

WARNING

SENSITIVE RECORD

PORTIONS OF THIS RECORD ARE CONSIDERED SENSITIVE AND NOT FOR PUBLIC VIEWING. THIS DOCUMENT CONTAINS THE FOLLOWING TYPE OF SENSITIVE INFORMATION:

- PRIVACY ACT INFORMATION
- ARCHAEOLOGICAL LOCATION COORDINATES OR MAPS
- ATTORNEY / CLIENT DELIBERATIVE PROCESS INFORMATION
- COMMAND INTERNAL RULES AND PRACTICES
- COMMERCIAL TRADE SECRETS OR CONFIDENTIAL COMMERCIAL INFORMATION
- DRAWINGS OF MILITARY STRUCTURES / BUILDINGS OR FEDERAL BUILDINGS
- STREET LEVEL MAP(S) OF MILITARY INSTALLATIONS OR FEDERAL BUILDINGS
- GEOLOGICAL / GEOPHYSICAL INFORMATION / DATA CONCERNING WELLS

RECORDS OFFICE REMINDER: REVIEW AND SAFEGUARD SENSITIVE INFORMATION CONTAINED IN THE DOCUMENT PRIOR TO PUBLIC ACCESS

12/1/96

NAVAL FUEL DEPOT, POINT MOLATE

Navy's Internal Review of Time Critical Removal Action

The Navy conducted an internal review of the Time Critical Removal Action described in an action memorandum dated November 15, 1996. The following Navy departments reviewed and commented on the described removal action: Naval Facilities Engineering Service Center, Environmental Planning, Legal, and the Point Molate Environmental Management Team.

Comments and recommendations from the Navy's internal review and comments provided by the Regulatory Agencies (DTSC, EPA, RWQCB) were considered in making a final management decision.

DECISION

The Navy will conduct a time critical removal action along the Naval Fuel Depot, Point Molate shoreline. The action will focus on containing groundwater in areas where significant levels of free floating product may migrate to San Francisco bay.

The Navy will construct an extension of the existing extraction trench for approximately 200 feet using the same technology as described in the Draft Time Critical Removal Action Memorandum. This will consist of an extension along the shoreline area for about 150 feet and a cut-off wing wall of about 50 feet. Enclosure (1) shows the approximate length and location of the extension.

SUPPORTING ARGUMENTS

TECHNICAL

(a) The Data: The shoreline groundwater monitoring data presented in the Time Critical Removal Action identifies isolated areas, south of the existing extraction trench, with minimal amounts of free floating product. The groundwater monitoring data does not indicate that an imminent threat exists along the shoreline area to warrant constructing a 700 foot extension of the existing trench. A 700 foot extension will unnecessarily contain vast amounts of groundwater where no free floating product was observed. Imminent environmental threat may exist, if any, in areas where free floating product was observed.

Enclosure (2) compares the shoreline groundwater monitoring data, detailed in the Draft Time Critical Removal Action Memorandum, with useful and established water quality standards. The data, when compared against marine and fresh water quality standards, shows that the concentration of all of the chemical contaminants of concern in the shoreline groundwater samples are well below those standards. This is sufficient

evidence for the Navy to conclude, that for a time critical removal action, a 700 foot or longer extension of the existing extraction trench is not warranted.

(b) TPH: Although elevated levels of TPH were detected in some of the samples for the shoreline groundwater monitoring data, the Navy's Cleanup Review Team (CURT) - a group of highly qualified technical experts, recommends that TPH data should not be used as the basis for cleanup goals or for human health and ecological risk assessments. The CURT's recommendation along with the fact that no standards exists for TPH, has lead the Navy to conclude that the appropriate time critical removal action is to contain the groundwater in areas where free floating product may pose an imminent threat. Excerpts from the CURT is provided as enclosure (3). The Navy will evaluate the potential ecological risk from the shoreline groundwater as part of the Phase II Remedial Investigation Feasibility Study. A contract for the shoreline Phase II RI/FS should be awarded in the first quarter of 1997.

(c) Alternative Technology: The proposed action in the Draft Time Critical Removal Action Memorandum describes a hydraulic containment and long term pump and treat technology for treating groundwater. Long term pump and treat technologies have proven to be less effective than other technologies at low level contamination sites.

Air sparging is a cost effective option for treating the low level of contaminants in the shoreline groundwater. Air sparging will increae the low dissolved oxygen levels and result in significant biodegradation of the contaminants. Also, Bioslurping technology can be used where free floating products or dissolved, non-biodegradable contaminants are detected. The Navy will evaluate the feasibility of these technologies during the RI/FS for the shoreline area.

