DEPARTMENT OF THE NAVY
PACIFIC DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
258 MAKALAPA DR., STE. 100
PEARL HARBOR, HI 96860-3134

RECEIVED
DEPARTMENT OF HEALTH
2004 APR 15 P 4: 34

5090.A14
Ser ENV1821/ 641

13 APR 2004

Dr. Keith Kawaoka
Hazard Evaluation and Emergency
Response Office
State of Hawaii, Department of Health
919 Ala Moana Blvd., 2nd Floor
Honolulu, HI 96814

Dear Dr. Kawaoka:

SUBJ: REQUEST FOR NO FURTHER ACTION DETERMINATION FOR THE RED HILL OILY WASTE DISPOSAL FACILITY

Thank you for your letter of January 13, 2004 indicating that you have no comments on the 8,000-Gallon AST Area Total Petroleum Hydrocarbon-Diesel Characterization Report (December 2003) (hereafter referred to as the "TPH Report"), and that the Hawaii State Department of Health (DOH) agrees with the TPH Report recommendation of No Further Action (NFA) for unrestricted use at the Red Hill Former Oily Waste Disposal Facility (OWDF) site, as shown on the enclosed map.

In accordance with the Federal Facility Agreement (FAA) (DON1994) and subsequent partnering agreements between the Navy, EPA, and DOH, Navy sites in Hawaii that are impacted solely by petroleum hydrocarbons can be closed after meeting the SCP requirements.

The attached tables summarize the Hawaii State Contingency Plan (SCP) (DOH 1997) criteria and Technical Guidance Manual (TGM) (DOH 2000) Section 9 criteria for closure of sites impacted by petroleum hydrocarbons, and describe the site conditions that justify closure with respect to each criterion. The SCP criteria are addressed in Table 1, which covers the entire OWDF site and presents in the Site-Specific Response columns the data and information that were documented in the Removal Action Report and the Phase I and Phase II RI Reports for the Red Hill OWDF (OHM 1995, Ogden 1996, Earth Tech 2000) and the TPH Report (Earth Tech 2002); the TGM Section 9 criteria are addressed in Table 2, which are the data and information documented in the TPH Report. As indicated in Tables 1 and 2, the results of the combined investigation demonstrate that the SCP and TGM closure criteria have been met. Therefore, the Navy requests that the DOH concur with a NFA determination for unrestricted use at the Red Hill Former OWDF site in accordance with the requirements of Hawaii Administrative Rules, Chapter 11-451: SCP and the TGM.

Should you have any questions regarding this letter, please contact Mr. Wesley Ching of our Environmental Restoration Division at (808) 472-1422.

Sincerely,

Melvin Z. Sakai 107829

MELVIN Z. SAKAI
Head
Environmental Engineering Department

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Encl:
(1) Site Map
(2) Table 1 – State Contingency Plan Criteria
(3) Table 2 – Technical Guidance Mannual Criteria

Copy to:
Mr. Lewis Mitani
Federal Facilities Cleanup Office
SFD-8-3
U. S. Environmental Protection Agency
Region IX
75 Hawthorne Street
San Francisco, CA 94105

Mr. Richard F. Howard
TechLaw Inc.
1211 H. Street, Suite E
Sacramento, CA 95814

Mr. Laurence Lau (w/o encl)
Deputy Director for Environmental Health
1250 Punchbowl Street
Kinau Hale
Honolulu, HI 96813

