



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

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

Received  
9/7/88  
Haw

LABORATORY NUMBER: 15336  
CLIENT: AQUA RESOURCES  
PROJECT #: 87157.5  
PROJECT LOCATION: LIVERMORE SUPERBLOCK

DATE RECEIVED: 08/10/88  
DATE ANALYZED: 08/10/88  
DATE REPORTED: 08/11/88

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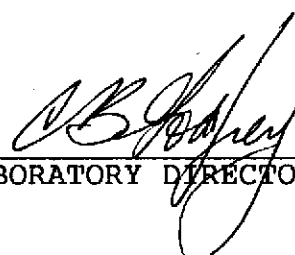
TOTAL LEAD ANALYSIS IN SOIL AND WASTE, EPA 7420

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C&T ID	SAMPLE ID	LEAD (mg/Kg)
15336-1	A-1	90
15336-2	A-2	33
15336-3	A-3	530
15336-4	A-4	6.0
15336-5	A-5	3.5

QA/QC SUMMARY

%RPD	27
%RECOVERY	99

  
LABORATORY DIRECTOR



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

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

LAB NUMBER: 15419  
CLIENT: AQUA RESOURCES  
JOB ID: 87157.5, LIVERMORE SUPERBLOCK

DATE RECEIVED: 08/11/88  
DATE ANALYZED: 08/16/88  
DATE REPORTED: 08/18/88

Results of Analysis for Petroleum Hydrocarbons in Soils & Wastes

Method References: TPH: Total Petroleum Hydrocarbons, EPA 3550/8015

LAB ID	CLIENT ID	GASOLINE (mg/kg)	KEROSINE (mg/kg)	DIESEL (mg/kg)	OTHER (mg/kg)
15419-1	B-1 3'	ND(10)	ND(10)	ND(10)	35,000**
15419-2	B-2 3'	ND(10)	ND(10)	ND(10)	1,000**
15419-3	B-3 1'	ND(10)	ND(10)	ND(10)	*
15419-4	B-4 8'	ND(10)	ND(10)	ND(10)	46,000**
15419-5	B-5 3'	ND(10)	ND(10)	ND(10)	560**

\*CONTAINS UNIDENTIFIABLE OIL NOT QUANTIFIABLE BY GC.

\*\*QUANTITATION BASED ON LARGEST PEAKS WITHIN C12-C20 BOILING RANGE.

ND = Not Detected; Limit of detection in parentheses.

QA/QC SUMMARY

Duplicate: Relative % Difference	9
Spike: % Recovery	85

  
LABORATORY DIRECTOR



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

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

LAB NUMBER: 15368  
 CLIENT: AQUA RESOURCES  
 JOB ID: 87157.5, LIVERMORE SUPERBLOCK

DATE RECEIVED: 08/12/88  
 DATE ANALYZED: 08/16/88  
 DATE REPORTED: 08/18/88

Results of Analysis for Petroleum Hydrocarbons in Soils & Wastes

Method References: TPH: Total Petroleum Hydrocarbons, EPA 3550/8015

LAB ID	CLIENT ID	GASOLINE (mg/kg)	KEROSINE (mg/kg)	DIESEL (mg/kg)	OTHER (mg/kg)
15368-1	B-6	ND(10)	ND(10)	ND(10)	380**
15368-2	B-7	ND(10)	ND(10)	ND(10)	40**
15368-3	B-8	ND(10)	ND(10)	ND(10)	TRACE**
15368-4	B-9	ND(10)	ND(10)	ND(10)	*
15368-5	B-10	ND(10)	ND(10)	ND(10)	*
15368-6	B-11	ND(10)	ND(10)	ND(10)	*
15368-7	B-12	ND(10)	ND(10)	ND(10)	*
15368-8	B-13	ND(10)	ND(10)	ND(10)	*

\*CONTAINS UNIDENTIFIABLE OIL NOT QUANTIFIABLE BY GC.

\*\*QUANTITATION BASED ON LARGEST PEAKS WITHIN C12-C20 BOILING RANGE.

ND = Not Detected; Limit of detection in parentheses.

QA/QC SUMMARY

Duplicate: Relative % Difference 19  
 Spike: % Recovery 93

  
 LABORATORY DIRECTOR

Berkeley

Wilmington

Los Angeles



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

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

LABORATORY NUMBER: 15369  
CLIENT: AQUA RESOURCES  
JOB ID: 87157.5, LIVERMORE SUPERBLOCK

DATE RECEIVED: 08/12/88  
DATE ANALYZED: 08/17/88  
DATE REPORTED: 08/18/88

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EXTRACTABLE LEAD IN SOILS

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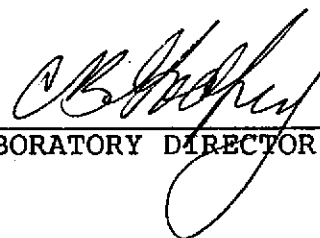
Method Reference:  
Extractable Lead: Waste Extraction Test, CAC Title 22, Section 66700  
Analysis by EPA 7420

LAB ID	SAMPLE ID	EXTRACTABLE LEAD (mg/L)
15369-1	A-3	9.9

ND= NONE DETECTED; LIMIT OF DETECTION IS INDICATED IN PARENTHESES.

