

Trace Analysis Laboratory, Inc.

3423 Investment Boulevard, #8 • Hayward, California 94545

Telephone (415) 783-6960

Facsimile (415) 783-1512



October 17, 1991

Mr. Jerry Green
Ballena Isle Marina
1150 Ballena Boulevard, Suite 111
Alameda, California 94501

Dear Mr. Green:

Trace Analysis Laboratory took three soil samples on September 27, 1991 for your project, 1100 Ballena Boulevard, Alameda, CA (our custody log number 1353).

These samples were composited and analyzed according to your chain of custody. Our analytical report and the completed chain of custody form 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,

A handwritten signature in cursive script, appearing to read 'Jennifer Pekol'.

Jennifer Pekol
Project Specialist

Enclosures

91 OCT 24 2:10:59

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LOG NUMBER: 1353
DATE SAMPLED: 09/27/91
DATE RECEIVED: 09/27/91
DATE EXTRACTED: 10/08/91
DATE ANALYZED: 10/12/91 and 10/14/91
DATE REPORTED: 10/17/91

CUSTOMER: Ballena Isle Marina
REQUESTER: Jerry Green
PROJECT: 1100 Ballena Boulevard, Alameda, CA

Sample Type: Soil

Method and Constituent:	Units	1		Composite 2 and 3		Method Blank	
		Concen- tration	Reporting Limit	Concen- tration	Reporting Limit	Concen- tration	Reporting Limit
DHS Method:							
Total Petroleum Hydro- carbons as Diesel	ug/kg	5,700,000	6,100	1,300,000	6,100	ND	1,000

QC Summary:

% Recovery: 94 and 98
% RPD: 0.6 and 3.5

Concentrations reported as ND were not detected at or above the reporting limit.
Samples 1 and Composite of 2 and 3 indicate compounds eluting later than diesel.



LOG NUMBER: 1353
 DATE SAMPLED: 09/27/91
 DATE RECEIVED: 09/27/91
 DATE EXTRACTED: 10/01/91
 DATE ANALYZED: 10/02/91 and 10/03/91
 DATE REPORTED: 10/17/91
 PAGE: Two

Sample Type: Soil

Method and Constituent:	Units	1		Composite 2 and 3		Method Blank	
		Concen- tration	Reporting Limit	Concen- tration	Reporting Limit	Concen- tration	Reporting Limit
DHS Method:							
Total Petroleum Hydrocarbons as Gasoline	ug/kg	860,000	2,400	7,400	500	ND	500
EPA Method 8020 for:							
Benzene	ug/kg	ND	180	ND	8.8	ND	5.0
Toluene	ug/kg	3,900	170	20	8.4	ND	5.0
Ethylbenzene	ug/kg	13,000	180	27	9.2	ND	5.0
Xylenes	ug/kg	140,000	440	140	22	ND	15

QC Summary:

% Recovery: 124 and 95
 % RPD: 17 and 23

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



LOG NUMBER: 1353
DATE SAMPLED: 09/27/91
DATE RECEIVED: 09/27/91
DATE EXTRACTED: 10/01/91
DATE ANALYZED: 10/01/91
DATE REPORTED: 10/17/91
PAGE: Three

Sample Type: Soil

Method and Constituent:	Units	1		Composite 2 and 3		Method Blank	
		Concen- tration	Reporting Limit	Concen- tration	Reporting Limit	Concen- tration	Reporting Limit
Standard Method 5520F Hydrocarbons:							
Oil and Grease	ug/kg	11,000,000	50,000	4,800,000	50,000	ND	50,000

QC Summary:

% Recovery: 61
% RPD: 4.2

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



LOG NUMBER: 1353
 DATE SAMPLED: 09/27/91
 DATE RECEIVED: 09/27/91
 DATE EXTRACTED: 10/01/91
 DATE ANALYZED: 10/05/91
 DATE REPORTED: 10/17/91
 PAGE: Four

