



Analytical Technologies, Inc.

RECEIVED  
WESTON - TEMPE

JUL 19 1993

ATI I.D. 306108

July 16, 1993

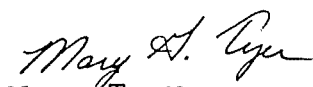
Roy F. Weston  
1600 W. Broadway  
Suite 210  
Tempe, AZ 85282

Project Name/Number: WVB/06405-056-010-0003

Attention: Rich Petrus


On 06/30/93, Analytical Technologies, Inc., (ADHS License No. AZ0061), received a request to analyze **aqueous** sample(s). The sample(s) were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

If you have any questions or comments, please do not hesitate to contact us at (602) 496-4400.

  
Mary Tyer  
Project Manager

RVW/st

Enclosure

  
Robert V. Woods  
Laboratory Manager



Analytical Technologies, Inc.

CLIENT : ROY F. WESTON  
PROJECT # : 06405-056-010-0003  
PROJECT NAME : WVB

DATE RECEIVED : 06/30/93

REPORT DATE : 07/14/93

ATI I.D. : 306108

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	AVB56-0102-1000 TRIP BLANK	AQUEOUS	04/13/93
02	AVB56-0100-1207	AQUEOUS	06/30/93

----- TOTALS -----

MATRIX	# SAMPLES
AQUEOUS	2

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in thirty (30) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

## GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30610801

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

 CLIENT : ROY F. WESTON  
 PROJECT # : 06405-056-010-0003  
 PROJECT NAME : WVB  
 CLIENT I.D. : AVB56-0102-1000 TRIP BLANK  
 SAMPLE MATRIX : AQUEOUS

 DATE SAMPLED : 04/13/93  
 DATE RECEIVED : 06/30/93  
 DATE EXTRACTED : N/A  
 DATE ANALYZED : 07/09/93  
 UNITS : UG/L  
 DILUTION FACTOR : 1

 -----  
 COMPOUNDS RESULTS  
 -----

BENZENE	<0.5
BROMODICHLOROMETHANE	<0.2
BROMOFORM	<0.2
BROMOMETHANE	<0.2
CARBON TETRACHLORIDE	<0.2
CHLOROBENZENE	<0.5
CHLOROETHANE	<0.2
CHLOROFORM	<0.2
CHLOROMETHANE	<0.2
DIBROMOCHLOROMETHANE	<0.2
2-CHLOROETHYL VINYL ETHER	<0.5
1,3-DICHLOROBENZENE	<0.5
1,2 & 1,4-DICHLOROBENZENE	<0.2
DICHLORODIFLUOROMETHANE	<0.2
1,1-DICHLOROETHANE	<0.2
1,2-DICHLOROETHANE	<0.2
1,1-DICHLOROETHENE	<0.2
1,2-DICHLOROETHENE (TOTAL)	<0.2
1,2-DICHLOROPROPANE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2
TRANS-1,3-DICHLOROPROPENE	<0.2
ETHYLBENZENE	<0.5
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.2
TETRACHLOROETHENE	<0.2
TOLUENE	<0.5
1,1,1-TRICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	<0.2
TRICHLOROETHENE	<0.2
TRICHLOROFLUOROMETHANE	<0.5
VINYL CHLORIDE	<0.2
TOTAL XYLENES	<0.5
TRICHLOROTRIFLUOROETHANE	<2.0

## SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	111
BROMOFLUOROBENZENE (%)	94



GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30610802

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

CLIENT : ROY F. WESTON  
PROJECT # : 06405-056-010-0003  
PROJECT NAME : WVB  
CLIENT I.D. : AVB56-0100-1207  
SAMPLE MATRIX : AQUEOUS

DATE SAMPLED : 06/30/93  
DATE RECEIVED : 06/30/93  
DATE EXTRACTED : N/A  
DATE ANALYZED : 07/09/93  
UNITS : UG/L  
DILUTION FACTOR : 1

-----  
COMPOUNDS *James Hall Reference* RESULTS  
-----

	<0.5
BENZENE	<0.2
BROMODICHLOROMETHANE	<0.2
BROMOFORM	<0.2
BROMOMETHANE	<0.2
CARBON TETRACHLORIDE	<0.5
CHLOROBENZENE	<0.2
CHLOROETHANE	<0.2
CHLOROFORM	<0.2
CHLOROMETHANE	<0.2
DIBROMOCHLOROMETHANE	<0.5
2-CHLOROETHYL VINYL ETHER	<0.5
1,3-DICHLOROBENZENE	<0.5
1,2 & 1,4-DICHLOROBENZENE	<0.2
DICHLORODIFLUOROMETHANE	<0.2
1,1-DICHLOROETHANE	<0.2
1,2-DICHLOROETHANE	<0.2
1,1-DICHLOROETHENE	<0.2
1,2-DICHLOROETHENE (TOTAL)	<0.2
1,2-DICHLOROPROPANE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2
TRANS-1,3-DICHLOROPROPENE	<0.5
ETHYLBENZENE	<2.0
METHYLENE CHLORIDE	<0.2
1,1,2,2-TETRACHLOROETHANE	<0.2
TETRACHLOROETHENE	<0.5
TOLUENE	<0.2
1,1,1-TRICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	<0.2
TRICHLOROETHENE	<0.5
TRICHLOROFLUOROMETHANE	<0.2
VINYL CHLORIDE	<0.5
TOTAL XYLENES	<2.0
TRICHLOROTRIFLUOROETHANE	

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	104
BROMOFLUOROBENZENE (%)	90



GAS CHROMATOGRAPHY - RESULTS

REAGENT BLANK

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

CLIENT : ROY F. WESTON
PROJECT # : 06405-056-010-0003
PROJECT NAME : WVB
CLIENT I.D. : REAGENT BLANK

ATI I.D. : 306108
DATE EXTRACTED : 07/09/93
DATE ANALYZED : 07/09/93
UNITS : UG/L
DILUTION FACTOR : N/A

Table with 2 columns: COMPOUNDS and RESULTS. Lists various chemical compounds and their corresponding results, mostly showing values less than 0.5.

SURROGATE PERCENT RECOVERIES

Table with 2 columns: Compound Name and Percent Recovery. Shows 100% recovery for Bromochloromethane and Bromofluorobenzene.



QUALITY CONTROL DATA

ATI I.D. : 306108

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

CLIENT : ROY F. WESTON  
 PROJECT # : 06405-056-010-0003  
 PROJECT NAME : WVB  
 REF I.D. : 30749907

DATE ANALYZED : 07/09/93  
 SAMPLE MATRIX : AQUEOUS  
 UNITS : UG/L

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
1,1-DICHLOROETHENE	<0.2	20	19	95	20	100	5
TRICHLOROETHENE	<0.2	20	18	90	19	95	5
TETRACHLOROETHENE	3.4	20	24	103	27	118	12
BENZENE	<0.5	20	17	85	17	85	0
BROMODICHLOROMETHANE	<0.2	20	19	95	19	95	0
CHLOROFORM	<0.2	20	19	95	19	95	0
1,1,1-TRICHLOROETHANE	<0.2	20	22	110	23	115	4
TOLUENE	<0.5	20	17	85	16	80	6
CHLOROBENZENE	<0.5	20	18	90	20	100	11
M-XYLENE	<0.5	20	16	80	16	80	0

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

300104

DATE: 3/21/93 PAGE 1 OF 1

Analytical Technologies, Inc., Phoenix, Arizona  
San Diego • Phoenix • Seattle • Pensacola • Ft. Collins • Portland

PROJECT MANAGER: RICH PETRUS

COMPANY: BOY F WESTON  
ADDRESS: 1400 W BROADWAY #210  
TEMPE AZ 85282  
PHONE: 916-2337  
FAX: 916-6343  
BILL TO: SAME  
COMPANY:  
ADDRESS:

SAMPLE ID DATE TIME MATRIX LAB ID

AUBSG-0102-1000 TB 1400 AQ 1  
AUBSG-0100-1207 1425 AQ 2

ANALYSIS REQUEST

Petroleum Hydrocarbons (418.1)	
(MOD 8015) Gas/Diesel	
Diesel/Gasoline/BTXE/MTBE (MOD 8015/8020)	
BTXE/MTBE (8020)	
Chlorinated Hydrocarbons (601/8949)	
Aromatic Hydrocarbons (602/8929)	
SDWA Volatiles (502.1/503.1), 502.2 Reg. & Unreg.	
Pesticides/PCB (608/8080)	
Herbicides (615/8150)	
Base/Neutral/Acid Compounds GC/MS (625/8270)	
Volatile Organics GC/MS (624/8240)	
Polynuclear Aromatics (610/8310)	
SDWA Primary Standards - Arizona	
SDWA Secondary Standards - Arizona	
SDWA Primary Standards - Federal	
SDWA Secondary Standards - Federal	
The 13 Priority Pollutant Metals	
RCRA Metals by Total Digestion	
RCRA Metals by TCLP (1311)	

**SAMPLED & RELINQUISHED BY: 1.**  
Signature: [Signature] Time: 1545  
Printed Name: [Name] Date: 30 JUN 93  
Company: [Company] Phone: [Phone]

**RECEIVED BY: 1.**  
Signature: [Signature] Time: [Time]  
Printed Name: [Name] Date: [Date]  
Company: [Company]

**RELINQUISHED BY: 2.**  
Signature: [Signature] Time: [Time]  
Printed Name: [Name] Date: [Date]  
Company: [Company]

**RECEIVED BY: 2.**  
Signature: [Signature] Time: 4:30  
Printed Name: [Name] Date: 6/30/93  
Company: Analytical Technologies, Inc.

**PROJECT INFORMATION**  
PROJECT NO.: 05425-056-010-0003  
NO. CONTAINERS: 4  
CUSTODY SEALS: 0 N / NA  
RECEIVED INTACT: Y  
RECEIVED COLD: Y

SHIPPED VIA: TSD (over 1500)  
PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS  
(RUSH)  24hr  48hr  72hr  1 WEEK  2 WEEK (NORMAL)

Comments: TB = trip blank

PLEASE FILL THIS FORM IN COMPLETELY. SHADED AREAS ARE FOR LAB USE ONLY.



Analytical **Technologies**, Inc.

9830 S. 51st Street Suite B-113 Phoenix, AZ 85044 (602) 496-4400

RECEIVED  
WESTON-TEMPE  
JUL 16 1993

ATI I.D. 307563

July 15, 1993

Roy F. Weston  
1600 W. Broadway  
Suite 210  
Tempe, AZ 85282

Project Name/Number: West Van Buren/06405-056-010-0003

Attention: Rich Petrus

On 07/07/93, Analytical Technologies, Inc., (ADHS License No. AZ0061), received a request to analyze **aqueous** sample(s). The sample(s) were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

If you have any questions or comments, please do not hesitate to contact us at (602) 496-4400.

*Mary L. Tyer*  
Mary Tyer  
Project Manager

RVW/st

Enclosure

*Robert V. Woods*  
Robert V. Woods  
Laboratory Manager



Analytical Technologies, Inc.

