

ALAMEDA COUNTY  
HEALTH CARE SERVICES

AGENCY  
DAVID J. KEARS, Agency Director



*Sent 12/28/99  
Including cc's*

201097

ENVIRONMENTAL HEALTH SERVICES  
ENVIRONMENTAL PROTECTION  
1131 Harbor Bay Parkway  
Alameda, CA 94502-6577  
(510) 567-6700  
(510) 337-9432

December 21, 1999  
StID # 1420

Mr. R. Stephen Wilson  
Crowley Marine Services  
2401 Fourth Ave., 11<sup>th</sup> Floor  
P.O. Box 2287  
Seattle, WA 98111-2287

**Re: Request for Well Closure at Pacific Dry Dock, Yard I, 1441 Embarcadero, Oakland,  
CA 94606**

Dear Mr. Wilson:

This letter is to inform you that the Regional Water Quality Control Board has concurred with our office's recommendation for site closure regarding the two former underground tanks at the above referenced site. Prior to issuing formal closure, you are required to properly close the existing six (6) monitoring wells at this site. You may contact, Ms. Cindy Hutcheson of Alameda County Public Works, Water Resources at (510) 670-5248 for their specific requirements.

Please send our office a copy of the well closure report after this work is completed.

You may contact me at (510) 567-6765 if you have any questions.

Sincerely,

Barney M. Chan  
Hazardous Materials Specialist

C: B. Chan, files  
Ms. D. Heinze, Port of Oakland, 530 Water St., Oakland, CA 954604-2064  
Wlc|PDDI

ALAMEDA COUNTY  
HEALTH CARE SERVICES

AGENCY  
DAVID J. KEARS, Agency Director



ENVIRONMENTAL HEALTH SERVICES  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502-6577  
(510) 567-6700  
(510) 337-9335 (FAX)

R01097

June 28, 1999

Mr. R. Stephen Wilson  
Crowley Marine Services, Inc.  
2401 Fourth Avenue, 11th Floor  
P.O. Box 2287  
Seattle, Washington 98111

**Re: Pacific Dry Dock Yards I and II, 1441 and 320 Embarcadero, Oakland,  
California, 94606**

Dear Mr. Wilson:

For a number of years, Crowley Marine Services, Inc. and its predecessors (Crowley) operated ship repair and maintenance facilities at Pacific Dry Dock Company Yard I (1441 Embarcadero) and Yard II (321 Embarcadero) in Oakland, California. These properties, leased by Crowley, are both owned by the Port of Oakland. We have received the *Update to the Risk Assessment Report* (Risk-Based Decisions, Inc., July 6, 1998) and the recalculations of the potential risks (Risk-Based Decisions, January 26, 1999) posed by the referenced sites, Pacific Dry Dock Yards I and II. Both Yards have been evaluated for closure based on the Guidelines used by the San Francisco Bay Regional Water Quality Control Board (RWQCB) for low risk soil and groundwater cases. Specific information relating to each site is presented below:

**Yard I**

Crowley reportedly operated a boat repair and marine railway facility at Yard I from approximately 1911 to May 1991 when all repair activity ceased. Before 1913, Yard I reportedly consisted mostly of soft mud where an old creek had emptied into the Oakland Inner Harbor, with the balance covered by water. With permission of the Oakland City Council (Resolution No. 7210, dated December 30, 1913), Crowley deposited approximately 35,722 cubic yards of fill covering the entire leased premises. The fill consisted of mud taken from the bottom of Oakland Inner Harbor, covered with rock and gravel to make the filled land more solid and substantial.

When it was operational, Yard I consisted of two marine railways, machine and carpentry shops, warehouses and support offices. During its commercial life, the

primary activity at Yard I was the repair and refurbishing of boats and ocean-going vessels. Some vessels were placed on the marine railways while others remained afloat during repair work. Vessels to be placed on the marine railways were aligned at high tide and, as the tide receded, the vessels were secured to the railway platform. The platform was then pulled to the high-water line where the repair work was performed. The hulls of some of these vessels were cleaned by high-pressure water, while others were stripped using air-blown sand blast grit to remove barnacles, rust and other debris.

Soil and groundwater at Yard I have been extensively investigated since 1989, under the supervision of the Alameda County Health Services Agency (ACHSA) pursuant to agency-approved work plans. From December 1989 to January 1990 a preliminary assessment evaluated Crowley's activities at the Yards and the chemicals associated with those activities. These efforts are described in **Site Assessment of Pacific Dry Dock Yards I and II Report**, dated October 2, 1990, Versar, Inc. After the preliminary assessment, Yard I was divided into two sections – the eastern section and the western section – and was investigated in phases:

Western Section:

9/91 - Crowley removed an underground storage tank located in the northwestern portion of the site (tank removal, sample collection and analytical results for soil and groundwater are described in **UST Removal Report**, dated January 14, 1992, Versar, Inc.).

10/91 and 1/92 - Investigation included drilling 48 soil borings and collecting and analyzing 11 groundwater samples and 70 soil samples (drilling, sample collection and analytical results are described in **Preliminary Investigation and Evaluation Report (PIER), Pacific Dry Dock and Repair Yard I, Western Section**, dated May 6, 1992, Versar, Inc.).

6/93 - Crowley installed 5 groundwater monitoring wells, and collected 10 soil samples (well installation, sample collection and analytical results are described in **Well Installation, Pacific Dry Dock and Repair Yard I, Western Section** report, dated November 1993, Versar, Inc.). After well installation, a quarterly groundwater monitoring program was initiated at the site (analytical results are described in **Site Assessment Report, Former Pacific Dry Dock and Repair Company Yard I Facility, Oakland, California** report, dated May 6, 1996, Versar, Inc.).

Eastern Section:

8/92 – Crowley sampled the contents of an abandoned 500-gallon UST and drilled 16 boreholes, from which soil and groundwater samples were collected (details of the groundwater sampling activities and the analytical results are described in **Addendum to Phase II Site Investigation Work Plan, Pacific Dry Dock Yard I** report, dated September 18, 1992, Versar, Inc.).

2/94 – Crowley removed a 500-gallon UST from NE corner of site (described in **Underground Storage Tank Removal Report**, dated July 29, 1994, Versar, Inc.).

6/95 - 3/96 – Crowley investigated areas of soil containing lead concentrations exceeding TTLC and STLC values, and removed approximately 40 tons of lead impacted soil for disposal; Crowley further evaluated the extent of lead impact in soil by drilling 8 soil borings, installing 1 monitoring well, and collecting and analyzing 22 soil samples (soil boring, well installation and analytical results are described in **Site Assessment Report Former Pacific Dry Dock and Repair Company Yard I Facility, Oakland, California** report, dated May 6, 1996, Versar, Inc.).

Remediation activities at Yard I are summarized below:

- An underground fuel storage tank was removed from the northwestern portion of the site in September 1991.
- An underground fuel storage tank was removed from the northeast corner of the site in February 1994.
- Approximately 40 tons of fill materials were excavated from two areas in the eastern section of the site in June and July 1995.<sup>1</sup>

These site characterizations revealed the presence of total petroleum hydrocarbons (TPH) as diesel (TPHd) and as gasoline (TPHg) with very low levels of benzene, toluene, ethylbenzene and xylenes (BTEX) in soil and groundwater. In addition, copper, lead, mercury and zinc were also detected at concentrations above their naturally occurring background concentrations. A risk assessment (**Risk-Based Decisions, Inc. Risk Assessment Report for the Former Pacific Dry Dock and Repair Company Yard I Site, July, 1997**) based on these data showed that there were no risks to human health and the environment above regulatory thresholds.

Additional sampling of soil and groundwater was conducted in 1998 and overseen by this agency. This investigation involved analyzing the collected samples testing for

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<sup>1</sup> The remediation of the inter-tidal and supra-tidal sediments is summarized at page 6.

all previously detected chemicals and, in addition, included testing for carcinogenic and noncarcinogenic polynuclear aromatic hydrocarbons (PNAs). These additional data were used to revise the 1997 risk assessment using recalculations of potential risks under conservative exposure scenarios (***Update to the Risk Assessment Report, Risk-Based Decisions, Inc., January 26, 1999***). All of these evaluations showed there were no risks to human health and the environment above regulatory thresholds.

Based on the reports submitted by Crowley, ACHCA Staff concurs with the scope of work completed and with the conclusions of the risk assessments. Alameda County, therefore, finds that based on the information provided to it, the concentrations of constituents of concern remaining at Pacific Dry Dock Yard I do not pose an unacceptable risk to public health and the environment and require no further action.

## Yard II

Crowley reportedly first acquired an interest in Yard II in the 1950s when it purchased the stock of Martinolich Ship Repair Company. Martinolich had been a sublessee of the United States Navy (the Navy) from approximately 1951 until December 31, 1962. The United States Navy was a tenant of the Port from approximately 1942 until approximately 1962. Review of the history apparently indicates that the Navy's contractor, Hurley Marine Works, leased property immediately to the east of what eventually became Yard II. The Navy's reports demonstrate the Navy's intention to establish facilities to support the assignment of a floating dry dock by the Government and to utilize to the fullest possible extent all existing ship repair facilities at the contractor's yard. Thus, even before 1944, there were apparently ship repair facilities in that area of the estuary.

