

PROJECT NOTE NO. PN-0145-151 CLE-C01-01F145-I2-0094	PROJECT NO. 01-F145-H6
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CONFIRMATION OF:	CONFERENCE TELECOM OTHER	X	DATE HELD DATE ISSUED RECORDED BY PLACE	06 January 1995 03 February 1995 John Dolegowski/CH2M HILL San Diego, California
SUBJECT	Contract Task Order (CTO) No. 145 Remedial Investigation/Feasibility Study OU-1 IAFS Strategy Meeting Marine Corps Air Station (MCAS) El Toro			

PARTICIPANTS: (\* DENOTES PART-TIME ATTENDANCE)

See Page 7

ACTION REQ'D. BY	ITEM
	<p>Representatives of the Naval Facilities Engineering Command, Southwest Division (SWDIV) and CH2M HILL held a strategy meeting to discuss the additional work required to complete the Operable Unit 1 (OU-1) Interim-Action Feasibility Study (IAFS) for the Marine Corps Air Station (MCAS) El Toro (or Station) Remedial Investigation/Feasibility Study (RI/FS). SWDIV has requested that CH2M HILL consider two additional remedial alternatives in the OU-1 IAFS: (1) MCAS El Toro Groundwater Extraction/Treatment, and (2) Desalter with Independent MCAS El Toro Shallow Groundwater Extraction/Treatment. The schedule impacts of the additional alternatives analysis were also addressed.</p> <p>In addition to the OU-1 IAFS, discussion topics included: (1) Proposed changes to the Irvine Subbasin Groundwater Model, which is used to evaluate the OU-1 IAFS alternatives, and (2) Major findings of the evaluation of background concentrations of inorganic constituents in groundwater at MCAS El Toro. These meeting minutes list the action items and summarize the most important issues discussed at the meeting. The agenda is attached (Attachment No. 1).</p> <p style="text-align: center;"><b>LIST OF ACTION ITEMS</b></p> <ul style="list-style-type: none"> <li>o Rex Callaway/Code 09C.RC and Cindy Dahl/CH2M HILL will confer by phone early in the week of 09 January 1995 to coordinate the research of Applicable or Relevant and Appropriate Requirements (ARARs) for potential discharge options.</li> <li>o CH2M HILL will pursue with the Regional Water Quality Control Board (RWQCB) Santa Ana issues raised by R. Callaway pertaining to potential discharge options. CH2M HILL will try to schedule a meeting with Gary Stewart/RWQCB the week of 16 January 1995.</li> </ul>



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- o The Navy will review the technical memorandum prepared by CH2M HILL on the evaluation of background concentrations of inorganic constituents in groundwater. Direction will be provided on how the conclusions of the technical memorandum will be incorporated into the OU-1 RI and the OU-1 Human Health Risk Assessment.
- o Navy managers will meet internally to discuss whether draft Contract Task Order (CTO) 145 deliverables will be given to the regulatory agencies at the same time SWDIV receives them or whether the Navy will complete a separate review prior to giving the deliverables to the agencies.
- o The Navy will initiate contractual action to fund the additional scope for the OU-1 IAFS.

**OPERABLE UNIT 1 INTERIM-ACTION FEASIBILITY STUDY**

OU-1 Schedule

The schedule impact of the additional alternative evaluations and resubmittal of the Draft IAFS Report was discussed. John Dolegowski/CH2M HILL stated that he and Andy Piszkin/Code 1831.AP had developed a preliminary detailed schedule incorporating the new work. Based upon the draft schedule, the submittal date for the draft OU-1 Record of Decision (ROD) will be delayed by approximately 9 to 12 months. In order to shorten the schedule, the regulatory and Navy review periods would have to be reduced. Cmdr. William Dos Santos/Code 09B asked that the Project Team do whatever is necessary to meet the current Federal Facilities Agreement (FFA) submittal date for the draft OU-1 ROD (29 December 1995). Cmdr. Dos Santos emphasized that Department of the Navy (DON) is anxious to move from studying the problem to taking action.