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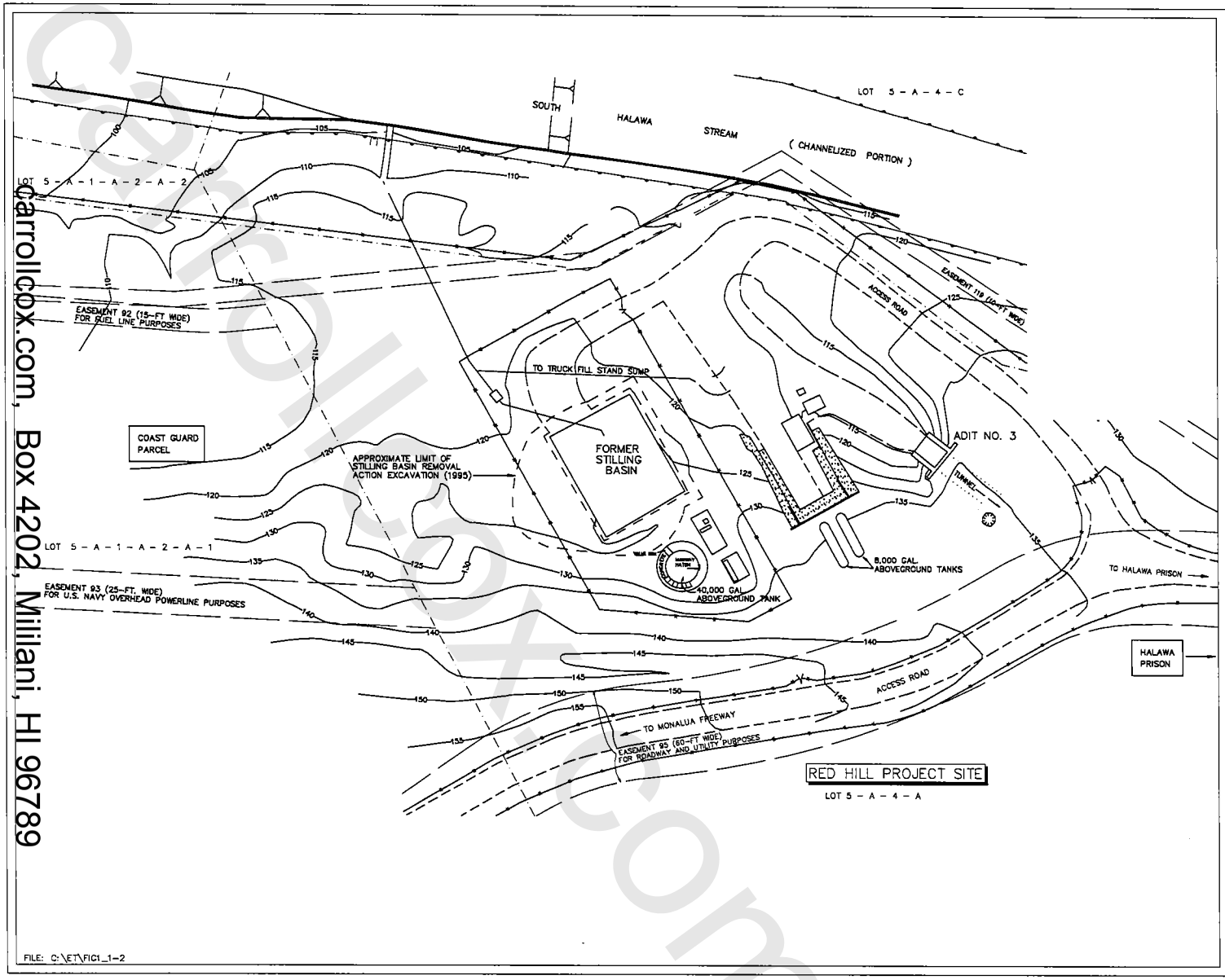

FILE: C:\ET\FIG1_1-2

LEGEND

- PROPERTY LINE
- UTILITY EASEMENT
- CHAIN LINK FENCE
- NO ACCESS BOUNDARY
- 135 ELEVATION CONTOUR (FEET,MSL)

NOTES

SOURCES

TOPOGRAPHIC SURVEY MAP, RED HILL OILY WASTE DISPOSAL PIT PROJECT, AT HALAWA, OAHU, HAWAII
BY PARK ENGINEERING, HAWAII: DATED MARCH 6 1992

TITLE

SITE MAP
RED HILL OILY WASTE DISPOSAL FACILITY

FEET 0 25 50
SCALE 1"=50' (APPROXIMATE)

EARTHTECH

FIGURE 1.1-2

ENCLOSURES (1)

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Table 1. Hawaii State Contingency Plan Criteria for Site Closure and Site-Specific Responses, Red Hill Former OWDF