MANAGERIAL

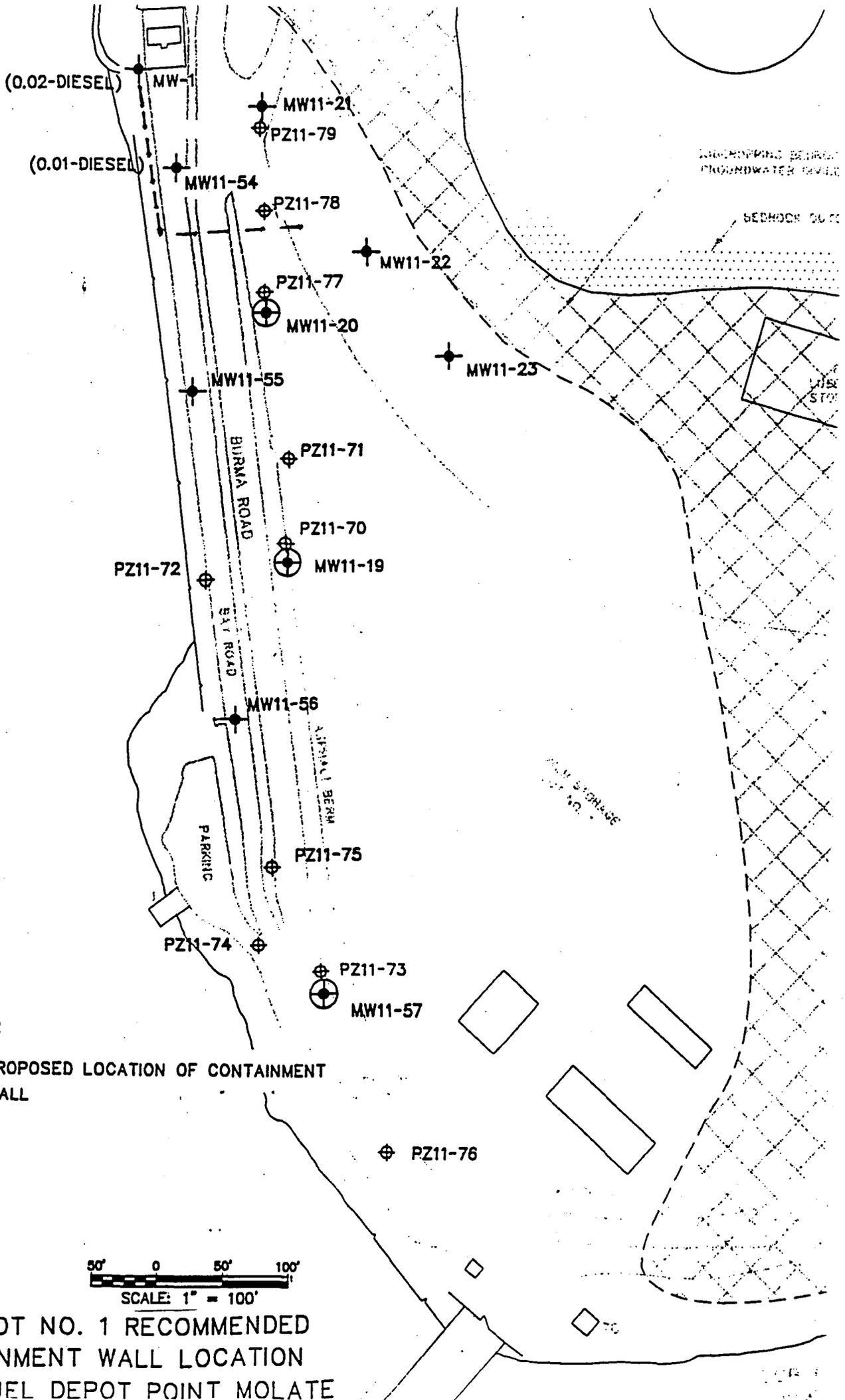
(a) Original Intent: The Navy's decision to extend the existing trench by 200 feet is consistent with the 1994-1995 discussions between DTSC, RWQCB and the Navy. Before the completion of the existing trench in 1994, a free floating product plume was observed just outside of the existing trench termination point. The Navy agreed that a trench extension of about 150 feet would be necessary to contain the observed free product. DTSC, RWQCB, and the Navy concurred that this would be the appropriate action. This concurrence is documented in the minutes titled "Naval Fuel Depot, Point Molate Project Managers Meeting", dated April 24, 1995. The Navy remains committed to this agreement.

(b) The Order: A 200 foot trench extension complies with the RWQCB Order 95-235, Item 11. The order does not specify the extent of hydraulic containment required. The Navy feels that a 200 foot trench extension meets the objective of this Time Critical Removal Action.

(c) Consequence of Long Term Pump/Treat: The removal action as described in the Draft Time Critical Removal Action Memorandum does not account for the cost associated with the additional long term pumping and treating of groundwater. A 700 foot or longer addition of the extraction trench would obligate the Navy to an indefinite expenditure of taxpayers dollars for long term monitoring and operation. The Navy intends to direct its environmental funding towards more active and effective cleanup strategies that are consistent with the fast track goals of rapid cleanup and transfer of the facility.