When the Navy's tenancy began, the shore-side property was significantly smaller in size than it became later that year as a result of the Navy's efforts. Photographs and other documents acquired from the National Archives depict the installation of pilings, and the placement of approximately 71,000 cubic yards of earth, rock and sand fill. One of the reports describes the demolition of approximately 50,000 square feet of an old pier, old pilings and debris, and placement of fill, the

construction of buildings, and the paving of "practically the whole yard" with 3-inches of asphaltic concrete on rock base. The Port of Oakland issued permits allowing the Navy to proceed with this effort. Thus, when Martinolich became a tenant in 1951, virtually the entire facility, consisting of approximately 3.5 acres, including the fill that had been imported by the Navy, was covered with asphalt. By 1951, Yard II consisted of two large wooden buildings (a warehouse building and a service

shop/office building), a plate shop, a powerhouse, a boathouse, and a floating dry dock, all reportedly constructed or installed by the Navy.

Soil and groundwater at Yard II have been extensively investigated since 1989, under the supervision of the Alameda County Health Services Agency (ACHSA) pursuant to agency-approved work plans. From December 1989 to January 1990 a preliminary assessment evaluated Crowley's activities at the Yards and the chemicals associated with those activities. These efforts are described in **Site Assessment of Pacific Dry Dock Yards I and II Report**, dated October 2, 1990, Versar, Inc., and in **Site Investigation Work Plan, Pacific Dry Dock and Repair Yard II**, dated June 13, 1991, Versar, Inc. During the preliminary assessment at Yard II, which focused on areas of industrial activity, Crowley drilled 11 boreholes and collected and analyzed 20 soil and spent sand-blast material. Subsequent investigations are described below:

5/94 Crowley drilled 18 boreholes and collected and analyzed 30 soil samples and 1 groundwater sample (described in **Soil and Groundwater Investigation Report**, dated July 14, 1995, Versar, Inc.).

7/94 Crowley drilled 3 boreholes and installed 3 4-inch monitoring wells (described in **Well Installation and Monitoring Report**, dated June 14, 1995, Versar, Inc.).

9/94 Crowley removed a 500-gallon underground tank, collected and analyzed soil samples (described in **Underground Storage Tank Removal Report**, dated February, 1995, Versar, Inc.). **(Based on these results, this agency issued a site closure letter dated March 2, 1995.delete this in parenthesis)**

4/95 Crowley collected and analyzed 33 soil samples from 28 locations (described in **Soil and Groundwater Investigation Report**, dated July 14, 1995, Versar, Inc.).

7/95 - 9/95 Crowley collected and analyzed filtered groundwater samples from 10 temporary groundwater sampling points, and installed and sampled 4 additional groundwater-monitoring wells (described in **Monitoring Well Installation and Third Round Groundwater Monitoring Report**, dated December 1, 1995, Versar, Inc.).

Constituents of potential concern at Yard II included heavy petroleum hydrocarbons, lighter petroleum hydrocarbons in the northeastern portion of

the site, (and delete) metals associated with the spent sandblast grit, **chlorinated hydrocarbons and PCBs**. Remediation at Yard II has been completed as described below:

- An underground fuel storage tank was removed from the north-central portion of the site in September 1994.
- The aboveground diesel fuel storage tanks near the powerhouse were removed in March 1996.<sup>2</sup>

A risk assessment (*Risk-Based Decisions, Inc. Risk Assessment Report for the Former Pacific Dry Dock and Repair Company Yard I Site, July, 1997*) based on these data showed that there were no risks to human health and the environment above regulatory thresholds.

With the oversight of this Department, additional sampling of soil and groundwater was conducted in 1998. This investigation involved testing for all previously identified chemicals and, in addition, for carcinogenic and noncarcinogenic polynuclear aromatic hydrocarbons (PNAs), and for polychlorinated biphenyls (PCBs). These additional data were used to revise the **previously** (previously, **typo**) submitted risk assessment using recalculations of potential risks under conservative exposure scenarios (*Update to the Risk Assessment Report, Risk-Based Decisions, Inc., Risk-Based Decisions, January 26, 1999*). All of these evaluations showed that there were no risks to human health and the environment above regulatory thresholds.

Based on the reports submitted by Crowley, ACHCA Staff concurs with the scope of work completed and with the conclusions of the risk assessments. The County, therefore, finds that based on the information provided to it, the concentrations of constituents of concern remaining at Pacific Dry Dock Yard II do not pose an unacceptable risk to public health and the environment and require no further action. **An on-going investigation related to petroleum release from two underground heating fuel tanks is still under investigation with the Port of Oakland, the responsible party.**

### Sediments

In addition, between 1989 and 1996, both Crowley and the RWQCB tested and evaluated the potential environmental impact of the inter-tidal and offshore sediments. An ecological risk assessment conducted by Crowley, under the supervision of the RWQCB, showed that the residual chemicals of potential concern

<sup>2</sup> The remediation of the inter-tidal and supra-tidal sediments is summarized at page 6.

in the sediments did not present risks to the environment above regulatory thresholds (*PTI, Supplemental Inshore Sediment Impairment Study*, June 1994). Notwithstanding this finding, in March 1996, the RWQCB issued Cleanup and Abatement Order (CAO) No. 96-111 directing Crowley to remove spent sand-blast grit from the inter-tidal and supra-tidal areas at both Yards. In that letter the RWQCB also stated that "data from [Crowley's] 1994 study and the 1995-96 Bay Protection and Toxic Cleanup Program [BPTCP] screening study indicate that the sediments of the subtidal areas on and near the sites do not represent a significant threat to aquatic life and human health."

In March 1997, in response to CAO 96-111, Crowley removed from the supra- and inter-tidal areas at Yard I (approximately 4000 tons) and Yard II (approximately 500 tons) of spent sandblast grit and debris. These materials were classified by the California Department of Toxic Substances Control as non-hazardous (Letter from Dr. James Carlisle to R. Stephen Wilson, November 17, 1997), and were sent for appropriate disposal as landfill cover.

By letter dated April 22, 1998 the RWQCB rescinded CAO No. 96-111 for the removal and appropriate disposal of the spent sand-blast grit at Yards I and II.

In April of this year, this Department received a communication from the RWQCB explaining the listing of "Pacific Dry Dock #1 (area in front of storm drain)" as a potential toxic hot spot under the Bay Protection and Toxic Cleanup Plan. In relevant part, the RWQCB stated:

"Although the area in front of Pacific Dry Dock Yard #1 was cleaned up [by Crowley] to the Regional Board's satisfaction, results from the PTI and BPTCP studies revealed that the sediment in front of the storm drain was more toxic than the sediment in front of the dry dock facility. BPTCP studies indicated that there was no toxicity directly in front of the dry dock facility and that the sediment in front of the storm drain contained high levels of contaminants common in urban runoff."

The RWQCB concluded as follows: "We consider the issue involving Crowley's responsibility under its former NPDES permit resolved."

Based on the results of Crowley's investigations of the soil and groundwater at Pacific Dry Dock Yards I and II, risk assessments have established that the concentrations of constituents of concern remaining at those sites do not pose an unacceptable risk to public health and the environment, we find that no further action is required at either Yard I or Yard II in regards to the surface releases and spills (SLIC cases).



Very truly yours,



-----  
Madhulla Logan  
ACEH



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Barney Chan  
ACEH

**C: ACEH, files**

Mee Ling Tung, Director, EHS  
R. Pantages, EHS  
T. Peacock, EHS  
D. Heinze, Port of Oakland, 530 Water St., P.O. Box 2064, Oakland CA 94604-2064  
M. Heffes, Port of Oakland  
D. Herman, Port of Oakland  
M. O'Brien, Port of Oakland  
Joyce Washington, Port of Oakland  
Karen Taberski, RWQCB, 1515 Clay St., Suite 1400, Oakland CA 94612  
Loretta Barsamian, RWQCB  
Mr. L. Griffin, City of Oakland, OES, 505 14<sup>th</sup> St., 7<sup>th</sup> Floor, Oakland CA 94612  
Mr. I. Jamal, Risk-Based Decisions, Inc., 910 Florin Rd., Suite 202, Sacramento, CA 95831

ALAMEDA COUNTY  
HEALTH CARE SERVICES



AGENCY  
DAVID J. KEARS, Agency Director

RO1097

June 16, 1999

STID #1420

Mr. Stephen Wilson  
Crowley Marine Services  
2401 Fourth Ave., 11<sup>th</sup> Floor  
Seattle, WA 98111

ENVIRONMENTAL HEALTH SERVICES  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502-6577  
(510) 567-6700  
(510) 337-9335 (FAX)

**RE: Pacific Dry Dock Yard I, 1441 Embarcadero, Oakland CA 94606**

**LANDOWNER NOTIFICATION AND PARTICIPATION REQUIREMENTS**

Dear Mr. Wilson:

This letter is to inform you of new legislative requirements pertaining to cleanup and closure of sites where an unauthorized release of hazardous substance, including petroleum, has occurred from an underground storage tank (UST). Section 25297.15(a) of Ch. 6.7 of the Health & Safety Code requires the primary or active responsible party to notify all current record owners of fee title to the site of: 1) a site cleanup proposal, 2) a site closure proposal, 3) a local agency intention to make a determination that no further action is required, and 4) a local agency intention to issue a closure letter. Section 25297.15(b) requires the local agency to take all reasonable steps to accommodate responsible landowners' participation in the cleanup or site closure process and to consider their input and recommendations.

For purposes of implementing these sections, you have been identified as the primary or active responsible party. Please provide to this agency, within twenty (20) calendar days of receipt of this notice, a complete mailing list of all current record owners of fee title to the site. You may use the enclosed "list of landowners" form (sample letter 2) as a template to comply with this requirement. If the list of current record owners of fee title to the site changes, you must notify the local agency of the change within 20 calendar days from when you are notified of the change.

If you are the sole landowner, please indicate that on the landowner list form. The following notice requirements do not apply to responsible parties who are the sole landowner for the site.