Criterion	Description	Site-specific Response
11-450-10(a) Criteria for No Further Action	"A facility… shall no longer be subject to response actions… when the department determines that no further response action appears appropriate based on all of the information that may then be reasonably obtained. In making such a determination, the department shall consider [a]ny appropriate information to determine whether the facility does not meet any of the minimum threshold criteria contained in 11-450-9(b)(2) [see below] and therefore, taking appropriate response action is not appropriate; or If response actions taken have been sufficient to address the release or threat of release in accordance with the requirements of these rules."	The combined findings of the Removal Action (OHM 1995), both RI phases (Ogden 1996, Earth Tech 2000), and the TPH characterization investigation (Earth Tech 2002) indicate that the remaining chemicals (petroleum hydrocarbons) at the site are limited in both concentration and extent, and that additional response action is therefore not warranted.
11-450-9(2)(b) Minimum Hazard Threshold Criteria	A. Actual or probable release to groundwater which is a drinking water supply	Hydrogeologic conditions prevent site constituents from reaching the deep basal (potable) aquifer that underlies the site. Hydrogeologic data presented in the Phase I and Phase II RI reports indicate that the petroleum hydrocarbons detected in the (non-potable) on-site perched groundwater cannot migrate vertically downward through the three low-permeability confining formations that overlie the basal aquifer (Ogden 1996, Earth Tech 1999). No TPH or PAHs were detected in any of the basal groundwater samples collected during Phase II groundwater sampling (Earth Tech 1999).
	B. Actual or probable release to surface water which is a drinking water supply	The Phase II RI Report (Earth Tech 1999) presented strong evidence (based on groundwater monitoring data representing the upper level perched groundwater) supporting the conclusion that petroleum hydrocarbons detected in the perched groundwater are naturally attenuating, and will not migrate to the basal aquifer. Note also that surface waters in the vicinity of the site are not suitable for use as drinking water supplies (Earth Tech 1999).
	C. Actual or probable release to air that poses a threat to public health	The Phase I RI Report (Ogden 1996) characterized the nature and extent of volatile organic compounds (VOCs) in soil, conducted a preliminary risk evaluation, and concluded that chemicals potentially released to the air pose no significant threat to human health.
	D. Actual or probable release to and extensive contamination of soil that poses a direct contact hazard due to uncontrolled facility access	Results of the Phase I RI (Ogden 1996), Phase II RI (Earth Tech 2002), and TPH characterization investigation (Earth Tech 2002) indicate that the distribution of chemicals in soil is characterized by isolated discrete occurrences. The Phase I and Phase II RI risk assessments demonstrated that direct contact with surface and near surface soils that may occur due to uncontrolled facility access does not pose significant risks.
	E. Actual or probable existence of uncontrolled hazardous substances, pollutants, or contaminants, such as leaking containers or impoundments, that poses a direct contact hazard due to uncontrolled facility access.	The Phase I and Phase II RIs (Ogden 1996, Earth Tech 2000) have demonstrated that current chemical concentrations at the site pose no direct contact hazards due to uncontrolled facility access.
	F. Actual or probable adverse impact to natural resources;	The Phase I and Phase II RI reports (Ogden 1996, Earth Tech 2000) provide strong evidence that site-related chemicals have not impacted on-site natural resources or wetlands, and that future impact is extremely unlikely, because (a) the petroleum constituents in soil are remaining onsite and decreasing in concentration due to natural attenuation and (b) the perched groundwater does not discharge to surface water.
	G. Actual or probable imminent danger of fire or explosion.	No free product has been detected in groundwater (Ogden 1996, Earth Tech 2000) and the levels of petroleum constituents remaining in soil (Earth Tech 2002) are well below levels that could pose fire or explosion hazards.
	H. A determination by the director that a facility or vessel poses a substantial endangerment to public health or welfare, the environment, or natural resources.	Based on the extensive risk assessment and exposure pathway modeling results presented in the Phase I and Phase II RI reports (Ogden 1996, Earth Tech 2000), the residual constituents present in the soil and groundwater at the site does not threaten public health or welfare, the environment, or natural resources.

