18 June requesting an extension for the phase II planning documents. o CH2M HILL will prepare position papers on chemicals of potential concern (COPCs), chemicals to be investigated during Phase II, and on petroleum hydrocarbons by 18 June. o CH2M HILL will provide a binder with meeting notes and position papers for each team member at the next DQO meeting. o The agencies will contact their modellers to check on their availability for the 29 June Modellers' Meeting. o The Navy will call the City of Irvine to inquire about the status of the lining of Agua Chinon Wash. o The agencies will provide a position paper on the use of soil gas surveys to locate TCE sources at MCAS El Toro by 30 June. o CH2M HILL will provide a list of cutpoints by 30 June. o CH2M HILL will provide a list of surface soil background concentrations used for screening by 18 June. o RWQCB will research the availability of existing petroleum hydrocarbon-contaminated sites to calibrate VLEACH. o CH2M HILL will provide a list of RFA sites within RI/FS site boundaries that need to be considered in the DQO process by 30 June. o MCAS El Toro will write a letter concerning the wellhead warning placards by 18 June. o DTSC will call RWQCB to arrange a visit to observe the second round of groundwater sampling at MCAS El Toro. o CH2M HILL will update and provide the two tables summarizing organic chemicals in the subsurface by 30 June. o CH2M HILL will send a copy of the Phase I RI database to Bechtel. o EPA will respond to the FS consensus memorandum on OU-1 by 18 June. o CH2M HILL will revise the meeting notes from the DQO meeting on 10-11 May to reflect agency comments. o CH2M HILL will prepare for the discussion of DQOs for two sites at the next DQO meeting on 6-7 July.

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Wednesday, 9 June 1993

Partnering Issues

Andy Piszkin/SOUTHWESTDIV kicked off the meeting and the team members introduced themselves. The following topics were then discussed briefly:

- o DTSC's address will change by 1 July, 1993.
- o Negotiations on the DQO schedule extension are still in progress. A. Piszkin has sent a letter to EPA with the Navy's position.
- o John Hamill/EPA would like to have a list of "action and discussion topics" included with the agenda to better focus the meetings.
- o LCDR Larry Serafini/MCAS El Toro reviewed action items from the first DQO meeting (10-11 May 1993 in San Francisco) and from the last Managers' Meeting (26-27 May 1993 in Riverside).
- o A. Piszkin mentioned that he had sent a letter to the California Department of Fish and Game describing the work to be done at Site 2 (Magazine Road Landfill).
- o A. Piszkin distributed two newspaper articles on the RI/FS at MCAS El Toro (from the 28 May 1993 Flight Jacket, and the 3 June 1993 Orange County Register).
- o A. Piszkin distributed a 4-page summary of upcoming contracting tasks for the RI/FS at MCAS El Toro.

Joe Zarnoch/DTSC requested that three items be added to the agenda: soil gas survey; clarification of the Phase I Technical Memorandum (TM); and regulatory oversight of the second round of groundwater sampling. It was agreed to attach the discussion on soil gas survey to the discussion of OU-2 and 3. The other two topics were discussed right away and are summarized below.

J. Zarnoch expressed his concern that Fuel Farm No. 5 may impact the groundwater at Site 4 (Ferrocene Spill Area), since benzene was detected in Well 18BGMW01-E. He said he was missing a discussion of the relationship between the fuel farm and Site 4 in the TM. A. Piszkin argued that it was not confirmed that the fuel farm was a source of benzene, and he felt that the investigation of the fuel farm was not part of the RI/FS.

J. Zarnoch asked for regulatory oversight during one day of the second round of groundwater sampling. John Dolegowski/CH2M HILL agreed and mentioned that the sampling teams would spend at least four more weeks in the field.

J. Dolegowski then brought up the issue of meeting frequencies. He expressed his concern that it was difficult to get work done on the DQOs if meetings were held every two weeks. He suggested that DQO meetings be combined with Managers' Meetings. The team felt that this was a good idea. L. Serafini proposed that the next Managers' Meeting be combined with the upcoming TRC meeting on 30 June and that the

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Modellers' Meeting be held on 29 June. Everybody agreed with that, although Roy Herndon's agreement was still pending. No consensus was reached on reducing the overall number of meetings.