Sample Type: Soil

<u>Method and Constituent</u>	<u>Units</u>	<u>1</u>		<u>Composite 2 and 3</u>		<u>Method Blank</u>	
		<u>Concen- tration</u>	<u>Reporting Limit</u>	<u>Concen- tration</u>	<u>Reporting Limit</u>	<u>Concen- tration</u>	<u>Reporting Limit</u>
EPA Method 8010:							
Benzyl Chloride	ug/kg	ND	6.8	ND	6.8	ND	6.8
Bis (2-Chloroethoxy) Methane	ug/kg	ND	6.8	ND	6.8	ND	6.8
Bis (2-Chloroisopropyl) Ether	ug/kg	ND	6.8	ND	6.8	ND	6.8
Bromobenzene	ug/kg	ND	6.8	ND	6.8	ND	6.8
Bromodichloromethane	ug/kg	ND	6.8	ND	6.8	ND	6.8
Bromoform	ug/kg	ND	6.8	ND	6.8	ND	6.8
Bromomethane	ug/kg	ND	6.8	ND	6.8	ND	6.8
Carbon Tetrachloride	ug/kg	ND	6.8	ND	6.8	ND	6.8
Chloroacetaldehyde	ug/kg	ND	6.8	ND	6.8	ND	6.8
Chloral	ug/kg	ND	6.8	ND	6.8	ND	6.8
Chlorobenzene	ug/kg	ND	6.8	ND	6.8	ND	6.8
Chloroethane	ug/kg	ND	6.8	ND	6.8	ND	6.8
Chloroform	ug/kg	ND	6.8	ND	6.8	ND	6.8
1-Chlorohexane	ug/kg	ND	6.8	ND	6.8	ND	6.8
2-Chloroethyl Vinyl Ether	ug/kg	ND	6.8	ND	6.8	ND	6.8

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



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 DATE ANALYZED: 10/05/91
 DATE REPORTED: 10/17/91
 PAGE: Five

Sample Type: Soil

<u>Method and Constituent</u>	<u>Units</u>	<u>1</u>		<u>Composite 2 and 3</u>		<u>Method Blank</u>	
		<u>Concen- tration</u>	<u>Reporting Limit</u>	<u>Concen- tration</u>	<u>Reporting Limit</u>	<u>Concen- tration</u>	<u>Reporting Limit</u>
EPA Method 8010 (Continued):							
Chloromethane	ug/kg	ND	6.8	ND	6.8	ND	6.8
Chloromethyl Methyl Ether	ug/kg	ND	6.8	ND	6.8	ND	6.8
Chlorotoluene	ug/kg	ND	6.8	ND	6.8	ND	6.8
Dibromochloromethane	ug/kg	ND	6.8	ND	6.8	ND	6.8
Dibromomethane	ug/kg	ND	6.8	ND	6.8	ND	6.8
1,2-Dichlorobenzene	ug/kg	ND	6.8	ND	6.8	ND	6.8
1,3-Dichlorobenzene	ug/kg	ND	6.8	ND	6.8	ND	6.8
1,4-Dichlorobenzene	ug/kg	ND	6.8	ND	6.8	ND	6.8
Dichlorodifluoromethane	ug/kg	ND	6.8	ND	6.8	ND	6.8
1,1-Dichloroethane	ug/kg	ND	6.8	ND	6.8	ND	6.8
1,2-Dichloroethane	ug/kg	ND	6.8	ND	6.8	ND	6.8
1,1-Dichloroethylene	ug/kg	ND	6.8	ND	6.8	ND	6.8
Trans-1,2-Dichloro- ethylene	ug/kg	ND	6.8	ND	6.8	ND	6.8
Dichloromethane	ug/kg	ND	9.9	ND	9.9	ND	9.9
1,2-Dichloropropane	ug/kg	ND	6.8	ND	6.8	ND	6.8
1,3-Dichloropropylene	ug/kg	ND	6.8	ND	6.8	ND	6.8
1,1,2,2-Tetrachloro- ethane	ug/kg	ND	6.8	ND	6.8	ND	6.8

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 PAGE: Six

Sample Type: Soil

Method and Constituent	Units	1		Composite 2 and 3		Method Blank	
		Concen- tration	Reporting Limit	Concen- tration	Reporting Limit	Concen- tration	Reporting Limit
EPA Method 8010 (Continued):							
1,1,1,2-Tetrachloro- ethane	ug/kg	ND	6.8	ND	6.8	ND	6.8
Tetrachloroethylene	ug/kg	ND	6.8	ND	6.8	ND	6.8
1,1,1-Trichloroethane	ug/kg	ND	6.8	ND	6.8	ND	6.8
1,1,2-Trichloroethane	ug/kg	ND	6.8	ND	6.8	ND	6.8
Trichloroethylene	ug/kg	ND	6.8	ND	6.8	ND	6.8
Trichlorofluoro- methane	ug/kg	ND	6.8	ND	6.8	ND	6.8
Trichloropropane	ug/kg	ND	6.8	ND	6.8	ND	6.8
Vinyl Chloride	ug/kg	ND	6.8	ND	6.8	ND	6.8

QC Summary:

% Recovery: 110
 % RPD: 5.6

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

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 DATE EXTRACTED: 10/08/91
 DATE ANALYZED: 10/09/91 and 10/10/91
 DATE REPORTED: 10/17/91
 PAGE: Seven

