



**Soil Remediation Activities Report  
Former Ransome Property  
Yerba Buena Project Site  
Emeryville, California**

**December 21, 1992  
1649.07**

**VOLUME II OF III  
(Appendix I)**

**Prepared for:  
Catellus Development Corporation  
201 Mission Street  
San Francisco, California**



**LEVINE·FRICKE**

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**LABORATORY CERTIFICATES - AQUA RESOURCES, INC., AND  
LEVINE-FRICKE, INC. VERIFICATION SAMPLES**

**Aqua Resources, Inc. Samples**





Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

DATE RECEIVED: 06/06/91

DATE REPORTED: 06/10/91

AQUA RESOURCES, INC  
RECEIVED

JUN 12 1991

✓ LAB NUMBER: 104048


JOB NO. \_\_\_\_\_  
FILE \_\_\_\_\_

CLIENT: AQUA RESOURCES

PROJECT ID: 90239.3

LOCATION: RANSOME

RESULTS: SEE ATTACHED

  
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QA/QC Approval

  
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Final Approval

Client: Aqua Resources

Laboratory Login Number: 104048

 Project Name: Ransome  
 Project Number: 90239.3

Report Date: 10 June 91

ANALYSIS: Hydrocarbon Oil &amp; Grease (Gravimetric)      METHOD: SMWW 17:5520EF

Lab ID	Sample ID	Matrix	Sampled	Received	Analyzed	Result	Units	RL	Analyst	QC Batch
104048-001	CB-1	Soil	06-JUN-91	06-JUN-91	07-JUN-91	ND	mg/Kg	50	TR	1646
104048-002	CS-2	Soil	06-JUN-91	06-JUN-91	07-JUN-91	ND	mg/Kg	50	TR	1646
104048-003	CE-3	Soil	06-JUN-91	06-JUN-91	07-JUN-91	ND	mg/Kg	50	TR	1646

ND = Not Detected at or above Reporting Limit (RL).



### Q C Batch Report

Client: Aqua Resources  
Project Name: Ransome  
Project Number: 90239.3

Laboratory Login Number: 104048  
Report Date: 10 June 91

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric)

QC Batch Number: 1646

#### Blank Results

Sample ID	Result	MDL	Units	Method	Date Analyzed
BLANK	ND	50	mg/Kg	SMWW 17:5520EF	07-JUN-91

#### Spike/Duplicate Results

Sample ID	Recovery	Method	Date Analyzed
BS	89%	SMWW 17:5520EF	07-JUN-91
BSD	94%	SMWW 17:5520EF	07-JUN-91

Average Spike Recovery  
Relative Percent Difference

92%  
6.1%

Control Limits  
80% - 120%  
< 20%

LABORATORY NUMBER: 104048  
 CLIENT: AQUA RESOURCES  
 PROJECT ID: 90239.3  
 LOCATION: RANSOME

DATE RECEIVED: 06/06/91  
 DATE ANALYZED: 06/06/91  
 DATE REPORTED: 06/10/91  
 DATE REVISED: 06/10/91

Total Volative Hydrocarbons with BTXE in Soils and Wastes  
 TVH by California DOHS Method/LUFT Manual October 1989  
 BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (mg/Kg)	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)
104048-1	CB-1	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104048-2	CS-2	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104048-3	CE-3	ND(1.0)	ND(5.0)	6.4	ND(5.0)	ND(5.0)

ND = Not detected at or above reporting limit; Reporting limit indicated in parentheses.

QA/QC SUMMARY

RPD, %	1
RECOVERY, %	119

AQUA RESOURCES, INC  
 RECEIVED

JUN 17 1991

JCS NO. \_\_\_\_\_  
 FILE \_\_\_\_\_



LABORATORY NUMBER: 104048  
CLIENT: AQUA RESOURCES  
PROJECT ID: 90239.3  
LOCATION: RANSOME

DATE RECEIVED: 06/06/91  
DATE ANALYZED: 06/10/91  
DATE REPORTED: 06/10/91

Extractable Petroleum Hydrocarbons in Soils & Wastes  
California DOHS Method  
LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (mg/Kg)	DIESEL RANGE (mg/Kg)	REPORTING LIMIT* (mg/Kg)
104048-1	CB-1	ND	ND	1.0
104048-2	CS-2	ND	ND	1.0
104048-3	CE-3	ND	ND	1.0

ND = Not Detected at or above reporting limit.

\*Reporting limit applies to all analytes.

QA/QC SUMMARY

RPD, %	5
RECOVERY, %	115





Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

DATE RECEIVED: 06/07/91  
DATE REPORTED: 06/11/91

LAB NUMBER: 104069

AQUA RESOURCES, INC  
RECEIVED

JUN 17 1991


JOE NO. \_\_\_\_\_  
FILE \_\_\_\_\_

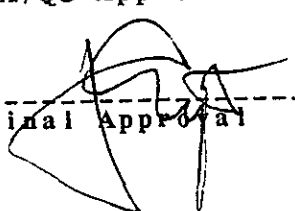
CLIENT: AQUA RESOURCES

PROJECT ID: 90239.3

LOCATION: RANSOME

RESULTS: SEE ATTACHED

  
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QA/QC Approval

  
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Final Approval

Berkeley

Wilmington

Los Angeles



LABORATORY NUMBER: 104069  
CLIENT: AQUA RESOURCES  
PROJECT ID: 90239.3  
LOCATION: RANSOME

DATE RECEIVED: 06/07/91  
DATE ANALYZED: 06/11/91  
DATE REPORTED: 06/11/91

Total Volative Hydrocarbons with BTXE in Soils and Wastes  
TVH by California DOHS Method/LUFT Manual October 1989  
BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (mg/Kg)	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)
104069-1	BW-1	ND(1.0)	ND(5.0)	16	ND(5.0)	ND(5.0)
104069-2	BW-2	ND(1.0)	ND(5.0)	7.3	ND(5.0)	ND(5.0)
104069-3	BB-3	ND(1.0)	ND(5.0)	11	ND(5.0)	ND(5.0)
104069-4	BB-4	ND(1.0)	ND(5.0)	8.3	ND(5.0)	ND(5.0)
104069-5	BB-5	ND(1.0)	ND(5.0)	10	ND(5.0)	ND(5.0)

ND = Not detected at or above reporting limit; Reporting limit indicated in parentheses.

QA/QC SUMMARY

RPD, %	4
RECOVERY, %	103





LABORATORY NUMBER: 104069  
CLIENT: AQUA RESOURCES  
PROJECT ID: 90239.3  
LOCATION: RANSOME

DATE RECEIVED: 06/07/91  
DATE EXTRACTED: 06/10/91  
DATE ANALYZED: 06/11/91  
DATE REPORTED: 06/11/91

Extractable Petroleum Hydrocarbons in Soils & Wastes  
California DOHS Method  
LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (mg/Kg)	DIESEL RANGE (mg/Kg)	REPORTING LIMIT* (mg/Kg)
104069-1	BW-1	ND	ND	1.0
104069-2	BW-2	ND	ND	1.0
104069-3	BB-3	ND	ND	1.0
104069-4	BB-4	ND	ND	1.0
104069-5	BB-5	ND	ND	1.0

ND = Not Detected at or above reporting limit.

\*Reporting limit applies to all analytes.

QA/QC SUMMARY

RPD, %	18
RECOVERY, %	109

Client: Aqua Resources

Laboratory Login Number: 104069

 Project Name: Ransome  
 Project Number: 90239.3

Report Date: 11 June 91

ANALYSIS: Hydrocarbon Oil &amp; Grease (Gravimetric)      METHOD: SMWW 17:5520EF

Lab ID	Sample ID	Matrix	Sampled	Received	Analyzed	Result	Units	RL	Analyst	QC Batch
104069-001	BW-1	Soil	07-JUN-91	07-JUN-91	11-JUN-91	ND	mg/Kg	50	TR	1678
104069-002	BW-2	Soil	07-JUN-91	07-JUN-91	11-JUN-91	ND	mg/Kg	50	TR	1678
104069-003	BB-3	Soil	07-JUN-91	07-JUN-91	11-JUN-91	ND	mg/Kg	50	TR	1678
104069-004	BB-4	Soil	07-JUN-91	07-JUN-91	11-JUN-91	ND	mg/Kg	50	TR	1678
104069-005	BB-5	Soil	07-JUN-91	07-JUN-91	11-JUN-91	ND	mg/Kg	50	TR	1678

ND = Not Detected at or above Reporting Limit (RL).



Q C Batch Report

Client: Aqua Resources  
Project Name: Ransome  
Project Number: 90239.3

Laboratory Login Number: 104069  
Report Date: 11 June 91

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric)

QC Batch Number: 1678

Blank Results

Sample ID	Result	MDL	Units	Method	Date Analyzed
BLANK	ND	50	mg/Kg	SMWW 17:5520EF	11-JUN-91

Spike/Duplicate Results

Sample ID	Recovery	Method	Date Analyzed
BS	87%	SMWW 17:5520EF	11-JUN-91
BSD	85%	SMWW 17:5520EF	11-JUN-91

Average Spike Recovery  
Relative Percent Difference

86%  
2.8%

Control Limits  
80% - 120%  
< 20%



LABORATORY NUMBER: 104094  
 CLIENT: AQUA RESOURCES  
 PROJECT ID: 90239.3  
 LOCATION: RANSOME

DATE RECEIVED: 06/11/91  
 DATE EXTRACTED: 06/12/91  
 DATE ANALYZED: 06/15, 16/91  
 DATE REPORTED: 06/18/91

Extractable Petroleum Hydrocarbons in Soils & Wastes  
 California DOHS Method  
 LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (mg/Kg)	DIESEL RANGE (mg/Kg)	REPORTING LIMIT* (mg/Kg)
104094-1	DB-3	ND	ND	1.0
104094-2	DN-4	ND	2.1	1.0
104094-3	DS-5	ND	ND	1.0
104094-4	DE-6	3.4	ND	1.0
104094-5	DS-7	ND	ND	1.0
104094-6	DB-8	25	ND	1.0
104094-7	DN-9	ND	ND	1.0

ND = Not Detected at or above reporting limit.

\*Reporting limit applies to all analytes.

QA/QC SUMMARY

RPD, %	20
RECOVERY, %	83



LABORATORY NUMBER: 104081  
CLIENT: AQUA RESOURCES  
PROJECT ID: 90239.3  
LOCATION: RANSOME

DATE RECEIVED: 06/10/91  
DATE EXTRACTED: 06/10/91  
DATE ANALYZED: 06/12/91  
DATE REPORTED: 06/13/91

Extractable Petroleum Hydrocarbons in Soils & Wastes  
California DOHS Method  
LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (mg/Kg)	DIESEL RANGE (mg/Kg)	REPORTING LIMIT* (mg/Kg)
104081-1	BS-6	ND	ND	1.0
104081-2	AB-1	ND	ND	1.0
104081-3	AE-2	ND	ND	1.0
104081-4	AN-3	ND	ND	1.0
104081-5	AW-4	ND	ND	1.0
104081-6	AS-5	ND	ND	1.0
04081-7	DN-1	ND	ND	1.0
104081-8	DB-2	ND	ND	1.0

ND = Not Detected at or above reporting limit.

\*Reporting limit applies to all analytes.

QA/QC SUMMARY

RPD, %

9

RECOVERY, %

85



LABORATORY NUMBER: 104124  
CLIENT: AQUA RESOURCES  
PROJECT ID: 90239.3  
LOCATION: RANSCME

DATE RECEIVED: 06/13/91  
DATE EXTRACTED: 06/17/91  
DATE ANALYZED: 06/19/91  
DATE REPORTED: 06/19/91

Extractable Petroleum Hydrocarbons in Soils & Wastes  
California DOHS Method  
LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (mg/Kg)	DIESEL RANGE (mg/Kg)	REPORTING LIMIT* (mg/Kg)
104124-1	FB-1	ND	13	1.0
104124-2	FW-2	ND	ND	1.0
104124-3	FN-3	ND	ND	10
104124-4	FS-4	ND	ND	1.0
104124-5	SAND-1	ND	ND	10

ND = Not Detected at or above reporting limit.

\*Reporting limit applies to all analytes.

QA/QC SUMMARY

RPD, %	7
RECOVERY, %	92

LABORATORY NUMBER: 104133  
 CLIENT: AQUA RESOURCES  
 PROJECT ID: 90239.3  
 LOCATION: RANSCME

DATE RECEIVED: 06/14/91  
 DATE EXTRACTED: 06/17/91  
 DATE ANALYZED: 06/19/91  
 DATE REPORTED: 06/19/91

Extractable Petroleum Hydrocarbons in Soils & Wastes  
 California DOHS Method  
 LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (mg/Kg)	DIESEL RANGE (mg/Kg)	REPORTING LIMIT* (mg/Kg)
104133-1	DS-17	ND	ND	1.0
104133-2	DB-18	ND	ND	1.0

ND = Not Detected at or above reporting limit.

\*Reporting limit applies to all analytes.

QA/QC SUMMARY

RPD, %	7
RECOVERY, %	92



LABORATORY NUMBER: 104094  
 CLIENT: AQUA RESOURCES  
 PROJECT ID: 90239.3  
 LOCATION: RANSOME

DATE RECEIVED: 06/11/91  
 DATE ANALYZED: 06/14/91  
 DATE REPORTED: 06/18/91

Total Volative Hydrocarbons with BTXE in Soils and Wastes  
 TVH by California DOHS Method/LUFT Manual October 1989  
 BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (mg/Kg)	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)
104094.1	DB-3	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104094.2	DN-4	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104094.3	DS-5	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104094.4	DE-6	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104094.5	DS-7	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	5.3
104094.6	DB-8	2.2	ND(5.0)	ND(5.0)	ND(5.0)	6.7
104094.7	DN-9	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)

ND = Not detected at or above reporting limit; Reporting limit indicated in parentheses.

QA/QC SUMMARY

RPD, %	1
RECOVERY, %	105

LABORATORY NUMBER: 104133  
 CLIENT: AQUA RESOURCES  
 PROJECT ID: 90239.3  
 LOCATION: RANSOME

DATE RECEIVED: 06/14/91  
 DATE ANALYZED: 06/18/91  
 DATE REPORTED: 06/19/91

Total Volatile Hydrocarbons with BTXE in Soils and Wastes  
 TVH by California DOHS Method/LUFT Manual October 1989  
 BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (mg/Kg)	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)
104133-1	DS-17	26	ND(5.0)	26	92	310
104133-2	DB-18	150	ND(10)	120	370	1,200

ND = Not detected at or above reporting limit; Reporting limit indicated in parentheses.

QA/QC SUMMARY

RPD, %	1
RECOVERY, %	107

LABORATORY NUMBER: 104081  
 CLIENT: AQUA RESOURCES  
 PROJECT ID: 90239.3  
 LOCATION: RANSOME

DATE RECEIVED: 06/10/91  
 DATE ANALYZED: 06/13/91  
 DATE REPORTED: 06/13/91

Total Volative Hydrocarbons with BTXE in Soils and Wastes  
 TVH by California DOHS Method/LUFT Manual October 1989  
 BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (mg/Kg)	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)
104081-1	BS-6	ND(1.0)	ND(5.0)		35 ND(5.0)	ND(5.0)
104081-2	AB-1	ND(1.0)	ND(5.0)		5.5 ND(5.0)	ND(5.0)
104081-3	AE-2	ND(1.0)	ND(5.0)		9.5 ND(5.0)	ND(5.0)
104081-4	AN-3	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104081-5	AW-4	ND(1.0)	ND(5.0)		5.5 ND(5.0)	ND(5.0)
104081-6	AS-5	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104081-7	DN-1	ND(1.0)	ND(5.0)		32 ND(5.0)	ND(5.0)
104081-8	DB-2	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)

ND = Not detected at or above reporting limit; Reporting limit indicated in parentheses.

QA/QC SUMMARY

RPD, %	4
RECOVERY, %	110



LABORATORY NUMBER: 104124  
CLIENT: AQUA RESOURCES  
PROJECT ID: 90239.3  
LOCATION: RANSOME

DATE RECEIVED: 06/13/91  
DATE ANALYZED: 06/19/91  
DATE REPORTED: 06/19/91

Total Volative Hydrocarbons with BTXE in Soils and Wastes  
TVH by California DOHS Method/LUFT Manual October 1989  
BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (mg/Kg)	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)
104124-1	FB-1	120	ND(80)	ND(80)	1,600	3,600
104124-2	FW-2	14	410	14	150	380
104124-3	FN-3	12	9.8	7.1	190	470
104124-4	FS-4	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104124-5	SAND-1	4,600	ND(4000)	9,300	16,000	37,000

ND = Not detected at or above reporting limit; Reporting limit indicated in parentheses.

QA/QC SUMMARY

RPD, %	1
RECOVERY, %	103

Client: Aqua Resources

Laboratory Login Number: 104081

 Project Name: Ransome  
 Project Number: 90239.3

Report Date: 13 June 91

ANALYSIS: Hydrocarbon Oil &amp; Grease (Gravimetric)      METHOD: BMW 17:5520EF

Lab ID	Sample ID	Matrix	Sampled	Received	Analyzed	Result	Units	RL	Analyst	QC	Batch
104081-001	AS-6	Soil	10-JUN-91	10-JUN-91	11-JUN-91	ND	mg/Kg	50	TR		1678
104081-002	AS-7	Soil	10-JUN-91	10-JUN-91	11-JUN-91	ND	mg/Kg	50	TR		1678
104081-003	AS-8	Soil	10-JUN-91	10-JUN-91	11-JUN-91	ND	mg/Kg	50	TR		1678
104081-004	AS-9	Soil	10-JUN-91	10-JUN-91	11-JUN-91	ND	mg/Kg	50	TR		1678
104081-005	AS-4	Soil	10-JUN-91	10-JUN-91	11-JUN-91	ND	mg/Kg	50	TR		1678
104081-006	AS-5	Soil	10-JUN-91	10-JUN-91	11-JUN-91	ND	mg/Kg	50	TR		1678
104081-007	AS-1	Soil	10-JUN-91	10-JUN-91	11-JUN-91	ND	mg/Kg	50	TR		1678
104081-008	AS-2	Soil	10-JUN-91	10-JUN-91	11-JUN-91	ND	mg/Kg	50	TR		1678

ND = Not Detected at or above Reporting Limit (RL).

Client: Aqua Resources

Laboratory Login Number: 104094

 Project Name: Ransome  
 Project Number: 90239.3

Report Date: 18 June 91

ANALYSIS: Hydrocarbon Oil &amp; Grease (Gravimetric) METHOD: SKWH 17:5520EF

Lab ID	Sample ID	Matrix	Sampled	Received	Analyzed	Result	Units	RL	Analyst	QC Batch
104094-001	DN-3	Soil	11-JUN-91	11-JUN-91	13-JUN-91	ND	mg/Kg	50	TR	1703
104094-002	DN-4	Soil	11-JUN-91	11-JUN-91	13-JUN-91	ND	mg/Kg	50	TR	1703
104094-003	DN-5	Soil	11-JUN-91	11-JUN-91	13-JUN-91	ND	mg/Kg	50	TR	1703
104094-004	DN-6	Soil	11-JUN-91	11-JUN-91	13-JUN-91	ND	mg/Kg	50	TR	1703
104094-005	DN-7	Soil	11-JUN-91	11-JUN-91	13-JUN-91	ND	mg/Kg	50	TR	1703
104094-006	DN-8	Soil	11-JUN-91	11-JUN-91	13-JUN-91	ND	mg/Kg	50	TR	1703
104094-007	DN-9	Soil	11-JUN-91	11-JUN-91	13-JUN-91	ND	mg/Kg	50	TR	1703

ND = Not Detected at or above Reporting Limit (RL).

Client: Aqua Resources

Project Name: Ransome

Project Number: 90239.3

Laboratory Login Number: 104133

Report Date: 19 June 91

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric)

METHOD: SMWW 17:5520BY

Lab ID	Sample ID	Matrix	Sampled	Received	Analyzed	Result	Units	RL	Analyst	QC	Batch
104133-001	15-17	Soil	14-JUN-91	14-JUN-91	17-JUN-91	ND	mg/Kg	50	TR		1733

ND - Not Detected at or above Reporting Limit (RL).

## QC Batch Report

 Client: Aqua Resources  
 Project Name: Ransome  
 Project Number: 90239.3

 Laboratory Login Number: 104133  
 Report Date: 19 June 91

ANALYSIS: Hydrocarbon Oil &amp; Grease (Gravimetric)

QC Batch Number: 1733

## Blank Results

Sample ID	Result	MDL	Units	Method	Date Analyzed
BLANK	ND	50	mg/Kg	SMWW 17:5520EF	17-JUN-91

## Spike/Duplicate Results

Sample ID	Recovery	Method	Date Analyzed
BS	87%	SMWW 17:5520EF	17-JUN-91
BSD	86%	SMWW 17:5520EF	17-JUN-91

 Average Spike Recovery 86%  
 Relative Percent Difference .2%

 Control Limits  
 80% - 120%  
 < 20%



QC Batch Report

Client: Aqua Resources  
Project Name: Ransome  
Project Number: 90239.3

Laboratory Login Number: 104094  
Report Date: 18 June 91

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric)

QC Batch Number: 1703

Blank Results

Sample ID	Result	MDL	Units	Method	Date Analyzed
BLANK	ND	50	mg/Kg	SMWW 17:5520EF	13-JUN-91

Spike/Duplicate Results

Sample ID	Recovery	Method	Date Analyzed
BS	83%	SMWW 17:5520EF	13-JUN-91
BSD	80%	SMWW 17:5520EF	13-JUN-91

Average Spike Recovery 82%  
Relative Percent Difference 2.7%

Control Limits  
80% - 120%  
< 20%

**Q C Batch Report**

Client: Aqua Resources  
 Project Name: Ransome  
 Project Number: 90239.3

Laboratory Login Number: 104081  
 Report Date: 13 June 91

**ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric)**

**QC Batch Number: 1678**

**Blank Results**

Sample ID	Result	MDL	Units	Method	Date Analyzed
BLANK	ND	50	mg/Kg	SMWW 17:5520EF	11-JUN-91

**Spike/Duplicate Results**

Sample ID	Recovery	Method	Date Analyzed
BS	87%	SMWW 17:5520EF	11-JUN-91
BSD	85%	SMWW 17:5520EF	11-JUN-91

Average Spike Recovery	86%	Control Limits
Relative Percent Difference	2.8%	80% - 120%
		< 20%



QC Batch Report

Client: Aqua Resources  
Project Name: Ransome  
Project Number: 90239.3

Laboratory Login Number: 104124  
Report Date: 19 June 91

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric)

QC Batch Number: 1733

Blank Results

Sample ID	Result	MDL	Units	Method	Date Analyzed
BLANK	ND	50	mg/Kg	SMWW 17:5520EF	17-JUN-91

Spike/Duplicate Results

Sample ID	Recovery	Method	Date Analyzed
BS	87%	SMWW 17:5520EF	17-JUN-91
BSD	86%	SMWW 17:5520EF	17-JUN-91

Average Spike Recovery	86%	Control Limits
Relative Percent Difference	.2%	80% - 120%
		< 20%





# AQUA RESOURCES, INC.

SHIPMENT NO.: 3



## CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

PROJECT NAME: RANSOME

DATE 6/10/91

PROJECT NO.: 90239.3

Sample Number	Location	Type of Sample		Type of Container	Type of Preservation		Analysis Required
		Material	Method		Temp	Chemical	
BS-6	3'	Soil	Drive from Bucket	BRASS SCREEN	±4°C		TPHS, BTXE, TPHD, O&G
AS-1	3 1/2'	"	"	"	"		"
AE-2	3'	"	"	"	"		"
AN-3	3 1/2'	"	"	"	"		"
AW-4	6'	"	"	"	"		"
AS-5	3 1/2'	"	"	"	"		"
DN-1	3'	"	"	"	"		"
DB-2	4 1/2'	"	"	"	"		"

Total Number of Samples Shipped: 8

Sampler's Signature: [Signature]

Relinquished By:  
 Signature: [Signature]  
 Printed Name: Aaron Stegeman  
 Company: Aqua Resources  
 Reason: ANALYSIS

Received By:  
 Signature: [Signature]  
 Printed Name: Nancy Wilson  
 Company: \_\_\_\_\_

Date: 6/10/91  
 Time: 4:30

Relinquished By:  
 Signature: \_\_\_\_\_  
 Printed Name: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Reason: \_\_\_\_\_

Received By:  
 Signature: \_\_\_\_\_  
 Printed Name: \_\_\_\_\_  
 Company: \_\_\_\_\_

Date: 1/1  
 Time: \_\_\_\_\_

**REMARKS:**

TPHG & BTXE = Luft Manna  
 TPHD = 8015 Mod  
 O&G = 5520 EF

Special Shipment / Handling / Storage Requirements:





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2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

DATE RECEIVED: 06/12/91  
DATE REPORTED: 06/19/91


LAB NUMBER: 104115

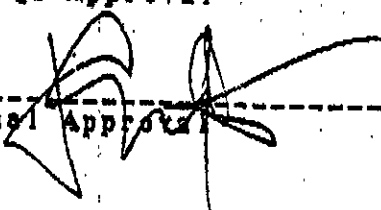
CLIENT: AQUA RESOURCES

PROJECT ID: 90239.2

LOCATION: RANSCME

RESULTS: SEE ATTACHED

  
-----  
QA/QC Approval

  
-----  
Final Approval

Berkeley

Wilmington

Los Angeles





LABORATORY NUMBER: 104115  
CLIENT: AQUA RESOURCES  
PROJECT ID: 90239.2  
LOCATION: RANSOME

DATE RECEIVED: 06/12/91  
DATE ANALYZED: 06/18/91  
DATE REPORTED: 06/19/91

Total Volative Hydrocarbons with BTXE in Soils and Wastes  
TVH by California DOHS Method/LUFT Manual October 1989  
BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (mg/Kg)	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)
104115-1	DB-10	370	ND(80)	ND(80)	340	3,400
104115-2	DW-11	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104115-3	DB-12	28	ND(10)	ND(10)	35	270
104115-4	DB-13	760	ND(400)	ND(400)	710	4,800
104115-5	DS-14	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104115-6	DB-15	110	ND(5.0)	130	180	840
104115-7	DE-16	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)

ND = Not detected at or above reporting limit; Reporting limit indicated in parentheses.

QA/QC SUMMARY

RPD, %	9
RECOVERY, %	94



LABORATORY NUMBER: 104115  
CLIENT: AQUA RESOURCES  
PROJECT ID: 90239.2  
LOCATION: RANSOME

DATE RECEIVED: 06/12/91  
DATE ANALYZED: 06/18/91  
DATE REPORTED: 06/19/91

Benzene, Toluene, Ethyl Benzene, Xylenes by EPA 8020  
Extraction by EPA 5030 Purge and Trap

LAB ID	SAMPLE ID	BENZENE (ug/kg)	TOLUENE (ug/kg)	ETHYL BENZENE (ug/kg)	TOTAL XYLENES (ug/kg)	REPORTING LIMIT * (ug/kg)
104115-8	DE-16 SPLIT	ND	ND	ND	ND	5.0

ND = Not detected at or above reporting limit.

\* Reporting Limit applies to all analytes.

QA/QC SUMMARY

RPD, %

9

RECOVERY, %

94



LABORATORY NUMBER: 104115  
CLIENT: AQUA RESOURCES  
PROJECT ID: 90239.2  
LOCATION: RANSOME

DATE RECEIVED: 06/12/91  
DATE EXTRACTED: 06/14/91  
DATE ANALYZED: 06/17/91  
DATE REPORTED: 06/19/91

Extractable Petroleum Hydrocarbons in Soils & Wastes  
California DOHS Method  
LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (mg/Kg)	DIESEL RANGE (mg/Kg)	REPORTING LIMIT* (mg/Kg)
104115-1	DB-10	ND	ND	10
104115-2	DW-11	ND	ND	1.0
104115-3	DB-12	ND	ND	10
104115-4	DB-13	ND	ND	10
104115-5	DS-14	ND	ND	1.0
104115-6	DB-15	ND	ND	1.0
104115-7	DE-16	ND	ND	1.0

ND = Not Detected at or above reporting limit.

\*Reporting limit applies to all analytes.

QA/QC SUMMARY

RPD, %	7
RECOVERY, %	92

Client: Aqua Resources

Laboratory Login Number: 104115

 Project Name: Ransome  
 Project Number: 90239.2

Report Date: 20 June 91

ANALYSIS: Hydrocarbon Oil &amp; Grease (Gravimetric)      METHOD: SKWV 17:5520EF

Lab ID	Sample ID	Matrix	Sampled	Received	Analyzed	Result	Units	RL	Analyst	QC Batch
104115-001	DR-10	Soil	12-JUN-91	12-JUN-91	14-JUN-91	3200	mg/Kg	50	TR	1726
104115-002	DR-11	Soil	12-JUN-91	12-JUN-91	14-JUN-91	ND	mg/Kg	50	TR	1726
104115-003	DR-12	Soil	12-JUN-91	12-JUN-91	14-JUN-91	7200	mg/Kg	50	TR	1726
104115-005	DR-14	Soil	12-JUN-91	12-JUN-91	14-JUN-91	ND	mg/Kg	50	TR	1726
104115-006	DR-15	Soil	12-JUN-91	12-JUN-91	14-JUN-91	ND	mg/Kg	50	TR	1726
104115-007	DR-16	Soil	12-JUN-91	12-JUN-91	14-JUN-91	ND	mg/Kg	50	TR	1726

ND = Not Detected at or above Reporting Limit (RL).



Q C Batch Report

Client: Aqua Resources  
Project Name: Ransome  
Project Number: 90239.2

Laboratory Login Number: 104115  
Report Date: 19 June 91

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric)

QC Batch Number: 1726

Blank Results

Sample ID	Result	MDL	Units	Method	Date Analyzed
BLANK	ND	50	mg/Kg	SMWW 17:5520EF	14-JUN-91

Spike/Duplicate Results

Sample ID	Recovery	Method	Date Analyzed
BS	81%	SMWW 17:5520EF	14-JUN-91
BSD	87%	SMWW 17:5520EF	14-JUN-91

Average Spike Recovery  
Relative Percent Difference

84%  
7.0%

Control Limits  
80% - 120%  
< 20%

# AQUA RESOURCES, INC.



## CHAIN OF CUSTODY RECORD

SHIPMENT NO.: 5

PAGE 1 OF 1

DATE 6/12/91

PROJECT NAME: RANSOME

PROJECT NO.: 90239.2

Sample Number	Location	Type of Sample		Type of Container	Type of Preservation		Analysis Required
		Material	Method		Temp	Chemical	
DB-10 ✓	8 1/2'	Soil	Drive from Tanker	Brass Sleeve	± 4°C		TPHG+BTXE, TPHD, TOG
DW-11 ✓	5'	"	"	"	"		TPHG+BTXE, TPHD, TOG
DB-12 ✓	8 1/2'	"	"	"	"		TPHG+BTXE, TPHD, TOG
DB-13 ✓	6'	"	"	"	"		TPHG+BTXE, TPHD, TOG
DS-14 ✓	5'	"	"	"	"		TPHG+BTXE, TPHD, TOG
DB-15 ✓	7'	"	"	"	"		TPHG+BTXE, TPHD, TOG
DE-16 ✓	2 1/2'	"	"	"	"		BTXE Only
DE-16-SPLIT	2 1/2'	"	"	"	"		

Total Number of Samples Shipped: 8    Sampler's Signature: [Signature]

Relinquished By: Signature: <u>[Signature]</u> Printed Name: <u>Aaron Stessman</u> Company: <u>Aqua Resources Inc.</u> Reason: <u>Analysis</u>	Received By: Signature: <u>[Signature]</u> Printed Name: <u>Nancy Wilson</u> Company: <u>LET</u>	Date: <u>6/12/91</u> Time: <u>4:20</u>
Relinquished By: Signature: _____ Printed Name: _____ Company: _____ Reason: _____	Received By: Signature: _____ Printed Name: _____ Company: _____	Date: <u>1/1</u> Time: _____

REMARKS:

TPHG = LEFT MANUAL  
 TPHD = mod  
 OEG = JLOEF

\* Run DB12 for 8010  
 as per Aaron

Special Shipment / Handling / Storage Requirements:



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DATE RECEIVED: 06/13/91  
DATE REPORTED: 06/19/91

LAB NUMBER: 104124

CLIENT: AQUA RESOURCES, INC.

PROJECT ID: 90239.3

LOCATION: RANSOME

RESULTS: SEE ATTACHED

  
-----  
QA/QC Approval

  
-----  
Final Approval

Berkeley

Wilmington

Los Angeles  
06 12 09 09 01 BERKELEY



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878.

2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

DATE RECEIVED: 06/10/91  
DATE REPORTED: 06/13/91

LAB NUMBER: 104081

CLIENT: AQUA RESOURCES

PROJECT ID: 90239.3

LOCATION: RANSOME

RESULTS: SEE ATTACHED

  
-----  
QA/QC Approval

  
-----  
Final Approval

Berkeley

Wilmington

Los Angeles





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2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

DATE RECEIVED: 06/14/91  
DATE REPORTED: 06/19/91


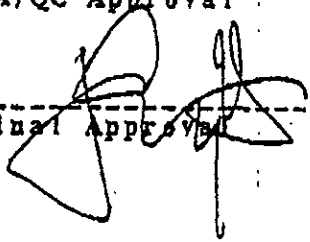
LAB NUMBER: 104133

CLIENT: AQUA RESOURCES

PROJECT ID: 90239.3

LOCATION: RANSOME

RESULTS: SEE ATTACHED

  
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QA/QC Approval  
  
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Final Approval

Berkeley

Wilmington

OF 10:16 01 BERKELEY

P.2



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2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

DATE RECEIVED: 06/11/91  
DATE REPORTED: 06/18/91

LAB NUMBER: 104094

CLIENT: AQUA RESOURCES, INC.

PROJECT ID: 90239.3

LOCATION: RANSOME

RESULTS: SEE ATTACHED

  
-----  
QA/QC Approval

  
-----  
Final Approval

Berkeley

Wilmington

Los Angeles



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

DATE RECEIVED: 06/18/91  
DATE REPORTED: 06/25/91

LAB NUMBER: 104181

CLIENT: AQUA RESOURCES, INC.

PROJECT ID: 90239.3

LOCATION: RANSOME

RESULTS: SEE ATTACHED

*Neil C. Gray*  
-----  
QA/QC Approval

*[Signature]*  
-----  
Final Approval



Curtis &amp; Tompkins, Ltd.

LABORATORY NUMBER: 104181  
 CLIENT: AQUA RESOURCES, INC.  
 PROJECT ID: 90239.3  
 LOCATION: RANSOME

DATE RECEIVED: 06/18/91  
 DATE ANALYZED: 06/23/91  
 DATE REPORTED: 06/25/91

Total Volative Hydrocarbons with BTXE in Soils and Wastes  
 TVH by California DOHS Method/LUFT Manual October 1989  
 BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (mg/Kg)	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)
104181-3	HW-3	2.5	6.6	ND(5.0)	ND(5.0)	8.0
104181-5	HN-5	78	20	24	ND(10)	ND(10)

ND = Not detected at or above reporting limit; Reporting limit indicated in parentheses.

QA/QC SUMMARY

RPD, %	3
RECOVERY, %	94



Curtis &amp; Tompkins, Ltd.

LABORATORY NUMBER: 104181  
 CLIENT: AQUA RESOURCES, INC.  
 PROJECT ID: 90239.3  
 LOCATION: RANSOME

DATE RECEIVED: 06/18/91  
 DATE EXTRACTED: 06/19/91  
 DATE ANALYZED: 06/23/91  
 DATE REPORTED: 06/25/91

Extractable Petroleum Hydrocarbons in Soils & Wastes  
 California DOHS Method  
 LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (mg/Kg)	DIESEL RANGE (mg/Kg)	REPORTING LIMIT* (mg/Kg)
104181-1	HS-1	ND	570	10
104181-2	HS-2	ND	36	10
104181-3	HW-3	ND	1.2	1.0
104181-4	HN-4	ND	ND	1.0
104181-5	HN-5	ND	690	10
104181-6	HE-6	ND	ND	1.0

ND = Not Detected at or above reporting limit.

\*Reporting limit applies to all analytes.



Curtis &amp; Tompkins, Ltd.

Client: Aqua Resources

Laboratory Login Number: 104181

Project Name: Ransome  
Project Number: 90239.3

Report Date: 25 June 91

ANALYSIS: Hydrocarbon Oil &amp; Grease (Gravimetric) METHOD: SMW 17:5520EF

Lab ID	Sample ID	Matrix	Sampled	Received	Analyzed	Result	Units	RL	Analyt	QC Batch
104181-001	HN-1	Soil	18-JUN-91	18-JUN-91	20-JUN-91	3200	mg/Kg	50	TR	1765
104181-002	HN-2	Soil	18-JUN-91	18-JUN-91	20-JUN-91	1700	mg/Kg	50	TR	1765
104181-003	HN-3	Soil	18-JUN-91	18-JUN-91	20-JUN-91	160	mg/Kg	50	TR	1765
104181-004	HN-4	Soil	18-JUN-91	18-JUN-91	20-JUN-91	ND	mg/Kg	50	TR	1765
104181-005	HN-5	Soil	18-JUN-91	18-JUN-91	20-JUN-91	65	mg/Kg	50	TR	1765
104181-006	HN-6	Soil	18-JUN-91	18-JUN-91	20-JUN-91	75	mg/Kg	50	TR	1765

ND = Not Detected at or above Reporting Limit (RL).



### QC Batch Report

Client: Aqua Resources  
Project Name: Ransome  
Project Number: 90239.3

Laboratory Login Number: 104181  
Report Date: 25 June 91

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric)

QC Batch Number: 1765

#### Blank Results

Sample ID	Result	MDL	Units	Method	Date Analyzed
BLANK	ND	50	mg/Kg	SMWW 17:5520EF	20-JUN-91

#### Spike/Duplicate Results

Sample ID	Recovery	Method	Date Analyzed
BS	92%	SMWW 17:5520EF	20-JUN-91
BSD	94%	SMWW 17:5520EF	20-JUN-91

Average Spike Recovery  
Relative Percent Difference

93%  
1.9%

Control Limits  
80% - 120%  
< 20%



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DATE RECEIVED: 06/19/91

DATE REPORTED: 06/24/91

AQUA RESOURCES, INC  
RECEIVED

JUN 27 1991

LAB NUMBER: 104200

JOB NO. \_\_\_\_\_


FILE \_\_\_\_\_

CLIENT: AQUA RESOURCES

PROJECT ID: 90239.3

LOCATION: RANSOME

RESULTS: SEE ATTACHED

  
-----  
QA/QC Approval

  
-----  
Final Approval

Berkeley

Wilmington

Los Angeles





LABORATORY NUMBER: 104200  
CLIENT: AQUA RESOURCES  
PROJECT ID: 90239.3  
LOCATION: RANSOME

DATE RECEIVED: 06/19/91  
DATE EXTRACTED: 06/20/91  
DATE ANALYZED: 06/21/91  
DATE REPORTED: 06/24/91

Extractable Petroleum Hydrocarbons in Soils & Wastes  
California DOHS Method  
LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (mg/Kg)	DIESEL RANGE (mg/Kg)	REPORTING LIMIT* (mg/Kg)
104200-1	GN-1	ND	ND	1.0
104200-2	GB-2	ND	ND	1.0
104200-3	GS-3	ND	ND	1.0
104200-4	GS-4	1.9	ND	1.0

ND = Not Detected at or above reporting limit.

\*Reporting limit applies to all analytes.

QA/QC SUMMARY

RPD, %	9
RECOVERY, %	108



Client: Aqua Resources

Laboratory Login Number: 104200

Project Name: Ransome

Report Date: 24 June 91

Project Number: 90239.3

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric)

METHOD: SMWW 17:5520EF

Lab ID	Sample ID	Matrix	Sampled	Received	Analyzed	Result	Units	RL	Analyst	QC Batch
104200-001	GN-1	Soil	19-JUN-91	19-JUN-91	20-JUN-91	660	mg/Kg	50	TR	1765
104200-002	GB-2	Soil	19-JUN-91	19-JUN-91	20-JUN-91	ND	mg/Kg	50	TR	1765
104200-003	GS-3	Soil	19-JUN-91	19-JUN-91	20-JUN-91	ND	mg/Kg	50	TR	1765
104200-004	GS-4	Soil	19-JUN-91	19-JUN-91	20-JUN-91	ND	mg/Kg	50	TR	1765

ND = Not Detected at or above Reporting Limit (RL).



Q C Batch Report

Client: Aqua Resources  
Project Name: Ransome  
Project Number: 90239.3

Laboratory Login Number: 104200  
Report Date: 24 June 91

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric)

QC Batch Number: 1765

Blank Results

Sample ID	Result	MDL	Units	Method	Date Analyzed
BLANK	ND	50	mg/Kg	SMWW 17:5520EF	20-JUN-91

Spike/Duplicate Results

Sample ID	Recovery	Method	Date Analyzed
BS	92%	SMWW 17:5520EF	20-JUN-91
BSD	94%	SMWW 17:5520EF	20-JUN-91

		Control Limits
Average Spike Recovery	93%	80% - 120%
Relative Percent Difference	1.9%	< 20%



LABORATORY NUMBER: 104200  
CLIENT: AQUA RESOURCES  
PROJECT ID: 90239.3  
LOCATION: RANSOME

DATE RECEIVED: 06/19/91  
DATE ANALYZED: 06/23/91  
DATE REPORTED: 06/24/91

Total Volative Hydrocarbons with BTXE in Soils and Wastes  
TVH by California DOHS Method/LUFT Manual October 1989  
BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (mg/Kg)	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)
104200-1	GN-1	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104200-2	GB-2	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104200-3	GS-3	1.5	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104200-4	GS-4	9.2	21	5.1	9.8	ND(5.0)

ND = Not detected at or above reporting limit; Reporting limit indicated in parentheses.

QA/QC SUMMARY

RPD, %	3
RECOVERY, %	94

**AQUA RESOURCES, INC.**

SHIPMENT NO.: 10  
PAGE 1 OF 1  
DATE 6/19/91



CHAIN OF CUSTODY RECORD

PROJECT NAME: RANSOME  
PROJECT NO.: 90239.3

1  
2  
3  
4

Sample Number	Location	Type of Sample		Type of Container	Type of Preservation		Analysis Required
		Material	Method		Temp	Chemical	
<u>GN-1</u>	<u>3 1/2</u>	<u>Soil</u>	<u>Drive from</u>	<u>Brass Sleeve</u>	<u>±4°C</u>		<u>TVHG + BTXE, TPIAD, O+G</u>
<u>GB-2</u>	<u>6 1/2</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>		<u>"</u>
<u>GS-3</u>	<u>3 1/2</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>		<u>"</u>
<u>GS-4</u>	<u>7 1/2</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>		<u>"</u>

Total Number of Samples Shipped: <u>4</u>		Sampler's Signature: <u>[Signature]</u>		Date
Relinquished By: Signature: <u>[Signature]</u> Printed Name: <u>Aaron N. Stettin</u> Company: <u>Aqua Resources</u> Reason: <u>For Analysis</u>	Received By: Signature: <u>[Signature]</u> Printed Name: <u>[Name]</u> Company: <u>[Company]</u>		Date: <u>6/19/91</u>	
	Received By: Signature: _____ Printed Name: _____ Company: _____		Time: <u>4:55</u>	
Relinquished By: Signature: _____ Printed Name: _____ Company: _____ Reason: _____		Received By: Signature: _____ Printed Name: _____ Company: _____		Date: <u>1/1</u> Time: _____

REMARKS:  
TVHG + BTXE = LUFT MANUAL  
TPIAD = 8015 Mod.  
O+G = 5520 EF

Special Shipment / Handling / Storage Requirements:



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DATE RECEIVED: 06/20/91  
DATE REPORTED: 06/26/91


LAB NUMBER: 104224

CLIENT: AQUA RESOURCES, INC.

PROJECT ID: 90239.3

LOCATION: RANSOME

RESULTS: SEE ATTACHED

  
-----  
QA/QC Approval

  
-----  
FIELD APPROVAL



Client: Aqua Resources

Laboratory Login Number: 104224

Project Name: Ransome

Report Date: 27 June 91

Project Number: 90239.3

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric)

METHOD: BMGW 17:5520EF

Lab ID	Sample ID	Matrix	Sampled	Received	Analyzed	Result	Units	RL	Analyst	QC	Batch
104224-002	08-6	Soil	20-JUN-91	20-JUN-91	25-JUN-91	ND	mg/Kg	50	TR		1821
104224-003	08-7	Soil	20-JUN-91	20-JUN-91	25-JUN-91	ND	mg/Kg	50	TR		1821
104224-005	08-2	Soil	20-JUN-91	20-JUN-91	25-JUN-91	ND	mg/Kg	50	TR		1821
104224-006	08-3	Soil	20-JUN-91	20-JUN-91	25-JUN-91	ND	mg/Kg	50	TR		1821
104224-007	08-4	Soil	20-JUN-91	20-JUN-91	25-JUN-91	ND	mg/Kg	50	TR		1821
104224-008	08-5	Soil	20-JUN-91	20-JUN-91	25-JUN-91	ND	mg/Kg	50	TR		1821

ND = Not Detected at or above Reporting Limit (RL).

## QC Batch Report

 Client: Aqua Resources  
 Project Name: Ransome  
 Project Number: 90239.3

 Laboratory Login Number: 104224  
 Report Date: 25 June 91

ANALYSIS: Hydrocarbon Oil &amp; Grease (Gravimetric)

QC Batch Number: 1821

## Blank Results

Sample ID	Result	MDL	Units	Method	Date Analyzed
BLANK	ND	50	mg/Kg	SMWW 17:5520EF	25-JUN-91

## Spike/Duplicate Results

Sample ID	Recovery	Method	Date Analyzed
BS	80%	SMWW 17:5520EF	25-JUN-91
BSD	82%	SMWW 17:5520EF	25-JUN-91

 Average Spike Recovery  
 Relative Percent Difference

 81%  
 2.5%

 Control Limits  
 80% - 120%  
 < 20%





LABORATORY NUMBER: 104224  
CLIENT: AQUA RESOURCES, INC.  
PROJECT ID: 90239.3  
LOCATION: RANSOME

DATE RECEIVED: 06/20/91  
DATE ANALYZED: 06/25/91  
DATE REPORTED: 06/26/91

Total Volative Hydrocarbons with BTXE in Soils and Wastes  
TVH by California DOHS Method/LUFT Manual October 1989  
BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (mg/Kg)	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)
104224.1	GB-5	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104224.2	GB-6	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104224.3	GN-7	380	180	280	6,400	16,000
104224.4	KN-1	11	24	5.0	93	170
104224.5	KB-2	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104224.6	KS-3	31	1,300	57	700	2,000
104224.7	KE-4	1.1	35	ND(5.0)	ND(5.0)	ND(5.0)
104224.8	KW-5	5.7	190	ND(5.0)	180	93

ND = Not detected at or above reporting limit; Reporting limit indicated in parentheses.

QA/QC SUMMARY

RPD, %	3
RECOVERY, %	109



LABORATORY NUMBER: 104224  
CLIENT: AQUA RESOURCES, INC.  
PROJECT ID: 90239.3  
LOCATION: RANSOME

DATE RECEIVED: 06/20/91  
DATE EXTRACTED: 06/24/91  
DATE ANALYZED: 06/25/91  
DATE REPORTED: 06/26/91

Extractable Petroleum Hydrocarbons in Soils & Wastes  
California DOHS Method  
LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (mg/Kg)	DIESEL RANGE (mg/Kg)	REPORTING LIMIT* (mg/Kg)
104224-1	GB-5	ND	ND	1.0
104224-2	GB-6	ND	ND	1.0
104224-3	GN-7	ND	55	1.0
104224-4	KN-1	ND	ND	1.0
104224-5	KB-2	ND	ND	1.0
104224-6	KS-3	ND	1.7	1.0
104224-7	KE-4	ND	ND	1.0
104224-8	KW-5	ND	ND	1.0

ND = Not Detected at or above reporting limit.

\*Reporting limit applies to all analytes.