CLIENT : ROY F. WESTON  
PROJECT # : 06405-056-010-0003  
PROJECT NAME : W. VAN BUREN  
ATI I.D. : 307563

DATE RECEIVED : 07/07/93  
REPORT DATE : 07/14/93

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	AVB20-0102-1000 (TB)	AQUEOUS	04/13/93
02	AVB20-0100-3073	AQUEOUS	07/06/93
03	AVB29-0100-4062	AQUEOUS	07/06/93
04	AVB10-0100-4066	AQUEOUS	07/06/93
05	AVB10-0200-4070	AQUEOUS	07/06/93

----- TOTALS -----

MATRIX	# SAMPLES
AQUEOUS	5

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in thirty (30) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30756301

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

CLIENT : ROY F. WESTON  
 PROJECT # : 06405-056-010-0003  
 PROJECT NAME : W. VAN BUREN  
 CLIENT I.D. : AVB20-0102-1000 (TB)  
 SAMPLE MATRIX : AQUEOUS

DATE SAMPLED : 04/13/93  
 DATE RECEIVED : 07/07/93  
 DATE EXTRACTED : N/A  
 DATE ANALYZED : 07/10/93  
 UNITS : UG/L  
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
	<0.5
BENZENE	<0.2
BROMODICHLOROMETHANE	<0.2
BROMOFORM	<0.2
BROMOMETHANE	<0.2
CARBON TETRACHLORIDE	<0.5
CHLOROBENZENE	<0.2
CHLOROETHANE	<0.2
CHLOROFORM	<0.2
CHLOROMETHANE	<0.2
DIBROMOCHLOROMETHANE	<0.5
2-CHLOROETHYL VINYL ETHER	<0.5
1,3-DICHLOROBENZENE	<0.5
1,2 & 1,4-DICHLOROBENZENE	<0.2
DICHLORODIFLUOROMETHANE	<0.2
1,1-DICHLOROETHANE	<0.2
1,2-DICHLOROETHANE	<0.2
1,1-DICHLOROETHENE	<0.2
1,2-DICHLOROETHENE (TOTAL)	<0.2
1,2-DICHLOROPROPANE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2
TRANS-1,3-DICHLOROPROPENE	<0.5
ETHYLBENZENE	<2.0
METHYLENE CHLORIDE	<0.2
1,1,2,2-TETRACHLOROETHANE	<0.2
TETRACHLOROETHENE	<0.5
TOLUENE	<0.2
1,1,1-TRICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	<0.2
TRICHLOROETHENE	<0.5
TRICHLOROFLUOROMETHANE	<0.2
VINYL CHLORIDE	<0.5
TOTAL XYLENES	<2.0
TRICHLOROTRIFLUOROETHANE	

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%) 88  
 BROMOFLUOROBENZENE (%) 110



GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30756302

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

CLIENT : ROY F. WESTON  
 PROJECT # : 06405-056-010-0003  
 PROJECT NAME : W. VAN BUREN  
 CLIENT I.D. : AVB20-0100-3073  
 SAMPLE MATRIX : AQUEOUS

DATE SAMPLED : 07/06/93  
 DATE RECEIVED : 07/07/93  
 DATE EXTRACTED : N/A  
 DATE ANALYZED : 07/10/93  
 UNITS : UG/L  
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
	<0.5
BENZENE	<0.2
BROMODICHLOROMETHANE	<0.2
BROMOFORM	<0.2
BROMOMETHANE	<0.2
CARBON TETRACHLORIDE	<0.5
CHLOROBENZENE	<0.2
CHLOROETHANE	1.5
CHLOROFORM	<0.2
CHLOROMETHANE	<0.2
DIBROMOCHLOROMETHANE	<0.5
2-CHLOROETHYL VINYL ETHER	<0.5
1,3-DICHLOROBENZENE	<0.5
1,2 & 1,4-DICHLOROBENZENE	<0.2
DICHLORODIFLUOROMETHANE	<0.2
1,1-DICHLOROETHANE	0.3
1,2-DICHLOROETHANE	1.5
1,1-DICHLOROETHENE	<0.2
1,2-DICHLOROETHENE (TOTAL)	<0.2
1,2-DICHLOROPROPANE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2
TRANS-1,3-DICHLOROPROPENE	<0.5
ETHYLBENZENE	<2.0
METHYLENE CHLORIDE	<0.2
1,1,2,2-TETRACHLOROETHANE	14
TETRACHLOROETHENE	2.5
TOLUENE	<0.2
1,1,1-TRICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	33
TRICHLOROETHENE	<0.5
TRICHLOROFLUOROMETHANE	<0.2
VINYL CHLORIDE	2.1
TOTAL XYLENES	<2.0
TRICHLOROTRIFLUOROETHANE	

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	98
BROMOFLUOROBENZENE (%)	90



GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30756303

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

CLIENT : ROY F. WESTON
PROJECT # : 06405-056-010-0003
PROJECT NAME : W. VAN BUREN
CLIENT I.D. : AVB29-0100-4062
SAMPLE MATRIX : AQUEOUS

DATE SAMPLED : 07/06/93
DATE RECEIVED : 07/07/93
DATE EXTRACTED : N/A
DATE ANALYZED : 07/10/93
UNITS : UG/L
DILUTION FACTOR : 1

Table with 2 columns: COMPOUNDS and RESULTS. Lists various chemical compounds and their corresponding concentration values.

SURROGATE PERCENT RECOVERIES

Table with 2 columns: Compound Name and Percent Recovery. Shows recoveries for Bromochloromethane (88%) and Bromofluorobenzene (94%).

## GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30756304

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

 CLIENT : ROY F. WESTON  
 PROJECT # : 06405-056-010-0003  
 PROJECT NAME : W. VAN BUREN  
 CLIENT I.D. : AVB10-0100-4066  
 SAMPLE MATRIX : AQUEOUS

 DATE SAMPLED : 07/06/93  
 DATE RECEIVED : 07/07/93  
 DATE EXTRACTED : N/A  
 DATE ANALYZED : 07/10/93  
 UNITS : UG/L  
 DILUTION FACTOR : 20

COMPOUNDS	RESULTS
BENZENE	<10.0
BROMODICHLOROMETHANE	<4.0
BROMOFORM	<4.0
BROMOMETHANE	<4.0
CARBON TETRACHLORIDE	<4.0
CHLOROBENZENE	<10.0
CHLOROETHANE	<4.0
CHLOROFORM	<4.0
CHLOROMETHANE	<4.0
DIBROMOCHLOROMETHANE	<4.0
2-CHLOROETHYL VINYL ETHER	<10.0
1,3-DICHLOROBENZENE	<10.0
1,2 & 1,4-DICHLOROBENZENE	<10.0
DICHLORODIFLUOROMETHANE	<4.0
1,1-DICHLOROETHANE	<4.0
1,2-DICHLOROETHANE	<4.0
1,1-DICHLOROETHENE	23
1,2-DICHLOROETHENE (TOTAL)	7
1,2-DICHLOROPROPANE	<4.0
CIS-1,3-DICHLOROPROPENE	<4.0
TRANS-1,3-DICHLOROPROPENE	<4.0
ETHYLBENZENE	<10.0
METHYLENE CHLORIDE	<40.0
1,1,2,2-TETRACHLOROETHANE	<4.0
TETRACHLOROETHENE	1000
TOLUENE	24
1,1,1-TRICHLOROETHANE	<4.0
1,1,2-TRICHLOROETHANE	<4.0
TRICHLOROETHENE	52
TRICHLOROFLUOROMETHANE	<10.0
VINYL CHLORIDE	<4.0
TOTAL XYLENES	10
TRICHLOROTRIFLUOROETHANE	<40.0

## SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	82
BROMOFLUOROBENZENE (%)	115



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30756305

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

CLIENT : ROY F. WESTON  
 PROJECT # : 06405-056-010-0003  
 PROJECT NAME : W. VAN BUREN  
 CLIENT I.D. : AVB10-0200-4070  
 SAMPLE MATRIX : AQUEOUS

DATE SAMPLED : 07/06/93  
 DATE RECEIVED : 07/07/93  
 DATE EXTRACTED : N/A  
 DATE ANALYZED : 07/10/93  
 UNITS : UG/L  
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
	1.7
BENZENE	0.6
BROMODICHLOROMETHANE	<0.2
BROMOFORM	<0.2
BROMOMETHANE	<0.2
CARBON TETRACHLORIDE	<0.5
CHLOROBENZENE	<0.2
CHLOROETHANE	3.1
CHLOROFORM	<0.2
CHLOROMETHANE	<0.2
DIBROMOCHLOROMETHANE	<0.5
2-CHLOROETHYL VINYL ETHER	<0.5
1,3-DICHLOROBENZENE	<0.5
1,2 & 1,4-DICHLOROBENZENE	<0.2
DICHLORODIFLUOROMETHANE	<0.2
1,1-DICHLOROETHANE	<0.2
1,2-DICHLOROETHANE	0.3
1,1-DICHLOROETHENE	<0.2
1,2-DICHLOROETHENE (TOTAL)	<0.2
1,2-DICHLOROPROPANE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2
TRANS-1,3-DICHLOROPROPENE	1.3
ETHYLBENZENE	<2.0
METHYLENE CHLORIDE	<0.2
1,1,2,2-TETRACHLOROETHANE	33
TETRACHLOROETHENE	12
TOLUENE	<0.2
1,1,1-TRICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	1.4
TRICHLOROETHENE	<0.5
TRICHLOROFLUOROMETHANE	<0.2
VINYL CHLORIDE	8.4
TOTAL XYLENES	<2.0
TRICHLOROTRIFLUOROETHANE	

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	96
BROMOFLUOROBENZENE (%)	99



GAS CHROMATOGRAPHY - RESULTS

REAGENT BLANK

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

CLIENT : ROY F. WESTON  
PROJECT # : 06405-056-010-0003  
PROJECT NAME : W. VAN BUREN  
CLIENT I.D. : REAGENT BLANK

ATI I.D. : 307563  
DATE EXTRACTED : 07/10/93  
DATE ANALYZED : 07/10/93  
UNITS : UG/L  
DILUTION FACTOR : N/A

COMPOUNDS	RESULTS
BENZENE	<0.5
BROMODICHLOROMETHANE	<0.2
BROMOFORM	<0.2
BROMOMETHANE	<0.2
CARBON TETRACHLORIDE	<0.2
CHLOROBENZENE	<0.5
CHLOROETHANE	<0.2
CHLOROFORM	<0.2
CHLOROMETHANE	<0.2
DIBROMOCHLOROMETHANE	<0.2
2-CHLOROETHYL VINYL ETHER	<0.5
1,3-DICHLOROBENZENE	<0.5
1,2 & 1,4-DICHLOROBENZENE	<0.2
DICHLORODIFLUOROMETHANE	<0.2
1,1-DICHLOROETHANE	<0.2
1,2-DICHLOROETHANE	<0.2
1,1-DICHLOROETHENE	<0.2
1,2-DICHLOROETHENE (TOTAL)	<0.2
1,2-DICHLOROPROPANE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2
TRANS-1,3-DICHLOROPROPENE	<0.2
ETHYLBENZENE	<0.5
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.2
TETRACHLOROETHENE	<0.2
TOLUENE	<0.5
1,1,1-TRICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	<0.2
TRICHLOROETHENE	<0.2
TRICHLOROFLUOROMETHANE	<0.5
VINYL CHLORIDE	<0.2
TOTAL XYLENES	<0.5
TRICHLOROTRIFLUOROETHANE	<2.0

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%) 102  
BROMOFLUOROBENZENE (%) 95



QUALITY CONTROL DATA

ATI I.D. : 307563

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

CLIENT : ROY F. WESTON  
 PROJECT # : 06405-056-010-0003  
 PROJECT NAME : W. VAN BUREN  
 REF I.D. : 30749908

DATE ANALYZED : 07/09/93  
 SAMPLE MATRIX : AQUEOUS  
 UNITS : UG/L

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
1,1-DICHLOROETHENE	<0.2	20	17	85	17	85	0
TRICHLOROETHENE	0.4	20	22	108	22	108	0
TETRACHLOROETHENE	<0.2	20	20	100	20	100	0
BENZENE	<0.5	20	19	95	20	100	5
BROMODICHLOROMETHANE	<0.2	20	18	90	19	95	5
CHLOROFORM	0.6	20	21	102	21	102	0
1,1,1-TRICHLOROETHANE	<0.2	20	20	100	21	105	5
TOLUENE	0.8	20	17	81	17	81	0
CHLOROBENZENE	<0.5	20	18	90	18	90	0
M-XYLENE	<0.5	20	16	80	17	85	6

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$



Analytical Technologies, Inc., Phoenix, Arizona  
 San Diego • Phoenix • Seattle • Pensacola • Ft. Collins • Portland

CHAIN OF CUSTODY  
 DATE: 6 JUL 93 PAGE 1 OF 1  
 ATILAB I.D. 307563

ANALYSIS REQUEST

PROJECT MANAGER: RICH PETRU  
 COMPANY: R WESTON  
 ADDRESS: 1600 W. BROADWAY STE 210  
 TEMPE AZ. 85287  
 PHONE: 602-966-2337  
 FAX:  
 BILL TO: SAME  
 COMPANY:  
 ADDRESS:

TEST	STANDARD	NUMBER OF CONTAINERS
Petroleum Hydrocarbons (418.1)	(MOD 8015) Gas/Diesel	
Diesel/Gasoline/BTEX/MTBE (MOD 8015/8020)	BTEX/MTBE (8020)	
Chlorinated Hydrocarbons (601/8010)	Aromatic Hydrocarbons (602/8020)	
SDWA Volatiles (502.1/503.1, 502.2 Reg. & Unreg.)	Herbicides (615/8150)	
Base/Neutral/Acid Compounds GC/MS (625/8270)	Volatle Organics GC/MS (624/8240)	
Polynuclear Aromatics (610/8310)	SDWA Primary Standards - Arizona	
SDWA Primary Standards - Arizona	SDWA Secondary Standards - Federal	
SDWA Primary Standards - Federal	SDWA Secondary Standards - Federal	
The 13 Priority Pollutant Metals	RCRA Metals by Total Digestion	
	RCRA Metals by TCLP (1311)	

SAMPLE ID	DATE	TIME	MATRIX	LAB ID
AVB20-0102-1000(7B)	13 JUL 93	0720	AQ	1
AVB20-0100-3073	6 JUL 93	0910	AQ	2
AVB29-0100-4062	6 JUL 93	1050	AQ	3
AVB10-0100-4066	6 JUL 93	1335	AQ	4
AVB10-0200-4070	6 JUL 93	1604	AQ	5

**PROJECT INFORMATION**

PROJ. NO.: 08405-056-010-0003  
 PROJ. NAME: WEST VALLEY BUREN  
 P.O. NO.:  
 SHIPPED VIA: TSD

**SAMPLE RECEIPT**

NO. CONTAINERS: 13  
 CUSTODY SEALS:  Y  N  NA  
 RECEIVED INTACT:  Y  
 RECEIVED COLD:  Y

**PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS**

(RUSH)  24hr  48hr  72hr  1 WEEK (NORMAL)  2 WEEK

Comments:  
 AVB20-0100-3073  
 AVB10-0100-4066  
 AVB10-0200-4070

**SAMPLED & RELINQUISHED BY: 1.**

Signature: Dale J. Flores  
 Printed Name: DALE J. FLORES  
 Date: 6 JUL 93  
 Time: 1706  
 Phone: 602-966-2337  
 Company: R WESTON

**RELINQUISHED BY: 2.**

Signature: Dale J. Flores  
 Printed Name: DALE J. FLORES  
 Date: 7 JUL 93  
 Time: 7:10 AM  
 Company: TOP SPEED DELV.