Sample Type: Soil

<u>Method and Constituent:</u>	<u>Units</u>	<u>1</u>		<u>Composite 2 and 3</u>	
		<u>Concen- tration</u>	<u>Reporting Limit</u>	<u>Concen- tration</u>	<u>Reporting Limit</u>
EPA Method 7130:					
Cadmium	ug/kg	ND	210	ND	210
EPA Method 7190:					
Chromium	ug/kg	18,000	1,200	17,000	1,200
EPA Method 7420:					
Lead	ug/kg	55,000	2,500	51,000	2,500
EPA Method 7520:					
Nickel	ug/kg	14,000	2,500	14,000	2,500
EPA Method 7950:					
Zinc	ug/kg	23,000	1,200	42,000	1,200

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



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DATE ANALYZED: 10/09/91 and 10/10/91
DATE REPORTED: 10/17/91
PAGE: Eight

Sample Type: Soil

Method and Constituent:	Units	Method Blank		QC Summary	
		Concen- tration	Reporting Limit	% Recovery	% RPD
EPA Method 7130: Cadmium	ug/kg	ND	210	91	*
EPA Method 7190: Chromium	ug/kg	ND	1,200	78	7.8
EPA Method 7420: Lead	ug/kg	ND	2,500	91	13
EPA Method 7520: Nickel	ug/kg	ND	2,500	90	0.0
EPA Method 7950: Zinc	ug/kg	ND	1,200	81	6.3

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

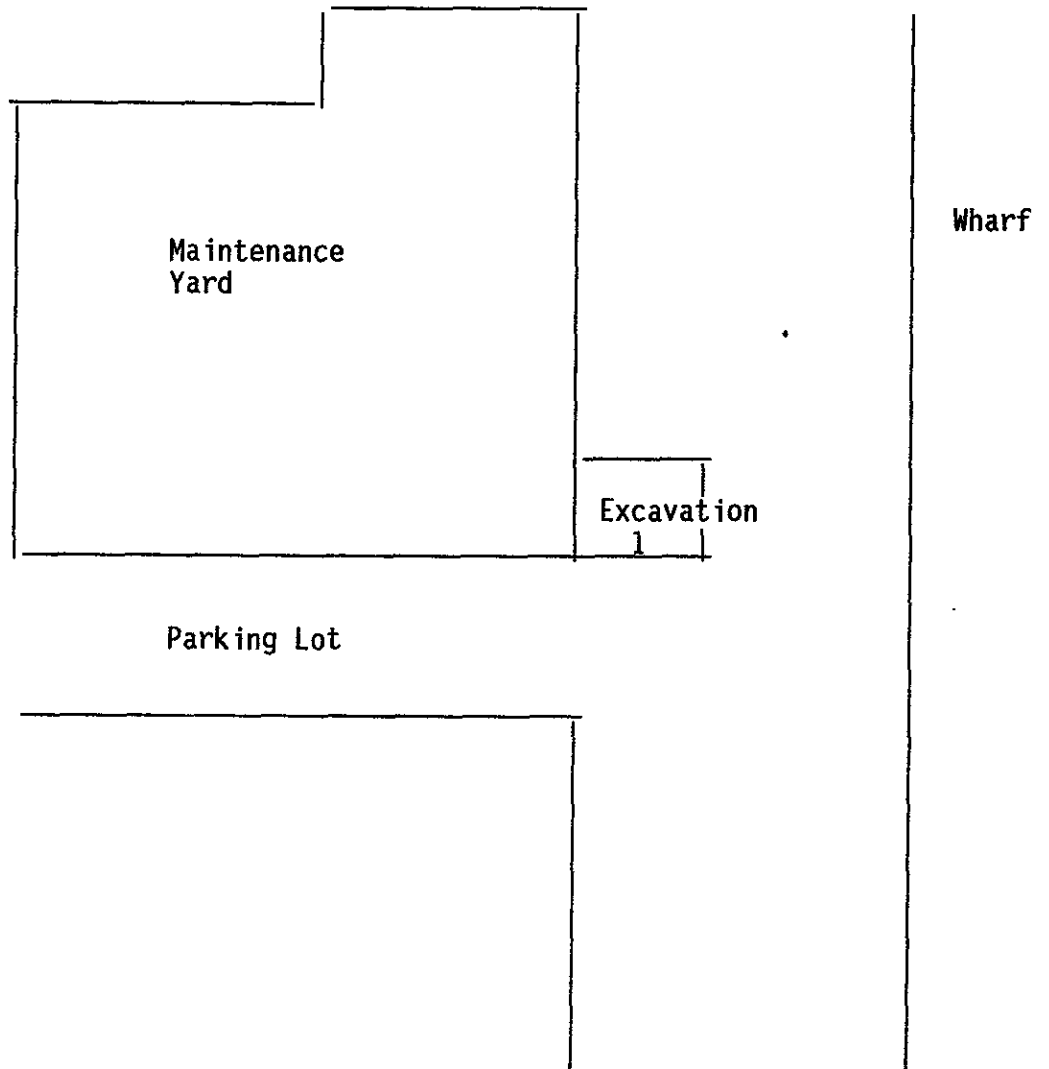
* The RPD is not reportable since the sample prepared in duplicate was not detectable.