DQO Schedule

J. Hamill stated that EPA had problems with the request for extension of the DQO schedule: boundaries of the two new sites (i.e., Sites 24 and 25) to be incorporated in OU-2 required better definition; a soil gas survey should be completed first; and preliminary drafts of the DQOs needed to be sent to EPA before 12 October so the review time could be reduced from 60 to 30 days. J. Dolegowski remarked that the schedule was too tight already to send out preliminary drafts. L. Serafini urged the team not to establish an enforceable date if the schedule was too tight. He stated it was the Station's position that it would be unacceptable to set a schedule that would cause the document to be released on its deliverable due date and not before. A. Piszkin stated that was not the Navy's position, since the document would go through internal review before being distributed to the regulators. J. Dolegowski argued that a request for preliminary drafts of DQOs would add at least one month to the schedule. J. Hamill responded that they did not need complete drafts; anything in writing would help. Chuck Elliot/CH2M HILL suggested that position papers be written explaining the approaches to be taken during the DQO process, and that the team go through DQOs for some example sites at the meetings.

J. Hamill pointed out that EPA wanted the field work to start in March 1994 so that the overall schedule would not be impacted. L. Serafini underlined his former statement that no date should be set if there is any doubt that it can be made. The Marines would take "political heat" if the due date in October could not be made. C. Elliott asked why the entire schedule could not be extended two months based on the new sites. J. Hamill answered that it was impossible to extend the schedule any further, and that EPA would then be forced to go to dispute resolution. J. Dolegowski argued that the delay in the DQO process was mainly due to the lack of compiled data until the Phase 1 R2 Technical Memorandum was released. Artemis Antipas/CH2M HILL agreed that the schedule was very tight in comparison to other Superfund sites. J. Hamill remarked that this was already the second schedule, the original one having been extended for two years and 8 months, and he felt that EPA could not agree to any further delay.

Discussions of the DQO schedule ended at this point in order to continue with the next agenda item. Yueh Chuang/CH2M HILL distributed the meeting minutes of the first DQO meeting held in San Francisco on 10-11 May 1993.

Groundwater Modelling Status Update

Hooshang Nezafati/CH2M HILL informed the team that the Modellers' Meeting planned for 8 June 1993 had been delayed at the request of the Orange County Water District (OCWD). After discussing CH2M HILL's concerns, Roy Herndon/OCWD felt he needed some time to do more computer work. Since their modeller had been on vacation it became necessary to delay the meeting to give the OCWD time to respond to CH2M

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	<p>HILL's comments. H. Nezafati mentioned that the model developed by the OCWD could be used after some refinement. He would prepare a position paper once the OCWD responded to the comments. The next Modellers' Meeting would be held on 29 June at 10 am at CH2M HILL's Santa Ana office. J. Dolegowski added that CH2M HILL had established a good working relationship with the OCWD.</p> <p>J. Zarnoch requested that the team be provided a list of sites not investigated in the Resources Conservation and Recovery Act (RCRA) Facility Assessment (RFA) because they were to be included in the RI/FS. Mike Arends/CH2M HILL agreed to prepare a list of RFA sites and associated RI/FS sites and to distribute them before the next DQO meeting.</p> <p>After a lunch break, A. Piszkin proposed the following DQO schedule: the due date for all documents (Work Plan, Sampling Plan, Community Relations Plan, Site Health and Safety Plan and Quality Assurance Project Plan) would be moved from 9 August to 9 November; the agencies would prepare their comments by 10 December; and the draft final documents would then be due on 10 January 1994. All agency representatives agreed in principle to the proposed schedule.</p> <p>Operable Unit Definitions</p> <p>C. Elliott proposed to add three new sites to OU-2. One of them would overlap the area of existing Sites 7, 9, 10 and 22. The second one would comprise the area of Site 8 and the motor pool area next to Agua Chinon Wash. The third site would consist of the four surface drainage channels or washes; this way the Phase I sediment, surface water and soil samples originally included as part of Site 18 would be incorporated into the DQO process. Site 18 has been defined as groundwater only.</p> <p>John Broderick/RWQCB indicated that a soil gas survey should be completed as soon as possible and before any traditional soil sampling; he wondered how DQOs could be developed before the soil gas survey was done. C. Elliott thought that the DQOs could be prepared prior to the soil gas survey using "if, then"-statements. Sebastian Tindall/Bechtel stated that the soil gas survey should be performed Station-wide. J. Broderick added that at least a majority of the sites may need soil gas survey. John Christopher/DTSC expressed his concern that the Work Plan would have too many gaps if soil gas surveys were performed at more than two sites. Y. Chuang agreed and stated that if there were too many "if, then"-statements it would be impossible to write the Work Plan. J. Christopher indicated that the DQO process should proceed in order to evaluate the sites which require soil gas surveys. J. Dolegowski pointed out that CH2M HILL needed a more definitive scope to start planning the work and questioned whether it was necessary to do DQOs at sites where a soil gas survey would be performed. J. Zarnoch asked whether it would be possible to get a longer extension that allowed the team to wait for the soil gas survey results and to include them in the Work Plan. The discussion continued with an emphasis on whether contracting and schedule allowed for inclusion of a survey. Everybody agreed that a soil gas survey was a good thing to do, but no consensus was reached on the number of sites to be surveyed, nor on the schedule of the soil gas survey.</p>
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Risk-Based Concentrations

Liz Miesner/CH2M HILL informed the team that DTSC had provided verbal comments on the risk-based concentrations (RBCs) proposed by her, but that Dan Stralka/EPA had not yet responded. C. Elliott indicated that that caused another delay in the DQO process. J. Hamill explained that D. Stralka had been out of town and the comments would be ready in a few days.

