



DEPARTMENT OF THE NAVY
MARE ISLAND NAVAL SHIPYARD
VALLEJO, CALIFORNIA 94592

IN REPLY REFER TO:
5090
Ser 461/43
MAR 21 1986

California Regional Water Quality Control Board
San Francisco Bay Region
1111 Jackson Street, Room 6040
Oakland, CA 94607
Attention: Ms. Lila Tang

Dear Ms. Tang:

Pursuant to Regional Water Quality Control Board Cleanup and Abatement Order No. 85-019, action is in progress to fulfill requirements that were discussed in the Shipyard's meeting of 28 February 1986 with the Board. As determined in your telephone conversation of 4 March 1986 with Shipyard Code 461, Mr. Ralph Lee, a follow-up meeting will be conducted at the Board offices on 31 March 1986 at 1000 to evaluate Shipyard progress.

The 28 February meeting was highly effective in resolving questions and focusing Shipyard efforts toward fulfillment of groundwater monitoring requirements. We strongly support the proposal to continue such meetings on approximately a monthly basis.

The current Shipyard efforts toward groundwater monitoring address the concerns of your letter of 10 February 1986 as follows:

a. Task a, Groundwater Monitoring Well Certification:

(1) All 22 existing groundwater monitoring wells are included in efforts to obtain additional construction and development information for the wells. This effort will be completed by 31 March 1986.

(2) Additional information regarding construction and development of existing wells is being sought from installers and supervising geotechnical engineers. Anticipated findings include the following:

(a) Descriptions of drilling methods.

(b) Quality control and quality assurance procedures such as procedures to coordinate backfill materials with well casing perforations and soil strata, and procedures to preclude "bridging" of backfill materials.

b. Task c, Hydrogeologic Investigation Proposal. A comprehensive hydrogeological investigation of the involved waste management area has been initiated. The products of the investigation will include the previously identified requirements to determine "the in-situ permeability of the geologic material under the landfill" and to evaluate the "adequacy of the locations of the 12 ISD wells for immediate detection of hazardous waste migration."

(1) Assumptions, criteria, and methods used in completed monitoring efforts will be consolidated. Necessary changes and requirements will be established. This effort will be accomplished by 31 March 1986.

(2) Quality control and quality assurance requirements will be addressed. For completed work, records will be consolidated and evaluated. For future work, guidelines will be outlined.

(3) Scheduling of detailed hydraulic monitoring--continuous monitoring of groundwater levels, in-situ permeability tests ("pump tests"), and barometric considerations--will be established by 31 March 1986. Current efforts pursuant to this function include mapping of waste deposits, soil profiles, and groundwater (rough mapping) which are required to determine effective locations and depths for detailed monitoring.

(4) A file review of existing hydrogeologic information is in progress. The review is being supplemented with additional soil borings and monitoring of groundwater levels. The anticipated products of these efforts include the following:

(a) Continuous soil borings will be retained from some of the new soil borings, and they will be supplemented by gamma radiation/soil density readings from other borings. The results will provide more accurate indications of geological profiles and waste deposits, including specific information such as descriptions of waste-soil interfaces, relationships of waste deposits with unsaturated zone soils, and possibly descriptions of previously noted sand traces in the Bay Mud formation.

(b) Groundwater data will be consolidated, supplemented, and analyzed pursuant to establishment of comprehensive baseline data. Completed monitoring data for the existing 22 groundwater wells will be consolidated, weekly readings for these wells will be accomplished during March 1986, and groundwater levels will be measured in new exploratory borings which will be drilled on and adjacent to the Landfill site. These efforts should indicate general groundwater levels and gradients, including areas of perched water; permit correlation of groundwater levels with other hydrogeologic factors such as soil stratigraphy and seasonal variations; possibly provide rudimentary indications of tidal influence; and indicate effective locations and elevations for continuous water level monitoring and in-situ permeability tests ("pump tests").

(5) Measurements of tidal effects are included in the continuous monitoring of groundwater wells that is discussed above in subparagraph b(3).

(6) Fundamental groundwater monitoring requirements will be readdressed in light of the findings of the actions described in subparagraphs a and b.

The Shipyard point of contact in this matter is Mr. Lee at telephone number (707) 646-2421 or 2432.

Sincerely,

H.R. Frauenfelder
H.R. FRAUENFELDER
Captain, CEC, USN
Public Works Officer
By direction of the Shipyard Commander

Copy to:
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California Department of Health Services
Toxic Substances Control Division
Attention: Mr. Andrew Hicks and Mr. Alan Lui
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Emeryville, CA 94608

Naval Energy and Environmental Support Activity, Code 112N
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