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DEPARTMENT OF THE NAVY
PACIFIC DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
(MAKALAPA, HI)
PEARL HARBOR, HAWAII 96860-7300

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Subj: NAVY'S INSTALLATION RESTORATION (IR) PROGRAM

Enclosed are the meeting minutes for DQO Meetings of 22 and 24 July 1996. The meetings were held in conjunction with preparation of draft planning documents for Phase 2 of the Remedial Investigation (RI) for the Red Hill Oily Waste Disposal Facility at the Fleet & Industrial Supply Center (FISC), Pearl Harbor.

These minutes are forwarded for your information and records. We have also provided copies by separate correspondence to the State of Hawaii Department of Health.

Should you have any questions, please contact Mr. Wesley Ching of our Environmental Restoration Branch at (808) 474-4513.

Sincerely,

LEIGHTON G. M. WONG
Head
Environmental Restoration Branch

Encl: (2 cys)
(1) Mtg Minutes for DQO
Mtg of 22 Jul 96
(2) Mtg Minutes for DQO
Mtg of 24 Jul 96

Copy to:
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Meeting Minutes (Draft) CTO OOO8

Date: 24 July 1996, 1100 hrs
Point of Contact: Wesley Ching, PE, Code 1821
Participants: Wesley Ching, Code 1821
Harry Hui, FISC
Lewis Mitani, EPA
Don Gruber, URS
Doug Hazelwood, EARTH TECH
Wade Kirby, EARTH TECH

Minutes prepared by Wade Kirby, EARTH TECH on 24 July 1996

Wesley opened the meeting by stating that the Navy still needed clarification and discussion on the Decision Rule developed during the 22 July 1996 meeting. In particular, the Navy wanted clarification and a proposed endpoint for Scenarios 2 and 3 of the Decision Rule. The agreement of each scenario is discussed below.

Scenario 2

If groundwater samples collected from the basal aquifer detect contamination below action levels, then long-term monitoring will be required. Two rounds of samples will be collected as the initial phase of monitoring. The first round will be collected no earlier than two weeks after development of the monitoring wells. The second round will be collected no earlier than four weeks after the first round. Then a round of groundwater samples will be collected each quarter after the second round of sampling. Groundwater samples will then be collected annually for two years, then the last round will be collected two years from the time the last annual sample was collected. Results from the samples will be used to perform a trend analysis and if it is demonstrated that the contaminants have reached steady state or are diminishing and the concentrations are below action levels, then the EPA will agree that No Further Action is needed for the site.

Scenario 3

If the groundwater samples are above action levels, then additional characterization will be required. An additional downgradient monitoring well will be installed. This well may have to be installed beyond the boundaries of the DQO selection (Step 4 of the DQO process). With this additional downgradient data point, groundwater modeling can be performed to predict contaminant movement and the "0" concentration point. As part of the removal action, a downgradient well will be installed to verify the "0" point. EPA agreed that the final action will not include further delineation of any plumes detected in the basal aquifer. EPA requires justification if well head treatment cannot be performed.

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Meeting Minutes (Draft) CTO 0008

Date:	22 July 1996, 900 hrs
Point of Contact:	Wesley Ching, PE, Code 1821
Participants:	Wesley Ching, Code 1821
	Harry Hui, FISC
	Jerry Yogi, COMNAVBASE
	Lewis Mitani, EPA
	Don Gruber, URS
	Michael Miyashiro, DOH
	Doug Hazelwood, EARTH TECH
	Barbara Brooks, EARTH TECH
	Wade Kirby, EARTH TECH

Minutes prepared by Wade Kirby, EARTH TECH on 24 July 1996

Wesley Ching opened the meeting concerning the Red Hill Oily Waste Disposal Facility (OWDF) by introducing all participants. He then turned the meeting over to EARTH TECH. Doug Hazelwood made a brief introduction of the objectives of the meeting. EARTH TECH then gave a 30 minute presentation of using the DQO process to develop the groundwater investigation. The objective of the presentation was to demonstrate that adequate data had been collected to support No Further Action at the site.

Although data collected indicated that contamination had not penetrated the confining clay layer, the EPA felt that some investigation in the basal aquifer was necessary. EPA's experience was that contamination could leak through clay. Additionally, the EPA will not accept institutional control as a means to protect receptors from exposure without characterization of the basal aquifer. EPA also stated that modeling is not acceptable without verification. In summary, the EPA is mandated to protect the drinking water sources and they are insistent that some type of sampling program be performed in the basal aquifer.

Jerry Yogi suggested an afternoon session to discuss restructuring of the DQOs and the type of monitoring program that would satisfy the EPA.

Participants of the meeting broke for lunch from 11:30 until 12:30.

Before the afternoon session began, the EPA agreed that the decisions made on the investigative approach for the OWDF will be site-specific and will not set precedence for investigation at other sites. The DQO program for the groundwater investigation was revised as follows:

Step 1: State the Problem
Determine if the basal aquifer is contaminated.

Step 2: Identify the Decision
If the basal aquifer is not contaminated, then No Further Action is needed; but if it

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is contaminated, then a new course of action is needed.

Step 3: Identify Inputs to the Decision

- Water Samples
- Characterize Aquifer

- Action Levels
  - VOCs - MCLs
  - SVOCs - State Criteria
  - TPH - TBD

Step 4: Study Boundary
Confine investigation to within the OWDF boundary.

Step 5: Develop a Decision Rule
The possibilities of using the Red Hill Shaft as a background well will be explored. Three wells will be installed within the confines of the OWDF boundary into the basal aquifer. Two wells will be installed downgradient of the location of the former Stilling Basin. A third well will be installed upgradient so that the groundwater gradient can be established. Three scenarios will be used as follows:

Scenario 1: If no contamination is found within the two downgradient monitoring wells, then No Further Action is warranted.

Scenario 2: If contamination is found but it is below action levels, then long term monitoring will be required to verify that impact to the basal aquifer is not increasing.

Scenario 3: If contamination is found above action levels, then one to two additional downgradient monitoring wells will be installed into the basal aquifer. A groundwater model will then be developed to predict future movements of the contamination.

Action Items:

1) Attempt to obtain data from monitoring wells installed by the Army at Tripler Hospital.
2) Attempt to obtain data from Halawa Shaft and Red Hill Shaft.

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