Chemicals of Potential Concern (COPCs) and Statistical Analysis

Bruce Peterson/CH2M HILL distributed two papers on COPCs and chemicals to be investigated in Phase II. He explained that background criteria for metals, pesticides and herbicides were calculated assuming log-normal distributions and applying the 90 percent confidence limit on the 99th percentile of the data values. All chemicals detected in Phase I, except for inorganics and pesticides/herbicides that were less than background, constituted the COPCs.

J. Christopher stated that according to the EPA Risk Assessment Guidance no anthropogenic chemical may be eliminated from the risk assessment. Instead, the incremental risk should be calculated by comparing the site risk to the background risk. Pesticides and herbicides may be screened out by applicable and relevant or appropriate requirements (ARARs) during the FS. He added that chemicals applied in agriculture were exempt from cleanup. J. Hamill indicated that D. Stralka/EPA would agree with J. Christopher.

B. Peterson then explained the method proposed to identify the chemicals to be investigated in Phase II as a subset of the COPCs. The agencies agreed to the approach.

J. Zarnoch requested that CH2M HILL bring more detailed information to the next DQO meeting to allow discussion of actual sites, ratios and risk indices. C. Elliott thought that it would be helpful to establish background concentrations for groundwater. Gary Stewart/RWQCB indicated that the Basin Groundwater Quality Objectives should be considered for background. J. Broderick added that the RWQCB would not require cleanup below background levels, but additional rounds of groundwater sampling would be necessary for the screening.

The question of when to screen out nutrients arose. J. Christopher indicated that the five essential nutrients (Na, K, Mg, Ca, Fe) could be eliminated from the list of COPCs if they were below or only slightly above background levels. If the concentrations were substantially higher (the mean concentration at a site exceeded the upper range of background concentrations), then the nutrients could not be screened out but would have to be carried through the risk evaluation.

B. Peterson suggested the use of sample-specific risk as a basis for statistical analysis instead of chemical-specific risk. J. Christopher thought that was a reasonable approach.



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A. Piszkin then discussed the agenda for the next day and everybody agreed to meet at 9:30 in the morning.

Thursday, 10 June 1993

Soil Depth Cutoff

A. Piszkin started the meeting by agreeing with DTSC's request to set the soil depth cutoff at 10 feet.

J. Hamill requested a list of the background concentrations discussed the day before. C. Elliott stated that some changes were necessary since the agencies had requested not to use pesticides/herbicides in the background screening. B. Peterson agreed to update the list and to send it out before the next DQO meeting.

Soil Gas Survey

A. Piszkin opened the discussion on a soil gas survey. He proposed to proceed with the DQOs and to do the soil gas survey during Phase II. J. Zarnoch rejected the proposal because he thought it was critical to use the survey results as the basis for a sampling strategy. J. Dolegowski remarked that it was impossible to add another phase of work to the tight schedule. J. Hamill said that they would discuss the topic at lunch and get back to the team after lunch. S. Tindall announced that he would advise the agencies to use a portable Mass Spectrometer. He stated that with that new technology, 20 samples a day could be analyzed, and in two to four weeks the entire Station could be surveyed. J. Dolegowski and C. Elliott strongly disagreed with that assumption. Y. Chuang showed calculations that indicated that in the source area alone (Sites 7, 8, 9, 10, 22) 1,200 borings would have to be sampled (using 100-foot centers). Since large areas were covered with asphalt or 14-inch-thick concrete only about 5 to 6 borings per day could be sampled. A. Piszkin suggested that a soil gas contractor be consulted about the different constraints and possibilities. S. Tindall agreed and stated he would gather information from outside professionals and CH2M HILL should do the same. Y. Chuang and J. Dolegowski argued that the logistics on MCAS El Toro were the main time-limiting factor, as was learned during Phase I. No consensus was reached. J. Hamill stated he would present a revised EPA position in the upcoming telephone conference on Tuesday, 15 June 1993. The team members agreed that the soil gas survey should be a topic of discussion at the next Managers' Meeting.