**LANDOWNER NOTIFICATION**

Re: 1441 Embarcadero, Oakland CA 94606

June 16, 1999

Page 2 of 2

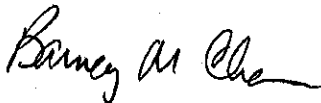
In accordance with Section 25297.15(a) of Ch. 6.7 of the Health & Safety Code, you must certify to the local agency that all current record owners of fee title to the site have been informed of the proposed action before the local agency may do any of the following:

- 1) consider a cleanup proposal (corrective action plan)
- 2) consider a site closure proposal
- 3) make a determination that no further action is required
- 4) issue a closure letter

You may use the enclosed "notice of proposed action" form (sample letter 3) as a template to comply with this requirement. Before approving a cleanup proposal or site closure proposal, determining that no further action is required, or issuing a closure letter, the local agency will take all reasonable steps necessary to accommodate responsible landowner participation in the cleanup and site closure process and will consider all input and recommendations from any responsible landowner.

Please call me at (510) 567-6765 should you have any questions about the content of this letter.

Sincerely,



Barney M. Chan  
Hazardous Materials Specialist

Attachments

cc: Chuck Headlee, RWQCB

ALAMEDA COUNTY  
HEALTH CARE SERVICES



AGENCY

DAVID J. KEARS, Agency Director

PO 1097

June 16, 1999  
StID # 1420

ENVIRONMENTAL HEALTH SERVICES  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502-6577  
(510) 567-6700  
(510) 337-9335 (FAX)

Mr. R. Stephen Wilson  
Crowley Marine Services, Inc.  
P.O. Box 2287  
Seattle, WA 98111

INTENT TO MAKE A DETERMINATION THAT NO FURTHER ACTION IS  
REQUIRED OR ISSUE A CLOSURE LETTER FOR 1441 Embarcadero, Oakland  
CA 94606

Dear Mr. Wilson:

This letter is to inform you that Alameda County Environmental Health Department, Local Oversight Program (LOP), intends to make a determination that no further action is required at the above site or to issue a closure letter. Please notify this agency of any input and recommendations you may have on these proposed actions within 20 days of the date of this letter.

In accordance with section 25297.15 of Ch. 6.7 of the Health & Safety Code, you must provide certification to the local agency that all of the current record fee title owners have been informed of the proposed action. Please provide this certification to this office within 20 days of the date of this letter. You may use the enclosed example letter (#3) for your reply.

If you have any questions about these proposed actions, please contact Barney Chan at (510) 567-6765.

Sincerely,

Thomas Peacock  
Manager, LOP

enclosure

cc: Chuck Headlee, RWQCB  
Mr. L. Griffin, City of Oakland Fire Services OES, 504 14<sup>th</sup> St., 7<sup>th</sup> Floor,  
Oakland, CA 94612

ALAMEDA COUNTY  
HEALTH CARE SERVICES

AGENCY  
DAVID J. KEARS, Agency Director



R01097

ENVIRONMENTAL HEALTH SERVICES  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502-6577  
(510) 567-6700  
(510) 337-9335 (FAX)

May 13, 1998

ATTN: Sir Or Madam

Versar, Inc  
5330 Primrose Dr. Ste. 228  
Fair Oaks Ca 95628

RE: Project # 6085A - Type M  
at 1441 Embarcadero in Oakland 94606

Dear Property Owner/Designee:

Our records indicate the deposit/refund account for the above project has fallen below the minimum deposit amount. To replenish the account, please submit an additional deposit of \$360.00, payable to Alameda County, Environmental Health Services, within two weeks of receipt of this letter.

It is expected that the amount requested will allow the project to be completed with a zero balance. Otherwise, more money will be requested or any unused monies will be refunded to you or your designee.

The deposit refund mechanism is authorized in Section 6.92.040L of the Alameda County Ordinance Code. Work on this project will be debited at the Ordinance specified rate, currently \$94 per hour.

Please be sure to write the following identifying information on your check:

- project #
- type of project and
- site address

(see RE: line above).

If you have any questions, please contact Amir Gholami at (510) 567-6876.

Sincerely,

Tom Peacock, Manager  
Environmental Protection

c: files

ALAMEDA COUNTY  
HEALTH CARE SERVICES

AGENCY  
DAVID J. KEARS, Agency Director



✓ RO# 1097 (#1441  
Embarcadero)

RO# 423 (#321 Embarcadero)

January 21, 1998

**Mr. R. Stephen Wilson**  
Crowley Marine Services, Inc.  
2401 Fourth St.  
Seattle, WA 98111

ENVIRONMENTAL HEALTH SERVICES  
ENVIRONMENTAL PROTECTION (LOP)  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502-6577  
(510) 567-6700  
FAX (510) 337-9335

**Ref: Environmental Investigation and Remediation at Pacific Dry Docks Yards I and II,  
1441 Embarcadero and 321 Embarcadero, Oakland, CA - 94606**

Dear Mr. Wilson:

This Department is in receipt and has reviewed the reports, Sampling Work Plan, dated November 14, 1997, prepared by Risk-Based Decisions (RBD), Draft Work Plan, dated September 1997, prepared by Geomatrix Consultants, Evaluation of the Work Plan Prepared by Geomatrix, dated December 9, 1997, prepared by RBD and Comments on the Sampling Work Plan, dated December 4, 1997, prepared by Geomatrix for the above referenced sites.

A letter, dated August 27, 1997 was sent to your attention requesting that both the parties, Crowley Marine Services and Port of Oakland confer and submit a mutually acceptable work plan. According to your letter dated, November 14, 1997, this was not feasible as both the parties could not resolve the differences regarding the sampling plan. This Department is concerned about the significant delay this has caused in initiating the required investigations at the referenced site and the inordinate amount of staff-time spent in reviewing the additional work generated by both the parties. Based on the information submitted, this Department has decided that the sampling work plan submitted by RBD is acceptable with the below given modifications. **Please submit a revised work plan incorporating the changes within 20 days from the date of this letter.**

**For Yard I - Western Section**

In the former UST area, diesel, gasoline and benzene (1.3 ppm) were identified at depths between 3.4 ft to 4ft bgs in boring BH12. Since complete information is not available as to the closure of this tank, at least 1 additional shallow and deep sample should be collected from this area and analyzed for TPH as gasoline and BTEX.

The area near the previous sampling location BH10 and BH12 was used for **drum storage**, and since no VOC samples have been collected, at least 1 shallow sample from this area should be analyzed for VOC's, and TRPH. Also, a sample should be collected at shallow depths from each of the two remaining **material storage areas** (marked on the enclosed map) and sampled for VOC's and TRPH since no samples have been collected from these areas previously.

A total of five soil samples were analyzed for **metals** in the western section out of which only one sample (BH9) was from a depth less than 5 feet. Also, two of the soil samples collected from borings, MW1 and MW3 had concentrations of arsenic above the preliminary remediation goals (PRG's) for a residential scenario but less than the background concentrations listed by RBD in their sampling plan. Hence, at least 1 shallow soil sample should be collected from each of the areas near MW1 and MW3 and analyzed for Title 22 metals.

Monitoring wells, MW1, and MW3 should be sampled and analyzed for VOC's, metals and PNA's and one groundwater sample should be collected in the former machine shop area and analyzed for VOC's and metals.

#### **For Yard 1 - Eastern Section**

A shallow soil sample should be collected from the **former paint booth area** (marked in the enclosed map), and analyzed for metals and VOC's.

At least one **groundwater sample** should be collected from each of the former paint storage and the paint booth area (marked in the map), and analyzed for VOC's and metals. Additionally, at least 1 groundwater sample should be collected in the furthest down gradient direction and analyzed for all VOC's, BTEX, PNA's, and metals. This data is needed to later evaluate the risk to marine life.

#### **For Yard 2**

The proposed samples **13a1s and 13a2s** should also be sampled for metals, apart from VOC's due to the previous use of this area for various purposes. Also, 1 deep soil sample (between 3 to 5 ft bgs) should be collected from this area and analyzed for both metals and VOC's.

At least one **groundwater sample** should be collected from each of the following areas:

Degreaser area/machine shop area and analyzed for VOC's, metals, TRPH and SVOC analysis ;

Former sandblast grit storage area analyzed for VOC's and metals analysis; and

Furthest down gradient direction and analyzed for all VOC's, BTEX, PNA's, and metals (This data is needed to later evaluate the risk to marine life).

#### **PCB Issue**

Although it is not confirmed that PCB's were used on site, there is a probability the marine paints and oil used on ships contained PCB's . Hence, collect 1 shallow sample from each of the following areas and analyze for PCB's:

One sample from the area where bilge water was disposed; and

One sample from the sandblast storage area.

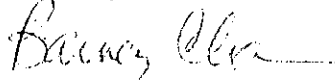
## Screening the Results of the Composite Samples

The screening process proposed for the composite samples is acceptable to this Department except that the adjusted concentrations of the composite sample should be compared to the preliminary remediation goals (PRGs) based on a cancer risk of  $10^{-6}$  for carcinogens and a hazard index of 1 for non-carcinogens. This decision was based on using the PRG concentrations as a screening tool to evaluate data adequacy and not for the purpose of evaluating risk to human health (for which the acceptable risk would be  $10^{-5}$ ).

Please include in the modified sampling plan, revised locations for random samples after excluding the additional target locations. Please note that based on the results of the investigation, additional work may be required prior to evaluating the risk for the referenced sites.