QA/QC SUMMARY

```

=====
RPD, %                                     13
RECOVERY, %                               98
=====

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2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

DATE RECEIVED: 06/21/91  
DATE REPORTED: 06/26/91

LAB NUMBER: 104247

CLIENT: AQUA RESOURCES, INC.

PROJECT ID: 90239.3

LOCATION: RANSOME

RESULTS: SEE ATTACHED

QA/QC Approval

Final Approval

Berkeley

Wilmington

Los Angeles  
14 53 08:24 C&T BERKELEY



LABORATORY NUMBER: 104247  
CLIENT: AQUA RESOURCES, INC.  
PROJECT ID: 90239.3  
LOCATION: RANSOME

DATE RECEIVED: 06/21/91  
DATE ANALYZED: 06/25/91  
DATE REPORTED: 06/25/91

Total Volative Hydrocarbons with BTXE in Soils and Wastes  
TVH by California DOHS Method/LUFT Manual October 1989  
BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (mg/Kg)	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)
104247-4	DB-19	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104247-5	DS-20	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104247-6	DE-21	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104247-8	DN-23	16	ND(5.0)	16	42	240
104247-11	LW-3	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)

ND = Not detected at or above reporting limit; Reporting limit indicated in parentheses.

QA/QC SUMMARY

RPD, %	3
RECOVERY, %	109

LABORATORY NUMBER: 104247  
 CLIENT: AQUA RESOURCES  
 PROJECT ID: 90239.3  
 LOCATION: RANSOME

DATE RECEIVED: 06/21/91  
 DATE EXTRACTED: 06/24/91  
 DATE ANALYZED: 06/25/91  
 DATE REPORTED: 06/26/91

Extractable Petroleum Hydrocarbons in Soils & Wastes  
 California DOHS Method  
 LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (mg/Kg)	DIESEL RANGE (mg/Kg)	REPORTING LIMIT* (mg/Kg)
104247-4	DB-19	ND	ND	1.0
104247-5	DS-20	ND	ND	1.0
104247-6	DE-21	ND	ND	1.0
104247-7	DN-22	ND	ND	1.0
104247-8	DN-23	ND	ND	1.0
104247-9	LE-1	ND	ND	1.0
104247-10	LS-2	ND	3.3	1.0
104247-11	LW-3	ND	ND	1.0

ND = Not Detected at or above reporting limit.

\*Reporting limit applies to all analytes.

QA/QC SUMMARY

=====  
 RPD, % 6  
 RECOVERY, % 97  
 =====



Client: Aqua Resources

Laboratory Login Number: 104247

Project Name: Ransome  
Project Number: 90239.3

Report Date: 25 June 91

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric) METHOD: SMWW 17:5520EF

Lab ID	Sample ID	Matrix	Sampled	Received	Analyzed	Result	Units	RL	Analyst	QC	Batch
104247-004	DR-19	Soil	21-JUN-91	21-JUN-91	25-JUN-91	ND	mg/Kg	50	TR		1821
104247-005	DR-20	Soil	21-JUN-91	21-JUN-91	25-JUN-91	700	mg/Kg	50	TR		1821
104247-006	DR-21	Soil	21-JUN-91	21-JUN-91	25-JUN-91	ND	mg/Kg	50	TR		1821
104247-007	DR-22	Soil	21-JUN-91	21-JUN-91	25-JUN-91	220	mg/Kg	50	TR		1821
104247-008	DR-23	Soil	21-JUN-91	21-JUN-91	25-JUN-91	ND	mg/Kg	50	TR		1821
104247-009	LS-1	Soil	21-JUN-91	21-JUN-91	25-JUN-91	ND	mg/Kg	50	TR		1821
104247-010	LS-2	Soil	21-JUN-91	21-JUN-91	25-JUN-91	76	mg/Kg	50	TR		1821
104247-011	LS-3	Soil	21-JUN-91	21-JUN-91	25-JUN-91	ND	mg/Kg	50	TR		1821

ND = Not Detected at or above Reporting Limit (RL).

## QC Batch Report

 Client: Aqua Resources  
 Project Name: Ransoms  
 Project Number: 90239.3

 Laboratory Login Number: 104247  
 Report Date: 25 June 91

ANALYSIS: Hydrocarbon Oil &amp; Grease (Gravimetric)

QC Batch Number: 1821

## Blank Results

Sample ID	Result	MDL	Units	Method	Date Analyzed
BLANK	ND	50	mg/Kg	SMWW 17:5520EF	25-JUN-91

## Spike/Duplicate Results

Sample ID	Recovery	Method	Date Analyzed
BS	80%	SMWW 17:5520EF	25-JUN-91
BSD	82%	SMWW 17:5520EF	25-JUN-91

 Average Spike Recovery  
 Relative Percent Difference

 81%  
 2.5%

 Control Limits  
 80% - 120%  
 < 20%



104247

AQUA RESOURCES, INC.

SHIPMENT NO.: 12



CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

PROJECT NAME: RANSOME

DATE 6/21/91

PROJECT NO.: 90239.3

Sample Number	Location	Type of Sample		Type of Container	Type of Preservation		Analysis Required
		Material	Method		Temp	Chemical	
AB-D-1	20"	Soil	Drive	Brass Sleeve	24°C		TVHG+BTXE, TEHD
AB-D-2	14"	"	"	"	"		
AB-D-3	17"	"	"	"	"		
DB-19	5 1/2'	"	DRIVE	"	"		TVHG+BTXE, TEHD, O&G
DB-20	3'	"	"	"	"		"
DE-21	4'	"	"	"	"		TVHG+BTXE, TEHD, O&G ONLY
DN-22	2 3/4'	"	"	"	"		TEHD, O&G ONLY
DN-23	4 1/2'	"	"	"	"		TVHG+BTXE, TEHD, O&G ONLY
LE-1	3 1/2'	"	"	"	"		TEHD, O&G ONLY
LS-2	3'	"	"	"	"		"
LW-3	5'	"	"	"	"		TEHD, O&G, TVHG+

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11

48

Total Number of Samples Shipped: 11      Sampler's Signature: [Signature]

Relinquished By: Signature: <u>[Signature]</u> Printed Name: <u>Aaron B. Stessman</u> Company: <u>Aqua Resources</u> Reason: <u>For Analysis</u>	Received By: Signature: <u>[Signature]</u> Printed Name: <u>Laurinda Browner</u> Company: <u>CT Energy</u>	Date: <u>6/21/91</u> Time: <u>16:25</u>
Relinquished By: Signature: _____ Printed Name: _____ Company: _____ Reason: _____	Received By: Signature: _____ Printed Name: _____ Company: _____	Date: <u>1/1</u> Time: _____

REMARKS:  
 TVHG+BTXE = LUFT MANUAL  
 TEHD = BOLS Mod.  
 O+G = 5520EF  
 \* Composite AB-D-1 through 3 for single analysis.

Special Shipment / Handling / Storage Requirements:



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DATE RECEIVED: 06/24/91

DATE REPORTED: 07/02/91


LAB NUMBER: 104266

CLIENT: AQUA RESOURCES, INC.

PROJECT ID: 90239.3

LOCATION: RANSOME

RESULTS: SEE ATTACHED

  
-----  
QA/QC Approval

  
-----  
Final Approval

Berkeley

Wilmington

Los Angeles



Client: Aqua Resources

Laboratory Login Number: 104124

Project Name: Ransome  
Project Number: 90239.3

Report Date: 19 June 91

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric)

METHOD: BMW 17:5520EF

Lab ID	Sample ID	Matrix	Sampled	Received	Analyzed	Result	Units	RL	Analyst	QC Batch
104124-001	71-1	Soil	13-JUN-91	13-JUN-91	17-JUN-91	ND	mg/Kg	50	TR	1733
104124-002	71-2	Soil	13-JUN-91	13-JUN-91	17-JUN-91	ND	mg/Kg	50	TR	1733
104124-003	71-3	Soil	13-JUN-91	13-JUN-91	17-JUN-91	130	mg/Kg	50	TR	1733
104124-004	71-4	Soil	13-JUN-91	13-JUN-91	17-JUN-91	ND	mg/Kg	50	TR	1733

ND = Not Detected at or above Reporting Limit (RL).



LABORATORY NUMBER: 104587  
 CLIENT: AQUA RESOURCES, INC.  
 PROJECT ID: 90239.3  
 LOCATION: RANSOME

DATE RECEIVED: 07/23/91  
 DATE ANALYZED: 07/24/91  
 DATE REPORTED: 07/25/91

Total Volatile Hydrocarbons with BTXE in Soils and Wastes  
 TVH by California DOHS Method/LUFT Manual October 1989  
 BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (mg/Kg)	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)
104587-1	JB-32	8.8	ND(10)	ND(10)	45	120
104587-2	JB-35	3.0	ND(5.0)	ND(5.0)	59	15
104587-3	JW-38	ND(1.0)	ND(5.0)	ND(5.0)	8.7	ND(5.0)
104587-4	JS-39	2.6	190	ND(5.0)	14	10
104587-5	JS-41	24	26	ND(5.0)	270	280

ND = Not detected at or above reporting limit; Reporting limit indicated in parentheses.

QA/QC SUMMARY

RPD, %	6
RECOVERY, %	94



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2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

DATE RECEIVED: 07/23/91

DATE REPORTED: 07/25/91

LAB NUMBER: 104587

CLIENT: AQUA RESOURCES, INC.

AQUA RESOURCES, INC  
RECEIVED

JUL 29 1991

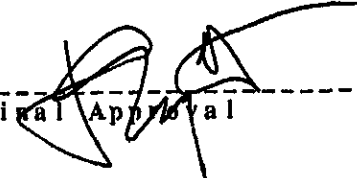
JOB NO. \_\_\_\_\_  
FILE \_\_\_\_\_

PROJECT ID: 90239.3

LOCATION: RANSOME

RESULTS: SEE ATTACHED

  
-----  
QA/QC Approval

  
-----  
Final Approval

104387

104385

AQUA RESOURCES, INC.

SHIPMENT NO.: 19



CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

DATE 7/3/91

PROJECT NAME: RANSOME

PROJECT NO.: 902-39.3

Sample Number	Location	Type of Sample		Type of Container	Type of Preservation		Analysis Required
		Material	Method		Temp	Chemical	
IB-10	6 1/2'	Soil	Drive	Brass Tube	±40C		TPHD
IB-11	6 1/2'	Soil	"	"	"		TPHD
IB-DZ-1	Depth 17"	"	Drive	"	"		COMPOSITE and Run. 13
IB-DZ-2	15"	"	"	"	"		TUHG+BEX
IA-DZ-3	11"	"	"	"	"		TPHD, O&G
IA-DZ-4	14"	"	"	"	"		
SP-CB-1	Elevation 3	"	Troncel	"	"		Composite and Run 14
SP-CB-2	2	"	"	"	"		O&G Only
SP-CB-3	1	"	"	"	"		
SP-CB-4	3	"	"	"	"		
SP-CB-5	2	"	"	"	"		Composite + Run 15
SP-CB-6	1	"	"	"	"		O&G Only
SP-CB-7	3	"	"	"	"		
SP-CB-8	2	"	"	"	"		

Total Number of Samples Shipped: 4      Sampler's Signature: *[Signature]*

Relinquished By: Signature: <i>[Signature]</i> Printed Name: Aaron D. Stegeman Company: Aqua Resources Reason: For Analysis	Received By: Signature: <i>[Signature]</i> Printed Name: Nahay Wilson Company: CJH	Date: 7/3/91 Time: 4:35
Relinquished By: Signature: _____ Printed Name: _____ Company: _____ Reason: _____	Received By: Signature: _____ Printed Name: _____ Company: _____	Date: 1/1 Time: _____

REMARKS:  
Please Note Composite Groups listed above.  
48 hour Rush on all 3 Composites - 104385  
IB samples need not be rushed. - 104387

Special Shipment / Handling / Storage Requirements:

LABORATORY NUMBER: 104387  
 CLIENT: AQUA RESOURCES  
 PROJECT ID: 90239.3  
 LOCATION: RANSOME

DATE RECEIVED: 07/03/91  
 DATE EXTRACTED: 07/09/91  
 DATE ANALYZED: 07/11/91  
 DATE REPORTED: 07/15/91

Extractable Petroleum Hydrocarbons in Soils & Wastes  
 California DOHS Method  
 LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (mg /Kg)	DIESEL RANGE (mg /Kg)	REPORTING LIMIT* (mg /Kg)
104387-1	JB-10	ND	ND	1.0
104387-2	JB-11	ND	ND	1.0

ND = Not Detected at or above reporting limit.

\*Reporting limit applies to all analytes.

QA/QC SUMMARY

RPD, %	5
RECOVERY, %	92



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2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

DATE RECEIVED: 07/03/91

DATE REPORTED: 07/15/91

AQUA RESOURCES, INC  
RECEIVED

JUL 18 1991

LAB NUMBER: 104387

JOB NO. \_\_\_\_\_

FILE \_\_\_\_\_

CLIENT: AQUA RESOURCES, INC.

PROJECT ID: 90239.3

LOCATION: RANSOME

RESULTS: SEE ATTACHED

  
-----  
QA/QC Approval

  
-----  
Final Approval

Berkeley

Wilmington

Los Angeles



10436.5  
3 samples only

AQUA RESOURCES, INC.

SHIPMENT NO.: 18



CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

PROJECT NAME: RANSOME

DATE 7/2/91

PROJECT NO.: 90239.3

Sample Number	Location	Type of Sample		Type of Container	Type of Preservation		Analysis Required
		Material	Method		Temp	Chemical	
KS-6	3'	Soil	Drive	Brass Tube	4°C		TVH+BTEX, TPHD ONLY
DE-40	5 1/2'	Soil	Drive	"	"		TVH+BTEX, TPHD O&G
E-TAR	1 1/2'	Tar	Drive	"	"		TVH+BTEX, TPHD O&G
AB-Z-1		Soil	Drive	"	"	}	COMPOSIT + Run TVH+BTEX, TPHD, O&G 13
AB-Z-2		Soil	"	"	"		
AB-Z-3		Soil	"	"	"		
AB-Z-4		Soil	"	"	"		
AB-A-3		Soil	Trowel	"	"	}	Composit + Run TVH+BTEX, TPHD, O&G 14
AB-A-4		"	"	"	"		
AB-A-5		"	"	"	"		
AB-A-6		"	"	"	"		
AB-D-4		Soil	Trowel	"	"	}	COMPOSIT + Run TVH+BTEX, TPHD, O&G 15
AB-D-5		"	"	"	"		
AB-D-6		"	"	"	"		
AB-D-7		"	"	"	"		

Total Number of Samples Shipped: 15      Sampler's Signature: *[Signature]*      Date: / /

Relinquished By: *[Signature]*      Received By: *[Signature]*      Date: / /  
 Signature: \_\_\_\_\_      Signature: \_\_\_\_\_      Time: \_\_\_\_\_  
 Printed Name: Jonathan Gear      Printed Name: \_\_\_\_\_      Company: \_\_\_\_\_  
 Company: \_\_\_\_\_      Company: \_\_\_\_\_  
 Reason: For Analysis      Reason: \_\_\_\_\_

Relinquished By: \_\_\_\_\_      Received By: *[Signature]*      Date: 07/02/91  
 Signature: \_\_\_\_\_      Signature: \_\_\_\_\_      Time: 16:07  
 Printed Name: \_\_\_\_\_      Printed Name: \_\_\_\_\_  
 Company: \_\_\_\_\_      Company: \_\_\_\_\_  
 Reason: \_\_\_\_\_

REMARKS:  
 24 hour Rush on Composit Samples - Lab ID: 10436.5  
 Normal Rush on Others 😊

Special Shipment / Handling / Storage Requirements:

## Q C B a t c h R e p o r t

 Client: Aqua Resources  
 Project Name: Ransome  
 Project Number: 90239.3

 Laboratory Login Number: 104365  
 Report Date: 10 July 91

ANALYSIS: Hydrocarbon Oil &amp; Grease (Gravimetric)

QC Batch Number: 1964

## Blank Results

Sample ID	Result	MDL	Units	Method	Date Analyzed
BLANK	ND	50	mg/Kg	SMWW 17:552OEF	08-JUL-91

## Spike/Duplicate Results

Sample ID	Recovery	Method	Date Analyzed
BS	87%	SMWW 17:552OEF	08-JUL-91
BSD	87%	SMWW 17:552OEF	08-JUL-91

Average Spike Recovery	87%	Control Limits	80% - 120%
Relative Percent Difference	.3%		< 20%



Client: Aqua Resources

Laboratory Login Number: 104365

Project Name: Ransome

Report Date: 10 July 91

Project Number: 90239.3

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric)

METHOD: SMWW 17:5520EF

Lab ID	Sample ID	Matrix	Sampled	Received	Analyzed	Result	Units	RL	Analyst	QC Batch
104365-002	DE-40	Soil	02-JUL-91	02-JUL-91	08-JUL-91	ND	mg/Kg	50	TR	1964

ND = Not Detected at or above Reporting Limit (RL).

LABORATORY NUMBER: 104365  
 CLIENT: AQUA RESOURCES, INC.  
 PROJECT ID: 90239.3  
 LOCATION: RANSOME

DATE RECEIVED: 07/02/91  
 DATE EXTRACTED: 07/03/91  
 DATE ANALYZED: 07/05/91  
 DATE REPORTED: 07/10/91

Extractable Petroleum Hydrocarbons in Soils & Wastes  
 California DOHS Method  
 LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (mg/Kg)	DIESEL RANGE (mg/Kg)	REPORTING LIMIT* (mg/Kg)
104365-1	KS-6	ND	110	1.0
104365-2	DE-40	ND	ND	1.0
104365-3	E-TAR	ND	1,200	100

ND = Not Detected at or above reporting limit.

\*Reporting limit applies to all analytes.

QA/QC SUMMARY

RPD, %	5
RECOVERY, %	104

LABORATORY NUMBER: 104365  
 CLIENT: AQUA RESOURCES, INC.  
 PROJECT ID: 90239.3  
 LOCATION: RANSOME

DATE RECEIVED: 07/02/91  
 DATE ANALYZED: 07/05/91  
 DATE REPORTED: 07/10/91

Total Volatile Hydrocarbons with BTXE in Soils and Wastes  
 TVH by California DOHS Method/LUFT Manual October 1989  
 BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (mg/Kg)	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)
104365-1	KS-6	7.9	12	6.1	ND(5.0)	16
104365-2	DE-40	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104365-3	E-TAR	1.5	180	5.4	ND	13

ND = Not detected at or above reporting limit; Reporting limit indicated in parentheses.

QA/QC SUMMARY

RPD, %	9
RECOVERY, %	99



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2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

DATE RECEIVED: 07/02/91  
DATE REPORTED: 07/10/91

LAB NUMBER: 104365

AQUA RESOURCES, INC  
RECEIVED

JUL 17 1991

CLIENT: AQUA RESOURCES, INC.

JOB NO. \_\_\_\_\_  
FILE \_\_\_\_\_

PROJECT ID: 90239.3

LOCATION: RANSOME

RESULTS: SEE ATTACHED

QA/QC Approval

Final Approval

Berkeley

Wilmington

Los Angeles

104352 104354  
 = 1, 2, 3, 4, 5, 6 & 7 (composit)

AQUA RESOURCES, INC.

SHIPMENT NO.: 17  
 PAGE 1 OF 1  
 DATE 7/1/91



CHAIN OF CUSTODY RECORD

PROJECT NAME: RANSOME  
 PROJECT NO.: 90259.3

Sample Number	Location	Type of Sample		Type of Container	Type of Preservation		Analysis Required
		Material	Method		Temp	Chemical	
SP-BASE-1	1 1/2'	Soil	Drive	Brass Tube	±4°C		TVHG+BTEX, TPHD, O&G
DE-39	6'	"	"	"	"		"
AB-C-7	2"	Soil	Trowel	Brass Tube	±4°C		O&G ONLY
AB-B-9	12"	Soil	Drive	Brass Tube	±4°C	} ON COMPOSIT OF FOUR SAMPLES	TVHG+BTEX, TPHD, O&G
AB-B-10	16"	"	"	"	"		
AB-B-11	18"	"	"	"	"		
AB-B-12	16"	"	"	"	"		
FB-5	17'	"	"	"	"		TVHG+BTEX, O&G, TPHD
FW-6	5'	"	"	"	"		TVHG+BTEX, O&G ONLY
GE-8	7'	"	"	"	"		TVHG+BTEX, TPHD, O+G
TP-8-1	2 1/2'	"	"	"	"		HOLD
J-STOCK		"	Trowel	"	"		TPHD, O+G

Total Number of Samples Shipped: 17      Sampler's Signature: [Signature]

Relinquished By: Signature: <u>[Signature]</u> Printed Name: <u>Aaron N. Stessman</u> Company: <u>Aqua Resources</u> Reason: <u>For Analysis</u>	Received By: Signature: <u>[Signature]</u> Printed Name: <u>Nancy Wilson</u> Company: <u>CIT</u>	Date: <u>7/1/91</u> Time: <u>5:00</u>
Relinquished By: Signature: _____ Printed Name: _____ Company: _____ Reason: _____	Received By: Signature: _____ Printed Name: _____ Company: _____	Date: <u>1/1</u> Time: _____

REMARKS:  
 \* 48 hr rush

Special Shipment / Handling / Storage Requirements:

## Q C B a t c h R e p o r t

 Client: Aqua Resources  
 Project Name: Ransome  
 Project Number: 90239.3

 Laboratory Login Number: 104354  
 Report Date: 10 July 91

ANALYSIS: Hydrocarbon Oil &amp; Grease (Gravimetric)

QC Batch Number: 1964

## Blank Results

Sample ID	Result	MDL	Units	Method	Date Analyzed
BLANK	ND	50	mg/Kg	SMWW 17:5520EF	08-JUL-91

## Spike/Duplicate Results

Sample ID	Recovery	Method	Date Analyzed
BS	87%	SMWW 17:5520EF	08-JUL-91
BSD	87%	SMWW 17:5520EF	08-JUL-91

 Average Spike Recovery  
 Relative Percent Difference

 87%  
 .3%

 Control Limits  
 80% - 120%  
 < 20%



Client: Aqua Resources

Laboratory Login Number: 104354

Project Name: Ransome  
Project Number: 90239.3

Report Date: 10 July 91

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric)      METHOD: SMWW 17:5520EF

Lab ID	Sample ID	Matrix	Sampled	Received	Analyzed	Result	Units	RL	Analyst	QC Batch
104354-001	SP-BASE-1	Soil	01-JUL-91	01-JUL-91	08-JUL-91	96	mg/Kg	50	TR	1964
104354-002	DE-39	Soil	01-JUL-91	01-JUL-91	08-JUL-91	ND	mg/Kg	50	TR	1964
104354-003	FB-5	Soil	01-JUL-91	01-JUL-91	08-JUL-91	ND	mg/Kg	50	TR	1964
104354-004	FW-6	Soil	01-JUL-91	01-JUL-91	08-JUL-91	ND	mg/Kg	50	TR	1964
104354-005	GE-8	Soil	01-JUL-91	01-JUL-91	08-JUL-91	ND	mg/Kg	50	TR	1964

ND = Not Detected at or above Reporting Limit (RL).



LABORATORY NUMBER: 104354  
CLIENT: AQUA RESOURCES, INC.  
PROJECT ID: 90239.3  
LOCATION: RANSOME

DATE RECEIVED: 07/01/91  
DATE ANALYZED: 07/07/91  
DATE REPORTED: 07/10/91

Total Volatile Hydrocarbons with BTXE in Soils and Wastes  
TVH by California DOHS Method/LUFT Manual October 1989  
BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (mg/Kg)	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)
104354-1	SP-BASE-1	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104354-2	DE-39	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104354-3	FB-5	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104354-4	FW-6	12	270	5.3	32	170
104354-5	GE-8	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)

ND = Not detected at or above reporting limit; Reporting limit indicated in parentheses.

QA/QC SUMMARY

RPD, % <1  
RECOVERY, % 91

LABORATORY NUMBER: 104354  
 CLIENT: AQUA RESOURCES, INC.  
 PROJECT ID: 90239.3  
 LOCATION: RANSOME

DATE RECEIVED: 07/01/91  
 DATE EXTRACTED: 07/02/91  
 DATE ANALYZED: 07/09/91  
 DATE REPORTED: 07/10/91

Extractable Petroleum Hydrocarbons in Soils & Wastes  
 California DOHS Method  
 LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (mg/Kg)	DIESEL RANGE (mg/Kg)	REPORTING LIMIT* (mg/Kg)
104354-1	SP-BASE-1	ND	29	1.0
104354-2	DE-39	ND	ND	1.0
104354-3	FB-5	ND	ND	1.0
104354-5	GE-8	ND	ND	1.0

ND = Not Detected at or above reporting limit.

\*Reporting limit applies to all analytes.

QA/QC SUMMARY

RPD, %	<1
RECOVERY, %	98



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2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

DATE RECEIVED: 07/01/91

DATE REPORTED: 07/10/91

LAB NUMBER: 104354

CLIENT: AQUA RESOURCES, INC.

PROJECT ID: 90239.3

LOCATION: RANSOME

RESULTS: SEE ATTACHED

QA/QC Approval

Final Approval

Berkeley

Wilmington

Los Angeles

Log in 104334

AQUA RESOURCES, INC.

SHIPMENT NO.: 16



CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

PROJECT NAME: RANSOME

DATE 6/28/91

PROJECT NO.: 90239.3

1-3  
 2-3  
 3-3  
 4-6

Sample Number	Location	Type of Sample		Type of Container	Type of Preservation		Analysis Required
		Material	Method		Temp	Chemical	
BW-7	2 1/2'	Soil	Drive	Brass Tube	± 4°C		TVH+BTEX, TPHD, OC
BE-8	3'	"	"	"	"		"
DB-36	10'	Soil	Drive	Brass Tube	"		TVH+BTEX, TPHD, OC
DB-37	10'	"	"	"	"		"
DB-38	10'	"	"	"	"		"
AREA D-2	Pile	Soil	Travel	Brass Tube	"		SOLO Analysis - Extracted

Total Number of Samples Shipped: 6      Sampler's Signature: [Signature]

Relinquished By: Signature: <u>[Signature]</u> Printed Name: <u>Aqua Resources</u> Company: <u>Aqua Resources</u> Reason: <u>For Analysis</u>	Received By: Signature: <u>[Signature]</u> Printed Name: <u>Joanne [Name]</u> Company: <u>[Company]</u>	Date: <u>6/28/91</u> Time: _____
Relinquished By: Signature: _____ Printed Name: _____ Company: _____ Reason: _____	Received By: Signature: _____ Printed Name: _____ Company: _____	Date: <u>1/1</u> Time: _____

REMARKS:

24 hr Rush on BW-7 and BE-8 (if possible) 104333

AREA D-2 Sample - Extract from end indicated 104334

→ This is a resample for 3010 which was not run previously see 104115-100 change

Special Shipment / Handling / Storage Requirements:

**Q C Batch Report**

Client: Aqua Resources  
 Project Name: Ransome  
 Project Number: 90239.3

Laboratory Login Number: 104334  
 Report Date: 05 July 91

**ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric)**

QC Batch Number: 1882

**Blank Results**

Sample ID	Result	MDL	Units	Method	Date Analyzed
BLANK	ND	50	mg/Kg	SMWW 17:5520EF	01-JUL-91

**Spike/Duplicate Results**

Sample ID	Recovery	Method	Date Analyzed
BS	81%	SMWW 17:5520EF	01-JUL-91
BSD	88%	SMWW 17:5520EF	01-JUL-91

Average Spike Recovery	84%	Control Limits
Relative Percent Difference	8.1%	80% - 120%
		< 20%

Client: Aqua Resources

Laboratory Login Number: 104334

 Project Name: Ransome  
 Project Number: 90239.3

Report Date: 05 July 91

ANALYSIS: Hydrocarbon Oil &amp; Grease (Gravimetric)      METHOD: SMWW 17:5520EF

Lab ID	Sample ID	Matrix	Sampled	Received	Analyzed	Result	Units	RL	Analyst	QC Batch
104334-001	DB-35010	Soil	28-JUN-91	28-JUN-91	01-JUL-91	ND	mg/Kg	50	TR	1882
104334-002	DB-37010	Soil	28-JUN-91	28-JUN-91	01-JUL-91	ND	mg/Kg	50	TR	1882
104334-003	DB-38010	Soil	28-JUN-91	28-JUN-91	01-JUL-91	ND	mg/Kg	50	TR	1882

ND = Not Detected at or above Reporting Limit (RL).

LABORATORY NUMBER: 104334  
 CLIENT: AQUA REOURCES, INC.  
 PROJECT ID: 90239.3  
 LOCATION: RANSCME

 DATE RECEIVED: 06/28/91  
 DATE ANALYZED: 07/04/91  
 DATE REPORTED: 07/05/91

 Total Volatile Hydrocarbons with BTXE in Soils and Wastes  
 TVH by California DOHS Method/LUFT Manual October 1989  
 BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (mg/Kg)	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)
104334-1	DB-36	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104334-2	DB-37	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104334-3	DB-38	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)

ND = Not detected at or above reporting limit; Reporting limit indicated in parentheses.

## QA/QC SUMMARY

 RPD, % 4  
 RECOVERY, % 90



LABORATORY NUMBER: 104334  
 CLIENT: AQUA RESOURCES, INC.  
 PROJECT ID: 90239.3  
 LOCATION: RANSOME

DATE RECEIVED: 06/28/91  
 DATE EXTRACTED: 07/01/91  
 DATE ANALYZED: 07/04/91  
 DATE REPORTED: 07/05/91

Extractable Petroleum Hydrocarbons in Solids & Wastes  
 California DOHS Method  
 LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (mg/Kg)	DIESEL RANGE (mg/Kg)	REPORTING LIMIT* (mg/Kg)
104334-1	DB-36	ND	ND	1.0
104334-2	DB-37	ND	ND	1.0
104334-3	DB-38	ND	ND	1.0

ND = Not Detected at or above reporting limit.

\*Reporting limit applies to all analytes.

QA/QC SUMMARY

RPD, %	11
RECOVERY, %	81



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DATE RECEIVED: 06/28/91  
DATE REPORTED: 07/05/91

LAB NUMBER: 104334

CLIENT: AQUA RESOURCES, INC.

PROJECT ID: 90239.3

LOCATION: RANSOME

RESULTS: SEE ATTACHED

QA/QC APPROVAL

Final Approval

Berkeley

Wilmington

Los Angeles

Log in 104333

AQUA RESOURCES, INC.

SHIPMENT NO.: 16



CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

DATE 6/28/91

PROJECT NAME: RANSOME

PROJECT NO.: 90239.3

Sample Number	Location	Type of Sample		Type of Container	Type of Preservation		Analysis Required
		Material	Method		Temp	Chemical	
BW-7	2 1/2'	Soil	Drive	Brass Tube	±4°C		TVH+BTEX, TPHD, OFC
BE-8	3'	"	"	"	"		"
DB-36	6'	Soil	Drive	Brass Tube	"		TVH+BTEX, TPHD, OFC
DB-37	10'	"	"	"	"		"
DB-38	12'	"	"	"	"		"
AREA D-2	Pile	Soil	Travel	Brass Tube	"		8010

-1  
-2  
see  
21334

Total Number of Samples Shipped: 6      Sampler's Signature: [Signature]

Relinquished By: Signature: <u>[Signature]</u> Printed Name: <u>Aaron N. Stersman</u> Company: <u>Aqua Resources</u> Reason: <u>For Analysis</u>	Received By: Signature: <u>[Signature]</u> Printed Name: _____ Company: _____	Date: <u>6/28/91</u> Time: _____
Relinquished By: Signature: _____ Printed Name: _____ Company: _____ Reason: _____	Received By: Signature: _____ Printed Name: _____ Company: _____	Date: <u>1/1</u> Time: _____

REMARKS:  
24 hr Rush on BW-7 and BE-8 (If possible) 104333  
AREA D-2 Sample - Extract from end indicated, 104334  
This is a resample for 8010 which was not run previously see 104115 - NO charge

Special Shipment / Handling / Storage Requirements:



Q C B a t c h R e p o r t

Client: Aqua Resources  
Project Name: Ransome  
Project Number: 90239.3

Laboratory Login Number: 104333  
Report Date: 01 July 91

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric)

QC Batch Number: 1882

Blank Results

Sample ID	Result	MDL	Units	Method	Date Analyzed
BLANK	ND	50	mg/Kg	SMWW 17:5520EF	01-JUL-91

Spike/Duplicate Results

Sample ID	Recovery	Method	Date Analyzed
BS	81%	SMWW 17:5520EF	01-JUL-91
BSD	88%	SMWW 17:5520EF	01-JUL-91

Average Spike Recovery	84%	Control Limits	80% - 120%
Relative Percent Difference	8.1%		< 20%

Client: Aqua Resources

Laboratory Login Number: 104333

 Project Name: Ransome  
 Project Number: 90239.3

Report Date: 01 July 91

ANALYSIS: Hydrocarbon Oil &amp; Grease (Gravimetric)      METHOD: SMWW 17:5520EF

Lab ID	Sample ID	Matrix	Sampled	Received	Analyzed	Result	Units	RL	Analyst	QC Batch
104333-001	BW-7@2.5'	Soil	28-JUN-91	28-JUN-91	01-JUL-91	ND	mg/Kg	50	TR	1882
104333-002	BE-8@3'	Soil	28-JUN-91	28-JUN-91	01-JUL-91	ND	mg/Kg	50	TR	1882

ND = Not Detected at or above Reporting Limit (RL).



LABORATORY NUMBER: 104333  
CLIENT: AQUA RESOURCES, INC.  
PROJECT ID: 90239.3  
LOCATION: RANSOME

DATE RECEIVED: 06/28/91  
DATE EXTRACTED: 06/28/91  
DATE ANALYZED: 06/28/91  
DATE REPORTED: 07/01/91

Extractable Petroleum Hydrocarbons in Soils & Wastes  
California DOHS Method  
LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (mg / Kg)	DIESEL RANGE (mg / Kg)	REPORTING LIMIT* (mg / Kg)
104333-1	BW-7	ND	ND	1.0
104333-2	BE-8	ND	ND	1.0

ND = Not Detected at or above reporting limit.

\*Reporting limit applies to all analytes.

QA/QC SUMMARY

RPD, %

7

RECOVERY, %

97



LABORATORY NUMBER: 104333  
CLIENT: AQUA RESOURCES, INC.  
PROJECT ID: 90239.3  
LOCATION: RANSOME

DATE RECEIVED: 06/28/91  
DATE ANALYZED: 06/30/91  
DATE REPORTED: 07/01/91

Total Volative Hydrocarbons with BTXE in Soils and Wastes  
TVH by California DOHS Method/LUFT Manual October 1989  
BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (mg/Kg)	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)
104333-1	BW-7	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104333-2	BE-8	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)

ND = Not detected at or above reporting limit; Reporting limit indicated in parentheses.

QA/QC SUMMARY

RPD, %	5
RECOVERY, %	89



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

DATE RECEIVED: 06/28/91

DATE REPORTED: 07/01/91

LAB NUMBER: 104333

CLIENT: AQUA RESOURCES, INC.

PROJECT ID: 90239.3

LOCATION: RANSOME

RESULTS: SEE ATTACHED

QA/QC Approval

Final Approval

Berkeley

Wilmington

Los Angeles



104 320

AQUA RESOURCES, INC.

SHIPMENT NO.: 15



CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

DATE 6/27/91

PROJECT NAME: RANSOME

PROJECT NO.: 90239.3

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12

Sample Number	Location	Type of Sample		Type of Container	Type of Preservation		Analysis Required
		Material	Method		Temp	Chemical	
DE-28	6'	Soil	Drive	Brass Tube	±4°C		TVH+BTEX, TPHD, O&G
DN-29	4 1/2'	"	"	"	"		
DN-30	6 1/2'	"	"	"	"		
DN-31	5'	"	"	"	"		
DN-32	4 1/2'	"	"	"	"		
DW-33	5'	"	"	"	"		
DB-34	8 1/2'	"	"	"	"		
DB-35	9 1/2'	"	"	"	"		
AB-C-3	16"	"	"	"	"	}	TVH+BTEX, TPHD
AB-C-4	14"	"	"	"	"		on
AB-C-5	16"	"	"	"	"		Composit
AB-C-6	8"	"	"	"	"		
AB-B-5	8"	"	"	"	"	}	TVH+BTEX, TPHD
AB-B-6	12"	"	"	"	"		on
AB-B-7	9"	"	"	"	"		Composit
AB-B-8	12"	"	"	"	"		

Total Number of Samples Shipped: 16

Sampler's Signature: *[Signature]*

Relinquished By:  
 Signature: *[Signature]*  
 Printed Name: Aaron N. Stessman  
 Company: Aqua Resources  
 Reason: For Analysis

Received By:  
 Signature: *[Signature]*  
 Printed Name: Lourinda Browner  
 Company: CT Bakery

Date: 6/27/91  
 Time: 16:45

Relinquished By:  
 Signature: \_\_\_\_\_  
 Printed Name: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Reason: \_\_\_\_\_

Received By:  
 Signature: \_\_\_\_\_  
 Printed Name: \_\_\_\_\_  
 Company: \_\_\_\_\_

Date: 1/1  
 Time: \_\_\_\_\_

REMARKS:

Composit AB-C-3 through 6 }  
 Composit AB-B-5 through 8 } 24 hour rush

Special Shipment / Handling / Storage Requirements:



LABORATORY NUMBER: 104320-8  
CLIENT: AQUA RESOURCES, INC.  
PROJECT ID: 90239.3  
LOCATION: RANSOME  
SAMPLE ID: DB-35

DATE RECEIVED: 06/27/91  
DATE ANALYZED: 07/02/91  
DATE REPORTED: 07/05/91

EPA 8010: Volatile Halocarbons in Soil & Wastes  
Extraction Method: EPA 5030 - Purge & Trap

Compound	RESULT ug/Kg	REPORTING LIMIT ug/Kg
chloromethane	ND	10
bromomethane	ND	10
vinyl chloride	ND	10
chloroethane	ND	10
methylene chloride	ND	5.0
trichlorofluoromethane	ND	5.0
1,1-dichloroethene	ND	5.0
1,1-dichloroethane	ND	5.0
cis-1,2-dichloroethene	ND	5.0
trans-1,2-dichloroethene	ND	5.0
chloroform	ND	5.0
freon 113	ND	5.0
1,2-dichloroethane	ND	5.0
1,1,1-trichloroethane	ND	5.0
carbon tetrachloride	ND	5.0
bromodichloromethane	ND	5.0
1,2-dichloropropane	ND	5.0
cis-1,3-dichloropropene	ND	5.0
trichloroethylene	ND	5.0
1,1,2-trichloroethane	ND	5.0
trans-1,3-dichloropropene	ND	5.0
dibromochloromethane	ND	5.0
2-chloroethylvinyl ether	ND	10
bromoform	ND	5.0
tetrachloroethylene	ND	5.0
1,1,2,2-tetrachloroethane	ND	5.0
chlorobenzene	ND	5.0
1,3-dichlorobenzene	ND	5.0
1,2-dichlorobenzene	ND	5.0
1,4-dichlorobenzene	ND	5.0

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

=====

Duplicate: Relative % Difference

Spike: Average % Recovery

5  
99

LABORATORY NUMBER: 104320  
 CLIENT: AQUA RESOURCES  
 PROJECT ID: 90239.3  
 LOCATION: RANSOME

DATE RECEIVED: 06/27/91  
 DATE EXTRACTED: 07/01/91  
 DATE ANALYZED: 07/2-3/91  
 DATE REPORTED: 07/05/91

Extractable Petroleum Hydrocarbons in Soils & Wastes  
 California DOHS Method  
 LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (mg/Kg)	DIESEL RANGE (mg/Kg)	REPORTING LIMIT* (mg/Kg)
104320-1	DE-28	ND	ND	1.0
104320-2	DN-29	ND	ND	1.0
104320-3	DN-30	ND	ND	1.0
104320-4	DN-31	ND	ND	1.0
104320-5	DW-32	ND	ND	1.0
104320-6	DW-33	ND	ND	1.0
104320-7	DB-34	ND	ND	1.0
104320-8	DB-35	ND	ND	1.0

ND = Not Detected at or above reporting limit.

\*Reporting limit applies to all analytes.

QA/QC SUMMARY

RPD, %	11
RECOVERY, %	81



LABORATORY NUMBER: 104320  
 CLIENT: AQUA RESOURCES  
 PROJECT ID: 90239.3  
 LOCATION: RANSOME

DATE RECEIVED: 06/27/91  
 DATE ANALYZED: 07/01/91  
 DATE REPORTED: 07/05/91

Total Volatile Hydrocarbons with BTXE in Soils and Wastes  
 TVH by California DOHS Method/LUFT Manual October 1989  
 BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (mg/Kg)	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)
104320-1	DE-28	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104320-2	DN-29	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104320-3	DN-30	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104320-4	DN-31	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104320-5	DW-32	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104320-6	DW-33	2.9	ND(5.0)	ND(5.0)	ND(5.0)	17
104320-7	DB-34	2.3	ND(5.0)	ND(5.0)	ND(5.0)	17
104320-8	DB-35	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)

ND = Not detected at or above reporting limit; Reporting limit indicated in parentheses.

QA/QC SUMMARY

RPD, %

<1

RECOVERY, %

113

## Q C B a t c h R e p o r t

 Client: Aqua Resources  
 Project Name: Ransome  
 Project Number: 90239.3

 Laboratory Login Number: 104320  
 Report Date: 01 July 91

ANALYSIS: Hydrocarbon Oil &amp; Grease (Gravimetric)

QC Batch Number: 1882

## Blank Results

Sample ID	Result	MDL	Units	Method	Date Analyzed
BLANK	ND	50	mg/Kg	SMWW 17:5520EF	01-JUL-91

## Spike/Duplicate Results

Sample ID	Recovery	Method	Date Analyzed
BS	81%	SMWW 17:5520EF	01-JUL-91
BSD	88%	SMWW 17:5520EF	01-JUL-91

		Control Limits
Average Spike Recovery	84%	80% - 120%
Relative Percent Difference	8.1%	< 20%

Client: Aqua Resources

Laboratory Login Number: 104320

 Project Name: Ransome  
 Project Number: 90239.3

Report Date: 01 July 91

ANALYSIS: Hydrocarbon Oil &amp; Grease (Gravimetric)      METHOD: SMWW 17:5520EF

Lab ID	Sample ID	Matrix	Sampled	Received	Analyzed	Result	Units	RL	Analyst	QC	Batch
104320-001	DE-28	Soil	27-JUN-91	27-JUN-91	01-JUL-91	ND	mg/Kg	50	TR		1882
104320-003	DN-30	Soil	27-JUN-91	27-JUN-91	01-JUL-91	ND	mg/Kg	50	TR		1882
104320-005	DW-32	Soil	27-JUN-91	27-JUN-91	01-JUL-91	ND	mg/Kg	50	TR		1882
104320-007	DB-34	Soil	27-JUN-91	27-JUN-91	01-JUL-91	ND	mg/Kg	50	TR		1882
104320-008	DB-35	Soil	27-JUN-91	27-JUN-91	01-JUL-91	ND	mg/Kg	50	TR		1882
104320-017	COMP AB-C-3,4,5,6	Soil	27-JUN-91	27-JUN-91	01-JUL-91	1100	mg/Kg	50	TR		1882
104320-018	COMP AB-B-5,6,7,8	Soil	27-JUN-91	27-JUN-91	01-JUL-91	500	mg/Kg	50	TR		1882

ND = Not Detected at or above Reporting Limit (RL).

LABORATORY NUMBER: 104320  
 CLIENT: AQUA RESOURCES  
 PROJECT ID: 90239.3  
 LOCATION: RANSOME

DATE RECEIVED: 06/27/91  
 DATE ANALYZED: 06/28/91  
 DATE REPORTED: 06/28/91

Total Volative Hydrocarbons with BTXE in Soils and Wastes  
 TVH by California DOHS Method/LUFT Manual October 1989  
 BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (mg/Kg)	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)
104320-17	COMPOSITE: AB-C-3,4,5,6	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104320-18	COMPOSITE: AB-B-5,6,7,8	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)

ND = Not detected at or above reporting limit; Reporting limit indicated in parentheses.

QA/QC SUMMARY

RPD, %	2
RECOVERY, %	103



LABORATORY NUMBER: 104320  
CLIENT: AQUA RESOURCES, INC.  
PROJECT ID: 90239.3  
LOCATION: RANSOME

DATE RECEIVED: 06/27/91  
DATE EXTRACTED: 06/28/91  
DATE ANALYZED: 06/28/91  
DATE REPORTED: 06/28/91

Extractable Petroleum Hydrocarbons in Soils & Wastes  
California DOHS Method  
LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (mg /Kg)	DIESEL RANGE (mg /Kg)	REPORTING LIMIT* (mg /Kg)
104320-17	COMPOSITE: AB-C-3, 4, 5, 6	ND	ND	10
104320-18	COMPOSITE: AB-B-5, 6, 7, 8	ND	ND	10

ND = Not Detected at or above reporting limit.

\*Reporting limit applies to all analytes.

QA/QC SUMMARY

RPD, %	2
RECOVERY, %	82





Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

DATE RECEIVED: 06/27/91

DATE REPORTED: 07/05/91

AQUA RESOURCES, INC  
RECEIVED

JUL 10 1991

LAB NUMBER: 104320

JOB NO. \_\_\_\_\_  
FILE \_\_\_\_\_

CLIENT: AQUA RESOURCES, INC.

PROJECT ID: 90239.3

LOCATION: RANSOME

RESULTS: SEE ATTACHED

QA/QC Approval

Final Approval

Berkeley

Wilmington

Los Angeles

104295

AQUA RESOURCES, INC.

SHIPMENT NO: 14



CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

PROJECT NAME: RANSOME

DATE 6/26/91

PROJECT NO.: 90239.3

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14

Sample Number	Location	Type of Sample		Type of Container	Type of Preservation		Analysis Required
		Material	Method		Temp	Chemical	
<del>JE-1</del>	7'						TEHD, O&G Only
<del>JE-2</del>	6'						TVHG+BTEX, TEHD, O
<del>JE-3</del>	4'						"
<del>JB-4</del>	11'						"
<del>JW-5</del>	6'						TEHD, O&G Only
<del>JW-6</del>	7'						TVHG+BTEX, TEHD, O
<del>JW-7</del>	13 1/2'						TEHD, O&G Only
<del>JN-8</del>	8 1/2'						TVHG+BTEX, TEHD, O
JB-9	4 1/2'						HOLD
TP-1	5'						"
TP-2	7 1/2'						"
TP-3	9 1/2'						TVHG+BTEX, TEHD, O
TP-4	11'						HOLD
TP-5	13'						TVHG, TEHD
J-Pipe-1							

Total Number of Samples Shipped: 14 Sampler's Signature: [Signature]

Relinquished By: Signature: <u>[Signature]</u> Printed Name: <u>Aaron N. Stessman</u> Company: <u>Aqua Resources Inc.</u> Reason: <u>For Analysis</u>	Received By: Signature: <u>[Signature]</u> Printed Name: <u>A Keane</u> Company: <u>C&amp;T Lab</u>	Date: <u>6/26/91</u> Time: _____
Relinquished By: Signature: _____ Printed Name: _____ Company: _____ Reason: _____	Received By: Signature: _____ Printed Name: _____ Company: _____	Date: <u>1/1</u> Time: _____

REMARKS:  
 J-Pipe-1 - Analyse Top + Bottom LAYER  
 TP-4: 24 hour turnaround  
 (104293-1) Separate LOGIN

Special Shipment / Handling / Storage Requirements:

LABORATORY NUMBER: 104295  
 CLIENT: AQUA RESOURCES  
 PROJECT #: 90239.3  
 LOCATION: RANSOME

DATE RECEIVED: 06/26/91  
 DATE ANALYZED: 07/01/91  
 DATE REPORTED: 07/02/91

Total Volatile Hydrocarbons as Gasoline  
 California DOHS Method  
 LUFT Manual October 1989

LAB ID	CLIENT ID	TVH AS GASOLINE (mg/L)	REPORTING LIMIT (mg/L)
104295-14	J-PIPE-1TOP	110,000	400
104295-14	J-PIPE-1BOTTOM	5,380	200

QA/QC SUMMARY

RPD, %	4
RECOVERY, %	105



Q C Batch Report

Client: Aqua Resources  
Project Name: Ransome  
Project Number: 90239.3

Laboratory Login Number: 104295  
Report Date: 28 June 91

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric)

QC Batch Number: 1842

Blank Results

Sample ID	Result	MDL	Units	Method	Date Analyzed
BLANK	ND	50	mg/Kg	SMWW 17:552OEF	27-JUN-91

Spike/Duplicate Results

Sample ID	Recovery	Method	Date Analyzed
BS	92%	SMWW 17:552OEF	27-JUN-91
BSD	86%	SMWW 17:552OEF	27-JUN-91

Average Spike Recovery	89%	Control Limits	80% - 120%
Relative Percent Difference	6.3%		< 20%

Client: Aqua Resources

Laboratory Login Number: 104295

 Project Name: Ransome  
 Project Number: 90239.3

Report Date: 28 June 91

ANALYSIS: Hydrocarbon Oil &amp; Grease (Gravimetric)      METHOD: SMWW 17:5520EF

Lab ID	Sample ID	Matrix	Sampled	Received	Analyzed	Result	Units	RL	Analyst	QC Batch
104295-001	JE-1	Soil	26-JUN-91	26-JUN-91	27-JUN-91	ND	mg/Kg	50	TR	1842
104295-002	JE-2	Soil	26-JUN-91	26-JUN-91	27-JUN-91	ND	mg/Kg	50	TR	1842
104295-003	JS-3	Soil	26-JUN-91	26-JUN-91	27-JUN-91	ND	mg/Kg	50	TR	1842
104295-004	JB-4	Soil	26-JUN-91	26-JUN-91	27-JUN-91	ND	mg/Kg	50	TR	1842
104295-005	JW-5	Soil	26-JUN-91	26-JUN-91	27-JUN-91	ND	mg/Kg	50	TR	1842
104295-006	JW-6	Soil	26-JUN-91	26-JUN-91	27-JUN-91	ND	mg/Kg	50	TR	1842
104295-007	JW-7	Soil	26-JUN-91	26-JUN-91	27-JUN-91	ND	mg/Kg	50	TR	1842
104295-008	JW-8	Soil	26-JUN-91	26-JUN-91	27-JUN-91	ND	mg/Kg	50	TR	1842
104295-009	JB-9	Soil	26-JUN-91	26-JUN-91	27-JUN-91	ND	mg/Kg	50	TR	1842

ND = Not Detected at or above Reporting Limit (RL).

LABORATORY NUMBER: 104295  
 CLIENT: AQUA RESOURCES  
 PROJECT ID: 90239.3  
 LOCATION: RANSOME

DATE RECEIVED: 06/26/91  
 DATE ANALYZED: 06/28/91  
 DATE REPORTED: 06/28/91

Total Volative Hydrocarbons with BTXE in Soils and Wastes  
 TVH by California DOHS Method/LUFT Manual October 1989  
 BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (mg/Kg)	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)
104295-2	JE-2	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104295-3	JS-3	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104295-4	JB-4	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104295-5	JW-5	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104295-7	JW-7	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104295-9	JB-9	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)

ND = Not detected at or above reporting limit; Reporting limit  
 indicated in parentheses.

QA/QC SUMMARY

RPD, %	2
RECOVERY, %	103

LABORATORY NUMBER: 104295  
 CLIENT: AQUA RESOURCES  
 PROJECT ID: 90239.3  
 LOCATION: RANSOME

DATE RECEIVED: 06/26/91  
 DATE EXTRACTED: 06/27/91  
 DATE ANALYZED: 06/27/91  
 DATE REPORTED: 06/28/91

Extractable Petroleum Hydrocarbons in Soils & Wastes  
 California DOHS Method  
 LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (mg/Kg)	DIESEL RANGE (mg/Kg)	REPORTING LIMIT* (mg/Kg)
104295-1	JE-1	ND	ND	1.0
104295-2	JE-2	ND	ND	1.0
104295-3	JS-3	ND	ND	1.0
104295-4	JB-4	ND	ND	1.0
104295-5	JW-5	ND	ND	1.0
104295-6	JW-6	ND	ND	1.0
104295-7	JW-7	ND	ND	1.0
104295-8	JN-8	ND	ND	1.0
104295-9	JB-9	ND	ND	1.0
104295-14	J-PIPE-1TOP	ND	37,000	10,000
104295-14	J-PIPE-1BOTTOM	ND	86	10

ND = Not Detected at or above reporting limit.

\*Reporting limit applies to all analytes.

QA/QC SUMMARY

RPD, %	8
RECOVERY, %	90



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

DATE RECEIVED: 06/26/91

DATE REPORTED: 07/02/91

LAB NUMBER: 104295

AQUA RESOURCES, INC  
RECEIVED

JUL - 5 1991


CLIENT: AQUA RESOURCES, INC.

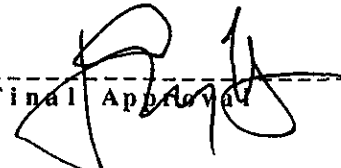
JOB NO. \_\_\_\_\_  
FILE \_\_\_\_\_

PROJECT ID: 90239.3

LOCATION: RANSOME

RESULTS: SEE ATTACHED

  
-----  
QA/QC Approval

  
-----  
Final Approval

Berkeley

Wilmington

Los Angeles



104266

AQUA RESOURCES, INC.

SHIPMENT NO.: 13  
 PAGE 1 OF 1  
 DATE 6/24/91



CHAIN OF CUSTODY RECORD

PROJECT NAME: RANSOME  
 PROJECT NO.: 90239.3

Sample Number	Location	Type of Sample		Type of Container	Type of Preservation		Analysis Required
		Material	Method		Temp	Chemical	
1 LB-4	6 1/2'	Soil	Drive	Brass Tube	4°C		TVHG, BTXE, TEHD, O&G
2 LN-5	2 1/2'	"	"	"	"		"
3 EE-1	3 1/2'	"	"	"	"		"
4 EB-2	6'	"	"	"	"		"
5 EW-3	3'	"	"	"	"		TEHD, O&G Only
6 ES-4	2'	Gravelly Soil	Trowel	"	"		TVHG, BTXE, TEHD, O&G
7 A'B-1	7'	Soil	Drive	"	"		TEHD, O&G Only
8 A'E-2	3'	"	"	"	"		"
9 A'N-3	4 1/2'	"	"	"	"		"
10 A'S-4	2 1/2'	"	"	"	"		TVHG, BTXE, TEHD, O&G
11 A'W-5	5'	"	"	"	"		"
12 DB-24	5 1/2'	"	"	"	"		"
13 DE-25	2'	"	"	"	"		<del>TVHG, BTXE, TEHD, O&amp;G</del> "
14 DN-26	4'	"	"	"	"		TEHD, O&G Only
15 DS-27	2 3/4'	"	"	"	"		

Total Number of Samples Shipped: 15    Sampler's Signature: Aaron N. Stessman

Relinquished By: Signature: <u>Aaron N. Stessman</u> Printed Name: <u>Aaron N. Stessman</u> Company: <u>Aqua Resources</u> Reason: <u>For Analysis</u>	Received By: Signature: <u>Jeanne Evans</u> Printed Name: <u>Jeanne EVANS</u> Company: <u>CURTIS &amp; TOMPKINS</u>	Date: <u>6/24/91</u> Time: <u>6:10 pm</u>
Relinquished By: Signature: _____ Printed Name: _____ Company: _____ Reason: _____	Received By: Signature: _____ Printed Name: _____ Company: _____	Date: <u>  /  /  </u> Time: _____

REMARKS:  
 TVHG+BTXE = LURT  
 TEHD = 8015 Mod.  
 O&G = 5520 EF

Special Shipment / Handling / Storage Requirements:



LABORATORY NUMBER: 104266  
 CLIENT: AQUA RESOURCES, INC.  
 PROJECT ID: 90239.3  
 LOCATION: RANSOME

DATE RECEIVED: 06/24/91  
 DATE EXTRACTED: 06/25/91  
 DATE ANALYZED: 06/28/91  
 DATE REPORTED: 07/02/91

Extractable Petroleum Hydrocarbons in Soils & Wastes  
 California DOHS Method  
 LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (mg/Kg)	DIESEL RANGE (mg/Kg)	REPORTING LIMIT* (mg/Kg)
104266-1	LB-4	ND	ND	1.0
104266-2	LN-5	ND	420	10
104266-3	EE-1	ND	ND	1.0
104266-4	EB-2	ND	ND	10
104266-5	EW-3	ND	ND	1.0
104266-6	ES-4	ND	ND	1.0
104266-7	A'B-1	ND	ND	1.0
104266-8	A'E-2	ND	ND	1.0
104266-9	A'N-3	ND	ND	1.0
104266-10	A'S-4	ND	ND	1.0
104266-11	A'W-5	ND	ND	1.0
104266-12	DB-24	ND	ND	1.0
104266-13	DE-25	ND	ND	1.0
104266-14	DN-26	ND	ND	1.0
104266-15	DS-27	ND	ND	1.0

ND = Not Detected at or above reporting limit.

\*Reporting limit applies to all analytes.

QA/QC SUMMARY

RPD, %	2
RECOVERY, %	82



LABORATORY NUMBER: 104266  
CLIENT: AQUA RESOURCES, INC.  
PROJECT ID: 90239.3  
LOCATION: RANSOME

DATE RECEIVED: 06/24/91  
DATE ANALYZED: 06/27/91  
DATE REPORTED: 07/02/91

Total Volative Hydrocarbons with BTXE in Soils and Wastes  
TVH by California DOHS Method/LUFT Manual October 1989  
BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (mg/Kg)	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)
104266-1	LB-4	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104266-2	LN-5	12	ND(5.0)	5.2	5.1	51
104266-3	EE-1	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104266-4	EB-2	13	ND(10)	ND(10)	ND(10)	90
104266-5	EW-3	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104266-7	A'B-1	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104266-11	A'W-5	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104266-12	DB-24	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104266-13	DE-25	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104266-14	DN-26	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)

ND = Not detected at or above reporting limit; Reporting limit indicated in parentheses.

QA/QC SUMMARY

RPD, %	10
RECOVERY, %	94



Q C Batch Report

Client: Aqua Resources  
Project Name: Ransome  
Project Number: 90239.3

Laboratory Login Number: 104266  
Report Date: 02 July 91

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric)

QC Batch Number: 1839

Blank Results

Sample ID	Result	MDL	Units	Method	Date Analyzed
BLANK	ND	50	mg/Kg	SMWW 17:5520EF	26-JUN-91

Spike/Duplicate Results

Sample ID	Recovery	Method	Date Analyzed
BS	85%	SMWW 17:5520EF	26-JUN-91
BSD	92%	SMWW 17:5520EF	26-JUN-91

		Control Limits
Average Spike Recovery	88%	80% - 120%
Relative Percent Difference	7.2%	< 20%

Client: Aqua Resources

Laboratory Login Number: 104266

 Project Name: Ransome  
 Project Number: 90239.3

Report Date: 02 July 91

ANALYSIS: Hydrocarbon Oil &amp; Grease (Gravimetric)      METHOD: SMWW 17:5520EF

Lab ID	Sample ID	Matrix	Sampled	Received	Analyzed	Result	Units	RL	Analyst	QC Batch
104266-001	LB-4	Soil	24-JUN-91	24-JUN-91	26-JUN-91	ND	mg/Kg	50	TR	1839
104266-002	LN-5	Soil	24-JUN-91	24-JUN-91	26-JUN-91	150	mg/Kg	50	TR	1839
104266-003	EE-1	soil	24-JUN-91	24-JUN-91	26-JUN-91	130	mg/Kg	50	TR	1839
104266-004	EB-2	soil	24-JUN-91	24-JUN-91	26-JUN-91	2300	mg/Kg	50	TR	1839
104266-005	EW-3	soil	24-JUN-91	24-JUN-91	26-JUN-91	ND	mg/Kg	50	TR	1839
104266-006	ES-4	soil	24-JUN-91	24-JUN-91	26-JUN-91	110	mg/Kg	50	TR	1839
104266-007	A'B-1	soil	24-JUN-91	24-JUN-91	26-JUN-91	ND	mg/Kg	50	TR	1839
104266-008	A'E-2	soil	24-JUN-91	24-JUN-91	26-JUN-91	ND	mg/Kg	50	TR	1839
104266-009	A'H-3	soil	24-JUN-91	24-JUN-91	26-JUN-91	ND	mg/Kg	50	TR	1839
104266-010	A'S-4	soil	24-JUN-91	24-JUN-91	26-JUN-91	60	mg/Kg	50	TR	1839
104266-011	A'W-5	soil	24-JUN-91	24-JUN-91	26-JUN-91	ND	mg/Kg	50	TR	1839
104266-012	DB-24	soil	24-JUN-91	24-JUN-91	26-JUN-91	ND	mg/Kg	50	TR	1839
104266-013	DE-25	soil	24-JUN-91	24-JUN-91	26-JUN-91	ND	mg/Kg	50	TR	1839
104266-014	DN-26	soil	24-JUN-91	24-JUN-91	26-JUN-91	ND	mg/Kg	50	TR	1839
104266-015	DS-27	soil	24-JUN-91	24-JUN-91	26-JUN-91	ND	mg/Kg	50	TR	1839

ND = Not Detected at or above Reporting Limit (RL).

# AQUA RESOURCES, INC.

SHIPMENT NO.: 23  
 PAGE 2 OF 2  
 DATE 7/23/91

## CHAIN OF CUSTODY RECORD



PROJECT NAME: RANSOME  
 PROJECT NO.: 90239.3

*Handwritten:* 104588 =  
 MONTANA

Sample Number	Location Depth	Type of Sample		Type of Container	Type of Preservation		Analysis Required
		Material	Method		Temp	Chemical	
B-37	9	Soil	Drive	Brass Tube	±4°C		1, 0 * 1, 2, 3
B-33	9	"	"	"	"		1, 0 * 1, 2, 3
B-34	9	"	"	"	"		1, 0 * 1, 2, 3
B-35	3 1/2	"	"	"	"		1, 0 * 1, 2, 3
P-36	3 1/2	"	"	"	"		1, 0 * 1, 2, 3
TW-37	10	"	"	"	"		1, 0 * 1, 2, 3
W-33	9	"	"	"	"		1, 0 * 1, 2, 3
S-39	7 1/2	"	"	"	"		1, 0 * 1, 2, 3
S-40	7 1/2	"	"	"	"		1, 0 * 1, 2, 3
S-41	8	"	"	"	"		1, 0 * 1, 2, 3
S-42	7	"	"	"	"		1, 0 * 1, 2, 3

Total Number of Samples Shipped: 11/31 | Sampler's Signature: [Signature]

Relinquished By: Signature: <u>[Signature]</u> Printed Name: <u>Aaron N. Stessman</u> Company: <u>Aqua Resources</u> Reason: <u>For Analysis</u>	Received By: Signature: _____ Printed Name: _____ Company: _____	Date: <u>1/1</u> Time: _____
Relinquished By: Signature: _____ Printed Name: _____ Company: _____ Reason: _____	Received By: Signature: <u>[Signature]</u> Printed Name: <u>JOHN GOVELE</u> Company: <u>CURTIS TOMPKINS</u>	Date: <u>7/23/91</u> Time: <u>1725</u>

REMARKS:  
 1 = TVITG + BTEX  
 2 = TPHD  
 3 = O&G  
 \* = ~~48~~ hr RUSH!  
 7A  
 O = Also held for possible TPHD, O&G Analyses

Special Shipment / Handling / Storage Requirements:

# AQUA RESOURCES, INC.



## CHAIN OF CUSTODY RECORD

SHIPMENT NO.: 73  
 PAGE 1 OF 2  
 DATE 7/23/91

PROJECT NAME: RANSOME  
 PROJECT NO.: 90239.3

Sample Number	Location (Depth)	Type of Sample		Type of Container	Type of Preservation		Analysis Required
		Material	Method		Temp	Chemical	
JB-12	13 1/2	Soil	Drive	Brass Tube	±4°C		1, 2, 3
JB-13	13 1/2	"	"	"	±4°C		1, 2, 3
JB-14	14	"	"	"	"		1, 2, 3
JB-15	14	"	"	"	"		1, 2, 3
JB-16	14	"	"	"	"		1, 2, 3
JB-17	14	"	"	"	"		1, 2, 3
JB-18	14	"	"	"	"		1, 2, 3
JB-19	14	"	"	"	"		1, 2, 3
JB-20	14	"	"	"	"		1, 2, 3
JB-21	14	"	"	"	"		1, 2, 3
JB-22	14	"	"	"	"		1, 2, 3
JB-22	14	"	"	"	"		1, 2, 3
JB-24	14	"	"	"	"		1, 2, 3
JB-25	14	"	"	"	"		1, 2, 3
JB-26	14	"	"	"	"		1, 2, 3
JB-27	13	"	"	"	"		1, 2, 3
JB-28	13	"	"	"	"		1, 2, 3
JB-29	13	"	"	"	"		1, 2, 3
JB-30	13	"	"	"	"		1, 2, 3
JB-31	13	"	"	"	"		1, 2, 3

Total Number of Samples Shipped: 20/31 Sampler's Signature: [Signature]

Relinquished By: Signature: <u>[Signature]</u> Printed Name: <u>Aaron M. Stessman</u> Company: <u>Aqua Resources</u> Reason: <u>For Analysis</u>	Received By: Signature: _____ Printed Name: _____ Company: _____	Date: <u>7/23/91</u> Time: _____
Relinquished By: Signature: _____ Printed Name: _____ Company: _____ Reason: _____	Received By: Signature: <u>[Signature]</u> Printed Name: <u>JOHN P. [unclear]</u> Company: <u>CIT</u>	Date: <u>7/23/91</u> Time: <u>1725</u>

REMARKS:  
 1 = TVHG + BTEX  
 2 = TPHD  
 3 = O&G  
 \* = ~~4~~ hr. RUSH!  
 2A  
 O = Also hold for possible TPHD and O+G analyses

Special Shipment / Handling / Storage Requirements:



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710. Phone (415) 486-0900

DATE RECEIVED: 07/23/91

DATE REPORTED: 07/29/91

AQUA RESOURCES, INC  
RECEIVED

AUG - 2 1991

LAB NUMBER: 104588

JOB NO. \_\_\_\_\_  
FILE \_\_\_\_\_

CLIENT: AQUA RESOURCES

PROJECT ID: 90239.3

LOCATION: RANSOME

RESULTS: SEE ATTACHED

  
-----  
QA/QC Approval

  
-----  
Final Approval

Berkeley

Wilmington

Los Angeles





Client: Aqua Resources

Laboratory Login Number: 104588

Project Name: Ransome  
Project Number: 90239.3

Report Date: 29 July 91

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric)

METHOD: SMWW 17:5520EF

Lab ID	Sample ID	Matrix	Sampled	Received	Analyzed	Result	Units	RL	Analyst	QC Batch
104588-002	JB-13	Soil	23-JUL-91	23-JUL-91	25-JUL-91	ND	mg/Kg	50	TR	2153
104588-003	JB-14	Soil	23-JUL-91	23-JUL-91	25-JUL-91	ND	mg/Kg	50	TR	2153
104588-004	JB-15	Soil	23-JUL-91	23-JUL-91	25-JUL-91	ND	mg/Kg	50	TR	2153
104588-005	JB-16	Soil	23-JUL-91	23-JUL-91	25-JUL-91	ND	mg/Kg	50	TR	2153
104588-007	JB-18	Soil	23-JUL-91	23-JUL-91	25-JUL-91	ND	mg/Kg	50	TR	2153
104588-008	JB-19	Soil	23-JUL-91	23-JUL-91	25-JUL-91	ND	mg/Kg	50	TR	2153
104588-010	JB-21	Soil	23-JUL-91	23-JUL-91	25-JUL-91	ND	mg/Kg	50	TR	2153
104588-012	JB-23	Soil	23-JUL-91	23-JUL-91	25-JUL-91	ND	mg/Kg	50	TR	2153
104588-014	JB-25	Soil	23-JUL-91	23-JUL-91	25-JUL-91	ND	mg/Kg	50	TR	2153
104588-017	JB-28	Soil	23-JUL-91	23-JUL-91	25-JUL-91	ND	mg/Kg	50	TR	2153
104588-019	JB-30	Soil	23-JUL-91	23-JUL-91	25-JUL-91	ND	mg/Kg	50	TR	2153
104588-020	JB-31	Soil	23-JUL-91	23-JUL-91	25-JUL-91	ND	mg/Kg	50	TR	2153
104588-021	JB-33	Soil	23-JUL-91	23-JUL-91	25-JUL-91	ND	mg/Kg	50	TR	2153
104588-026	JS-42	Soil	23-JUL-91	23-JUL-91	25-JUL-91	ND	mg/Kg	50	TR	2153

ND = Not Detected at or above Reporting Limit (RL).



Q C Batch Report

Client: Aqua Resources  
Project Name: Ransome  
Project Number: 90239.3

Laboratory Login Number: 104588  
Report Date: 29 July 91

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric)

QC Batch Number: 2153

Blank Results

Sample ID	Result	MDL	Units	Method	Date Analyzed
BLANK	ND	50	mg/Kg	SMWW 17:552OEF	25-JUL-91

Spike/Duplicate Results

Sample ID	Recovery	Method	Date Analyzed
BS	95%	SMWW 17:552OEF	25-JUL-91
BSD	93%	SMWW 17:552OEF	25-JUL-91

		Control Limits
Average Spike Recovery	94%	80% - 120%
Relative Percent Difference	1.8%	< 20%

LABORATORY NUMBER: 104588  
 CLIENT: AQUA RESOURCES  
 PROJECT ID: 90239.3  
 LOCATION: RANSOME

DATE RECEIVED: 07/23/91  
 DATE EXTRACTED: 07/24/91  
 DATE ANALYZED: 07/28/91  
 DATE REPORTED: 07/29/91

Extractable Petroleum Hydrocarbons in Soils & Wastes  
 California DOHS Method  
 LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (mg/Kg)	DIESEL RANGE (mg/Kg)	REPORTING LIMIT* (mg/Kg)
104588-2	JB-13	ND	ND	1.0
104588-3	JB-14	ND	ND	1.0
104588-4	JB-15	ND	ND	1.0
104588-5	JB-16	ND	ND	1.0
104588-7	JB-18	ND	ND	1.0
104588-8	JB-19	ND	ND	1.0
104588-10	JB-21	ND	ND	1.0
104588-12	JB-23	ND	ND	1.0
104588-14	JB-25	ND	ND	1.0
104588-17	JB-28	ND	ND	1.0
104588-19	JB-30	ND	ND	1.0
104588-20	JB-31	ND	ND	1.0
104588-21	JB-33	ND	ND	1.0
104588-26	JS-42	ND	ND	1.0

ND = Not Detected at or above reporting limit.

\*Reporting limit applies to all analytes.

QA/QC SUMMARY

=====  
 RPD, % 8  
 RECOVERY, % 102  
 =====



LABORATORY NUMBER: 104588  
CLIENT: AQUA RESOURCES  
PROJECT ID: 90239.3  
LOCATION: RANSOME

DATE RECEIVED: 07/23/91  
DATE ANALYZED: 07/25-27/91  
DATE REPORTED: 07/29/91

Total Volatile Hydrocarbons with BTXE in Soils and Wastes  
TVH by California DOHS Method/LUFT Manual October 1989  
BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (mg/Kg)	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)
104588-1	JB-12	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104588-2	JB-13	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104588-3	JB-14	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104588-4	JB-15	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104588-5	JB-16	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104588-6	JB-17	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104588-7	JB-18	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104588-8	JB-19	ND(1.0)	6.0	ND(5.0)	ND(5.0)	ND(5.0)
104588-9	JB-20	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104588-10	JB-21	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104588-11	JB-22	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104588-12	JB-23	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)

ND = Not detected at or above reporting limit; Reporting limit indicated in parentheses.

QA/QC SUMMARY

RPD, %	5
RECOVERY, %	104



LABORATORY NUMBER: 104588  
CLIENT: AQUA RESOURCES  
PROJECT ID: 90239.3  
LOCATION: RANSOME

DATE RECEIVED: 07/23/91  
DATE ANALYZED: 07/25-27/91  
DATE REPORTED: 07/29/91

Total Volatile Hydrocarbons with BTXE in Soils and Wastes  
TVH by California DOHS Method/LUFT Manual October 1989  
BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (mg/Kg)	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)
104588-13	JB-24	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104588-14	JB-25	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104588-15	JB-26	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104588-16	JB-27	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	7.0
104588-17	JB-28	ND(1.0)	11	ND(5.0)	ND(5.0)	ND(5.0)
104588-18	JB-29	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104588-19	JB-30	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104588-20	JB-31	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104588-21	JB-33	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104588-22	JB-34	2.6	ND(5.0)	7.5	7.3	ND(5.0)
104588-23	JB-36	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104588-24	JW-37	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104588-25	JS-40	1.7	15	ND(5.0)	7.0	6.0
104588-26	JS-42	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)

ND = Not detected at or above reporting limit; Reporting limit indicated in parentheses.

QA/QC SUMMARY

RPD, %  
RECOVERY, %

5  
104

# AQUA RESOURCES, INC.

SHIPMENT NO.: 23



## CHAIN OF CUSTODY RECORD

PAGE 1 OF 2

DATE 7/23/91

PROJECT NAME: RANSOME

PROJECT NO.: 90239.3

104560

Sample Number	Location (Depth)	Type of Sample		Type of Container	Type of Preservation		Analysis Required
		Material	Method		Temp	Chemical	
JB-12	13 1/2	Soil	Drive	Brass Tube	±4°C		1, 2, 3
JB-13	13 1/2	"	"	"	±4°C		1, 2, 3
JB-14	14	"	"	"	"		1, 2, 3
JB-15	14	"	"	"	"		1, 2, 3
JB-16	14	"	"	"	"		1, 2, 3
JB-17	14	"	"	"	"		1, 2, 3
JB-18	14	"	"	"	"		1, 2, 3
JB-19	14	"	"	"	"		1, 2, 3
JB-20	14	"	"	"	"		1, 2, 3
JB-21	14	"	"	"	"		1, 2, 3
JB-22	14	"	"	"	"		1, 2, 3
JB-23	14	"	"	"	"		1, 2, 3
JB-24	14	"	"	"	"		1, 2, 3
JB-25	14	"	"	"	"		1, 2, 3
JB-26	14	"	"	"	"		1, 2, 3
JB-27	13	"	"	"	"		1, 2, 3
JB-28	13	"	"	"	"		1, 2, 3
JB-29	13	"	"	"	"		1, 2, 3
JB-30	13	"	"	"	"		1, 2, 3
JB-31	13	"	"	"	"		1, 2, 3

Total Number of Samples Shipped: 20/31      Sampler's Signature: [Signature]

Relinquished By: <u>[Signature]</u> Signature Printed Name: <u>Aaron M. Stessman</u> Company: <u>Aqua Resources</u> Reason: <u>For Analysis</u>	Received By: <u>[Signature]</u> Signature Printed Name: _____ Company: _____	Date: <u>7/23/91</u> Time: _____
Relinquished By: _____ Signature Printed Name: _____ Company: _____ Reason: _____	Received By: <u>[Signature]</u> Signature Printed Name: <u>J. G. [unclear]</u> Company: <u>CST</u>	Date: <u>7/23/91</u> Time: <u>1725</u>

REMARKS:

- 1 = TVHG + BTEX
- 2 = TPHD
- 3 = O&G
- \* = ~~13~~ km RUSH!
- 2A
- 0 = Also hold for possible TPHD and O+G analyses

Special Shipment / Handling / Storage Requirements:

104588

AQUA RESOURCES, INC.

SHIPMENT NO.: 22  
PAGE 2 OF 2  
DATE 7/23/91



CHAIN OF CUSTODY RECORD

PROJECT NAME: **RANSOME**  
PROJECT NO.: **90239.3**

587 = real

Sample Number	Location (Depth)	Type of Sample		Type of Container	Type of Preservation		Analysis Required
		Material	Method		Temp	Chemical	
JB-32	9	Soil	Drive	Brass Tube	14°C		1, 0 ★
JB-33	9	"	"	"	"		1, 2, 3
JB-34	9	"	"	"	"		1, 0 ★
JB-35	2 1/2	"	"	"	"		1, 0
TP-36	8 1/2	"	"	"	"		1, 0
TW-37	10	"	"	"	"		1, 0 ★
TW-38	9	"	"	"	"		1, 0 ★
JS-39	7 1/2	"	"	"	"		1, 0
JS-40	7 1/2	"	"	"	"		1, 0 ★
JS-41	8	"	"	"	"		1, 2, 3
JS-42	7	"	"	"	"		

Total Number of Samples Shipped: 11/31 | Sampler's Signature: [Signature]

Relinquished By: Signature: <u>[Signature]</u> Printed Name: <u>Aaron N. Stessman</u> Company: <u>Aqua Resources</u> Reason: <u>For Analysis</u>	Received By:	Date: <u>1/1</u>
	Signature: _____	Time: _____
	Printed Name: _____	
Relinquished By: Signature: _____ Printed Name: _____ Company: _____ Reason: _____	Received By:	Date: <u>7/23/91</u>
	Signature: <u>[Signature]</u>	Time: <u>1725</u>
	Printed Name: <u>JOHN GURTELL</u>	
	Company: <u>CURTIS TOMPKINS</u>	

REMARKS:  
1 = TVI+G + BTEX  
2 = TPHD  
3 = O&G  
★ = ~~10~~ hr RUSH!  
24  
0 = Also hold for possible TPHD, O&G Analyses

Special Shipment / Handling / Storage Requirements:



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710. Phone (415) 486-0900

DATE RECEIVED: 07/24/91  
DATE REPORTED: 07/26/91

LAB NUMBER: 104604

AQUA RESOURCES, INC  
RECEIVED

JUL 30 1991

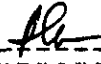
CLIENT: AQUA RESOURCES, INC.

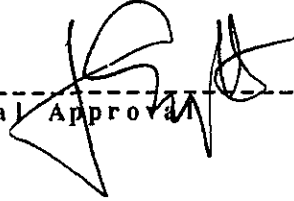
JOB NO. \_\_\_\_\_  
FILE \_\_\_\_\_

PROJECT ID: 90239.3

LOCATION: RANSOME

RESULTS: SEE ATTACHED

  
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QA/QC Approval

  
-----  
Final Approval

Berkeley

Wilmington

Los Angeles





LABORATORY NUMBER: 104604  
CLIENT: AQUA RESOURCES, INC.  
PROJECT ID: 90239.3  
LOCATION: RANSOME

DATE RECEIVED: 07/24/91  
DATE EXTRACTED: 07/25/91  
DATE ANALYZED: 07/26/91  
DATE REPORTED: 07/26/91

Extractable Petroleum Hydrocarbons in Soils & Wastes  
California DOHS Method  
LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (mg/Kg)	DIESEL RANGE (mg/Kg)	REPORTING LIMIT* (mg/Kg)
104604-2	JE-44	ND	ND	1.0
104604-3	JN-45	ND	1,400	10

ND = Not Detected at or above reporting limit.

\*Reporting limit applies to all analytes.



LABORATORY NUMBER: 104604  
CLIENT: AQUA RESOURCES, INC.  
PROJECT ID: 90239.3  
LOCATION: RANSOME

DATE RECEIVED: 07/24/91  
DATE ANALYZED: 07/25/91  
DATE REPORTED: 07/25/91

Total Volatile Hydrocarbons with BTXE in Soils and Wastes  
TVH by California DOHS Method/LUFT Manual October 1989  
BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (mg/Kg)	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)
104604-1	JS-43	10	24	19	ND(5.0)	69
104604-2	JE-44	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104604-3	JN-45	61	ND(80)	ND(80)	ND(80)	270
104604-4	JN-46	2.8	110	ND(5.0)	170	13
104604-5	JN-47	7.0	10	ND(5.0)	250	23
104604-6	JN-48	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)

ND = Not detected at or above reporting limit; Reporting limit indicated in parentheses.

QA/QC SUMMARY

RPD, %	6
RECOVERY, %	94



Client: Aqua Resources

Laboratory Login Number: 104604

Project Name: Ransome  
Project Number: 90239.3

Report Date: 25 July 91

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric)      METHOD: SMWW 17:5520EF

Lab ID	Sample ID	Matrix	Sampled	Received	Analyzed	Result	Units	RL	Analyst	QC Batch
104604-002	JE-44	Soil	24-JUL-91	24-JUL-91	25-JUL-91	ND	mg/Kg	50	TR	2153
104604-003	JN-45	Soil	24-JUL-91	24-JUL-91	25-JUL-91	58	mg/Kg	50	TR	2153

ND = Not Detected at or above Reporting Limit (RL).



Q C Batch Report

Client: Aqua Resources  
Project Name: Ransome  
Project Number: 90239.3

Laboratory Login Number: 104604  
Report Date: 25 July 91

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric)

QC Batch Number: 2153

Blank Results

Sample ID	Result	MDL	Units	Method	Date Analyzed
BLANK	ND	50	mg/Kg	SMWW 17:5520EF	25-JUL-91

Spike/Duplicate Results

Sample ID	Recovery	Method	Date Analyzed
BS	95%	SMWW 17:5520EF	25-JUL-91
BSD	93%	SMWW 17:5520EF	25-JUL-91

Average Spike Recovery	94%	Control Limits	80% - 120%
Relative Percent Difference	1.8%		< 20%

104604  
 AQUA RESOURCES, INC.

SHIPMENT NO.: 29  
 PAGE 1 OF 1  
 DATE 7/24/91



CHAIN OF CUSTODY RECORD

PROJECT NAME: RANSOME  
 PROJECT NO.: 90239.3

Sample Number	Location (Depth)	Type of Sample		Type of Container	Type of Preservation		Analysis Required
		Material	Method		Temp	Chemical	
J3-43	7'	Soil	Drive	Brass Tube	±4°C		1, 2, 3 *
JE-44	9	"	"	"	"		1, 2, 3 *
JN-45	9	"	"	"	"		1, 2, 3 *
JN-46	8 1/2	"	"	"	"		1, 2, 3 *
JN-47	9	"	"	"	"		1, 2, 3 *
JN-48	8 1/2	"	"	"	"		1, 2, 3
JE-49	8	"	"	"	"		1, 2, 3
JN-50	7	"	"	"	"		1, 2, 3
JN-51	9 1/2	"	"	"	"		1, 2, 3
JN-52	7	"	"	"	"		1, 2, 3
JN-53	9 1/2	"	"	"	"		1, 2, 3
JN-54	7	"	"	"	"		1
JN-55	9 1/2	"	"	"	"		

Total Number of Samples Shipped: 13      Sampler's Signature: *[Signature]*      Date: 1/1

Relinquished By: *[Signature]*      Received By: *[Signature]*      Date: 7/24/91  
 Signature: *[Signature]*      Signature: *[Signature]*      Time: 17:25  
 Printed Name: Aaron N. Stessman      Printed Name: J. GORRITZ  
 Company: Aqua Resources      Company: C-7  
 Reason: For Analysis

REMARKS:  
 1 = TUNG + BTEX  
 2 = TPHD  
 3 = O&G  
 \* = RUSH (24-hr.) - All others 5 day turnaround please  
~~ALSO~~

Special Shipment / Handling / Storage Requirements:



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

DATE RECEIVED: 07/24/91

DATE REPORTED: 08/01/91

AQUA RESOURCES, INC  
RECEIVED

AUG - 5 1991

LAB NUMBER: 104606

JOB NO. \_\_\_\_\_

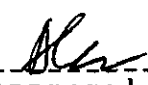
FILE \_\_\_\_\_

CLIENT: AQUA RESOURCES, INC.

PROJECT ID: 90239.3

LOCATION: RANSOME

RESULTS: SEE ATTACHED

  
-----  
QA/QC Approval

  
-----  
Final Approval

Berkeley

Wilmington

Los Angeles



LABORATORY NUMBER: 104606  
CLIENT: AQUA RESOURCES, INC.  
PROJECT ID: 90239.3  
LOCATION: RANSOME

DATE RECEIVED: 07/24/91  
DATE EXTRACTED: 07/25/91  
DATE ANALYZED: 07/28/91  
DATE REPORTED: 08/01/91

Extractable Petroleum Hydrocarbons in Soils & Wastes  
California DOHS Method  
LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (mg/Kg)	DIESEL RANGE (mg/Kg)	REPORTING LIMIT* (mg/Kg)
104606-1	JE-49	ND	ND	1.0
104606-3	JN-51	ND	ND	1.0
104606-4	JN-52	ND	ND	1.0
104606-5	JN-53	ND	ND	1.0
104606-6	JN-54	ND	ND	1.0

ND = Not Detected at or above reporting limit.

\*Reporting limit applies to all analytes.

QA/QC SUMMARY

RPD, %	8
RECOVERY, %	102

LABORATORY NUMBER: 104606  
 CLIENT: AQUA RESOURCES, INC.  
 PROJECT ID: 90239.3  
 LOCATION: RANSOME

DATE RECEIVED: 07/24/91  
 DATE ANALYZED: 07/29-31/91  
 DATE REPORTED: 08/01/91

Total Volatile Hydrocarbons with BTXE in Soils and Wastes  
 TVH by California DOHS Method/LUFT Manual October 1989  
 BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (mg/Kg)	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)
104606-1	JE-49	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104606-2	JN-50	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104606-3	JN-51	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104606-4	JN-52	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104606-5	JN-53	2.5	ND(5.0)	ND(5.0)	32	ND(5.0)
104606-6	JN-54	2.5	53	ND(5.0)	24.0	11
104606-7	JN-55	120	84	130	2,000	7,700

ND = Not detected at or above reporting limit; Reporting limit  
 indicated in parentheses.

QA/QC SUMMARY

RPD, %	3
RECOVERY, %	100





Client: Aqua Resources

Laboratory Login Number: 104606

Project Name: Ransome  
Project Number: 90239.3

Report Date: 01 August 91

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric)

METHOD: SMWW 17:5520EF

Lab ID	Sample ID	Matrix	Sampled	Received	Analyzed	Result	Units	RL	Analyst	QC Batch
104606-001	JE-49	Soil	24-JUL-91	25-JUL-91	30-JUL-91	ND	mg/Kg	50	TR	2185
104606-003	JN-51	Soil	24-JUL-91	25-JUL-91	30-JUL-91	ND	mg/Kg	50	TR	2185
104606-004	JN-52	Soil	24-JUL-91	25-JUL-91	30-JUL-91	ND	mg/Kg	50	TR	2185
104606-005	JN-53	Soil	24-JUL-91	25-JUL-91	30-JUL-91	ND	mg/Kg	50	TR	2185
104606-006	JN-54	Soil	24-JUL-91	25-JUL-91	30-JUL-91	ND	mg/Kg	50	TR	2185

ND = Not Detected at or above Reporting Limit (RL).

## Q C B a t c h R e p o r t

 Client: Aqua Resources  
 Project Name: Ransome  
 Project Number: 90239.3

 Laboratory Login Number: 104606  
 Report Date: 01 August 91

ANALYSIS: Hydrocarbon Oil &amp; Grease (Gravimetric)

QC Batch Number: 2185

## Blank Results

Sample ID	Result	MDL	Units	Method	Date Analyzed
BLANK	ND	50	mg/Kg	SMWW 17:552OEF	30-JUL-91

## Spike/Duplicate Results

Sample ID	Recovery	Method	Date Analyzed
BS	90%	SMWW 17:552OEF	30-JUL-91
BSD	94%	SMWW 17:552OEF	30-JUL-91

		Control Limits
Average Spike Recovery	92%	80% - 120%
Relative Percent Difference	4.0%	< 20%

**AQUA RESOURCES, INC.**

SHIPMENT NO.: 29



**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 1

DATE 7/24/91

PROJECT NAME: **RANSOME**

PROJECT NO.: **90239.3**

Sample Number	Location (Depth)	Type of Sample		Type of Container	Type of Preservation		Analysis Required
		Material	Method		Temp	Chemical	
J3-43	7'	Soil	Drive	Brass Tube	±40C		1 *
JE-44	9	"	"	"	"		1, 2, 3 *
JN-45	9	"	"	"	"		1, 2, 3 *
JN-46	8 1/2	"	"	"	"		1 *
JN-47	9	"	"	"	"		1 *
JN-48	8 1/2	"	"	"	"		1, 2, 3
JE-49	8	"	"	"	"		1
JN-50	7	"	"	"	"		1, 2, 3
JN-51	9 1/2	"	"	"	"		1, 2, 3
JN-52	7	"	"	"	"		1, 2, 3
JN-53	9 1/2	"	"	"	"		1, 2, 3
JN-54	7	"	"	"	"		1
JN-55	9 1/2	"	"	"	"		

Total Number of Samples Shipped: 13      Sampler's Signature: [Signature]

Relinquished By: Signature: <u>[Signature]</u> Printed Name: <u>Aaron N. Stessman</u> Company: <u>Aqua Resources</u> Reason: <u>For Analysis</u>	Received By: Signature: _____ Printed Name: _____ Company: _____	Date: <u>1/1</u> Time: _____
Relinquished By: Signature: _____ Printed Name: _____ Company: _____ Reason: _____	Received By: Signature: <u>[Signature]</u> Printed Name: <u>J. GUSTE</u> Company: <u>CIT</u>	Date: <u>7/24/91</u> Time: <u>17:25</u>

REMARKS:

1 = TUGH + BTEX  
 2 = TPHD  
 3 = O&G  
 \* = Rush (24 hr.) - All others 5 day turnaround please

Special Shipment / Handling / Storage Requirements:



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

DATE RECEIVED: 07/25/91

DATE REPORTED: 08/01/91

AQUA RESOURCES, INC  
RECEIVED

AUG - 5 1991

LAB NUMBER: 104612


JOB NO. \_\_\_\_\_  
FILE \_\_\_\_\_

CLIENT: AQUA RESOURCES, INC.

PROJECT ID: 90239.3

LOCATION: RANSOME

RESULTS: SEE ATTACHED

  
-----  
QA/QC Approval

  
-----  
Final Approval

Berkeley

Wilmington

Los Angeles

LABORATORY NUMBER: 104612  
 CLIENT: AQUA RESOURCES, INC.  
 PROJECT ID: 90239.3  
 LOCATION: RANSOME

DATE RECEIVED: 07/25/91  
 DATE EXTRACTED: 07/25/91  
 DATE ANALYZED: 07/27/91  
 DATE REPORTED: 08/01/91

Extractable Petroleum Hydrocarbons in Soils & Wastes  
 California DOHS Method  
 LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (mg/Kg)	DIESEL RANGE (mg/Kg)	REPORTING LIMIT* (mg/Kg)
104612-2	DS-41	ND	ND	1.0
104612-3	DW-42	ND	ND	1.0
104612-4	DW-43	ND	ND	1.0
104612-5	DW-44	ND	ND	1.0

ND = Not Detected at or above reporting limit.

\*Reporting limit applies to all analytes.

QA/QC SUMMARY

RPD, %	<1
RECOVERY, %	94

LABORATORY NUMBER: 104612  
 CLIENT: AQUA RESOURCES, INC.  
 PROJECT ID: 90239.3  
 LOCATION: RANSOME

DATE RECEIVED: 07/25/91  
 DATE ANALYZED: 07/28/91  
 DATE REPORTED: 08/01/91

Total Volatile Hydrocarbons with BTXE in Soils and Wastes  
 TVH by California DOHS Method/LUFT Manual October 1989  
 BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (mg/Kg)	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)
104612-1	LE-6	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104612-3	DW-42	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)

ND = Not detected at or above reporting limit; Reporting limit indicated in parentheses.

QA/QC SUMMARY

RPD, %	1
RECOVERY, %	104

LABORATORY NUMBER: 104612  
 CLIENT: AQUA RESOURCES, INC.  
 PROJECT ID: 90239.3  
 LOCATION: RANSOME

DATE RECEIVED: 07/25/91  
 DATE ANALYZED: 07/28/91  
 DATE REPORTED: 08/01/91

Total Volatile Hydrocarbons as Gasoline in Soils & Wastes  
 California DOHS Method  
 LUFT Manual October 1989

LAB ID	CLIENT ID	TVH AS GASOLINE (mg/Kg)	REPORTING LIMIT (mg/Kg)
104612-4	DW-43	ND	1.0
104612-5	DW-44	ND	1.0

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

RPD, %	1
RECOVERY, %	104

Client: Aqua Resources

Laboratory Login Number: 104612

Project Name: Ransome  
Project Number: 90239.3

Report Date: 01 August 91

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric)      METHOD: SMWW 17:5520EF

Lab ID	Sample ID	Matrix	Sampled	Received	Analyzed	Result	Units	RL	Analyst	QC Batch
104612-002	DS-41	Soil	25-JUL-91	25-JUL-91	30-JUL-91	ND	mg/Kg	50	TR	2185
104612-003	DW-42	Soil	25-JUL-91	25-JUL-91	30-JUL-91	ND	mg/Kg	50	TR	2185

ND = Not Detected at or above Reporting Limit (RL).



## Q C B a t c h R e p o r t

 Client: Aqua Resources  
 Project Name: Ransome  
 Project Number: 90239.3

 Laboratory Login Number: 104612  
 Report Date: 01 August 91

ANALYSIS: Hydrocarbon Oil &amp; Grease (Gravimetric)

QC Batch Number: 2185

## Blank Results

Sample ID	Result	MDL	Units	Method	Date Analyzed
BLANK	ND	50	mg/Kg	SMWW 17:5520EF	30-JUL-91

## Spike/Duplicate Results

Sample ID	Recovery	Method	Date Analyzed
BS	90%	SMWW 17:5520EF	30-JUL-91
BSD	94%	SMWW 17:5520EF	30-JUL-91

		Control Limits
Average Spike Recovery	92%	80% - 120%
Relative Percent Difference	4.0%	< 20%

Log in # 104612

AQUA RESOURCES, INC.

SHIPMENT NO.: 35



CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

DATE 7/25/91

PROJECT NAME: RANSOME

PROJECT NO.: 90239.3

Sample Number	Location (Depth Ft)	Type of Sample		Type of Container	Type of Preservation		Analysis Required
		Material	Method		Temp	Chemical	
LE-6	5	Soil	Drive	Brass Tube	±4°C		2
DS-41	4	"	"	"	"		3, 4
DW-42	5	"	"	"	"		2, 3, 4
DN-43	3 1/2	"	"	"	"		1, 3
DN-44	6	"	"	"	"		1, 3

Total Number of Samples Shipped: 5

Sampler's Signature: *[Signature]*

Relinquished By: *[Signature]*  
 Signature: *[Signature]*  
 Printed Name: Aaron N. Stessman  
 Company: Aqua Resources  
 Reason: For Analysis

Received By:  
 Signature: *[Signature]*  
 Printed Name: *[Printed Name]*  
 Company: *[Company]*

Date: 7/25/91  
 Time: 1:08

Relinquished By:  
 Signature: \_\_\_\_\_  
 Printed Name: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Reason: \_\_\_\_\_

Received By:  
 Signature: \_\_\_\_\_  
 Printed Name: \_\_\_\_\_  
 Company: \_\_\_\_\_

Date: / /  
 Time: .

- REMARKS:
- 1) = TVHG
  - 2) = TVHG + BTEX
  - 3) = TPHD
  - 4) = O&G

5 day turnaround.

Special Shipment / Handling / Storage Requirements:



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

DATE RECEIVED: 07/26/91

DATE REPORTED: 08/02/91


LAB NUMBER: 104631

CLIENT: AQUA RESOURCES

PROJECT ID: 90239.3

LOCATION: RANSOME

RESULTS: SEE ATTACHED

  
-----  
QA/QC Approval

  
-----  
Final Approval

Berkeley

Wilmington

Los Angeles

LABORATORY NUMBER: 104631  
 CLIENT: AQUA RESOURCES  
 PROJECT ID: 90239.3  
 LOCATION: RANSOME

DATE RECEIVED: 07/26/91  
 DATE ANALYZED: 07/30/91  
 DATE REPORTED: 08/02/91

Total Volatile Hydrocarbons with BTXE in Soils and Wastes  
 TVH by California DOHS Method/LUFT Manual October 1989  
 BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (mg/Kg)	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)
104631-8	DE-45	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104631-9	DB-46	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104631-10	DS-47	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104631-11	SP-J1-1, 2, 3, 4	23	250	11	33	460

ND = Not detected at or above reporting limit; Reporting limit  
 indicated in parentheses.

QA/QC SUMMARY

RPD, % 5  
 RECOVERY, % 102



LABORATORY NUMBER: 104631  
CLIENT: AQUA RESOURCES  
PROJECT ID: 90239.3  
LOCATION: RANSOME

DATE RECEIVED: 07/26/91  
DATE EXTRACTED: 07/29/91  
DATE ANALYZED: 08/01-02/91  
DATE REPORTED: 08/02/91

Extractable Petroleum Hydrocarbons in Soils & Wastes  
California DOHS Method  
LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (mg/Kg)	DIESEL RANGE (mg/Kg)	REPORTING LIMIT* (mg/Kg)
104631-8	DE-45	ND	4.8	1.0
104631-9	DB-46	ND	3.8	1.0
104631-11	SP-J1-1,2,3,4	ND	98	1.0

ND = Not Detected at or above reporting limit.

\*Reporting limit applies to all analytes.

QA/QC SUMMARY