Chemicals Below Eight Feet

Susan Diehl/CH2M HILL presented two tables. The first one compared chemicals detected at each site in the subsurface between 8 and 20 feet with the ones detected below 20 feet. The second table listed, by site, all soil samples that exceeded the allowable total fuel hydrocarbon (TFH) levels according to the California Leaking Underground Fuel Tank (CA LUFT) Manual. G. Stewart pointed out the gasoline hit of 131,000 ppm at Angle Boring 223 completed in Agua Chinon Wash may require a

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removal action. C. Elliott mentioned that the wash would soon be paved. A. Piszkin affirmed he would call the City of Irvine to find out when Agua Chinon Wash would be lined. He requested for the sampling depths of the angle borings below the bottom of the wash. S. Diehl agreed to modify the tables and to send them out with accompanying explanations.

Cutpoints

C. Elliott explained that a cutpoint was a screening value for Phase II data. The team would have to agree on a cutpoint for each chemical to be investigated in Phase II. Each chemical that exceeded the cutpoint would have to be remediated. J. Christopher indicated that the same RBCs could be used as in Phase I. C. Elliott asked what to do when the RBCs were much lower than the detection limits. J. Christopher answered either reanalyze with methods that have lower detection limits, or neglect the samples of concern. C. Elliott agreed to compile a list of cutpoints and to distribute it before the next DQO meeting.

Petroleum Hydrocarbons

Y. Chuang proposed that only TFH-gasoline and TFH-diesel data collected in Phase I be addressed during the screening process and that total recoverable petroleum hydrocarbons (TRPHs) (EPA Method 418.1) data not be used for screening. TRPH concentrations generally indicated the presence of oil and grease, which were not hydrocarbons of concern. He further proposed only to use benzene, toluene, ethylbenzene and xylene, and polyaromatic hydrocarbons (PAHs) in the risk screening of surface soils, since the additional use of CA LUFT Method 8015 would result in the double-counting of these compounds. For subsurface soils he suggested the application of CA LUFT guidance levels as cutpoints for fuel hydrocarbons for evaluation of Phase I data. J. Christopher and J. Zarnoch concurred with the proposal, while J. Hamill requested a week for consideration. J. Broderick agreed that the proposed approach could be followed during the DQO screening, but expressed his concern that the CA LUFT guidance levels were not adequate for decisions during the FS. He requested use of physical tests to show whether a compound had the potential to leach to groundwater. Y. Chuang discussed his research on soil column tests and concluded that they would be impractical. J. Broderick responded that if no physical tests were performed, more conservative cleanup standards may have to be used. S. Tindall suggested performing an extensive literature research instead. J. Broderick added that the usual approach was to apply the best available cleanup technology until no further improvement without high financial investment could be attained. Y. Chuang explained the difficulties of vadose zone modelling and model-calibration. G. Stewart suggested that VLEACH be applied to petroleum-contaminated sites outside MCAS El Toro with existing data to demonstrate whether the model works reasonably. If it were concluded that the model did not work, then "Marshack's levels" (Jon Marshack/RWQCB) should be the guidance for cleanup levels. J. Dolegowski mentioned that the test sites should have no free product since VLEACH only models chemicals dissolved in water. Y. Chuang agreed to modify his proposal and to distribute it before the next DQO meeting.

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	<p>The team then went through the list of action items and the meeting ended.</p> <p>Attendees</p> <ul style="list-style-type: none"> A. Antipas - CH2M HILL/SEA J. Broderick - RWQCB-SAR Y. Chuang - CH2M HILL/SDO J. Dolegowski - CH2M HILL/SCO J. Hamill - EPA L. Miesner - CH2M HILL/SFO M. Arends - CH2M HILL/SCO H. Nezafati - CH2M HILL/SCO S. Diehl - CH2M HILL/SAC B. Peterson - CH2M HILL/SEA A. Piszkin - Code 1812.AP D. Richards - CH2M HILL/CVO C. Elliott - CH2M HILL/SAC G. Stewart - RWQCB-SAR S. Tindall - Bechtel Corp J. Zarnoch - DTSC <p>*Part-time Attendees</p> <ul style="list-style-type: none"> *C. Mitchell - MCAS El Toro *J. Christopher - Cal EPA/DTSC *L. Nuzum - Code 1812 *LCDR L. Serafini - MCAS El Toro *L. Vitale - RWQCB-SAR <p><u>Nonparticipant Distribution</u></p> <ul style="list-style-type: none"> R. Green - Code 0232 K. Reynolds - Code 1841 K. Tomeo - CH2M HILL/SCO File - CTO Notebook/PMO File - PMO File - CH2M HILL