CONCLUSION

After a detailed reevaluation, the Navy's decision is to amend the Draft Time Critical Removal Action Memorandum to construct a 200 foot trench extension. This ammendment is consistent with prior discussions and agreements with the regulatory agencies and satisfies the RWQCB Order No 95-235, Item 11.

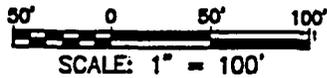


LEGEND

⊕ MONITORING WELL

⊕ 2-INCH PIEZOMETER

----- PROPOSED LOCATION OF CONTAINMENT WALL



**DRUM LOT NO. 1 RECOMMENDED
CONTAINMENT WALL LOCATION
NAVAI FUEL DEPOT POINT MOLATE**

Table 1. Summary of Groundwater Analyses at NFD Point Molate Drum Lot No. 1^(a)

Chemical	Detects/ Samples	Concentration Range of Detects (µg/L)	EPA Water Quality Criterion	Tier II Chronic Value
Vinyl chloride	1/13	0.71	525 ^(b)	87.8
Carbon disulfide	2/13	0.51 to 2.7	1,000 ^(c)	8.89
1,2-Dichloroethene	1/13	1.1	224,000 ^(c)	1,100
Chloroform	1/13	9.9	1,240 ^(c)	188
Carbon tetrachloride	1/13	17	50,000 ^(c)	229
Bromidichloromethane	1/13	1.2		
Dibromochloromethane	1/13	1.4		
Bromoform	1/13	3.3	470 ^(b)	
Tetrachloroethylene	1/13	1.9	450 ^(c)	418
1,3-Dichlorobenzene	1/13	0.5	1,970 (total) ^(c)	
1,4-Dichlorobenzene	1/13	0.51	1,970 (total) ^(c)	
1,2-Dichlorobenzene	1/13	0.55	1,970 (total) ^(c)	
cis-1,2-Dichloroethene	1/13	1.0	224,000 ^(c)	
2-Methylnaphthalene	2/13	6 to 32	620	2.08
4-Nitrophenol	1/13	4.0j	4,850 ^(c)	23.4
Diethylphthalate	2/13	2 to 5j	120,000 ^(b)	220
Fluorene	1/13	7		
Benzene	7/13	0.27j to 8.9	700	45.5
Toluene	11/13	0.17j to 20	5,000	133
Ethylbenzene	10/13	0.19j to 9.3	430	294
Total xylenes	11/13	0.21j to 19.5	2,680 ^(c)	86.2
TPH (mg/L)	10/13	0.70 to 28		

(a) Water quality criteria are marine chronic values, or freshwater chronic values if no marine criterion was available. Tier II values for freshwater from Suter (1996).

(b) No criterion available — human health (fish consumption) value.

(c) No criterion available — lowest effects concentration or estimated value.

Encl (2)

Excerpt from EFA West Cleanup Review Team (CURT) preliminary report - follow up to Regulatory Support Meeting of 4/23/96. Draft version.

1.2.4 Using Individual Constituent Concentrations and TPH Values

A simple, rapid method for analysis of total petroleum hydrocarbons (TPH) is used frequently at potentially contaminated sites as a quick screening tool to delineate the aerial extent of contamination of subsurface soils, sediments, and ground water with various types of crude or refined petroleum products. The TPH data also are used sometimes for setting cleanup goals and as a basis of human health and ecological risk assessments. The methods used most frequently for TPH analysis (EPA Method 8015, 418.1 or equivalent) lack specificity and are not able to identify and quantify the chemical constituents of petroleum that have the greatest potential to cause environmental injury.

The Cleanup Review Team recommends that TPH data should not be used as the basis for cleanup goals or for human health and ecological risk assessments. In most cases soil, sediment, and ground water samples also are analyzed for volatile aromatic hydrocarbons (BTEX) and less often for polycyclic aromatic hydrocarbons (PAHs). The BTEX and PAH compounds are the chemicals in various crude, refined, and residual petroleum products with the highest toxicity and potential for causing environmental injury. However, at several sites reviewed by the Team,

concentrations of TPH in soil or ground water were high, yet concentrations of BTEX and or PAHs were very low or non-detectable. This indicates that either the TPH analyses were not quantifying a petroleum product such as gasoline or diesel fuel, or the petroleum product had been degraded to the point where it no longer contained environmentally significant concentrations of toxic constituents. In either case, the TPH greatly overestimated the environmental hazard of any petroleum product remaining in the soil or ground water.

Risk calculations cannot be performed utilizing TPH data because no toxicity values for the mixture is available and weathering has often occurred. Assuming the presence of individual constituents (i.e., benzene) when sampling data does not support this assumption results in an overestimation of risk and may result in unnecessary remediation. The evaluation of TPH concentrations, in the absence of individual constituents, should focus on the potential adverse aesthetic effects only (taste, odor, sheen, etc.).

TPH data should be obtained only for initial screening and delineation of underground petroleum plumes. Data for BTEX and PAHs in soils, sediments, and ground water should be used to monitor site cleanup or remediation and as the basis of human health and ecological risk assessments.