```

=====
RPD, %                                18
RECOVERY, %                            117
=====

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Client: Aqua Resources

Laboratory Login Number: 104631

Project Name: Ransome  
Project Number: 90239.3

Report Date: 05 August 91

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric)      METHOD: SMWW 17:5520EF

Lab ID	Sample ID	Matrix	Sampled	Received	Analyzed	Result	Units	RL	Analyst	QC Batch
104631-008	DE-45	Soil	26-JUL-91	26-JUL-91	31-JUL-91	ND	mg/Kg	50	TR	2193
104631-011	SP-J1-1,2,3,4	Soil	26-JUL-91	26-JUL-91	31-JUL-91	2000	mg/Kg	50	TR	2193

ND = Not Detected at or above Reporting Limit (RL).

## Q C B a t c h R e p o r t

 Client: Aqua Resources  
 Project Name: Ransome  
 Project Number: 90239.3

 Laboratory Login Number: 104631  
 Report Date: 02 August 91

ANALYSIS: Hydrocarbon Oil &amp; Grease (Gravimetric)

QC Batch Number: 2193

## Blank Results

Sample ID	Result	MDL	Units	Method	Date Analyzed
BLANK	ND	50	mg/Kg	SMWW 17:5520EF	31-JUL-91

## Spike/Duplicate Results

Sample ID	Recovery	Method	Date Analyzed
BS	91%	SMWW 17:5520EF	31-JUL-91
BSD	89%	SMWW 17:5520EF	31-JUL-91

		Control Limits
Average Spike Recovery	90%	80% - 120%
Relative Percent Difference	2.6%	< 20%



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

DATE RECEIVED: 07/31/91

DATE REPORTED: 08/01/91

AQUA RESOURCES, INC  
RECEIVED

AUG - 5 1991

LAB NUMBER: 104653

JOB NO. \_\_\_\_\_  
FILE \_\_\_\_\_

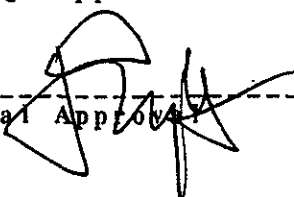
CLIENT: AQUA RESOURCES, INC.

PROJECT ID: 90239.3

LOCATION: RANSOME

RESULTS: SEE ATTACHED

  
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QA/QC Approval

  
-----  
Final Approval



LABORATORY NUMBER: 104653  
 CLIENT: AQUA RESOURCES, INC.  
 PROJECT ID: 90239.3  
 LOCATION: RANSOME

DATE RECEIVED: 07/31/91  
 DATE EXTRACTED: 07/31/91  
 DATE ANALYZED: 08/01/91  
 DATE REPORTED: 08/01/91

Extractable Petroleum Hydrocarbons in Soils & Wastes  
 California DOHS Method  
 LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (mg /Kg)	DIESEL RANGE (mg /Kg)	REPORTING LIMIT* (mg /Kg)
104653-1	KS-10	ND	25	1.0

ND = Not Detected at or above reporting limit.

\*Reporting limit applies to all analytes.

QA/QC SUMMARY

RPD, %	18
RECOVERY, %	117

log in 104653

AQUA RESOURCES, INC.

SHIPMENT NO.: 5834



CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

DATE 7/31/91

PROJECT NAME: RANSOME

PROJECT NO.: 90239.3

Sample Number	Location (Depth)	Type of Sample		Type of Container	Type of Preservation		Analysis Required
		Material	Method		Temp	Chemical	
KN-7	6'	Soil	Drive	Brass Tube	±4°C		1, 2, 3
B-8	11 1/2'	"	"	"	"		1, 2, 3
KN-9	6 1/2'	"	"	"	"		1, 2, 3
B-10	5 1/2'	"	"	"	"		2 *

Total Number of Samples Shipped: 4

Sampler's Signature: [Signature]

Relinquished By:  
 Signature: [Signature]  
 Printed Name: Aaron N. Stessman  
 Company: Aqua Resources  
 Reason: For Analysis

Received By:  
 Signature: [Signature]  
 Printed Name: Nancy Wilson  
 Company: LETI Lab

Date: 7/31/91  
 Time: 11:55 AM

Relinquished By:  
 Signature: \_\_\_\_\_  
 Printed Name: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Reason: \_\_\_\_\_

Received By:  
 Signature: \_\_\_\_\_  
 Printed Name: \_\_\_\_\_  
 Company: \_\_\_\_\_

Date:   /  /    
 Time:   :  :  

REMARKS:  
 1 = TVH6 + BTEX  
 2 = TPHD  
 3 = O&G  
 \* = 48 hr RUSH — [initials]

Special Shipment / Handling / Storage Requirements:



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

DATE RECEIVED: 07/31/91

DATE REPORTED: 08/06/91

LAB NUMBER: 104656

CLIENT: AQUA RESOURCES, INC.

PROJECT ID: 90239.3

LOCATION: RANSOME

RESULTS: SEE ATTACHED

  
-----  
QA/QC Approval

  
-----  
Final Approval

Berkeley

Wilmington

Los Angeles

Client: Aqua Resources

Laboratory Login Number: 104656

 Project Name: Ransome  
 Project Number: 90239.3

Report Date: 06 August 91

ANALYSIS: Hydrocarbon Oil &amp; Grease (Gravimetric)      METHOD: SMWW 17:5520EF

Lab ID	Sample ID	Matrix	Sampled	Received	Analyzed	Result	Units	RL	Analyst	QC Batch
104656-001	KN-7	Soil	31-JUL-91	31-JUL-91	05-AUG-91	ND	mg/Kg	50	TR	2239
104656-002	KB-8	Soil	31-JUL-91	31-JUL-91	05-AUG-91	ND	mg/Kg	50	TR	2239
104656-003	KN-9	Soil	31-JUL-91	31-JUL-91	05-AUG-91	ND	mg/Kg	50	TR	2239

ND = Not Detected at or above Reporting Limit (RL).

## Q C B a t c h R e p o r t

 Client: Aqua Resources  
 Project Name: Ransome  
 Project Number: 90239.3

 Laboratory Login Number: 104656  
 Report Date: 06 August 91

ANALYSIS: Hydrocarbon Oil &amp; Grease (Gravimetric)

QC Batch Number: 2239

## Blank Results

Sample ID	Result	MDL	Units	Method	Date Analyzed
BLANK	ND	50	mg/Kg	SMWW 17:5520EF	05-AUG-91

## Spike/Duplicate Results

Sample ID	Recovery	Method	Date Analyzed
BS	88%	SMWW 17:5520EF	05-AUG-91
BSD	93%	SMWW 17:5520EF	05-AUG-91

		Control Limits
Average Spike Recovery	91%	80% - 120%
Relative Percent Difference	5.6%	< 20%

LABORATORY NUMBER: 104656  
 CLIENT: AQUA RESOURCES, INC.  
 PROJECT ID: 90239.3  
 LOCATION: RANSOME

DATE RECEIVED: 07/30/91  
 DATE EXTRACTED: 08/01/91  
 DATE ANALYZED: 08/03/91  
 DATE REPORTED: 08/06/91

Extractable Petroleum Hydrocarbons in Soils & Wastes  
 California DOHS Method  
 LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (mg/Kg)	DIESEL RANGE (mg/Kg)	REPORTING LIMIT* (mg/Kg)
104656-1	KW-7	ND	3.8	1.0
104656-2	KB-8	ND	ND	1.0
104656-3	KN-9	ND	3.8	1.0

ND = Not Detected at or above reporting limit.

\*Reporting limit applies to all analytes.

QA/QC SUMMARY

RPD, %	4
RECOVERY, %	113

LABORATORY NUMBER: 104656  
 CLIENT: AQUA RESOURCES, INC.  
 PROJECT ID: 90239.3  
 LOCATION: RANSOME

DATE RECEIVED: 07/31/91  
 DATE ANALYZED: 08/06/91  
 DATE REPORTED: 08/06/91

Total Volatile Hydrocarbons with BTXE in Soils and Wastes  
 TVH by California DOHS Method/LUFT Manual October 1989  
 BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (mg/Kg)	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)
104656-1	KW-7	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104656-2	KB-8	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104656-3	KN-9	1.3	ND(5.0)	ND(5.0)	5.9	8.7

ND = Not detected at or above reporting limit; Reporting limit  
 indicated in parentheses.

QA/QC SUMMARY

RPD, %	3
RECOVERY, %	92

104556

# AQUA RESOURCES, INC.

SHIPMENT NO.: ~~34~~ **34**



## CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

PROJECT NAME: **RANSOME**  
PROJECT NO.: **90239.3**

DATE **7/31/91**

Sample Number	Location (Depth)	Type of Sample		Type of Container	Type of Preservation		Analysis Required
		Material	Method		Temp	Chemical	
KW-7	6'	Soil	Drive	Brass Tube	14°C		1, 2, 3
KB-8	11 1/2'	"	"	"	"		1, 2, 3
KN-9	6 1/2'	"	"	"	"		1, 2, 3
KS-10	5 1/2'	"	"	"	"		2 *

Total Number of Samples Shipped: 4 Sampler's Signature: [Signature]

Relinquished By:  
Signature [Signature]  
Printed Name **Aaron W. Stessman**  
Company **Aqua Resources**  
Reason **For Analysis**

Received By:  
Signature [Signature]  
Printed Name **Kevin Wilson**  
Company **LEWIS**

Date **7/31/91**  
Time **11:15 AM**

Relinquished By:  
Signature \_\_\_\_\_  
Printed Name \_\_\_\_\_  
Company \_\_\_\_\_  
Reason \_\_\_\_\_

Received By:  
Signature \_\_\_\_\_  
Printed Name \_\_\_\_\_  
Company \_\_\_\_\_

Date   /  /    
Time   :  :  

REMARKS:  
1 = TVHG + BTEX  
2 = TPHD  
3 = O<sub>2</sub>G  
\* = 48 hr RUSH — 104556

Special Shipment / Handling / Storage Requirements:





Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

DATE RECEIVED: 08/02/91

DATE REPORTED: 08/08/91

LABORATORY NUMBER: 104696

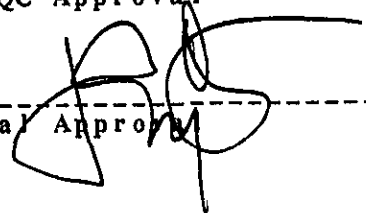
CLIENT: AQUA RESOURCES

PROJECT ID: 90239.3

LOCATION: RANSOME

RESULTS: SEE ATTACHED

  
-----  
QA/QC Approval

  
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Final Approval

Berkeley

Wilmington

Los Angeles



Client: Aqua Resources

Laboratory Login Number: 104696

Project Name: Ransome  
Project Number: 90239.3

Report Date: 08 August 91

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric)      METHOD: SMWW 17:5520EF

Lab ID	Sample ID	Matrix	Sampled	Received	Analyzed	Result	Units	RL	Analyst	QC Batch
104696-001	LS-10	Soil	02-AUG-91	02-AUG-91	05-AUG-91	510	mg/Kg	50	TR	2239
104696-002	LW-13	Soil	02-AUG-91	02-AUG-91	05-AUG-91	ND	mg/Kg	50	TR	2239

ND = Not Detected at or above Reporting Limit (RL).

## Q C B a t c h R e p o r t

 Client: Aqua Resources  
 Project Name: Ransome  
 Project Number: 90239.3

 Laboratory Login Number: 104696  
 Report Date: 08 August 91

ANALYSIS: Hydrocarbon Oil &amp; Grease (Gravimetric)

QC Batch Number: 2239

## Blank Results

Sample ID	Result	MDL	Units	Method	Date Analyzed
BLANK	ND	50	mg/Kg	SMWW 17:5520EF	05-AUG-91

## Spike/Duplicate Results

Sample ID	Recovery	Method	Date Analyzed
BS	88%	SMWW 17:5520EF	05-AUG-91
BSD	93%	SMWW 17:5520EF	05-AUG-91

		Control Limits
Average Spike Recovery	91%	80% - 120%
Relative Percent Difference	5.6%	< 20%

LABORATORY NUMBER: 104696  
 CLIENT: AQUA RESOURCES  
 PROJECT ID: 90239.3  
 LOCATION: RANSOME

DATE RECEIVED: 08/02/91  
 DATE ANALYZED: 08/07/91  
 DATE REPORTED: 08/08/91

Total Volatile Hydrocarbons with BTXE in Soils and Wastes  
 TVH by California DOHS Method/LUFT Manual October 1989  
 BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (mg/Kg)	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)
104696-1	LS-10	3.3	ND(5.0)	ND(5.0)	9.3	33
104696-2	LW-13	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)

ND = Not detected at or above reporting limit; Reporting limit  
 indicated in parentheses.

QA/QC SUMMARY

RPD, %	6
RECOVERY, %	95

LABORATORY NUMBER: 104696  
 CLIENT: AQUA RESOURCES  
 PROJECT ID: 90239.3  
 LOCATION: RANSOME

DATE RECEIVED: 08/02/91  
 DATE EXTRACTED: 08/05/91  
 DATE ANALYZED: 08/06/91  
 DATE REPORTED: 08/08/91

Extractable Petroleum Hydrocarbons in Soils & Wastes  
 California DOHS Method  
 LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (mg/Kg)	DIESEL RANGE (mg/Kg)	REPORTING LIMIT* (mg/Kg)
104696-1	LS-10	ND	73	10
104696-2	LW-13	ND	2.2	1.0

ND = Not Detected at or above reporting limit.

\*Reporting limit applies to all analytes.

QA/QC SUMMARY

RPD, %	<1
RECOVERY, %	81

104696

AQUA RESOURCES, INC.

SHIPMENT NO.: 36



CHAIN OF CUSTODY RECORD

**RUSH**

PAGE 1 OF 1  
DATE 8/2/91

PROJECT NAME: RANSOME

PROJECT NO.: 90239.3

- 5 days

Sample Number	Location (Depth)	Type of Sample		Type of Container	Type of Preservation		Analysis Required
		Material	Method		Temp	Chemical	
WB-89	8'	Soil	Drive	Brass Tube			2 *
WB-90	4'	"					1, 2, 3
WB-91	7 1/2'	"					2 *
WB-92	4'	"					2 *
WB-93	4'	"					1, 2, 3
WB-94	6'	"					2 *

Total Number of Samples Shipped: 6  
 Analyzed By: Aaron R. Stessman  
 Date: 8/2/91  
 Company: Aqua Resources  
 Reason: For Analysis

Sampler's Signature: [Signature]  
 Received By:  
 Signature: [Signature]  
 Printed Name: Nancy Wilson  
 Company: CWT Lab  
 Date: 8/2/91  
 Time: 4:15

1 = TVH + BTEX  
 2 = TPH  
 \* = 48 hr RUSH  
 3 = O&G

0 = Comment - consider TVH + BTEX, O&G when 1st results return

Transport / Handling / Storage Requirements:



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

DATE RECEIVED: 08/05/91

DATE REPORTED: 08/08/91

LABORATORY NUMBER: 104711


CLIENT: AQUA RESOURCES, INC.

PROJECT ID: 90239.3

LOCATION: RANSOME

RESULTS: SEE ATTACHED

  
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QA/QC Approval

  
-----  
Final Approval



LABORATORY NUMBER: 104711  
CLIENT: AQUA RESOURCES, INC.  
PROJECT ID: 90239.3  
LOCATION: RANSOME

DATE RECEIVED: 08/05/91  
DATE EXTRACTED: 08/06/91  
DATE ANALYZED: 08/07/91  
DATE REPORTED: 08/08/91

Extractable Petroleum Hydrocarbons in Soils & Wastes  
California DOHS Method  
LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (mg/Kg)	DIESEL RANGE (mg/Kg)	REPORTING LIMIT* (mg/Kg)
104711-1	EB-5	ND	ND	1.0
104711-2	LW-14	ND	5,100	100
104711-3	KS-11	ND	1.1	1.0

ND = Not Detected at or above reporting limit.

\*Reporting limit applies to all analytes.

QA/QC SUMMARY

RPD, %	14
RECOVERY, %	92



104711

AQUA RESOURCES, INC.

SHIPMENT NO.: 37



CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

DATE 8/5/91

PROJECT NAME: RANSOME

PROJECT NO.: 90239.3

Sample Number	Location (Depth)	Type of Sample		Type of Container	Type of Preservation		Analysis Required
		Material	Method		Temp	Chemical	
EB-5	10'	Soil	Drive	Brass Tube	+4°C		TPHD *
LW-14	3 1/2	"	"	"	"		TPHD *
KS-11	5 1/2	"	"	"	"		TPHD *
PC-FILL-2	-	"	"	"	"		HOLD

Total Number of Samples Shipped: 4    Sampler's Signature: *[Signature]*

Relinquished By: Signature: <i>[Signature]</i> Printed Name: <u>Aaron N. Weissman</u> Company: <u>Aqua Resources</u> Reason: <u>For Analysis</u>	Received By: Signature: <i>[Signature]</i> Printed Name: <u>Nancy L. Wilson</u> Company: <u>CUTLAW</u>	Date: <u>8/5/91</u> Time: <u>4:20</u>
Relinquished By: Signature: _____ Printed Name: _____ Company: _____ Reason: _____	Received By: Signature: _____ Printed Name: _____ Company: _____	Date: <u>  /  /  </u> Time: _____

REMARKS:  
\* = 48 hr turnaround

Special Handling / Storage Requirements:



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

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DATE RECEIVED: 08/05/91

DATE ORDERED: 08/09/91

DATE REPORTED: 08/14/91

LABORATORY NUMBER: 104775

AQUA RESOURCES, INC  
RECEIVED

AUG 14 1991

CLIENT: AQUA RESOURCES, INC.

JOB NO. \_\_\_\_\_

FILE \_\_\_\_\_

PROJECT ID: 90239.3

LOCATION: RANSOME

RESULTS: SEE ATTACHED

  
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QA/QC Approval

  
-----  
Final Approval

Berkeley

Wilmington

Los Angeles



Client: Aqua Resources

Laboratory Login Number: 104775

Project Name: Ransome  
Project Number: 90239.3

Report Date: 14 August 91

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric)

METHOD: SMWW 17:5520EF

Lab ID	Sample ID	Matrix	Sampled	Received	Analyzed	Result	Units	RL	Analyst	QC Batch
104775-001	KS-11	Soil	05-AUG-91	05-AUG-91	12-AUG-91	ND	mg/Kg	50	TR	2313
104775-002	EB-5	Soil	05-AUG-91	05-AUG-91	12-AUG-91	ND	mg/Kg	50	TR	2313

ND = Not Detected at or above Reporting Limit (RL).

## Q C B a t c h R e p o r t

 Client: Aqua Resources  
 Project Name: Ransome  
 Project Number: 90239.3

 Laboratory Login Number: 104775  
 Report Date: 14 August 91

ANALYSIS: Hydrocarbon Oil &amp; Grease (Gravimetric)

QC Batch Number: 2313

## Blank Results

Sample ID	Result	MDL	Units	Method	Date Analyzed
BLANK	ND	50	mg/Kg	SMWW 17:5520EF	12-AUG-91

## Spike/Duplicate Results

Sample ID	Recovery	Method	Date Analyzed
BS	87%	SMWW 17:5520EF	12-AUG-91
BSD	85%	SMWW 17:5520EF	12-AUG-91

		Control Limits
Average Spike Recovery	86%	80% - 120%
Relative Percent Difference	2.4%	< 20%

LABORATORY NUMBER: 104775  
 CLIENT: AQUA RESOURCES, INC.  
 PROJECT ID: 90239.3  
 LOCATION: RANSOME

DATE RECEIVED: 08/05/91  
 DATE ORDERED: 08/09/91  
 DATE ANALYZED: 08/13/91  
 DATE REPORTED: 08/14/91

Total Volatile Hydrocarbons with BTXE in Soils and Wastes  
 TVH by California DOHS Method/LUFT Manual October 1989  
 BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (mg/Kg)	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)
104775-1	KS-11	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104775-2	EB-5	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)

ND = Not detected at or above reporting limit; Reporting limit  
 indicated in parentheses.

QA/QC SUMMARY

RPD, %	5
RECOVERY, %	105

VERBAL ADDITIONS / CANCELLATIONS TO ANALYSIS REQUEST SHEET

CLIENT: AQUA RESOURCES DATE: 8/09/91  
 REQUESTED BY: Aaron TIME: 10:00 am pm  
 RECORDED BY: Alison

Current Lab ID (Previous Lab ID)	Client ID	Circle matrix	Specify <sup>(add)</sup> or cancel	Analysis	Due date
104775-1 104711-003	KS-11	<input checked="" type="radio"/> soil water other	A D	TVH/BTXE 5520EF	8/15
104775-2 (104711-001)	EB-5	<input checked="" type="radio"/> soil water other	D	TVH/BTXE 5520EF	8/15
( )		soil water other			
( )		soil water other			
( )		soil water other			
( )		soil water other			
( )		soil water other			
( )		soil water other			

Original in job jacket.

Copies to analytical departments.



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DATE RECEIVED: 08/07/91  
DATE REQUESTED: 08/09/91  
DATE REPORTED: 08/13/91


LABORATORY NUMBER: 104782

CLIENT: AQUA RESOURCES

PROJECT ID: 90239.3

LOCATION: RANSOME

RESULTS: SEE ATTACHED

  
-----  
QA/QC Approval

  
-----  
Final Approval

Client: Aqua Resources

Laboratory Login Number: 104782

 Project Name: Ransome  
 Project Number: 90239.3

Report Date: 13 August 91

ANALYSIS: Hydrocarbon Oil &amp; Grease (Gravimetric)      METHOD: SMWW 17:5520EF

Lab ID	Sample ID	Matrix	Sampled	Received	Analyzed	Result	Units	RL	Analyst	QC Batch
104782-001	L8-15	Soil	07-AUG-91	07-AUG-91	12-AUG-91	ND	mg/Kg	50	TR	2313
104782-002	JN-62	Soil	07-AUG-91	07-AUG-91	12-AUG-91	ND	mg/Kg	50	TR	2313

ND = Not Detected at or above Reporting Limit (RL).



## Q C B a t c h R e p o r t

 Client: Aqua Resources  
 Project Name: Ransome  
 Project Number: 90239.3

 Laboratory Login Number: 104782  
 Report Date: 13 August 91

ANALYSIS: Hydrocarbon Oil &amp; Grease (Gravimetric)

QC Batch Number: 2313

## Blank Results

Sample ID	Result	MDL	Units	Method	Date Analyzed
BLANK	ND	50	mg/Kg	SMWW 17:5520EF	12-AUG-91

## Spike/Duplicate Results

Sample ID	Recovery	Method	Date Analyzed
BS	87%	SMWW 17:5520EF	12-AUG-91
BSD	85%	SMWW 17:5520EF	12-AUG-91

		Control Limits
Average Spike Recovery	86%	80% - 120%
Relative Percent Difference	2.4%	< 20%



LABORATORY NUMBER: 104782  
CLIENT: AQUA RESOURCES  
PROJECT ID: 90239.3  
LOCATION: RANSOME

DATE RECEIVED: 08/07/91  
DATE REQUESTED: 08/09/91  
DATE ANALYZED: 08/10/91  
DATE REPORTED: 08/13/91

Total Volatile Hydrocarbons with BTXE in Soils and Wastes  
TVH by California DOHS Method/LUFT Manual October 1989  
BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (mg/Kg)	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)
104782-1	LB-15	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104782-2	JN-62	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)

ND = Not detected at or above reporting limit; Reporting limit indicated in parentheses.

QA/QC SUMMARY

RPD, %	1
RECOVERY, %	96

VERBAL ADDITIONS / CANCELLATIONS TO ANALYSIS REQUEST SHEET

CLIENT: Aqua Resources DATE: 7/9/91  
 REQUESTED BY: Aaron TIME: 2:45 am pm  
 RECORDED BY: Joanne

Current Lab ID (Previous Lab ID)	Client ID	Circle matrix	Specify add or cancel	Analysis	Due date
104782-1 (104745-001)	LB-15	soil water other	AAA	TVH-G BTXE O+G	8/13
104782-2 (104745-003)	<del>LB-15</del> JN-62	soil water other	AAA	TVH/BTXE O+G	8/13
( )		soil water other			
( )		soil water other			
( )		soil water other			
( )		soil water other			
( )		soil water other			
( )		soil water other			

Original in job jacket.

Copies to analytical departments.



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DATE RECEIVED: 08/07/91  
DATE REPORTED: 08/15/91

LABORATORY NUMBER: 104748

CLIENT: AQUA RESOURCES, INC.

PROJECT ID: 90239.3

LOCATION: RANSOME

RESULTS: SEE ATTACHED

  
-----  
QA/QC Approval

  
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Final Approval

Berkeley

Wilmington

Los Angeles

Client: Aqua Resources

Laboratory Login Number: 104748

 Project Name: Ransome  
 Project Number: 90239.3

Report Date: 15 August 91

ANALYSIS: Hydrocarbon Oil &amp; Grease (Gravimetric)      METHOD: SMWW 17:5520EF

Lab ID	Sample ID	Matrix	Sampled	Received	Analyzed	Result	Units	RL	Analyst	QC Batch
104748-001	CAT-IMPORT-1	Soil	07-AUG-91	07-AUG-91	09-AUG-91	10000	mg/Kg	250	TR	2294

ND = Not Detected at or above Reporting Limit (RL).