If you have any questions, you may reach me at (510) 567-6765

Sincerely,



Barney Chan

Hazardous Material Specialist

**Ms. Rachelle Hess**, Port of Oakland, 530 Water ST., Oakland, CA - 94604

**Mr. I. Jamall**, Risk based Decisions, Inc. 910 Florin Rd, Suite 2020, Sacramento, CA - 95831



ALAMEDA COUNTY  
HEALTH CARE SERVICES

AGENCY  
DAVID J. KEARS, Agency Director



V RO# 1097 (# 1441 Embarcadero)

RO# 423 (# 321 Embarcadero)

January 14, 1998

**Mr. R. Stephen Wilson**  
Crowley Marine Services, Inc.  
2401 Fourth St.  
Seattle, WA 98111

ENVIRONMENTAL HEALTH SERVICES  
ENVIRONMENTAL PROTECTION (LOP)  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502-6577  
(510) 567-6700  
FAX (510) 337-9335

**Ref: Environmental Investigation and Remediation at Pacific Dry Docks Yards I and II,  
1441 Embarcadero and 321 Embarcadero, Oakland, CA - 94606**

Dear Mr. Wilson:

Please remit \$4000 for Yard II and \$1000 for Yard I to cover the current negative balance for the projects and for continued oversight of the referenced sites. This deposit is authorized by Alameda County ordinance code section 3-141.6 to cover the expenses incurred by County personnel for their oversight duties. Records are maintained for the time County employees commit to a project and deposit will be debited at the rate of \$94.00 per hour for any time dedicated to your project. Any money remaining in your account at the end of the project will be refunded. Additional monies may be needed if the project exhausts the fund. Please submit a check payable to "Treasurer, County of Alameda" with the words "Site Mitigation" written on the check for proper credit. Also, please make sure to include the complete address of the site for which the deposit-refund account is being established.

If you have any questions, you may reach me at (510) 567-6765

Sincerely,

Barney Chan,  
Hazardous Material Specialist

ALAMEDA COUNTY  
HEALTH CARE SERVICES

AGENCY  
DAVID J. KEARS, Agency Director



✓ R0# 1097 (1441 EMBARCADERO)

R0# 423 (321 EMBARCADERO)

September 29, 1997  
SLIC StID # 1222 & 1420

Mr. R. Stephen Wilson  
Crowley Marine Services, Inc.  
2401 Fourth St.  
Seattle, WA 98111

ENVIRONMENTAL HEALTH SERVICES  
ENVIRONMENTAL PROTECTION (LOP)  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502-6577  
(510) 567-6700  
FAX (510) 337-9335

**Re: Environmental Investigation and Remediation at Pacific Dry  
Docks Yards I and II, 1441 Embarcadero and 321 Embarcadero,  
Oakland CA 94606**

Dear Mr. Wilson:

I have received your request for an extension of our office's September 29, 1997 deadline for the submittal of a mutual work plan for additional site assessment for the above referenced sites. I understand that some progress has been made in the meetings with your consultant and that of the Port of Oakland. I further understand that the Port's consultant has prepared their own individual work plan. Because our office would like to see a work plan with both parties input, we will grant the extension requested, November 15, 1997, on the condition that if the mutual work plan is not submitted by this date, we will request that the Port send their consultant's work plan for review.

In addition, you are again requested to submit a copy of the shoreline soils removal report for both sites and a copy of "Attachment 2" referenced in your May 29, 1997 letter.

You may contact me at (510) 567-6765 if you have any questions.

Sincerely,

Barney M. Chan  
Hazardous Materials Specialist

c: B. Chan, files

Ms. D. Heinze, Port of Oakland, 530 Water St., P.O. Box 2064,  
Oakland CA 94604

Ms. M. Heffes, Port of Oakland, Legal Department, 530 Water  
P.O. Box 2064, Oakland CA 94604

Ms. R. Hess, Port of Oakland, P.O. Box 2064, Oakland 94604

Ms. Beth Hamilton, Enea, Piunti & Hamilton, 60 S. Market St.,  
Suite 730, San Jose, CA 95113

Mr. I. Jamall, Risk-Based Decisions, Inc., 910 Florin Rd.,  
Suite 202, Sacramento, CA 95831

Mr. Steve Moore, RWQCB  
3PDDI&II

ALAMEDA COUNTY  
HEALTH CARE SERVICES

AGENCY  
DAVID J. KEARS, Agency Director



STID#  
✓ R0# 1097: ~~R0#~~ 1420: 1441 EMBARCADERO

R0# 423: STID# 1222: 321 EMBARCADERO

August 27, 1997  
SLIC StID # 1222 & 1420

Mr. R. Stephen Wilson  
Crowley Marine Services, Inc.  
2401 Fourth St.  
Seattle, WA 98111

ENVIRONMENTAL HEALTH SERVICES  
ENVIRONMENTAL PROTECTION (LOP)  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502-6577  
(510) 567-6700  
FAX (510) 337-9335

**Re: Environmental Investigation and Remediation at Pacific Dry  
Docks Yards I and II, 1441 Embarcadero and 321 Embarcadero,  
Oakland CA 94606**

Dear Mr. Wilson:

Our office has received the Risk Assessment reports for both of the above referenced sites as prepared by Dr. Ijaz Jamall of Risk-Based Decisions, Inc. Prior to reviewing these documents, I verbally requested that you submit a copy of the shoreline soils removal report for both sites. We further request copies of the "Attachment 2" referenced in your May 29, 1997 letter.

You are aware that the Port of Oakland retained the consulting firm, Geomatrix, in order to review the existing data for both sites. Their objective was to determine if sufficient site characterization had been performed prior to completing a risk assessment. Our office was submitted a Geomatrix report detailing extensive additional recommended investigation for both sites. In response to this report, our office has also received your May 29, 1997 letter and the May 28, 1997 Gauntlett Group report which responds to the Geomatrix report, basically stating that no further work is warranted. At this time, our office is in the unfortunate position of determining which recommendation should be taken.

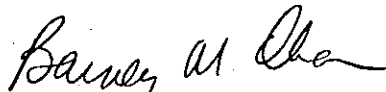
Our office would like the parties to confer and come to a mutually acceptable decision, however, we are prepared to evaluate the information provided as provided. Because the Geomatrix report was not specific in its recommended sampling, our office requests a specific supplemental work plan for any additional site investigation. Please provide **within 30 days or by September 29, 1997** either a work plan or notification that no additional work is recommended.

If no additional report is provided, our office will evaluate **both** submitted reports in consideration as to the future requirements for these sites.

You may contact me at (510) 567-6765 if you have any questions.

Mr. R. Stephen Wilson  
Pacific Dry Dock Yard I & II  
August 27, 1997  
Page 2.

Sincerely,



Barney M. Chan  
Hazardous Materials Specialist

c: B. Chan, files  
Ms. D. Heinze, Port of Oakland, 530 Water St., P.O. Box 2064,  
Oakland CA 94604  
Ms. M. Heffes, Port of Oakland, Legal Department, 530 Water  
P.O. Box 2064, Oakland CA 94604  
Ms. Beth Hamilton, Enea, Piunti & Hamilton, 60 S. Market St.,  
Suite 730, San Jose, CA 95113  
Mr. I. Jamall, Risk-Based Decisions, Inc., 910 Florin Rd.,  
Suite 202, Sacramento, CA 95831  
Mr. Steve Moore, RWQCB  
2PDDI&II

ALAMEDA COUNTY  
HEALTH CARE SERVICES

AGENCY  
DAVID J. KEARS, Agency Director



R01097

STID 1420

January 15, 1997

Mr. Stephen Wilson  
Crowley Marine Services  
2401 Fourth Avenue  
P. O. Box 2287  
Seattle, WA 98111

ENVIRONMENTAL HEALTH SERVICES  
ENVIRONMENTAL PROTECTION (LOP)  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502-6577  
(510) 567-6700  
FAX (510) 337-9335

RE: 1441 EMBARCADERO, OAKLAND, CA 94606

Dear Mr. Wilson:

This office is in receipt of and has completed review of the case file for this site, up to and including the May 6, 1996 Versar Inc., "Site Assessment Report".

Laboratory analytical results of groundwater samples collected on 3/5/96, from the six (6) on-site monitoring wells, revealed levels of total petroleum hydrocarbons as diesel (TPHd) and benzene at maximum concentrations of 320 and 7.5 ug/L (ppb), respectively. No detectable levels of total petroleum hydrocarbons as gasoline (TPHg), toluene, ethyl benzene, total xylenes or lead were detected in any of the groundwater samples collected from the six monitoring wells. It appears that the last groundwater sampling event occurred on 3/5/96.

At this time please adhere to a revised **semi-annual (1st and 3rd quarters)** schedule of well sampling, monitoring, and report submittal as referenced in Title 23, California Code of Regulations (CCR) section 2652(d). Please have these groundwater samples analyzed for total petroleum hydrocarbons as gasoline and diesel (TPHd and TPHg), the aromatic hydrocarbons benzene, toluene, ethyl benzene, total xylene isomers (BTEX), and lead. In addition, please have the groundwater samples filtered before performing lead analyses.

**The next groundwater sampling event should occur during the first quarter 1997 (January through March 1997).**

After documentation of the 1st quarter 1997 groundwater monitoring and sampling report, this site file will be reviewed to determine whether it warrants closure as a "Low-Risk Groundwater Case".

Please be advised that once the Local Oversight Program (LOP) portion of the case is closed, this site will be regulated by this office as a "Spills, Leaks and Investigation Cleanup" (SLIC) site, due to the confirmed lead contamination. Please be advised that in order to obtain SLIC closure, additional lead-contaminated soils need to be removed in the BH18 and BH32 areas.

You may contact me with any questions or comments concerning this notice at (510)567-6880.

Mr. Stephen Wilson  
RE: 1441 Embarcadero, Oakland  
January 15, 1997  
Page 2 of 2

Sincerely,

A handwritten signature in cursive script that reads "Dale Klettke". The signature is written in black ink and has a horizontal line extending to the right from the end of the name.