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ENCLOSURES (2)

Table 2: Technical Guidance Manual Criteria for Petroleum-Impacted Sites and Site-Specific Responses, AST, Red Hill Former OWDF

Criterion No.	Criterion	Site-Specific Response
1	The contaminant source area has been characterized, and the extent of the impact has been defined.	TPH-diesel was detected at isolated discrete soil sampling locations, indicating that the lateral and vertical extent of TPH-diesel in soil is not continuous. A TPH-diesel concentration above the DOH Tier 1 SAL was detected in only one sample (at 10 feet bgs) at the Former AST Area. The investigation results indicate that TPH-diesel concentrations above the site-specific characterization level requested by the DOH (25 mg/kg) are limited to depths between approximately 5 and 25 feet bgs.
2	The impacted soil does not create nuisance problems (odor).	The investigation results indicate that TPH concentrations above 25 mg/kg are limited to depths of 5 feet bgs or deeper, and no odors or other nuisance problems have been observed around the area.
3	The facility ensures that residual petroleum does not migrate off site (i.e., via groundwater) and negatively impact adjacent properties, groundwater extraction wells, or surface water bodies.	The investigation results indicate that TPH concentrations greater than 25 mg/kg in soil are limited to depths between approximately 5 and 25 feet bgs in the Former AST Area, away from the site perimeter. No surface water exists at the site, and potential for surface runoff from the site is low (Earth Tech 2000). Results of the hydrogeologic investigation (Earth Tech 2000) strongly support the conclusion that there is little or no potential for downward transport of constituents to the basal aquifer. This conclusion is supported by the groundwater monitoring data (Earth Tech 2000): No sheen, product, TPH, or fuel-related constituents have been detected in the basal groundwater, and no sheen or product has been detected in the perched groundwater at the OWDF (Earth Tech 2000).
4	The following TPH values are not exceeded: 5,000 mg/kg for TPH as oil or TPH as diesel, and 2,000 mg/kg for TPH as gasoline.	With the exception of one sample (collected at 10 feet bgs in the Former AST Area) TPH concentrations detected in all soil samples collected during the investigation were below the DOH criteria (Earth Tech 2002a).
	Based on recent discussions between the Navy, DOH, and EPA, it was agreed that the TPH concentrations listed in Criterion 4 should be used as screening criteria for delineation of petroleum contamination, but that cleanup to these levels is not required if the following criteria are met: The contaminant source area has been characterized, and the vertical and lateral extent of contamination has been delineated in accordance with an agreed-upon SAP.	The following evidence demonstrates that each criterion has been met: The vertical and lateral extent of TPH contamination has been characterized and delineated according to the DOH Tier 1 SALs, the site-specific TPH-diesel characterization level requested by the DOH (25 mg/kg), and the agreed-upon SAP (which documents the investigation approach and data quality objectives) (Earth Tech 2002b).
	Free-phase product is removed from the water table to the extent practicable in accordance with the TGM SCP (DOH 1997).	No free-phase product was detected in the borings for monitoring wells RH-MW08, RH-MW06 and RH-MW09 or any of the other borings advanced in the Former AST Area during the Phase II RI and TPH-diesel characterization investigations. No sheen or free-phase product was observed in any of the groundwater samples collected from existing monitoring wells after the OHM remedial action in 1995 (Ogden 1996, Earth Tech 2000).
	Risk assessments conducted in support of site characterization are consistent with DOH Tier 1, 2, or 3 RBCA methodology, consider both the direct contact pathway and potential threats to groundwater or surface water bodies, and demonstrate that no unacceptable risks to human health or the environment are associated with the TPH	Human health and ecological risk assessments were conducted for both RI phases in accordance with USEPA methodology (EPA 1989a, 1989b, 1991, 1997) to evaluate the potential threats represented by detected soil and groundwater concentrations. The risk assessments demonstrated that no unacceptable risks to human health or the environment are associated with the petroleum hydrocarbon compounds or any of the other chemicals detected at the OWDF

bgs below ground surface
EPA Environmental Protection Agency, United States
mg/kg milligram per kilogram
RBCA risk-based corrective action
SAL soil-action level
SAP sampling and analysis plan

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