## Q C Batch Report

 Client: Aqua Resources  
 Project Name: Ransome  
 Project Number: 90239.3

 Laboratory Login Number: 104748  
 Report Date: 15 August 91

ANALYSIS: Hydrocarbon Oil &amp; Grease (Gravimetric)

QC Batch Number: 2294

## Blank Results

Sample ID	Result	MDL	Units	Method	Date Analyzed
BLANK	ND	50	mg/Kg	SMWW 17:552OEF	09-AUG-91

## Spike/Duplicate Results

Sample ID	Recovery	Method	Date Analyzed
BS	81%	SMWW 17:552OEF	09-AUG-91
BSD	85%	SMWW 17:552OEF	09-AUG-91

Average Spike Recovery	83%	Control Limits	80% - 120%
Relative Percent Difference	4.6%		< 20%

LABORATORY NUMBER: 104748  
 CLIENT: AQUA RESOURCES, INC.  
 PROJECT ID: 90239.3  
 LOCATION: RANSOME

DATE RECEIVED: 08/07/91  
 DATE EXTRACTED: 08/08/91  
 DATE ANALYZED: 08/15/91  
 DATE REPORTED: 08/15/91

Extractable Petroleum Hydrocarbons in Soils & Wastes  
 California DOHS Method  
 LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (mg/Kg)	DIESEL RANGE (mg/Kg)	REPORTING LIMIT* (mg/Kg)
104748-1	CAT-IMPORT-1	ND	490	100

ND = Not Detected at or above reporting limit.

\*Reporting limit applies to all analytes.

QA/QC SUMMARY

RPD, %	5
RECOVERY, %	83

106748

AQUA RESOURCES, INC. SHIPMENT NO.: 40  
 CHAIN OF CUSTODY RECORD PAGE 1 OF 1  
 PROJECT NAME: RANSOME DATE 8/7/91  
 PROJECT NO.: 90239.3



Sample Number	Location	Type of Sample		Type of Container	Type of Preservation		Analysis Required
		Material	Method		Temp	Chemical	
CAT-IMPORT-1		SOIL	Drive	Bross Tube	4°C		TPHD, OEG

Total Number of Samples Shipped: 1 Sampler's Signature: [Signature]

Relinquished By: Signature <u>[Signature]</u> Printed Name <u>Aaron N. Stessman</u> Company <u>Aqua Resources</u> Reason <u>For Analysis</u>	Received By: Signature <u>[Signature]</u> Printed Name <u>Nancy J. Wilson</u> Company <u>CIT Lab</u>	Date <u>8/7/91</u> Time <u>2:55</u>
Relinquished By: Signature _____ Printed Name _____ Company _____ Reason _____	Received By: Signature _____ Printed Name _____ Company _____	Date <u>  /  /  </u> Time _____

REMARKS:  
5 Day Turnaround

Special Shipment / Handling / Storage Requirements:





Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710. Phone (415) 486-0900

DATE RECEIVED: 08/08/91

DATE REPORTED: 08/09/91

LABORATORY NUMBER: 104769

CLIENT: AQUA RESOURCES, INC.

AQUA RESOURCES, INC  
RECEIVED


AUG 13 1991

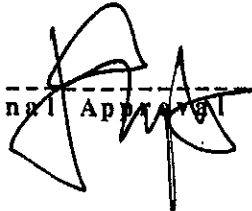
JOB NO. \_\_\_\_\_  
FILE \_\_\_\_\_

PROJECT ID: 90239.3

LOCATION: RANSOME

RESULTS: SEE ATTACHED

  
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QA/QC Approval

  
-----  
Final Approval

Berkeley

Wilmington

Los Angeles

LABORATORY NUMBER: 104769  
CLIENT: AQUA RESOURCES, INC.  
PROJECT ID: 90239.3  
LOCATION: RANSOME

DATE RECEIVED: 08/08/91  
DATE ANALYZED: 08/09/91  
DATE REPORTED: 08/09/91

Total Volatile Hydrocarbons with BTXE in Soils and Wastes  
TVH by California DOHS Method/LUFT Manual October 1989  
BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (mg/Kg)	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)
104769-1	LS-17	9.3	ND(5.0)	5.9	24	85
104769-2	LE-18	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)

ND = Not detected at or above reporting limit; Reporting limit indicated in parentheses.



LABORATORY NUMBER: 104769  
CLIENT: AQUA RESOURCES, INC.  
PROJECT ID: 90239.3  
LOCATION: RANSOME

DATE RECEIVED: 08/08/91  
DATE EXTRACTED: 08/09/91  
DATE ANALYZED: 08/09/91  
DATE REPORTED: 08/09/91

Extractable Petroleum Hydrocarbons in Soils & Wastes  
California DOHS Method  
LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (mg/Kg)	DIESEL RANGE (mg/Kg)	REPORTING LIMIT* (mg/Kg)
104769-1	LS-17	ND	750	10
104769-2	LE-18	ND	ND	1.0

ND = Not Detected at or above reporting limit.

\*Reporting limit applies to all analytes.

QA/QC SUMMARY

RPD, %	13
RECOVERY, %	100

AQUA RESOURCES, INC.

SHIPMENT NO.: 41



CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

PROJECT NAME: RANSOME

DATE: 8/8/91

PROJECT NO.: 90239.3

469

Sample Number	Location (Depth)	Type of Sample		Type of Container	Type of Preservation		Analysis Required
		Material	Method		Temp	Chemical	
BS-17	4'	Soil	Drive	Brass Tube	±4°C		TPHD, TVHG+B
EE-18	7'	"	"	"	"		"
REFILL-4	-	"	"	"	"		4
BEADJ-1	2'	"	Trowel	"	"		2, 3 on Composite
BEADJ-2	1'	"	"	"	"		
BEADJ-3	3'	"	"	"	"		
BEADJ-4	2'	"	"	"	"		
BEADJ-5	1'	"	"	"	"		2, 3 on Composite
BEADJ-6	3'	"	"	"	"		
BEADJ-7	2'	"	"	"	"		
BEADJ-8	7'	"	"	"	"		

EX\*

Total Number of Samples Shipped: 11

Sampler's Signature: *[Signature]*

Relinquished By:  
 Signature: *[Signature]*  
 Printed Name: Aaron N. Stessman  
 Company: Aqua Resources  
 Reason: For Analysis

Received By:  
 Signature: *[Signature]*  
 Printed Name: Lourinda Brauer  
 Company: CT - Berkeley

Date: 8/8/91  
 Time: 17:10

Relinquished By:  
 Signature: \_\_\_\_\_  
 Printed Name: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Reason: \_\_\_\_\_

Received By:  
 Signature: \_\_\_\_\_  
 Printed Name: \_\_\_\_\_  
 Company: \_\_\_\_\_

Date: / /  
 Time: ..

REMARKS:  
 1 = TVHG + BTEX  
 2 = TPHD  
 3 = O&G  
 4 = TVHG + BTEX, TPHD, O&G, CAM-17 Metals and 8240  
 \* = 24 hr turnaround  
 Others are 8 day turnaround.

Transportation / Handling / Storage Requirements:



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

DATE RECEIVED: 08/08/91  
DATE REQUESTED: 08/09/91  
DATE REPORTED: 08/16/91


LABORATORY NUMBER: 104794

CLIENT: AQUA RESOURCES, INC.

PROJECT ID: 90239.3

LOCATION: RANSOME

RESULTS: SEE ATTACHED

  
-----  
QA/QC Approval

  
-----  
Final Approval

Client: Aqua Resources

Laboratory Login Number: 104794

Project Name: Ransome  
Project Number: 90239.3

Report Date: 16 August 91

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric)      METHOD: SMWW 17:5520EF

Lab ID	Sample ID	Matrix	Sampled	Received	Analyzed	Result	Units	RL	Analyst	QC Batch
104794-001	LE-18	Soil	08-AUG-91	08-AUG-91	15-AUG-91	ND	mg/Kg	50	TR	2346

ND = Not Detected at or above Reporting Limit (RL).

## Q C B a t c h R e p o r t

 Client: Aqua Resources  
 Project Name: Ransome  
 Project Number: 90239.3

 Laboratory Login Number: 104794  
 Report Date: 16 August 91

ANALYSIS: Hydrocarbon Oil &amp; Grease (Gravimetric)

QC Batch Number: 2346

## Blank Results

Sample ID	Result	MDL	Units	Method	Date Analyzed
BLANK	ND	50	mg/Kg	SMWW 17:5520EF	15-AUG-91

## Spike/Duplicate Results

Sample ID	Recovery	Method	Date Analyzed
BS	85%	SMWW 17:5520EF	15-AUG-91
BSD	86%	SMWW 17:5520EF	15-AUG-91

		Control Limits
Average Spike Recovery	86%	80% - 120%
Relative Percent Difference	1.6%	< 20%



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DATE RECEIVED: 08/12/91  
DATE REPORTED: 08/14-15/91

LABORATORY NUMBER: 104804

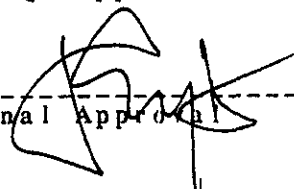
CLIENT: AQUA RESOURCES, INC.

PROJECT ID: 90239.3

LOCATION: RANSOME

RESULTS: SEE ATTACHED

  
-----  
QA/QC Approval

  
-----  
Final Approval



LABORATORY NUMBER: 104804  
 CLIENT: AQUA RESOURCES  
 PROJECT ID: 90239.3  
 LOCATION: RANSOME

DATE RECEIVED: 08/12/91  
 DATE ANALYZED: 08/13/91  
 DATE REPORTED: 08/14/91

Total Volatile Hydrocarbons with BTXE in Soils and Wastes  
 TVH by California DOHS Method/LUFT Manual October 1989  
 BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (mg/Kg)	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)
104804-1	LS-19	16	ND(5.0)	ND(5.0)	28	150
104804-3	LW-21	46	150	ND(80)	ND(80)	160
104804-5	LN-23	1.1	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)

ND = Not detected at or above reporting limit; Reporting limit indicated in parentheses.

QA/QC SUMMARY

RPD, %	5
RECOVERY, %	105

LABORATORY NUMBER: 104804  
 CLIENT: AQUA RESOURCES  
 PROJECT ID: 90239.3  
 LOCATION: RANSOME

DATE RECEIVED: 08/12/91  
 DATE EXTRACTED: 08/13/91  
 DATE ANALYZED: 08/14/91  
 DATE REPORTED: 08/14/91

Extractable Petroleum Hydrocarbons in Soils & Wastes  
 California DOHS Method  
 LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (mg /Kg)	DIESEL RANGE (mg /Kg)	REPORTING LIMIT* (mg /Kg)
104804-1	LS-19	ND	810	10
104804-3	LW-21	ND	3,200	10
104804-4	LS-22	ND	1,000	10
104804-5	LN-23	ND	230	1.0

ND = Not Detected at or above reporting limit.

\*Reporting limit applies to all analytes.

QA/QC SUMMARY

RPD, %	<1
RECOVERY, %	81

104804

AQUA RESOURCES, INC.

SHIPMENT NO.: 42



CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

DATE 8/12/91

PROJECT NAME: RANSOME

PROJECT NO.: 90239.3

Sample Number	Location (Depth)	Type of Sample		Type of Container	Type of Preservation		Analysis Required
		Material	Method		Temp	Chemical	
LS-19	5 1/2	Soil	Drive	Brass Tube	± 4°C		1, 2 *
LB-20	10 1/2	"	"	"	"		2 *
LW-21	6	"	"	"	"		1, 2 *
LS-22	3 1/2	"	"	"	"		2 *
LN-23	6 1/2	"	"	"	"		1, 2 *
PC-FILL-5	-	"	"	"	"		4

Total Number of Samples Shipped: 6

Sampler's Signature: *[Signature]*

Relinquished By:  
 Signature: *[Signature]*  
 Printed Name: Aaron N. Stessman  
 Company: Aqua Resources  
 Reason: For Analysis

Received By:  
 Signature: *[Signature]*  
 Printed Name: Lourinda Browner  
 Company: CT-Robert

Date: 8/12/91  
 Time: 16:35

Relinquished By:  
 Signature: \_\_\_\_\_  
 Printed Name: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Reason: \_\_\_\_\_

Received By:  
 Signature: \_\_\_\_\_  
 Printed Name: \_\_\_\_\_  
 Company: \_\_\_\_\_

Date: / /  
 Time: \_\_\_\_\_

REMARKS:

- ① = TVH6 + BTEX
- ② = TPHD.
- ③ = O&G
- \* = 24 hr rush

④ = TVH6 + BTEX, TPHD, O&G, CAM 17 metals, and EPA 8240

Others are normal 5 day turnaround.

Special Shipment / Handling / Storage Requirements:



LABORATORY NUMBER: 104804  
CLIENT: AQUA RESOURCES, INC.  
PROJECT ID: 90239.3  
LOCATION: RANSOME

DATE RECEIVED: 08/12/91  
DATE EXTRACTED: 08/14/91  
DATE ANALYZED: 08/15/91  
DATE REPORTED: 08/15/91

Extractable Petroleum Hydrocarbons in Soils & Wastes  
California DOHS Method  
LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (mg/Kg)	DIESEL RANGE (mg/Kg)	REPORTING LIMIT* (mg/Kg)
104804-2	LB-20	ND	ND	1.0

ND = Not Detected at or above reporting limit.

\*Reporting limit applies to all analytes.

QA/QC SUMMARY

RECOVERY, %

81

104804

AQUA RESOURCES, INC.

SHIPMENT NO.: 42



CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

DATE 8/12/91

PROJECT NAME: RANSOME

PROJECT NO.: 90239.3

Sample Number	Location (Depth)	Type of Sample		Type of Container	Type of Preservation		Analysis Required
		Material	Method		Temp	Chemical	
LS-19	5 1/2	Soil	Drive	Brass Tube	± 1°C		1, 2 *
LB-20	10 1/2	"	"	"	"		2 *
LW-21	6	"	"	"	"		1, 2 *
LS-22	3 1/2	"	"	"	"		2 *
LN-23	6 1/2	"	"	"	"		1, 2 *
PC-FULL-5	-	"	"	"	"		4

Total Number of Samples Shipped: 6      Sampler's Signature: [Signature]

Relinquished By: Signature: <u>[Signature]</u> Printed Name: <u>Aaron R. Stessman</u> Company: <u>Aqua Resources</u> Reason: <u>For Analysis</u>	Received By: Signature: <u>[Signature]</u> Printed Name: <u>Louinda Browner</u> Company: <u>CT-Rob...</u>	Date: <u>8/12/91</u> Time: <u>16:35</u>
Relinquished By: Signature: _____ Printed Name: _____ Company: _____ Reason: _____	Received By: Signature: _____ Printed Name: _____ Company: _____	Date: <u>1/1</u> Time: _____

REMARKS:

① = TVH6+BTEX      ② = TPHD, O&G, CAM 17 Metals, and EPA 8240

③ = O&G      Others are normal 5 day turnaround.

\* = 24 hr rush

Special Shipment / Handling / Storage Requirements:



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DATE RECEIVED: 08/12-16/91

DATE REQUESTED: 08/21/91

DATE REPORTED: 08/26/91

LABORATORY NUMBER: 104911

CLIENT: AQUA RESOURCES

PROJECT ID: 90239.3

LOCATION: RANSOME

RESULTS: SEE ATTACHED

  
-----  
QA/QC Approval

  
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Final Approval

Berkeley

Wilmington

Los Angeles

Client: Aqua Resources

Laboratory Login Number: 104911

 Project Name: Ransome  
 Project Number: 90239.3

Report Date: 26 August 91

ANALYSIS: Hydrocarbon Oil &amp; Grease (Gravimetric)

METHOD: SMWW 17:5520EF

Lab ID	Sample ID	Matrix	Sampled	Received	Analyzed	Result	Units	RL	Analyst	QC Batch
104911-001	LB-20	Soil	12-AUG-91	12-AUG-91	22-AUG-91	ND	mg/Kg	50	TR	2409
104911-002	LW-28	Soil	15-AUG-91	15-AUG-91	22-AUG-91	ND	mg/Kg	50	TR	2409
104911-003	LS-29	Soil	16-AUG-91	16-AUG-91	22-AUG-91	ND	mg/Kg	50	TR	2409
104911-004	LS-30	Soil	16-AUG-91	16-AUG-91	22-AUG-91	ND	mg/Kg	50	TR	2409
104911-005	LS-31	Soil	16-AUG-91	16-AUG-91	22-AUG-91	ND	mg/Kg	50	TR	2409

ND = Not Detected at or above Reporting Limit (RL).



Q C B a t c h R e p o r t

Client: Aqua Resources  
Project Name: Ransome  
Project Number: 90239.3

Laboratory Login Number: 104911  
Report Date: 26 August 91

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric)

QC Batch Number: 2409

Blank Results

Sample ID	Result	MDL	Units	Method	Date Analyzed
BLANK	ND	50	mg/Kg	SMWW 17:5520EF	22-AUG-91

Spike/Duplicate Results

Sample ID	Recovery	Method	Date Analyzed
BS	86%	SMWW 17:5520EF	22-AUG-91
BSD	86%	SMWW 17:5520EF	22-AUG-91

		Control Limits
Average Spike Recovery	86%	80% - 120%
Relative Percent Difference	.3%	< 20%



LABORATORY NUMBER: 104911  
 CLIENT: AQUA RESOURCES  
 PROJECT ID: 90239.3  
 LOCATION: RANSOME

 DATE RECEIVED: 08/12-16/91  
 DATE REQUESTED: 08/21/91  
 DATE ANALYZED: 08/23/91  
 DATE REPORTED: 08/26/91

 Total Volatile Hydrocarbons with BTXE in Soils and Wastes  
 TVH by California DOHS Method/LUFT Manual October 1989  
 BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (mg/Kg)	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)
104911-1	LB-20	1.4	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104911-3	LS-29	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104911-4	LS-30	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104911-5	LS-31	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)

ND = Not detected at or above reporting limit; Reporting limit indicated in parentheses.