**RECEIVED BY: 1.**

Signature: Dale J. Flores  
 Printed Name: DALE J. FLORES  
 Date: 6 JUL 93  
 Time: 1706  
 Company: R WESTON

**RECEIVED BY: 2.**

Signature: Dale J. Flores  
 Printed Name: DALE J. FLORES  
 Date: 7 JUL 93  
 Time: 9:10 AM  
 Company: TOP SPEED DELV.

**RECEIVED BY: 3.**

Signature: Dale J. Flores  
 Printed Name: DALE J. FLORES  
 Date: 7 JUL 93  
 Time: 9:10 AM  
 Company: TOP SPEED DELV.

PLEASE FILL THIS FORM IN COMPLETELY. SHADED AREAS ARE FOR LAB USE ONLY.

DISTRIBUTION: White, Canary • ANALYTICAL TECHNOLOGIES, INC. • Pink • ORIGINATOR



Analytical **Technologies, Inc.**

9830 S 51st Street Suite B-113 Phoenix, AZ 85044 (602) 496-4400

RECEIVED  
WESTON-TEMPE

JUL 21 1993

ATI I.D. 307582

July 20, 1993

Roy F. Weston  
1600 W. Broadway  
Suite 210  
Tempe, AZ 85282

Project Name/Number: West Van Buren/06405-056-010-0003

Attention: Rich Petrus

On 07/08/93, Analytical Technologies, Inc., (ADHS License No. AZ0061), received a request to analyze aqueous sample(s). The sample(s) were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

D indicates the compound was analyzed at a greater dilution.

If you have any questions or comments, please do not hesitate to contact us at (602) 496-4400.

*Mary L. Tyer*  
Mary Tyer  
Project Manager

RVW/st

Enclosure

*Robert V. Woods*  
Robert V. Woods  
Laboratory Manager



Analytical Technologies, Inc.

CLIENT : ROY F. WESTON  
PROJECT # : 06405-056-010-0003  
PROJECT NAME : W.VAN BUREN  
ATI I.D. : 307582

DATE RECEIVED : 07/08/93

REPORT DATE : 07/19/93

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	AVB43-0102-1000 (TB)	AQUEOUS	07/01/93
02	AVB43-0100-4042	AQUEOUS	07/07/93
03	AVB42-0200-2060	AQUEOUS	07/07/93
04	AVB42-0300-2060	AQUEOUS	07/07/93
05	AVB42-0100-2060	AQUEOUS	07/07/93
06	AVB12-0100-4060	AQUEOUS	07/07/93
07	AVB14-0100-4065	AQUEOUS	07/07/93
08	AVB18-0100-4064	AQUEOUS	07/07/93

----- TOTALS -----

MATRIX	# SAMPLES
-----	-----
AQUEOUS	8

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in thirty (30) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30758201

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

CLIENT : ROY F. WESTON
PROJECT # : 06405-056-010-0003
PROJECT NAME : W.VAN BUREN
CLIENT I.D. : AVB43-0102-1000 (TB)
SAMPLE MATRIX : AQUEOUS

DATE SAMPLED : 07/01/93
DATE RECEIVED : 07/08/93
DATE EXTRACTED : N/A
DATE ANALYZED : 07/12/93
UNITS : UG/L
DILUTION FACTOR : 1

Table with 2 columns: COMPOUNDS and RESULTS. Lists various chemical compounds and their corresponding results, mostly showing values less than 0.5.

SURROGATE PERCENT RECOVERIES

Table with 2 columns: Compound Name and Percent Recovery. Shows recoveries for Bromochloromethane (98%) and Bromofluorobenzene (111%).



GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30758202

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

CLIENT : ROY F. WESTON  
PROJECT # : 06405-056-010-0003  
PROJECT NAME : W.VAN BUREN  
CLIENT I.D. : AVB43-0100-4042  
SAMPLE MATRIX : AQUEOUS

DATE SAMPLED : 07/07/93  
DATE RECEIVED : 07/08/93  
DATE EXTRACTED : N/A  
DATE ANALYZED : 07/12/93  
UNITS : UG/L  
DILUTION FACTOR : 1

COMPOUNDS	RESULTS
BENZENE	<0.5
BROMODICHLOROMETHANE	<0.2
BROMOFORM	<0.2
BROMOMETHANE	<0.2
CARBON TETRACHLORIDE	<0.2
CHLOROBENZENE	<0.5
CHLOROETHANE	<0.2
CHLOROFORM	1.3
CHLOROMETHANE	<0.2
DIBROMOCHLOROMETHANE	<0.2
2-CHLOROETHYL VINYL ETHER	<0.5
1,3-DICHLOROBENZENE	<0.5
1,2 & 1,4-DICHLOROBENZENE	<0.5
DICHLORODIFLUOROMETHANE	<0.2
1,1-DICHLOROETHANE	<0.2
1,2-DICHLOROETHANE	<0.2
1,1-DICHLOROETHENE	<0.2
1,2-DICHLOROETHENE (TOTAL)	<0.2
1,2-DICHLOROPROPANE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2
TRANS-1,3-DICHLOROPROPENE	<0.5
ETHYLBENZENE	<2.0
METHYLENE CHLORIDE	<0.2
1,1,2,2-TETRACHLOROETHANE	2.4
TETRACHLOROETHENE	2.6
TOLUENE	<0.2
1,1,1-TRICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	3.1
TRICHLOROETHENE	<0.5
TRICHLOROFLUOROMETHANE	<0.2
VINYL CHLORIDE	1.6
TOTAL XYLENES	<2.0
TRICHLOROTRIFLUOROETHANE	

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	90
BROMOFLUOROBENZENE (%)	120



GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30758203

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

CLIENT : ROY F. WESTON
PROJECT # : 06405-056-010-0003
PROJECT NAME : W.VAN BUREN
CLIENT I.D. : AVB42-0200-2060
SAMPLE MATRIX : AQUEOUS

DATE SAMPLED : 07/07/93
DATE RECEIVED : 07/08/93
DATE EXTRACTED : N/A
DATE ANALYZED : 07/12/93
UNITS : UG/L
DILUTION FACTOR : 5

Table with 2 columns: COMPOUNDS and RESULTS. Lists various chemical compounds and their corresponding results, including surrogate percent recoveries for Bromochloromethane and Bromofluorobenzene.



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30758204

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

CLIENT : ROY F. WESTON
PROJECT # : 06405-056-010-0003
PROJECT NAME : W.VAN BUREN
CLIENT I.D. : AVB42-0300-2060
SAMPLE MATRIX : AQUEOUS

DATE SAMPLED : 07/07/93
DATE RECEIVED : 07/08/93
DATE EXTRACTED : N/A
DATE ANALYZED : 07/12/93
UNITS : UG/L
DILUTION FACTOR : 25

Table with 2 columns: COMPOUNDS and RESULTS. Lists various chemical compounds and their corresponding numerical results.

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%) 82
BROMOFLUOROBENZENE (%) 110



## TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

CLIENT : ROY F. WESTON  
 PROJECT # : 06405-056-010-0003  
 PROJECT NAME : W.VAN BUREN  
 CLIENT I.D. : AVB42-0100-2060  
 SAMPLE MATRIX : AQUEOUS

DATE SAMPLED : 07/07/93  
 DATE RECEIVED : 07/08/93  
 DATE EXTRACTED : N/A  
 DATE ANALYZED : 07/12/93  
 UNITS : UG/L  
 DILUTION FACTOR : 5

COMPOUNDS	RESULTS
BENZENE	<2.5
BROMODICHLOROMETHANE	<1.0
BROMOFORM	<1.0
BROMOMETHANE	<1.0
CARBON TETRACHLORIDE	<1.0
CHLOROBENZENE	<2.5
CHLOROETHANE	<1.0
CHLOROFORM	7
CHLOROMETHANE	<1.0
DIBROMOCHLOROMETHANE	<1.0
2-CHLOROETHYL VINYL ETHER	<2.5
1,3-DICHLOROBENZENE	<2.5
1,2 & 1,4-DICHLOROBENZENE	<2.5
DICHLORODIFLUOROMETHANE	<1.0
1,1-DICHLOROETHANE	<1.0
1,2-DICHLOROETHANE	<1.0
1,1-DICHLOROETHENE	1
1,2-DICHLOROETHENE (TOTAL)	<1.0
1,2-DICHLOROPROPANE	<1.0
CIS-1,3-DICHLOROPROPENE	<1.0
TRANS-1,3-DICHLOROPROPENE	<1.0
ETHYLBENZENE	<2.5
METHYLENE CHLORIDE	10.0
1,1,2,2-TETRACHLOROETHANE	<1.0
TETRACHLOROETHENE	100
TOLUENE	<2.5
1,1,1-TRICHLOROETHANE	<1.0
1,1,2-TRICHLOROETHANE	<1.0
TRICHLOROETHENE	360 D
TRICHLOROFLUOROMETHANE	<2.5
VINYL CHLORIDE	<1.0
TOTAL XYLENES	<2.5
TRICHLOROTRIFLUOROETHANE	<10.0

## SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	102
BROMOFLUOROBENZENE (%)	100

## GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30758206

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

 CLIENT : ROY F. WESTON  
 PROJECT # : 06405-056-010-0003  
 PROJECT NAME : W.VAN BUREN  
 CLIENT I.D. : AVB12-0100-4060  
 SAMPLE MATRIX : AQUEOUS

 DATE SAMPLED : 07/07/93  
 DATE RECEIVED : 07/08/93  
 DATE EXTRACTED : N/A  
 DATE ANALYZED : 07/12/93  
 UNITS : UG/L  
 DILUTION FACTOR : 5

COMPOUNDS	RESULTS
BENZENE	<2.5
BROMODICHLOROMETHANE	<1.0
BROMOFORM	<1.0
BROMOMETHANE	<1.0
CARBON TETRACHLORIDE	<1.0
CHLOROBENZENE	<2.5
CHLOROETHANE	<1.0
CHLOROFORM	8
CHLOROMETHANE	<1.0
DIBROMOCHLOROMETHANE	<1.0
2-CHLOROETHYL VINYL ETHER	<2.5
1,3-DICHLOROBENZENE	<2.5
1,2 & 1,4-DICHLOROBENZENE	<2.5
DICHLORODIFLUOROMETHANE	<1.0
1,1-DICHLOROETHANE	<1.0
1,2-DICHLOROETHANE	<1.0
1,1-DICHLOROETHENE	<1.0
1,2-DICHLOROETHENE (TOTAL)	4
1,2-DICHLOROPROPANE	<1.0
CIS-1,3-DICHLOROPROPENE	<1.0
TRANS-1,3-DICHLOROPROPENE	<1.0
ETHYLBENZENE	<2.5
METHYLENE CHLORIDE	<10.0
1,1,2,2-TETRACHLOROETHANE	<1.0
TETRACHLOROETHENE	110
TOLUENE	10
1,1,1-TRICHLOROETHANE	<1.0
1,1,2-TRICHLOROETHANE	<1.0
TRICHLOROETHENE	180
TRICHLOROFLUOROMETHANE	<2.5
VINYL CHLORIDE	<1.0
TOTAL XYLENES	11
TRICHLOROTRIFLUOROETHANE	<10.0

## SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	98
BROMOFLUOROBENZENE (%)	105



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30758207

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

CLIENT : ROY F. WESTON  
 PROJECT # : 06405-056-010-0003  
 PROJECT NAME : W.VAN BUREN  
 CLIENT I.D. : AVB14-0100-4065  
 SAMPLE MATRIX : AQUEOUS

DATE SAMPLED : 07/07/93  
 DATE RECEIVED : 07/08/93  
 DATE EXTRACTED : N/A  
 DATE ANALYZED : 07/13/93  
 UNITS : UG/L  
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
BENZENE	3.3
BROMODICHLOROMETHANE	<0.2
BROMOFORM	<0.2
BROMOMETHANE	<0.2
CARBON TETRACHLORIDE	<0.2
CHLOROETHANE	<0.2
CHLOROBENZENE	<0.2
CHLOROFORM	4.9
CHLOROMETHANE	<0.2
DIBROMOCHLOROMETHANE	<0.2
2-CHLOROETHYL VINYL ETHER	<0.5
1,3-DICHLOROBENZENE	<0.5
1,2 & 1,4-DICHLOROBENZENE	<0.5
DICHLORODIFLUOROMETHANE	<0.2
1,1-DICHLOROETHANE	3.0
1,2-DICHLOROETHANE	0.6
1,1-DICHLOROETHENE	12
1,2-DICHLOROETHENE (TOTAL)	8.7
1,2-DICHLOROPROPANE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2
TRANS-1,3-DICHLOROPROPENE	<0.2
ETHYLBENZENE	<0.5
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.2
TETRACHLOROETHENE	24
TOLUENE	212
1,1,1-TRICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	<0.2
TRICHLOROETHENE	62
TRICHLOROFLUOROMETHANE	<0.5
VINYL CHLORIDE	<0.2
TOTAL XYLENES	19
TRICHLOROTRIFLUOROETHANE	<2.0

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	91
BROMOFLUOROBENZENE (%)	93



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30758208

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

CLIENT : ROY F. WESTON  
 PROJECT # : 06405-056-010-0003  
 PROJECT NAME : W.VAN BUREN  
 CLIENT I.D. : AVB18-0100-4064  
 SAMPLE MATRIX : AQUEOUS

DATE SAMPLED : 07/07/93  
 DATE RECEIVED : 07/08/93  
 DATE EXTRACTED : N/A  
 DATE ANALYZED : 07/13/93  
 UNITS : UG/L  
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
BENZENE	1.2
BROMODICHLOROMETHANE	<0.2
BROMOFORM	<0.2
BROMOMETHANE	<0.2
CARBON TETRACHLORIDE	<0.2
CHLOROETHANE	<0.5
CHLOROBENZENE	<0.2
CHLOROETHANE	4.4
CHLOROFORM	<0.2
CHLOROMETHANE	<0.2
DIBROMOCHLOROMETHANE	<0.5
2-CHLOROETHYL VINYL ETHER	<0.5
1,3-DICHLOROBENZENE	<0.5
1,2 & 1,4-DICHLOROBENZENE	<0.5
DICHLORODIFLUOROMETHANE	<0.2
1,1-DICHLOROETHANE	<0.2
1,2-DICHLOROETHANE	<0.2
1,1-DICHLOROETHENE	3.1
1,2-DICHLOROETHENE (TOTAL)	0.4
1,2-DICHLOROPROPANE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2
TRANS-1,3-DICHLOROPROPENE	<0.2
ETHYLBENZENE	<0.5
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.2
TETRACHLOROETHENE	17
TOLUENE	9.9
1,1,1-TRICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	<0.2
TRICHLOROETHENE	47
TRICHLOROFLUOROMETHANE	<0.5
VINYL CHLORIDE	<0.2
TOTAL XYLENES	9.4
TRICHLOROTRIFLUOROETHANE	<2.0

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	82
BROMOFLUOROBENZENE (%)	88



## REAGENT BLANK

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

CLIENT : ROY F. WESTON  
 PROJECT # : 06405-056-010-0003  
 PROJECT NAME : W.VAN BUREN  
 CLIENT I.D. : REAGENT BLANK

ATI I.D. : 307582  
 DATE EXTRACTED : 07/12/93  
 DATE ANALYZED : 07/12/93  
 UNITS : UG/L  
 DILUTION FACTOR : N/A

COMPOUNDS	RESULTS
BENZENE	<0.5
BROMODICHLOROMETHANE	<0.2
BROMOFORM	<0.2
BROMOMETHANE	<0.2
CARBON TETRACHLORIDE	<0.2
CHLOROBENZENE	<0.5
CHLOROETHANE	<0.2
CHLOROFORM	<0.2
CHLOROMETHANE	<0.2
DIBROMOCHLOROMETHANE	<0.2
2-CHLOROETHYL VINYL ETHER	<0.5
1,3-DICHLOROBENZENE	<0.5
1,2 & 1,4-DICHLOROBENZENE	<0.5
DICHLORODIFLUOROMETHANE	<0.2
1,1-DICHLOROETHANE	<0.2
1,2-DICHLOROETHANE	<0.2
1,1-DICHLOROETHENE	<0.2
1,2-DICHLOROETHENE (TOTAL)	<0.2
1,2-DICHLOROPROPANE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2
TRANS-1,3-DICHLOROPROPENE	<0.2
ETHYLBENZENE	<0.5
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.2
TETRACHLOROETHENE	<0.2
TOLUENE	<0.5
1,1,1-TRICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	<0.2
TRICHLOROETHENE	<0.2
TRICHLOROFLUOROMETHANE	<0.5
VINYL CHLORIDE	<0.2
TOTAL XYLENES	<0.5
TRICHLOROTRIFLUOROETHANE	<2.0

## SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	114
BROMOFLUOROBENZENE (%)	110



## REAGENT BLANK

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

CLIENT : ROY F. WESTON  
PROJECT # : 06405-056-010-0003  
PROJECT NAME : W.VAN BUREN  
CLIENT I.D. : REAGENT BLANKATI I.D. : 307582  
DATE EXTRACTED : 07/13/93  
DATE ANALYZED : 07/13/93  
UNITS : UG/L  
DILUTION FACTOR : N/A

COMPOUNDS	RESULTS
BENZENE	<0.5
BROMODICHLOROMETHANE	<0.2
BROMOFORM	<0.2
BROMOMETHANE	<0.2
CARBON TETRACHLORIDE	<0.2
CHLOROBENZENE	<0.2
CHLOROETHANE	<0.2
CHLOROFORM	<0.2
CHLOROMETHANE	<0.2
DIBROMOCHLOROMETHANE	<0.2
2-CHLOROETHYL VINYL ETHER	<0.5
1,3-DICHLOROBENZENE	<0.5
1,2 & 1,4-DICHLOROBENZENE	<0.5
DICHLORODIFLUOROMETHANE	<0.2
1,1-DICHLOROETHANE	<0.2
1,2-DICHLOROETHANE	<0.2
1,1-DICHLOROETHENE	<0.2
1,2-DICHLOROETHENE (TOTAL)	<0.2
1,2-DICHLOROPROPANE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2
TRANS-1,3-DICHLOROPROPENE	<0.2
ETHYLBENZENE	<0.5
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.2
TETRACHLOROETHENE	<0.2
TOLUENE	<0.5
1,1,1-TRICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	<0.2
TRICHLOROETHENE	<0.2
TRICHLOROFLUOROMETHANE	<0.5
VINYL CHLORIDE	<0.2
TOTAL XYLENES	<0.5
TRICHLOROTRIFLUOROETHANE	<2.0

## SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%) 96  
BROMOFLUOROBENZENE (%) 95



Analytical Technologies, Inc.

QUALITY CONTROL DATA

ATI I.D. : 307582

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

CLIENT : ROY F. WESTON  
 PROJECT # : 06405-056-010-0003  
 PROJECT NAME : W.VAN BUREN  
 REF I.D. : 30749901

DATE ANALYZED : 07/10/93  
 SAMPLE MATRIX : AQUEOUS  
 UNITS : UG/L

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP.	DUP.	RPD
					SPIKED SAMPLE	% REC.	
1,1-DICHLOROETHENE	<0.2	20	19	95	17	85	11
TRICHLOROETHENE	<0.2	20	18	90	17	85	6
TETRACHLOROETHENE	<0.2	20	21	105	18	90	15
BENZENE	<0.5	20	21	105	24	120	13
BROMODICHLOROMETHANE	<0.2	20	20	100	19	95	5
CHLOROFORM	<0.2	20	22	110	22	110	0
1,1,1-TRICHLOROETHANE	<0.2	20	17	85	16	80	6
TOLUENE	<0.5	20	20	100	24	120	18
CHLOROBENZENE	<0.5	20	23	115	22	110	4
M-XYLENE	<0.5	20	19	95	23	115	19

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$



Analytical Technologies, Inc.

QUALITY CONTROL DATA

ATI I.D. : 307582

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

CLIENT : ROY F. WESTON
PROJECT # : 06405-056-010-0003
PROJECT NAME : W.VAN BUREN
REF I.D. : 30758202

DATE ANALYZED : 07/12/93
SAMPLE MATRIX : AQUEOUS
UNITS : UG/L

Table with 8 columns: COMPOUNDS, SAMPLE RESULT, CONC. SPIKED, SPIKED SAMPLE, % REC., DUP. SPIKED SAMPLE, DUP. % REC., RPD. Lists compounds like 1,1-DICHLOROETHENE, TRICHLOROETHENE, etc.

% Recovery = (Spike Sample Result - Sample Result) / Spike Concentration X 100

RPD (Relative % Difference) = (Spiked Sample Result - Duplicate Spike Sample Result) / Average of Spiked Sample X 100

COOLER 1111  
 Analytical Technologies, Inc., Phoenix, Arizona  
 San Diego • Phoenix • Seattle • Pensacola • Ft. Collins • Portland

**CHAIN OF CUSTODY**  
 DATE: 7 JUL 93 PAGE 1 OF 1

ATI LAB I.D. 307582

PROJECT MANAGER: RICH PETRUS  
 COMPANY: ROY F. WESTON  
 ADDRESS: 1606 W. BRAWLEY, STE 210  
 TEMPE, AZ 85282  
 PHONE: 602-966-2337  
 FAX:  
 BILL TO: AS ABOVE  
 COMPANY:  
 ADDRESS:

**ANALYSIS REQUEST**

TEST	SDWA Volatiles (502.1/503.1), 502.2 Reg. & Unreg.	Aromatic Hydrocarbons (602/8020)	Chlorinated Hydrocarbons (601/8010)	Petroleum Hydrocarbons (418.1)	(MOD 8015) Gas/Diesel	Diesel/Gasoline/BTEX/MTBE (MOD 8015/8020)	BTEX/MTBE (8020)	Pesticides/PCB (608/8080)	Herbicides (615/8150)	Base/Neutral/Acid Compounds GC/MS (625/8270)	Volatile Organics GC/MS (624/8240)	Polynuclear Aromatics (610/8310)	SDWA Primary Standards - Arizona	SDWA Secondary Standards - Arizona	SDWA Primary Standards - Federal	SDWA Secondary Standards - Federal	The 13 Priority Pollutant Metals	PCRA Metals by Total Digestion	PCRA Metals by TCLP (1311)	NUMBER OF CONTAINERS
																				3
																				3
																				3
																				3
																				3
																				3
																				3

SAMPLE ID	DATE	TIME	MATRIX	LAB ID
AVB43-0102-1000 (7B)	7 JUL 93	0700	AQ	1
AVB43-0100-4042	7 JUL 93	0705	AQ	2
AVB42-0200-24060	7 JUL 93	0847	AQ	3
AVB42-0300-2060	7 JUL 93	0943	AQ	4
AVB42-0100-2060	7 JUL 93	1045	AQ	5
AVB2-0100-4060	7 JUL 93	1242	AQ	6
AVB4-0100-4065	7 JUL 93	1350	AQ	7
AVB18-0100-4064	7 JUL 93	1545	AQ	8

**PROJECT INFORMATION**  
 PROJ. NO.: 0845-056-010-003  
 PROJ. NAME: W VAN BUILEN  
 P.O. NO.:  
 SHIPPED VIA: TSD

**SAMPLE RECEIPT**  
 NO. CONTAINERS: 22  
 CUSTODY SEALS: (Y) N / NA  
 RECEIVED INTACT: Y  
 RECEIVED COLD: Y

**PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS**  
 (RUSH)  24hr  48hr  72hr  1 WEEK  2 WEEK (NORMAL)

Comments:

**SAMPLED & RELINQUISHED BY: 1.**  
 Signature: [Signature]  
 Printed Name: RICH PETRUS  
 Date: 7 JUL 93  
 Company: TSD

**RELINQUISHED BY: 2.**  
 Signature: [Signature]  
 Printed Name: CHRISTINA BULLY  
 Date: 7-8-93  
 Company: TSD

**RECEIVED BY: 1.**  
 Signature: [Signature]  
 Printed Name: RICH PETRUS  
 Date: 7 JUL 93  
 Company: TSD

**RECEIVED BY: 2.**  
 Signature: [Signature]  
 Printed Name: HARRY GILBERT  
 Date: 7-8-93  
 Company: TSD

**RELINQUISHED BY: 3.**  
 Signature: [Signature]  
 Printed Name: HARRY GILBERT  
 Date: 7-8-93  
 Company: TSD

**RECEIVED BY: 3.**  
 Signature: [Signature]  
 Printed Name: ANN RICHARDSON  
 Date: 7/8/93  
 Company: Analytical Technologies, Inc.