A discussion of document review protocols with the agencies ensued regarding whether the regulatory agencies should be provided review drafts of the OU-1 deliverables at the same time as the Navy. The primary argument in favor of prior DON reviews is that the Navy needs to ensure that the documents accurately portray the Navy's position and that they are consistent with the Navy negotiation position with Orange County Water District (OCWD). The arguments in favor of concurrent DON/agency reviews are that they would promote openness and save time. No conclusions were reached at the meeting. Cmdr. Dos Santos asked that this topic be discussed internally at a later date.

Rationale for Early Action

CH2M HILL pointed out that there has been a change in the rationale for proceeding with the OU-1 FS and ROD before completing the Phase II RI. In 1993, the Navy and agencies decided to proceed with early action on OU-1 with the belief that the Irvine Desalter Project (Desalter) would be constructed and operated with or without participation by the DON. It was important in that case to mitigate the effect of the Desalter wells on the groundwater contamination in the southwest portion of the Station. The Desalter Project is now no longer considered completely certain and will



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not be treated as a baseline condition in the revised IAFS, removing what was previously presented as the primary justification for bypassing the Phase II RI.

However, other valid reasons still exist for early action on OU-1. First, proceeding with OU-1 allows progress to be made toward action rather than continuing study. Second, in addition to containment and remediation of the Principal Aquifer, early action will contain the shallow on-Station groundwater source area, minimizing further migration while OU-2 investigates this area in more detail. Third, sufficient data exist to conduct the FS; future data can be used to refine remedial actions but are not required to move toward action. Fourth, as before, it is important to complete the FS for the regional groundwater contamination in time to support the Navy/OCWD cost-sharing negotiations for the Desalter Project. The agencies recognize this need.

The Navy staff present concurred in this reasoning.

Definitions of OU-1 and OU-2

Another change in the IAFS logic pertains to the relationship between OU-1 and OU-2 given that the Desalter is no longer considered as a definite baseline condition. If the Desalter does not proceed, the question could arise whether separating OU-1 from OU-2 (the source areas) still makes sense or whether it would be better to wait for the results of the Phase II investigation results. The existing IAFS argues for on-Station shallow extraction/containment wells to isolate the area in the southwest portion of the MCAS El Toro where the highest concentrations of volatile organic compounds (VOCs) in groundwater have been detected. The purpose of these shallow extraction wells is to intercept the groundwater with the highest concentrations of VOCs in the shallow groundwater, reducing the migration of shallow VOC-contaminated groundwater both horizontally and vertically. The actual performance of the shallow containment wells can begin while OU-2 proceeds with the Phase II RI and evaluates the most appropriate technologies for removal of the contaminants in the source area.

The Navy consensus was that the present division of the project into OU-1 and OU-2 still makes sense in order to proceed with early response to the regional groundwater contamination, with or without the Desalter.

Remedial Action Objectives

Davi Richards/CH2M HILL presented a revised list of remedial action objectives (RAOs) for the OU-1 IAFS; the RAOs are slightly revised for clarification but not substantively different from the ones presented in the Draft IAFS and previously agreed to by the agencies. The revisions are intended to make a clearer distinction between the objectives in the shallow groundwater and the Principal Aquifer. Attachment 2 lists the RAOs from the Draft IAFS and the revised version.

The Navy agreed that the revised version is an improvement.



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ARARs for Discharge Options

D. Richards summarized the progress and plans to research ARARs for potential discharge options other than potable water supply (the discharge option for the Desalter). Cindy Dahl/CH2M HILL (Corvallis), an engineer with extensive regulatory compliance experience, will be taking the lead to prepare a draft narrative analysis to be submitted to R. Callaway by the end of January 1995. She will be supported by Kimó Look/CH2M HILL (Santa Ana), a water resources engineer, by Renu Gupta/CH2M HILL (Santa Ana), a hazardous waste engineer, and by Nanci Klinger/CH2M HILL (Portland), an environmental engineer and attorney. A preliminary list of discharge options is attached.