## QA/QC SUMMARY

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=====
RPD, %                                     <1
RECOVERY, %                               97
=====
  
```

VERBAL ADDITIONS / CANCELLATIONS TO ANALYSIS REQUEST SHEET

CLIENT: ARI DATE: 8/21/91  
 REQUESTED BY: Aaron TIME: 11:45 (am) pm  
 RECORDED BY: Alison

Current Lab ID (Previous Lab ID)	Client ID	Circle matrix	Specify add or cancel	Analysis	Due date
104911-1 (104804-002)	LB-20	<input checked="" type="radio"/> soil water other	ADD	TVA/BTXE D+E	8/27
104911-2 (104847-002)	LW-28	<input checked="" type="radio"/> soil water other		O+E	
104911-3 (104865-001)	LS-29	<input checked="" type="radio"/> soil water other		TVA/BTXE O+E	
(104865-002)	LS-30	<input checked="" type="radio"/> soil water other			
(104865-003)	LS-31	<input checked="" type="radio"/> soil water other	✓	✓	✓
( )		soil water other			
( )		soil water other			
( )		soil water other			

Original in job jacket.

Copies to analytical departments.



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DATE RECEIVED: 08/13/91

DATE REPORTED: 08/20/91


LABORATORY NUMBER: 104824

CLIENT: AQUA RESOURCES, INC.

PROJECT ID: 90239.3

LOCATION: RANSOME

RESULTS: SEE ATTACHED

  
-----  
QA/QC Approval

  
-----  
Final Approval

Berkeley

Wilmington

Los Angeles



LABORATORY NUMBER: 104824  
CLIENT: AQUA RESOURCES, INC.  
PROJECT ID: 90239.3  
LOCATION: RANSOME

DATE RECEIVED: 08/13/91  
DATE ANALYZED: 08/16/91  
DATE REPORTED: 08/20/91

Total Volatile Hydrocarbons with BTXE in Soils and Wastes  
TVH by California DOHS Method/LUFT Manual October 1989  
BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (mg/Kg)	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)
104824-1	LB-24	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104824-2	LW-26	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)

ND = Not detected at or above reporting limit; Reporting limit indicated in parentheses.

QA/QC SUMMARY

RPD, %	3
RECOVERY, %	94

LABORATORY NUMBER: 104824  
 CLIENT: AQUA RESOURCES, INC.  
 PROJECT ID: 90239.3  
 LOCATION: RANSOME

DATE RECEIVED: 08/13/91  
 DATE EXTRACTED: 08/15/91  
 DATE ANALYZED: 08/17,20/91  
 DATE REPORTED: 08/20/91

Extractable Petroleum Hydrocarbons in Soils & Wastes  
 California DOHS Method  
 LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (mg / Kg)	DIESEL RANGE (mg / Kg)	REPORTING LIMIT* (mg / Kg)
104824-1	LB-24	ND	1.2	1.0
104824-2	LW-26	ND	ND	1.0

ND = Not Detected at or above reporting limit.

\*Reporting limit applies to all analytes.

QA/QC SUMMARY

RPD, %	<1
RECOVERY, %	81



Client: Aqua Resources

Laboratory Login Number: 104824

Project Name: Ransome  
Project Number: 90239.3

Report Date: 20 August 91

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric) METHOD: SMWW 17:5520EF

Lab ID	Sample ID	Matrix	Sampled	Received	Analyzed	Result	Units	RL	Analyst	QC Batch
104824-001	LB-24	Soil	13-AUG-91	13-AUG-91	15-AUG-91	ND	mg/Kg	50	TR	2346
104824-002	LW-26	Soil	13-AUG-91	13-AUG-91	15-AUG-91	ND	mg/Kg	50	TR	2346

ND = Not Detected at or above Reporting Limit (RL).

## Q C B a t c h R e p o r t

 Client: Aqua Resources  
 Project Name: Ransome  
 Project Number: 90239.3

 Laboratory Login Number: 104824  
 Report Date: 20 August 91

ANALYSIS: Hydrocarbon Oil &amp; Grease (Gravimetric)

QC Batch Number: 2346

## Blank Results

Sample ID	Result	MDL	Units	Method	Date Analyzed
BLANK	ND	50	mg/Kg	SMWW 17:552OEF	15-AUG-91

## Spike/Duplicate Results

Sample ID	Recovery	Method	Date Analyzed
BS	85%	SMWW 17:552OEF	15-AUG-91
BSD	86%	SMWW 17:552OEF	15-AUG-91

		Control Limits
Average Spike Recovery	86%	80% - 120%
Relative Percent Difference	1.6%	< 20%

104824

AQUA RESOURCES, INC.

SHIPMENT NO.: 43



CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

DATE 8/13/91

PROJECT NAME: RANSOME

PROJECT NO.: 90239.3

Sample Number	Location (Depth)	Type of Sample		Type of Container	Type of Preservation		Analysis Required
		Material	Method		Temp	Chemical	
LB-24	12 1/2'	Soil	Drive	Brass Tube	4°C		1, 2, 3
WE-25	9'	"	"	"	"		1 *
LW-26	8'	"	"	"	"		1, 2, 3
AB-DZ-44	18"	"	"	"	"	}	Composite + Run
AB-DZ-45	19"	"	"	"	"		
AB-DZ-46	17"	"	"	"	"		
AB-DZ-47	16"	"	"	"	"		
AB-DZ-48	15"	"	"	"	"	}	Composite + Run
AB-DZ-49	16"	"	"	"	"		
AB-DZ-50	17"	"	"	"	"		
AB-DZ-51	15"	"	"	"	"		

Total Number of Samples Shipped: 15

Sampler's Signature: *[Signature]*

Relinquished By:  
 Signature: *[Signature]*  
 Printed Name: Aaron S. Stessman  
 Company: Aqua Resources  
 Reason: For Analysis

Received By:  
 Signature: *[Signature]*  
 Printed Name: Lourinda Brainer  
 Company: CT B...

Date: 8/13/91  
 Time: 16:00

Relinquished By:  
 Signature: \_\_\_\_\_  
 Printed Name: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Reason: \_\_\_\_\_

Received By:  
 Signature: \_\_\_\_\_  
 Printed Name: \_\_\_\_\_  
 Company: \_\_\_\_\_

Date: / /  
 Time: .

REMARKS:

- 1 = TVHG, BTEX
- 2 = TPHD
- 3 = O&G
- \* = 48 hr RUSH

Special Shipment / Handling / Storage Requirements:





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DATE RECEIVED: 08/13-15/91  
DATE REQUESTED: 08/20/91  
DATE REPORTED: 08/27/91

LABORATORY NUMBER: 104888

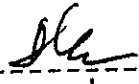
CLIENT: AQUA RESOURCES, INC.

Q. 104888  
AUG 23 1991  
ISSUED: 90239.3  
FILE

PROJECT ID: 90239.3

LOCATION: RANSOME

RESULTS: SEE ATTACHED

  
-----  
QA/QC Approval

  
-----  
Final Approval



Client: Aqua Resources

Laboratory Login Number: 104888

Project Name: Ransome  
Project Number: 90239.3

Report Date: 27 August 91

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric) METHOD: SMWW 17:5520EF

Lab ID	Sample ID:	Matrix	Sampled	Received	Analyzed	Result	Units	RL	Analyst	QC Batch
104888-001	LE-25	Soil	13-AUG-91	13-AUG-91	21-AUG-91	ND	mg/Kg	50	TR	2395
104888-002	JS-66	Soil	14-AUG-91	14-AUG-91	21-AUG-91	ND	mg/Kg	50	TR	2395
104888-003	LN-27	Soil	15-AUG-91	15-AUG-91	21-AUG-91	ND	mg/Kg	50	TR	2395

ND = Not Detected at or above Reporting Limit (RL).

## Q C B a t c h R e p o r t

 Client: Aqua Resources  
 Project Name: Ransome  
 Project Number: 90239.3

 Laboratory Login Number: 104888  
 Report Date: 27 August 91

ANALYSIS: Hydrocarbon Oil &amp; Grease (Gravimetric)

QC Batch Number: 2395

## Blank Results

Sample ID	Result	MDL	Units	Method	Date Analyzed
BLANK	ND	50	mg/Kg	SMWW 17:552OEF	21-AUG-91

## Spike/Duplicate Results

Sample ID	Recovery	Method	Date Analyzed
BS	83%	SMWW 17:552OEF	21-AUG-91
BSD	86%	SMWW 17:552OEF	21-AUG-91

		Control Limits
Average Spike Recovery	85%	80% - 120%
Relative Percent Difference	3.4%	< 20%

LABORATORY NUMBER: 104888  
 CLIENT: AQUA RESOURCES, INC.  
 PROJECT ID: 90239.3  
 LOCATION: RANSOME

DATE RECEIVED: 08/13-15/91  
 DATE REQUESTED: 08/20/91  
 DATE ANALYZED: 08/22/91  
 DATE REPORTED: 08/27/91

Total Volatile Hydrocarbons with BTXE in Soils and Wastes  
 TVH by California DOHS Method/LUFT Manual October 1989  
 BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (mg/Kg)	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)
104888-3	LN-27	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)

ND = Not detected at or above reporting limit; Reporting limit indicated in parentheses.

QA/QC SUMMARY

RPD, %	2
RECOVERY, %	98

LABORATORY NUMBER: 104888  
 CLIENT: AQUA RESOURCES, INC.  
 PROJECT ID: 90239.3  
 LOCATION: RANSOME

DATE RECEIVED: 08/13-15/91  
 DATE REQUESTED: 08/20/91  
 DATE EXTRACTED: 08/22/91  
 DATE ANALYZED: 08/24,25/91  
 DATE REPORTED: 08/27/91

Extractable Petroleum Hydrocarbons in Soils & Wastes  
 California DOHS Method  
 LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (mg/Kg)	DIESEL RANGE (mg/Kg)	REPORTING LIMIT* (mg/Kg)
104888-1	LE-25	ND	ND	1.0
104888-2	JS-66	ND	ND	1.0

ND = Not Detected at or above reporting limit.

\*Reporting limit applies to all analytes.

QA/QC SUMMARY

RPD, %	10
RECOVERY, %	85

VERBAL ADDITIONS / CANCELLATIONS TO ANALYSIS REQUEST SHEET

CLIENT: AQUA Resources DATE: \_\_\_\_\_  
 REQUESTED BY: Aaron TIME: 8:20 am pm  
 RECORDED BY: Alison

Current Lab ID (Previous Lab ID)	Client ID	Circle matrix	Specify <u>add</u> or cancel	Analysis	Due date
104888-1 (104822-1)	LE-25	soil water other	ADD	TEH 5520EF	
104888-2 (104838-2)	JS-66	soil water other	ADD	TEH 5520EF	
104888-3 (104847-1)	LN-27	soil water other	ADD	TVH/BTXE 5520EF	
( )		soil water other			
( )		soil water other			
( )		soil water other			
( )		soil water other			
( )		soil water other			

Original in job jacket.

Copies to analytical departments.



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2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

DATE RECEIVED: 08/14/91

DATE REPORTED: 08/16/91


LABORATORY NUMBER: 104838

CLIENT: AQUA RESOURCES, INC.

PROJECT ID: 90239.3

LOCATION: RANSOME

RESULTS: SEE ATTACHED

  
-----  
QA/QC Approval

  
-----  
Final Approval

LABORATORY NUMBER: 104838  
 CLIENT: AQUA RESOURCES, INC.  
 PROJECT ID: 90239.3  
 LOCATION: RANSOME

DATE RECEIVED: 08/14/91  
 DATE ANALYZED: 08/16/91  
 DATE REPORTED: 08/16/91

Total Volatile Hydrocarbons with BTXE in Soils and Wastes  
 TVH by California DOHS Method/LUFT Manual October 1989  
 BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (mg/Kg)	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)
104838-1	JS-64	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104838-2	JS-66	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104838-3	JS-68	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)

ND = Not detected at or above reporting limit; Reporting limit  
 indicated in parentheses.

QA/QC SUMMARY

RPD, %	3
RECOVERY, %	94



AQUA RESOURCES, INC.

SHIPMENT NO.: 44

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

DATE 8/14/91



PROJECT NAME: RANSOME

PROJECT NO.: 90239.3

104538-und

Sample Number	Location (Depth)	Type of Sample		Type of Container	Type of Preservation		Analysis Required
		Material	Method		Temp	Chemical	
JS-63	8'	Soil	Drive	Brass Tube	4°C		1, 2, 3 1*
JS-64 1	7 1/2'	"	"	"	"		1
JB-65	13'	"	"	"	"		1*
JS-66 2	8'	"	"	"	"		1, 2, 3
JB-67	13'	"	"	"	"		1*
JS-68 3	9'	"	"	"	"		

Total Number of Samples Shipped: 6      Sampler's Signature: Jan M. Stessman

Relinquished By: Signature: <u>Jan M. Stessman</u> Printed Name: <u>Aaron B. Stessman</u> Company: <u>Aqua Resources</u> Reason: <u>For Analysis</u>	Received By: Signature: <u>Nancy Wilson</u> Printed Name: <u>Nancy Wilson</u> Company: <u>CityLab</u>	Date: <u>8/14/91</u> Time: <u>4:52</u>
Relinquished By: Signature: _____ Printed Name: _____ Company: _____ Reason: _____	Received By: Signature: _____ Printed Name: _____ Company: _____	Date: <u>1/1</u> Time: _____

REMARKS:  
 ① = TVH + BTEX  
 ② = TEHD  
 ③ = OFG  
 \* = 48 hr rush others 5 day

Special Shipment / Handling / Storage Requirements:



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

DATE RECEIVED: 08/14/91

DATE REPORTED: 08/20/91


LABORATORY NUMBER: 104840

CLIENT: AQUA RESOURCES, INC.

PROJECT ID: 90239.3

LOCATION: RANSOME

RESULTS: SEE ATTACHED

  
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QA/QC Approval

  
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Final Approval

Berkeley

Wilmington

Los Angeles

Client: Aqua Resources

Laboratory Login Number: 104840

 Project Name: Ransome  
 Project Number: 90239.3

Report Date: 20 August 91

ANALYSIS: Hydrocarbon Oil &amp; Grease (Gravimetric)      METHOD: SMWW 17:5520EF

Lab ID	Sample ID:	Matrix	Sampled	Received	Analyzed	Result	Units	RL	Analyst	QC Batch
104840-001	JS-63	Soil	14-AUG-91	14-AUG-91	16-AUG-91	ND	mg/Kg	50	TR	2357
104840-003	JB-67	Soil	14-AUG-91	14-AUG-91	16-AUG-91	ND	mg/Kg	50	TR	2357

ND = Not Detected at or above Reporting Limit (RL).



Q C Batch Report

Client: Aqua Resources  
Project Name: Ransome  
Project Number: 90239.3

Laboratory Login Number: 104840  
Report Date: 20 August 91

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric)

QC Batch Number: 2357

Blank Results

Sample ID	Result	MDL	Units	Method	Date Analyzed
BLANK	ND	50	mg/Kg	SMWW 17:552OEF	16-AUG-91

Spike/Duplicate Results

Sample ID	Recovery	Method	Date Analyzed
BS	81%	SMWW 17:552OEF	16-AUG-91
BSD	83%	SMWW 17:552OEF	16-AUG-91

		Control Limits
Average Spike Recovery	82%	80% - 120%
Relative Percent Difference	2.0%	< 20%



LABORATORY NUMBER: 104840  
CLIENT: AQUA RESOURCES, INC.  
PROJECT ID: 90239.3  
LOCATION: RANSOME

DATE RECEIVED: 08/14/91  
DATE ANALYZED: 08/17,19/91  
DATE REPORTED: 08/20/91

Total Volatile Hydrocarbons with BTXE in Soils and Wastes  
TVH by California DOHS Method/LUFT Manual October 1989  
BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (mg/Kg)	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)
104840-1	JS-63	1.3	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104840-2	JB-65	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104840-3	JB-67	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)

ND = Not detected at or above reporting limit; Reporting limit indicated in parentheses.

QA/QC SUMMARY

RPD, %	2
RECOVERY, %	95



LABORATORY NUMBER: 104840  
CLIENT: AQUA RESOURCES, INC.  
PROJECT ID: 90239.3  
LOCATION: RANSOME

DATE RECEIVED: 08/14/91  
DATE EXTRACTED: 08/15/91  
DATE ANALYZED: 08/17/91  
DATE REPORTED: 08/20/91

Extractable Petroleum Hydrocarbons in Soils & Wastes  
California DOHS Method  
LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (mg/Kg)	DIESEL RANGE (mg/Kg)	REPORTING LIMIT* (mg/Kg)
104840-1	JS-63	ND	1.1	1.0
104840-3	JB-67	ND	ND	1.0

ND = Not Detected at or above reporting limit.

\*Reporting limit applies to all analytes.

QA/QC SUMMARY

RPD, %	<1
RECOVERY, %	81

AQUA RESOURCES, INC.

SHIPMENT NO.: 14



CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

DATE 8/14/91

PROJECT NAME: RANSOME

PROJECT NO.: 90239.3

Sample Number	Location (DEPTH)	Type of Sample		Type of Container	Type of Preservation		Analysis Required
		Material	Method		Temp	Chemical	
JS-63 1	8'	Soil	Drive	Brass Tube	5°C		1, 2, 3 1*
JS-64 1	7 1/2'	"	"	"	"		1
JB-65 2	13'	"	"	"	"		1*
JS-66 2	8'	"	"	"	"		1, 2, 3
JB-67 3	13'	"	"	"	"		1*
JS-68 3	9'	"	"	"	"		

Total Number of Samples Shipped: 6 Sampler's Signature: Jan M. Stegman

Relinquished By: Signature: <u>Jan M. Stegman</u> Printed Name: <u>Aaron N. Stegman</u> Company: <u>Aqua Resources</u> Reason: <u>For Analysis</u>	Received By: Signature: <u>Nancy Wilson</u> Printed Name: <u>Nancy Wilson</u> Company: <u>COTAB</u>	Date: <u>8/14/91</u> Time: <u>1:50</u>
Relinquished By: Signature: _____ Printed Name: _____ Company: _____ Reason: _____	Received By: Signature: _____ Printed Name: _____ Company: _____	Date: _____ Time: _____

REMARKS:

① = TVH + BTEX  
 ② = TEAD  
 ③ = OFG  
 \* = 48hr rush others 5 day

Special Equipment / Handling / Storage Requirements:



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878  
2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

DATE RECEIVED: 08/15/91  
DATE REPORTED: 08/16/91

LABORATORY NUMBER: 104847

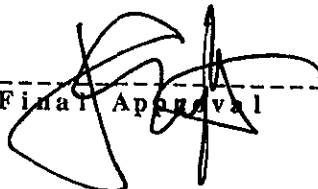
CLIENT: AQUA RESOURCES, INC.

PROJECT ID: 90239.3

LOCATION: RANSOME

RESULTS: SEE ATTACHED

  
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QA/QC Approval

  
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Final Approval





LABORATORY NUMBER: 104847  
CLIENT: AQUA RESOURCES, INC.  
PROJECT ID: 90239.3  
LOCATION: RANSOME

DATE RECEIVED: 08/15/91  
DATE ANALYZED: 08/16/91  
DATE REPORTED: 08/16/91

Total Volatile Hydrocarbons with BTXE in Soils and Wastes  
TVH by California DOHS Method/LUFT Manual October 1989  
BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (mg/Kg)	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)
104847-2	LW-28	2.1	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)

ND = Not detected at or above reporting limit; Reporting limit indicated in parentheses.

QA/QC SUMMARY

RPD, %	3
RECOVERY, %	94

LABORATORY NUMBER: 104847  
 CLIENT: AQUA RESOURCES, INC.  
 PROJECT ID: 90239.3  
 LOCATION: RANSOME

DATE RECEIVED: 08/15/91  
 DATE EXTRACTED: 08/15/91  
 DATE ANALYZED: 08/16/91  
 DATE REPORTED: 08/16/91

Extractable Petroleum Hydrocarbons in Soils & Wastes  
 California DOHS Method  
 LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (mg/Kg)	DIESEL RANGE (mg/Kg)	REPORTING LIMIT* (mg/Kg)
104847-1	LN-27	ND	ND	1.0
104847-2	LW-28	ND	ND	1.0

ND = Not Detected at or above reporting limit.

\*Reporting limit applies to all analytes.

QA/QC SUMMARY

RPD, %	26
RECOVERY, %	83

104878

# AQUA RESOURCES, INC.

SHIPMENT NO.: 45



## CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

DATE 8/15/91

PROJECT NAME: RANSOME

PROJECT NO.: 90239.3

Sample Number	Location (Depth)	Type of Sample		Type of Container	Type of Preservation		Analysis Required
		Material	Method		Temp	Chemical	
LN-27	6'	Soil	Drive	Brass Tube	14°C		2*
LW-28	4'	"	"	"	"		2*
PC-FILL-6	-	"	"	"	"		2, 4

Total Number of Samples Shipped: 3

Sampler's Signature: [Signature]

Relinquished By:  
 Signature: [Signature]  
 Printed Name: Aaron D. Stessman  
 Company: Aqua Resources  
 Reason: For Analysis

Received By:  
 Signature: [Signature]  
 Printed Name: Mark Wilson  
 Company: CST

Date: 8/15/91  
 Time: 4:00

Relinquished By:  
 Signature: \_\_\_\_\_  
 Printed Name: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Reason: \_\_\_\_\_

Received By:  
 Signature: \_\_\_\_\_  
 Printed Name: \_\_\_\_\_  
 Company: \_\_\_\_\_

Date: / /  
 Time: \_\_\_\_\_

### REMARKS:

- 1 = ~~TVI~~ TVI + BTEX
- 2 = ~~TEHD~~ TEHD
- 3 = O&G
- \* = 24 hr RDSH

4 = EPA 8240

Others 5 day turnaround - 104847  
DUST

Special Handling / Storage Requirements:



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

DATE RECEIVED: 08/16/91

DATE REPORTED: 08/20/91


LABORATORY NUMBER: 104865

CLIENT: AQUA RESOURCES, INC.

PROJECT ID: 90239.3

LOCATION: RANSOME

RESULTS: SEE ATTACHED

  
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QA/QC Approval

  
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Final Approval

Berkeley

Wilmington

Los Angeles

LABORATORY NUMBER: 104865  
 CLIENT: AQUA RESOURCES, INC.  
 PROJECT ID: 90239.3  
 LOCATION: RANSOME

DATE RECEIVED: 08/16/91  
 DATE ANALYZED: 08/20/91  
 DATE REPORTED: 08/20/91

Total Volatile Hydrocarbons as Gasoline in Soils & Wastes  
 California DOHS Method  
 LUFT Manual October 1989

LAB ID	CLIENT ID	TVH AS GASOLINE (mg/Kg)	REPORTING LIMIT (mg/Kg)
104865-4	LW-32	20	2.0

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

RPD, %	2
RECOVERY, %	93

LABORATORY NUMBER: 104865  
 CLIENT: AQUA RESOURCES, INC.  
 PROJECT ID: 90239.3  
 LOCATION: RANSOME

DATE RECEIVED: 08/16/91  
 DATE EXTRACTED: 08/19/91  
 DATE ANALYZED: 08/20/91  
 DATE REPORTED: 08/20/91

Extractable Petroleum Hydrocarbons in Soils & Wastes  
 California DOHS Method  
 LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (mg/Kg)	DIESEL RANGE (mg/Kg)	REPORTING LIMIT* (mg/Kg)
104865-1	LS-29	ND	2.3	1.0
104865-2	LS-30	ND	1.9	1.0
104865-3	LS-31	ND	2.6	1.0
104865-4	LW-32	ND	300	1.0

ND = Not Detected at or above reporting limit.

\*Reporting limit applies to all analytes.

QA/QC SUMMARY

RPD, %	<1
RECOVERY, %	81

# 104865

## AQUA RESOURCES, INC.



### CHAIN OF CUSTODY RECORD

SHIPMENT NO.: 46

PAGE 1 OF       

DATE 8/16/91

PROJECT NAME: RANSOME

PROJECT NO.: 90239.3

Sample Number	Location	Type of Sample		Type of Container	Type of Preservation		Analysis Required
		Material	Method		Temp	Chemical	
LS-29	4 1/2	Soil	Drive	Brass			TPHD *
LS-30	4	"	"	"			" *
LS-31	6	"	"	"			" *
LW-32	4 1/2	"	"	"			TPHD TNHGA *

Total Number of Samples Shipped: <u>4</u>		Sampler's Signature: <i>[Signature]</i>		Date: <u>7-1</u>	
Relinquished By: <i>[Signature]</i> Signature: <i>[Signature]</i> Printed Name: <u>Aaron R. Stessman</u> Company: <u>Aqua Resources</u> Reason: <u>For Analysis</u>		Received By: <i>[Signature]</i> Signature: <i>[Signature]</i> Printed Name: <u>[Name]</u> Company: <u>[Company]</u>		Time: <u>4:5</u>	
Relinquished By: Signature: _____ Printed Name: _____ Company: _____ Reason: _____		Received By: Signature: _____ Printed Name: _____ Company: _____		Date: <u>1/1</u> Time: _____	

REMARKS:

\* = RUSH (48hr.)

Sample LW-32 is included  
LS-32

Special Shipment / Handling / Storage Requirements:



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

DATE RECEIVED: 08/19/91

DATE REPORTED: 08/21/91


LABORATORY NUMBER: 104882

CLIENT: AQUA RESOURCES, INC.

PROJECT ID: 90239.3

LOCATION: RANSOME

RESULTS: SEE ATTACHED

  
-----  
QA/QC Approval

  
-----  
Final Approval

Berkeley

Wilmington

Los Angeles



LABORATORY NUMBER: 104882  
 CLIENT: AQUA RESOURCES, INC.  
 PROJECT ID: 90239.3  
 LOCATION: RANSOME

DATE RECEIVED: 08/19/91  
 DATE ANALYZED: 08/21/91  
 DATE REPORTED: 08/21/91

Total Volatile Hydrocarbons with BTXE in Soils and Wastes  
 TVH by California DOHS Method/LUFT Manual October 1989  
 BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (mg/Kg)	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)
104882-1	KW-14	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104882-2	KN-15	18	60	22	270	330

ND = Not detected at or above reporting limit; Reporting limit indicated in parentheses.

QA/QC SUMMARY

RPD, %	5
RECOVERY, %	94

LABORATORY NUMBER: 104882  
 CLIENT: AQUA RESOURCES, INC.  
 PROJECT ID: 90239.3  
 LOCATION: RANSOME

DATE RECEIVED: 08/19/91  
 DATE EXTRACTED: 08/20/91  
 DATE ANALYZED: 08/21/91  
 DATE REPORTED: 08/21/91

Extractable Petroleum Hydrocarbons in Soils & Wastes  
 California DOHS Method  
 LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (mg / Kg)	DIESEL RANGE (mg / Kg)	REPORTING LIMIT* (mg / Kg)
104882-1	KW-14	ND	ND	1.0
104882-2	KN-15	ND	ND	1.0

ND = Not Detected at or above reporting limit.

\*Reporting limit applies to all analytes.

QA/QC SUMMARY

RPD, %	<1
RECOVERY, %	85

AQUA RESOURCES, INC.

SHIPMENT NO.: 46



CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

DATE 8/19/91

PROJECT NAME: RANSOME

PROJECT NO.: 90239.3

Sample Number	Location (Depth)	Type of Sample		Type of Container	Type of Preservation		Analysis Required
		Material	Method		Temp	Chemical	
KB-13	1 1/2'	Soil	Drive	Brass Tube	± 4°C		1, 2, 3
KW-14	6'	"	"	"	"		1, 2, 3*
KN-15	6'	"	"	"	"		1, 2, 3*
JW-69	6 1/2'	"	"	"	"		1, 2, 3
JS-70	7 1/2'	"	"	"	"		1, 2, 3
LEECH-1	—	Product	Grab	2 VOAS	"		4

Total Number of Samples Shipped: 6 Sampler's Signature: [Signature]

Relinquished By: Signature <u>[Signature]</u> Printed Name <u>Aaron N. Stessman</u> Company <u>Aqua Resources</u> Reason <u>For Analysis</u>	Received By: Signature <u>Nancy Wilson</u> Printed Name <u>Nancy Wilson</u> Company <u>C. Lab</u>	Date <u>8/19/91</u>
		Time <u>4:45</u>
	Received By: Signature _____ Printed Name _____ Company _____	Date <u>1/1</u>
		Time _____

REMARKS:  
 1 = TVHG + BTEX      \* = 24 hr Turnaround  
 2 = TEHD  
 3 = O&G  
 4 = BZFO, Cadmium, Chromium, Lead, Zinc and Nickel.

Special Handling / Storage Requirements:



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878.

2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

DATE RECEIVED: 08/19/91

DATE REPORTED: 08/26/91

LABORATORY NUMBER: 104889

CLIENT: AQUA RESOURCES

PROJECT ID: 90239.3

LOCATION: RANSOME

RESULTS: SEE ATTACHED

  
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QA/QC Approval

  
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Final Approval

Berkeley

Wilmington

Los Angeles



Client: Aqua Resources

Laboratory Login Number: 104889

Project Name: Ransome  
Project Number: 90239.3

Report Date: 26 August 91

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric)      METHOD: SMWW 17:5520EF

Lab ID	Sample ID	Matrix	Sampled	Received	Analyzed	Result	Units	RL	Analyst	QC Batch
104889-001	KB-13	Soil	19-AUG-91	19-AUG-91	21-AUG-91	90	mg/Kg	50	TR	2395
104889-002	JW-69	Soil	19-AUG-91	19-AUG-91	21-AUG-91	ND	mg/Kg	50	TR	2395
104889-003	JS-70	Soil	19-AUG-91	19-AUG-91	21-AUG-91	ND	mg/Kg	50	TR	2395

ND = Not Detected at or above Reporting Limit (RL).

## Q C Batch Report

 Client: Aqua Resources  
 Project Name: Ransome  
 Project Number: 90239.3

 Laboratory Login Number: 104889  
 Report Date: 26 August 91

ANALYSIS: Hydrocarbon Oil &amp; Grease (Gravimetric)

QC Batch Number: 2395

## Blank Results

Sample ID	Result	MDL	Units	Method	Date Analyzed
BLANK	ND	50	mg/Kg	SMWW 17:5520EF	21-AUG-91

## Spike/Duplicate Results

Sample ID	Recovery	Method	Date Analyzed
BS	83%	SMWW 17:5520EF	21-AUG-91
BSD	86%	SMWW 17:5520EF	21-AUG-91

	Control Limits
Average Spike Recovery	85%      80% - 120%
Relative Percent Difference	3.4%      < 20%

LABORATORY NUMBER: 104889  
 CLIENT: AQUA RESOURCES  
 PROJECT ID: 90239.3  
 LOCATION: RANSOME

DATE RECEIVED: 08/19/91  
 DATE ANALYZED: 08/22/91  
 DATE REPORTED: 08/26/91

Total Volatile Hydrocarbons with BTXE in Soils and Wastes  
 TVH by California DOHS Method/LUFT Manual October 1989  
 BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (mg/Kg)	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)
104889-1	KB-13	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	25
104889-2	JW-69	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104889-3	JS-70	1.9	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)

ND = Not detected at or above reporting limit; Reporting limit  
 indicated in parentheses.

QA/QC SUMMARY

RPD, %	2
RECOVERY, %	98



LABORATORY NUMBER: 104889  
CLIENT: AQUA RESOURCES  
PROJECT ID: 90239.3  
LOCATION: RANSOME

DATE RECEIVED: 08/19/91  
DATE EXTRACTED: 08/22/91  
DATE ANALYZED: 08/23/91  
DATE REPORTED: 08/26/91

Extractable Petroleum Hydrocarbons in Soils & Wastes  
California DOHS Method  
LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (mg/Kg)	DIESEL RANGE (mg/Kg)	REPORTING LIMIT* (mg/Kg)
104889-1	KB-13	ND	16	1.0
104889-2	JW-69	ND	ND	1.0
104889-3	JS-70	ND	ND	1.0

ND = Not Detected at or above reporting limit.

\*Reporting limit applies to all analytes.

QA/QC SUMMARY

RPD, %	5
RECOVERY, %	83



104884

KB-13, JW-69, JS-70

# AQUA RESOURCES, INC.

SHIPMENT NO.: 46



## CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

PROJECT NAME: RANSOME

DATE 8/19/91

PROJECT NO.: 90239.3

Sample Number	Location (Depth)	Type of Sample		Type of Container	Type of Preservation		Analysis Required
		Material	Method		Temp	Chemical	
KB-13	11 1/2'	Soil	Drive	Brass Tube	±4°C		1, 2, 3
KW-14	6'	"	"	"	"		1, 2, 3*
KN-15	6'	"	"	"	"		1, 2, 3*
JW-69	6 1/2'	"	"	"	"		1, 2, 3
JS-70	7 1/2'	"	"	"	"		1, 2, 3
LEECH-1	-	Product	Grab	2 VOAS	"		4

Total Number of Samples Shipped: 6

Sampler's Signature: [Signature]

Relinquished By:  
 Signature: [Signature]  
 Printed Name: Aaron N. Stessman  
 Company: Aqua Resources  
 Reason: For Analysis

Received By:  
 Signature: [Signature]  
 Printed Name: Nancy Wilson  
 Company: CIT Lab

Date: 8/19/91  
 Time: 4:45

Relinquished By:  
 Signature: \_\_\_\_\_  
 Printed Name: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Reason: \_\_\_\_\_

Received By:  
 Signature: \_\_\_\_\_  
 Printed Name: \_\_\_\_\_  
 Company: \_\_\_\_\_

Date: 1/1  
 Time: \_\_\_\_\_

REMARKS:  
 1 = TVHG + BTEX      \* = 24 hr Turnaround  
 2 = TETA  
 3 = O&G  
 4 = 8270, Cadmium, Chromium, Lead, Zinc and Nickel.

Special Shipment / Handling / Storage Requirements:



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

DATE RECEIVED: 08/20/91

DATE REPORTED: 08/27/91


LABORATORY NUMBER: 104901

CLIENT: AQUA RESOURCES, INC.

PROJECT ID: 90239.3

LOCATION: RANSOME

RESULTS: SEE ATTACHED

  
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QA/QC Approval

  
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Final Approval

Berkeley

Wilmington

Los Angeles

Client: Aqua Resources

Laboratory Login Number: 104901

 Project Name: Ransome  
 Project Number: 90239.3

Report Date: 27 August 91

ANALYSIS: Hydrocarbon Oil &amp; Grease (Gravimetric)      METHOD: SMWW 17:5520EF

Lab ID	Sample ID	Matrix	Sampled	Received	Analyzed	Result	Units	RL	Analyst	QC Batch
104901-001	KB-20	Soil	20-AUG-91	20-AUG-91	21-AUG-91	ND	mg/Kg	50	TR	2395

ND = Not Detected at or above Reporting Limit (RL).

## Q C B a t c h R e p o r t

 Client: Aqua Resources  
 Project Name: Ransome  
 Project Number: 90239.3

 Laboratory Login Number: 104901  
 Report Date: 27 August 91

ANALYSIS: Hydrocarbon Oil &amp; Grease (Gravimetric)

QC Batch Number: 2395

## Blank Results

Sample ID	Result	MDL	Units	Method	Date Analyzed
BLANK	ND	50	mg/Kg	SMWW 17:5520EF	21-AUG-91

## Spike/Duplicate Results

Sample ID	Recovery	Method	Date Analyzed
BS	83%	SMWW 17:5520EF	21-AUG-91
BSD	86%	SMWW 17:5520EF	21-AUG-91

		Control Limits
Average Spike Recovery	85%	80% - 120%
Relative Percent Difference	3.4%	< 20%

LABORATORY NUMBER: 104901  
 CLIENT: AQUA RESOURCES, INC.  
 PROJECT ID: 90239.3  
 LOCATION: RANSOME

DATE RECEIVED: 08/20/91  
 DATE ANALYZED: 08/22/91  
 DATE REPORTED: 08/27/91

Total Volatile Hydrocarbons with BTXE in Soils and Wastes  
 TVH by California DOHS Method/LUFT Manual October 1989  
 BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (mg/Kg)	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)
104901-1	KB-20	ND(1.0)	ND(5.0)	ND(5.0)	11	ND(5.0)

ND = Not detected at or above reporting limit; Reporting limit indicated in parentheses.

QA/QC SUMMARY

RPD, %	2
RECOVERY, %	98

LABORATORY NUMBER: 104901  
 CLIENT: AQUA RESOURCES, INC.  
 PROJECT ID: 90239.3  
 LOCATION: RANSOME

DATE RECEIVED: 08/20/91  
 DATE EXTRACTED: 08/22/91  
 DATE ANALYZED: 08/25/91  
 DATE REPORTED: 08/27/91

Extractable Petroleum Hydrocarbons in Soils & Wastes  
 California DOHS Method  
 LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (mg/Kg)	DIESEL RANGE (mg/Kg)	REPORTING LIMIT* (mg/Kg)
104901-1	KB-20	ND	ND	1.0

ND = Not Detected at or above reporting limit.

\*Reporting limit applies to all analytes.

QA/QC SUMMARY

RPD, %	10
RECOVERY, %	85

~~104819~~

104901

104819

# AQUA RESOURCES, INC.

SHIPMENT NO.: 48



## CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

PROJECT NAME: RANSOME

DATE 8/20/91

PROJECT NO.: 90239.3

Sample Number	Location (Depth)	Type of Sample		Type of Container	Type of Preservation		Analysis Required
		Material	Method		Temp	Chemical	
KS-16	6 1/2'	So. 1	Drive	Brass Tube	±4°C		1, 2 *
KS-17	7'	"	"	"	"		1, 2 *
KS-18	6 1/2'	"	"	"	"		1, 2 *
KE-19	6'	"	"	"	"		1, 2 *
KB-20	11 3/4'	"	"	"	"		1, 2, 3

Total Number of Samples Shipped: 5

Sampler's Signature: [Signature]

Relinquished By:  
 Signature: [Signature]  
 Printed Name: Aaron N. Stessman  
 Company: Aqua Resources  
 Reason: For Analysis

Received By:  
 Signature: [Signature]  
 Printed Name: Lourinda Browner  
 Company: CT - Ransome

Date: 8/20/91  
 Time: 17:05

Relinquished By:  
 Signature: \_\_\_\_\_  
 Printed Name: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Reason: \_\_\_\_\_

Received By:  
 Signature: \_\_\_\_\_  
 Printed Name: \_\_\_\_\_  
 Company: \_\_\_\_\_

Date: 1/1  
 Time: \_\_\_\_\_

### REMARKS:

- 1 = TVH6, BTEX
- 2 = TEHD
- 3 = O&G
- \* = 24 hr turnaround, others 5 day

Special Handling / Storage Requirements:



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

DATE RECEIVED: 08/23/91  
DATE REPORTED: 08/28/91

LABORATORY NUMBER: 104949

CLIENT: AQUA RESOURCES, INC.

PROJECT ID: 90239.3

LOCATION: RANSOME

RESULTS: SEE ATTACHED

08/23/91  
1991  
FILE

  
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QA/QC Approval

  
-----  
Final Approval



LABORATORY NUMBER: 104949  
 CLIENT: AQUA RESOURCES, INC.  
 PROJECT ID: 90239.3  
 LOCATION: RANSOME

DATE RECEIVED: 08/23/91  
 DATE EXTRACTED: 08/26/91  
 DATE ANALYZED: 08/27,28/91  
 DATE REPORTED: 08/28/91

Extractable Petroleum Hydrocarbons in Soils & Wastes  
 California DOHS Method  
 LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (mg/Kg)	DIESEL RANGE (mg/Kg)	REPORTING LIMIT* (mg/Kg)
104949-1	LN-34	ND	ND	1.0
104949-2	LW-35	ND	ND	1.0
104949-3	LS-36	ND	2.4	1.0
104949-4	LB-37	ND	2,500	10
104949-5	LB-38	ND	650	10
104949-6	LW-39	ND	ND	1.0
104949-7	LE-40	ND	ND	1.0
104949-8	LE-41	ND	ND	1.0
104949-9	LS-42	ND	3,300	10

ND = Not Detected at or above reporting limit.

\*Reporting limit applies to all analytes.

QA/QC SUMMARY

RPD, %	4
RECOVERY, %	104

LABORATORY NUMBER: 104949  
 CLIENT: AQUA RESOURCES, INC.  
 PROJECT ID: 90239.3  
 LOCATION: RANSOME

DATE RECEIVED: 08/23/91  
 DATE ANALYZED: 08/26/91  
 DATE REPORTED: 08/27/91

Total Volatile Hydrocarbons with BTXE in Soils and Wastes  
 TVH by California DOHS Method/LUFT Manual October 1989  
 BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (mg/Kg)	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)
104949-1	LN-34	3.5	11	ND(5.0)	5.7	35
104949-2	LW-35	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104949-3	LS-36	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104949-4	LB-37	12	ND(5.0)	ND(5.0)	16	51
104949-5	LB-38	7.7	12	ND(5.0)	8.7	50
104949-6	LW-39	1.3	ND(5.0)	ND(5.0)	ND(5.0)	6.3
104949-7	LE-40	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104949-8	LE-41	1.1	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104949-9	LS-42	9.3	ND(5.0)	ND(5.0)	18	61

ND = Not detected at or above reporting limit; Reporting limit  
 indicated in parentheses.

QA/QC SUMMARY

RPD, %	1
RECOVERY, %	110

164949

AQUA RESOURCES, INC.

SHIPMENT NO.: 51



CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

DATE 8/23/91

PROJECT NAME: RANSOME

PROJECT NO.: 90239.3

1  
2  
3  
4  
5  
6  
7  
8  
9

Sample Number	Location (Depth)	Type of Sample		Type of Container	Type of Preservation		Analysis Required
		Material	Method		Temp	Chemical	
LV-34	3 1/2'	Soil	Drive	Brass Tube	±4°C		1, 2 *
LW-35	4'	"	"	"	"		" *
LS-36	4'	"	"	"	"		" *
LB-37	7'	"	"	"	"		" *
LB-38	7 1/2'	"	"	"	"		" *
LW-39	4 1/2'	"	"	"	"		" *
LE-40	4 1/2'	"	"	"	"		" *
LE-41	5'	"	"	"	"		" *
LS-42	4 1/2'	"	"	"	"		" *

Total Number of Samples Shipped: 9      Sampler's Signature: *[Signature]*

Relinquished By: Signature: <i>[Signature]</i> Printed Name: Aaron N. Stessman Company: Aqua Resources Reason: For Analysis	Received By: Signature: <i>[Signature]</i> Printed Name: Lourinda Bowen Company: CT - Bankly	Date: 8/23/91 Time: 16:45
Relinquished By: Signature: _____ Printed Name: _____ Company: _____ Reason: _____	Received By: Signature: _____ Printed Name: _____ Company: _____	Date: / / Time: .

REMARKS:  
1 = TVHG, BTEX  
2 = TPH-D  
  
\* = RUSH

Special Handling / Storage Requirements:



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710. Phone (415) 486-0900

DATE RECEIVED: 08/26/91

DATE REPORTED: 08/28/91


LABORATORY NUMBER: 104963

CLIENT: AQUA RESOURCES

PROJECT ID: 90239.3

LOCATION: RANSOME

RESULTS: SEE ATTACHED

  
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QA/QC Approval

  
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Final Approval

Berkeley

Wilmington

Los Angeles

Client: Aqua Resources

Laboratory Login Number: 104963

 Project Name: Ransome  
 Project Number: 90239.3

Report Date: 28 August 91

ANALYSIS: Hydrocarbon Oil &amp; Grease (Gravimetric)      METHOD: SMWW 17:5520EF

Lab ID	Sample ID	Matrix	Sampled	Received	Analyzed	Result	Units	RL	Analyst	QC Batch
104963-005	KW-25	Soil	26-AUG-91	26-AUG-91	27-AUG-91	1400	mg/Kg	50	TR	2453
104963-006	KW-26	Soil	26-AUG-91	26-AUG-91	27-AUG-91	720	mg/Kg	50	TR	2453

ND = Not Detected at or above Reporting Limit (RL).

## Q C B a t c h R e p o r t

 Client: Aqua Resources  
 Project Name: Ransome  
 Project Number: 90239.3

 Laboratory Login Number: 104963  
 Report Date: 28 August 91

ANALYSIS: Hydrocarbon Oil &amp; Grease (Gravimetric)

QC Batch Number: 2453

## Blank Results

Sample ID	Result	MDL	Units	Method	Date Analyzed
BLANK	ND	50	mg/Kg	SMWW 17:5520EF	27-AUG-91

## Spike/Duplicate Results

Sample ID	Recovery	Method	Date Analyzed
BS	84%	SMWW 17:5520EF	27-AUG-91
BSD	93%	SMWW 17:5520EF	27-AUG-91

		Control Limits
Average Spike Recovery	89%	80% - 120%
Relative Percent Difference	10.0%	< 20%

LABORATORY NUMBER: 104963  
 CLIENT: AQUA RESOURCES  
 PROJECT ID: 90239.3  
 LOCATION: RANSOME

DATE RECEIVED: 08/26/91  
 DATE ANALYZED: 08/28/91  
 DATE REPORTED: 08/28/91

Total Volatile Hydrocarbons with BTXE in Soils and Wastes  
 TVH by California DOHS Method/LUFT Manual October 1989  
 BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (mg/Kg)	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)
104963-1	KW-21	33	130	ND(10)	800	790
104963-2	KW-22	2.8	ND(10)	ND(10)	110	37
104963-3	KN-23	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104963-4	KS-24	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104963-5	KW-25	36	87	16	26	50
104963-6	KW-26	5.1	ND(10)	ND(10)	13	34

ND = Not detected at or above reporting limit; Reporting limit indicated in parentheses.

LABORATORY NUMBER: 104963  
 CLIENT: AQUA RESOURCES  
 PROJECT ID: 90239.3  
 LOCATION: RANSOME

DATE RECEIVED: 08/26/91  
 DATE EXTRACTED: 08/27/91  
 DATE ANALYZED: 08/28/91  
 DATE REPORTED: 08/28/91

Extractable Petroleum Hydrocarbons in Soils & Wastes  
 California DOHS Method  
 LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (mg /Kg)	DIESEL RANGE (mg /Kg)	REPORTING LIMIT* (mg /Kg)
104963-1	KW-21	ND	1.8	1.0
104963-2	KW-22	ND	1.4	1.0
104963-3	KN-23	ND	1.0	1.0
104963-4	KS-24	ND	ND	10
104963-5	KW-25	ND	200	1.0
104963-6	KW-26	ND	510	10

ND = Not Detected at or above reporting limit.

\*Reporting limit applies to all analytes.

QA/QC SUMMARY

RPD, %	4
RECOVERY, %	104



104963

AQUA RESOURCES, INC.

SHIPMENT NO.: 52



CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

PROJECT NAME: RANSOME

DATE 8/26/91

PROJECT NO.: 90239.3

Sample Number	Location (Depth)	Type of Sample		Type of Container	Type of Preservation		Analysis Required
		Material	Method		Temp	Chemical	
KW-21	5 1/2	Soil	Drive	Brass Tube	+4°C		1, 2 *
KW-22	7 1/2	"	"	"	"		1, 2 *
KN-23	6	"	"	"	"		1, 2 *
KS-24	6	"	"	"	"		1, 2, 3 *
KW-25	6 1/2	"	"	"	"		1, 2, 3 *
RW-26	5	"	"	"	"		

Total Number of Samples Shipped: 6 Sampler's Signature: [Signature]

Relinquished By: Signature <u>[Signature]</u> Printed Name <u>Aaron N. Stessman</u> Company <u>Aqua Resources</u> Reason <u>For Analysis</u>	Received By: Signature _____ Printed Name _____ Company _____	Date <u>8/26/91</u> Time _____
Relinquished By: Signature _____ Printed Name _____ Company _____ Reason _____	Received By: Signature <u>[Signature]</u> Printed Name <u>JOHN GUYETTE</u> Company <u>Curtis Tompkins</u>	Date <u>8/26/91</u> Time <u>16:50</u>

REMARKS:

- 1 = TVHG+BTEX
- 2 = TPHD
- 3 = O&G
- \* = 2A hr RUSH

Special Shipment / Handling / Storage Requirements:



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

DATE RECEIVED: 08/27/91  
DATE REPORTED: 08/30/91

LABORATORY NUMBER: 104974

CLIENT: AQUA RESOURCES

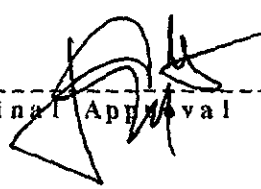
PROJECT ID: 90239.3

LOCATION: RANSOME

RESULTS: SEE ATTACHED

10  
SEP 1 1991  
FILE NO. \_\_\_\_\_  
FILE \_\_\_\_\_

  
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QA/QC Approval

  
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Final Approval



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

DATE RECEIVED: 08/27/91

DATE REQUESTED: 09/03/91

DATE REPORTED: 09/06/91

LABORATORY NUMBER: 105041

SEP 11 1991

CLIENT: AQUA RESOURCES

FILE \_\_\_\_\_  
\_\_\_\_\_

PROJECT ID: 90239.3

LOCATION: RANSOME

RESULTS: SEE ATTACHED

QA/QC Approval

Final Approval

Berkeley

Wilmington

Los Angeles

Client: Aqua Resources

Laboratory Login Number: 104974

 Project Name: Ransome  
 Project Number: 90239.3

Report Date: 30 August 91

ANALYSIS: Hydrocarbon Oil &amp; Grease (Gravimetric)      METHOD: SMWW 17:5520EF

Lab ID	Sample ID	Matrix	Sampled	Received	Analyzed	Result	Units	RL	Analyst	QC Batch
104974-001	KS-27	Soil	27-AUG-91	27-AUG-91	28-AUG-91	ND	mg/Kg	50	TR	2464
104974-002	KS-28	Soil	27-AUG-91	27-AUG-91	28-AUG-91	ND	mg/Kg	50	TR	2464
104974-003	KE-30	Soil	27-AUG-91	27-AUG-91	28-AUG-91	ND	mg/Kg	50	TR	2464
104974-004	KE-31	Soil	27-AUG-91	27-AUG-91	28-AUG-91	ND	mg/Kg	50	TR	2464
104974-005	KB-32	Soil	27-AUG-91	27-AUG-91	28-AUG-91	ND	mg/Kg	50	TR	2464

ND = Not Detected at or above Reporting Limit (RL).

## Q C Batch Report

 Client: Aqua Resources  
 Project Name: Ransome  
 Project Number: 90239.3

 Laboratory Login Number: 104974  
 Report Date: 30 August 91

ANALYSIS: Hydrocarbon Oil &amp; Grease (Gravimetric)

QC Batch Number: 2464

## Blank Results

Sample ID	Result	MDL	Units	Method	Date Analyzed
BLANK	ND	50	mg/Kg	SMWW 17:5520EF	28-AUG-91

## Spike/Duplicate Results

Sample ID	Recovery	Method	Date Analyzed
BS	86%	SMWW 17:5520EF	28-AUG-91
BSD	89%	SMWW 17:5520EF	28-AUG-91

		Control Limits
Average Spike Recovery	88%	80% - 120%
Relative Percent Difference	3.2%	< 20%



LABORATORY NUMBER: 104974  
CLIENT: AQUA RESOURCES  
PROJECT ID: 90239.3  
LOCATION: RANSOME

DATE RECEIVED: 08/27/91  
DATE EXTRACTED: 08/28/91  
DATE ANALYZED: 08/30/91  
DATE REPORTED: 08/30/91

Extractable Petroleum Hydrocarbons in Soils & Wastes  
California DOHS Method  
LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (mg / Kg)	DIESEL RANGE (mg / Kg)	REPORTING LIMIT* (mg / Kg)
104974-1	KS-27	ND	1.1	1.0
104974-2	KS-28	ND	1.1	1.0
104974-3	KE-30	ND	1.2	1.0
104974-4	KE-31	ND	1.0	1.0
104974-5	KB-32	ND	1.2	1.0

ND = Not Detected at or above reporting limit.

\*Reporting limit applies to all analytes.

QA/QC SUMMARY

RPD, %	19
RECOVERY, %	89

LABORATORY NUMBER: 104974  
 CLIENT: AQUA RESOURCES  
 PROJECT ID: 90239.3  
 LOCATION: RANSOME

DATE RECEIVED: 08/27/91  
 DATE ANALYZED: 08/28/91  
 DATE REPORTED: 08/30/91

Total Volatile Hydrocarbons with BTXE in Soils and Wastes  
 TVH by California DOHS Method/LUFT Manual October 1989  
 BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (mg/Kg)	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)
104974-3	KE-30	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)

ND = Not detected at or above reporting limit; Reporting limit  
 indicated in parentheses.

QA/QC SUMMARY

RPD, % 1  
 RECOVERY, % 111

RUSH 104974

AQUA RESOURCES, INC.

SHIPMENT NO.: 53



CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

DATE 8/27/91

PROJECT NAME: RANSOME

PROJECT NO.: 90239.3

Sample Number	Location	Type of Sample		Type of Container	Type of Preservation		Analysis Required
		Material	Method		Temp	Chemical	
KS - 27	7'	Soil	Drive	Brass Tube	+4°C		2, 3 * 0
KS - 28	6 1/2'						2, 3 * 0
KB - 29	10 1/2'						1, 2, 3
KE - 30	6 1/2'						1, 2, 3 *
KE - 31	7'						2, 3 * 0
KB - 32	11'						2, 3 * 0

Total Number of Samples Shipped: 6      Sampler's Signature: *[Signature]*

Relinquished By: Signature: <i>[Signature]</i> Printed Name: Aaron W. Stessman Company: Aqua Resources Reason: For Analysis	Received By: Signature: _____ Printed Name: _____ Company: _____	Date: <i>8/27/91</i> Time: _____
	Relinquished By: Signature: _____ Printed Name: _____ Company: _____ Reason: _____	Received By: <i>[Signature]</i> Signature: <i>[Signature]</i> Printed Name: _____ Company: _____

REMARKS:

- 1 = TVHG, BTEX
- 2 = TPHD
- 3 = O&G
- \* = 24 hr Turnaround (Others are 5 day)
- 0 = Comment run TVHG if no TPHD, O&G

Special Shipment / Handling / Storage Requirements:





Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

DATE RECEIVED: 08/27/91

DATE REQUESTED: 09/03/91

DATE REPORTED: 09/06/91

LABORATORY NUMBER: 105041

SEP 11 1991

CLIENT: AQUA RESOURCES

FILE \_\_\_\_\_

PROJECT ID: 90239.3

LOCATION: RANSOME

RESULTS: SEE ATTACHED

QA/QC Approval

Final Approval

Berkeley

Wilmington

Los Angeles



LABORATORY NUMBER: 105041  
CLIENT: AQUA RESOURCES  
PROJECT ID: 90239.3  
LOCATION: RANSOME

DATE RECEIVED: 08/27/91  
DATE REQUESTED: 09/03/91  
DATE ANALYZED: 09/05/91  
DATE REPORTED: 09/06/91

Total Volatile Hydrocarbons with BTXE in Soils and Wastes  
TVH by California DOHS Method/LUFT Manual October 1989  
BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (mg/Kg)	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)
105041-1	KS-27	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
105041-2	KS-28	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
105041-3	KE-31	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
105041-4	KB-32	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)

ND = Not detected at or above reporting limit; Reporting limit indicated in parentheses.

QA/QC SUMMARY

RPD, %	6
RECOVERY, %	98

RUSH 104974

Original COC

AQUA RESOURCES, INC.

SHIPMENT NO.: 53



CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

PROJECT NAME: RANSOME

DATE 8/27/91

PROJECT NO.: 90239.3

Sample Number	Location	Type of Sample		Type of Container	Type of Preservation		Analysis Required
		Material	Method		Temp	Chemical	
KS-27	7'	Soil	Drive	Brass Tube	±4°C		2, 3 * 0
KS-28	6 1/2'						2, 3 * 0
KB-29	10 1/2'						1, 2, 3
KE-30	6 1/2'						1, 2, 3 *
KE-31	7'						2, 3 * 0
KB-32	11'						2, 3 * 0

Total Number of Samples Shipped: 6     Sampler's Signature: [Signature]

Relinquished By: Signature: <u>[Signature]</u> Printed Name: <u>Aaron R. Stessman</u> Company: <u>Aqua Resources</u> Reason: <u>for analysis</u>	Received By: Signature: _____ Printed Name: _____ Company: _____	Date: <u>  /  /  </u>
		Time: _____
Relinquished By: Signature: _____ Printed Name: _____ Company: _____ Reason: _____	Received By: Signature: <u>[Signature]</u> Printed Name: _____ Company: _____	Date: <u>8/27/91</u>
		Time: <u>8:45</u>

REMARKS:

- 1 = TVHG, BTEX
- 2 = TPHD
- 3 = O&G
- \* = 24 hr Turnaround (Others are 5 day)
- 0 = Comment run TVHG if no TPHD, O&G

Specific Handling / Storage Requirements:

VERBAL ADDITIONS / CANCELLATIONS TO ANALYSIS REQUEST SHEET

CLIENT: Agua Resources

DATE: 9/3/91

REQUESTED BY: Arnon

TIME: 7:45 am pm

RECORDED BY: Joanne

Current Lab ID (Previous Lab ID)	Client ID	Circle matrix	Specify add or cancel	Analysis	Due date
<del>105041</del> 105041-1 (104974-001)	KS-27	<u>soil</u> water other	Add	TVH / BTXE	9/10
105041-2 (104974-002)	KS-28	<u>soil</u> water other	Add	TVH / BTXE	9/10
105041-3 (104974-004)	KE-31	<u>soil</u> water other	Add	TVH / BTXE	9/10
105041-4 (104974-005)	KB-32	<u>soil</u> water other	Add	TVH / BTXE	9/10
( )		soil water other			
( )		soil water other			
( )		soil water other			
( )		soil water other			

Original in job jacket.

Copies to analytical departments.



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710. Phone (415) 486-0900

DATE RECEIVED: 08/27/91

DATE REPORTED: 09/05/91


LABORATORY NUMBER: 104977


CLIENT: AQUA RESOURCES

PROJECT ID: 90239.3

LOCATION: RANSOME

RESULTS: SEE ATTACHED

  
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QA/QC Approval

  
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Final Approval

Berkeley

Wilmington

Los Angeles

Client: Aqua Resources

Laboratory Login Number: 104977

Project Name: Ransome  
Project Number: 90239.3

Report Date: 05 September 91

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric)      METHOD: SMWW 17:5520EF

Lab ID	Sample ID	Matrix	Sampled	Received	Analyzed	Result	Units	RL	Analyst	QC Batch
104977-001	KB-29	Soil	27-AUG-91	27-AUG-91	28-AUG-91	ND	mg/Kg	50	TR	2464

ND = Not Detected at or above Reporting Limit (RL).

## Q C B a t c h R e p o r t

 Client: Aqua Resources  
 Project Name: Ransome  
 Project Number: 90239.3

 Laboratory Login Number: 104977  