Dale Klettke, CHMM  
Hazardous Materials Specialist

c: Paul Graff, R.G. c/o Versar Inc., 7844 Madison Avenue, Suite 167, Fair Oaks, CA 95628  
Diane Heinze, Port of Oakland  
Dale Klettke--files

1420semi.ann

*bc*

ALAMEDA COUNTY  
HEALTH CARE SERVICES

AGENCY

DAVID J. KEARS, Agency Director



RO# 1097

RAFAT A. SHAHID, DIRECTOR

STID 1420

February 13, 1996

Mr. Stephen Wilson  
Crowley Marine Services  
2401 Fourth Avenue  
P. O. Box 2287  
Seattle, WA 98111

DEPARTMENT OF ENVIRONMENTAL HEALTH  
1131 Harbor Bay Parkway  
Alameda, CA 94502-6577  
(510) 567-6700

RE: 1441 EMBARCADERO, OAKLAND, CA 94606

Dear Mr. Wilson:

This office is in receipt of and has completed review of the case file for this site, up to and including the January 26, 1996 Versar Inc., "Revised Workplan Addendum".

This soil and groundwater investigation proposes to install one (1) groundwater monitoring well (MW6) in the northeast corner of the site to assess groundwater impairment in the vicinity of the former underground storage tank (UST). In addition, eight (8) soil borings will be advanced to depths of between 8 and 11' below ground surface (bgs). Grab groundwater samples will be collected from borings HP1, HP2, HP3 and HP4. Soil borings SB1, SB2, SB3 and SB4 will be located approximately 5 and 10 feet from the two lead-impacted soil excavations to further assess the extent of lead impacted soils in these areas..

**This Work Plan is approved.** Please keep this office advised on progress of the work plan pertaining to this site on a timely basis.

Should you have any questions or comments, please feel free to call me directly at (510)567-6880.

Sincerely,

Dale Klettke, CHMM  
Hazardous Materials Specialist

c: Paul Graff, R.G. c/o Versar Inc., 7844 Madison Avenue, Suite 167, Fair Oaks, CA 95628  
Thomas Peacock, LOP Manager--files

1420wpok.dkt

PK

ALAMEDA COUNTY  
HEALTH CARE SERVICES  
AGENCY

DAVID J. KEARS, Agency Director



R01097

RAFAT A. SHAHID, DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH  
State Water Resources Control Board  
Division of Clean Water Programs  
UST Local Oversight Program  
1131 Harbor Bay Parkway  
Alameda, CA 94502-6577  
(510) 567-6700

June 13, 1995  
STID 1420

Crowley Maritime Corp.  
ATTN: Stephen Wilson  
2401 Fourth Ave.  
P.O. Box 2287  
Seattle, WA 98111 2287

RE: 1441 Embarcadero, Oakland, CA 94606

Dear Stephen Wilson,

This office has received and reviewed a Groundwater Monitoring Report (February 2, 1995) dated May 4, 1995 for the above site by Versar Inc. The report was sent to this office after 3 months and mentioned on page 9 that the next sampling event was scheduled for April 1995, which now is past.

Versar has since scheduled field work at the site on Wednesday, June 20, 1995. Soil removal will be conducted at that time.

It is very evident that the site is under some tidal action and that the groundwater is very high in TDS. This site may be suitable for closure soon and the responsible party should request that action when appropriate.

If you have any questions or comments, please contact this office at (510) 567-6782.

Sincerely,

Thomas Peacock, Supervising HMS  
Hazardous Material Division

cc: Dan Schoenholz, Port of Oakland, 530 Water St., Oakland, CA  
94604-2064  
Mee Ling Tung, Acting Chief - file  
Lawrence Kleinecke, Versar, Inc., 5330 Primrose Dr., Suite  
228, Fair Oaks, CA 95628



ALAMEDA COUNTY  
HEALTH CARE SERVICES  
AGENCY

DAVID J. KEARS, Agency Director



RO1097

RAFAT A. SHAHID, DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH  
State Water Resources Control Board  
Division of Clean Water Programs  
UST Local Oversight Program  
1131 Harbor Bay Parkway  
Alameda, CA 94502-6577  
(510) 567-6700

May 16, 1995  
STID 1420

Crowley Maritime Corp.  
ATTN: Stephen Wilson  
2401 Fourth Ave.  
P.O. Box 2287  
Seattle, WA 98111-2287

RE: 1441 Embarcadero, Oakland, CA 94606

Dear Stephen Wilson,

This office has received and reviewed an Addendum to the Phase II site investigation workplan dated March 31, 1995 for the above site by Versar Inc. The Addendum is only for interim soil removal and the installation of additional monitoring wells. The following comment is concerning this addendum:

Page 4 says that you intend to install MW-7 and MW-9. However figure 1 shows MW-7, MW-8, and MW-9 being proposed. Are you proposing 2 wells or three?

Otherwise, the addendum is acceptable to this office. Please contact this office at least 3 days prior to the commencement of field work.

If you have any questions or comments, please contact this office at (510) 567-6782.

Sincerely,

A handwritten signature in cursive script, appearing to read 'Thomas Peacock'.

Thomas Peacock, Supervising HMS  
Hazardous Material Division

cc: Dan Schoenholz, Port of Oakland, 530 Water St., Oakland, CA  
94604-2064  
Bill Raynolds, Acting Chief - file  
Lawrence Kleinecke, Versar, Inc., 5330 Primrose Dr., Suite  
228, Fair Oaks, CA 95628

ALAMEDA COUNTY  
HEALTH CARE SERVICES  
AGENCY

DAVID J. KEARS, Agency Director



R01097

RAFAT A. SHAHID, ASST. AGENCY DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH  
State Water Resources Control Board  
Division of Clean Water Programs  
UST Local Oversight Program

November 7, 1994  
STID 1420

Crowley Maritime Corp.  
ATTN: Stephen Wilson  
2401 Fourth Ave.  
Seattle, WA 98111

ALAMEDA COUNTY CC4580  
DEPT. OF ENVIRONMENTAL HEALTH  
ENVIRONMENTAL PROTECTION DIVISION  
1131 HARBOR BAY PKWY., #250  
ALAMEDA CA 94502-6577

RE: 1441 Embarcadero, Oakland, CA 94606

Dear Stephen Wilson,

This office has received and reviewed an three Quarterly Monitoring Reports and an Addendum to the Phase II Site Investigation Workplan dated September 16, 1994 for the above site. All were by Versar Inc. The Addendum is acceptable as written although I understand there will be 4 additional monitoring wells installed rather than three. Please notify this office at least 3 days prior to the plan being implemented. The following are comments concerning these reports:

1. MW-1 and MW-3 should still be monitored. This is agreeable as stated in the comments on page 8 of the Sep. 27, 1994 report.
2. The most important constituents to sample in these wells are TPHd and benzene.
3. I agree with the concept of the tidal study as the gradient has been variable and may be tidally influenced.

If you have any questions or comments, please contact this office at (510) 567-6782. Notice that our office has moved.

Sincerely,

Thomas Peacock, Supervising HMS  
Hazardous Material Division

cc: Dan Schoenholz, Port of Oakland, 530 Water St., Oakland, CA  
94604-2064  
Edgar J. Howell, Chief - file  
Lawrence Kleinecke, Versar, Inc., 5330 Primrose Dr., Suite  
228, Fair Oaks, CA 95628

ALAMEDA COUNTY  
HEALTH CARE SERVICES  
AGENCY

DAVID J. KEARS, Agency Director



R01097

RAFAT A. SHAHID, ASST. AGENCY DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH  
State Water Resources Control Board  
Division of Clean Water Programs  
UST Local Oversight Program  
80 Swan Way, Rm 200  
Oakland, CA 94621  
(510) 271-4530

February 1, 1993  
STID 1420

Crowley Maritime Corp.  
ATTN: George Brooks  
2401 Fourth Ave.  
Seattle, WA 98111

RE: 1441 Embarcadero, Oakland, CA 94606

Dear George Brooks,

This office has received and reviewed an Addendum to Phase II Site Investigation Work Plan dated December 30, 1992 by Versar Inc. concerning the above site. This plan is acceptable as written. Please notify this office at least 3 days prior to the plan being implemented.

In looking at the plan and reviewing the Addendum dated September 18, 1992 and the workplan dated March 12, 1992 it was noticed that an underground fuel tank was discovered and remains abandoned on the property. The September 18 Addendum stated that a removal plan was included but this was in error. No plan for tank removal has been submitted as required. A tank removal plan is attached for you to complete and submit as soon as possible.

If you have any questions or comments, please contact this office at (510) 271-4530.

Sincerely,

A handwritten signature in cursive script, appearing to read 'Thomas Peacock'.

Thomas Peacock, Supervising HMS  
Hazardous Material Division

cc: Richard Hiett, RWQCB  
Dan Schoenholz, Port of Oakland, 530 Water St., Oakland, CA  
94604-2064  
Edgar J. Howell, Chief - file  
Gil Jensen, Alameda County District Attorney's Office  
Lawrence Kleinecke, Versair Inc., 5330 Primrose Dr., Suite  
228, Fair Oaks, CA 95628  
Enclosure  
Edgar Howell, Chief - Files

ALAMEDA COUNTY  
HEALTH CARE SERVICES

AGENCY

DAVID J. KEARS, Agency Director



✓ R01097 (1441 Emb.)

R0423 (321 Emb.)