R. Callaway and C. Dahl will confer by phone early in the week of 09 January 1995 to coordinate the research. Ginny Garelick/Code 1852.VG suggested that CH2M HILL call Maria Rhea and Cat Kuhlman at Environmental Protection Agency (EPA) Region IX, both of whom work with water regulations and issues and may be able to provide leads.

Issues mentioned by R. Callaway to be pursued:

- (1) How will basin water quality objectives and the Basin Plan affect reinjection?
- (2) How are agricultural discharges regulated?
- (3) Are agricultural discharges exempt from regulation?
- (4) How are RWQCB decisions and policies accessed?
- (5) What are the basin standards for reinjection of municipal effluent?

It was agreed that CH2M HILL will try to schedule a meeting with Gary Stewart/RWQCB the week of 16 January 1995 to address these issues.

The Navy agreed that in making phone calls for researching these issues, CH2M HILL may mention the calls are for the MCAS El Toro IAFS.

Conceptual Alternatives

D. Richards presented the new preliminary list of IAFS alternatives (Attachment 4). The Navy agreed that this was a good starting point.

Cmdr. Dos Santos asked whether DON should consider an alternative that would provide containment of the shallow groundwater in the southwest portion of the Station and rely on natural attenuation in the Principal Aquifer. D. Richards pointed out that: (1) Although EPA seems more willing than previously to consider natural attenuation, the chances are slight that they would accept it here because it is a potential drinking water aquifer, and (2) A serious evaluation of natural attenuation would require a longer FS schedule. A. Piszkin suggested an alternative that would include well-head treatment as needed for the Principal Aquifer. Walter Sandza/Code 185 expressed the opinion that both of these alternatives would likely be unacceptable to the agencies and should therefore not be pursued.

It was agreed that CH2M HILL will proceed with the alternatives listed on Attachment 4 unless instructed otherwise by the Navy.



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**PROPOSED MODIFICATIONS TO GROUNDWATER MODEL**

Hooshang Nezafati/CH2M HILL presented the proposed modifications, discussed below, to the Irvine Subbasin Groundwater Model, which has been used to support the evaluation of the OU-1 IAFS remedial alternatives (Attachment 5). He explained that the proposed modifications were the minimum refinements necessary to address regulatory agency review comments and to prepare the model for evaluation of the new MCAS El Toro Groundwater Extraction/Treatment System. The model will have to be recalibrated after incorporation of proposed modifications described below.

Refinement of the Finite-Element Grid

Model grid refinement is required to evaluate the new groundwater extraction and injection alternatives in shallow groundwater. Flow rates of the proposed extraction and, in particular, injection wells will generate relatively small cones of depression and can only be evaluated with a finer set of grids than the one currently used in the model. The finer set of grids will also facilitate the preparation of maps showing capture zones around extraction wells (as specifically requested by the Department of Toxic Substances Control [DTSC]). It will also minimize the potential for numerical dispersion and, therefore, lateral spread of the simulated plume (to address IAFS review comments from Bechtel National, Inc. and the EPA). A. Piszkin asked if the model grid refinements could be limited to the evaluation of the new alternatives in order to save time. H. Nezafati answered that there would not be much of a time saving because the effort will be small compared to that which is needed for the simulation of the new remedial alternatives. He added that specific agency comments can not be addressed without performing the proposed grid refinements.

Assessment and Simulation of Transient Groundwater Flow Conditions

Incorporation of the seasonal changes of the water budget (i.e., pumping and recharge rates) is needed to enhance the calibration of the groundwater flow calibration model. H. Nezafati stated that some proposed alternatives would rely upon existing irrigation wells for mass removal and containment. H. Nezafati added that groundwater modeling presented in the draft IAFS assumed that wells were pumped at constant rates year round (i.e. the model assumed steady state conditions), as was assumed by OCWD's MODFLOW groundwater model. However, because we now know that irrigation wells are pumped on a seasonal basis, consideration of seasonal water budget fluctuations is required to generate more accurate conclusions, particularly regarding VOC capture at the toe of the plume.