 Report Date: 05 September 91

ANALYSIS: Hydrocarbon Oil &amp; Grease (Gravimetric)

QC Batch Number: 2464

## Blank Results

Sample ID	Result	MDL	Units	Method	Date Analyzed
BLANK	ND	50	mg/Kg	SMWW 17:5520EF	28-AUG-91

## Spike/Duplicate Results

Sample ID	Recovery	Method	Date Analyzed
BS	86%	SMWW 17:5520EF	28-AUG-91
BSD	89%	SMWW 17:5520EF	28-AUG-91

		Control Limits
Average Spike Recovery	88%	80% - 120%
Relative Percent Difference	3.2%	< 20%

LABORATORY NUMBER: 104977  
 CLIENT: AQUA RESOURCES  
 PROJECT ID: 90239.3  
 LOCATION: RANSOME

DATE RECEIVED: 08/27/91  
 DATE ANALYZED: 08/29/91  
 DATE REPORTED: 09/05/91

Total Volatile Hydrocarbons with BTXE in Soils and Wastes  
 TVH by California DOHS Method/LUFT Manual October 1989  
 BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (mg/Kg)	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)
104977-1	KB-29	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)

ND = Not detected at or above reporting limit; Reporting limit  
 indicated in parentheses.

QA/QC SUMMARY

RPD, % 3  
 RECOVERY, % 106



LABORATORY NUMBER: 104977  
 CLIENT: AQUA RESOURCES  
 PROJECT ID: 90239.3  
 LOCATION: RANSOME

DATE RECEIVED: 08/27/91  
 DATE EXTRACTED: 08/29/91  
 DATE ANALYZED: 09/02-04/91  
 DATE REPORTED: 09/05/91

Extractable Petroleum Hydrocarbons in Soils & Wastes  
 California DOHS Method  
 LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (mg/Kg)	DIESEL RANGE (mg/Kg)	REPORTING LIMIT* (mg/Kg)
104977-1	KB-29	ND	ND	1.0

ND = Not Detected at or above reporting limit.

\*Reporting limit applies to all analytes.

QA/QC SUMMARY

RPD, %	5
RECOVERY, %	92

~~NOV~~ NOW RUSH 1049117  
 RUSH 104974

AQUA RESOURCES, INC.

SHIPMENT NO.: 53



CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

PROJECT NAME: RANSOME

DATE 8/27/91

PROJECT NO.: 90239.3

Sample Number	Location	Type of Sample		Type of Container	Type of Preservation		Analysis Required
		Material	Method		Temp	Chemical	
KS-27	7'	Soil	Drive	Braze Tube	+4°C		2,3* 0
KS-28	6 1/2'						2,3* 0
KB-29	10 1/2'						1,2,3
KE-30	6 1/2'						1,2,3*
KE-31	7'						2,3* 0
KB-32	11'						2,3* 0

Total Number of Samples Shipped: <u>6</u>		Sampler's Signature: <u>[Signature]</u>		Date <u>  /  /  </u>
Relinquished By: Signature: <u>[Signature]</u> Printed Name: <u>Aaron D. Stessman</u> Company: <u>Aqua Resources</u> Reason: <u>For Analysis</u>		Received By: Signature: _____ Printed Name: _____ Company: _____		Date <u>  /  /  </u> Time <u>  :  </u>
Relinquished By: Signature: _____ Printed Name: _____ Company: _____ Reason: _____		Received By: Signature: <u>[Signature]</u> Printed Name: _____ Company: _____		Date <u>8/27/91</u> Time <u>10:45</u>

REMARKS:  
 1 = TVHG, BTEX  
 2 = TPHD  
 3 = O&G  
 \* = 24 hr Turnaround (Others are 5 day)  
 0 = comment run TVHG if no TPHD, O&G

Special Shipment / Handling / Storage Requirements:



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2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

DATE RECEIVED: 08/30/91

DATE REPORTED: 09/05/91

LABORATORY NUMBER: 105025

CLIENT: AQUA RESOURCES

PROJECT ID: 90239.3

LOCATION: RANSOME

RESULTS: SEE ATTACHED

  
-----  
QA/QC Approval

  
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Final Approval

Berkeley

Wilmington

Los Angeles



LABORATORY NUMBER: 105025  
CLIENT: AQUA RESOURCES  
PROJECT ID: 90239.3  
LOCATION: RANSOME

DATE RECEIVED: 08/30/91  
DATE EXTRACTED: 09/03/91  
DATE ANALYZED: 09/04/91  
DATE REPORTED: 09/05/91

Extractable Petroleum Hydrocarbons in Soils & Wastes  
California DOHS Method  
LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (mg/Kg)	DIESEL RANGE (mg/Kg)	REPORTING LIMIT* (mg/Kg)
105025-1	LS-43	ND	ND	1.0
105025-2	LS-46	ND	280	1.0

ND = Not Detected at or above reporting limit.

\*Reporting limit applies to all analytes.

QA/QC SUMMARY

RPD, %	14
RECOVERY, %	92

AQUA RESOURCES, INC.

SHIPMENT NO.: 56



CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

PROJECT NAME: RANSOME  
PROJECT NO.: 90239.3

DATE 8/30/91

Sample Number	Location (Depth)	Type of Sample		Type of Container	Type of Preservation		Analysis Required
		Material	Method		Temp	Chemical	
JN-71	7'	Soil	Drive	Brass Tube	±4°C		2,3
JN-72	5'	"	"	"	"		1,2,3
LS-43	6 1/2'	"	"	"	"		2*
LB-44	10 1/2'	"	"	"	"		1,2,3
LB-45	10 1/2'	"	"	"	"		1,2,3
LS-46	7 1/2'	"	"	"	"		2 *

Total Number of Samples Shipped: 6 Sampler's Signature: [Signature]

Relinquished By: Signature: <u>[Signature]</u> Printed Name: <u>Aaron D. Stessman</u> Company: <u>Aqua Resources</u> Reason: <u>For Analysis</u>	Received By: Signature: _____ Printed Name: _____ Company: _____	Date: <u>8/31/91</u> Time: _____
Relinquished By: Signature: _____ Printed Name: _____ Company: _____ Reason: _____	Received By: Signature: _____ Printed Name: _____ Company: _____	Date: <u>  /  /  </u> Time: _____

REMARKS:  
1 = TVHG, BTEX  
2 = TPHD  
3 = OFG  
\* = 48 hr RUSH (OTHERS ARE 5 day)

Transport / Handling / Storage Requirements:

LABORATORY NUMBER: 105026  
 CLIENT: AQUA RESOURCES  
 PROJECT ID: 90239.3  
 LOCATION: RANSOME

DATE RECEIVED: 08/30/91  
 DATE ANALYZED: 09/04/91  
 DATE REPORTED: 09/05/91

Total Volatile Hydrocarbons with BTXE in Soils and Wastes  
 TVH by California DOHS Method/LUFT Manual October 1989  
 BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (mg/Kg)	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)
105026-2	JN-72	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
105026-3	LB-44	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
105026-4	LB-45	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)

ND = Not detected at or above reporting limit; Reporting limit  
 indicated in parentheses.

QA/QC SUMMARY

RPD, %

RECOVERY, %

4  
96

LABORATORY NUMBER: 105026  
 CLIENT: AQUA RESOURCES  
 PROJECT ID: 90239.3  
 LOCATION: RANSOME

DATE RECEIVED: 08/30/91  
 DATE EXTRACTED: 09/03/91  
 DATE ANALYZED: 09/04/91  
 DATE REPORTED: 09/03/91

Extractable Petroleum Hydrocarbons in Soils & Wastes  
 California DOHS Method  
 LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (mg/Kg)	DIESEL RANGE (mg/Kg)	REPORTING LIMIT* (mg/Kg)
★ 105026-1	JN-71	ND	ND	1.0
★ 105026-2	JN-72	ND	ND	1.0
105026-3	LB-44	ND	ND	1.0
105026-4	LB-45	ND	ND	1.0

ND = Not Detected at or above reporting limit.

\*Reporting limit applies to all analytes.

QA/QC SUMMARY

RPD, %

RECOVERY, %

14  
92



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DATE RECEIVED: 08/30/91  
DATE REPORTED: 09/05/91

LABORATORY NUMBER: 108026

CLIENT: AQUA RESOURCES

PROJECT ID: 90239.3

LOCATION: RANSOME

RESULTS: SEE ATTACHED

  
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QA/QC Approval

  
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Final Approval

Berkeley

Wilmington

Los Angeles





Client: Aqua Resources

Laboratory Login Number: 105026

Project Name: Ransome  
Project Number: 90239.3

Report Date: 05 September 91

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric) METHOD: SMW 17:5520EF

Lab ID	Sample ID	Matrix	Sampled	Received	Analyzed	Result	Units	RL	Analyst	QC Batch
*105026-001	105026-001	Soil	30-AUG-91	30-AUG-91	04-SEP-91	ND	mg/Kg	50	TR	2532
*105026-002	105026-002	Soil	30-AUG-91	30-AUG-91	04-SEP-91	ND	mg/Kg	50	TR	2532
105026-003	105026-003	Soil	30-AUG-91	30-AUG-91	04-SEP-91	ND	mg/Kg	50	TR	2532
105026-004	105026-004	Soil	30-AUG-91	30-AUG-91	04-SEP-91	ND	mg/Kg	50	TR	2532

ND = Not Detected at or above Reporting Limit (RL).

Client: Aqua Resources  
 Project Name: Ransome  
 Project Number: 90239.3

Laboratory Login Number: 108026  
 Report Date: 05 September 91

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric)

QC Batch Number: 2532

Blank Results

Sample ID	Result	MDL	Units	Method	Date Analyzed
BLANK	ND	50	mg/Kg	SMWW 17:5520EF	04-SEP-91

Spike/Duplicate Results

Sample ID	Recovery	Method	Date Analyzed
SS	82%	SMWW 17:5520EF	04-SEP-91
RSD	85%	SMWW 17:5520EF	04-SEP-91

Average Spike Recovery  
 Relative Percent Difference

83%  
 3.7%

Control Limits  
 80% - 120%  
 < 20%



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DATE RECEIVED: 08/30/91

DATE REPORTED: 09/05/91

LABORATORY NUMBER: 105026

1031

CLIENT: AQUA RESOURCES

PROJECT ID: 90239.3

LOCATION: RANSOME

RESULTS: SEE ATTACHED

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QA/QC Approval

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Final Approval

Berkeley

Wilmington

Los Angeles

Client: Aqua Resources

Laboratory Login Number: 105026

 Project Name: Ransome  
 Project Number: 90239.3

Report Date: 05 September 91

ANALYSIS: Hydrocarbon Oil &amp; Grease (Gravimetric)      METHOD: SMWW 17:552OEF

Lab ID	Sample ID	Matrix	Sampled	Received	Analyzed	Result	Units	RL	Analyst	QC Batch
105026-001	JN-71	Soil	30-AUG-91	30-AUG-91	04-SEP-91	ND	mg/Kg	50	TR	2532
105026-002	JN-72	Soil	30-AUG-91	30-AUG-91	04-SEP-91	ND	mg/Kg	50	TR	2532
105026-003	L8-44	Soil	30-AUG-91	30-AUG-91	04-SEP-91	ND	mg/Kg	50	TR	2532
105026-004	L8-45	Soil	30-AUG-91	30-AUG-91	04-SEP-91	ND	mg/Kg	50	TR	2532

ND = Not Detected at or above Reporting Limit (RL).

## Q C B a t c h R e p o r t

 Client: Aqua Resources  
 Project Name: Ransome  
 Project Number: 90239.3

 Laboratory Login Number: 105026  
 Report Date: 05 September 91

ANALYSIS: Hydrocarbon Oil &amp; Grease (Gravimetric)

QC Batch Number: 2532

## Blank Results

Sample ID	Result	MDL	Units	Method	Date Analyzed
BLANK	ND	50	mg/Kg	SMWW 17:5520EF	04-SEP-91

## Spike/Duplicate Results

Sample ID	Recovery	Method	Date Analyzed
BS	82%	SMWW 17:5520EF	04-SEP-91
BSD	85%	SMWW 17:5520EF	04-SEP-91

		Control Limits
Average Spike Recovery	83%	80% - 120%
Relative Percent Difference	3.7%	< 20%



LABORATORY NUMBER: 105026  
CLIENT: AQUA RESOURCES  
PROJECT ID: 90239.3  
LOCATION: RANSOME

DATE RECEIVED: 08/30/91  
DATE ANALYZED: 09/04/91  
DATE REPORTED: 09/05/91

Total Volatile Hydrocarbons with BTXE in Soils and Wastes  
TVH by California DOHS Method/LUFT Manual October 1989  
BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (mg/Kg)	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)
105026-2	JN-72	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
105026-3	LB-44	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
105026-4	LB-45	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)

ND = Not detected at or above reporting limit; Reporting limit indicated in parentheses.

QA/QC SUMMARY

RPD, %	4
RECOVERY, %	96

LABORATORY NUMBER: 105026  
 CLIENT: AQUA RESOURCES  
 PROJECT ID: 90239.3  
 LOCATION: RANSOME

DATE RECEIVED: 08/30/91  
 DATE EXTRACTED: 09/03/91  
 DATE ANALYZED: 09/04/91  
 DATE REPORTED: 09/05/91

Extractable Petroleum Hydrocarbons in Soils & Wastes  
 California DOHS Method  
 LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (mg /Kg)	DIESEL RANGE (mg /Kg)	REPORTING LIMIT* (mg /Kg)
105026-1	JN-71	ND	ND	1.0
105026-2	JN-72	ND	ND	1.0
105026-3	LB-44	ND	ND	1.0
105026-4	LB-45	ND	ND	1.0

ND = Not Detected at or above reporting limit.

\*Reporting limit applies to all analytes.

QA/QC SUMMARY

RPD, %	14
RECOVERY, %	92

AQUA RESOURCES, INC.

SHIPMENT NO.: 56



CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

PROJECT NAME: RANSOME

DATE 8/30/91

PROJECT NO.: 90239.3

Sample Number	Location (Depth)	Type of Sample		Type of Container	Type of Preservation		Analysis Required
		Material	Method		Temp	Chemical	
JN-71	7'	Soil	Drive	Brass Tube	±4°C		2,3
JN-72	5'	"	"	"	"		1,2,3
LS-43	6½'	"	"	"	"		2*
LB-44	10½'	"	"	"	"		1,2,3
LB-45	10½'	"	"	"	"		1,2,3
LS-46	7½'	"	"	"	"		2*

Total Number of Samples Shipped: 6 Sampler's Signature: [Signature]

Relinquished By: Signature: <u>[Signature]</u> Printed Name: <u>Aaron D. Stessman</u> Company: <u>Aqua Resources</u> Reason: <u>For Analysis</u>	Received By: Signature: <u>[Signature]</u> Printed Name: <u>[Name]</u> Company: <u>[Company]</u>	Date: <u>8/30/91</u>
		Time: <u>1:00</u>
		Date: <u>1/1</u>
		Time: <u></u>

REMARKS:  
 1 = TVHG, BTEX  
 2 = TPHD  
 3 = OFG  
 \* = 48 hr RUSH (OTHERS ARE 5 day) -

Transport / Handling / Storage Requirements:





2030 Addison Street, Suite 500 • Berkeley, California 94704 • 415 540-6954

September 6, 1991

VIA FAX: 415-652-2246

Cynthia Barclay  
Levine-Fricke  
Emeryville, CA

90239

Dear Cindy:

Attached please find the results of the additional area J samples which we agreed would be collected at our meeting on 8/30/91. For your reference, JN-71 neighbors sample JN-50. JN-72 was collected along the north wall of area J roughly between samples JN-51 and JN-58. Following a review of these results and consistent with our agreement at the aforementioned meeting, we are planning to begin the backfilling and compaction of the largest portion of area J on 9/9/91.

Samples in areas K and L indicate that further excavation is necessary in the vicinity of KW-21, KW-25, KW-26 and LS-46. We intend to resume work in these areas on 9/10/91.

Should you have any objections to the initiation of these operations please contact myself or Aaron at 415-540-6954 as soon as possible.

Sincerely yours,  
AQUA RESOURCES INC.

Wojtek Bajsarowicz, R.E.A.  
Senior Environmental Engineer

VB/ans

cc: Ed Webster, Ransome Co.

areaj.ltr



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2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

DATE RECEIVED: 09/10/91  
DATE REPORTED: 09/12/91

LABORATORY NUMBER: 105120

CLIENT: AQUA RESOURCES, INC.

PROJECT ID: 90239.3

LOCATION: RANSOME

RESULTS: SEE ATTACHED

QA/QC APPROVAL  
*[Signature]*  
Final Approval

Berkeley

Wilmington

Los Angeles

LABORATORY NUMBER: 105120  
 CLIENT: AQUA RESOURCES, INC.  
 PROJECT ID: 90239.3  
 LOCATION: RANSOME

DATE RECEIVED: 09/10/91  
 DATE EXTRACTED: 09/11/91  
 DATE ANALYZED: 09/11, 12/91  
 DATE REPORTED: 09/12/91

Extractable Petroleum Hydrocarbons in Soils & Wastes  
 California DOHS Method  
 LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (mg/Kg)	DIESEL RANGE (mg/Kg)	REPORTING LIMIT* (mg/Kg)
105120-1	KS-33	ND	ND	1.0
105120-2	KW-34	ND	ND	1.0
105120-3	KB-35	ND	ND	1.0
105120-4	KB-36	ND	ND	1.0
105120-5	LS-47	ND	ND	1.0
105120-6	BOX-1	ND	1,400	100

ND = Not Detected at or above reporting limit.

\*Reporting limit applies to all analytes.

QA/QC SUMMARY

RPD, %	16
RECOVERY, %	106



LABORATORY NUMBER: 105120  
CLIENT: AQUA RESOURCES, INC.  
PROJECT ID: 90239.3  
LOCATION: RANSOME

DATE RECEIVED: 09/10/91  
DATE ANALYZED: 09/12/91  
DATE REPORTED: 09/12/91

Total Volatile Hydrocarbons with BTXE in Soils and Wastes  
TVH by California DOHS Method/LUFT Manual October 1989  
BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (mg/Kg)	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)
105120.1	KS-33	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
105120.2	KW-34	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
105120.3	KB-35	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
105120.4	KB-36	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
105120.5	LS-47	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)

ND = Not detected at or above reporting limit; Reporting limit indicated in parentheses.

QA/QC SUMMARY

RPD, %	3
RECOVERY, %	86

LABORATORY NUMBER: 105120  
 CLIENT: AQUA RESOURCES, INC.  
 PROJECT ID: 90239.3  
 LOCATION: RANSOME

DATE RECEIVED: 09/10/91  
 DATE ANALYZED: 09/10/91  
 DATE REPORTED: 09/12/91

Total Volatile Hydrocarbons as Gasoline in Solids & Wastes  
 California DOHS Method  
 LUFT Manual October 1989

LAB ID	CLIENT ID	TVH AS GASOLINE (mg/Kg)	REPORTING LIMIT (mg/Kg)
105120-6	BOX-1	44	16

QA/QC SUMMARY

RPD, %	1
RECOVERY, %	96

Client: Aqua Resources

Laboratory Logia Number: 105120

Project Name: Ransome  
Project Number: 90239.3

Report Date: 12 September 91

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric)

METHOD: BMW 17:552(UEF)

Lab ID	Sample ID	Matrix	Sampled	Received	Analyzed	Result	Units	RL	Ana yet	QC Batch
105120-001	KP-33	Soil	10-SEP-91	10-SEP-91	12-SEP-91	ND	mg/Kg	50	TR	2627
105120-002	KP-34	Soil	10-SEP-91	10-SEP-91	12-SEP-91	ND	mg/Kg	50	TR	2627
105120-003	KP-35	Soil	10-SEP-91	10-SEP-91	12-SEP-91	ND	mg/Kg	50	TR	2627
105120-004	KP-36	Soil	10-SEP-91	10-SEP-91	12-SEP-91	ND	mg/Kg	50	TR	2627
105120-006	KP-37	Soil	10-SEP-91	10-SEP-91	12-SEP-91	6000	mg/Kg	50	TR	2627

ND = Not Detected at or above Reporting Limit (RL).

QC Batch Report

Client: Aqua Resources  
 Project Name: Ransome  
 Project Number: 90239.3

Laboratory Login Number: 105120  
 Report Date: 12 September 91

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric)

QC Batch Number: 2627

Blank Results

Sample ID	Result	MDL	Units	Method	Date Analyzed
BLANK	ND	50	mg/Kg	SMWW 17:5520EF	12-SEP-91

Spike/Duplicate Results

Sample ID	Recovery	Method	Date Analyzed
BS	84%	SMWW 17:5520EF	12-SEP-91
BSD	91%	SMWW 17:5520EF	12-SEP-91

Average Spike Recovery 87%  
 Relative Percent Difference 8.2%

Control Limits  
 80% - 120%  
 < 20%



LABORATORY NUMBER: 105120.6  
 CLIENT: AQUA RESOURCES, INC.  
 PROJECT ID: 90239.3  
 LOCATION: RANSOME  
 SAMPLE ID: BOX-1

DATE RECEIVED: 09/10/91  
 DATE ANALYZED: 09/12/91  
 DATE REPORTED: 09/12/91

EPA 8010: Volatile Halocarbons in Soil & Wastes  
 Extraction Method: EPA 8030 - Purge & Trap

Compound	RESULT ug/Kg	REPORTING LIMIT ug/Kg
chloromethane	ND	100
bromomethane	ND	100
vinyl chloride	ND	100
chloroethane	ND	100
methylene chloride	ND	50
trichlorofluoromethane	ND	50
1,1-dichloroethene	ND	50
1,1-dichloroethane	ND	50
cis-1,2-dichloroethene	ND	50
trans-1,2-dichloroethene	ND	50
chloroform	ND	50
freon 113	ND	50
1,2-dichloroethane	ND	50
1,1,1-trichloroethane	ND	50
carbon tetrachloride	ND	50
bromodichloromethane	ND	50
1,2-dichloropropane	ND	50
cis-1,3-dichloropropene	ND	50
trichloroethylene	ND	50
1,1,2-trichloroethane	ND	50
trans-1,3-dichloropropene	ND	50
dibromochloromethane	ND	100
2-chloroethylvinyl ether	ND	50
bromoform	ND	50
tetrachloroethylene	ND	50
1,1,2,2-tetrachloroethane	ND	50
chlorobenzene	ND	50
1,3-dichlorobenzene	ND	50
1,2-dichlorobenzene	ND	50
1,4-dichlorobenzene	ND	50

ND = Not detected at or above reporting limit.



LABORATORY NUMBER: 108120-6  
 CLIENT: AQUA RESOURCES, INC.  
 PROJECT ID: 90239.3  
 LOCATION: RANSOME  
 SAMPLE ID: BOX-1

DATE RECEIVED: 09/10/91  
 DATE ANALYZED: 09/11/12/91  
 DATE REPORTED: 09/12/91

Title 26 Metals in Soils & Wastes  
 Digestion Method: EPA 3050

METAL	RESULT mg/Kg	REPORTING LIMIT mg/Kg	METHOD
Antimony	ND	3.0	EPA 6010
Arsenic	ND	2.5	EPA 7060
Barium	95.1	0.50	EPA 6010
Beryllium	0.10	0.10	EPA 6010
Cadmium	0.69	0.25	EPA 6010
Chromium (total)	13.0	0.50	EPA 6010
Cobalt	8.2	0.90	EPA 6010
Copper	82.6	0.50	EPA 6010
Lead	37.4	3.0	EPA 7420
Mercury	ND	0.10	EPA 7471
Molybdenum	ND	0.70	EPA 6010
Nickel	36.3	1.6	EPA 6010
Selenium	ND	2.5	EPA 7740
Silver	ND	0.50	EPA 6010
Thallium	ND	2.5	EPA 7841
Vanadium	14.9	0.50	EPA 6010
Zinc	225	1.0	EPA 6010

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

RPD, % RECOVERY, %		RPD, % RECOVERY, %	
Antimony	3 83	Mercury	2 95
Arsenic	3 87	Molybdenum	2 98
Barium	<1 95	Nickel	<1 91
Beryllium	<1 93	Selenium	3 96
Cadmium	1 84	Silver	<1 83
Chromium	<1 91	Thallium	<1 95
Cobalt	2 92	Vanadium	2 90
Copper	1 92	Zinc	2 88
Lead	<1 91		

105120

AQUA RESOURCES, INC.



CHAIN OF CUSTODY RECORD

SHIPMEN NO. 58  
PAGE 1 OF 1  
DATE 9/10/91

PROJECT NAME: RANSOME  
PROJECT NO.: 90239.3

Sample Number	Location (Depth)	Type of Sample		Type of Container	Type of Preservation		Analysis Required
		Material	Method		Temp	Chemical	
KS-33	5'	Soil	Drive	Brass Tube	Temp		1, 2, 3 *
KW-34	6 1/2'	"	"	"	"		1, 2, 3 *
KB-35	8 1/2'	"	"	"	"		1, 2, 3 *
KB-36	7 1/2'	"	"	"	"		1, 2, 3 *
LS-47	7'	"	"	"	"		1, 2, 3 *
BOX-1	-	Soil/Sludge	"	"	"		1, 2, 3, 4, 5, 6 *

Total Number of Samples Shipped: 6 Sampler's Signature: [Signature]

Relinquished By: Signature: <u>[Signature]</u> Printed Name: <u>Aaron A. Slessman</u> Company: <u>Aqua Resources</u> Reason: <u>For Analysis</u>	Received By: Signature: <u>[Signature]</u> Printed Name: <u>[Name]</u> Company: <u>[Company]</u>	Date: <u>9/10/91</u> Time: <u> </u>
Relinquished By: Signature: <u>[Signature]</u> Printed Name: <u>[Name]</u> Company: <u>[Company]</u> Reason: <u>[Reason]</u>	Received By: Signature: <u>[Signature]</u> Printed Name: <u>A. Pearce</u> Company: <u>[Company]</u>	Date: <u>9/16/91</u> Time: <u>16:35</u>

REMARKS:

1 = TVHG, BTEX                      ★ = 48 hr Turnaround  
 2 = TEHD  
 3 = O&G  
 4 = TVHG only  
 5 = 8010  
 6 = CAM 17 metals

Transport / Handling / Storage Requirements:

**Levine-Fricke, Inc. Samples**

**CERTIFICATE OF ANALYSIS**

PAGE 1 OF 7

LEVINE-FRICKE  
1900 POWELL ST., 12TH FL.  
EMERYVILLE, CA 94608  
ATTN: CINDY BARCLAY

REPORT DATE: 07/15/91

DATE SAMPLED: 06/28/91

DATE RECEIVED: 06/28/91

CLIENT PROJ. ID: 1649.05  
C.O.C. SERIAL NO: 7701

MED-TOX JOB NO: 9106217

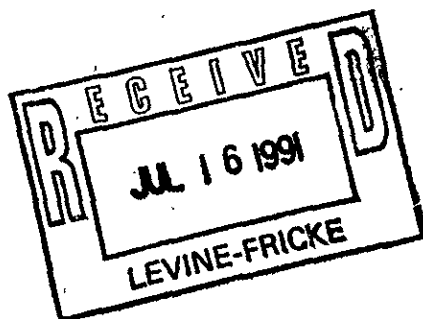
ANALYSIS OF: SOIL SAMPLES

Sample Identification Client Id.    Lab No.	Oil & Grease (mg/kg)	Hydrocarbons (mg/kg)	Extractable Hydrocarbons as Diesel (mg/kg)	Extractable Hydrocarbons as Oil (mg/kg)
DB36-10    01A	ND	ND	ND	ND
DB37-10    02A	40	40	ND	100
BEB-3    05A	ND	ND	ND	ND
Detection Limit	10	10	10	20
Method	5520E	5520F	3550 GCFID	3550 GCFID
Instrument	IR	IR	C	C
Date Extracted:	07/02/91	07/02/91	07/02/91	07/02/91
Date Analyzed:	07/08/91	07/08/91	07/03/91	07/03/91

ND. = Not Detected

*Andrew Bradeen*  
Andrew Bradeen, Manager  
Organic Laboratory

Results FAXed 07/09/91



## LEVINE-FRICKE

CLIENT ID: DB36-10  
CLIENT PROJ. ID: 1649.05  
DATE SAMPLED: UNKNOWN  
DATE RECEIVED: 06/28/91  
REPORT DATE: 07/15/91

MED-TOX LAB NO: 9106217-01A  
MED-TOX JOB NO: 9106217  
DATE ANALYZED: 07/02/91  
INSTRUMENT: H

## BTEX AND HYDROCARBONS (SOIL MATRIX)

METHOD: EPA 8020, 5030 GCFID

	CAS #	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene	71-43-2	ND	1
Toluene	108-88-3	ND	1
Ethylbenzene	100-41-4	ND	1
Xylenes, Total	1330-20-7	ND	3

## PURGEABLE HYDROCARBONS AS:

Gasoline ND mg/kg 0.2 mg/kg

ND = Not Detected

## LEVINE-FRICKE

CLIENT ID: DB37-10  
CLIENT PROJ. ID: 1649.05  
DATE SAMPLED: UNKNOWN  
DATE RECEIVED: 06/28/91  
REPORT DATE: 07/15/91

MED-TOX LAB NO: 9106217-02A  
MED-TOX JOB NO: 9106217  
DATE ANALYZED: 07/02-03/91  
INSTRUMENT: H

## BTEX AND HYDROCARBONS (SOIL MATRIX)

METHOD: EPA 8020, 5030 GCFID

	CAS #	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene	71-43-2	ND	1
Toluene	108-88-3	ND	1
Ethylbenzene	100-41-4	ND	1
Xylenes, Total	1330-20-7	5	3

## PURGEABLE HYDROCARBONS AS:

Gasoline 1 mg/kg 0.2 mg/kg

ND = Not Detected

\* Hydrocarbon pattern does not resemble that of gasoline.

## LEVINE-FRICKE

CLIENT ID: BE8-3  
CLIENT PROJ. ID: 1649.05  
DATE SAMPLED: UNKNOWN  
DATE RECEIVED: 06/28/91  
REPORT DATE: 07/15/91

MED-TOX LAB NO: 9106217-05A  
MED-TOX JOB NO: 9106217  
DATE ANALYZED: 07/02/91  
INSTRUMENT: H

## BTEX AND HYDROCARBONS (SOIL MATRIX)

METHOD: EPA 8020, 5030 GCFID

	CAS #	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene	71-43-2	ND	1
Toluene	108-88-3	ND	1
Ethylbenzene	100-41-4	ND	1
Xylenes, Total	1330-20-7	ND	3

## PURGEABLE HYDROCARBONS AS:

Gasoline ND mg/kg 0.2 mg/kg

ND - Not Detected

QUALITY CONTROL DATA

LEVINE-FRICKE

CLIENT PROJ. ID: 1649.05

MED-TOX JOB NO: 9106217



DATE EXTRACTED: 07/02/91  
DATE ANALYZED: 07/08/91  
SAMPLE SPIKED: 9106217-02A

MED-TOX JOB NO: 9106217  
CLIENT PROJ. ID: 1649.05  
INSTRUMENT: IR

IR DETERMINATION FOR OIL & GREASE/HYDROCARBONS  
MATRIX SPIKE RECOVERY SUMMARY  
SOIL MATRIX

ANALYTE	MS Conc. (mg/kg)	Sample Result (mg/kg)	MS Result (mg/kg)	MSD Result (mg/kg)	Average Percent Recovery	RPD
oil	229	44	256	251	91.5	2.0

CURRENT QC LIMITS (Revised 03/14/91)

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
oil	(53-132)	14

MS = Matrix Spike  
MSD = Matrix Spike Duplicate  
RPD = Relative Percent Difference  
ND = Not Detected

DATE EXTRACTED: 07/02/91  
DATE ANALYZED: 07/03/91  
SAMPLE SPIKED: 9106217-02A

MED-TOX JOB NO: 9106217  
CLIENT PROJ. ID: 1649.05  
INSTRUMENT: C

**MATRIX SPIKE RECOVERY SUMMARY  
TPH EXTRACTABLE SOILS  
METHOD 3550 GCFID  
(SOIL MATRIX; EXTRACTION METHOD)**

ANALYTE	Spike Conc. (mg/kg)	Sample Result (mg/kg)	MS Result (mg/kg)	MSD Result (mg/kg)	Average Percent Recovery	RPD
Diesel	84.8	ND	73.8	83.1	92.5	11.9

**CURRENT QC LIMITS (Revised 05/02/91)**

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
Diesel	(48.8-126.6)	19.1

MS = Matrix Spike  
MSD = Matrix Spike Duplicate  
RPD = Relative Percent Difference  
ND = Not Detected

DATE ANALYZED: 07/03/91  
 SAMPLE SPIKED: 9107009-05A  
 INSTRUMENT: H

MED-TOX JOB NO: 9106217  
 CLIENT PROJ. ID: 1649.05

**MATRIX SPIKE RECOVERY SUMMARY**  
**METHOD TPHBTS**  
**5030 w/GCFID/8020**

ANALYTE	Spike Conc. (ug/kg)	Sample Result (ug/kg)	MS Result (ug/kg)	MSD Result (ug/kg)	Average Percent Recovery	RPD
Benzene	28.6	ND	27.5	27.2	95.6	1.1
Toluene	101	ND	94.8	95.6	94.3	0.8
Hydrocarbons as Gasoline	1030	ND	858	868	83.8	1.2

**CURRENT QC LIMITS (Revised 04/30/91)**

Analyte	Percent Recovery	RPD
Benzene	(78.6-121.5)	14.8
Toluene	(78.7-119.1)	11.8
Gasoline	(60.0-109.7)	15.6

MS = Matrix Spike  
 MSD = Matrix Spike Duplicate  
 RPD = Relative Percent Difference  
 ND = Not Detected

K-4,S-G

9106217

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Project No.: 1649.05  
 Project Name: Yerba Buena  
 Sampler (signature): *Michael Hall*  
 Field Logbook No.:  
 Project Location: Emeryville, CA  
 Date: 6-28-91  
 Serial No.: 7701  
 Samplers: MJS

SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	ANALYSES						REMARKS		
						EPA 601	EPA 624	605 TPH Lead	6070 BTEX	520 BTEX	HOLD		RUSH	
DB36-10	6-28-91		01A	1	Soil	X	X	X	X	X	X			
DB37-10			02A			X	X	X	X		X			
DB38-10			03A			X	X	X	X		X			
BW 7-2.5			04A			X	X	X	X		X		EPA 8015 TPH Gasoline, Diesel	
REB-3	X		05A	X		X	X	X	X		X		EPA 8070 BTEX EPA 5520 E,F Oil & Grease	
						RUSH-5-day TAT								
						Please Phone, Fax results to: Cynthia Barclay								
RELINQUISHED BY: <i>Michael Hall</i>						DATE	6-28-91	TIME	4:15	RECEIVED BY: (Signature)			DATE	TIME
RELINQUISHED BY:						DATE		TIME		RECEIVED BY: (Signature)			DATE	TIME
RELINQUISHED BY:						DATE		TIME		RECEIVED BY: (Signature)			DATE	TIME
METHOD OF SHIPMENT:						DATE		TIME		LAB COMMENTS: <i>June Gillespie</i>			DATE	TIME
Sample Collector: LEVINE-FRICKE 1900 Powell Street, 12th Floor Emeryville, Ca 94608 (415) 652-4500						Analytical Laboratory:			Attn: Denise Harrington Med-Tox, Pleasant Hill, CA					

DOHS CERTIFICATION NO: E772

## CERTIFICATE OF ANALYSIS

PAGE 1 OF 7

LEVINE-FRICKE  
1900 POWELL ST., 12TH FL.  
EMERYVILLE, CA 94608  
ATTN: CINDY BARCLAY


REPORT DATE: 08/30/91  
DATE SAMPLED: 08/14-15/91  
DATE RECEIVED: 08/16/91  
MED-TOX JOB NO: 9108114

CLIENT PROJ. ID: 1649.05  
C.O.C. SERIAL NO: 7189, 7190

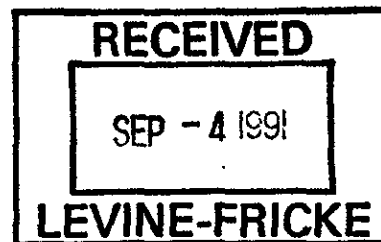
### ANALYSIS OF: SOIL SAMPLES

Sample Identification Client Id.	Lab No.	Oil & Grease (mg/kg)	Hydrocarbons (mg/kg)	Extractable Hydrocarbons as Diesel (mg/kg)
JS-64-7.5	02A	20	ND	ND
JS-68-9	06A	20	ND	ND
LW-28.1-8	09A	20	10	ND
Detection Limit		10	10	10
Method		5520E	5520F	3550 GCFID
Instrument		IR	IR	C
Date Extracted:		08/22/91	08/22/91	08/20/91
Date Analyzed:		08/26/91	08/26/91	08/22/91

ND = Not Detected

  
Andrew Bradeen, Manager  
Organic Laboratory

Results FAXed 08/27/91



## LEVINE-FRICKE

CLIENT ID: JS-64-7.5  
CLIENT PROJ. ID: 1649.05  
DATE SAMPLED: 08/14/91  
DATE RECEIVED: 08/16/91  
REPORT DATE: 08/30/91

MED-TOX LAB NO: 9108114-02A  
MED-TOX JOB NO: 9108114  
DATE ANALYZED: 08/22/91  
INSTRUMENT: H

## BTEX AND HYDROCARBONS (SOIL MATRIX)

METHOD: EPA 8020, 5030 GCFID

	CAS #	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene	71-43-2	ND	1
Toluene	108-88-3	ND	1
Ethylbenzene	100-41-4	ND	1
Xylenes, Total	1330-20-7	ND	3

## PURGEABLE HYDROCARBONS AS:

Gasoline ND mg/kg 0.2 mg/kg

ND = Not Detected

## LEVINE-FRICKE

CLIENT ID: JS-68-9  
CLIENT PROJ. ID: 1649.05  
DATE SAMPLED: 08/14/91  
DATE RECEIVED: 08/16/91  
REPORT DATE: 08/30/91

MED-TOX LAB NO: 9108114-06A  
MED-TOX JOB NO: 9108114  
DATE ANALYZED: 08/22/91  
INSTRUMENT: H

## BTEX AND HYDROCARBONS (SOIL MATRIX)

METHOD: EPA 8020, 5030 GCFID

	CAS #	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene	71-43-2	ND	1
Toluene	108-88-3	ND	1
Ethylbenzene	100-41-4	ND	1
Xylenes, Total	1330-20-7	ND	3

## PURGEABLE HYDROCARBONS AS:

Gasoline ND mg/kg 0.2 mg/kg

ND - Not Detected

## LEVINE-FRICKE

CLIENT ID: LW-28.1-8  
CLIENT PROJ. ID: 1649.05  
DATE SAMPLED: 08/15/91  
DATE RECEIVED: 08/16/91  
REPORT DATE: 08/30/91

MED-TOX LAB NO: 9108114-09A  
MED-TOX JOB NO: 9108114  
DATE ANALYZED: 08/22-23/91  
INSTRUMENT: H

## BTEX AND HYDROCARBONS (SOIL MATRIX)

METHOD: EPA 8020, 5030 GCFID

	CAS #	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene	71-43-2	14	1
Toluene	108-88-3	ND	1
Ethylbenzene	100-41-4	140	1
Xylenes, Total	1330-20-7	93	3

## PURGEABLE HYDROCARBONS AS:

Gasoline 4.0 mg/kg 0.2 mg/kg

ND = Not Detected



QUALITY CONTROL DATA

LEVINE-FRICKE

CLIENT PROJ. ID: 1649.05

MED-TOX JOB NO: 9108114

DATE EXTRACTED: 08/22/91  
DATE ANALYZED: 08/22/91  
SAMPLE SPIKED: 9108163-02A

MED-TOX JOB NO: 9108114  
CLIENT PROJ. ID: 1649.05  
INSTRUMENT: IR

**IR DETERMINATION FOR OIL & GREASE/HYDROCARBONS  
METHOD SPIKE RECOVERY SUMMARY  
SOIL MATRIX**

ANALYTE	MS Conc. (mg/kg)	Sample Result (mg/kg)	MS Result (mg/kg)	MSD Result (mg/kg)	Average Percent Recovery	RPD
Oil	206	ND	206	206	100.0	0.0

**CURRENT QC LIMITS (Revised 08/14/91)**

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
Oil	(66-130)	10.2

MS = Matrix Spike  
MSD = Matrix Spike Duplicate  
RPD = Relative Percent Difference  
ND = Not Detected

DATE EXTRACTED: 08/20/91  
DATE ANALYZED: 08/22/91  
SAMPLE SPIKED: 9108114-06A

MED-TOX JOB NO: 9108114  
CLIENT PROJ. ID: 1649.05  
INSTRUMENT: C

**METHOD SPIKE RECOVERY SUMMARY  
TPH EXTRACTABLE SOILS  
METHOD 3550 GCFID  
(SOIL MATRIX; EXTRACTION METHOD)**

<u>ANALYTE</u>	<u>Spike Conc. (mg/kg)</u>	<u>Sample Result (mg/kg)</u>	<u>MS Result (mg/kg)</u>	<u>MSD Result (mg/kg)</u>	<u>Average Percent Recovery</u>	<u>RPD</u>
Diesel	84.8	ND	95.0	90.2	109.2	5.2

**CURRENT QC LIMITS (Revised 08/15/91)**

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
Diesel	(60.3-116.2)	19.7

MS = Matrix Spike  
MSD = Matrix Spike Duplicate  
RPD = Relative Percent Difference  
ND = Not Detected

DATE ANALYZED: 08/22/91  
 SAMPLE SPIKED: 9108114-06A  
 INSTRUMENT: H

MED-TOX JOB NO: 9108114  
 CLIENT PROJ. ID: 1649.05

**MATRIX SPIKE RECOVERY SUMMARY**  
**METHOD TPHBTS**  
**5030 w/GCFID/8020**

ANALYTE	Spike Conc. (ug/kg)	Sample Result (ug/kg)	MS Result (ug/kg)	MSD Result (ug/kg)	Average Percent Recovery	RPD
Benzene	26.8	ND	27.6	27.3	102.4	1.1
Toluene	115	ND	117	116	101.3	0.9
Hydrocarbons as Gasoline	1038	ND	882	859	83.9	2.6

**CURRENT QC LIMITS (Revised 08/15/91)**

Analyte	Percent Recovery	RPD
Benzene	(81-125)	9.6
Toluene	(83-119)	10
Gasoline	(54-120)	15

MS = Matrix Spike  
 MSD = Matrix Spike Duplicate  
 RPD = Relative Percent Difference  
 ND = Not Detected

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

9108114

Project No.: 1649.05 Field Logbook No.: Date: 8/15/91 Serial No.: 7190  
 Project Name: Yerba Buena Project Location: Emeryville

Sampler (Signature): *William Madson* ANALYSES  
 Hold Rush Samplers: *WEM*

SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE	ANALYSES										REMARKS	
						EPA-SOL	EPA-SOL	META	TOX	552DEF	HOLD	RUSH					
LM-27-6	8/15/91	14:45	07A	1	Soil											X	
LW-28-4		15:00	08A	1												X	
LW-28-1-8		15:45	09A	1			X	X									

RELINQUISHED BY: (Signature) <i>William Madson</i>	DATE 8/15/91	TIME 16:15	RECEIVED BY: (Signature) <i>Kim Jones</i>	DATE 8/16/91	TIME 10:40
RELINQUISHED BY: (Signature) <i>Kim Jones</i>	DATE 8/16/91	TIME 11:20	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature) <i>Ana Gillespie</i>	DATE 8/16/91	TIME 11:20
METHOD OF SHIPMENT:	DATE	TIME	LAB COMMENTS:		

Sample Collector: LEVINE-FRICKE  
 1900 Powell Street, 12th Floor  
 Emeryville, Ca 94608  
 (415) 652-4500

Analytical Laboratory: *Med-TOX*

R-4,S-H

## CHAIN OF CUSTODY / ANALYSES REQUEST FORM

9108114

Project No.: 1649.05			Field Logbook No.:			Date: 8/14/91			Serial No.: 7189		
Project Name: Yerba Buena			Project Location: Emeryville								
Sampler (Signature): Wilton Madison			ANALYSES			SAMPLERS: WEM					
SAMPLES						HOLD			RUSH		
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE	EPA-604	EPA-604	Med 9015/9020	552DEF		REMARKS
JS-63-8	8/14/91	14:10	01A	1	Soil					X	
JS-64-75		14:25	02A	1			X	X			Regular TAT
JB-65-13		14:35	03A	1						X	
JS-66-8		14:40	04A	1						X	
JB-67-13		14:55	05A	1						X	
JS-68-9		15:10	06A	1			X	X			Regular TAT
											Results to Cindy Barclay
RELINQUISHED BY: (Signature) Wilton Madison			DATE	TIME	RECEIVED BY: (Signature) Kim Flores			DATE	TIME	8/16/91 18:40	
RELINQUISHED BY: (Signature) Kim Flores			DATE	TIME	RECEIVED BY: (Signature) -----			DATE	TIME	8/16/91 11:20	
RELINQUISHED BY: (Signature) -----			DATE	TIME	RECEIVED BY: (Signature) Cynthia Gillespie			DATE	TIME	8/16/91 11:20	
METHOD OF SHIPMENT:			DATE	TIME	LAB COMMENTS:						
Sample Collector: LEVINE-FRICKE 1900 Powell Street, 12th Floor Emeryville, Ca 94608 (415) 652-4500					Analytical Laboratory: Med-TOX						

Shipping Copy (White)

Lab Copy (Green)

File Copy (Yellow)

Field Copy (Pink)

FORM NO. 86/COC/ARF

**CERTIFICATE OF ANALYSIS**

PAGE 1 OF 6

LEVINE-FRICKE  
1900 POWELL ST., 12TH FL.  
EMERYVILLE, CA 94608  
ATTN: CINDY BARCLAY

REPORT DATE: 07/05/91  
DATE SAMPLED: 06/21-24/91  
DATE RECEIVED: 06/24/91  
MED-TOX JOB NO: 9106169

CLIENT PROJ. ID: 1649.05  
C.O.C. SERIAL NO: 7767

**ANALYSIS OF: SOIL SAMPLES**

Sample Identification		Oil & Grease	Hydrocarbons	Extractable Hydrocarbons as Diesel	Extractable Hydrocarbons as Oil
Client Id.	Lab No.	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
LB-4-6.5	01A	ND	ND	ND	ND
EB-2-6	04A	4,500	4,300	ND	1,800
Detection Limit		10	10	10	20
Method		5520E	5520F	3550 GCF10	3550 GCF10
Instrument		IR	IR	C	C
Date Extracted:		06/28/91	06/28/91	06/28/91	06/28/91
Date Analyzed:		07/01/91	07/01/91	06/30/91	06/30/91
ND = Not Detected					

*Andrew Bradeen*  
Andrew Bradeen, Manager  
Organic Laboratory



Results FAXed 07/01/91

LEVINE-FRICKE

CLIENT ID: LB-4-6.5  
 CLIENT PROJ. ID: 1649.05  
 DATE SAMPLED: 06/24/91  
 DATE RECEIVED: 06/24/91  
 REPORT DATE: 07/05/91

MED-TOX LAB NO: 9106169-01A  
 MED-TOX JOB NO: 9106169  
 DATE ANALYZED: 06/27/91  
 INSTRUMENT: H

BTEX AND HYDROCARBONS (SOIL MATRIX)

METHOD: EPA 8020, 5030 GCFID

	CAS #	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene	71-43-2	ND	1
Toluene	108-88-3	ND	1
Ethylbenzene	100-41-4	ND	1
Xylenes, Total	1330-20-7	ND	3

PURGEABLE HYDROCARBONS AS:

Gasoline ND mg/kg 0.2 mg/kg

ND = Not Detected





QUALITY CONTROL DATA

LEVINE-FRICKE

CLIENT PROJ. ID: 1649.05

MED-TOX JOB NO: 9106169

DATE EXTRACTED: 06/28/91  
DATE ANALYZED: 07/01/91  
SAMPLE SPIKED: 9106194-04A

MED-TOX JOB NO: 9106169  
CLIENT PROJ. ID: 1649.05  
INSTRUMENT: IR

IR DETERMINATION FOR OIL & GREASE/HYDROCARBONS  
MATRIX SPIKE RECOVERY SUMMARY  
SOIL MATRIX

ANALYTE	MS Conc. (mg/kg)	Sample Result (mg/kg)	MS Result (mg/kg)	MSD Result (mg/kg)	Average Percent Recovery	RPD
Oil	213	ND	203	208	96.5	2.4

CURRENT QC LIMITS (Revised 03/14/91)

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
Oil	(53-132)	14

MS = Matrix Spike  
MSD = Matrix Spike Duplicate  
RPD = Relative Percent Difference  
ND = Not Detected

DATE EXTRACTED: 06/28/91  
DATE ANALYZED: 06/30/91  
SAMPLE SPIKED: 9106105-16A

MED-TOX JOB NO: 9106169  
CLIENT PROJ. ID: 1649.05  
INSTRUMENT: C

**MATRIX SPIKE RECOVERY SUMMARY  
TPH EXTRACTABLE SOILS  
METHOD 3550 GCFID  
(SOIL MATRIX; EXTRACTION METHOD)**

<u>ANALYTE</u>	<u>Spike Conc. (mg/kg)</u>	<u>Sample Result (mg/kg)</u>	<u>MS Result (mg/kg)</u>	<u>MSD Result (mg/kg)</u>	<u>Average Percent Recovery</u>	<u>RPD</u>
Diesel	84.8	250	307	346	90.2	11.9

**CURRENT QC LIMITS (Revised 05/02/91)**

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
Diesel	(48.8-126.6)	19.1

MS = Matrix Spike  
MSD = Matrix Spike Duplicate  
RPD = Relative Percent Difference  
ND = Not Detected

DATE ANALYZED: 06/28/91  
 SAMPLE SPIKED: 9106169-01A  
 INSTRUMENT: H

MED-TOX JOB NO: 9106169  
 CLIENT PROJ. ID: 1649.05

**MATRIX SPIKE RECOVERY SUMMARY**  
**METHOD TPHBTS**  
**5030 w/GCFID/8020**

ANALYTE	Spike Conc. (ug/kg)	Sample Result (ug/kg)	MS Result (ug/kg)	MSD Result (ug/kg)	Average Percent Recovery	RPD
Benzene	25.6	ND	27.5	27.1	106.6	1.5
Toluene	85.5	ND	92.9	91.3	107.7	1.7
Hydrocarbons as Gasoline	1030	ND	777	796	76.4	2.4

**CURRENT QC LIMITS (Revised 04/30/91)**

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
Benzene	(78.6-121.5)	14.8
Toluene	(78.7-119.1)	11.8
Gasoline	(60.0-109.7)	15.6

MS = Matrix Spike  
 MSD = Matrix Spike Duplicate  
 RPD = Relative Percent Difference  
 ND = Not Detected

R-4, S-E

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

9106169

Project No.: 1649.05	Field Logbook No.:	Date: 6/24/91	Serial No.: 7767
Project Name: Yerba Buena	Project Location: Emeryville / Oakland		

Sampler (Signature): *William Frick* ANALYSES  
 Samplers: *WEM*

SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	ANALYSES					HOLD	RUSH	REMARKS
						EPA-601	EPA-624	MUT-615/620	5520EF				
LB-4-65	6/24	9:25	01A	1	Soil		X	X			X	X	
LN-5-25		9:45	02A	1			X	X			X	X	5-Day TAT
EE-1-25		13:30	03A	1							X		
EB-2-6		14:10	04A	1		X	X				X		Results to Cindy Barclay
EW-3-3		14:40	05A	1							X		
ES-4-2		15:00	06A	1							X		
DB-24-55		15:25	07A	1							X		
<del>A'B-1-7</del>		<del>15:50</del>	<del>08A</del>	1							X		
A'B-1-7	6/24	15:50	08A	1							X		
A'E-2-3	6/24	15:50	09A	1							X		
A'N-3-4,5	6/24	16:00	10A	1							X		
A'S-4-2,5	6/24	16:00	11A	1							X		
A'W-5-2,5	6/24	16:05	12A	1							X		
T-1	6/21/91	17:00	13A	1	Soil						X		

RELINQUISHED BY: (Signature) <i>William Frick</i>	DATE: 6/24/91	TIME: 16:30	RECEIVED BY: (Signature) <i>Kim Jones</i>	DATE: 6/24/91	TIME: 4:40
RELINQUISHED BY: (Signature) <i>Kim Jones</i>	DATE: 6/24/91	TIME: 6:05	RECEIVED BY: (Signature) <i>Gina Gillespie</i>	DATE: 6-24-91	TIME: 1805
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT:	DATE	TIME	LAB COMMENTS:		

Sample Collector: LEVINE-FRICKE 1900 Powell Street, 12th Floor Emeryville, Ca 94608 (415) 652-4500	Analytical Laboratory: <i>Med-Tox</i>
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# ANALYTICAL SERVICES

LABORATORY CERTIFICATION NO: E772

## CERTIFICATE OF ANALYSIS

PAGE 1 OF 7

LEVINE-FRICKE  
1900 POWELL ST., 12TH FL.  
EMERYVILLE, CA 94608  
ATTN: CINDY BARCLAY

REPORT DATE: 08/06/91  
DATE SAMPLED: 07/24/91  
DATE RECEIVED: 07/25/91  
MED-TOX JOB NO: 9107151

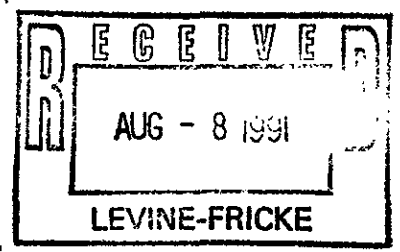
CLIENT PROJ. ID: 1649.05  
C.O.C. SERIAL NO: 7773

### ANALYSIS OF: SOIL SAMPLES

Sample Identification		Oil & Grease	Hydrocarbons	Extractable Hydrocarbons as Diesel	Extractable Hydrocarbons as Oil
Client Id.	Lab No.	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
JS-43-7	01A	30	20	ND	ND
JN-53-9.5	11A	30	30	ND	ND
JN-54-7	12A	10	ND	ND	ND
Detection Limit		10	10	10	20
Method		5520E	5520F	3550 GCFID	3550 GCFID
Instrument		IR	IR	C	C
Date Extracted:		07/30/91	07/30/91	07/30/91	07/30/91
Date Analyzed:		08/01/91	08/01/91	07/30/91	07/30/91

ND = Not Detected

*Stephen L. Walker* FOR  
Andrew Bradeen, Manager  
Organic Laboratory



Results FAXed 08/02/91

LEVINE-FRICKE

CLIENT ID: JS-43-7  
CLIENT PROJ. ID: 1649.05  
DATE SAMPLED: 07/24/91  
DATE RECEIVED: 07/25/91  
REPORT DATE: 08/06/91

MED-TOX LAB NO: 9107151-01A  
MED-TOX JOB NO: 9107151  
DATE ANALYZED: 07/29-31/91  
INSTRUMENT: H

BTEX AND HYDROCARBONS (SOIL MATRIX)

METHOD: EPA 8020, 5030 GCFID.

	CAS #	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene	71-43-2	10	1
Toluene	108-88-3	7	1
Ethylbenzene	100-41-4	2	1
Xylenes, Total	1330-20-7	13	3

PURGEABLE HYDROCARBONS AS:

Gasoline 1 mg/kg 0.2 mg/kg

ND = Not Detected



LEVINE-FRICKE

CLIENT ID: JN-53-9.5  
 CLIENT PROJ. ID: 1649.05  
 DATE SAMPLED: 07/24/91  
 DATE RECEIVED: 07/25/91  
 REPORT DATE: 08/06/91

MED-TOX LAB NO: 9107151-11A  
 MED-TOX JOB NO: 9107151  
 DATE ANALYZED: 07/29-31/91  
 INSTRUMENT: H

BTEX AND HYDROCARBONS (SOIL MATRIX)

METHOD: EPA 8020, 5030 GCFID

	CAS #	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene	71-43-2	44	1
Toluene	108-88-3	15	1
Ethylbenzene	100-41-4	1,900	1
Xylenes, Total	1330-20-7	5,000	3

PURGEABLE HYDROCARBONS AS:

Gasoline 32 mg/kg 0.2 mg/kg

ND = Not Detected

LEVINE-FRICKE

CLIENT ID: JN-54-7  
CLIENT PROJ. ID: 1649.05  
DATE SAMPLED: 07/24/91  
DATE RECEIVED: 07/25/91  
REPORT DATE: 08/06/91

MED-TOX LAB NO: 9107151-12A  
MED-TOX JOB NO: 9107151  
DATE ANALYZED: 07/29-31/91  
INSTRUMENT: H

BTEX AND HYDROCARBONS (SOIL MATRIX)

METHOD: EPA 8020, 5030 GCFID

	CAS #	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene	71-43-2	350	1
Toluene	108-88-3	7	1
Ethylbenzene	100-41-4	320	1
Xylenes, Total	1330-20-7	340	3

PURGEABLE HYDROCARBONS AS:

Gasoline 5.5 mg/kg 0.2 mg/kg

ND = Not Detected

QUALITY CONTROL DATA

LEVINE-FRICKE

CLIENT PROJ. ID: 1649.05

MED-TOX JOB NO: 9107151

DATE EXTRACTED: 07/30/91  
DATE ANALYZED: 08/01/91  
SAMPLE SPIKED: BLANK

MED-TOX JOB NO: 9107151  
CLIENT PROJ. ID: 1649.05  
INSTRUMENT: IR

IR DETERMINATION FOR OIL & GREASE/HYDROCARBONS  
MATRIX SPIKE RECOVERY SUMMARY  
SOIL MATRIX

ANALYTE	MS Conc. (mg/kg)	Sample Result (mg/kg)	MS Result (mg/kg)	MSD Result (mg/kg)	Average Percent Recovery	RPD
Oil	222	ND	233	238	106.1	2.1

CURRENT QC LIMITS (Revised 03/14/91)

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
Oil	(53-132)	14

MS = Matrix Spike  
MSD = Matrix Spike Duplicate  
RPD = Relative Percent Difference  
ND = Not Detected

DATE EXTRACTED: 07/30/91  
DATE ANALYZED: 08/01/91  
SAMPLE SPIKED: BLANKMED-TOX JOB NO: 9107151  
CLIENT PROJ. ID: 1649.05  
INSTRUMENT: C**MATRIX SPIKE RECOVERY SUMMARY  
TPH EXTRACTABLE SOILS  
METHOD 3550 GCFID  
(SOIL MATRIX; EXTRACTION METHOD)**

ANALYTE	Spike Conc. (mg/kg)	Sample Result (mg/kg)	MS Result (mg/kg)	MSD Result (mg/kg)	Average Percent Recovery	RPD
Diesel	84.8	ND	78.1	76.0	90.9	2.7

**CURRENT QC LIMITS (Revised 05/02/91)**

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
Diesel	(48.8-126.6)	19.1

MS = Matrix Spike  
MSD = Matrix Spike Duplicate  
RPD = Relative Percent Difference  
ND = Not Detected

DATE ANALYZED: 07/29/91  
 SAMPLE SPIKED: 9107155-01A  
 INSTRUMENT: H

MED-TOX JOB NO: 9107151  
 CLIENT PROJ. ID: 1649.05

**MATRIX SPIKE RECOVERY SUMMARY**  
**METHOD TPHBTS**  
**5030 w/GCFID/8020**

ANALYTE	Spike Conc. (ug/kg)	Sample Result (ug/kg)	MS Result (ug/kg)	MSD Result (ug/kg)	Average Percent Recovery	RPD
Benzene	28.3	3.5	35.3	36.1	113.8	2.2
Toluene	102	2.9	105.5	107.3	101.5	1.7
Hydrocarbons as Gasoline	1030	ND	778	785	75.9	0.9

**CURRENT QC LIMITS (Revised 04/30/91)**

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
Benzene	(78.6-121.5)	14.8
Toluene	(78.7-119.1)	11.8
Gasoline	(60.0-109.7)	15.6

MS = Matrix Spike  
 MSD = Matrix Spike Duplicate  
 RPD = Relative Percent Difference  
 ND = Not Detected

R-4, S-H

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

9107151

Project No.: 1649.05		Field Logbook No.:		Date: 7/24/91		Serial No.: 7773				
Project Name: Yerba Buena				Project Location: Emeryville						
Sampler (Signature): <i>William Madson</i>				ANALYSES						
SAMPLERS				SAMPLERS: WEM						
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE	ANALYSES		HOLD	RUSH	REMARKS
						EPA-681	EPA-681			
JN-43-7	7/24/91	8:10	01A	1	Soil		X			Regular TAT; Results to Cindy Barclay
JN-44-9		8:55	02A						X	
JN-45-9		9:05	03A						X	
JN-46-8.5		11:20	04A						X	
JN-47-9		11:30	05A						X	
JN-48-8.5		11:45	06A						X	
JE-49-8		13:40	07A						X	
JN-50-7		13:50	08A						X	
JN-51-9.5		14:10	09A						X	
JN-52-7		14:20	10A						X	
JN-53-9.5		14:45	11A			X	X			
JN-54-7		15:05	12A			X	X			
JN-55-9.5		15:15	13A						X	

RELINQUISHED BY: (Signature) <i>William Madson</i>	DATE: 7/25/91	TIME: 7:08	RECEIVED BY: (Signature) <i>Kim Jones</i>	DATE: 7/25/91	TIME: 12:15
RELINQUISHED BY: (Signature) <i>Kim Jones</i>	DATE: 7/25/91	TIME: 1:00	RECEIVED BY: (Signature) <i>Gina Gillespie</i>	DATE: 7-25-91	TIME: 1300
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT:	DATE	TIME	LAB COMMENTS:		
Sample Collector: LEVINE-FRICKE 1900 Powell Street, 12th Floor Emeryville, Ca 94608 (415) 652-4500	Analytical Laboratory: <i>Med+Tox</i>				

LABS CERTIFICATION NO: E772

## CERTIFICATE OF ANALYSIS

PAGE 1 OF 11

LEVINE-FRICKE  
1900 POWELL ST., 12TH FL.  
EMERYVILLE, CA 94608  
ATTN: CINDY BARCLAY

REPORT DATE: 08/07/91

DATE SAMPLED: 07/23/91

DATE RECEIVED: 07/24/91

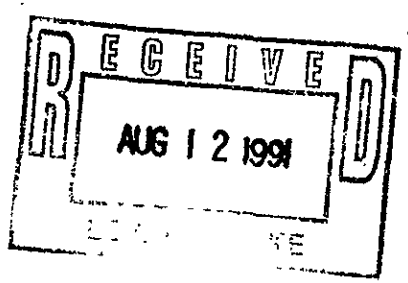
CLIENT PROJ. ID: 1649.05  
C.O.C. SERIAL NO: 7200, 8138

MED-TOX JOB NO: 9107142

### ANALYSIS OF: SOIL SAMPLES

Sample Identification Client Id.    Lab No.	Oil & Grease (mg/kg)	Hydrocarbons (mg/kg)	Extractable Hydrocarbons as Diesel (mg/kg)	Extractable Hydrocarbons as Oil (mg/kg)
JB-12-13.5    01A	ND	ND	ND	ND
JB-20-14     09A	ND	ND	ND	ND
JB-28-13     17A	ND	ND	ND	ND
JB-31-13     20A	ND	ND	ND	ND
JB-32-9      21A	20	ND	ND	ND
JB-35-8.5    24A	ND	ND	ND	ND
JS-41-8.0    30A	20	ND	ND	ND
Detection Limit	10	10	10	20
Method	5520E	5520F	3550 GCFID	3550 GCFID
Instrument	IR	IR	C	C
Date Extracted:	07/31/91	07/31/91	07/26/91	07/26/91
Date Analyzed:	08/01/91	08/01/91	07/26/91	07/26/91
ND = Not Detected				

*Stephen J. Walker* FOR  
Andrew Bradeen, Manager  
Organic Laboratory



Results FAXed 08/02/91



LEVINE-FRICKE

CLIENT ID: JB-12-13.5  
CLIENT PROJ. ID: 1649.05  
DATE SAMPLED: 07/23/91  
DATE RECEIVED: 07/24/91  
REPORT DATE: 08/06/91

MED-TOX LAB NO: 9107142-01A  
MED-TOX JOB NO: 9107142  
DATE ANALYZED: 07/26/91  
INSTRUMENT: H

BTEX AND HYDROCARBONS (SOIL MATRIX)

METHOD: EPA 8020, 5030 GCFID

	CAS #	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene	71-43-2	ND	1
Toluene	108-88-3	1	1
Ethylbenzene	100-41-4	ND	1
Xylenes, Total	1330-20-7	ND	3

PURGEABLE HYDROCARBONS AS:

Gasoline ND mg/kg 0.2 mg/kg

ND = Not Detected

LEVINE-FRICKE

CLIENT ID: JB-20-14  
 CLIENT PROJ. ID: 1649.05  
 DATE SAMPLED: 07/23/91  
 DATE RECEIVED: 07/24/91  
 REPORT DATE: 08/06/91

MED-TOX LAB NO: 9107142-09A  
 MED-TOX JOB NO: 9107142  
 DATE ANALYZED: 07/26-29/91  
 INSTRUMENT: H

BTEX AND HYDROCARBONS (SOIL MATRIX)

METHOD: EPA 8020, 5030 GCFID

	CAS #	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene	71-43-2	2	1
Toluene	108-88-3	2	1
Ethylbenzene	100-41-4	ND	1
Xylenes, Total	1330-20-7	8	3

PURGEABLE HYDROCARBONS AS:

Gasoline ND mg/kg 0.2 mg/kg

ND = Not Detected

LEVINE-FRICKE

CLIENT ID: JB-28-13  
 CLIENT PROJ. ID: 1649.05  
 DATE SAMPLED: 07/23/91  
 DATE RECEIVED: 07/24/91  
 REPORT DATE: 08/06/91

MED-TOX LAB NO: 9107142-17A  
 MED-TOX JOB NO: 9107142  
 DATE ANALYZED: 07/26-29/91  
 INSTRUMENT: H

BTEX AND HYDROCARBONS (SOIL MATRIX)

METHOD: EPA 8020, 5030 GCFID

	CAS #	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene	71-43-2	14	1
Toluene	108-88-3	ND	1
Ethylbenzene	100-41-4	ND	1
Xylenes, Total	1330-20-7	ND	3

PURGEABLE HYDROCARBONS AS:

Gasoline ND mg/kg 0.2 mg/kg

ND = Not Detected