RAFAT A. SHAHID, Assistant Agency Director

DEPARTMENT OF ENVIRONMENTAL HEALTH  
Hazardous Materials Division  
80 Swan Way, Rm. 200  
Oakland, CA 94621  
(510) 271-4320

October 4, 1992

Mr. George A. Brooks  
Manager, Environmental Control  
Crowley Maritime Corporation  
Crowley Maritime Plaza  
Post Office Box 2287  
Seattle, Washington 98111

**Re: Pacific Dry Dock Yard II located at 320 Embarcadero,  
Oakland, CA 94606**

Dear Mr. Brooks:

This is a follow up to August 13, 1992 correspondence sent to you from this office. The work plan was approved conditional to the inclusion of six items stated in that correspondence. Upon review of the file for the above project it became apparent that an initial deposit/refund account had never been established.

The deposit refund mechanism in which fees associated with the regulatory oversight, of a project can be billed to a Responsible Party, is authorized by Alameda County Ordinance Code Section 3-140.5 (z). You are requested to remit \$ 1000.00 to cover expenses incurred by this Department in the review of the 320 Embarcadero site. The funds will be billed against at the rate of \$ 71.00 per hour. Any unused portion of funds charged will be returned to you at the completion of the project.

Additionally, please provide an update of your intentions regarding the implementation of the approved work plan and

Mr. Brooks  
October 5, 1992  
page 2 of 2

include a timetable for both the implementation of the proposed work, the removal of the underground storage tanks and the completion of the HMMPs for the 321 and the 1441 Embarcadero sites. Please provide the above to this office within 30 days of the receipt of this letter.

Sincerely,



Paul M. Smith  
Senior Hazardous Materials Specialist

cc:

- Mr. John Dunn, Facility Manager, Pacific Dry Dock, 1441 Embarcadero, Oakland, CA 94606
- Mr. Rich Hiett, San Francisco Regional Water Quality Control Board, 2101 Webster St., 5th floor, Oakland, CA 94612
- Mr. Dan Schoenholz, Port of Oakland, 530 Water St., Oakland, CA 94607
- Mr. Gil Jensen, Alameda County District Attorneys Office, 7677 Oakport, 4th floor, Oakland, CA 94621
- Ms. Yvonne M. Lembi, Versar Inc., 5330 Primrose Drive, Suite 228, Fair Oaks, CA 95628-3520.

ALAMEDA COUNTY  
HEALTH CARE SERVICES

AGENCY

DAVID J. KEARS, Agency Director



R01097

RAFAT A. SHAHID, Assistant Agency Director

March 16, 1992  
STID # 1420

DEPARTMENT OF ENVIRONMENTAL HEALTH  
Hazardous Materials Division  
80 Swan Way, Rm. 200  
Oakland, CA 94621  
(510) 271-4320

Mr. George Brooks  
Mgr. Environmental Control  
Crowley Maritime Corporation  
2401 Fourth Ave.  
P.O. Box 2287  
Seattle, Washington 98111

Re: Phase II Site Investigation Work Plan for Pacific Dry Dock  
Yard I, Western Section at 1441 Embarcadero, Oakland CA 94606

Dear Mr. Brooks:

Our office has received and reviewed the work plan for the Phase II Site Assessment at the western section of Yard I at Pacific Dry Dock. This report also includes the results of the initial site assessment performed on this area consisting of borings and grab water samples and chemical analysis. This Phase II work plan was developed from the results of the initial site assessment and through a conversation I had with Mr. Lawrence Kleinecke of Versar Inc. The general approach of excavation to the stated limits of: 1 parts per billion (ppb) for total benzene, toluene, ethyl benzene and xylenes (BTEX), 10 parts per million (ppm) for total petroleum hydrocarbons as gasoline (TPHg), 100 ppm for total petroleum hydrocarbons as diesel (TPHD) and 1000 ppm for total oil and grease (TOG) is acceptable.

Please note however, these limits may have an effect on the required length of ground water monitoring prior to recommendation for site sign-off to the Regional Water Board. Certainly, when at all possible, non-detectable levels of all hydrocarbons is preferable and allows for shorter ground water monitoring requirements.

Upon review of the analytical results in this report a number of items require clarification. These items include:

1. In the approval to the initial site assessment, it was agreed that at least one water and one soil sample near the former waste oil tank was to be analyzed for chlorinated hydrocarbons by Method 8010 or 8240 and analyzed for semi-volatiles by Method 8270. It appears that this minimum sample has not been analyzed. If this is the case, a water and soil sample from the monitoring well proposed in this area should be run for these parameters.

Mr. George Brooks  
Pacific Dry Dock, Yard I Western Section  
March 16, 1992  
STID 1420  
Page 2.

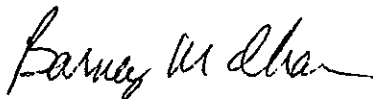
2. It was noticed that a number of borings were not run for any hydrocarbons analysis. The borings include BH42-BH45, BH20-BH21 and BH23-BH26. It is assumed that these samples did not show field observations which may have indicated potential contamination and were therefore not run. Please explain the reasoning for the absence of these analyses.

3. The proposed monitoring well locations are acceptable with the condition that after ground water gradient has been determined, a monitoring well should be located downgradient to all significant water or soil contaminant locations.

It was suggested that soil and ground water samples, which depict the estuary water and soil, be analyzed similarly for the parameters found on this site. In addition, total dissolved solids should be run in an attempt to establish the current water quality and likely long term affect of any residual hydrocarbon contamination left on site.

Upon clarification of the above items, you may proceed with the proposed Phase II Site Investigation. Please contact me at (510) 271-4320 should you have any questions.

Sincerely,



Barney M. Chan  
Hazardous Materials Specialist

cc: M. Thomson, Alameda County District Attorney Office  
R. Hiett, RWQCB  
L. Kleinecke, Versar Inc.  
H. Hatayama, DOHS  
D. Schoenholtz, Port of Oakland

PhaseIII1441

ALAMEDA COUNTY  
HEALTH CARE SERVICES

AGENCY

DAVID J. KEARS, Agency Director



RAFAT A. SHAHID, Assistant Agency Director

R01097

March 9, 1992

STID # 1420

Mr. George Brooks  
Mgr. Environmental Control  
Crowley Maritime Corporation  
2401 Fourth Avenue  
P.O. Box 2287  
Seattle, Washington 98111

DEPARTMENT OF ENVIRONMENTAL HEALTH  
Hazardous Materials Division  
80 Swan Way, Rm. 200  
Oakland, CA 94621  
(510) 271-4320

Re: Work Plan for the Eastern Section of Yard I at 1441  
Embarcadero, Oakland CA 94606, aka Pacific Dry Dock

Dear Mr. Brooks:

This letter recounts the recent conversation I had with Mr. Larry Kleinecke of Versar Inc. regarding the work plan for the eastern section of Yard I at 1441 Embarcadero, Oakland CA 94606. In addition, I was informed that the results of the preliminary subsurface soil and ground water investigation on the western section of Yard I will be in a forthcoming report from Versar. Upon receipt of this report a written response will be issued to the proposed next step of the investigation/remediation in this area.

In regards to the proposal for further borings and soil and ground water samplings on the eastern section of Yard I the County accepts this work plan with following conditional items:

1. It is stated that although samples will be run for Total Recoverable Hydrocarbons (TRH) by Method 5520 C & F, Total Petroleum Hydrocarbons as gas and as diesel (TPHg and TPHd), BTEX (Benzene, Toluene, Ethyl Benzene, and Xylenes), the CAM (California Assessment Manual) Metals and semi-volatile organic compounds by Method 8270, not all samples will be analyzed for all of the above constituents. The County would like clarification as to the rationale for determining which samples will be run for which parameter. Minimally, the County anticipates the following analyses:

a. Area No. 1: This area was identified in the site assessment as having elevated levels of petroleum hydrocarbons therefore samples in this area should be run minimally for TPHg, TPHd and TRH.

b. Area No. 2: This area was identified in the site assessment as having copper, lead and mercury above TTL (Total Threshold Limit Concentration) and elevated levels of petroleum hydrocarbons. Because of this, samples from these areas should be run minimally



Mr. George Brooks  
Crowley Maritime Corporation  
Eastern Section, 1441 Embarcadero  
March 9, 1992  
STID #1420  
Page 2.

for the CAM total metals and the above mentioned petroleum hydrocarbon parameters; TPHg, TPHd and TRH.

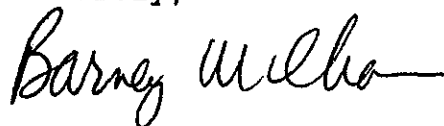
c. Area No. 3: This area was identified in the site assessment as having elevated petroleum hydrocarbon concentrations. Since this area was formally a forklift and spent sandblasting material area, as stated in the work plan, you should analyze minimally for TPHg, TPHd, TRH and the CAM total metals.

The logic for the analysis for the semi-volatile organic compounds by Method 8270 is less clear, however, the existence of high TRH is certainly one reasonable criteria for the request of this analysis.

2. The work plan also states that a maximum of five (5) ground water samples will be collected for analysis. Certainly one ground water sample from each Area No.(1-3) should be taken. The other ground water samples should be taken in an attempt to determine the extent of ground water contamination as field instruments dictate. It would seem inefficient to limit the number of soil and ground water samples to be analyzed to the proposed 30 and 5 if significant information concerning the extent and amount of contamination could be gained by additional sample analysis.

Please feel free to comment on this items in this letter and work may proceed immediately if there are no objections to these conditions. You may contact me at (510) 271-4320 should you have any questions.

