

**Versar** INC. SACRAMENTOTELECOPY TRANSMITTALJOB NO. 7703.26

TO: Mr. Barney Chan  
LOCATION: Alameda Co. - Hazardous Materials  
TELECOPY NO. (510) 568-3706  
FROM: Yvonne Lembi  
DATE: 10/24/91  
TIME: 8:50

TRANSMITTAL SHEET PLUS 17 PAGES

For verification, please call (916) 962-1612. Our telefax phone number is (916) 962-2678.

Mr. Chan,

Following is the acknowledgment of the modifications to the Pacific Dry Dock Western Yard I work plan. Also included are the laboratory results for the Yard I tank removal which took place on 9/24/91.

Sincerely,  
Yvonne Lembi

**Versar** INC SACRAMENTO

October 24, 1991

Mr. Barney Chan  
Hazardous Materials Specialist  
Alameda County Health Department  
800 Swan Way, Room 200  
Oakland, California 94621

Reference: Modifications to the Work Plan for the  
Western Section of Pacific Dry Dock Yard I,  
1441 Embarcadero, Oakland, California;  
Versar Job No. 7703.26

Dear Mr. Chan:

Per our telephone conversation of October 22, 1991, this letter documents our response to your letter of October 16, 1991 documenting the changes to the Work Plan for the Western Section of Pacific Dry Dock Yard I. A copy of your letter is included as Attachment I. I have reviewed your comments and have the following responses:

1. Versar Inc., on behalf of Pacific Dry Dock and Repair Co., will move the boring which had been originally proposed for the center of the western section of Yard I closer to the tank excavation area in an effort to define the lateral extent of hydrocarbon-impacted soils near the former tank location.
2. As you have requested, a minimum of one soil sample and one ground-water sample taken near the waste-oil tank, the above-ground storage tanks and the former underground storage tank locations will be analyzed for the full suite of waste oil parameters i.e. Total Petroleum Hydrocarbons as gasoline and diesel (TPH-d and -g); benzene, toluene, ethylbenzene and xylenes (BTEX) by EPA Method 8020; oil and grease by EPA Method 5520E and F; chlorinated hydrocarbons by EPA Method 8010 or 8240; semi-volatiles by EPA Method 8270; and the metals cadmium, chromium, lead, nickel and zinc.

However, as we discussed in our conversation on October 22, 1991, Versar will not analyze all other samples collected for all the analytes listed in our work plan. Versar will analyze selected samples for selected parameters of those listed i.e. oil and grease by 5520E and F; TPH-d and TPH-g; BTEX by EPA Method 8020; and semi-volatiles by Method 8270. The samples to be analyzed and the parameters for which they will be analyzed, beyond the requirements stated above, will

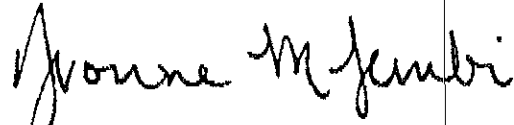
**Versar** INC. SACRAMENTO

Letter to Mr. Barney Chan  
October 24, 1991  
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be selected based on field screening methods including headspace analysis, and visual and olfactory characterization.

Versar will proceed with the stated work on October 25, 1991 as planned. If you have any questions or comments, or require supplemental information, please contact me at (916) 962-1612.

Sincerely,



Yvonne M. Lembi  
Geologist

c: George Brooks, Crowley Maritime Corp.  
Dan Schoenholtz, Port of Oakland



ATTACHMENT I

ALAMEDA COUNTY  
HEALTH CARE SERVICES

AGENCY

DAVID J. KEARS, Director



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OCT 22 1991

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:

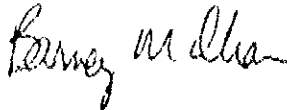
This letter is to acknowledge the conversation I had with Ms. Yvonne Lempi of Versar regarding the adequacy of their proposed work plan for the western section of Yard I. In general, their proposed plan is acceptable with the addition/clarification of the following items mentioned in our October 15th 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 south~~ly~~ 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. Hiatt, RWQCB  
Y. Lembi, Versar  
H. Hatayama, DOHS  
D. Schoenholtz, Port of Oakland

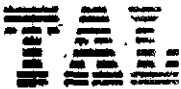
1441WestPDD

**Trace Analysis Laboratory, Inc.**

3423 Investment Boulevard, #B • Hayward, California 94545

Telephone (415) 783-6860

Facsimile (415) 783-1512



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OCT 17 1991

Ans'd.....

October 9, 1991

Ms. Yvonne Lembi  
Versar, Inc.  
5330 Primrose Drive, Suite 228  
Fair Oaks, California 95628

Dear Ms. Lembi,

Trace Analysis Laboratory received three soil samples and one water sample on September 24, 1991 for your Project No. 7703.26, Crowley Tank Site (our custody log number 1340).

Three samples were analyzed for total Petroleum Hydrocarbons as Gasoline, Benzene, Toluene, Ethylbenzene, Xylenes and Organic Lead. Our analytical report, the completed chain of custody form, and our analytical methodologies are enclosed for your review.