Verification of the "Active-Source Scenario"

In response to IAFS comments from the California Environmental Protection Agency (Cal-EPA), Department of Toxic Substances Control (DTSC), CH2M HILL proposed to verify the "Active-Source Scenario" by estimating the dissolved mass of trichloroethylene (TCE) in groundwater and applying the dissolved mass as a prescribed flux for about 50 years. The proposed modification will help enhance the simulation of the new alternatives, as well as address agency comments.

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A. Piszkin expressed his concerns about whether this modification is necessary and how it would change the modeling results. H. Nezafati responded that the verification would not be time consuming, would help to increase the confidence in the model, and would likely would not change the modeling results.

Cmdr. Dos Santos asked what kind of equation or tool was used to solve similar problems 10 years ago when sophisticated groundwater models were not available. He expressed some concerns that the Navy may be investigating too much and that the existing model may already be adequate to accomplish DON objectives. H. Nezafati answered that in the past, the groundwater scientific community knew much less about the field of groundwater contamination. Previous applications of groundwater models were limited compared to their current uses. He added that the Irvine Subbasin is too complex to be studied with a simple equation or tool, and the Irvine Subbasin Groundwater Model is the appropriate tool for the task at hand. The model has the needed sophistications to match the complexity of the real world.

**EVALUATION OF INORGANIC BACKGROUND CONCENTRATIONS**

Yueh Chuang/CH2M HILL gave a presentation on the major findings of the evaluation of background concentrations of inorganic constituents in groundwater at MCAS El Toro. The findings were submitted as a technical memorandum, to the Navy for internal review on 16 December 1994. Overheads of the presentation are attached (Attachment 6).

The Navy felt the overall approach of the technical memorandum was sound. A. Piszkin indicated the Navy will decide on the use of the information after a more thorough review by Dennis Askvig/Code 1852.DA, the Navy statistician, and Jim Ferris/Code 1853. During the meeting, the Navy requested CH2M HILL address the following issues:

- o Research potential historical trends of the inorganic concentrations in the Irvine Subbasin. J. Ferris and A. Piszkin questioned how the current findings compared with earlier trends in groundwater.
- o Include additional references and discussions on fertilizer use (therefore nitrates) to the conceptual model. W. Sandza felt the current conceptual model did not explicitly mention fertilizers.
- o Provide a description of the power and confidence used in the statistical analyses. D. Askvig felt the power and confidence levels should be based on risk.
- o Explicitly quantify the 95th-percent background exceedances (as multiples of the 95th-percent background concentrations). W. Sandza felt the reader would benefit from knowing whether the concentrations were just slightly over, or much greater than, the 95th-percent background values.



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- o Perform an analysis of variance (ANOVA) or discuss reason(s) why such an analysis is unnecessary. D. Askvig felt an ANOVA would help the statistical analyses/interpretation.

Other noteworthy issues discussed are summarized below.

- o W. Sandza asked why background was set at the 95th-percent level and not 90th- or 99th-percent. Y. Chuang indicated that 95th-percent is a good compromise. D. Askvig concurred. A. Piszkin pointed out that the soils background analysis used 99th-percent levels. Additional discussions ended with the Navy concurring with the current approach of using 95th-percent levels for background concentrations.
- o J. Dolegowski indicated additional site-specific evaluations of background exceedances should be performed. Sites to be evaluated include Sites 13 (Oil Change Area), Site 15 (Suspended Fuel Tanks), and Site 16 (Crash Crew Pit No. 2).
- o D. Askvig asked whether a 2- or 3-parameter lognormal distribution was assumed for the data. Y. Chuang indicated Dick Glanzman, CH2M HILL's geochemist in the Denver office, will have to be consulted on that issue.