Sincerely,



Barney M. Chan, Hazardous Materials Specialist

cc: M. Thomson, Alameda County District Attorney Office  
R. Hiett, RWQCB  
L. Kleinecke, Versar Inc.  
H. Hatayama, DOHS  
D. Schoenholtz, Port of Oakland  
1441EastPDD

ALAMEDA COUNTY  
HEALTH CARE SERVICES

AGENCY  
DAVID J. KEARS, Director



R01097

October 29, 1991

Telephone Number: (415)

Mr. George Brooks  
Mgr. Environmental Control  
Crowley Maritime Corporation  
2401 Fourth Avenue  
P.O. Box 2287  
Seattle, Washington 98111

Re: Request for Work Plan for the Unauthorized Petroleum Fuel Release  
at 1441 Embarcadero, Oakland CA 94606, dba Pacific Dry Dock

Dear Mr. Brooks:

Alameda County Environmental Health, Hazardous Materials Division, has received analytical results of soil and water samples taken subsequent to the removal of a 400 gallon gasoline tank at the above referenced site. These results were sent to our agency by your consultant, Ms. Yvonne Lembi, of Versar Inc. The results indicate that there was some Total Petroleum Hydrocarbon as gasoline, TPHg, and Benzene, Toluene, Ethylbenzene and Xylenes, (BTEX), in the soil and the ground water sample. In fact, the ground water sample had 3.4% TPHg and 170 parts per million (ppm) Toluene, 480 ppm Ethylbenzene and 1,900 ppm Xylenes. Our division uses the "Tri-Regional Board Staff Recommendations for Preliminary Evaluation and Investigation of Underground Tank Sites" for guidance when determining whether further investigation is required at tank removal sites. Accordingly, when the ground water has potentially been impacted as evidenced by detectable levels of petroleum hydrocarbons in water samples, as was in this case, a soil/ground water investigation is required.

Therefore, you are requested to provide a work plan within thirty (30) days which minimally determines the extent of soil and ground water contamination and provides for the remediation of any contamination. Enclosed please find the contents of a "typical" work plan to use as guidance.

All proposals, reports and analytical results pertaining to this investigation and remediation must be sent to our office and the Regional Water Quality Control Board (RWQCB) to the attention of Mr. Eddy So. Their address is : 2101 Webster St., 4th Floor, Oakland CA 94612.

The County acknowledges the receipt of the proposed work plan for the western section of Yard I, at this same site, and realizes that there may be some overlap in the investigation of the contamination from the tank and that associated with surface spills. Hopefully, information received from the investigation of the western section

Mr. George Brooks  
1441 Embarcadero, Tank Removal Remediation  
October 29, 1991  
Page 2.

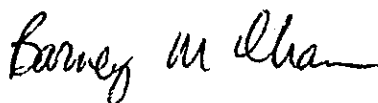
will prove useful in determining the extent of contamination around the former tank excavation pit. Certainly, once all the subsurface soil and ground water investigation is completed it would prove wise to address any remediation or ground water monitoring in an entire site remediation plan. This site plan may also eventually include the eastern section of Yard I.

The County is also aware that the contamination found in the tank pit of the former gasoline tank was not typical of what might have been expected. In fact, considerable oily material was observed floating on the surface of the water in the pit. Please be advised that this contamination is considered the responsibility of Crowley Maritime until which time you provide evidence of its origin in an upgradient location. Such evidence may include chromatograms of the hydrocarbons found in the pit and that from the upgradient source, verification of ground water gradient, historical records of the contents of the tank and documentation of the monitoring program used for the tank and the identification of the upgradient source.

Please be aware that this is a formal request for technical reports pursuant to the California Water Code, Section 13267 (b). Any extensions on agreed upon time deadlines must be confirmed in writing by either this Division or the RWQCB.

You may contact me at (510) 271-4320 should you have any questions regarding this letter.

Sincerely,



Barney M. Chan  
Hazardous Materials Specialist

enclosure

cc: G. Jensen, Alameda County District Attorney, Consumer and  
Environmental Protection Division

E. So, RWQCB  
H. Hatayama, DOHS  
Y. Lembi, Versar  
D. Schoenholtz, Port of Oakland

1441W-WP

ALAMEDA COUNTY  
HEALTH CARE SERVICES

AGENCY  
DAVID J. KEARS, Director



R01097

Telephone Number: (415)

October 16, 1991

Mr. George Brooks  
Mgr. Environmental Control  
Crowley Maritime Corporation  
2401 Fourth Avenue  
P.O. Box 2287  
Seattle, Washington 98111

Re: Work Plan for the Western Section of Yard I at 1441 Embarcadero,  
Oakland CA 94606, dba Pacific Dry Dock

Dear Mr. Brooks:

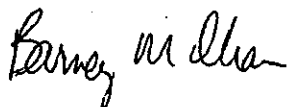
This letter is to acknowledge the conversation I had with Ms. Yvonne Lembi of Versar regarding the adequacy of their proposed work plan for the western section of Yard I. In general, their proposed plan is acceptable with the addition/clarification of the following items mentioned in our October 15th conversation:

1. The proposed boring in the center of the site, south of the underground storage tank will be moved closer to the excavation pit area as an attempt to define the lateral extent of contamination of the former fuel tank.
2. Because of the potential source of waste oil near the waste oil tank and the storage tanks and because of the observation of oil in the water from the underground fuel tank pit, a minimum of one soil and one water sample on the southly side of these three locations will be analyzed for the full waste oil parameters i.e. Total Petroleum Hydrocarbons as gasoline and diesel, TPHg and TPHd, BTEX, Oil and Grease by Method 5520 E and F, Chlorinated Hydrocarbons by Method 8010 or 8240, Semi-volatiles by Method 8270 and the metals, cadmium, chromium, lead, nickel and zinc. All other samples which are analyzed should be analyzed for the stated parameters in the work plan i.e. Oil and Grease by 5520 E and F, TPHd and TPHg, BTEX and semi-volatiles by Method 8270.

Mr. George Brooks  
Pacific Dry Dock, Yard I Western Sector  
October 16, 1991  
Page 2

With these items taken into account, you may proceed with this subsurface investigation. Please note this is an approval for only the western section of Yard I. The eastern section of Yard I and Yard II will be reviewed individually. Please contact me at (510) 271-4320 should you have any questions regarding this letter.

Sincerely,



Barney M. Chan  
Hazardous Materials Specialist

cc: G. Jensen, Alameda County District Attorney Office  
R. Hiett, RWQCB  
Y. Lembi, Versar  
H. Hatayama, DOHS  
D. Schoenholtz, Port of Oakland

1441WestPDD

ALAMEDA COUNTY  
HEALTH CARE SERVICES

AGENCY

DAVID J. KEARS, Agency Director



R01097 (1441 Embarcadero)

May 6, 1991

DEPARTMENT OF ENVIRONMENTAL HEALTH  
Hazardous Materials Program  
80 Swan Way, Rm. 200  
Oakland, CA 94621  
(415)

Mr. George Brooks  
Mgr. Environmental Control  
Lost Control and Environmental Affairs  
Crowley Maritime Corporation  
2401 Fourth Avenue  
P.O. Box 2287  
Seattle, Washinton 98111

Re: Pacific Dry Dock, 320 and 1441 Embarcadero, Oakland CA 94606

Dear Mr. Brooks:

This letter is to acknowledge that Alameda County Environmental Health, Hazardous Materials Division agrees to an extension of thirty (30) days from the previously agreed to date, May 12, 1991, for the submittal of a workplan to address the contamination at the above referenced locations. In the interim, our office will be in contact with the Regional Water Quality Control Board (RWQCB) to determine which items of the remediation will be delegated to to Alameda County Environmental Health and which items they will oversee. It was suggested that a meeting of the concerned parties should be arranged once our roles are defined. You will be kept abreast with any changes in our office's oversight. Until this issue is resolved, it would be advisable to send remediation proposals and other related communication to both our agencies.

Please contact me at (415) 271-4320 should you have any questions.

Sincerely,

Barney M. Chan,  
Hazardous Materials Specialist

cc: Gil Jensen, Alameda County District Attorney, Consumer and  
Environmental Protection Division  
Lester Feldman and Dave Barr, RWQCB  
H. Hatayama, DOHS  
R. Hartsock, Pacific Dry Dock Repair Co., 1441  
Embarcadero, Oakland 94606  
D. Schoenholtz and M. Heffes, Port of Oakland  
E. Howell, Chief, Hazardous Materials Division

pddock1 #4

GA

ALAMEDA COUNTY  
HEALTH CARE SERVICES



AGENCY

DAVID J. KEARS, Agency Director

R01097 (1441 Embar.)

Certified #P 062 128 351

DEPARTMENT OF ENVIRONMENTAL HEALTH  
Hazardous Materials Program  
80 Swan Way, Rm. 200  
Oakland, CA 94621  
(415)

April 12, 1991

Mr. Charles Nalen  
Vice President  
Lost Control and Environmental Affairs  
Crowley Maritime Corporation  
2401 Fourth Avenue  
P.O. Box 2287  
Seattle, Washington 98111

Re: Pacific Dry Dock, 320 and 1441 Embarcadero, Oakland CA 94606

**NOTICE OF VIOLATION**

Dear Mr. Nalen:

Alameda County Environmental Health, Hazardous Materials Division is the County agency which has assumed the role of enforcing the State of California's hazardous materials laws and regulations as stated in the California Code of Regulations, Title 22 Division 4 (22CCR) and the California Health and Safety Code, Division 20 (CH&SC). Our agency assumes this role by a Memorandum of Understanding with the California Department of Health Services (DOHS). We also have been given the Delegation of Responsibility by the Regional Water Quality Control Board to act in their behalf to protect the waters of the State.