QA/QC SUMMARY:

	EXTRACTABLE LEAD
RPD %	2
SPIKE RECOVERY %	107

  
LABORATORY DIRECTOR



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

LAB NUMBER: 15389A  
 CLIENT: AQUA RESOURCES  
 JOB #: 87157.5, LIVERMORE SUPERBLOCK

DATE RECEIVED: 08/15/88  
 DATE ANALYZED: 08/17/88  
 DATE REPORTED: 08/19/88

Results of Analysis for Petroleum Hydrocarbons in Soils & Wastes

Method References: TPH: Total Petroleum Hydrocarbons, EPA 3550/8015

LAB ID	CLIENT ID	GASOLINE (mg/kg)	KEROSINE (mg/kg)	DIESEL (mg/kg)	OTHER (mg/kg)
15389-1	C-1S	ND(10)	ND(10)	ND(10)	*
15389-2	C-2S	ND(10)	ND(10)	ND(10)	ND(10)
15389-3	C-3S	ND(10)	ND(10)	ND(10)	ND(10)
15389-4	C-4S	ND(10)	ND(10)	ND(10)	ND(10)
15389-5	C-5B	ND(10)	ND(10)	ND(10)	*
15389-6	C-6B	ND(10)	ND(10)	ND(10)	ND(10)
15389-7	D-1S	ND(10)	ND(10)	ND(10)	ND(10)
15389-8	D-2S	ND(10)	ND(10)	ND(10)	ND(10)
15389-9	D-3S	ND(10)	ND(10)	ND(10)	ND(10)
15389-10	D-4S	ND(10)	ND(10)	ND(10)	ND(10)
15389-11	D-5S	ND(10)	ND(10)	ND(10)	*
15389-12	D-6B	ND(10)	ND(10)	ND(10)	ND(10)
15389-13	D-7B	ND(10)	ND(10)	ND(10)	ND(10)
15389-14	D-8S	ND(10)	ND(10)	ND(10)	ND(10)
15389-15,16, 17,18, 19	COMPOSITE ID B2-1,3,4 D-1,2	ND(10)	ND(10)	ND(10)	730**

\*CONTAINS UNIDENTIFIABLE OIL NOT QUANTIFIABLE BY GC.

\*\*QUANTITATION BASED ON LARGEST PEAKS WITHIN C12-C20 BOILING RANGE.

ND = Not Detected; Limit of detection in parentheses.

QA/QC SUMMARY

Duplicate: Relative % Difference	21
Spike: % Recovery	119

*Jan Wong for CBG*  
 LABORATORY DIRECTOR



LAB NUMBER: 15375  
 CLIENT: AQUA RESOURCES  
 JOB #: 87157.5, LIVERMORE SUPERBLOCK

DATE RECEIVED: 08/12/88  
 DATE ANALYZED: 08/17/88  
 DATE REPORTED: 08/19/88  
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Results of Analysis for Petroleum Hydrocarbons in Soils & Wastes

Method References: TPH: Total Petroleum Hydrocarbons, EPA 3550/8015

LAB ID	CLIENT ID	GASOLINE (mg/kg)	KEROSINE (mg/kg)	DIESEL (mg/kg)	OTHER (mg/kg)
15375-7	B-17S	ND(10)	ND(10)	ND(10)	2,900**
15375-8	B-18B	ND(10)	ND(10)	ND(10)	5,600**
15375-9	B-19B	ND(10)	ND(10)	ND(10)	13,700**
15375-10	B-20S	ND(10)	ND(10)	ND(10)	ND(10)
15375-11	B-21B	ND(10)	ND(10)	ND(10)	1,250**
15375-12	B-22S	ND(10)	ND(10)	ND(10)	*
15375-13	B-23S	ND(10)	ND(10)	ND(10)	*
15375-14	B-24S	ND(10)	ND(10)	ND(10)	*
15375-15	B-25B	ND(10)	ND(10)	ND(10)	*
15375-16	B-26S	ND(10)	ND(10)	ND(10)	*
15375-17	B-27B	ND(10)	ND(10)	ND(10)	*
15375-18	B-28B	ND(10)	ND(10)	ND(10)	ND(10)
15375-4,5,6	COMPOSITE ID B-14,B-15, B-16	ND(10)	ND(10)	ND(10)	1,700**
15375-19,20	C-1, C-2	ND(10)	ND(10)	ND(10)	ND(10)

\*CONTAINS UNIDENTIFIABLE OIL NOT QUANTIFIABLE BY GC.

\*\*QUANTITATION BASED ON LARGEST PEAKS WITHIN C12-C20 BOILING RANGE.

ND = Not Detected; Limit of detection in parentheses.