**Attachments:**

1. Agenda
2. RAOs
3. Preliminary List of Discharge Options
4. IAFS Alternatives
5. Groundwater Modeling Overheads
6. Overheads for Background Inorganics in Groundwater

**Participants**

- |                                     |                                   |
|-------------------------------------|-----------------------------------|
| * Dennis Askvig/Code 1852.DA        | Ginny Garelick/Code 1852.VG       |
| * Rex Callaway/Code 09C.RC          | * Hooshang Nezafati/CH2M HILL/SCO |
| Yueh Chuang/CH2M HILL/SDO           | Larry Nuzum/Code 1831             |
| * John Dolegowski/CH2M HILL/SCO     | Andy Piszkin/Code 1831.AP         |
| * Cmdr. William Dos Santos/Code 09B | * Davi Richards/CH2M HILL/CVO     |
| Jim Farris/Code 1853                | Walter Sandza/Code 185            |

\* Denotes Part-Time Attendance

## AGENDA

CTO #145  
MCAS EI Toro RI/FS  
OU-1 IAFS STRATEGY MEETING

06 JANUARY 1995  
08:30 - 15:30  
SWDIV, San Diego, CA.

1. Background Concentrations of Inorganics in Groundwater
2. New OU-1 Schedule
3. Changes to Groundwater Model that Address Agency Comments
4. Rationale for proceeding on Early Action for OU-1 with Alternatives that Don't Include the Desalter.
5. New Operable Unit Definitions
6. Review of Remedial Action Objectives for OU-1 (RAOs)
7. Discharge Options - ARARs Research (scope, schedule, staff)
8. Conceptual alternatives
9. Need for Routine Technical Exchange Meetings with Navy and Regulatory Agencies to Build Consensus.
10. Contractual Issues

MCAS El Toro  
OU-1  
SCE31981.FU.60  
January 6, 1995

### **REMEDIAL ACTION OBJECTIVES IN PRESENT IAFS**

- Minimize further migration of groundwater containing VOCs that have emanated from sites at MCAS El Toro.
- Reduce concentrations of VOCs in the groundwater in the AOC to federal or state MCLs, whichever are more stringent, nonzero MCLGs, or RBCs for compounds that have no promulgated MCLs.
- Prevent human exposure to groundwater containing levels of VOCs above MCLs, nonzero MCLGs, or RBCs.

### **CLARIFIED REMEDIAL ACTION OBJECTIVES**

- Contain VOCs in shallow groundwater in southwest portion of MCAS El Toro.
- Reduce concentrations of VOCs in principal aquifer to federal or state MCLs, whichever are more stringent, nonzero MCLGs, or RBCs for compounds that have no promulgated MCLs.
- Minimize migration of VOCs in principal aquifer.
- Prevent use of groundwater containing VOCs above MCLs/MCLGs/RBCs for drinking water.

## ALTERNATIVES

### Present List

1. No Action
2. MCAS El Toro Extraction/Treatment/Discharge to further treatment by others for potable use
3. Desalter Only
4. Desalter/Additional Extraction

### New Preliminary List of Alternatives for Initial Consideration

1. No Action
2. MCAS El Toro Extraction/Treatment  
Discharge to:
  - a. ReInjection
  - b. Other discharge options (to be evaluated)
  - c. Treatment (by others) for potable use
3. Desalter Only
4. Desalter/Additional Extraction with Discharge to Desalter
  - a. Without Pretreatment
  - b. With Pretreatment
5. Desalter with Independent MCAS El Toro Shallow Aquifer Extraction/Treatment  
Discharge to:
  - a. ReInjection
  - b. Other discharge options (to be evaluated)

MCAS El Toro  
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## PRELIMINARY LIST OF DISCHARGE OPTIONS

1. ReInjection
2. Recharge (discharge to washes?)
3. Discharge to surface water (washes?)
4. Discharge to Desalter (Navy removes VOCs only) (for on-Station shallow groundwater)
5. Discharge to IRWD for upgrade to potable water (Navy removes VOCs only) (for DON stand-alone system)
6. Discharge to IRWD reclaim water line (for irrigation, etc.)
7. Evaporation
8. Direct land application/irrigation (e.g., poplar trees; i.e., not through reclaim water line)
9. County Sanitation Districts of Orange County (CSDOC) brine line