Our division has recently received the Site Assessment Report for the Pacific Dry Dock and Repair Yard located at the above referenced locations as prepared for you by Versar Inc.. The report recounts the study of soil sampling and analytical results performed at these two sites in December 1989 and January 1990. A total of twelve (12) soil samples were collected from Yard 1, 1441 Embarcadero, and a total of sixteen (16) samples were collected from Yard 2, 320 Embarcadero. These samples were both surface and subsurface samples ranging from 0.5 to 5.0 ft. in depth. Results indicate significant total petroleum hydrocarbon contamination on both yards, by EPA Method 418.1, with the highest level noted to be 109,000 mg/kg (ppm). There was also found semi-volatile organic compounds including tetrachloroethylene (TCE) and pyrene, and significant levels of heavy metals, particularly copper and lead above total threshold limit concentrations (TTL) and soluble threshold limit concentrations (STLC).

Because of these results these properties are considered to have experienced unauthorized disposal of hazardous materials, the extent of which must be determined and remediated.

Mr. Charles Nalen  
Crowley Maritime Corporation  
April 12, 1991  
Page 2

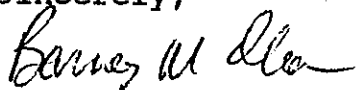
You should be made aware of Section 25189.5 (d) of the California Health and Safety Code which states that the disposal of any hazardous waste at an unpermitted facility is potentially subject to civil fines of not less than five thousand dollars (\$5000) or more than one hundred thousand dollars (\$100,000) for each day of the violation. In accordance with Section 66328 of CCR, T22 a plan of correction must be submitted to our office within 30 days of receipt of this letter. The plan should specify those actions Crowley Maritime Corporation will take to address this violation.

Attached is the contents of a "typical" workplan specific to the release of a petroleum hydrocarbon. Your plan should also address the other contaminants found in this report. Please send copies of all reports, analytical results, workplans etc. to our Division and to the Regional Water Quality Control Board to the attention of Mr. Lester Feldman. Their address is 2101 Webster St., 4th Floor, Oakland CA 94612.

Please submit two checks for \$500.00 each, payable to the County of Alameda for our oversight of these site remediations. Our time will be debited from these fees at a rate of \$67.00 per hour. Any remainder, upon completion of the project, will be refunded to you. Note that Section 3-141.6 of the Ordinance Code of the County of Alameda provides for deposits for the review of plans.

Please contact the undersigned at (415) 271-4320 should you have any questions regarding this letter.

Sincerely,



Barney M. Chan  
Hazardous Materials Specialist

enclosure: workplan to Mr. Nalen only

cc: Gil Jensen, Alameda County District Attorney, Consumer and  
Environmental Protection Division  
Lester Feldman, RWQCB  
H. Hatayama, DOHS  
Robert Hartsock, Pacific Drydock and Repair Co., 1441  
Embarcadero, Oakland 94606  
D.Schoenholtz and M. Heffes, Port of Oakland  
Edgar Howell, Chief, Hazardous Materials Division



Below lists the contents of a "typical" workplan as requested for after an unauthorized petroleum fuel release is observed.

Our office will be the lead agency overseeing both the soil and groundwater remediation of this site. The Regional Water Quality Control Board (RWQCB) is currently unable to oversee the large number of contamination cases within Alameda County and has delegated the handling of this case to our Division. We will be in contact with the RWQCB in order to provide you with guidance concerning the RWQCB's remediation requirements. However, please be aware that you are responsible for diligent actions to protect waters of the State.

To complete contaminant assessment and begin any possible remediation, we require that you submit a work plan which, at a minimum, addresses the items listed below and presents a timetable for their completion. Please submit this workplan within 30 days of the date of this letter.

#### I. Introduction

- A. Statement of scope of work
- B. Site map showing location of existing and past underground storage tanks and associated piping
- C. Site History
  - provide historical site use and ownership information. Include a description of types and locations of hazardous materials used on site.

#### II. Site Description

- A. Vicinity description including hydrogeologic setting
- B. Initial soil contamination and excavation results
  - provide sampling procedures used
  - indicate depth to ground water
  - describe soil strata encountered
  - provide soil sampling results, chain of custody forms, identity of sampler
  - describe methods for storing and disposal of all soils

#### III. Plan for determining extent of soil contamination on site

- A. Describe approach to determine extent of lateral and vertical contamination
  - identify subcontractors, if any
  - identify methods or techniques used for analysis
  - provide sampling map showing all lines of excavation and sampling points
  - if a step out procedure is used, define action level for determination of "clean" isopleth
  - provide chain of custody forms, lab analysis results, all receipts and manifests, & identity of sampler

Typical Workplan  
Page 2.

Plan for determining extent of soil contamination on site.

B. Describe method and criteria for screening clean versus contaminated soil. If onsite soil aeration/bioremediation is to be utilized, then provide a complete description of method that includes:

- volume and rate of aeration/turning
- method of containment and cover
- wet weather contingency plans
- permits obtained

C. Describe security measures

IV. Plan for determining ground water contamination

- Construction and placement of wells should adhere to the requirements of the "Regional Board Staff Recommendations for Initial Evaluation and Investigation of Underground Tanks". Provide a description of placement and rationale for the location of monitoring wells including a map to scale.
- The placement and number of wells must be able to determine the extent and magnitude of the free product and dissolved product plumes.

A. Drilling method for construction of monitoring wells

- expected depth and diameter of monitoring wells
- date of expected drilling
- casing type, diameter, screen interval, and pack and slot sizing techniques
- depth and type of seal
- development method and criteria for adequacy of development
- plans for cuttings and development water

B. Ground water sampling plan

- method for free product measurement, observation of sheen
- well purging procedures
- sample collection procedures
- chain of custody procedures
- procedures for determining ground water gradient

Typical Workplan  
Page 3.

Plan for determining groundwater contamination.

C. Sampling schedule

- measure free product weekly for first month following well installation
- measure free product and dissolved constituents monthly for first three months.
- after first three months monitor quarterly.
- monitoring must occur a minimum of one year.

V. Provide a site safety plan

VI Development of a Remediation Plan.

A. The Remediation Plan is to include a time schedule for remediation, and, at minimum, must address the following issues:

- removal of all free product. Manual bailing is not acceptable as a recovery system. Actual amount of free product removed must be monitored and tabulated.
- remediation of contaminated soils and dissolved constituents must follow RWQCB's resolution No. 68-16.
- soils containing 1,000+ ppm of hydrocarbons must be remediated. Soils containing between 100 and 1,000 ppm must be remediated unless sufficient evidence is provided which indicates no adverse effects on groundwater will occur. Clean up of soils to 100 ppm is strongly recommended.
- design of remedial action system should be based on a review of hydrogeologic and water quality data and on an evaluation of mitigation alternatives. The determination of probable capture zone(s) of extraction system(s) should be based on aquifer characteristics as determined by aquifer test data

Typical Workplan  
Page 4.

VII Reporting

- A. Technical reports should be submitted with a cover letter from your company. The letter must be signed by an authorized representative.
- B. Monthly reports must be submitted for the next three months with the first report due 90 days from the above letter date.
- C. Quarterly reports must be submitted with the first report due 90 days after the final monthly report. These reports should describe the status of the investigation and cleanup.
- D. All reports and proposals must be signed by a California-Certified Engineering Geologist, California Registered Geologist or a California-Registered Civil Engineer (see page 2, 2 June 1988 RWQCB document). A statement of qualifications should be included in all reports. Initial tank removal and soil sampling does not require such expertise; however, borehole and monitoring well installation and logging, and impact assessments do require such a professional.

ALAMEDA COUNTY  
HEALTH CARE SERVICES

DAVE KEARS

AGENCY  
Agency Director



7/E  
✓ R01097 (1441 Embarcadero)  
R0423 (321 Embarcadero)

470-27th Street, Third Floor  
Oakland, California 94612  
(415)874-7237

June 19, 1986

Mr. Robert Hartsock  
Pacific Dry Dock and Repair Co.  
321 Embarcadero  
Oakland, CA 94606

Dear Mr. Robert Hartsock:

On May 28, 1986, an inspection was conducted of your facilities at 321 and 1441 Embarcadero, Oakland, by this department. The following violations of the California Administrative Code, Title 22, Division 4, Chapter 30, were discovered:

1. Waste not properly classified as hazardous, i.e. caustic, dirty solvent in violation of 66305.
2. No hazardous waste determination made in violation of 66471.
3. EPA identification number not applied for and received in violation of 66472.
4. Manifest not prepared for transporting the waste off site in violation of 66480.
5. No manifests are kept, no Biennial Reports are kept, there are no test results, waste analysis, or other determinations made in violation of 66492.
6. A Biennial Report is not properly filed with the Department by March 1 in violation of 66493.
7. Hazardous waste containers are not marked in accordance with requirements of 49CFR 172.304 as amended November 1, 1983, in format. Hazardous Waste-State and Federal Law Prohibits Improper Disposal. If found, contact the nearest police or public safety authority or the Generator's:

June 18, 1986  
Pacific Dry Dock & Repair Co.  
Mr. Robert Hartsock

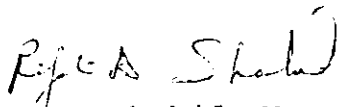
Name and Address \_\_\_\_\_  
Manifest Number \_\_\_\_\_  
This is in violation of 66504.

In accordance with 66328, a Plan of Correction is required to be submitted to this Department, within 14 days, stating the actions to be taken and the expected dates of completion.

Your attention is directed to Sections 25183, 25189, and 25191 of the California Hazardous Waste Control Law, which provides for civil and criminal penalties of up to \$25,000 per day, per violation, for violations of the California Hazardous Waste Control Law and regulations.

If you have any questions concerning this matter, please contact Thomas Peacock, at 874-7237.

Sincerely,



Rafat A. Shahid, Manager  
Hazardous Materials Program

RAS:mn-c

cc: Dwight Hoenig, DOHS