## LEVINE-FRICKE

CLIENT ID: JB-31-13  
CLIENT PROJ. ID: 1649.05  
DATE SAMPLED: 07/23/91  
DATE RECEIVED: 07/24/91  
REPORT DATE: 08/06/91

MED-TOX LAB NO: 9107142-20A  
MED-TOX JOB NO: 9107142  
DATE ANALYZED: 07/29/91  
INSTRUMENT: H

## BTEX AND HYDROCARBONS (SOIL MATRIX)

METHOD: EPA 8020, 5030 GCFID

	CAS #	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene	71-43-2	ND	1
Toluene	108-88-3	ND	1
Ethylbenzene	100-41-4	ND	1
Xylenes, Total	1330-20-7	ND	3

## PURGEABLE HYDROCARBONS AS:

Gasoline ND mg/kg 0.2 mg/kg

ND = Not Detected



LEVINE-FRICKE

CLIENT ID: JB-35-8.5  
 CLIENT PROJ. ID: 1649.05  
 DATE SAMPLED: 07/23/91  
 DATE RECEIVED: 07/24/91  
 REPORT DATE: 08/06/91

MED-TOX LAB NO: 9107142-24A  
 MED-TOX JOB NO: 9107142  
 DATE ANALYZED: 07/29-08/01/91  
 INSTRUMENT: H

BTEX AND HYDROCARBONS (SOIL MATRIX)

METHOD: EPA 8020, 5030 GCFID

	CAS #	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene	71-43-2	ND	1
Toluene	108-88-3	ND	1
Ethylbenzene	100-41-4	3	1
Xylenes, Total	1330-20-7	ND	3

PURGEABLE HYDROCARBONS AS:

Gasoline	ND mg/kg	0.2 mg/kg
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ND = Not Detected

LEVINE-FRICKE

CLIENT ID: JS-41-8.0  
CLIENT PROJ. ID: 1649.05  
DATE SAMPLED: 07/23/91  
DATE RECEIVED: 07/24/91  
REPORT DATE: 08/06/91

MED-TOX LAB NO: 9107142-30A  
MED-TOX JOB NO: 9107142  
DATE ANALYZED: 07/29/91  
INSTRUMENT: H

BTEX AND HYDROCARBONS (SOIL MATRIX)

METHOD: EPA 8020, 5030 GCFID

	CAS #	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene	71-43-2	38	1
Toluene	108-88-3	25	1
Ethylbenzene	100-41-4	100	1
Xylenes, Total	1330-20-7	180	3

PURGEABLE HYDROCARBONS AS:

Gasoline 14 mg/kg 0.2 mg/kg

ND = Not Detected

QUALITY CONTROL DATA

LEVINE-FRICKE

CLIENT PROJ. ID: 1649.05

MED-TOX JOB NO: 9107142



DATE EXTRACTED: 07/31/91  
DATE ANALYZED: 08/01/91  
SAMPLE SPIKED: 9107142-20A

MED-TOX JOB NO: 9107142  
CLIENT PROJ. ID: 1649.05  
INSTRUMENT: IR

IR DETERMINATION FOR OIL & GREASE/HYDROCARBONS  
MATRIX SPIKE RECOVERY SUMMARY  
SOIL MATRIX

ANALYTE	MS Conc. (mg/kg)	Sample Result (mg/kg)	MS Result (mg/kg)	MSD Result (mg/kg)	Average Percent Recovery	RPD
Oil	222	ND	227	227	102	0.0

CURRENT QC LIMITS (Revised 03/14/91)

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
Oil	(53-132)	14

MS = Matrix Spike  
MSD = Matrix Spike Duplicate  
RPD = Relative Percent Difference  
ND = Not Detected

DATE EXTRACTED: 07/26/91  
DATE ANALYZED: 07/26/91  
SAMPLE SPIKED: 9107142-24A

MED-TOX JOB NO: 9107142  
CLIENT PROJ. ID: 1649.05  
INSTRUMENT: C

**MATRIX SPIKE RECOVERY SUMMARY  
TPH EXTRACTABLE SOILS  
METHOD 3550 GCFID  
(SOIL MATRIX; EXTRACTION METHOD)**

<u>ANALYTE</u>	<u>Spike Conc. (mg/kg)</u>	<u>Sample Result (mg/kg)</u>	<u>MS Result (mg/kg)</u>	<u>MSD Result (mg/kg)</u>	<u>Average Percent Recovery</u>	<u>RPD</u>
Diesel	84.8	ND	62.7	73.4	80.2	15.7

**CURRENT QC LIMITS (Revised 05/02/91)**

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
Diesel	(48.8-126.6)	19.1

MS = Matrix Spike  
MSD = Matrix Spike Duplicate  
RPD = Relative Percent Difference  
ND = Not Detected

DATE ANALYZED: 07/26/91  
 SAMPLE SPIKED: 9107142-01A  
 INSTRUMENT: H

MED-TOX JOB NO: 9107142  
 CLIENT PROJ. ID: 1649.05

**MATRIX SPIKE RECOVERY SUMMARY**  
**METHOD TPHBTS**  
**5030 w/GCFID/8020**

ANALYTE	Spike Conc. (ug/kg)	Sample Result (ug/kg)	MS Result (ug/kg)	MSD Result (ug/kg)	Average Percent Recovery	RPD
Benzene	29.0	ND	30.6	30.2	104.8	1.3
Toluene	98.8	1.1	103	102	102.6	1.0
Hydrocarbons as Gasoline	1030	ND	1000	977	96.0	2.3

**CURRENT QC LIMITS (Revised 04/30/91)**

Analyte	Percent Recovery	RPD
Benzene	(78.6-121.5)	14.8
Toluene	(78.7-119.1)	11.8
Gasoline	(60.0-109.7)	15.6

MS = Matrix Spike  
 MSD = Matrix Spike Duplicate  
 RPD = Relative Percent Difference  
 ND = Not Detected

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

R-15-J

9107142 Page 1 of 2

Project No.: 1649.05	Field Logbook No.:	Date: 7/24/91	Serial No.: 7200
Project Name: Yerba Buena	Project Location: Emeryville		

SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE	ANALYSES						HOLD	RUSH	REMARKS
						EPA-881	EPA-821	MSD 8015/8010	5520EE					
JB-12-13	7/23/91	7:55	01A	1	Soil			X	X					
JB-13-13.5		8:10	02A	1								X		Regular TAT Results to Cindy Barclay
JB-14-14		8:15	03A	1								X		
JB-15-14		8:25	04A	1								X		
JB-16-14		8:35	05A	1								X		
JB-17-14		8:45	06A	1								X		
JB-18-14		8:55	07A	1								X		
JB-19-14		9:05	08A	1								X		
JB-20-14		9:20	09A	1			X	X						
JB-21-14		9:25	10A	1								X		
JB-22-14		9:45	11A	1								X		
JB-23-14		10:00	12A	1								X		
JB-24-14		10:10	13A	1								X		
JB-25-14		11:15	14A	1								X		
JB-26-14		11:20	15A	1								X		
JB-27-13		11:30	No A	1								X		

RELINQUISHED BY: (Signature) <i>Dr. Kevin Madison</i>	DATE	TIME	RECEIVED BY: (Signature) <i>Dr. K. A.</i>	DATE	TIME
RELINQUISHED BY: (Signature) <i>Dr. K. A.</i>	7/24/91	7:30	RECEIVED BY: (Signature) <i>Kim Flores</i>	7/24/91	7:30
RELINQUISHED BY: (Signature) <i>Kim Flores</i>	7/24/91	10:00	RECEIVED BY: (Signature) <i>Anna Gillespie</i>	7/24/91	10:05
METHOD OF SHIPMENT:	DATE	TIME	LAB COMMENTS:	DATE	TIME
				7-24-91	11:20

Sample Collector: LEVINE-FRICKE 1900 Powell Street, 12th Floor Emeryville, Ca 94608 (415) 652-4500	Analytical Laboratory: <i>Med-TOX</i>
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CHAIN OF CUSTODY / ANALYSES REQUEST FORM

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Project No.: Yerbu Buena Field Logbook No.: Date: 7/24/91 Serial No.: 8138  
 Project Name: 1649.05 Project Location: Emeryville

Sampler (Signature): [Signature] ANALYSES  
 Hold RUSH Samplers: WEM

SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	ANALYSES				HOLD	RUSH	REMARKS
						ERA-601	ERA-624	70215	520FF			
JB-28-13	7/23/91	11:45	17A	1	Soil		X	X				Regular TAT Results to Cindy Barclay
JB-29-13		11:55	18A						X			
JB-30-13		12:05	19A						X			
JB-31-13		12:20	20A			X	X					
JB-32-9		13:20	21A			X	X					
JB-33-9		13:25	22A						X			
JB-34-9		13:35	23A						X			
JB-35-8.5		13:45	24A			X	X					
JB-36-8.5		13:55	25A						X			
JW-37-10		14:20	26A						X			
JW-38-9		14:35	27A						X			
JS-39-7.5		14:50	28A						X			
JS-40-7.5		15:00	29A						X			
JS-41-8.0		15:15	30A			X	X					
JS-42-7.0		15:25	31A						X			

RELINQUISHED BY: [Signature] DATE: 7/24/91 TIME: 7:30	RECEIVED BY: [Signature] DATE: 7/24/91 TIME: 7:50
RELINQUISHED BY: [Signature] DATE: 7/24/91 TIME: 10:00	RECEIVED BY: [Signature] DATE: 7/24/91 TIME: 10:05
RELINQUISHED BY: [Signature] DATE: 7/24/91 TIME: 11:20	RECEIVED BY: [Signature] DATE: 7/24/91 TIME: 11:20
METHOD OF SHIPMENT:	LAB COMMENTS:

Sample Collector: LEVINE-FRICKE  
 1900 Powell Street, 12th Floor  
 Emeryville, Ca 94608  
 (415) 652-4500

Analytical Laboratory:  
 Med-TOX

**CERTIFICATE OF ANALYSIS**

PAGE 1 OF 6

LEVINE-FRICKE  
1900 POWELL ST., 12TH FL.  
EMERYVILLE, CA 94608  
ATTN: CINDY BARCLAY

REPORT DATE: 07/10/91

DATE SAMPLED: 06/27/91

DATE RECEIVED: 06/28/91

CLIENT PROJ. ID: 1649.05  
C.O.C. SERIAL NO: 7700

MED-TOX JOB NO: 9106209

**ANALYSIS OF: SOIL SAMPLES**

Sample Identification		Oil & Grease (mg/kg)	Hydrocarbons (mg/kg)	Extractable Hydrocarbons as Diesel (mg/kg)	Extractable Hydrocarbons as Oil (mg/kg)
Client Id.	Lab No.				
D632-4.5	05A	ND	ND	ND	ND
D835-9.5	08A	ND	ND	ND	ND
Detection Limit		10	10	10	20
Method		5520E	5520F	3550 GCFID	3550 GCFID
Instrument		IR	IR	C	C
Date Extracted:		07/02/91	07/02/91	07/02/91	07/02/91
Date Analyzed:		07/08/91	07/08/91	07/03/91	07/03/91

ND = Not Detected

*Andrew Bradeen*  
Andrew Bradeen, Manager  
Organic Laboratory

Results FAXed 07/09/91



## LEVINE-FRICKE

CLIENT ID: DW32-4.5  
CLIENT PROJ. ID: 1649.05  
DATE SAMPLED: 06/27/91  
DATE RECEIVED: 06/28/91  
REPORT DATE: 07/10/91

MED-TOX LAB NO: 9106209-05A  
MED-TOX JOB NO: 9106209  
DATE ANALYZED: 07/02/91  
INSTRUMENT: H

## BTEX AND HYDROCARBONS (SOIL MATRIX)

METHOD: EPA 8020, 5030 GCFID

	CAS #	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene	71-43-2	ND	1
Toluene	108-88-3	ND	1
Ethylbenzene	100-41-4	ND	1
Xylenes, Total	1330-20-7	ND	3

## PURGEABLE HYDROCARBONS AS:

Gasoline ND mg/kg 0.2 mg/kg

ND = Not Detected

LEVINE-FRICKE

CLIENT ID: DB35-9.5  
CLIENT PROJ. ID: 1649.05  
DATE SAMPLED: 06/27/91  
DATE RECEIVED: 06/28/91  
REPORT DATE: 07/10/91

MED-TOX LAB NO: 9106209-08A  
MED-TOX JOB NO: 9106209  
DATE ANALYZED: 07/02-03/91  
INSTRUMENT: H

BTEX AND HYDROCARBONS (SOIL MATRIX)

METHOD: EPA 8020, 5030 GCFID

	CAS #	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene	71-43-2	ND	5
Toluene	108-88-3	7	5
Ethylbenzene	100-41-4	ND	5
Xylenes, Total	1330-20-7	100	20

PURGEABLE HYDROCARBONS AS:

Gasoline\* 4 mg/kg 1 mg/kg

ND = Not Detected

\* Hydrocarbon pattern does not resemble that of gasoline.



QUALITY CONTROL DATA

LEVINE-FRICKE

CLIENT PROJ. ID: 1649.05

MED-TOX JOB NO: 9106209

DATE EXTRACTED: 07/02/91  
DATE ANALYZED: 07/08/91  
SAMPLE SPIKED: 9106217-02A

MED-TOX JOB NO: 9106209  
CLIENT PROJ. ID: 1649.05  
INSTRUMENT: IR

IR DETERMINATION FOR OIL & GREASE/HYDROCARBONS  
MATRIX SPIKE RECOVERY SUMMARY  
SOIL MATRIX

ANALYTE	MS Conc. (mg/kg)	Sample Result (mg/kg)	MS Result (mg/kg)	MSD Result (mg/kg)	Average Percent Recovery	RPD
oil	229	44	256	251	91.5	2.0

CURRENT QC LIMITS (Revised 03/14/91)

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
oil	(53-132)	14

MS = Matrix Spike  
MSD = Matrix Spike Duplicate  
RPD = Relative Percent Difference  
ND = Not Detected

MS = Matrix Spike  
 MSD = Matrix Spike Duplicate  
 RPD = Relative Percent Difference  
 ND = Not Detected

Analyte                      Percent Recovery                      RPD  
 Benzene                      (78.6-121.5)                      14.8  
 Toluene                      (78.7-119.1)                      11.8  
 Gasoline                      (60.0-109.7)                      15.6

CURRENT QC LIMITS (Revised 04/30/91)

ANALYTE	Spike Conc. (ug/kg)	Sample Result (ug/kg)	MS Result (ug/kg)	HSD Result (ug/kg)	Average Percent Recovery	RPD
Benzene	26.7	ND	27.5	28.7	105.2	4.2
Toluene	91.3	ND	94.0	98.7	105.5	4.9
Hydrocarbons as Gasoline	1030	ND	846	898	84.7	6.0

MATRIX SPIKE RECOVERY SUMMARY  
 METHOD TPHBTS  
 5030 w/GCFID/8020

DATE ANALYZED: 07/02/91  
 SAMPLE SPIKED: 9106194-01A  
 INSTRUMENT: H  
 MED-TOX JOB NO: 9106209  
 CLIENT PROJ. ID: 1649.05



MS = Matrix Spike  
 MSD = Matrix Spike Duplicate  
 RPD = Relative Percent Difference  
 ND = Not Detected

ANALYTE Diesel  
 Percent Recovery (48.8-126.6)  
 RPD 19.1

CURRENT QC LIMITS (Revised 05/02/91)

ANALYTE	spike Conc. (mg/kg)	Sample Result (mg/kg)	MS Result (mg/kg)	MSD Result (mg/kg)	Average Percent Recovery	RPD
Diesel	84.8	ND	73.8	83.1	92.5	11.9

MATRIX SPIKE RECOVERY SUMMARY  
 TPH EXTRACTABLE SOILS  
 METHOD 3550 GC/FID  
 (SOIL MATRIX; EXTRACTION METHOD)

DATE EXTRACTED: 07/02/91  
 DATE ANALYZED: 07/03/91  
 SAMPLE SPIKED: 9106217-02A

MED-TOX JOB NO: 9106209  
 CLIENT PROJ. ID: 1649.05  
 INSTRUMENT: C

**CHAIN OF CUSTODY / ANALYSES REQUEST FORM**

9106209

Project No.: <i>Verba Buena - 1649.05</i>	Field Logbook No.:	Date: <i>6-27-91</i>	Serial No.: <b>7700</b>
Project Name: <i>Verba Buena</i>	Project Location: <i>Emeryville, CA</i>		

SAMPLER (Signature): <i>Michael Stoll</i>					ANALYSES								SAMPLERS: <i>MJS</i>	
SAMPLES					EPA 601	EPA 624	8015 TPH Gas & Diesel	8020 BTEX	5520 E.F. Oil & Grease	01 + Grease	HOLD	RUSH	REMARKS	
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE									
<i>DE 28-6</i>	<i>6-27-91</i>		<i>01 A</i>	<i>1</i>	<i>Soil</i>			<i>X</i>	<i>X</i>	<i>X</i>		<i>X</i>	<i>X</i>	
<i>DN 29-4.5</i>			<i>02 A</i>					<i>X</i>	<i>X</i>	<i>X</i>		<i>X</i>	<i>X</i>	
<i>DN 30-6.5</i>			<i>03 A</i>					<i>X</i>	<i>X</i>	<i>X</i>		<i>X</i>	<i>X</i>	<i>8015 - TPH - Gas + Diesel</i>
<i>DN 31-5</i>			<i>04 A</i>					<i>X</i>	<i>X</i>	<i>X</i>		<i>X</i>	<i>X</i>	<i>8020 - BTEX</i>
<i>DW 32-4.5</i>	<i>analyze</i>		<i>05 A</i>					<i>*</i>	<i>*</i>	<i>*</i>		<i>*</i>	<i>*</i>	<i>5520 - E.F. oil + grease</i>
<i>DW 33-5</i>			<i>06 A</i>					<i>X</i>	<i>X</i>	<i>X</i>		<i>X</i>	<i>X</i>	
<i>DB 34-8.5</i>			<i>07 A</i>					<i>X</i>	<i>X</i>	<i>X</i>		<i>X</i>	<i>X</i>	
<i>DB 35-9.5</i>	<i>analyze</i>		<i>08 A</i>	<i>X</i>	<i>X</i>			<i>*</i>	<i>*</i>	<i>*</i>		<i>*</i>	<i>*</i>	
														<i>RUSH 5-day TAT on samples analyzed</i>
														<i>Hold samples until notified by Cindy Barclay of Levine-Fricke</i>
														<i>Please Phone + Fax results to: Cindy Barclay</i>

RELINQUISHED BY: (Signature) <i>Michael Stoll</i>	DATE <i>6/28/91</i>	TIME <i>10:10</i>	RECEIVED BY: (Signature) <i>Kim Flores</i>	DATE <i>6/28/91</i>	TIME <i>10:10</i>
RELINQUISHED BY: (Signature) <i>Kim Flores</i>	DATE <i>6/28/91</i>	TIME <i>10:55</i>	RECEIVED BY: (Signature) <i>Gina Gillespie</i>	DATE <i>6-28-91</i>	TIME <i>10:55</i>
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT:	DATE	TIME	LAB COMMENTS:		
Sample Collector: <b>LEVINE-FRICKE</b> 1900 Powell Street, 12th Floor Emeryville, Ca 94608 (415) 652-4500			Analytical Laboratory: <i>Med-Tox, Pleasant Hill</i>		

**CERTIFICATE OF ANALYSIS**

PAGE 1 OF 7

LEVINE-FRICKE  
1900 POWELL ST., 12TH FL.  
EMERYVILLE, CA 94608  
ATTN: CINDY BARCLAY

REPORT DATE: 06/26/91

DATE SAMPLED: 06/21/91

DATE RECEIVED: 06/21/91

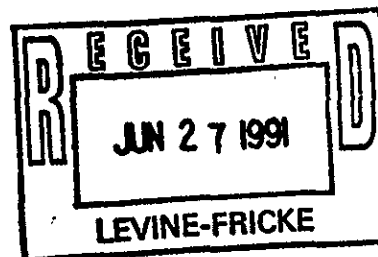
CLIENT PROJ. ID: 1649.05  
C.O.C. SERIAL NO: 7768

MED-TOX JOB NO: 9106158

**ANALYSIS OF: SOIL SAMPLES**

Sample Identification Client Id.      Lab No.	Oil & Grease (mg/kg)	Hydrocarbons (mg/kg)	Extractable Hydrocarbons as Diesel (mg/kg)	Extractable Hydrocarbons as Oil (mg/kg)
DN-19-5.5      01A	10	ND	ND	ND
DN-23-4.5      05A	20	ND	ND	ND
LU-3-5          08A	ND	ND	ND	ND
Detection Limit	10	10	10	20
Method	5520E	5520F	3550 GCFID	3550 GCFID
Instrument	IR	IR	C	C
Date Extracted:	06/24/91	06/24/91	06/24/91	06/24/91
Date Analyzed:	06/25/91	06/25/91	06/24/91	06/24/91

ND = Not Detected



*Andrew Bradeen*  
Andrew Bradeen, Manager  
Organic Laboratory

Results FAXed 06/25/91

## LEVINE-FRICKE

CLIENT ID: DB-19-5.5  
CLIENT PROJ. ID: 1649.05  
DATE SAMPLED: 06/21/91  
DATE RECEIVED: 06/21/91  
REPORT DATE: 06/26/91

MED-TOX LAB NO: 9106158-01A  
MED-TOX JOB NO: 9106158  
DATE ANALYZED: 06/21/91  
INSTRUMENT: H

## BTEX AND HYDROCARBONS (SOIL MATRIX)

METHOD: EPA 8020, 5030 GCFID

	CAS #	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene	71-43-2	ND	1
Toluene	108-88-3	ND	1
Ethylbenzene	100-41-4	ND	1
Xylenes, Total	1330-20-7	ND	3

## PURGEABLE HYDROCARBONS AS:

Gasoline ND mg/kg 0.2 mg/kg

ND - Not Detected

## LEVINE-FRICKE

CLIENT ID: DN-23-4.5  
CLIENT PROJ. ID: 1649.05  
DATE SAMPLED: 06/21/91  
DATE RECEIVED: 06/21/91  
REPORT DATE: 06/26/91

MED-TOX LAB NO: 9106158-05A  
MED-TOX JOB NO: 9106158  
DATE ANALYZED: 06/21/91  
INSTRUMENT: H

## BTEX AND HYDROCARBONS (SOIL MATRIX)

METHOD: EPA 8020, 5030 GCFID

	CAS #	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene	71-43-2	ND	5
Toluene	108-88-3	10	5
Ethylbenzene	100-41-4	9	5
Xylenes, Total	1330-20-7	60	20
PURGEABLE HYDROCARBONS AS:			
Gasoline *		10 mg/kg	1 mg/kg

ND - Not Detected

\* Sample hydrocarbon pattern does not resemble that of gasoline.



LEVINE-FRICKE

CLIENT ID: LW-3-5  
 CLIENT PROJ. ID: 1649.05  
 DATE SAMPLED: 06/21/91  
 DATE RECEIVED: 06/21/91  
 REPORT DATE: 06/26/91

MED-TOX LAB NO: 9106158-08A  
 MED-TOX JOB NO: 9106158  
 DATE ANALYZED: 06/21/91  
 INSTRUMENT: H

BTEX AND HYDROCARBONS (SOIL MATRIX)

METHOD: EPA 8020, 5030 GCFID

	CAS #	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene	71-43-2	ND	1
Toluene	108-88-3	ND	1
Ethylbenzene	100-41-4	ND	1
Xylenes, Total	1330-20-7	ND	3
PURGEABLE HYDROCARBONS AS:			
Gasoline		ND mg/kg	0.2 mg/kg

ND = Not Detected

**QUALITY CONTROL DATA**

**LEVINE-FRICKE**

**CLIENT PROJ. ID: 1649.05**

**MED-TOX JOB NO: 9106158**

DATE EXTRACTED: 06/24/91  
DATE ANALYZED: 06/25/91  
SAMPLE SPIKED: 9106146-03A

MED-TOX JOB NO: 9106158  
CLIENT PROJ. ID: 1649.05  
INSTRUMENT: IR

**IR DETERMINATION FOR OIL & GREASE/HYDROCARBONS  
MATRIX SPIKE RECOVERY SUMMARY  
SOIL MATRIX**

ANALYTE	MS Conc. (mg/kg)	Sample Result (mg/kg)	MS Result (mg/kg)	MSD Result (mg/kg)	Average Percent Recovery	RPD
oil	229	ND	223	218	96.3	2.3

**CURRENT QC LIMITS (Revised 03/14/91)**

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
oil	(53-132)	14

MS = Matrix Spike  
MSD = Matrix Spike Duplicate  
RPD = Relative Percent Difference  
ND = Not Detected

DATE EXTRACTED: 06/24/91  
DATE ANALYZED: 06/24/91  
SAMPLE SPIKED: 9106146-03A

MED-TOX JOB NO: 9106158  
CLIENT PROJ. ID: 1649.05  
INSTRUMENT: C

**MATRIX SPIKE RECOVERY SUMMARY  
TPH EXTRACTABLE SOILS  
METHOD 3550 GCFID  
(SOIL MATRIX; EXTRACTION METHOD)**

<u>ANALYTE</u>	<u>Spike Conc. (mg/kg)</u>	<u>Sample Result (mg/kg)</u>	<u>MS Result (mg/kg)</u>	<u>MSD Result (mg/kg)</u>	<u>Average Percent Recovery</u>	<u>RPD</u>
Diesel	84.8	ND	75.5	77.9	90.4	1.6

**CURRENT QC LIMITS (Revised 05/02/91)**

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
Diesel	(48.8-126.6)	19.1

MS = Matrix Spike  
MSD = Matrix Spike Duplicate  
RPD = Relative Percent Difference  
ND = Not Detected

DATE ANALYZED: 06/21/91  
SAMPLE SPIKED: 9106146-03A  
INSTRUMENT: HMED-TOX JOB NO: 9106158  
CLIENT PROJ. ID: 1649.05**MATRIX SPIKE RECOVERY SUMMARY  
METHOD TPHBTS  
5030 w/GCFID/8020**

ANALYTE	Spike Conc. (ug/kg)	Sample Result (ug/kg)	MS Result (ug/kg)	MSD Result (ug/kg)	Average Percent Recovery	RPD
Benzene	29.1	ND	28.8	32.2	104.8	11.1
Toluene	100	ND	97.8	109	103.4	10.8
Hydrocarbons as Gasoline	1030	ND	952	1080	98.6	12.6

**CURRENT QC LIMITS (Revised 04/30/91)**

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
Benzene	(78.6-121.5)	14.8
Toluene	(78.7-119.1)	11.8
Gasoline	(60.0-109.7)	15.6

MS = Matrix Spike  
MSD = Matrix Spike Duplicate  
RPD = Relative Percent Difference  
ND = Not Detected

QUALITY CONTROL DATA

LEVINE-FRICKE

CLIENT PROJ. ID: 1649.05

MED-TOX JOB NO: 9109056

DATE EXTRACTED: 09/17/91  
DATE ANALYZED: 09/18/91  
SAMPLE SPIKED: 9109090-01A

MED-TOX JOB NO: 9109056  
CLIENT PROJ. ID: 1649.05  
INSTRUMENT: IR

IR DETERMINATION FOR OIL & GREASE/HYDROCARBONS  
METHOD SPIKE RECOVERY SUMMARY  
SOIL MATRIX

ANALYTE	MS Conc. (mg/kg)	Sample Result (mg/kg)	MS Result (mg/kg)	MSD Result (mg/kg)	Average Percent Recovery	RPD
oil	217	ND	215	208	97.5	3.3

CURRENT QC LIMITS (Revised 08/14/91)

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
oil	(66-130)	10

MS = Matrix Spike  
MSD = Matrix Spike Duplicate  
RPD = Relative Percent Difference  
ND = Not Detected

DATE EXTRACTED: 09/13/91  
DATE ANALYZED: 09/16/91  
SAMPLE SPIKED: 9109056-06A

MED-TOX JOB NO: 9109056  
CLIENT PROJ. ID: 1649.05  
INSTRUMENT: C

**METHOD SPIKE RECOVERY SUMMARY  
TPH EXTRACTABLE SOILS  
METHOD 3550 GCFID  
(SOIL MATRIX; EXTRACTION METHOD)**

ANALYTE	Spike Conc. (ng/kg)	Sample Result (ng/kg)	MS Result (ng/kg)	MSD Result (ng/kg)	Average Percent Recovery	RPD
Diesel	84.8	ND	77.7	78.8	92.3	1.4

**CURRENT QC LIMITS (Revised 08/15/91)**

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
Diesel	(60.3-116.2)	19.7

MS = Matrix Spike  
MSD = Matrix Spike Duplicate  
RPD = Relative Percent Difference  
ND = Not Detected



DATE ANALYZED: 09/12/91  
 SAMPLE SPIKED: 9109056-06A  
 INSTRUMENT: H

MED-TOX JOB NO: 9109056  
 CLIENT PROJ. ID: 1649.05

**MATRIX SPIKE RECOVERY SUMMARY  
 METHOD TPHBTS  
 5030 w/GCFID/8020**

ANALYTE	Spike Conc. (ug/kg)	Sample Result (ug/kg)	MS Result (ug/kg)	MSD Result (ug/kg)	Average Percent Recovery	RPD
Benzene	27.0	ND	26.4	27.1	99.1	2.6
Toluene	111	ND	108	111	98.6	2.7
Hydrocarbons as Gasoline	1040	ND	1050	1030	100.0	1.9

**CURRENT QC LIMITS (Revised 08/15/91)**

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
Benzene	(81-125)	9.6
Toluene	(83-119)	10
Gasoline	(54-120)	15

MS = Matrix Spike  
 MSD = Matrix Spike Duplicate  
 RPD = Relative Percent Difference  
 ND = Not Detected

K-515-B

### CHAIN OF CUSTODY / ANALYSES REQUEST FORM

9109054

Project No.: 1649.05	Field Logbook No.:	Date: 9/10/91	Serial No.: 7744
Project Name: Yerpo Buena	Project Location: Emeryville / Oakland		

SAMPLER (Signature):						ANALYSES						SAMPLERS: W-E-M	
SAMPLES												REMARKS	
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE	EPA 601	EPA 624	Med. 825/824	TSZEE	HOLD	RUSH		
Box-1	9/10/91	11:50	01A	1	Sz1					X			
KS-33-5		13:00	02A				X	X				Residual TAT	
KW-34-6.5		13:10	03A							X			
KB-35-9.5		13:15	04A							X			
KB-36-7.5		13:25	05A							X			
LS-47-7		14:15	06A				X	X				Residual to study nearby	

RELINQUISHED BY: (Signature) <i>N. Levine</i>	DATE 9/10/91	TIME 17:30	RECEIVED BY: (Signature) <i>Kim Jones</i>	DATE 9/10/91	TIME 10:25
RELINQUISHED BY: (Signature) <i>Kim Jones</i>	DATE 9/11/91	TIME 10:55	RECEIVED BY: (Signature) <i>Janie Gillespie</i>	DATE 9/11/91	TIME 10:55
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT:	DATE	TIME	LAB COMMENTS:		

Sample Collector: LEVINE-FRICKE 1900 Powell Street, 12th Floor Emeryville, Ca 94608 (415) 652-4500	Analytical Laboratory: <i>Med-Tx</i>
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DOHS CERTIFICATION NO: E772

## CERTIFICATE OF ANALYSIS

PAGE 1 OF 7

LEVINE-FRICKE  
1900 POWELL ST., 12TH FL.  
EMERYVILLE, CA 94608  
ATTN: CINDY BARCLAY

REPORT DATE: 09/09/91

DATE SAMPLED: 08/23/91

DATE RECEIVED: 08/26/91

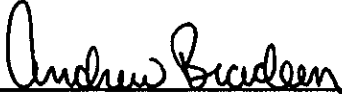
CLIENT PROJ. ID: 1649.05  
C.O.C. SERIAL NO: 7867

MED-TOX JOB NO: 9108197

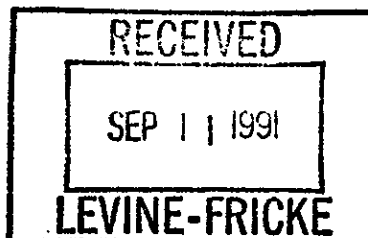
### ANALYSIS OF: SOIL SAMPLES

Sample Identification Client Id.      Lab No.	Oil & Grease (mg/kg)	Hydrocarbons (mg/kg)	Extractable Hydrocarbons as Diesel (mg/kg)
LS-36-4      03A	30	ND	ND
LB-37-7      04A	3,100	3,000	2,800
LE-40-4.5    07A	ND	ND	ND
Detection Limit	10	10	10
Method	5520E	5520F	3550 GCFID
Instrument	IR	IR	C
Date Extracted:	09/03/91	09/03/91	09/04/91
Date Analyzed:	09/04/91	09/04/91	09/04/91

ND = Not Detected

  
Andrew Bradeen, Manager  
Organic Laboratory

Results FAXed 09/05/91



LEVINE-FRICKE

CLIENT ID: LS-36-4  
 CLIENT PROJ. ID: 1649.05  
 DATE SAMPLED: 08/23/91  
 DATE RECEIVED: 08/26/91  
 REPORT DATE: 09/09/91

MED-TOX LAB NO: 9108197-03A  
 MED-TOX JOB NO: 9108197  
 DATE ANALYZED: 08/29/91  
 INSTRUMENT: H

BTEX AND HYDROCARBONS (SOIL MATRIX)

METHOD: EPA 8020, 5030 GCFID

	CAS #	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene	71-43-2	ND	1
Toluene	108-88-3	ND	1
Ethylbenzene	100-41-4	ND	1
Xylenes, Total	1330-20-7	ND	3

PURGEABLE HYDROCARBONS AS:

Gasoline	ND mg/kg	0.2 mg/kg
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ND = Not Detected

## LEVINE-FRICKE

CLIENT ID: LB-37-7  
CLIENT PROJ. ID: 1649.05  
DATE SAMPLED: 08/23/91  
DATE RECEIVED: 08/26/91  
REPORT DATE: 09/09/91

MED-TOX LAB NO: 9108197-04A  
MED-TOX JOB NO: 9108197  
DATE ANALYZED: 08/29/91  
INSTRUMENT: H

## BTEX AND HYDROCARBONS (SOIL MATRIX)

METHOD: EPA 8020, 5030 GCFID

	CAS #	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene	71-43-2	ND	1
Toluene	108-88-3	1	1
Ethylbenzene	100-41-4	3	1
Xylenes, Total	1330-20-7	20	3
PURGEABLE HYDROCARBONS AS:			
Gasoline		ND mg/kg	1* mg/kg

ND - Not Detected

\* Elevated detection limit due to the presence of diesel.

## LEVINE-FRICKE

CLIENT ID: LE-40-4.5  
CLIENT PROJ. ID: 1649.05  
DATE SAMPLED: 08/23/91  
DATE RECEIVED: 08/26/91  
REPORT DATE: 09/09/91

MED-TOX LAB NO: 9108197-07A  
MED-TOX JOB NO: 9108197  
DATE ANALYZED: 08/29/91  
INSTRUMENT: H

## BTEX AND HYDROCARBONS (SOIL MATRIX)

METHOD: EPA 8020, 5030 GCFID

	CAS #	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene	71-43-2	ND	1
Toluene	108-88-3	ND	1
Ethylbenzene	100-41-4	ND	1
Xylenes, Total	1330-20-7	ND	3

## PURGEABLE HYDROCARBONS AS:

Gasoline ND mg/kg 0.2 mg/kg

ND = Not Detected

QUALITY CONTROL DATA

LEVINE-FRICKE

CLIENT PROJ. ID: 1649.05

MED-TOX JOB NO: 9108197

DATE EXTRACTED: 09/03/91  
DATE ANALYZED: 09/04/91  
SAMPLE SPIKED: 9108231-04A

MED-TOX JOB NO: 9108197  
CLIENT PROJ. ID: 1649.05  
INSTRUMENT: IR

IR DETERMINATION FOR OIL & GREASE/HYDROCARBONS  
METHOD SPIKE RECOVERY SUMMARY  
SOIL MATRIX

ANALYTE	MS Conc. (mg/kg)	Sample Result (mg/kg)	MS Result (mg/kg)	MSD Result (mg/kg)	Average Percent Recovery	RPD
oil	216	12	216	232	98.1	7.5

CURRENT QC LIMITS (Revised 08/14/91)

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
oil	(66-130)	10

MS = Matrix Spike  
MSD = Matrix Spike Duplicate  
RPD = Relative Percent Difference  
ND = Not Detected



DATE EXTRACTED: 09/04/91  
DATE ANALYZED: 09/04/91  
SAMPLE SPIKED: 9108197-07A

MED-TOX JOB NO: 9108197  
CLIENT PROJ. ID: 1649.05  
INSTRUMENT: C

**METHOD SPIKE RECOVERY SUMMARY  
TPH EXTRACTABLE SOILS  
METHOD 3550 GCFID  
(SOIL MATRIX; EXTRACTION METHOD)**

ANALYTE	Spike Conc. (mg/kg)	Sample Result (mg/kg)	MS Result (mg/kg)	MSD Result (mg/kg)	Average Percent Recovery	RPD
Diesel	84.8	ND	65.0	68.3	78.6	5.0

**CURRENT QC LIMITS (Revised 08/15/91)**

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
Diesel	(60.3-116.2)	19.7

MS = Matrix Spike  
MSD = Matrix Spike Duplicate  
RPD = Relative Percent Difference  
ND = Not Detected

DATE ANALYZED: 08/29/91  
 SAMPLE SPIKED: 9108174-01A  
 INSTRUMENT: H

MED-TOX JOB NO: 9108197  
 CLIENT PROJ. ID: 1649.05

**MATRIX SPIKE RECOVERY SUMMARY**  
**METHOD TPHBTS**  
**5030 w/GCFID/8020**

ANALYTE	Spike Conc. (ug/kg)	Sample Result (ug/kg)	MS Result (ug/kg)	MSD Result (ug/kg)	Average Percent Recovery	RPD
Benzene	24.8	ND	24.5	24.7	99.2	0.8
Toluene	101.3	ND	99.1	99.5	98.0	0.4
Hydrocarbons as Gasoline	1038	ND	908	903	87.2	0.5

**CURRENT QC LIMITS (Revised 08/15/91)**

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
Benzene	(81-125)	9.6
Toluene	(83-119)	10
Gasoline	(54-120)	15

MS = Matrix Spike  
 MSD = Matrix Spike Duplicate  
 RPD = Relative Percent Difference  
 ND = Not Detected

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

9108197

Project No.: 1649.05 Field Logbook No.: Date: 8/23/91 Serial No.: 7867  
 Project Name: Yerba Buena Project Location: Emeryville

Sampler (Signature): *William Gradstein* ANALYSES  
 Sampplers: WEM

SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE	ANALYSES										REMARKS	
						GRA 604	EPA 824	NOA 8015	55205E	HOLD	RUSH						
LN-34-3.5	8/23/91	11:25	01A	1	Soil												X
LW-35-4		11:35	02A														X
LS-36-4		14:35	03A					X	X								
LB-37-7		14:40	04A					X	X								
LB-38-7.5		14:50	05A														X
LW-39-4.5		15:00	06A														X
LE-40-4.5		15:30	07A					X	X								
LE-41-5		15:45	08A														X
LS-42-4.5		15:50	09A														X

RELINQUISHED BY: <i>William Gradstein</i>	DATE: 8/23/91	TIME: 18:00	RECEIVED BY: <i>Kim Flores</i>	DATE: 8/26/91	TIME: 18:05
RELINQUISHED BY: <i>Kim Flores</i>	DATE: 8/26/91	TIME: 10:40	RECEIVED BY: <i>Julia Gillespie</i>	DATE: 8/26/91	TIME: 10:40
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT:	DATE	TIME	LAB COMMENTS:		

Sample Collector: LEVINE-FRICKE  
 1900 Powell Street, 12th Floor  
 Emeryville, Ca 94608  
 (415) 652-4500

Analytical Laboratory:  
*Med-Tox*

DOHS CERTIFICATION NO: E772

## CERTIFICATE OF ANALYSIS

PAGE 1 OF 5

LEVINE-FRICKE  
1900 POWELL ST., 12TH FL.  
EMERYVILLE, CA 94608  
ATTN: CINDY BARCLAY

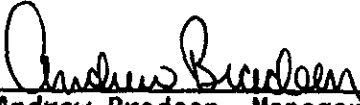
REPORT DATE: 08/26/91  
DATE SAMPLED: 08/12/91  
DATE RECEIVED: 08/13/91  
MED-TOX JOB NO: 9108083

CLIENT PROJ. ID: 1649.05  
C.O.C. SERIAL NO: 7215

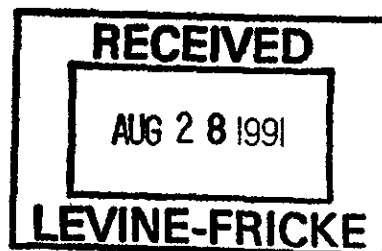
### ANALYSIS OF: SOIL SAMPLES

Sample Identification Client Id.      Lab No.	Oil & Grease (mg/kg)	Hydrocarbons (mg/kg)	Extractable Hydrocarbons as Diesel (mg/kg)	Extractable Hydrocarbons as Oil (mg/kg)
LB-20-10.5      02A	10	ND	ND	ND
Detection Limit	10	10	10	20
Method	5520E	5520F	3550 GCFID	3550 GCFID
Instrument	IR	IR	C	C
Date Extracted:	08/21/91	08/21/91	08/14/91	08/14/91
Date Analyzed:	08/22/91	08/22/91	08/16/91	08/16/91

ND = Not Detected

  
Andrew Bradeen, Manager  
Organic Laboratory

Results FAXed 08/22/91



## LEVINE-FRICKE

CLIENT ID: LB-20-10.5  
CLIENT PROJ. ID: 1649.05  
DATE SAMPLED: 08/12/91  
DATE RECEIVED: 08/13/91  
REPORT DATE: 08/26/91

MED-TOX LAB NO: 9108083-02A  
MED-TOX JOB NO: 9108083  
DATE ANALYZED: 08/16-19/91  
INSTRUMENT: H

## BTEX AND HYDROCARBONS (SOIL MATRIX)

METHOD: EPA 8020, 5030 GCFID

	CAS #	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene	71-43-2	ND	1
Toluene	108-88-3	ND	1
Ethylbenzene	100-41-4	ND	1
Xylenes, Total	1330-20-7	ND	3

## PURGEABLE HYDROCARBONS AS:

Gasoline ND mg/kg 0.2 mg/kg

ND = Not Detected

QUALITY CONTROL DATA

LEVINE-FRICKE

CLIENT PROJ. ID: 1649.05

◦ MED-TOX JOB NO: 9108083

DATE EXTRACTED: 08/21/91  
DATE ANALYZED: 08/21/91  
SAMPLE SPIKED: 9108142-02A

MED-TOX JOB NO: 9108083  
CLIENT PROJ. ID: 1649.05  
INSTRUMENT: IR

IR DETERMINATION FOR OIL & GREASE/HYDROCARBONS  
METHOD SPIKE RECOVERY SUMMARY  
SOIL MATRIX

ANALYTE	MS Conc. (mg/kg)	Sample Result (mg/kg)	MS Result (mg/kg)	MSD Result (mg/kg)	Average Percent Recovery	RPD
oil	216	ND	221	216	101.2	2.3

CURRENT QC LIMITS (Revised 08/13/91)

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
oil	(66-130)	10.2

MS = Matrix Spike  
MSD = Matrix Spike Duplicate  
RPD = Relative Percent Difference  
ND = Not Detected

DATE EXTRACTED: 08/14/91  
DATE ANALYZED: 08/16/91  
SAMPLE SPIKED: 9108083-02A

MED-TOX JOB NO: 9108083  
CLIENT PROJ. ID: 1649.05  
INSTRUMENT: C

METHOD SPIKE RECOVERY SUMMARY  
TPH EXTRACTABLE SOILS  
METHOD 3550 GCFID  
(SOIL MATRIX; EXTRACTION METHOD)

ANALYTE	Spike Conc. (mg/kg)	Sample Result (mg/kg)	MS Result (mg/kg)	MSD Result (mg/kg)	Average Percent Recovery	RPD
Diesel	84.8	ND	73.1	77.1	88.6	5.3

CURRENT QC LIMITS (Revised 08/15/91)

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
Diesel	(60.3-116.2)	19.7

MS = Matrix Spike  
MSD = Matrix Spike Duplicate  
RPD = Relative Percent Difference  
ND = Not Detected



DATE ANALYZED: 08/20/91  
SAMPLE SPIKED: 9108104-02A  
INSTRUMENT: H

MED-TOX JOB NO: 9108083  
CLIENT PROJ. ID: 1649.05

**MATRIX SPIKE RECOVERY SUMMARY  
METHOD TPHBTS  
5030 w/GCFID/8020**

ANALYTE	Spike Conc. (ug/kg)	Sample Result (ug/kg)	MS Result (ug/kg)	MSD Result (ug/kg)	Average Percent Recovery	RPD
Benzene	108	3.9	113	113	101.0	0.0
Toluene	363	2.4	367	370	100.9	0.8
Hydrocarbons as Gasoline	4120	ND	4510	4340	107.4	3.8

**CURRENT QC LIMITS (Revised 08/14/91)**

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
Benzene	(81-125)	9.6
Toluene	(83-119)	10
Gasoline	(54-120)	15

MS - Matrix Spike  
MSD - Matrix Spike Duplicate  
RPD - Relative Percent Difference  
ND - Not Detected

R-4,S-A

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

9108083

Project No.: 1649.05	Field Logbook No.:	Date: 8/13/91	Serial No.: 7215
Project Name: Yerba Buena	Project Location: Emeryville		

Sampler (Signature): William Madson

ANALYSES

Samplers: WEM

SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE	ANALYSES						HOLD	RUSH	REMARKS
						EPA 501	EPA 524	MDX 8015/8020	5528 EF					
LS-19-5.5	8/12/91	12:15	01A	1	SAL								X	Regulator TAT Results to Cindy Barclay
LB-20-10.5		2:45	02A	1			X	X						
LW-21-6		3:00	03A	1									X	
LS-22-3.5		3:15	04A	1									X	
LN-23-6.5		3:40	05A	1									X	

RELINQUISHED BY: (Signature) William Madson	DATE 8/13/91	TIME 10:00	RECEIVED BY: (Signature) Kim Flores	DATE 8-12-91	TIME 10:30
RELINQUISHED BY: (Signature) Kim Flores	DATE 8/13/91	TIME 11:05	RECEIVED BY: (Signature) Gina Gillespie	DATE 8/13/91	TIME 11:05
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT:	DATE	TIME	LAB COMMENTS:		

Sample Collector: LEVINE-FRICKE 1900 Powell Street, 12th Floor Emeryville, Ca 94608 (415) 652-4500	Analytical Laboratory: WAVY <del>EF</del> Med-TOX
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DOHS CERTIFICATION NO: E772

**CERTIFICATE OF ANALYSIS**

PAGE 1 OF 7

LEVINE-FRICKE  
1900 POWELL ST., 12TH FL.  
EMERYVILLE, CA 94608  
ATTN: CINDY BARCLAY


REPORT DATE: 09/11/91  
DATE SAMPLED: 08/26-27/91  
DATE RECEIVED: 08/28/91  
MED-TOX JOB NO: 9108231

CLIENT PROJ. ID: 1649.05  
C.O.C. SERIAL NO: 7740

ANALYSIS OF: SOIL SAMPLES

Sample Identification		Oil & Grease	Hydrocarbons	Extractable
Client Id.	Lab No.	(mg/kg)	(mg/kg)	Hydrocarbons as Diesel (mg/kg)
KN-23-6	03A	ND	ND	ND
KS-24-6	04A	10	ND	ND
KE-31-7	11A	860	610	ND
Detection Limit		10	10	10
Method		5520E	5520F	3550 GCFID
Instrument		IR	IR	C
Date Extracted:		09/03/91	09/03/91	09/04/91
Date Analyzed:		09/04/91	09/04/91	09/04/91

ND = Not Detected

  
Andrew Bradeen, Manager  
Organic Laboratory

Results FAXed 09/05/91

## LEVINE-FRICKE

CLIENT ID: KN-23-6  
CLIENT PROJ. ID: 1649.05  
DATE SAMPLED: 08/26/91  
DATE RECEIVED: 08/28/91  
REPORT DATE: 09/11/91

MED-TOX LAB NO: 9108231-03A  
MED-TOX JOB NO: 9108231  
DATE ANALYZED: 08/30/91  
INSTRUMENT: H

## BTEX AND HYDROCARBONS (SOIL MATRIX)

METHOD: EPA 8020, 5030 GCFID

	CAS #	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene	71-43-2	ND	1
Toluene	108-88-3	ND	1
Ethylbenzene	100-41-4	ND	1
Xylenes, Total	1330-20-7	ND	3

## PURGEABLE HYDROCARBONS AS:

Gasoline ND mg/kg 0.2 mg/kg

ND = Not Detected

LEVINE-FRICKE

CLIENT ID: KS-24-6	MED-TOX LAB NO: 9108231-04A
CLIENT PROJ. ID: 1649.05	MED-TOX JOB NO: 9108231
DATE SAMPLED: 08/26/91	DATE ANALYZED: 08/30/91
DATE RECEIVED: 08/28/91	INSTRUMENT: H
REPORT DATE: 09/11/91	

BTEX AND HYDROCARBONS (SOIL MATRIX)

METHOD: EPA 8020, 5030 GCFID

	CAS #	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene	71-43-2	ND	1
Toluene	108-88-3	ND	1
Ethylbenzene	100-41-4	ND	1
Xylenes, Total	1330-20-7	ND	3

PURGEABLE HYDROCARBONS AS:

Gasoline	ND mg/kg	0.2 mg/kg
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ND = Not Detected

## LEVINE-FRICKE

CLIENT ID: KE-31-7  
CLIENT PROJ. ID: 1649.05  
DATE SAMPLED: 08/27/91  
DATE RECEIVED: 08/28/91  
REPORT DATE: 09/11/91

MED-TOX LAB NO: 9108231-11A  
MED-TOX JOB NO: 9108231  
DATE ANALYZED: 08/30/91  
INSTRUMENT: H

## BTEX AND HYDROCARBONS (SOIL MATRIX)

METHOD: EPA 8020, 5030 GCFID

	CAS #	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene	71-43-2	ND	1
Toluene	108-88-3	ND	1
Ethylbenzene	100-41-4	ND	1
Xylenes, Total	1330-20-7	ND	3

## PURGEABLE HYDROCARBONS AS:

Gasoline ND mg/kg 0.2 mg/kg

ND = Not Detected

QUALITY CONTROL DATA

LEVINE-FRICKE

CLIENT PROJ. ID: 1649.05

MED-TOX JOB NO: 9108231

DATE EXTRACTED: 09/03/91  
DATE ANALYZED: 09/04/91  
SAMPLE SPIKED: 9108231-04A

MED-TOX JOB NO: 9108231  
CLIENT PROJ. ID: 1649.05  
INSTRUMENT: IR

IR DETERMINATION FOR OIL & GREASE/HYDROCARBONS  
METHOD SPIKE RECOVERY SUMMARY  
SOIL MATRIX

ANALYTE	MS Conc. (mg/kg)	Sample Result (mg/kg)	MS Result (mg/kg)	MSD Result (mg/kg)	Average Percent Recovery	RPD
oil	216	12	216	232	98.1	7.5

CURRENT QC LIMITS (Revised 08/14/91)

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
oil	(66-130)	10

MS = Matrix Spike  
MSD = Matrix Spike Duplicate  
RPD = Relative Percent Difference  
ND = Not Detected



DATE EXTRACTED: 09/04/91  
DATE ANALYZED: 09/04/91  
SAMPLE SPIKED: 9108197-07A

MED-TOX JOB NO: 9108231  
CLIENT PROJ. ID: 1649.05  
INSTRUMENT: C

METHOD SPIKE RECOVERY SUMMARY  
TPH EXTRACTABLE SOILS  
METHOD 3550 GCFID  
(SOIL MATRIX; EXTRACTION METHOD)

ANALYTE	Spike Conc. (mg/kg)	Sample Result (mg/kg)	MS Result (mg/kg)	MSD Result (mg/kg)	Average Percent Recovery	RPD
Diesel	84.8	ND	65.0	68.3	78.6	5.0

CURRENT QC LIMITS (Revised 08/15/91)

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
Diesel	(60.3-116.2)	19.7

MS = Matrix Spike  
MSD = Matrix Spike Duplicate  
RPD = Relative Percent Difference  
ND = Not Detected

DATE ANALYZED: 08/30/91  
 SAMPLE SPIKED: 9108231-11A  
 INSTRUMENT: H

MED-TOX JOB NO: 9108231  
 CLIENT PROJ. ID: 1649.05

**MATRIX SPIKE RECOVERY SUMMARY**  
**METHOD TPHBTS**  
**5030 w/GCFID/8020**

ANALYTE	Spike Conc. (ug/kg)	Sample Result (ug/kg)	MS Result (ug/kg)	MSD Result (ug/kg)	Average Percent Recovery	RPD
Benzene	26.2	ND	26.0	26.0	99.2	0.0
Toluene	111	ND	110	110	99.1	0.0
Hydrocarbons as Gasoline	1040	ND	868	865	83.3	0.3

**CURRENT QC LIMITS (Revised 08/15/91)**

Analyte	Percent Recovery	RPD
Benzene	(81-125)	9.6
Toluene	(83-119)	10
Gasoline	(54-120)	15

MS = Matrix Spike  
 MSD = Matrix Spike Duplicate  
 -RPD = Relative Percent Difference  
 ND = Not Detected

R-4, S-5

**CHAIN OF CUSTODY / ANALYSES REQUEST FORM**

9108231

Project No.: <b>1649.05</b>		Field Logbook No.:		Date: <b>8/28/91</b>		Serial No.: <b>7740</b>							
Project Name: <b>Yerba Buena</b>		Project Location: <b>Emeryville/Oakland</b>											
Sampler (Signature): <i>William Gardner</i>		<b>ANALYSES</b>		<b>SAMPLERS</b>		<b>REMARKS</b>							
		<b>SAMPLES</b>		<b>WFA</b>									
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE	ANALYSES				HOLD	RUSH	REMARKS	
						EPA 601	EPA 624	Metals	5520 EF				
KW-21-5.5	8/26/91	14:25	01A	1	S <sub>2</sub>								
KW-22-7.5		14:45	02A	1									
KW-23-6		15:00	03A				X	X					Regular TAT
KS-24-6		15:10	04A				X	X					
KW-25-6.5		15:20	05A								X		
KW-26-5		15:35	06A								X		
KS-27-7	8/27/91	14:40	07A								X		
KS-28-6.5		14:45	08A								X		
KB-29-10.5		15:10	09A								X		
KE-30-6.5		15:20	10A								X		
KE-31-7		15:35	11A				X	X					Results to Cindy Barclay
KB-32-11		15:40	12A								X		
RELINQUISHED BY: (Signature) <i>William Gardner</i>		DATE	TIME	RECEIVED BY: (Signature) <i>Agua Ollisio</i>		DATE	TIME			DATE	TIME		
RELINQUISHED BY: (Signature)		DATE	TIME	RECEIVED BY: (Signature)		DATE	TIME			DATE	TIME		
RELINQUISHED BY: (Signature)		DATE	TIME	RECEIVED BY: (Signature)		DATE	TIME			DATE	TIME		
METHOD OF SHIPMENT:		DATE	TIME	LAB COMMENTS:									
Sample Collector: <b>LEVINE-FRICKE</b> 1900 Powell Street, 12th Floor Emeryville, Ca 94608 (415) 652-4500				Analytical Laboratory: <b>Med-TOX</b>									

DOHS CERTIFICATION NO: E772

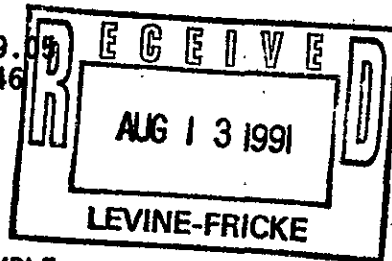
## CERTIFICATE OF ANALYSIS

PAGE 1 OF 5

LEVINE-FRICKE  
1900 POWELL ST., 12TH FL.  
EMERYVILLE, CA 94608  
ATTN: CINDY BARCLAY

REPORT DATE: 08/12/91  
DATE SAMPLED: 07/31/91  
DATE RECEIVED: 07/31/91  
MED-TOX JOB NO: 9107204


CLIENT PROJ. ID: 1649.05  
C.O.C. SERIAL NO: 7046



ANALYSIS OF: SOIL SAMPLE

Sample Identification Client Id.	Lab No.	Oil & Grease (mg/kg)	Hydrocarbons (mg/kg)	Extractable Hydrocarbons as Diesel (mg/kg)	Extractable Hydrocarbons as Oil (mg/kg)
KM9-6.5	03A	ND	ND	ND	ND
Detection Limit		10	10	10	20
Method		5520E	5520F	3550 GCFID	3550 GCFID
Instrument		IR	IR	C	C
Date Extracted:		08/06/91	08/06/91	08/01/91	08/01/91
Date Analyzed:		08/07/91	08/07/91	08/01/91	08/01/91

ND = Not Detected

  
Andrew Bradeen, Manager  
Organic Laboratory

Results FAXed 08/09/91

## LEVINE-FRICKE

CLIENT ID: KN9-6.5  
CLIENT PROJ. ID: 1649.05  
DATE SAMPLED: 07/31/91  
DATE RECEIVED: 07/31/91  
REPORT DATE: 08/12/91

MED-TOX LAB NO: 9107204-03A  
MED-TOX JOB NO: 9107204  
DATE ANALYZED: 08/07/91  
INSTRUMENT: H

## BTEX AND HYDROCARBONS (SOIL MATRIX)

METHOD: EPA 8020, 5030 GCFID

	CAS #	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene	71-43-2	ND	1
Toluene	108-88-3	ND	1
Ethylbenzene	100-41-4	ND	1
Xylenes, Total	1330-20-7	ND	3

## PURGEABLE HYDROCARBONS AS:

Gasoline ND mg/kg 0.2 mg/kg

ND = Not Detected

QUALITY CONTROL DATA

LEVINE-FRICKE

CLIENT PROJ. ID: 1649.05

MED-TOX JOB NO: 9107204

DATE EXTRACTED: 08/06/91  
DATE ANALYZED: 08/07/91  
SAMPLE SPIKED: 9107202-01A

MED-TOX JOB NO: 9107204  
CLIENT PROJ. ID: 1649.05  
INSTRUMENT: IR

IR DETERMINATION FOR OIL & GREASE/HYDROCARBONS  
METHOD SPIKE RECOVERY SUMMARY  
SOIL MATRIX

ANALYTE	MS Conc. (mg/kg)	Sample Result (mg/kg)	MS Result (mg/kg)	MSD Result (mg/kg)	Average Percent Recovery	RPD
Oil	216	72	351	337	125.9	5.2

CURRENT QC LIMITS (Revised 03/14/91)

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
Oil	(53-132)	14

MS = Matrix Spike  
MSD = Matrix Spike Duplicate  
RPD = Relative Percent Difference  
ND = Not Detected

DATE EXTRACTED: 08/01/91  
DATE ANALYZED: 08/01/91  
SAMPLE SPIKED: 9107204-03A

MED-TOX JOB NO: 9107204  
CLIENT PROJ. ID: 1649.05  
INSTRUMENT: C

**METHOD SPIKE RECOVERY SUMMARY**  
**TPH EXTRACTABLE SOILS**  
**METHOD 3550 GCFID**  
**(SOIL MATRIX; EXTRACTION METHOD)**

ANALYTE	Spike Conc. (mg/kg)	Sample Result (mg/kg)	MS Result (mg/kg)	MSD Result (mg/kg)	Average Percent Recovery	RPD
Diesel	84.8	ND	65.8	69.9	80.0	6.0

**CURRENT QC LIMITS (Revised 05/02/91)**

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
Diesel	(48.8-126.6)	19.1

MS = Matrix Spike  
MSD = Matrix Spike Duplicate  
RPD = Relative Percent Difference  
ND = Not Detected



DATE ANALYZED: 08/08/91  
 SAMPLE SPIKED: 9108060-01A  
 INSTRUMENT: H

MED-TOX JOB NO: 9107204  
 CLIENT PROJ. ID: 1649.05

**MATRIX SPIKE RECOVERY SUMMARY**  
**METHOD TPHBTS**  
**5030 w/GCFID/8020**

ANALYTE	Spike Conc. (ug/kg)	Sample Result (ug/kg)	MS Result (ug/kg)	MSD Result (ug/kg)	Average Percent Recovery	RPD
Benzene	28.2	ND	28.9	28.0	100.9	3.2
Toluene	95.8	ND	97.5	94.4	100.2	3.2
Hydrocarbons as Gasoline	1030	ND	963	931	91.9	3.4

**CURRENT QC LIMITS (Revised 04/30/91)**

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
Benzene	(78.6-121.5)	14.8
Toluene	(78.7-119.1)	11.8
Gasoline	(60.0-109.7)	15.6

MS = Matrix Spike  
 MSD = Matrix Spike Duplicate  
 RPD = Relative Percent Difference  
 ND = Not Detected

R-T.S-O

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

9107204

Project No.: 1649.05	Field Logbook No.:	Date: 7-31-91	Serial No.: 7046
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Project Name: Yerba Buena	Project Location: Emeryville, CA
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Sampler (Signature): Michael Stoll	ANALYSES	Samplers: M75
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SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE	ANALYSES							REMARKS	
						EPA 601	EPA 624	8015 Gasoline	8015 Diesel	5520 E/F	8020 BTXE	HOLD		RUSH
KW7-6	7-31-91		01A	1	Soil			X	X	X	X	X		
KB8-11.5			02A					X	X	X	X	X		5520 E, F
KN9-6.5			03A					X	X	X	X			8015 TPH Gasoline, Diesel
KS10-2.5	X		04A	X	X			X			X			8020 BTXE
														regular luk TAT
														Please Fax results to Cindy Barclay

RELINQUISHED BY: (Signature) Michael Stoll	DATE 7-31-91	TIME	RECEIVED BY: (Signature) Kim Stoll	DATE 7/31/91	TIME 3:15
RELINQUISHED BY: (Signature) Kim Stoll	DATE 7/31/91	TIME 4:00	RECEIVED BY: (Signature) Julie Gillespie	DATE 7-31-91	TIME 1600
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME

METHOD OF SHIPMENT:	DATE	TIME	LAB COMMENTS:
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Sample Collector: LEVINE-FRICKE 1900 Powell Street, 12th Floor Emeryville, Ca 94608 (415) 652-4500	Analytical Laboratory: Med-Tox, Pleasant Hill, CA
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JOHS CERTIFICATION NO: E772

## CERTIFICATE OF ANALYSIS

PAGE 1 OF 5

LEVINE-FRICKE  
1900 POWELL ST., 12TH FL.  
EMERYVILLE, CA 94608  
ATTN: CINDY BARCLAY

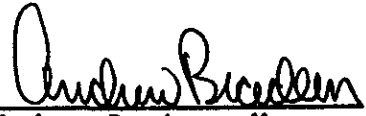
REPORT DATE: 09/03/91  
DATE SAMPLED: 08/20/91  
DATE RECEIVED: 08/21/91  
MED-TOX JOB NO: 9108165

CLIENT PROJ. ID: 1649.05  
C.O.C. SERIAL NO: 7741

### ANALYSIS OF: SOIL SAMPLE

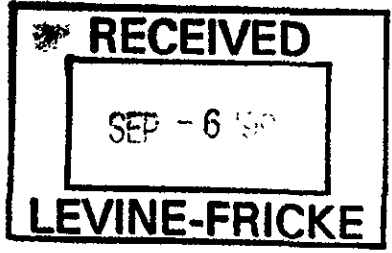
Sample Identification Client Id.      Lab No.	Oil & Grease (mg/kg)	Hydrocarbons (mg/kg)	Extractable Hydrocarbons as Diesel (mg/kg)
KB-20-11      01A	ND	ND	ND
Detection Limit	10	10	10
Method	5520E	5520F	3550 GCFID
Instrument	IR	IR	C
Date Extracted:	08/27/91	08/27/91	08/26/91
Date Analyzed:	08/29/91	08/29/91	08/27/91

ND - Not Detected



Andrew Bradeen, Manager  
Organic Laboratory

Results FAXed 08/30/91



## LEVINE-FRICKE

CLIENT ID: KB-20-11  
CLIENT PROJ. ID: 1649.05  
DATE SAMPLED: 08/20/91  
DATE RECEIVED: 08/21/91  
REPORT DATE: 09/03/91

MED-TOX LAB NO: 9108165-01A  
MED-TOX JOB NO: 9108165  
DATE ANALYZED: 08/26/91  
INSTRUMENT: H

## BTEX AND HYDROCARBONS (SOIL MATRIX)

METHOD: EPA 8020, 5030 GCFID

	CAS #	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene	71-43-2	1	1
Toluene	108-88-3	ND	1
Ethylbenzene	100-41-4	3	1
Xylenes, Total	1330-20-7	4	3

## PURGEABLE HYDROCARBONS AS:

Gasoline ND mg/kg 0.2 mg/kg

ND - Not Detected

QUALITY CONTROL DATA

LEVINE-FRICKE

CLIENT PROJ. ID: 1649.05

MED-TOX JOB NO: 9108165

DATE EXTRACTED: 08/27/91  
DATE ANALYZED: 08/28/91  
SAMPLE SPIKED: 9108159-02A

MED-TOX JOB NO: 9108165  
CLIENT PROJ. ID: 1649.05  
INSTRUMENT: IR

IR DETERMINATION FOR OIL & GREASE/HYDROCARBONS  
METHOD SPIKE RECOVERY SUMMARY  
SOIL MATRIX

ANALYTE	MS Conc. (mg/kg)	Sample Result (mg/kg)	MS Result (mg/kg)	MSD Result. (mg/kg)	Average Percent Recovery	RPD
Oil	216	ND	195	241	94.0	7.9

CURRENT QC LIMITS (Revised 08/14/91)

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
Oil	(66-130)	10

MS = Matrix Spike  
MSD = Matrix Spike Duplicate  
RPD = Relative Percent Difference  
ND = Not Detected

DATE EXTRACTED: 08/26/91  
DATE ANALYZED: 08/27/91  
SAMPLE SPIKED: 9108165-01A

MED-TOX JOB NO: 9108165  
CLIENT PROJ. ID: 1649.05  
INSTRUMENT: C

**METHOD SPIKE RECOVERY SUMMARY  
TPH EXTRACTABLE SOILS  
METHOD 3550 GCFID  
(SOIL MATRIX; EXTRACTION METHOD)**

<u>ANALYTE</u>	<u>Spike Conc. (mg/kg)</u>	<u>Sample Result (mg/kg)</u>	<u>MS Result (mg/kg)</u>	<u>MSD Result (mg/kg)</u>	<u>Average Percent Recovery</u>	<u>RPD</u>
Diesel	84.8	ND	75.6	82.0	92.9	8.1

**CURRENT QC LIMITS (Revised 08/15/91)**

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
Diesel	(60.3-116.2)	19.7

MS = Matrix Spike  
MSD = Matrix Spike Duplicate  
RPD = Relative Percent Difference  
ND = Not Detected

DATE ANALYZED: 08/26/91  
 SAMPLE SPIKED: 9108136-06A  
 INSTRUMENT: H

MED-TOX JOB NO: 9108165  
 CLIENT PROJ. ID: 1649.05

**MATRIX SPIKE RECOVERY SUMMARY**  
**METHOD TPHBTS**  
**5030 w/GCFID/8020**

ANALYTE	Spike Conc. (ug/kg)	Sample Result (ug/kg)	MS Result (ug/kg)	MSD Result (ug/kg)	Average Percent Recovery	RPD
Benzene	25.9	ND	26.4	26.3	101.7	0.4
Toluene	112.9	ND	113	114	100.5	0.9
Hydrocarbons as Gasoline	1038	ND	842	848	81.4	0.7

**CURRENT QC LIMITS (Revised 08/15/91)**

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
Benzene	(81-125)	9.6
Toluene	(83-119)	10
Gasoline	(54-120)	15

MS - Matrix Spike  
 MSD - Matrix Spike Duplicate  
 RPD - Relative Percent Difference  
 ND - Not Detected



CHAIN OF CUSTODY / ANALYSES REQUEST FORM

9108165

Project No.: 1649.05	Field Logbook No.:	Date: 8/20/91	Serial No.: 7741
Project Name: Yerba Buena	Project Location: Emeryville		

Sampler (Signature): *William Medina* ANALYSES  
 Hold Rush  
 Samplers: WEM

SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE	ANALYSES										REMARKS		
						ED-604	ED-604	MA-102	MA-102	MA-102	MA-102	MA-102	MA-102	MA-102	MA-102		MA-102	MA-102
KS-16-6	8/20/91	14:55	02A	1	Soil													X
KS-17-7		15:10	03A															X
KS-18-6.5		15:20	04A															X
KE-19-6		15:30	05A															X
KB-20-11		15:35	01A					X	X									Results

RELINQUISHED BY: (Signature) <i>William Medina</i>	DATE 8/20/91	TIME 17:15	RECEIVED BY: (Signature) <i>Kim Jones</i>	DATE 8/21/91	TIME 3:45
RELINQUISHED BY: (Signature) <i>Kim Jones</i>	DATE 8/21/91	TIME 5:40	RECEIVED BY: (Signature) <i>Denise Harrington</i>	DATE 8/21/91	TIME 17:40
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT:	DATE	TIME	LAB COMMENTS:		

Sample Collector: LEVINE-FRICKE 1900 Powell Street, 12th Floor Emeryville, Ca 94608 (415) 652-4500	Analytical Laboratory: <i>Med-Tox</i>