# **GROUNDWATER MODELING TASKS**

## **OBJECTIVES**

- **Respond to the Agency Comments**
- **Perform Evaluation of the New OU-1 IAFS Alternatives**

# Refine The Model Grid

- **To prepare figures to graphically illustrate the Capture Zones around the extraction wells**
- **To minimize the lateral spread of the simulated TCE plume**
- **To evaluate Capture Zones of the new extraction/injection wells**

# **Recalibrate The Model**

- **Potential Modification of the “Active source Scenario”**
- **Incorporate the Seasonal Pumping Rates of the Irrigation Wells Utilized in the OU-1 IAFS Alternatives**

# Simulation of Alternatives

- **Simulate the OU-1 IAFS Alternatives**
- **Report Preparation**



***EVALUATION OF  
BACKGROUND CONCENTRATIONS  
OF INORGANIC CONSTITUENTS  
IN GROUNDWATER***



## ***Inorganic Constituents in Groundwater Exceed Drinking Water Standards***

- **Major Ions Include:**
  - **Total Dissolved Solids (TDS)**
  - **Sulfate**
  - **Nitrate**
  - **Chloride**
- **Trace Metals Include:**
  - **Antimony**
  - **Manganese**
  - **Nickel**
  - **Selenium**



## ***Question to Answer:***

**Have *Previous* or *Current* Activities at the Station Impacted the Inorganic Groundwater Quality?**



# ***Inorganics in Groundwater Thought To Be Naturally Occurring, and Result of Agricultural Activities***

## **Supporting Evidence Includes:**

- 1. Previous Land Use – Agricultural**
- 2. Orange County Water District (OCWD)  
Documented Widespread Inorganics  
Problems in Irvine Subbasin**



# ***Statistical Methods Were Used to Separate Groundwater Populations***

## **Possible Populations Include:**

- 1. Background – Natural Mineralogical Interactions**
- 2. Anthropogenic – Due to Past Activities**
- 3. Anthropogenic – Potential Releases of Contamination Sources**



## ***Three Statistical Methods Were Employed to Distinguish Groundwater Populations***

- 1. Summary Statistics and Least-Square-Fit Correlation Coefficients**
- 2. Statistical Evaluation of Ranked Normalized Groundwater Concentrations**
- 3. Cumulative Frequency-Probability Plots (PROBPLOT)**



# ***Conceptual Model of Groundwater Geochemistry Will Be Tested and Refined***

**Current Interpretation Based on:**

- 1. Two Complete Sampling Rounds of Groundwater**
- 2. Well Boring Logs**
- 3. Understanding of Local Geology**



## ***Conceptual Model (Abbreviated Version):***

- **Active and Progressive Oxidation of Previously Reduced Sediments Occurring**
- **Enhanced Oxidation a Result of Groundwater Withdrawal**
- **Infiltrating Groundwater Oxidizes Iron Sulfide Minerals (e.g., Pyrite), Produces Sulfuric Acid**



## ***Conceptual Model (Continued):***

- **Iron and Other Metals in the Sulfides are Dissolved in, and Mobilized by Groundwater**
- **Sulfuric Acid Reacts with Surrounding Minerals, Thereby Increasing TDS and Trace Metals Associated with the Iron and Manganese Oxyhydroxide Precipitates**
- **Weathering of Minerals Also Results in Release of Additional Inorganics**



## ***Conceptual Model (Continued):***

- **As Oxygen Is Consumed, The Metals Can Remain Mobile in Groundwater Under Reducing Conditions**
- **Oxidizing Conditions Exist in Shallow Groundwater, but Subsurface Environment More Reducing With Depth**