QA/QC SUMMARY

Duplicate: Relative % Difference 1  
 Spike: % Recovery 94

LABORATORY DIRECTOR



LABORATORY NUMBER: 15375  
CLIENT: AQUA RESOURCES  
JOB ID: 87157.5, LIVERMORE SUPERBLOCK

DATE RECEIVED: 08/12/88  
DATE ANALYZED: 08/15/88  
DATE REPORTED: 08/19/88  
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TOTAL LEAD ANALYSIS IN SOIL AND WASTE, EPA 7420

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LAB ID	SAMPLE ID	LEAD (mg/Kg)
15375-1	A2-1	2.5
15375-2	A2-2	44
15375-3	A6	650

QA/QC SUMMARY

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%RPD	17
%RECOVERY	94

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

LAB NUMBER: 15396  
 CLIENT: AQUA RESOURCES  
 JOB ID: 87157.5, LIVERMORE SUPERBLOCK

DATE RECEIVED: 08/16/88  
 DATE ANALYZED: 08/16/88  
 DATE REPORTED: 08/20/88

Results of Analysis for Petroleum Hydrocarbons in Soils & Wastes

Method References: TPH: Total Petroleum Hydrocarbons, EPA 3550/8015

LAB ID	CLIENT ID	GASOLINE (mg/kg)	KEROSINE (mg/kg)	DIESEL (mg/kg)	OTHER (mg/kg)
15369-1	B3-1	ND(10)	ND(10)	ND(10)	26**
15369-2	B3-2	ND(10)	ND(10)	ND(10)	*
15369-3	B3-3	ND(10)	ND(10)	ND(10)	*
15369-4	B3-4	ND(10)	ND(10)	ND(10)	ND(10)
15369-5	B3-5	ND(10)	ND(10)	ND(10)	ND(10)
15369-6	B3-6	ND(10)	ND(10)	ND(10)	130,000**

\*Contains unidentifiable oil not quantifiable by GC.

\*\*Quantitation based on largest peaks within the C12-C20 boiling range.

ND = Not Detected; Limit of detection in parentheses.

QA/QC SUMMARY

Duplicate: Relative % Difference 8  
 Spike: % Recovery 102

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

LABORATORY NUMBER: 15446  
 CLIENT: AQUA RESOURCES  
 JOB ID: 87157.5, LIVERMORE SUPERBLOCK

DATE RECEIVED: 08/23/88  
 DATE ANALYZED: 08/29/88  
 DATE REPORTED: 08/30/88  
 PAGE 1 OF 2

Results of Analysis for Petroleum Hydrocarbons/Oil & Grease

Method References: O&G: Oil and Grease, SMWW 503 A  
 TPH: Total Petroleum Hydrocarbons, EPA 3550/8015

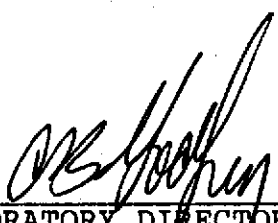
LAB ID	SAMPLE ID	GASOLINE (mg/Kg)	KEROSINE (mg/Kg)	DIESEL (mg/Kg)	OTHER* (mg/Kg)
15446-1	B-14	ND(10)	ND(10)	ND(10)	ND(10)
15446-2	B-15	ND(10)	ND(10)	ND(10)	320
15446-3	B-16	ND(10)	ND(10)	ND(10)	ND(10)
15446-4	B2-1	ND(10)	ND(10)	ND(10)	1,900
15446-5	B2-3	ND(10)	ND(10)	ND(10)	1,200
15446-6	B2-4	ND(10)	ND(10)	ND(10)	ND(10)
15446-7	D-1	ND(10)	ND(10)	ND(10)	ND(10)
15446-8	D-2	ND(10)	ND(10)	ND(10)	ND(10)

\* Quantitation based on largest peaks within C11-C21 boiling range.

ND = Not Detected; Limit of detection indicated in parentheses.

QA/QC SUMMARY

	TPH
Duplicate: Relative % Difference	4
Spike: % Recovery	106

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

LAB NUMBER: 15446-6  
 CLIENT: AQUA RESOURCES  
 JOB ID: 87157.5, LIVERMORE SUPERBLOCK  
 CLIENT ID: B3-6

DATE RECEIVED: 08-23-88  
 DATE ANALYZED: 08-27-88  
 DATE REPORTED: 09-02-88  
 PAGE 2 OF 2

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POLYCHLORINATED BIPHENYLS (PCB'S)  
 METHOD: EPA 608/8080  
 EXTRACTION METHOD: EPA 3580-WASTE DILUTION

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LAB ID	CLIENT ID	AROCLOR	CONCENTRATION (mg/Kg)	MDL (mg/Kg)
15446-6	B3-6	PCB 1016	ND	1.0
		PCB 1221	ND	1.0
		PCB 1232	ND	1.0
		PCB 1242	ND	1.0
		PCB 1248	ND	1.0
		PCB 1254	ND	1.0
		PCB 1260	ND	1.0

ND = NONE DETECTED; LIMIT OF DETECTION IS INDICATED IN LAST COLUMN.

QA/QC SUMMARY

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%RPD	2
%RECOVERY	103

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