PLEASE FILL THIS FORM IN COMPLETELY. SHADED AREAS ARE FOR LAB USE ONLY.



ATI I.D. 307610

July 27, 1993

Roy F. Weston  
1600 W. Broadway  
Suite 210  
Tempe, AZ 85282

Project Name/Number: W. Van Buren/06405-056-010-0003

Attention: Rich Petrus

On 07/09/93, Analytical Technologies, Inc., (ADHS License No. AZ0061), received a request to analyze aqueous sample(s). The sample(s) were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

D indicates the compound was analyzed at a greater dilution.

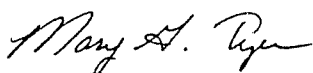
Samples AVB47-0100-4057, AVB46-0100-4056, and AVB11-0100-4055 were received after the recommended 24 hour holding time for hexavalent chromium had expired. Analysis took place at approximately 12:00 on 07/09/93.

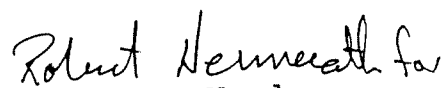
An additional compound, methyl-tert-butyl ether, was detected by EPA Method 601/602 analysis in samples AVB46-0100-4056, AVB25-0100-3058, and AVB25-0101-3058.

The compound dichlorodifluoromethane (DCDFM) was detected by EPA Method 601/602 in samples AVB46-0100-4056 and AVB11-0100-4055. The daily check standard for this compound was outside of ATI acceptability limits on 07/12/93. These samples were re-analyzed for more accurate quantitation on 07/26/93; however, the recommended 14 day holding time had expired. Only DCDFM is reported from this re-analysis. We apologize for any inconvenience this may have caused.

ATI I.D. 307610  
July 27, 1993  
Page Two

If you have any questions or comments, please do not hesitate to contact us at (602) 496-4400.

  
Mary Tyer  
Project Manager

  
Robert V. Woods  
Laboratory Manager

RVW/st

Enclosure



CLIENT : ROY F. WESTON  
 PROJECT # : 06405-056-010-0003  
 PROJECT NAME : W. VAN BUREN  
 ATI I.D. : 307610

DATE RECEIVED : 07/09/93  
 REPORT DATE : 07/21/93

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	AVB47-0100-4057	AQUEOUS	07/08/93
02	AVB46-0100-4056	AQUEOUS	07/08/93
03	AVB11-0100-4055	AQUEOUS	07/08/93
04	AVB25-0100-3058	AQUEOUS	07/08/93
05	AVB25-0101-3058	AQUEOUS	07/08/93
06	AVB26-0100-4061	AQUEOUS	07/08/93
07	AVB26-0104-4061	AQUEOUS	07/01/93
08	AVB47-0102-1000 (TB)	AQUEOUS	07/08/93
09	AVB45-0150-3000	AQUEOUS	

----- TOTALS -----

MATRIX	# SAMPLES
AQUEOUS	9

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in thirty (30) days from date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.



Analytical **Technologies**, Inc.

GENERAL CHEMISTRY RESULTS

ATI I.D. : 307610

CLIENT : ROY F. WESTON  
PROJECT # : 06405-056-010-0003  
PROJECT NAME : W. VAN BUREN

DATE RECEIVED : 07/09/93

REPORT DATE : 07/21/93

PARAMETER	UNITS	01	02	03	04	09
CHROMIUM HEXAVALENT EPA 7196	MG/L	3.0	<0.02	0.12	<0.02	0.3



Analytical **Technologies**, Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

CLIENT : ROY F. WESTON  
PROJECT # : 06405-056-010-0003  
PROJECT NAME : W. VAN BUREN

ATI I.D. : 307610

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE CONC	SPIKE CONC	% REC
CHROMIUM HEXAVALENT	MG/L	30761004	<0.02	<0.02	NA	0.14	0.15	93

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

## METALS RESULTS

ATI I.D. : 307610

 CLIENT : ROY F. WESTON  
 PROJECT # : 06405-056-010-0003  
 PROJECT NAME : W. VAN BUREN

DATE RECEIVED : 07/09/93

REPORT DATE : 07/21/93

PARAMETER	UNITS	01	02	03	04	09
SILVER (EPA 200.7/6010)	MG/L	-	-	-	-	<0.010
ARSENIC (200.7/6010)	MG/L	-	-	-	-	<0.1
BORON (EPA 200.7/6010)	MG/L	-	-	-	-	0.54
BARIUM (EPA 200.7/6010)	MG/L	-	-	-	-	0.091
CADMIUM (200.7/6010)	MG/L	-	-	-	-	<0.005
CHROMIUM (EPA 200.7/6010)	MG/L	3.02	<0.010	0.126	<0.010	-
COPPER (EPA 200.7/6010)	MG/L	-	-	-	-	0.046
MERCURY (EPA 245.1/7470)	MG/L	-	-	-	-	<0.0002
MANGANESE (EPA 200.7/6010)	MG/L	-	-	-	-	0.112
LEAD (200.7/6010)	MG/L	-	-	-	-	<0.10
SELENIUM (200.7/6010)	MG/L	-	-	-	-	<0.1
ZINC (EPA 200.7/6010)	MG/L	-	-	-	-	0.188



METALS - QUALITY CONTROL

CLIENT : ROY F. WESTON  
 PROJECT # : 06405-056-010-0003  
 PROJECT NAME : W. VAN BUREN

ATI I.D. : 307610

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC	% REC
SILVER	MG/L	30761009	<0.010	<0.010	NA	0.920	1.00	92
ARSENIC (ICAP)	MG/L	30761009	<0.1	<0.1	NA	0.9	1.0	90
BORON	MG/L	30760701	0.18	0.18	0	1.21	1.00	103
BARIUM	MG/L	30761009	0.091	0.090	1	1.05	1.00	96
CADMIUM	MG/L	30761009	<0.005	<0.005	NA	0.050	0.050	100
CHROMIUM	MG/L	30760701	<0.010	<0.010	NA	1.00	1.00	100
COPPER	MG/L	30761009	0.046	0.044	4	1.01	1.00	96
MERCURY	MG/L	30765401	<0.0002	<0.0002	NA	0.0050	0.0050	100
MANGANESE	MG/L	30761009	0.112	0.110	2	1.09	1.00	98
LEAD	MG/L	30761009	<0.10	<0.10	NA	0.93	1.00	93
SELENIUM (ICAP)	MG/L	30761009	<0.1	<0.1	NA	1.0	1.0	100
ZINC	MG/L	30761009	0.188	0.188	0	1.19	1.00	100

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$



GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30761001

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

CLIENT : ROY F. WESTON  
PROJECT # : 06405-056-010-0003  
PROJECT NAME : W. VAN BUREN  
CLIENT I.D. : AVB47-0100-4057  
SAMPLE MATRIX : AQUEOUS

DATE SAMPLED : 07/08/93  
DATE RECEIVED : 07/09/93  
DATE EXTRACTED : N/A  
DATE ANALYZED : 07/12/93  
UNITS : UG/L  
DILUTION FACTOR : 25

-----  
COMPOUNDS RESULTS  
-----

BENZENE	<12.5
BROMODICHLOROMETHANE	<5.0
BROMOFORM	<5.0
BROMOMETHANE	<5.0
CARBON TETRACHLORIDE	<5.0
CHLOROBENZENE	<12.5
CHLOROETHANE	<5.0
CHLOROFORM	<5.0
CHLOROMETHANE	<5.0
DIBROMOCHLOROMETHANE	<5.0
2-CHLOROETHYL VINYL ETHER	<12.5
1,3-DICHLOROBENZENE	<12.5
1,2 & 1,4-DICHLOROBENZENE	<12.5
DICHLORODIFLUOROMETHANE	<5.0
1,1-DICHLOROETHANE	<5.0
1,2-DICHLOROETHANE	<5.0
1,1-DICHLOROETHENE	<5.0
1,2-DICHLOROETHENE (TOTAL)	10
1,2-DICHLOROPROPANE	<5.0
CIS-1,3-DICHLOROPROPENE	<5.0
TRANS-1,3-DICHLOROPROPENE	<5.0
ETHYLBENZENE	<12.5
METHYLENE CHLORIDE	<50.0
1,1,2,2-TETRACHLOROETHANE	<5.0
TETRACHLOROETHENE	2400 D
TOLUENE	<12.5
1,1,1-TRICHLOROETHANE	<5.0
1,1,2-TRICHLOROETHANE	<5.0
TRICHLOROETHENE	<5.0
TRICHLOROFLUOROMETHANE	<12.5
VINYL CHLORIDE	<5.0
TOTAL XYLENES	<12.5
TRICHLOROTRIFLUOROETHANE	<50.0

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	110
BROMOFLUOROBENZENE (%)	101



GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30761002

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

CLIENT : ROY F. WESTON  
 PROJECT # : 06405-056-010-0003  
 PROJECT NAME : W. VAN BUREN  
 CLIENT I.D. : AVB46-0100-4056  
 SAMPLE MATRIX : AQUEOUS

DATE SAMPLED : 07/08/93  
 DATE RECEIVED : 07/09/93  
 DATE EXTRACTED : N/A  
 DATE ANALYZED : 07/12/93  
 UNITS : UG/L  
 DILUTION FACTOR : 1

-----  
 COMPOUNDS RESULTS  
 -----

BENZENE	<0.5
BROMODICHLOROMETHANE	<0.2
BROMOFORM	<0.2
BROMOMETHANE	<0.2
CARBON TETRACHLORIDE	<0.2
CHLOROBENZENE	<0.5
CHLOROETHANE	3.1
CHLOROFORM	0.3
CHLOROMETHANE	<0.2
DIBROMOCHLOROMETHANE	<0.2
2-CHLOROETHYL VINYL ETHER	<0.5
1,3-DICHLOROBENZENE	<0.5
1,2 & 1,4-DICHLOROBENZENE	<0.5
DICHLORODIFLUOROMETHANE	1.2*
1,1-DICHLOROETHANE	<0.2
1,2-DICHLOROETHANE	<0.2
1,1-DICHLOROETHENE	<0.2
1,2-DICHLOROETHENE (TOTAL)	<0.2
1,2-DICHLOROPROPANE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2
TRANS-1,3-DICHLOROPROPENE	<0.2
ETHYLBENZENE	0.5
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.2
TETRACHLOROETHENE	14
TOLUENE	3.9
1,1,1-TRICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	<0.2
TRICHLOROETHENE	0.2
TRICHLOROFLUOROMETHANE	<0.5
VINYL CHLORIDE	<0.2
TOTAL XYLENES	3.5
TRICHLOROTRIFLUOROETHANE	<2.0
METHYL-TERT-BUTYL ETHER	0.05

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%) 112  
 BROMOFLUOROBENZENE (%) 99  
 \* ANALYZED ON 07/26/93

## GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30761003

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

 CLIENT : ROY F. WESTON  
 PROJECT # : 06405-056-010-0003  
 PROJECT NAME : W. VAN BUREN  
 CLIENT I.D. : AVB11-0100-4055  
 SAMPLE MATRIX : AQUEOUS