## ***Background Populations Were Estimated by Statistically Separating Populations of Constituents Using PROBPLOT***

- **Background Concentrations Are Defined as *95th-Percentile* Concentrations**
- **Therefore,**
  - **5 Percent of Concentrations Exceed Background Even Under Natural Groundwater Conditions**
  - **Isolated Exceedances of Background *Do Not Equal* Contamination**



## ***Conclusions:***

- 1. Only One Groundwater Population Was identified for All Constituents**

*This Supports the Conclusion that MCAS El Toro is not a source of Regional Contamination*

- 2. The Majority of Observed Trace Metals Concentrations Represent Background Concentrations**

*Since the Background Exceedances Were Sporadic and Randomly Distributed, they do not Indicate the Presence of Localized Sources*

- 3. Background Concentrations of Four Major Ions and Seven Trace Metals Exceed Their Drinking Water Standards**

*This Means Exceedances of Drinking Water Standards Would Occur in the Absence of MCAS El Toro*



## ***Conclusions (Continued):***

- 4. The Distribution of Nitrate, TDS and Selenium Exceedances Is Consistent With Problem Areas Previously Reported by OCWD**
- 5. There is no Substantive Evidence to Suggest the Four Landfills Are Contributing Contaminants to Groundwater Due to Leachate**
- 6. The Elevated Inorganics Concentrations Observed at the Sites 13 and 15 Area Are Likely Due to Naturally Occurring Conditions and Agricultural Activities**



## ***Conclusions (Continued):***

- 7. The Two Exceedances of Mercury Background are not Likely the Results of On-Station Sources**
- 8. The Two Exceedances of Cyanide Background may be Caused by Localized Sources. However, Additional Work Is Necessary for a More Definitive Evaluation**



## ***Additional Work is Required to Test and to Refine Conceptual Model***

### **Recommendations:**

- 1. Collect Field Data – Eh and DO**
- 2. Conduct Laboratory Analysis of  
Soil/Rock Samples**
- 3. Run Geochemical Specification Model  
(e.g., WATEQ)**



# JACOBS ENGINEERING GROUP INC.

## CLEAN TRANSMITTAL/DELIVERABLE RECEIPT

CONTRACT N68711-89-D-9296

Doc. Control Number: CLE-C01-01F145-I2-0094

TO: Ms. Robin Green  
Contracting Officer, Code 0232  
Southwest Division  
Naval Facilities Engineering Command  
Contracts Department, Room 131  
1220 Pacific Highway  
San Diego, California 92132-5187

DATE: 03 Feb 1995

CTO#: 145

LOCATION: MCAS El Toro

TASK/WORK ELEMENT:

John Dolegowski  
John Dolegowski/Project Manager

Bryant Wong  
Ken Tomeo/Resource Center Manager

DESCRIPTION: Project Note No. PN-0145-151, Contract Task Order (CTO) No. 145, Remedial Investigation/Feasibility Study, OU-1 IAFS Strategy Meeting

TYPE:  Contract Deliverable  CTO Deliverable  Request for Change/Project Note

VERSION: Final  
(e.g., Draft, Draft Final, Final, etc.)

REVISION # N/A

ADMIN RECORD Yes  No  Category  Confidential   
(PJM to identify)

NEGOTIATED DELIVERY DATE: \_\_\_\_\_ ACTUAL DELIVERY DATE: \_\_\_\_\_

Number of Copies Submitted to Navy: \_\_\_\_\_

Copies To:	<u>J. Rogers - Code 18C1 w/attach</u>	<u>Mike Bitner - CH2M HILL/ABQ w/attach</u>
	<u>A. Piszkin - Code 1831.AP w/attach</u>	<u>File - PMO w/attach</u>
	<u>V. Parpiani - MCAS El Toro w/attach</u>	<u>File - CH2M HILL w/attach</u>
	<u>K. Tomeo - CH2M HILL w/o attach</u>	
	<u>M. Huddleston - CH2M HILL w/o attach</u>	

Delivered To: Contracting Officer  RPM/EIC

Name: \_\_\_\_\_

<u>Date/Time Received</u>
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