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**CERTIFICATE OF ANALYSIS**

PAGE 1 OF 6

LEVINE-FRICKE  
1900 POWELL ST., 12TH FL.  
EMERYVILLE, CA 94608  
ATTN: CINDY BARCLAY

REPORT DATE: 06/26/91  
DATE SAMPLED: 06/20/91  
DATE RECEIVED: 06/20/91  
MED-TOX JOB NO: 9106146

CLIENT PROJ. ID: 1649.05  
C.O.C. SERIAL NO: 7783

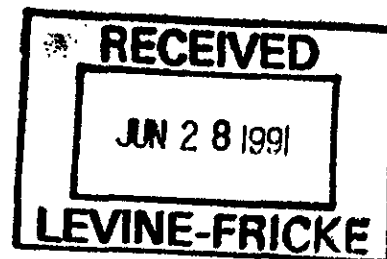
**ANALYSIS OF: SOIL SAMPLES**

Sample Identification		Oil & Grease	Hydrocarbons	Extractable Hydrocarbons as Diesel	Extractable Hydrocarbons as Oil
Client Id.	Lab No.	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
K3-2-11.5	02A	ND	ND	ND	ND
GB-5-11.5	03A	ND	ND	ND	ND
Detection Limit		10	10	10	20
Method		5520E	5520F	3550 GCFID	3550 GCFID
Instrument		IR	IR	C	C
Date Extracted:		06/24/91	06/24/91	06/24/91	06/24/91
Date Analyzed:		06/24/91	06/24/91	06/24/91	06/24/91

ND = Not Detected

*Andrew Bradeen*  
Andrew Bradeen, Manager  
Organic Laboratory

Results FAXed 06/24/91



## LEVINE-FRICKE

CLIENT ID: KB-2-11.5  
CLIENT PROJ. ID: 1649.05  
DATE SAMPLED: 06/20/91  
DATE RECEIVED: 06/20/91  
REPORT DATE: 06/26/91

MED-TOX LAB NO: 9106146-02A  
MED-TOX JOB NO: 9106146  
DATE ANALYZED: 06/21/91  
INSTRUMENT: H

## BTEX AND HYDROCARBONS (SOIL MATRIX)

METHOD: EPA 8020, 5030 GCFID

	CAS #	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene	71-43-2	ND	1
Toluene	108-88-3	ND	1
Ethylbenzene	100-41-4	ND	1
Xylenes, Total	1330-20-7	ND	3

## PURGEABLE HYDROCARBONS AS:

Gasoline ND mg/kg 0.2 mg/kg

ND - Not Detected

## LEVINE-FRICKE

CLIENT ID: GB-5-11.5  
CLIENT PROJ. ID: 1649.05  
DATE SAMPLED: 06/20/91  
DATE RECEIVED: 06/20/91  
REPORT DATE: 06/26/91

MED-TOX LAB NO: 9106146-03A  
MED-TOX JOB NO: 9106146  
DATE ANALYZED: 06/21/91  
INSTRUMENT: H

## BTEX AND HYDROCARBONS (SOIL MATRIX)

METHOD: EPA 8020, 5030 GCFID

	CAS #	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene	71-43-2	ND	1
Toluene	108-88-3	ND	1
Ethylbenzene	100-41-4	ND	1
Xylenes, Total	1330-20-7	ND	3

## PURGEABLE HYDROCARBONS AS:

Gasoline ND mg/kg 0.2 mg/kg

ND = Not Detected

**QUALITY CONTROL DATA**

**LEVINE-FRICKE**

**CLIENT PROJ. ID: 1649.05**

**MED-TOX JOB NO: 9106146**

DATE EXTRACTED: 06/24/91  
DATE ANALYZED: 06/25/91  
SAMPLE SPIKED: 9106146-03A

MED-TOX JOB NO: 9106146  
CLIENT PROJ. ID: 1649.05  
INSTRUMENT: IR

**IR DETERMINATION FOR OIL & GREASE/HYDROCARBONS  
MATRIX SPIKE RECOVERY SUMMARY  
SOIL MATRIX**

<b>ANALYTE</b>	<b>MS Conc. (mg/kg)</b>	<b>Sample Result (mg/kg)</b>	<b>MS Result (mg/kg)</b>	<b>MSD Result (mg/kg)</b>	<b>Average Percent Recovery</b>	<b>RPD</b>
oil	229	ND	223	218	96.3	2.3

**CURRENT QC LIMITS (Revised 03/14/91)**

<b>Analyte</b>	<b>Percent Recovery</b>	<b>RPD</b>
oil	(53-132)	14

MS = Matrix Spike  
MSD = Matrix Spike Duplicate  
RPD = Relative Percent Difference  
ND = Not Detected

DATE EXTRACTED: 06/24/91  
DATE ANALYZED: 06/24/91  
SAMPLE SPIKED: 9106146-03A

MED-TOX JOB NO: 9106146  
CLIENT PROJ. ID: 1649.05  
INSTRUMENT: C

**MATRIX SPIKE RECOVERY SUMMARY  
TPH EXTRACTABLE SOILS  
METHOD 3550 GCFID  
(SOIL MATRIX; EXTRACTION METHOD)**

ANALYTE	Spike Conc. (mg/kg)	Sample Result (mg/kg)	MS Result (mg/kg)	MSD Result (mg/kg)	Average Percent Recovery	RPD
Diesel	84.8	ND	75.5	77.9	90.4	1.6

**CURRENT QC LIMITS (Revised 05/02/91)**

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
Diesel	(48.8-126.6)	19.1

MS = Matrix Spike  
MSD = Matrix Spike Duplicate  
RPD = Relative Percent Difference  
ND = Not Detected

DATE ANALYZED: 06/21/91  
 SAMPLE SPIKED: 9106146-03A  
 INSTRUMENT: H

MED-TOX JOB NO: 9106146  
 CLIENT PROJ. ID: 1649.05

**MATRIX SPIKE RECOVERY SUMMARY**  
**METHOD TPHBTS**  
**5030 w/GCFID/8020**

ANALYTE	Spike Conc. (ug/kg)	Sample Result (ug/kg)	MS Result (ug/kg)	MSD Result (ug/kg)	Average Percent Recovery	RPD
Benzene	29.1	ND	28.8	32.2	104.8	11.1
Toluene	100	ND	97.8	109	103.4	10.8
Hydrocarbons as Gasoline	1030	ND	952	1080	98.6	12.6

**CURRENT QC LIMITS (Revised 04/30/91)**

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
Benzene	(78.6-121.5)	14.8
Toluene	(78.7-119.1)	11.8
Gasoline	(60.0-109.7)	15.6

MS - Matrix Spike  
 MSD - Matrix Spike Duplicate  
 RPD - Relative Percent Difference  
 ND - Not Detected



R-9, S-5

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

9106146

Project No.: 1649.05	Field Logbook No.:	Date: 6/20/91	Serial No.: 7783
Project Name: Yerba Buena	Project Location: Oakland/Emeryville		

Sampler (Signature): *William Madison* ANALYSES  
 Hold RUSH  
 Samplers: WEM

SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE	ANALYSES					HOLD	RUSH	REMARKS
						-EPA-684	-EPA-624	Mod. 8015/8020	5520EF				
KN-1-8		8:45	01A	1	Soil						X		
KB-2-115		8:55	02A	1							X		4g-Hour-TAT
GB-5-115		13:00	03A	1							X		
KS-3-3		14:00	04A	1							X		Results to Cindy Barclay.
KE-4-55		14:30	05A	1							X		
KW-5-7		14:10	06A	1							* X		HOLD THIS SAMPLE
GB-6-11		14:50	07A	1							X		PER W. MADISON 6/20/91
GM-7-65		15:10	08A	1							X		

RELINQUISHED BY: <i>William Madison</i>	DATE: 6/20/91	TIME: 16:00	RECEIVED BY: <i>Kum Glous</i>	DATE: 6/20/91	TIME: 4:05
RELINQUISHED BY: <i>Kum Glous</i>	DATE: 6/20/91	TIME: 18:05	RECEIVED BY: <i>Gina Gillespie</i>	DATE: 6-20-91	TIME: 1805
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT:	DATE	TIME	LAB COMMENTS:		

Sample Collector: LEVINE-FRICKE 1900 Powell Street, 12th Floor Emeryville, Ca 94608 (415) 652-4500	Analytical Laboratory: <i>Med-Tox</i>
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**CERTIFICATE OF ANALYSIS**

PAGE 1 OF 8

LEVINE-FRICKE  
1900 POWELL ST., 12TH FL.  
EMERYVILLE, CA 94608  
ATTN: CINDY BARCLAY

REPORT DATE: 06/17/91

DATE SAMPLED: 06/12/91

DATE RECEIVED: 06/12/91

CLIENT PROJ. ID: 1649.05  
C.O.C. SERIAL NO: 7042

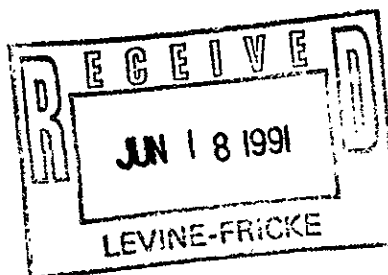
MED-TOX JOB NO: 9106079

**ANALYSIS OF: SOIL SAMPLES**

Sample Identification Client Id.    Lab No.	Oil & Grease (mg/kg)	Hydrocarbons (mg/kg)	Extractable Hydrocarbons as Diesel (mg/kg)	Extractable Hydrocarbons as Oil (mg/kg)
DB-10-8.5    01A	2,700	2,600	340 *	7,300
DM-11-5    02A	ND	ND	ND	ND
DM-12-8.5    03A	3,200	3,100	30 *	950
DB-15-7    06A	100	80	90 *	ND
Detection Limit	10	10	10	20
Method	5520E	5520F	3550 GCFID	3550 GCFID
Instrument	IR	IR	C	C
Date Extracted:	06/12/91	06/12/91	06/12/91	06/12/91
Date Analyzed:	06/13/91	06/13/91	06/12/91	06/12/91

ND = Not Detected

\* Resembles stoddard type solvent



*Andrew Bradeen*  
Andrew Bradeen, Manager  
Organic Laboratory

Results FAXed 06/14/91

LEVINE-FRICKE

CLIENT ID: DB-10-8.5  
 CLIENT PROJ. ID: 1649.05  
 DATE SAMPLED: 06/12/91  
 DATE RECEIVED: 06/12/91  
 REPORT DATE: 06/17/91

MED-TOX LAB NO: 9106079-01A  
 MED-TOX JOB NO: 9106079  
 DATE ANALYZED: 06/12-13/91  
 INSTRUMENT: H

BTEX AND HYDROCARBONS (SOIL MATRIX)

METHOD: EPA 8020, 5030 GCFID

	CAS #	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene	71-43-2	ND	20
Toluene	108-88-3	ND	20
Ethylbenzene	100-41-4	660	20
Xylenes, Total	1330-20-7	2,600	60

PURGEABLE HYDROCARBONS AS:

Gasoline \* 220 mg/kg 4 mg/kg

ND = Not Detected

\* Sample does not match the pattern typically seen with gasoline hydrocarbons.

## LEVINE-FRICKE

CLIENT ID: DW-11-5  
CLIENT PROJ. ID: 1649.05  
DATE SAMPLED: 06/12/91  
DATE RECEIVED: 06/12/91  
REPORT DATE: 06/17/91

MED-TOX LAB NO: 9106079-02A  
MED-TOX JOB NO: 9106079  
DATE ANALYZED: 06/12/91  
INSTRUMENT: H

## BTEX AND HYDROCARBONS (SOIL MATRIX)

METHOD: EPA 8020, 5030 GCFID

	CAS #	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene	71-43-2	ND	1
Toluene	108-88-3	ND	1
Ethylbenzene	100-41-4	ND	1
Xylenes, Total	1330-20-7	ND	3

## PURGEABLE HYDROCARBONS AS:

Gasoline ND mg/kg 0.2 mg/kg

ND = Not Detected

## LEVINE-FRICKE

CLIENT ID: DB-12-8.5  
CLIENT PROJ. ID: 1649.05  
DATE SAMPLED: 06/12/91  
DATE RECEIVED: 06/12/91  
REPORT DATE: 06/17/91

MED-TOX LAB NO: 9106079-03A  
MED-TOX JOB NO: 9106079  
DATE ANALYZED: 06/12-13/91  
INSTRUMENT: H

## BTEX AND HYDROCARBONS (SOIL MATRIX)

METHOD: EPA 8020, 5030 GCFID

	CAS #	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene	71-43-2	ND	50
Toluene	108-88-3	ND	50
Ethylbenzene	100-41-4	ND	50
Xylenes, Total	1330-20-7	640	200

## PURGEABLE HYDROCARBONS AS:

Gasoline \* 54 mg/kg 10 mg/kg

ND = Not Detected

\* Sample does not match the pattern typically seen with gasoline hydrocarbons.

LEVINE-FRICKE

CLIENT ID: DB-15-7  
CLIENT PROJ. ID: 1649.05  
DATE SAMPLED: 06/12/91  
DATE RECEIVED: 06/12/91  
REPORT DATE: 06/17/91

MED-TOX LAB NO: 9106079-06A  
MED-TOX JOB NO: 9106079  
DATE ANALYZED: 06/12/91  
INSTRUMENT: H

BTEX AND HYDROCARBONS (SOIL MATRIX)

METHOD: EPA 8020, 5030 GCFID

	CAS #	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene	71-43-2	260	1
Toluene	108-88-3	650	1
Ethylbenzene	100-41-4	570	1
Xylenes, Total	1330-20-7	2,000	3

PURGEABLE HYDROCARBONS AS:

Gasoline \*                                      590 mg/kg                                      0.2 mg/kg

ND = Not Detected

\* Sample does not match the pattern typically seen with gasoline hydrocarbons.

QUALITY CONTROL DATA

LEVINE-FRICKE

CLIENT PROJ. ID: 1649.05

MED-TOX JOB NO: 9106079

DATE EXTRACTED: 06/10/91  
DATE ANALYZED: 06/13/91  
SAMPLE SPIKED: 9106060-07A

MED-TOX JOB NO: 9106079  
CLIENT PROJ. ID: 1649.05  
INSTRUMENT: IR

IR DETERMINATION FOR OIL & GREASE/HYDROCARBONS  
MATRIX SPIKE RECOVERY SUMMARY  
SOIL MATRIX

ANALYTE	MS Conc. (mg/kg)	Sample Result (mg/kg)	MS Result (mg/kg)	MSD Result (mg/kg)	Average Percent Recovery	RPD
oil	241	12	241	241	95.3	0.0

CURRENT QC LIMITS (Revised 03/14/91)

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
Oil	(53-132)	14

MS = Matrix Spike  
MSD = Matrix Spike Duplicate  
RPD = Relative Percent Difference  
ND = Not Detected



DATE EXTRACTED: 06/11/91  
DATE ANALYZED: 06/12/91  
SAMPLE SPIKED: 9106068-05A

MED-TOX JOB NO: 9106079  
CLIENT PROJ. ID: 1649.05  
INSTRUMENT: C

**MATRIX SPIKE RECOVERY SUMMARY  
TPH EXTRACTABLE SOILS  
METHOD 3550 GCFID  
(SOIL MATRIX; EXTRACTION METHOD)**

<b>ANALYTE</b>	<b>Spike Conc. (mg/kg)</b>	<b>Sample Result (mg/kg)</b>	<b>MS Result (mg/kg)</b>	<b>MSD Result (mg/kg)</b>	<b>Average Percent Recovery</b>	<b>RPD</b>
Diesel	84.8	ND	93.5	79.0	101.7	16.8

**CURRENT QC LIMITS (Revised 05/02/91)**

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
Diesel	(48.8-126.6)	19.1

MS = Matrix Spike  
MSD = Matrix Spike Duplicate  
RPD = Relative Percent Difference  
ND = Not Detected

DATE ANALYZED: 06/12/91  
 SAMPLE SPIKED: 9106051-17A  
 INSTRUMENT: H

MED-TOX JOB NO: 9106079  
 CLIENT PROJ. ID: 1649.05

**MATRIX SPIKE RECOVERY SUMMARY**  
**METHOD TPHBTS**  
**5030 w/GCFID/8020**

ANALYTE	Spike Conc. (ug/kg)	Sample Result (ug/kg)	MS Result (ug/kg)	MSD Result (ug/kg)	Average Percent Recovery	RPD
Benzene	27.7	ND	29.5	28.4	104.5	3.8
Toluene	91.6	ND	97.1	93.2	103.9	4.1
Hydrocarbons as Gasoline	1040	ND	988	968	94.0	2.0

CURRENT QC LIMITS (Revised 04/30/91)

Analyte	Percent Recovery	RPD
Benzene	(78.6-121.5)	14.8
Toluene	(78.7-119.1)	11.8
Gasoline	(60.0-109.7)	15.6

MS = Matrix Spike  
 MSD = Matrix Spike Duplicate  
 RPD = Relative Percent Difference  
 ND = Not Detected

K-4.5 ✓  
CHAIN OF CUSTODY / ANALYSES REQUEST FORM

9106079

Project No.: <b>1649.05</b>	Field Logbook No.:	Date: <b>6/12/91</b>	Serial No.: <b>No. 7042</b>
Project Name: <b>Yerba Buena</b>	Project Location: <b>Emeryville/Oakland</b>		

Sampler (Signature): *William Gradini*      ANALYSES      Samplers: **WEM**

SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE	ANALYSES						REMARKS	
						EPA 801	EPA 821	META: 4015/4022	5520 GF	HOLD	RUSH		
DB-10-8.5	6/12/91	9:15	01A	1	Soil		X	X				X	48-Hour TAT Results to Cindy Barclay
DW-11-5		9:30	02A	1			X	X				X	
DB-12-8.5		11:35	03A	1			X	X				X	
DB-13-6		11:50	04A	1						X			
DS-14-6		12:00	05A	1						X			
DB-15-7		14:35	06A	1		X	X					X	
DE-16-2.5		14:45	07A	1						X			

RELINQUISHED BY: (Signature) <i>William Gradini</i>	DATE: <b>6/12/91</b>	TIME: <b>16:00</b>	RECEIVED BY: (Signature) <i>Michelle C. Yest</i>	DATE: <b>6-12-91</b>	TIME: <b>16:00</b>
RELINQUISHED BY: (Signature) <i>Michelle C. Yest</i>	DATE: <b>6-12-91</b>	TIME: <b>16:30</b>	RECEIVED BY: (Signature) <i>Janie Gillespie</i>	DATE: <b>6-12-91</b>	TIME: <b>16:30</b>
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME

METHOD OF SHIPMENT:	DATE	TIME	LAB COMMENTS:
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Sample Collector: <b>LEVINE-FRICKE</b> 1900 Powell Street, 12th Floor Emeryville, Ca 94608 (415) 652-4500	Analytical Laboratory: <i>Med-Top, Pleasant Hill, CA</i>
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**CERTIFICATE OF ANALYSIS**

PAGE 1 OF 6

LEVINE-FRICKE  
1900 POWELL ST., 12TH FL.  
EMERYVILLE, CA 94608  
ATTN: CINDY BARCLAY

REPORT DATE: 06/18/91  
DATE SAMPLED: 06/11/91  
DATE RECEIVED: 06/11/91  
MED-TOX JOB NO: 9106068

CLIENT PROJ. ID: 1649.05  
C.O.C. SERIAL NO: 7798

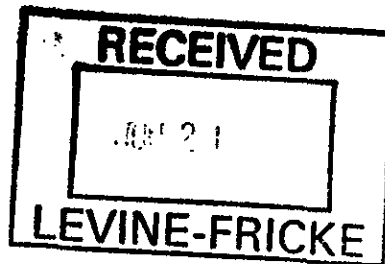
**ANALYSIS OF: SOIL SAMPLES**

Sample Identification		Oil & Grease (mg/kg)	Hydrocarbons (mg/kg)	Extractable Hydrocarbons as Diesel (mg/kg)	Extractable Hydrocarbons as Oil (mg/kg)
Client Id.	Lab No.				
DS-7-4	05A	20	10	ND	ND
DN-9-3	07A	20	ND	ND	ND
Detection Limit		10	10	10	20
Method		5520E	5520F	3550 GCFID	3550 GCFID
Instrument		IR	IR	C	C
Date Extracted:		06/11/91	06/11/91	06/11/91	06/11/91
Date Analyzed:		06/13/91	06/13/91	06/12/91	06/12/91

ND = Not Detected

*Andrew Bradeen*  
Andrew Bradeen, Manager  
Organic Laboratory

Results FAXed 06/13/91



## LEVINE-FRICKE

CLIENT ID: DS-7-4  
CLIENT PROJ. ID: 1649.05  
DATE SAMPLED: 06/11/91  
DATE RECEIVED: 06/11/91  
REPORT DATE: 06/18/91

MED-TOX LAB NO: 9106068-05A  
MED-TOX JOB NO: 9106068  
DATE ANALYZED: 06/11/91  
INSTRUMENT: H

## BTEX AND HYDROCARBONS (SOIL MATRIX)

METHOD: EPA 8020, 5030 GCFID

	CAS #	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene	71-43-2	ND	1
Toluene	108-88-3	ND	1
Ethylbenzene	100-41-4	ND	1
Xylenes, Total	1330-20-7	ND	3

## PURGEABLE HYDROCARBONS AS:

Gasoline ND mg/kg 0.2 mg/kg

ND = Not Detected

LEVINE-FRICKE

CLIENT ID: DN-9-3  
 CLIENT PROJ. ID: 1649.05  
 DATE SAMPLED: 06/11/91  
 DATE RECEIVED: 06/11/91  
 REPORT DATE: 06/18/91

MED-TOX LAB NO: 9106068-07A  
 MED-TOX JOB NO: 9106068  
 DATE ANALYZED: 06/11/91  
 INSTRUMENT: H

BTEX AND HYDROCARBONS (SOIL MATRIX)

METHOD: EPA 8020, 5030 GCFID

	CAS #	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene	71-43-2	ND	1
Toluene	108-88-3	ND	1
Ethylbenzene	100-41-4	ND	2
Xylenes, Total	1330-20-7	ND	3

PURGEABLE HYDROCARBONS AS:

Gasoline \*                                      0.4 mg/kg                                      0.2 mg/kg

ND = Not Detected

\* Hydrocarbon pattern does not match that of gasoline.

QUALITY CONTROL DATA

LEVINE-FRICKE

CLIENT PROJ. ID: 1649.05

MED-TOX JOB NO: 9106068

DATE EXTRACTED: 06/10/91  
DATE ANALYZED: 06/11-13/91  
SAMPLE SPIKED: 9106060-07A

MED-TOX JOB NO: 9106068  
CLIENT PROJ. ID: 1649.05  
INSTRUMENT: IR

**IR DETERMINATION FOR OIL & GREASE/HYDROCARBONS  
MATRIX SPIKE RECOVERY SUMMARY  
SOIL MATRIX**

ANALYTE	MS Conc. (mg/kg)	Sample Result (mg/kg)	MS Result (mg/kg)	MSD Result (mg/kg)	Average Percent Recovery	RPD
oil	241	12	241	241	95.3	0.0

**CURRENT QC LIMITS (Revised 03/14/91)**

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
oil	(53-132)	14

MS = Matrix Spike  
MSD = Matrix Spike Duplicate  
RPD = Relative Percent Difference  
ND = Not Detected



DATE EXTRACTED: 06/11/91  
DATE ANALYZED: 06/12/91  
SAMPLE SPIKED: 9106068-05A

MED-TOX JOB NO: 9106068  
CLIENT PROJ. ID: 1649.05  
INSTRUMENT: C

**MATRIX SPIKE RECOVERY SUMMARY**  
**TPH EXTRACTABLE SOILS**  
**METHOD 3550 GCFID**  
**(SOIL MATRIX; EXTRACTION METHOD)**

ANALYTE	Spike Conc. (mg/kg)	Sample Result (mg/kg)	MS Result (mg/kg)	MSD Result (mg/kg)	Average Percent Recovery	RPD
Diesel	84.8	ND	93.5	79.0	101.7	16.8

**CURRENT QC LIMITS (Revised 05/02/91)**

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
Diesel	(48.8-126.6)	19.1

MS = Matrix Spike  
MSD = Matrix Spike Duplicate  
RPD = Relative Percent Difference  
ND = Not Detected

DATE ANALYZED: 06/11/91  
 SAMPLE SPIKED: 9106051-20A  
 INSTRUMENT: H

MED-TOX JOB NO: 9106068  
 CLIENT PROJ. ID: 1649.05

**MATRIX SPIKE RECOVERY SUMMARY  
 METHOD TPHBTS  
 5030 w/GCFID/8020**

ANALYTE	Spike Conc. (ug/kg)	Sample Result (ug/kg)	MS Result (ug/kg)	MSD Result (ug/kg)	Average Percent Recovery	RPD
Benzene	27.9	ND	28.1	28.2	100.9	0.4
Toluene	91.7	ND	91.0	91.7	99.6	0.8
Hydrocarbons as Gasoline	1040	ND	911	893	86.7	2.0

**CURRENT QC LIMITS (Revised 04/30/91)**

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
Benzene	(78.6-121.5)	14.8
Toluene	(78.7-119.1)	11.8
Gasoline	(60.0-109.7)	15.6

MS = Matrix Spike  
 MSD = Matrix Spike Duplicate  
 RPD = Relative Percent Difference  
 ND = Not Detected

**CHAIN OF CUSTODY / ANALYSES REQUEST FORM**

9106068

Project No.: 1649.05	Field Logbook No.:	Date: 6/11/91	Serial No.: 7798
Project Name: Yerba Buena	Project Location: Oakland/Emeryville		

Sampler (Signature): <i>William Goodwin</i>	<b>ANALYSES</b>	Samplers: 16EM
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SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	ANALYSES										REMARKS		
						EPA-801	EPA-824	Methyl 15/30/2	5520 FF	HOLD	RUSH							
DB-3-5.5	6/11/91	9:45	01A	1	Soil												X	
DN-4-3		9:50	02A	1													X	
DS-5-5		10:05	03A	1													X	
DE-6-4		10:40	04A	1													X	
DS-7-4		13:10	05A	1				X	X								X	
DR-8-6		14:30	06A	1													X	
DA-9-3		14:35	07A	1				X	X								X	

RELINQUISHED BY: (Signature) <i>William Goodwin</i>	DATE: <del>6/11/91</del>	TIME: 16:00	RECEIVED BY: (Signature) <i>Michelle C. Guest</i>	DATE: 6-11-91	TIME: 16:00
RELINQUISHED BY: (Signature) <i>Michelle C. Guest</i>	DATE: 6-11-91	TIME: 16:45	RECEIVED BY: (Signature) <i>Gina Gillespie</i>	DATE: 6-11-91	TIME: 16:45
RELINQUISHED BY: (Signature)	DATE:	TIME:	RECEIVED BY: (Signature)	DATE:	TIME:
METHOD OF SHIPMENT:	DATE:	TIME:	LAB COMMENTS:		

Sample Collector: LEVINE-FRICKE 1900 Powell Street, 12th Floor Emeryville, Ca 94608 (415) 652-4500	Analytical Laboratory:  <i>Met. Tox. Alameda Hill, CA</i>
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**CERTIFICATE OF ANALYSIS**

PAGE 1 OF 8

LEVINE-FRICKE  
1900 POWELL ST., 12TH FL.  
EMERYVILLE, CA 94608  
ATTN: CINDY BARCLAY

REPORT DATE: 06/13/91  
DATE SAMPLED: 06/10/91  
DATE RECEIVED: 06/10/91  
MED-TOX JOB NO: 9106060

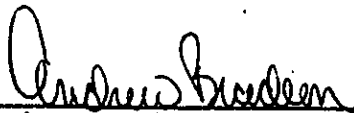
CLIENT PROJ. ID: 1649.05  
C.O.C. SERIAL NO: 7797

OCT 13 1992

**ANALYSIS OF: SOIL SAMPLES**

Sample Identification Client Id.    Lab No.	Oil & Grease (mg/kg)	Hydrocarbons (mg/kg)	Extractable Hydrocarbons as Diesel (mg/kg)	Extractable Hydrocarbons as Oil (mg/kg)
BS-6-3            01A	20	ND	ND	ND
BB-6.1-5.5      02A	200	180	ND	70
AS-5-3.5        07A	10	ND	ND	ND
DN-1-3           08A	40	20	ND	ND
Detection Limit	10	10	10	20
Method	5520E	5520F	3550 GCFID	3550 GCFID
Instrument	IR	IR	C	C
Date Extracted:	06/10/91	06/10/91	06/10/91	06/10/91
Date Analyzed:	06/11/91	06/11/91	06/11/91	06/11/91

ND = Not Detected

  
Andrew Bradeen, Manager  
Organic Laboratory

Results FAXed 06/12/91

**COPY**

## LEVINE-FRICKE

CLIENT ID: BS-6-3  
CLIENT PROJ. ID: 1649.05  
DATE SAMPLED: 06/10/91  
DATE RECEIVED: 06/10/91  
REPORT DATE: 06/13/91

MED-TOX LAB NO: 9106060-01A  
MED-TOX JOB NO: 9106060  
DATE ANALYZED: 06/10-12/91  
INSTRUMENT: H

## BTEX AND HYDROCARBONS (SOIL MATRIX)

METHOD: EPA 8020, 5030 GCFID

	CAS #	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene	71-43-2	ND	1
Toluene	108-88-3	ND	1
Ethylbenzene	100-41-4	ND	1
Xylenes, Total	1330-20-7	ND	3

## PURGEABLE HYDROCARBONS AS:

Gasoline ND mg/kg 0.2 mg/kg

ND - Not Detected

LEVINE-FRICKE

CLIENT ID: BB-6.1-5.5  
 CLIENT PROJ. ID: 1649.05  
 DATE SAMPLED: 06/10/91  
 DATE RECEIVED: 06/10/91  
 REPORT DATE: 06/13/91

MED-TOX LAB NO: 9106060-02A  
 MED-TOX JOB NO: 9106060  
 DATE ANALYZED: 06/10/91  
 INSTRUMENT: H

BTEX AND HYDROCARBONS (SOIL MATRIX)

METHOD: EPA 8020, 5030 GCFID

	CAS #	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene	71-43-2	ND	5
Toluene	108-88-3	ND	20
Ethylbenzene	100-41-4	ND	70
Xylenes, Total	1330-20-7	ND	200

PURGEABLE HYDROCARBONS AS:

Gasoline \*    26 mg/kg    1 mg/kg

ND - Not Detected

\* Hydrocarbon pattern in sample does not match that normally seen in gasoline.

## LEVINE-FRICKE

CLIENT ID: AS-5-3.5  
CLIENT PROJ. ID: 1649.05  
DATE SAMPLED: 06/10/91  
DATE RECEIVED: 06/10/91  
REPORT DATE: 06/13/91

MED-TOX LAB NO: 9106060-07A  
MED-TOX JOB NO: 9106060  
DATE ANALYZED: 06/10/91  
INSTRUMENT: H

## BTEX AND HYDROCARBONS (SOIL MATRIX)

METHOD: EPA 8020, 5030 GCFID

	CAS #	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene	71-43-2	ND	1
Toluene	108-88-3	ND	1
Ethylbenzene	100-41-4	ND	1
Xylenes, Total	1330-20-7	ND	3

## PURGEABLE HYDROCARBONS AS:

Gasoline ND mg/kg 0.2 mg/kg

ND - Not Detected

## LEVINE-FRICKE

CLIENT ID: DN-1-3  
CLIENT PROJ. ID: 1649.05  
DATE SAMPLED: 06/10/91  
DATE RECEIVED: 06/10/91  
REPORT DATE: 06/13/91

MED-TOX LAB NO: 9106060-08A  
MED-TOX JOB NO: 9106060  
DATE ANALYZED: 06/10-11/91  
INSTRUMENT: H

## BTEX AND HYDROCARBONS (SOIL MATRIX)

METHOD: EPA 8020, 5030 GCFID

	CAS #	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene	71-43-2	ND	1
Toluene	108-88-3	ND	1
Ethylbenzene	100-41-4	ND	1
Xylenes, Total	1330-20-7	ND	3

## PURGEABLE HYDROCARBONS AS:

Gasoline ND mg/kg 0.2 mg/kg

ND = Not Detected



QUALITY CONTROL DATA

LEVINE-FRICKE

CLIENT PROJ. ID: 1649.05

MED-TOX JOB NO: 9106060

DATE EXTRACTED: 06/10/91  
DATE ANALYZED: 06/11/91  
SAMPLE SPIKED: 9106060-07A

MED-TOX JOB NO: 9106060  
CLIENT PROJ. ID: 1649.05  
INSTRUMENT: IR

IR DETERMINATION FOR OIL & GREASE/HYDROCARBONS  
MATRIX SPIKE RECOVERY SUMMARY  
SOIL MATRIX

ANALYTE	MS Conc. (mg/kg)	Sample Result (mg/kg)	MS Result (mg/kg)	MSD Result (mg/kg)	Average Percent Recovery	RPD
oil	241	12	241	241	95.3	0.0

CURRENT QC LIMITS (Revised 03/14/91)

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
oil	(53-132)	14

MS = Matrix Spike  
MSD = Matrix Spike Duplicate  
RPD = Relative Percent Difference  
ND = Not Detected

DATE EXTRACTED: 06/10/91  
DATE ANALYZED: 06/11/91  
SAMPLE SPIKED: 9106060-07A

MED-TOX JOB NO: 9106060  
CLIENT PROJ. ID: 1649.05  
INSTRUMENT: C

**MATRIX SPIKE RECOVERY SUMMARY  
TPH EXTRACTABLE SOILS  
METHOD 3550 GCFID  
(SOIL MATRIX; EXTRACTION METHOD)**

<u>ANALYTE</u>	<u>Spike Conc. (mg/kg)</u>	<u>Sample Result (mg/kg)</u>	<u>MS Result (mg/kg)</u>	<u>MSD Result (mg/kg)</u>	<u>Average Percent Recovery</u>	<u>RPD</u>
Diesel	84.8	ND	86.2	82.7	99.6	4.1

**CURRENT QC LIMITS (Revised 05/02/91)**

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
Diesel	(48.8-126.6)	19.1

MS = Matrix Spike  
MSD = Matrix Spike Duplicate  
RPD = Relative Percent Difference  
ND = Not Detected

DATE ANALYZED: 06/10/91  
 SAMPLE SPIKED: 9106051-03A  
 INSTRUMENT: H

MED-TOX JOB NO: 9106060  
 CLIENT PROJ. ID: 1649.05

**MATRIX SPIKE RECOVERY SUMMARY**  
**METHOD TPHBTS**  
**5030 w/GCFID/8020**

ANALYTE	Spike Conc. (ug/kg)	Sample Result (ug/kg)	MS Result (ug/kg)	MSD Result (ug/kg)	Average Percent Recovery	RPD
Benzene	29.5	ND	27.2	27.4	92.5	0.7
Toluene	96.7	3.0	84.2	84.2	87.2	0.4
Hydrocarbons as Gasoline	1040	ND	1030	1070	101.0	3.8

**CURRENT QC LIMITS (Revised 04/30/91)**

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
Benzene	(78.6-121.5)	14.8
Toluene	(78.7-119.1)	11.8
Gasoline	(60.0-109.7)	15.6

MS = Matrix Spike  
 MSD = Matrix Spike Duplicate  
 RPD = Relative Percent Difference  
 ND = Not Detected

R-4, S-D

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

9106060

Project No.: 1649.05	Field Logbook No.:	Date: 6/10/91	Serial No.: N# 7797
Project Name: Yerba Buena	Project Location: Oakland / Emeryville		

SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE	ANALYSES							HOLD	RUSH	SAMPLERS: WEM	REMARKS
						EPA 601	EPA 604	Mog. 8015/8020	557DEF							
BS-6-3	6/10/91	8:40	01A	1	Soil			X	X			X	X			48-hour TAT
BB-6-1-5.5		9:00	02A	1				X	X			X	X			
AB-1-8.5		11:50	03A	1								X				-Results to Cindy Barclay
AF-2-3		12:05	04A	1								X				
AN-3-5.5		12:15	05A	1								X				
AW-4-6		12:20	06A	1								X				
AS-5-3.5		12:25	07A	1				X	X				X			
DB-1-3		15:05	08A	1				X	X				X			Sample labeled DN-1-3
DN-2-4.5		14:55	09A	1									X			" DB-2-4.5

RELINQUISHED BY: (Signature) <i>Mildred Gordin</i>	DATE: 6/10/91	TIME: 16:10	RECEIVED BY: (Signature) <i>Michelle C. Yust</i>	DATE: 6-10-91	TIME: 16:55
RELINQUISHED BY: (Signature) <i>Michelle C. Yust</i>	DATE: 6-10-91	TIME: 16:55	RECEIVED BY: (Signature) <i>Gina Gillespie</i>	DATE: 6-10-91	TIME: 16:55
RELINQUISHED BY: (Signature)	DATE:	TIME:	RECEIVED BY: (Signature)	DATE:	TIME:
METHOD OF SHIPMENT:	DATE:	TIME:	LAB COMMENTS:		

Sample Collector: LEVINE-FRICKE 1900 Powell Street, 12th Floor Emeryville, Ca 94608 (415) 652-4500	Analytical Laboratory: <i>Mel-Tox</i>
---	--

# ANALYTICAL SERVICES



DOHS CERTIFICATION NO: E772

## CERTIFICATE OF ANALYSIS

PAGE 1 OF 7

LEVINE-FRICKE  
1900 POWELL ST., 12TH FL.  
EMERYVILLE, CA 94608  
ATTN: CINDY BARCLAY


REPORT DATE: 08/30/91  
DATE SAMPLED: 08/14-15/91  
DATE RECEIVED: 08/16/91  
MED-TOX JOB NO: 9108114

CLIENT PROJ. ID: 1649.05  
C.O.C. SERIAL NO: 7189, 7190

### ANALYSIS OF: SOIL SAMPLES

Sample Identification Client Id.	Lab No.	Oil & Grease (mg/kg)	Hydrocarbons (mg/Kg)	Extractable Hydrocarbons as Diesel (mg/kg)
JS-64-7.5	02A	20	ND	ND
JS-68-9	06A	20	ND	ND
LW-28.1-8	09A	20	10	ND
Detection Limit		10	10	10
Method		5520E	5520F	3550 GCFID
Instrument		IR	IR	C
Date Extracted:		08/22/91	08/22/91	08/20/91
Date Analyzed:		08/26/91	08/26/91	08/22/91

ND = Not Detected

  
Andrew Bradeen, Manager  
Organic Laboratory

Results FAXed 08/27/91

## LEVINE-FRICKE

CLIENT ID: JS-64-7.5  
CLIENT PROJ. ID: 1649.05  
DATE SAMPLED: 08/14/91  
DATE RECEIVED: 08/16/91  
REPORT DATE: 08/30/91

MED-TOX LAB NO: 9108114-02A  
MED-TOX JOB NO: 9108114  
DATE ANALYZED: 08/22/91  
INSTRUMENT: H

## BTEX AND HYDROCARBONS (SOIL MATRIX)

METHOD: EPA 8020, 5030 GCFID

	CAS #	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene	71-43-2	ND	1
Toluene	108-88-3	ND	1
Ethylbenzene	100-41-4	ND	1
Xylenes, Total	1330-20-7	ND	3

## PURGEABLE HYDROCARBONS AS:

Gasoline ND mg/kg 0.2 mg/kg

ND = Not Detected

## LEVINE-FRICKE

CLIENT ID: JS-68-9  
CLIENT PROJ. ID: 1649.05  
DATE SAMPLED: 08/14/91  
DATE RECEIVED: 08/16/91  
REPORT DATE: 08/30/91

MED-TOX LAB NO: 9108114-06A  
MED-TOX JOB NO: 9108114  
DATE ANALYZED: 08/22/91  
INSTRUMENT: H

## BTEX AND HYDROCARBONS (SOIL MATRIX)

METHOD: EPA 8020, 5030 GCFID

	CAS #	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene	71-43-2	ND	1
Toluene	108-88-3	ND	1
Ethylbenzene	100-41-4	ND	1
Xylenes, Total	1330-20-7	ND	3

## PURGEABLE HYDROCARBONS AS:

Gasoline ND mg/kg 0.2 mg/kg

ND - Not Detected



## LEVINE-FRICKE

CLIENT ID: LW-28.1-8  
CLIENT PROJ. ID: 1649.05  
DATE SAMPLED: 08/15/91  
DATE RECEIVED: 08/16/91  
REPORT DATE: 08/30/91

MED-TOX LAB NO: 9108114-09A  
MED-TOX JOB NO: 9108114  
DATE ANALYZED: 08/22-23/91  
INSTRUMENT: H

## BTEX AND HYDROCARBONS (SOIL MATRIX)

METHOD: EPA 8020, 5030 GCFID

	CAS #	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene	71-43-2	14	1
Toluene	108-88-3	ND	1
Ethylbenzene	100-41-4	140	1
Xylenes, Total	1330-20-7	93	3

## PURGEABLE HYDROCARBONS AS:

Gasoline 4.0 mg/kg 0.2 mg/kg

ND - Not Detected

QUALITY CONTROL DATA

LEVINE-FRICKE

CLIENT PROJ. ID: 1649.05

MED-TOX JOB NO: 9108114

DATE EXTRACTED: 08/22/91  
DATE ANALYZED: 08/22/91  
SAMPLE SPIKED: 9108163-02A

MED-TOX JOB NO: 9108114  
CLIENT PROJ. ID: 1649.05  
INSTRUMENT: IR

IR DETERMINATION FOR OIL & GREASE/HYDROCARBONS  
METHOD SPIKE RECOVERY SUMMARY  
SOIL MATRIX

ANALYTE	MS Conc. (mg/kg)	Sample Result (mg/kg)	MS Result (mg/kg)	MSD Result (mg/kg)	Average Percent Recovery	RPD
Oil	206	ND	206	206	100.0	0.0

CURRENT QC LIMITS (Revised 08/14/91)

Analyte	Percent Recovery	RPD
Oil	(66-130)	10.2

MS = Matrix Spike  
MSD = Matrix Spike Duplicate  
RPD = Relative Percent Difference  
ND = Not Detected

DATE EXTRACTED: 08/20/91  
DATE ANALYZED: 08/22/91  
SAMPLE SPIKED: 9108114-06A

MED-TOX JOB NO: 9108114  
CLIENT PROJ. ID: 1649.05  
INSTRUMENT: C

METHOD SPIKE RECOVERY SUMMARY  
TPH EXTRACTABLE SOILS  
METHOD 3550 GCFID  
(SOIL MATRIX; EXTRACTION METHOD)

ANALYTE	Spike Conc: (mg/kg)	Sample Result (mg/kg)	MS Result (mg/kg)	MSD Result (mg/kg)	Average Percent Recovery	RPD
Diesel	84.8	ND	95.0	90.2	109.2	5.2

CURRENT QC LIMITS (Revised 08/15/91)

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
Diesel	(60.3-116.2)	19.7

MS = Matrix Spike  
MSD = Matrix Spike Duplicate  
RPD = Relative Percent Difference  
ND = Not Detected

DATE ANALYZED: 08/22/91  
SAMPLE SPIKED: 9108114-06A  
INSTRUMENT: H

MED-TOX JOB NO: 9108114

CLIENT PROJ. ID: 1649.05

**MATRIX SPIKE RECOVERY SUMMARY**  
**METHOD TPHBTS**  
**5030 w/GCFID/8020**

ANALYTE	Spike Conc. (ug/kg)	Sample Result (ug/kg)	MS Result (ug/kg)	MSD Result (ug/kg)	Average Percent Recovery	RPD
Benzene	26.8	ND	27.6	27.3	102.4	1.1
Toluene	115	ND	117	116	101.3	0.9
Hydrocarbons as Gasoline	1038	ND	882	859	83.9	2.6

**CURRENT QC LIMITS (Revised 08/15/91)**

Analyte	Percent Recovery	RPD
Benzene	(81-125)	9.6
Toluene	(83-119)	10
Gasoline	(54-120)	15

MS = Matrix Spike  
MSD = Matrix Spike Duplicate  
RPD = Relative Percent Difference  
ND = Not Detected

R-4, S-H H

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

9108114

Project No.: 1041905 Field Logbook No.: Date: 8/15/91 Serial No.: 7190

Project Name: Yuba River Project Location: Emeryville

Sampler (Signature): [Signature] ANALYSES Hold Rush Samplers: [Signature]

Table with columns: SAMPLE NO., DATE, TIME, LAB SAMPLE NO., NO. OF CON-TAINERS, SAMPLE TYPE, EPA-601, EPA-624, TMDL, 4051002, 552DEF, HOLD, RUSH, REMARKS. Contains 3 rows of sample data.

RELINQUISHED BY: [Signature] DATE: 8/15/91 TIME: 12:15 RECEIVED BY: [Signature] DATE: 8/15/91 TIME: 10:00

RELINQUISHED BY: [Signature] DATE: 7/11/91 TIME: 11:20 RECEIVED BY: [Signature] DATE: 8/15/91 TIME: 10:00

RELINQUISHED BY: [Signature] DATE: [ ] TIME: [ ] RECEIVED BY: [Signature] DATE: 8/15/91 TIME: 10:00

METHOD OF SHIPMENT: DATE: TIME: LAB COMMENTS: [ ]

Sample Collector: LEVINE-FRICKE 1900 Powell Street, 12th Floor Emeryville, Ca 94608 (415) 652-4500 Analytical Laboratory: Med-Tox

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

9108104

Project No.: <u>161705</u>	Field Logbook No.:	Date: <u>8/19/91</u>	Serial No.: <u>7189</u>
Project Name: <u>Yearly Permit</u>	Project Location: <u>Emeryville</u>		

SAMPLER (Signature): <u>[Signature]</u>						ANALYSES						SAMPLERS: <u>Lot A</u>				
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	ANALYSES						HOLD	RUSH	REMARKS		
						EPA-601	EPA 624	PAHs	GC/MS	5720EE						
<u>100-1</u>	<u>8/19/91</u>	<u>11:10</u>	<u>01A</u>	<u>1</u>	<u>Soil</u>									<u>X</u>		
<u>100-2</u>	<u>8/19/91</u>	<u>11:25</u>	<u>02A</u>	<u>1</u>	<u>Soil</u>		<u>X</u>	<u>X</u>								<u>Regular TAT</u>
<u>100-3</u>	<u>8/19/91</u>	<u>11:40</u>	<u>03A</u>	<u>1</u>	<u>Soil</u>									<u>X</u>		
<u>100-4</u>	<u>8/19/91</u>	<u>11:55</u>	<u>04A</u>	<u>1</u>	<u>Soil</u>									<u>X</u>		
<u>100-5</u>	<u>8/19/91</u>	<u>12:10</u>	<u>05A</u>	<u>1</u>	<u>Soil</u>		<u>X</u>	<u>X</u>								<u>Regular TAT</u>
																<u>Results to be provided</u>

RELINQUISHED BY: (Signature) <u>[Signature]</u>	DATE <u>8/19/91</u>	TIME <u>12:00</u>	RECEIVED BY: (Signature) <u>[Signature]</u>	DATE <u>8/19/91</u>	TIME <u>11:50</u>
RELINQUISHED BY: (Signature) <u>[Signature]</u>	DATE <u>8/19/91</u>	TIME <u>11:50</u>	RECEIVED BY: (Signature) <u>[Signature]</u>	DATE <u>8/19/91</u>	TIME <u>11:50</u>
RELINQUISHED BY: (Signature) <u>[Signature]</u>	DATE <u>8/19/91</u>	TIME <u>11:50</u>	RECEIVED BY: (Signature) <u>[Signature]</u>	DATE <u>8/19/91</u>	TIME <u>11:50</u>
METHOD OF SHIPMENT:	DATE	TIME	LAB COMMENTS: <u>[Comments]</u>		

Sample Collector: <b>LEVINE-FRICKE</b> 1900 Powell Street, 12th Floor Emeryville, Ca 94608 (415) 652-4500	Analytical Laboratory: <u>Met-Tox</u>
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## CERTIFICATE OF ANALYSIS

PAGE 1 OF 6

LEVINE-FRICKE  
1900 POWELL ST., 12TH FL.  
EMERYVILLE, CA 94608  
ATTN: CINDY BARCLAY

REPORT DATE: 06/11/91

DATE SAMPLED: 06/06/91

DATE RECEIVED: 06/06/91


CLIENT PROJ. ID: 1649.05  
C.O.C. SERIAL NO: 7713

MED-TOX JOB NO: 9106044

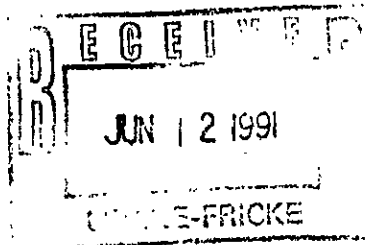
### ANALYSIS OF: SOIL SAMPLES

Sample Identification		Oil & Grease (mg/kg)	Hydrocarbons (mg/kg)	Extractable Hydrocarbons as Diesel (mg/kg)	Extractable Hydrocarbons as Oil (mg/kg)
Client Id.	Lab No.				
CB-1-6.5	01A	20	10	ND	ND
CE-3-3	02A	20	10	ND	ND
Detection Limit		10	10	10	20
Method		5520E	5520F	3550 GCF10	3550 GCF10
Instrument		IR	IR	C	C
Date Extracted:		06/07/91	06/07/91	06/06/91	06/06/91
Date Analyzed:		06/10/91	06/10/91	06/08/91	06/08/91

ND = Not Detected

  
Andrew Bradeen, Manager  
Organic Laboratory

Results FAXed 06/10/91









**QUALITY CONTROL DATA**

**LEVINE-FRICKE**

**CLIENT PROJ. ID: 1649.05**

**MED-TOX JOB NO: 9106044**

DATE EXTRACTED: 06/07/91  
DATE ANALYZED: 06/10/91  
SAMPLE SPIKED: 9106044-01A

MED-TOX JOB NO: 9106044  
CLIENT PROJ. ID: 1649.05  
INSTRUMENT: IR

**IR DETERMINATION FOR OIL & GREASE/HYDROCARBONS  
MATRIX SPIKE RECOVERY SUMMARY  
SOIL MATRIX**

ANALYTE	MS Conc. (mg/kg)	Sample Result (mg/kg)	MS Result (mg/kg)	MSD Result (mg/kg)	Average Percent Recovery	RPD
Oil & Grease	231	19	252	241	106.7	4.5

CURRENT QC LIMITS (Revised 03/14/91)

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
Oil & Grease	(53-132)	14

MS = Matrix Spike  
MSD = Matrix Spike Duplicate  
RPD = Relative Percent Difference  
ND = Not Detected

DATE EXTRACTED: 06/06/91  
DATE ANALYZED: 06/08/91  
SAMPLE SPIKED: 9106044-01A

MED-TOX JOB NO: 9106044  
CLIENT PROJ. ID: 1649.05  
INSTRUMENT: C

**MATRIX SPIKE RECOVERY SUMMARY  
TPH EXTRACTABLE SOILS  
METHOD 3550 GCFID  
(SOIL MATRIX; EXTRACTION METHOD)**

ANALYTE	Spike Conc. (mg/kg)	Sample Result (mg/kg)	MS Result (mg/kg)	MSD Result (mg/kg)	Average Percent Recovery	RPD
Diesel	84.8	ND	81.3	82.0	96.3	0.9

**CURRENT QC LIMITS (Revised 05/02/91)**

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
Diesel	(48.8-126.6)	19.1

MS = Matrix Spike  
MSD = Matrix Spike Duplicate  
RPD = Relative Percent Difference  
ND = Not Detected

DATE ANALYZED: 06/06/91  
 SAMPLE SPIKED: 9106044-01A  
 INSTRUMENT: H

MED-TOX JOB NO: 9106044

CLIENT PROJ. ID: 1649.05

**MATRIX SPIKE RECOVERY SUMMARY**  
**METHOD TPHBTS**  
**5030 w/GCFID/8020**

ANALYTE	Spike Conc. (ug/kg)	Sample Result (ug/kg)	MS Result (ug/kg)	MSD Result (ug/kg)	Average Percent Recovery	RPD
Benzene	102	ND	88.8	92.4	88.8	4.0
Toluene	311	ND	266.0	283.0	88.3	6.2
Hydrocarbons as Gasoline	4160	ND	4380	4490	106.6	2.5

**CURRENT QC LIMITS (Revised 04/30/91)**

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
Benzene	(78.6-121.5)	14.8
Toluene	(78.7-119.1)	11.8
Gasoline	(60.0-109.7)	15.6

MS = Matrix Spike  
 MSD = Matrix Spike Duplicate  
 RPD = Relative Percent Difference  
 ND = Not Detected

R-4,5-

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

106 # 9106134  
9106044

Project No.: 1649.05	Field Logbook No.:	Date: 6/6/91	Serial No.: 7713
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Project Name: Yerba Buena	Project Location: Emeryville/Oakland
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Sampler (Signature): <i>Arleen Madrin</i>	ANALYSES	Samplers: WEM
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SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE	ANALYSES					HOLD	RUSH	REMARKS
						EPA 601	EPA 821	TRU	2015/8200	5520/EF			
CB-1-6.5	6/6/91	13:45	O1A	1	Soil		X	X			X		48-hour TAT
CE-3-3	6/6/91	14:20	O2A	1	Soil		X	X			X		Analyses to CEB (Cindy Barclay)

RELINQUISHED BY: (Signature) <i>Arleen Madrin</i>	DATE: 6/6/91	TIME: 15:30	RECEIVED BY: (Signature) <i>[Signature]</i>	DATE: 6/6/91	TIME: 1530
RELINQUISHED BY: (Signature) <i>[Signature]</i>	DATE: 6/6/91	TIME: 1715	RECEIVED BY: (Signature) <i>Michelle C. Gust</i>	DATE: 6-6-91	TIME: 1745
RELINQUISHED BY: (Signature) <i>Michelle C. Gust</i>	DATE: 6-6-91	TIME: 1800	RECEIVED BY: (Signature) <i>Gina Gillispie</i>	DATE: 6-6-91	TIME: 1800
METHOD OF SHIPMENT:	DATE:	TIME:	LAB COMMENTS:		

Sample Collector: LEVINE-FRICKE 1900 Powell Street, 12th Floor Emeryville, Ca 94608 (415) 652-4500	Analytical Laboratory: BC Analytical
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**CERTIFICATE OF ANALYSIS**

PAGE 1 OF 5

LEVINE-FRICKE  
1900 POWELL ST., 12TH FL.  
EMERYVILLE, CA 94608  
ATTN: CINDY BARCLAY

REPORT DATE: 06/21/91  
DATE SAMPLED: 06/17/91  
DATE RECEIVED: 06/17/91  
MED-TOX JOB NO: 9106107

CLIENT PROJ. ID: 1649.05  
C.O.C. SERIAL NO: 7726

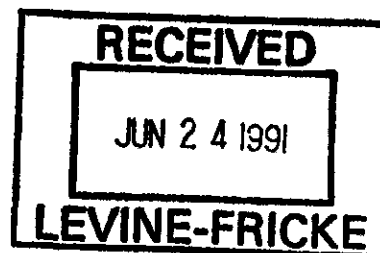
**ANALYSIS OF: SOIL SAMPLE**

Sample Identification		Oil & Grease	Hydrocarbons	Extractable Hydrocarbons as Diesel	Extractable Hydrocarbons as Oil
Client Id.	Lab No.	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
B*1E-5-6	05A	ND	ND	ND	ND
Detection Limit		10	10	10	20
Method		5520E	5520F	3550 GCF10	3550 GCF10
Instrument		IR	IR	C	C
Date Extracted:		06/17/91	06/17/91	06/17/91	06/17/91
Date Analyzed:		06/18/91	06/18/91	06/17/91	06/17/91

ND = Not Detected

*Andrew Bradeen*  
Andrew Bradeen, Manager  
Organic Laboratory

Results FAXed 06/19/91





## LEVINE-FRICKE

CLIENT ID: B'1E-5-6  
CLIENT PROJ. ID: 1649.05  
DATE SAMPLED: 06/17/91  
DATE RECEIVED: 06/17/91  
REPORT DATE: 06/21/91

MED-TOX LAB NO: 9106107-05A  
MED-TOX JOB NO: 9106107  
DATE ANALYZED: 06/17/91  
INSTRUMENT: H

## BTEX AND HYDROCARBONS (SOIL MATRIX)

METHOD: EPA 8020, 5030 GCFID

	CAS #	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene	71-43-2	ND	1
Toluene	108-88-3	ND	1
Ethylbenzene	100-41-4	ND	1
Xylenes, Total	1330-20-7	ND	3

## PURGEABLE HYDROCARBONS AS:

Gasoline ND mg/kg 0.2 mg/kg

ND - Not Detected

**QUALITY CONTROL DATA**

**LEVINE-FRICKE**

**CLIENT PROJ. ID: 1649.05**

**MED-TOX JOB NO: 9106107**

DATE EXTRACTED: 06/18/91  
DATE ANALYZED: 06/18/91  
SAMPLE SPIKED: 9106107-05A

MED-TOX JOB NO: 9106107  
CLIENT PROJ. ID: 1649.05  
INSTRUMENT: IR

**IR DETERMINATION FOR OIL & GREASE/HYDROCARBONS  
MATRIX SPIKE RECOVERY SUMMARY  
SOIL MATRIX**

ANALYTE	MS Conc. (mg/kg)	Sample Result (mg/kg)	MS Result (mg/kg)	MSD Result (mg/kg)	Average Percent Recovery	RPD
oil	226	ND	231	226	101.1	2.2

**CURRENT QC LIMITS (Revised 03/14/91)**

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
oil	(53-132)	14

MS = Matrix Spike  
MSD = Matrix Spike Duplicate  
RPD = Relative Percent Difference  
ND = Not Detected

DATE EXTRACTED: 06/17/91  
DATE ANALYZED: 06/17/91  
SAMPLE SPIKED: 9106107-05A

MED-TOX JOB NO: 9106107  
CLIENT PROJ. ID: 1649.05  
INSTRUMENT: C

**MATRIX SPIKE RECOVERY SUMMARY  
TPH EXTRACTABLE SOILS  
METHOD 3550 GCFID  
(SOIL MATRIX; EXTRACTION METHOD)**

<u>ANALYTE</u>	<u>Spike Conc. (mg/kg)</u>	<u>Sample Result (mg/kg)</u>	<u>MS Result (mg/kg)</u>	<u>MSD Result (mg/kg)</u>	<u>Average Percent Recovery</u>	<u>RPD</u>
Diesel	84.8	ND	74.3	70.8	85.6	4.8

**CURRENT QC LIMITS (Revised 05/02/91)**

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
Diesel	(48.8-126.6)	19.1

MS = Matrix Spike  
MSD = Matrix Spike Duplicate  
RPD = Relative Percent Difference  
ND = Not Detected

DATE ANALYZED: 06/17/91  
SAMPLE SPIKED: 9106056-10B  
INSTRUMENT: H

MED-TOX JOB NO: 9106107  
CLIENT PROJ. ID: 1649.05

**MATRIX SPIKE RECOVERY SUMMARY  
METHOD TPHBTS  
5030 w/GCFID/8020**

ANALYTE	Spike Conc. (ug/kg)	Sample Result (ug/kg)	MS Result (ug/kg)	MSD Result (ug/kg)	Average Percent Recovery	RPD
Benzene	100.2	ND	116.3	116.3	116.1	0.0
Toluene	324.4	ND	360.0	360.1	111.0	0.0
Hydrocarbons as Gasoline	4160	ND	3163	3150	75.9	0.4

**CURRENT QC LIMITS (Revised 04/30/91)**

Analyte	Percent Recovery	RPD
Benzene	(78.6-121.5)	14.8
Toluene	(78.7-119.1)	11.8
Gasoline	(60.0-109.7)	15.6

MS = Matrix Spike  
MSD = Matrix Spike Duplicate  
RPD = Relative Percent Difference  
ND = Not Detected

R-4, J+M

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

9106107

Project No.: 1649.05	Field Logbook No.:	Date: 6/17/91	Serial No.: 7726
Project Name: Yerba Buena	Project Location: Oakland / Emeryville		

Sampler (Signature): *William P. Andrew* ANALYSES  
 Hold RUSH  
 Samplers: WEM

SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE	ANALYSES					HOLD	RUSH	REMARKS
						EPA 601	EPA 624	Met 4	3015/9020	5520 ES			
B1N-1-7.5	6/17/91	9:40	01A	1	Soil						X		
B1W-2-5.5		10:00	02A	1							X		48-hour TAT
B1B-3-9		15:00	03A	1							X		
B1S-4-7		15:10	04A	1							X		Sample Results to Cindy Barclay
B1E-5-6		15:30	05A	1							X		

RELINQUISHED BY: <i>William Andrew</i>	DATE: 6/17/91	TIME: 15:55	RECEIVED BY: <i>Kim Glass</i>	DATE: 6/17/91	TIME: 15:55
RELINQUISHED BY: <i>Kim Glass</i>	DATE: 6/17/91	TIME: 16:35	RECEIVED BY:	DATE:	TIME:
RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY: <i>Michelle C. Grest</i>	DATE: 6-17-91	TIME: 16:35
METHOD OF SHIPMENT:	DATE:	TIME:	LAB COMMENTS:		

Sample Collector: LEVINE-FRICKE 1900 Powell Street, 12th Floor Emeryville, Ca 94608 (415) 652-4500	Analytical Laboratory: <i>Met Tox</i>
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**CERTIFICATE OF ANALYSIS**

PAGE 1 OF 6

LEVINE-FRICKE  
1900 POWELL ST., 12TH FL.  
EMERYVILLE, CA 94608  
ATTN: JOHN STURMAN

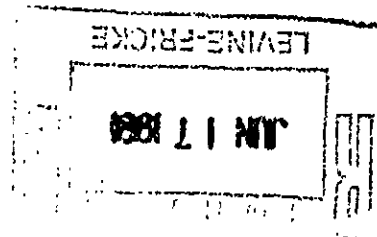
REPORT DATE: 06/12/91  
DATE SAMPLED: 06/06-07/91  
DATE RECEIVED: 06/07/91  
MED-TOX JOB NO: 9106057

CLIENT PROJ. ID: 1649.05  
C.O.C. SERIAL NO: 7650

**ANALYSIS OF: SOIL SAMPLES**

Sample Identification		Oil & Grease	Hydrocarbons	Extractable Hydrocarbons as Diesel	Extractable Hydrocarbons as Oil
Client Id.	Lab No.	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
BW-1-1.5	01A	ND	ND	ND	ND
BB-3-5.5	03A	ND	ND	ND	ND
Detection Limit		10	10	10	20
Method		5520E	5520F	3550 GCF10	3550 GCF10
Instrument		IR	IR	C	C
Date Extracted:		06/08/91	06/08/91	06/08/91	06/08/91
Date Analyzed:		06/10/91	06/10/91	06/10/91	06/10/91
ND = Not Detected					

*Andrew Bradeen*  
Andrew Bradeen, Manager  
Organic Laboratory



Results FAXed 06/11/91

## LEVINE-FRICKE

CLIENT ID: BW-1-1.5  
CLIENT PROJ. ID: 1649.05  
DATE SAMPLED: 06/07/91  
DATE RECEIVED: 06/07/91  
REPORT DATE: 06/12/91

MED-TOX LAB NO: 9106057-01A  
MED-TOX JOB NO: 9106057  
DATE ANALYZED: 06/08/91  
INSTRUMENT: H

## BTEX AND HYDROCARBONS (SOIL MATRIX)

METHOD: EPA 8020, 5030 GCFID

	CAS #	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene	71-43-2	ND	1
Toluene	108-88-3	ND	1
Ethylbenzene	100-41-4	ND	1
Xylenes, Total	1330-20-7	ND	3
PURGEABLE HYDROCARBONS AS:			
Gasoline		ND mg/kg	0.2mg/kg

ND = Not Detected



LEVINE-FRICKE

CLIENT ID: BB-3-5.5  
 CLIENT PROJ. ID: 1649.05  
 DATE SAMPLED: 06/07/91  
 DATE RECEIVED: 06/07/91  
 REPORT DATE: 06/12/91

MED-TOX LAB NO: 9106057-03A  
 MED-TOX JOB NO: 9106057  
 DATE ANALYZED: 06/08/91  
 INSTRUMENT: H

BTEX AND HYDROCARBONS (SOIL MATRIX)

METHOD: EPA 8020, 5030 GCFID

	CAS #	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene	71-43-2	ND	1
Toluene	108-88-3	ND	1
Ethylbenzene	100-41-4	ND	1
Xylenes, Total	1330-20-7	ND	3
PURGEABLE HYDROCARBONS AS:			
Gasoline		ND mg/kg	0.2mg/kg

ND = Not Detected

QUALITY CONTROL DATA

LEVINE-FRICKE

CLIENT PROJ. ID: 1649.05

MED-TOX JOB NO: 9106057

DATE EXTRACTED: 06/08/91  
DATE ANALYZED: 06/10/91  
SAMPLE SPIKED: 9106057-03A

MED-TOX JOB NO: 9106057  
CLIENT PROJ. ID: 1649.05  
INSTRUMENT: IR

IR DETERMINATION FOR OIL & GREASE/HYDROCARBONS  
MATRIX SPIKE RECOVERY SUMMARY  
SOIL MATRIX

ANALYTE	MS Conc. (mg/kg)	Sample Result (mg/kg)	MS Result (mg/kg)	MSD Result (mg/kg)	Average Percent Recovery	RPD
Oil	210	ND	220	210	102.4	4.7

CURRENT QC LIMITS (Revised 03/14/91)

Analyte	Percent Recovery	RPD
Oil	(53-132)	14

MS = Matrix Spike  
MSD = Matrix Spike Duplicate  
RPD = Relative Percent Difference  
ND = Not Detected

DATE EXTRACTED: 06/08/91  
DATE ANALYZED: 06/10/91  
SAMPLE SPIKED: 9106057-03A

MED-TOX JOB NO: 9106057  
CLIENT PROJ. ID: 1649.05  
INSTRUMENT: C

**MATRIX SPIKE RECOVERY SUMMARY**  
**TPH EXTRACTABLE SOILS**  
**METHOD 3550 GCFID**  
**(SOIL MATRIX; EXTRACTION METHOD)**

ANALYTE	Spike Conc. (mg/kg)	Sample Result (mg/kg)	MS Result (mg/kg)	MSD Result (mg/kg)	Average Percent Recovery	RPD
Diesel	84.8	ND	86.4	93.2	105.9	7.6

**CURRENT QC LIMITS (Revised 05/02/91)**

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
Diesel	(48.8-126.6)	19.1

MS = Matrix Spike  
MSD = Matrix Spike Duplicate  
RPD = Relative Percent Difference  
ND = Not Detected

DATE ANALYZED: 06/08/91  
 SAMPLE SPIKED: 9106028-07A  
 INSTRUMENT: H

MED-TOX JOB NO: 9106057  
 CLIENT PROJ. ID: 1649.05

**MATRIX SPIKE RECOVERY SUMMARY**  
**METHOD TPHBTS**  
**5030 w/GCFID/8020**

ANALYTE	Spike Conc. (ug/kg)	Sample Result (ug/kg)	MS Result (ug/kg)	MSD Result (ug/kg)	Average Percent Recovery	RPD
Benzene	25.2	ND	30.7	30.5	121.4	0.7
Toluene	82.5	ND	87.7	85.9	105.2	2.1
Hydrocarbons as Gasoline	1040	705	1630	1510	83.2	7.6

CURRENT QC LIMITS (Revised 04/30/91)

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
Benzene	(78.6-121.5)	14.8
Toluene	(78.7-119.1)	11.8
Gasoline	(60.0-109.7)	15.6

MS = Matrix Spike  
 MSD = Matrix Spike Duplicate  
 RPD = Relative Percent Difference  
 ND = Not Detected

R-4,S-E

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

9106057

Project No.: <u>1649-C5</u>	Field Logbook No.:	Date: <u>6/7/91</u>	Serial No.: <u>7650</u>
Project Name: <u>Yerba Buena</u>	Project Location: <u>Emeryville/Oakland</u>		

Sampler (Signature): [Signature] ANALYSES: \_\_\_\_\_  
 SAMPLERS: WEM

SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE	ANALYSES					HOLD	RUSH	REMARKS	
						EPA-604	EPA-624	MAR-8015/8022	5520/EF					
<u>AW-1-1.5</u>	<u>6/7/91</u>	<u>14:00</u>	<u>01A</u>	<u>1</u>	<u>Soil</u>			<u>X</u>	<u>X</u>			<u>X</u>	<u>X</u>	<u>48-hour TAT</u>  <u>- Results to John Sturman of L-F</u>  <u>- Please observe and cap notes on containers</u>
<u>AW-2-3</u>		<u>14:25</u>	<u>02A</u>	<u>1</u>								<u>X</u>		
<u>BB-3-5.5</u>		<u>15:10</u>	<u>03A</u>	<u>1</u>			<u>X</u>	<u>X</u>					<u>X</u>	
<u>BB-4-5</u>		<u>15:35</u>	<u>04A</u>	<u>1</u>								<u>X</u>		
<u>BB-5-4</u>		<u>15:50</u>	<u>05A</u>	<u>1</u>								<u>X</u>		
<u>CS-2-3</u>	<u>6/7/91</u>	<u>14:05</u>	<u>06A</u>	<u>1</u>								<u>X</u>		

RELINQUISHED BY: (Signature) <u>[Signature]</u>	DATE <u>6/7/91</u>	TIME <u>16:05</u>	RECEIVED BY: (Signature) <u>mechelle c yust</u>	DATE <u>6-7-91</u>	TIME <u>1605</u>
RELINQUISHED BY: (Signature) <u>mechelle c yust</u>	DATE <u>6-7-91</u>	TIME <u>1645</u>	RECEIVED BY: (Signature) _____	DATE _____	TIME _____
RELINQUISHED BY: (Signature) _____	DATE _____	TIME _____	RECEIVED BY: (Signature) <u>gina gillespie</u>	DATE <u>6-7-91</u>	TIME <u>1645</u>
METHOD OF SHIPMENT: _____	DATE _____	TIME _____	LAB COMMENTS: _____		

Sample Collector: <u>LEVINE-FRICKE</u> 1900 Powell Street, 12th Floor Emeryville, Ca 94608 (415) 652-4500	Analytical Laboratory: <u>Med-Tox</u>
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