Louis W. DuPuis
Quality Assurance/Quality Control Manager



Site: Ballena Isle Marina
Address: 1100 Ballena Boulevard
Alameda, CA 94501

North
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Requester: Jerry Green

Customer: Ballena Isle Marina

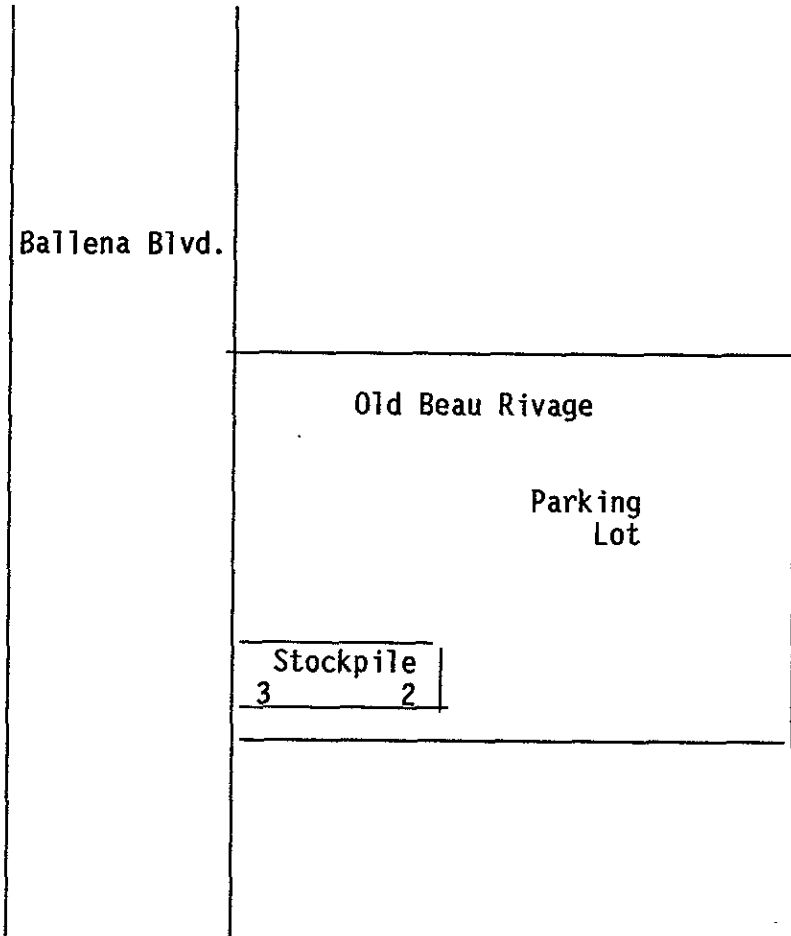
Address: 1150 Ballena Blvd., Ste. 111
Alameda, CA 94501

Date Sampled: 09/27/91

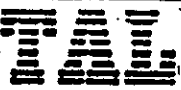
Log #: 1353

Site: Ballena Isle Marina
Address: 1100 Ballena Boulevard
Alameda, CA 94501

North
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Requester: Jerry Green
Customer: Ballena Isle Marina
Address: 1150 Ballena Blvd., Ste. 111 Date Sampled: 09/27/91
Alameda, CA 94501 Log #: 1353



CHAIN OF CUSTODY RECORD

Proj. No.		Project Name		No. of Containers	<div style="border: 1px solid black; padding: 5px; text-align: center;"> 1353 </div>				
Samplers: (signature) <i>John King</i>									
Sample ID	Date	Time	Site Location						
1	9/27/91	10:57	1100 Ballena Blvd	1-Lt.	X	X	X	X	X
2	9/27/91	11:00	↓	↓	X	X	X	X	(Comp)
3	9/27/91	11:08	↓	↓	X	X	X	X	
Relinquished by: (signature)				Date/Time	Received by: (signature)				Date/Time
Relinquished by: (signature)				Date/Time	Received by: (signature)				Date/Time
Received for Laboratory by: (signature)								Date/Time	
REMARKS Send copy of report to county ^{col, site disgram} Reg - TAY soil 1-lt ea on ice Field Sample : Y-6 & R									

A R / Jones