Trace Analysis Laboratory is certified under the California Environmental Laboratory Accreditation Program. Our certification number is 1199.

If you should have any questions or require additional information, please call me.

Sincerely yours,

Jennifer Pekol  
Project Specialist

Enclosures

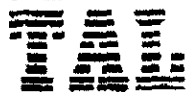
*at MS-Environmental Commission w/ 100' of high water lens*  
B C D C  
will pump out pit on Oct 25 site  
investigation of yard I western section  
per 10/24/91 conversation w/ Y. Lembi

**Trace Analysis Laboratory, Inc.**

3423 Investment Boulevard, #B • Hayward, California 94545

Telephone (415) 783-8960

Facsimile (415) 783-1512



LOG NUMBER: 1340  
 DATE SAMPLED: 9/24/91  
 DATE RECEIVED: 9/24/91  
 DATE EXTRACTED: 9/27/91  
 DATE ANALYZED: 9/29/91 and 10/02/91  
 DATE REPORTED: 10/09/91

CUSTOMER: Versar, Inc.  
 REQUESTER: Yvonne Lembi  
 PROJECT: No. 7703.26, Crowley Tank Pull

Sample Type: Soil

Method and Constituent:	Units	7703.26-N1		7703.26-S1		7703.26-Pile1	
		Concentration	Reporting Limit	Concentration	Reporting Limit	Concentration	Reporting Limit
DHS Method:							
Total Petroleum Hydrocarbons as Gasoline	ug/kg	11,000 <i>11 ppm</i>	500	130,000 <i>130 ppm</i>	600	13,000	300
EPA Method 8020 for:							
Benzene	ug/kg	1,100	44	2,000	176	620	88
Toluene	ug/kg	110	42	1,400	168	110	84
Ethylbenzene	ug/kg	460	46	3,800	184	1,100	92
Xylenes	ug/kg	850	110	3,800	440	6,200	220

Concentrations reported as ND were not detected at or above the reporting limit.





LOG NUMBER: 1340  
 DATE SAMPLED: 9/24/91  
 DATE RECEIVED: 9/24/91  
 DATE EXTRACTED: 9/27/91  
 DATE ANALYZED: 9/29/91 and 10/02/91  
 DATE REPORTED: 10/09/91  
 PAGE: Two

Sample Type: Soil

Method and Constituent:	Units	Method Blank	
		Concen- tration	Reporting Limit
DHS Method:			
Total Petroleum Hydro- carbons as Gasoline	ug/kg	ND	500
EPA Method 8020 for:			
Benzene	ug/kg	ND	5.0
Toluene	ug/kg	ND	5.0
Ethylbenzene	ug/kg	ND	5.0
Xylenes	ug/kg	ND	15

QC Summary:

% Recovery: 130 and 120  
 % RPD: 7.1 and 17

Concentrations reported as ND were not detected at or above the reporting limit.



Trace Analysis Laboratory, Inc.

LOG NUMBER: 1340  
 DATE SAMPLED: 9/24/91  
 DATE RECEIVED: 9/24/91  
 DATE ANALYZED: 9/25/91  
 DATE REPORTED: 10/09/91  
 PAGE: Three

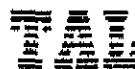
Sample Type: Water

Method and Constituent:	Units	7703.26-Water		Method Blank	
		Concen- tration	Reporting Limit	Concen- tration	Reporting Limit
DHS Method:					
Total Petroleum Hydrocarbons as Gasoline	ug/l	34,000,000	39,000	ND	50
EPA Method 8020 for:					
Benzene	ug/l	ND	9,400	ND	0.50
Toluene <i>170 ppm</i>	ug/l	170,000	9,400	ND	0.50
Ethylbenzene	ug/l	480,000	11,000	ND	0.50
Xylenes	ug/l	1,900,000	32,000	ND	1.5

QC Summary:

% Recovery: 64  
 % RPD: 11

Concentrations reported as ND were not detected at or above the reporting limit.



LOG NUMBER: 1340  
 DATE SAMPLED: 9/24/91  
 DATE RECEIVED: 9/24/91  
 DATE EXTRACTED: 10/07/91  
 DATE ANALYZED: 10/08/91  
 DATE REPORTED: 10/09/91  
 PAGE: four

Method and Constituent:	7703.26-N1		7703.26-S1		7703.26-11el		
	Units	Concentration	Reporting Limit	Concentration	Reporting Limit	Concentration	Reporting Limit
DHS Method:							
Organic Lead	ug/kg	ND	500	950	500	4,400	500

Method and Constituent:	Method Blank	
	Units	Reporting Limit
DHS Method:		
Organic Lead	ug/kg	ND

QC Summary:  
 % Recovery: 95  
 % RPD: \*

Concentrations reported as ND were not detected at or above the reporting limit

\* The RPD is not reportable since the sample prepared in duplicate was not retained