 DATE SAMPLED : 07/08/93  
 DATE RECEIVED : 07/09/93  
 DATE EXTRACTED : N/A  
 DATE ANALYZED : 07/12/93  
 UNITS : UG/L  
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
BENZENE	<0.5
BROMODICHLOROMETHANE	<0.2
BROMOFORM	<0.2
BROMOMETHANE	<0.2
CARBON TETRACHLORIDE	<0.2
CHLOROBENZENE	<0.5
CHLOROETHANE	2.8
CHLOROFORM	<0.2
CHLOROMETHANE	<0.2
DIBROMOCHLOROMETHANE	<0.2
2-CHLOROETHYL VINYL ETHER	<0.5
1,3-DICHLOROBENZENE	<0.5
1,2 & 1,4-DICHLOROBENZENE	<0.5
DICHLORODIFLUOROMETHANE	2.3*
1,1-DICHLOROETHANE	<0.2
1,2-DICHLOROETHANE	<0.2
1,1-DICHLOROETHENE	<0.2
1,2-DICHLOROETHENE (TOTAL)	<0.2
1,2-DICHLOROPROPANE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2
TRANS-1,3-DICHLOROPROPENE	<0.2
ETHYLBENZENE	<0.5
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.2
TETRACHLOROETHENE	29
TOLUENE	<0.5
1,1,1-TRICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	<0.2
TRICHLOROETHENE	<0.2
TRICHLOROFLUOROMETHANE	<0.5
VINYL CHLORIDE	<0.2
TOTAL XYLENES	<0.5
TRICHLOROTRIFLUOROETHANE	<2.0

## SURROGATE PERCENT RECOVERIES

 BROMOCHLOROMETHANE (%) 110  
 BROMOFLUOROBENZENE (%) 99

\* ANALYZED ON 07/26/93



GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30761004

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

CLIENT : ROY F. WESTON  
PROJECT # : 06405-056-010-0003  
PROJECT NAME : W. VAN BUREN  
CLIENT I.D. : AVB25-0100-3058  
SAMPLE MATRIX : AQUEOUS

DATE SAMPLED : 07/08/93  
DATE RECEIVED : 07/09/93  
DATE EXTRACTED : N/A  
DATE ANALYZED : 07/12/93  
UNITS : UG/L  
DILUTION FACTOR : 1

COMPOUNDS	RESULTS
BENZENE	<0.5
BROMODICHLOROMETHANE	<0.2
BROMOFORM	<0.2
BROMOMETHANE	<0.2
CARBON TETRACHLORIDE	<0.2
CHLOROBENZENE	<0.2
CHLOROETHANE	<0.2
CHLOROFORM	<0.2
CHLOROMETHANE	<0.2
DIBROMOCHLOROMETHANE	<0.2
2-CHLOROETHYL VINYL ETHER	<0.5
1,3-DICHLOROBENZENE	<0.5
1,2 & 1,4-DICHLOROBENZENE	<0.5
DICHLORODIFLUOROMETHANE	<0.2
1,1-DICHLOROETHANE	<0.2
1,2-DICHLOROETHANE	<0.2
1,1-DICHLOROETHENE	<0.2
1,2-DICHLOROETHENE (TOTAL)	<0.2
1,2-DICHLOROPROPANE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2
TRANS-1,3-DICHLOROPROPENE	<0.2
ETHYLBENZENE	<0.5
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.2
TETRACHLOROETHENE	1.0
TOLUENE	<0.5
1,1,1-TRICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	<0.2
TRICHLOROETHENE	<0.2
TRICHLOROFLUOROMETHANE	<0.5
VINYL CHLORIDE	<0.2
TOTAL XYLENES	<0.5
TRICHLOROTRIFLUOROETHANE	<2.0
METHYL-TERT-BUTYL ETHER	77

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	108
BROMOFLUOROBENZENE (%)	100



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30761005

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

CLIENT : ROY F. WESTON  
 PROJECT # : 06405-056-010-0003  
 PROJECT NAME : W. VAN BUREN  
 CLIENT I.D. : AVB25-0101-3058  
 SAMPLE MATRIX : AQUEOUS

DATE SAMPLED : 07/08/93  
 DATE RECEIVED : 07/09/93  
 DATE EXTRACTED : N/A  
 DATE ANALYZED : 07/12/93  
 UNITS : UG/L  
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
BENZENE	<0.5
BROMODICHLOROMETHANE	<0.2
BROMOFORM	<0.2
BROMOMETHANE	<0.2
CARBON TETRACHLORIDE	<0.2
CHLOROBENZENE	<0.2
CHLOROETHANE	<0.2
CHLOROFORM	<0.2
CHLOROMETHANE	<0.2
DIBROMOCHLOROMETHANE	<0.2
2-CHLOROETHYL VINYL ETHER	<0.5
1,3-DICHLOROBENZENE	<0.5
1,2 & 1,4-DICHLOROBENZENE	<0.5
DICHLORODIFLUOROMETHANE	<0.2
1,1-DICHLOROETHANE	<0.2
1,2-DICHLOROETHANE	<0.2
1,1-DICHLOROETHENE	<0.2
1,2-DICHLOROETHENE (TOTAL)	<0.2
1,2-DICHLOROPROPANE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2
TRANS-1,3-DICHLOROPROPENE	<0.2
ETHYLBENZENE	<0.5
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.2
TETRACHLOROETHENE	0.9
TOLUENE	<0.5
1,1,1-TRICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	<0.2
TRICHLOROETHENE	<0.2
TRICHLOROFLUOROMETHANE	<0.5
VINYL CHLORIDE	<0.2
TOTAL XYLENES	<0.5
TRICHLOROTRIFLUOROETHANE	<2.0
METHYL-TERT-BUTYL ETHER	72

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	91
BROMOFLUOROBENZENE (%)	97

## GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30761006

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

 CLIENT : ROY F. WESTON  
 PROJECT # : 06405-056-010-0003  
 PROJECT NAME : W. VAN BUREN  
 CLIENT I.D. : AVB26-0100-4061  
 SAMPLE MATRIX : AQUEOUS

 DATE SAMPLED : 07/08/93  
 DATE RECEIVED : 07/09/93  
 DATE EXTRACTED : N/A  
 DATE ANALYZED : 07/12/93  
 UNITS : UG/L  
 DILUTION FACTOR : 5

 -----  
 COMPOUNDS RESULTS  
 -----

BENZENE	<2.5
BROMODICHLOROMETHANE	<1.0
BROMOFORM	<1.0
BROMOMETHANE	<1.0
CARBON TETRACHLORIDE	<1.0
CHLOROBENZENE	<2.5
CHLOROETHANE	<1.0
CHLOROFORM	2
CHLOROMETHANE	<1.0
DIBROMOCHLOROMETHANE	<1.0
2-CHLOROETHYL VINYL ETHER	<2.5
1,3-DICHLOROBENZENE	<2.5
1,2 & 1,4-DICHLOROBENZENE	<2.5
DICHLORODIFLUOROMETHANE	<1.0
1,1-DICHLOROETHANE	6
1,2-DICHLOROETHANE	<1.0
1,1-DICHLOROETHENE	18
1,2-DICHLOROETHENE (TOTAL)	22
1,2-DICHLOROPROPANE	<1.0
CIS-1,3-DICHLOROPROPENE	<1.0
TRANS-1,3-DICHLOROPROPENE	<1.0
ETHYLBENZENE	<2.5
METHYLENE CHLORIDE	<10.0
1,1,2,2-TETRACHLOROETHANE	<1.0
TETRACHLOROETHENE	69
TOLUENE	<2.5
1,1,1-TRICHLOROETHANE	8
1,1,2-TRICHLOROETHANE	<1.0
TRICHLOROETHENE	27
TRICHLOROFLUOROMETHANE	<2.5
VINYL CHLORIDE	<1.0
TOTAL XYLENES	<2.5
TRICHLOROTRIFLUOROETHANE	<10.0

## SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	106
BROMOFLUOROBENZENE (%)	89

## GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30761007

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

CLIENT	: ROY F. WESTON	DATE SAMPLED	: 07/08/93
PROJECT #	: 06405-056-010-0003	DATE RECEIVED	: 07/09/93
PROJECT NAME	: W. VAN BUREN	DATE EXTRACTED	: N/A
CLIENT I.D.	: AVB26-0104-4061	DATE ANALYZED	: 07/12/93
SAMPLE MATRIX	: AQUEOUS	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
BENZENE	<0.5
BROMODICHLOROMETHANE	<0.2
BROMOFORM	<0.2
BROMOMETHANE	<0.2
CARBON TETRACHLORIDE	<0.2
CHLOROBENZENE	<0.5
CHLOROETHANE	<0.2
CHLOROFORM	<0.2
CHLOROMETHANE	<0.2
DIBROMOCHLOROMETHANE	<0.2
2-CHLOROETHYL VINYL ETHER	<0.5
1,3-DICHLOROBENZENE	<0.5
1,2 & 1,4-DICHLOROBENZENE	<0.5
DICHLORODIFLUOROMETHANE	<0.2
1,1-DICHLOROETHANE	<0.2
1,2-DICHLOROETHANE	<0.2
1,1-DICHLOROETHENE	<0.2
1,2-DICHLOROETHENE (TOTAL)	<0.2
1,2-DICHLOROPROPANE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2
TRANS-1,3-DICHLOROPROPENE	<0.2
ETHYLBENZENE	<0.5
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.2
TETRACHLOROETHENE	<0.2
TOLUENE	<0.5
1,1,1-TRICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	<0.2
TRICHLOROETHENE	<0.2
TRICHLOROFLUOROMETHANE	<0.5
VINYL CHLORIDE	<0.2
TOTAL XYLENES	<0.5
TRICHLOROTRIFLUOROETHANE	<2.0

## SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	96
BROMOFLUOROBENZENE (%)	93

## GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30761008

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

CLIENT	: ROY F. WESTON	DATE SAMPLED	: 07/01/93
PROJECT #	: 06405-056-010-0003	DATE RECEIVED	: 07/09/93
PROJECT NAME	: W. VAN BUREN	DATE EXTRACTED	: N/A
CLIENT I.D.	: AVB47-0102-1000(TB)	DATE ANALYZED	: 07/12/93
SAMPLE MATRIX	: AQUEOUS	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
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BENZENE	<0.5
BROMODICHLOROMETHANE	<0.2
BROMOFORM	<0.2
BROMOMETHANE	<0.2
CARBON TETRACHLORIDE	<0.2
CHLOROBENZENE	<0.5
CHLOROETHANE	<0.2
CHLOROFORM	<0.2
CHLOROMETHANE	<0.2
DIBROMOCHLOROMETHANE	<0.2
2-CHLOROETHYL VINYL ETHER	<0.5
1,3-DICHLOROBENZENE	<0.5
1,2 & 1,4-DICHLOROBENZENE	<0.5
DICHLORODIFLUOROMETHANE	<0.2
1,1-DICHLOROETHANE	<0.2
1,2-DICHLOROETHANE	<0.2
1,1-DICHLOROETHENE	<0.2
1,2-DICHLOROETHENE (TOTAL)	<0.2
1,2-DICHLOROPROPANE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2
TRANS-1,3-DICHLOROPROPENE	<0.2
ETHYLBENZENE	<0.5
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.2
TETRACHLOROETHENE	<0.2
TOLUENE	<0.5
1,1,1-TRICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	<0.2
TRICHLOROETHENE	<0.2
TRICHLOROFLUOROMETHANE	<0.5
VINYL CHLORIDE	<0.2
TOTAL XYLENES	<0.5
TRICHLOROTRIFLUOROETHANE	<2.0

## SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	92
BROMOFLUOROBENZENE (%)	91



## GAS CHROMATOGRAPHY - RESULTS

## REAGENT BLANK

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

CLIENT : ROY F. WESTON  
 PROJECT # : 06405-056-010-0003  
 PROJECT NAME : W. VAN BUREN  
 CLIENT I.D. : REAGENT BLANK

ATI I.D. : 307610  
 DATE EXTRACTED : 07/12/93  
 DATE ANALYZED : 07/12/93  
 UNITS : UG/L  
 DILUTION FACTOR : N/A

COMPOUNDS	RESULTS
-----------	---------

BENZENE	<0.5
BROMODICHLOROMETHANE	<0.2
BROMOFORM	<0.2
BROMOMETHANE	<0.2
CARBON TETRACHLORIDE	<0.2
CHLOROBENZENE	<0.2
CHLOROETHANE	<0.2
CHLOROFORM	<0.2
CHLOROMETHANE	<0.2
DIBROMOCHLOROMETHANE	<0.2
2-CHLOROETHYL VINYL ETHER	<0.5
1,3-DICHLOROBENZENE	<0.5
1,2 & 1,4-DICHLOROBENZENE	<0.5
DICHLORODIFLUOROMETHANE	<0.2
1,1-DICHLOROETHANE	<0.2
1,2-DICHLOROETHANE	<0.2
1,1-DICHLOROETHENE	<0.2
1,2-DICHLOROETHENE (TOTAL)	<0.2
1,2-DICHLOROPROPANE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2
TRANS-1,3-DICHLOROPROPENE	<0.2
ETHYLBENZENE	<0.5
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.2
TETRACHLOROETHENE	<0.2
TOLUENE	<0.5
1,1,1-TRICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	<0.2
TRICHLOROETHENE	<0.2
TRICHLOROFLUOROMETHANE	<0.5
VINYL CHLORIDE	<0.2
TOTAL XYLENES	<0.5
TRICHLOROTRIFLUOROETHANE	<2.0

## SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	107
BROMOFLUOROBENZENE (%)	100

## GAS CHROMATOGRAPHY - RESULTS

## REAGENT BLANK

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

 CLIENT : ROY F. WESTON  
 PROJECT # : 06405-056-010-0003  
 PROJECT NAME : W. VAN BUREN  
 CLIENT I.D. : REAGENT BLANK

 ATI I.D. : 307610  
 DATE EXTRACTED : 07/26/93  
 DATE ANALYZED : 07/26/93  
 UNITS : UG/L  
 DILUTION FACTOR : N/A

COMPOUNDS	RESULTS
BENZENE	<0.5
BROMODICHLOROMETHANE	<0.2
BROMOFORM	<0.2
BROMOMETHANE	<0.2
CARBON TETRACHLORIDE	<0.2
CHLOROBENZENE	<0.5
CHLOROETHANE	<0.2
CHLOROFORM	<0.2
CHLOROMETHANE	<0.2
DIBROMOCHLOROMETHANE	<0.2
2-CHLOROETHYL VINYL ETHER	<0.5
1,3-DICHLOROBENZENE	<0.5
1,2 & 1,4-DICHLOROBENZENE	<0.5
DICHLORODIFLUOROMETHANE	<0.2
1,1-DICHLOROETHANE	<0.2
1,2-DICHLOROETHANE	<0.2
1,1-DICHLOROETHENE	<0.2
1,2-DICHLOROETHENE (TOTAL)	<0.2
1,2-DICHLOROPROPANE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2
TRANS-1,3-DICHLOROPROPENE	<0.2
ETHYLBENZENE	<0.5
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.2
TETRACHLOROETHENE	<0.2
TOLUENE	<0.5
1,1,1-TRICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	<0.2
TRICHLOROETHENE	<0.2
TRICHLOROFLUOROMETHANE	<0.5
VINYL CHLORIDE	<0.2
TOTAL XYLENES	<0.5
TRICHLOROTRIFLUOROETHANE	<2.0

## SURROGATE PERCENT RECOVERIES

 BROMOCHLOROMETHANE (%) 94  
 BROMOFLUOROBENZENE (%) 105



Analytical Technologies, Inc.

QUALITY CONTROL DATA

ATI I.D. : 307610

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

CLIENT : ROY F. WESTON  
 PROJECT # : 06405-056-010-0003  
 PROJECT NAME : W. VAN BUREN  
 REF I.D. : 30761004

DATE ANALYZED : 07/12/93  
 SAMPLE MATRIX : AQUEOUS  
 UNITS : UG/L

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
1,1-DICHLOROETHENE	<0.2	20	19	95	21	105	10
TRICHLOROETHENE	<0.2	20	23	115	24	120	4
TETRACHLOROETHENE	1.0	20	24	115	24	115	0
BENZENE	<0.5	20	20	100	20	100	0
BROMODICHLOROMETHANE	<0.2	20	21	105	22	110	5
CHLOROFORM	<0.2	20	24	120	24	120	0
1,1,1-TRICHLOROETHANE	<0.2	20	23	115	24	120	4
TOLUENE	<0.5	20	19	95	19	95	0
CHLOROBENZENE	<0.5	20	19	95	20	100	5
M-XYLENE	<0.5	20	18	90	18	90	0

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$



Analytical Technologies, Inc., Phoenix, Arizona  
 San Diego • Phoenix • Seattle • Pensacola • Ft. Collins • Portland

# CHAIN OF CUSTODY

DATE: 9 JUL 1993 PAGE 1 OF 1

ATI LAB I.D. 307610

PROJECT MANAGER: RICH PETRUS

COMPANY: ROY F. WESTON

ADDRESS: 1600 W. BROADWAY, STE 210  
TEMPE, AZ. 85282

PHONE: 602-966-2337

FAX:

BILL TO: A.S. ABOVE

COMPANY:

ADDRESS:

SAMPLE ID	DATE	TIME	MATRIX	LAB ID
AVB47-0100-4057	8 Jul 93	0712	AQ	1
AVB46-0100-4056	8 Jul 93	0852	AQ	2
AVB11-0100-4055	8 Jul 93	1025	AQ	3
AVB25-0100-3058	8 Jul 93	1405	AQ	4
AVB25-0101-3058	8 Jul 93	1405	AQ	5
AVB26-0100-4061	8 Jul 93	1600	AQ	6
AVB26-0104-4061	8 Jul 93	1600	AQ	7
AVB47-0102-1000(B)	15 Jul 93	0700	AQ	8
AVB45-0150-3000	8 Jul 93	1700	AQ	9

PROJECT INFORMATION		SAMPLE RECEIPT	
PROJ. NO.: 08405-056-010-0003	NO. CONTAINERS	32	
PROJ. NAME: W. VAN BUREN	CUSTODY SEALS	YIN (NA)	
P.O. NO.:	RECEIVED INTACT	Y	
SHIPPED VIA: TSD Cont. AT	RECEIVED COLD	Y	

PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS  
 (RUSH)  24hr  48hr  72hr  1 WEEK (NORMAL)  2 WEEK

Comments: \* METALS = SILVER, SELENIUM, ARSENIC, BARIUM, MANGANESE  
 MERCURY, LEAD, CHROME +6, ARSENIC, BARIUM, BORON, ALUMINUM, COPPER, ZINC

## ANALYSIS REQUEST

ANALYSIS REQUEST	CHLORINATED HYDROCARBONS (601/8040)	AROMATIC HYDROCARBONS (602/8029)	SDWA VOLATILES (502.1/503.1), 502.2 Reg. & Unreg.	PESTICIDES/PCB (608/8080)	HERBICIDES (615/8150)	BASE/NEUTRAL/ACID COMPOUNDS GC/MS (625/8270)	VOLATILE ORGANICS GC/MS (624/8240)	POLYNUCLEAR AROMATICS (610/8310)	SDWA PRIMARY STANDARDS - ARIZONA	SDWA SECONDARY STANDARDS - ARIZONA	SDWA PRIMARY STANDARDS - FEDERAL	SDWA SECONDARY STANDARDS - FEDERAL	CHROMIUM +6	CHROMIUM TOTAL	THE 13 PRIORITY POLLUTANT METALS	RCRA METALS BY TOTAL DIGESTION	RCRA METALS BY TCLP (1311)	NUMBER OF CONTAINERS
Petroleum Hydrocarbons (418.1)																		
(MOD 8015) Gas/Diesel																		
Diesel/Gasoline/BTXE/MTBE (MOD 8015/8020)																		
BTXE/MTBE (8020)																		
Chlorinated Hydrocarbons (601/8040)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	1
Aromatic Hydrocarbons (602/8029)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	1
SDWA Volatiles (502.1/503.1), 502.2 Reg. & Unreg.																		1
Pesticides/PCB (608/8080)																		1
Herbicides (615/8150)																		1
Base/Neutral/Acid Compounds GC/MS (625/8270)																		1
Volatile Organics GC/MS (624/8240)																		1
Polynuclear Aromatics (610/8310)																		1
SDWA Primary Standards - Arizona																		1
SDWA Secondary Standards - Arizona																		1
SDWA Primary Standards - Federal																		1
SDWA Secondary Standards - Federal																		1
CHROMIUM +6																		1
CHROMIUM TOTAL																		1
The 13 Priority Pollutant Metals																		1
RCRA Metals by Total Digestion																		1
RCRA Metals by TCLP (1311)																		1

SAMPLED & RELINQUISHED BY: 1.	RELINQUISHED BY: 2.	RELINQUISHED BY: 3.
Signature: <u>R. Tubbesbee</u>	Signature: <u>R. Tubbesbee</u>	Signature: <u>R. Tubbesbee</u>
Time: 10:56	Time: 11:10	Time: 11:10
Printed Name: <u>ROY F. WESTON</u>	Printed Name: <u>ROY F. WESTON</u>	Printed Name: <u>ROY F. WESTON</u>
Date: 7/9/93	Date: 7/9/93	Date: 7/9/93
Company: <u>ROY F. WESTON</u>	Company: <u>ROY F. WESTON</u>	Company: <u>ROY F. WESTON</u>
Signature: <u>R. Tubbesbee</u>	Signature: <u>R. Tubbesbee</u>	Signature: <u>R. Tubbesbee</u>
Time: 10:56	Time: 10:56	Time: 10:56
Printed Name: <u>R. Tubbesbee</u>	Printed Name: <u>R. Tubbesbee</u>	Printed Name: <u>R. Tubbesbee</u>
Date: 7/9/93	Date: 7/9/93	Date: 7/9/93
Company: <u>ROY F. WESTON</u>	Company: <u>ROY F. WESTON</u>	Company: <u>ROY F. WESTON</u>

PLEASE FILL THIS FORM IN COMPLETELY. SHADED AREAS ARE FOR LAB USE ONLY.



Analytical **Technologies**, Inc.

9830 S. 51st Street Suite B-113 Phoenix, AZ 85044 (602) 496-4400

ATI I.D. 307640

July 20, 1993

RECEIVED  
WESTON-TEMPE

JUL 21 1993

Roy F. Weston  
1600 W. Broadway  
Suite 210  
Tempe, AZ 85282

Project Name/Number: West Van Buren/06405-056-010-0003

Attention: Rich Petrus

On 07/12/93, Analytical Technologies, Inc., (ADHS License No. AZ0061), received a request to analyze aqueous sample(s). The sample(s) were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

If you have any questions or comments, please do not hesitate to contact us at (602) 496-4400.

*Mary A. Tyer*  
Mary Tyer  
Project Manager

*Robert V. Woods*  
Robert V. Woods  
Laboratory Manager

RVW/st

Enclosure



Analytical Technologies, Inc.

CLIENT : ROY F. WESTON  
PROJECT # : 06405-056-010-0003  
PROJECT NAME : W.V.BUREN

DATE RECEIVED : 07/12/93  
REPORT DATE : 07/19/93

ATI I.D. : 307640

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	AVB07-0102-3000	AQUEOUS	04/13/93
02	AVB07-0100-3000	AQUEOUS	07/12/93

----- TOTALS -----

MATRIX	# SAMPLES
AQUEOUS	2

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in thirty (30) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.



## GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30764001

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

CLIENT : ROY F. WESTON  
 PROJECT # : 06405-056-010-0003  
 PROJECT NAME : W.V.BUREN  
 CLIENT I.D. : AVB07-0102-3000  
 SAMPLE MATRIX : AQUEOUS

DATE SAMPLED : 04/13/93  
 DATE RECEIVED : 07/12/93  
 DATE EXTRACTED : N/A  
 DATE ANALYZED : 07/14/93  
 UNITS : UG/L  
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
BENZENE	<0.5
BROMODICHLOROMETHANE	<0.2
BROMOFORM	<0.2
BROMOMETHANE	<0.2
CARBON TETRACHLORIDE	<0.2
CHLOROBENZENE	<0.2
CHLOROETHANE	<0.2
CHLOROFORM	<0.2
CHLOROMETHANE	<0.2
DIBROMOCHLOROMETHANE	<0.2
2-CHLOROETHYL VINYL ETHER	<0.5
1,3-DICHLOROBENZENE	<0.5
1,2 & 1,4-DICHLOROBENZENE	<0.5
DICHLORODIFLUOROMETHANE	<0.2
1,1-DICHLOROETHANE	<0.2
1,2-DICHLOROETHANE	<0.2
1,1-DICHLOROETHENE	<0.2
1,2-DICHLOROETHENE (TOTAL)	<0.2
1,2-DICHLOROPROPANE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2
TRANS-1,3-DICHLOROPROPENE	<0.2
ETHYLBENZENE	<0.5
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.2
TETRACHLOROETHENE	<0.2
TOLUENE	<0.5
1,1,1-TRICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	<0.2
TRICHLOROETHENE	<0.2
TRICHLOROFLUOROMETHANE	<0.5
VINYL CHLORIDE	<0.2
TOTAL XYLENES	<0.5
TRICHLOROTRIFLUOROETHANE	<2.0

## SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	96
BROMOFLUOROBENZENE (%)	94



## GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30764002

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

CLIENT : ROY F. WESTON  
 PROJECT # : 06405-056-010-0003  
 PROJECT NAME : W.V.BUREN  
 CLIENT I.D. : AVB07-0100-3000  
 SAMPLE MATRIX : AQUEOUS

DATE SAMPLED : 07/12/93  
 DATE RECEIVED : 07/12/93  
 DATE EXTRACTED : N/A  
 DATE ANALYZED : 07/14/93  
 UNITS : UG/L  
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
BENZENE	<0.5
BROMODICHLOROMETHANE	<0.2
BROMOFORM	<0.2
BROMOMETHANE	<0.2
CARBON TETRACHLORIDE	<0.2
CHLOROBENZENE	<0.5
CHLOROETHANE	<0.2
CHLOROFORM	<0.2
CHLOROMETHANE	<0.2
DIBROMOCHLOROMETHANE	<0.2
2-CHLOROETHYL VINYL ETHER	<0.5
1,3-DICHLOROBENZENE	<0.5
1,2 & 1,4-DICHLOROBENZENE	<0.5
DICHLORODIFLUOROMETHANE	<0.2
1,1-DICHLOROETHANE	<0.2
1,2-DICHLOROETHANE	<0.2
1,1-DICHLOROETHENE	<0.2
1,2-DICHLOROETHENE (TOTAL)	<0.2
1,2-DICHLOROPROPANE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2
TRANS-1,3-DICHLOROPROPENE	<0.2
ETHYLBENZENE	<0.5
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.2
TETRACHLOROETHENE	<0.2
TOLUENE	<0.5
1,1,1-TRICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	<0.2
TRICHLOROETHENE	0.2
TRICHLOROFLUOROMETHANE	<0.5
VINYL CHLORIDE	<0.2
TOTAL XYLENES	<0.5
TRICHLOROTRIFLUOROETHANE	<2.0

## SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	112
BROMOFLUOROBENZENE (%)	95



## REAGENT BLANK

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

CLIENT : ROY F. WESTON  
 PROJECT # : 06405-056-010-0003  
 PROJECT NAME : W.V.BUREN  
 CLIENT I.D. : REAGENT BLANK

ATI I.D. : 307640  
 DATE EXTRACTED : 07/14/93  
 DATE ANALYZED : 07/14/93  
 UNITS : UG/L  
 DILUTION FACTOR : N/A

-----  
 COMPOUNDS RESULTS  
 -----

BENZENE	<0.5
BROMODICHLOROMETHANE	<0.2
BROMOFORM	<0.2
BROMOMETHANE	<0.2
CARBON TETRACHLORIDE	<0.2
CHLOROETHANE	<0.2
CHLOROBENZENE	<0.2
CHLOROFORM	<0.2
CHLOROMETHANE	<0.2
DIBROMOCHLOROMETHANE	<0.2
2-CHLOROETHYL VINYL ETHER	<0.5
1,3-DICHLOROBENZENE	<0.5
1,2 & 1,4-DICHLOROBENZENE	<0.5
DICHLORODIFLUOROMETHANE	<0.2
1,1-DICHLOROETHANE	<0.2
1,2-DICHLOROETHANE	<0.2
1,1-DICHLOROETHENE	<0.2
1,2-DICHLOROETHENE (TOTAL)	<0.2
1,2-DICHLOROPROPANE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2
TRANS-1,3-DICHLOROPROPENE	<0.2
ETHYLBENZENE	<0.5
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.2
TETRACHLOROETHENE	<0.2
TOLUENE	<0.5
1,1,1-TRICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	<0.2
TRICHLOROETHENE	<0.2
TRICHLOROFLUOROMETHANE	<0.5
VINYL CHLORIDE	<0.2
TOTAL XYLENES	<0.5
TRICHLOROTRIFLUOROETHANE	<2.0

## SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	120
BROMOFLUOROBENZENE (%)	96



QUALITY CONTROL DATA

ATI I.D. : 307640

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

CLIENT : ROY F. WESTON  
 PROJECT # : 06405-056-010-0003  
 PROJECT NAME : W.V.BUREN  
 REF I.D. : 30764002

DATE ANALYZED : 07/14/93  
 SAMPLE MATRIX : AQUEOUS  
 UNITS : UG/L

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP.	DUP.	RPF
					SPIKED SAMPLE	% REC.	
1,1-DICHLOROETHENE	<0.2	20	16	80	17	85	6
TRICHLOROETHENE	0.2	20	18	89	19	94	5
TETRACHLOROETHENE	<0.2	20	20	100	20	100	0
BENZENE	<0.5	20	21	105	20	100	5
BROMODICHLOROMETHANE	<0.2	20	19	95	19	95	0
CHLOROFORM	<0.2	20	21	105	22	110	5
1,1,1-TRICHLOROETHANE	<0.2	20	16	80	17	85	6
TOLUENE	<0.5	20	21	105	19	95	10
CHLOROBENZENE	<0.5	20	22	110	22	110	0
M-XYLENE	<0.5	20	20	100	18	90	11

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

# CHAIN OF CUSTODY

ATI LAB ID. **307640**

DATE: **12 Jul 93** PAGE **1** OF **1**

Analytical Technologies, Inc., Phoenix, Arizona  
 San Diego • Phoenix • Seattle • Pensacola • Ft. Collins • Portland

PROJECT MANAGER: **RICH PETRUS**

COMPANY: **ROY F. WESTON**

ADDRESS: **1600 W. BROMANA ST. #210**  
**TEMPE, AZ 85282**

PHONE: **602-966-2337**

FAX: \_\_\_\_\_

BILL TO: **SAME**

COMPANY: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

## ANALYSIS REQUEST

ANALYSIS REQUEST	NUMBER OF CONTAINERS
Petroleum Hydrocarbons (418.1)	
(MOD 8015) Gas/Diesel	
Diesel/Gasoline/BTXE/MTBE (MOD 8015/8020)	
BTXE/MTBE (8020)	
Chlorinated Hydrocarbons (601/8010)	
Aromatic Hydrocarbons (602/8020)	
SDWA Volatiles (502.1/503.1, 502.2 Reg. & Unreg.)	
Pesticides/PCB (608/8080)	
Herbicides (615/8150)	
Base/Neutral/Acid Compounds GC/MS (625/8270)	
Volatile Organics GC/MS (624/8240)	
Polynuclear Aromatics (610/8310)	
SDWA Primary Standards - Arizona	
SDWA Secondary Standards - Arizona	
SDWA Primary Standards - Federal	
SDWA Secondary Standards - Federal	
The 13 Priority Pollutant Metals	
RCRA Metals by Total Digestion	
RCRA Metals by TCLP (1311)	

SAMPLE ID	DATE	TIME	MATRIX	LAB ID
AVB07-0102-3000	12 Jul 93	0900	AQ	1
AVB07-0100-3600	12 Jul 93	1147	AQ	2

**SAMPLE RECEIPT**

PROJECT INFORMATION: PROJ. NO.: **08405-056-010-0003** NO. CONTAINERS: **4**

PROJ. NAME: **W.V. Bowen** CUSTODY SEALS: **YIN/NA**

P.O. NO.: \_\_\_\_\_ RECEIVED INTACT:

SHIPPED VIA: \_\_\_\_\_ RECEIVED COLD:

**PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS**

(RUSH)  24hr  48hr  72hr  1 WEEK (NORMAL)  2 WEEK

**SAMPLED & RELINQUISHED BY: 1.** Signature: *[Signature]* Time: **1424**

Printed Name: **ROY F. WESTON** Date: **12 Jul 93**

Company: **ROY F. WESTON** Phone: **602-966-2337**

**RECEIVED BY: 1.** Signature: *[Signature]* Time: **1424**

Printed Name: **ROY F. WESTON** Date: **12 Jul 93**

Company: **ROY F. WESTON**

**RELINQUISHED BY: 2.** Signature: *[Signature]* Time: **4:38**

Printed Name: **J.H. Chumick** Date: **7-12-93**

Company: **TOP Speed**

**RECEIVED BY: 2.** Signature: *[Signature]* Time: \_\_\_\_\_

Printed Name: \_\_\_\_\_ Date: \_\_\_\_\_

Company: \_\_\_\_\_

**RELINQUISHED BY: 3.** Signature: \_\_\_\_\_ Time: \_\_\_\_\_

Printed Name: \_\_\_\_\_ Date: \_\_\_\_\_

Company: \_\_\_\_\_

**RECEIVED BY: 3.** Signature: *[Signature]* Time: **11:23**

Printed Name: **J.H. Chumick** Date: **7-12-93**

Company: **Analytical Technologies, Inc.**

Comments: **AVB07-0102 TRIP BLANK**

PLEASE FILL THIS FORM IN COMPLETELY. SHADED AREAS ARE FOR LAB USE ONLY.



Analytical **Technologies**, Inc.

9830 S. 51st Street Suite B-113 Phoenix, AZ 85044 (602) 496-4400

ATI I.D. 307670

July 26, 1993

Roy F. Weston  
1600 W. Broadway  
Suite 210  
Tempe, AZ 85282

Project Name/Number: MARYATT IND./06405-055-010-0503

Attention: Rich Petrus

On 07/13/93, Analytical Technologies, Inc., (ADHS License No. AZ0061), received a request to analyze **aqueous** sample(s). The sample(s) were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

D indicates the compound was analyzed at a greater dilution.

If you have any questions or comments, please do not hesitate to contact us at (602) 496-4400.

*Mary A. Tyer*  
Mary Tyer  
Project Manager

*Robert Hermerath*  
Robert Hermerath  
QA Coordinator

RVW/st

Enclosure

*Robert V. Woods*  
Robert V. Woods  
Laboratory Manager



Analytical Technologies, Inc.

CLIENT : ROY F. WESTON  
PROJECT # : 06405-055-010-0503  
PROJECT NAME : MARYATT IND.

DATE RECEIVED : 07/13/93

REPORT DATE : 07/22/93

ATI I.D. : 307670

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	AVB40-0602-1000	AQUEOUS	07/01/93
02	AVB40-0607-3063	AQUEOUS	07/13/93
03	AVB40-0707-4063	AQUEOUS	07/13/93
04	AVB40-0507-4062	AQUEOUS	07/13/93
05	AVB40-0807-3063	AQUEOUS	07/13/93

----- TOTALS -----

MATRIX	# SAMPLES
AQUEOUS	5

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in thirty (30) days from date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.



## GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30767001

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

CLIENT : ROY F. WESTON  
 PROJECT # : 06405-055-010-0503  
 PROJECT NAME : MARYATT IND.  
 CLIENT I.D. : AVB40-0602-1000  
 SAMPLE MATRIX : AQUEOUS

DATE SAMPLED : 07/01/93  
 DATE RECEIVED : 07/13/93  
 DATE EXTRACTED : N/A  
 DATE ANALYZED : 07/14/93  
 UNITS : UG/L  
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
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BENZENE	<0.5
BROMODICHLOROMETHANE	<0.2
BROMOFORM	<0.2
BROMOMETHANE	<0.2
CARBON TETRACHLORIDE	<0.2
CHLOROBENZENE	<0.5
CHLOROETHANE	<0.2
CHLOROFORM	<0.2
CHLOROMETHANE	<0.2
DIBROMOCHLOROMETHANE	<0.2
2-CHLOROETHYL VINYL ETHER	<0.5
1,3-DICHLOROBENZENE	<0.5
1,2 & 1,4-DICHLOROBENZENE	<0.5
DICHLORODIFLUOROMETHANE	<0.2
1,1-DICHLOROETHANE	<0.2
1,2-DICHLOROETHANE	<0.2
1,1-DICHLOROETHENE	<0.2
1,2-DICHLOROETHENE (TOTAL)	<0.2
1,2-DICHLOROPROPANE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2
TRANS-1,3-DICHLOROPROPENE	<0.2
ETHYLBENZENE	<0.5
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.2
TETRACHLOROETHENE	<0.2
TOLUENE	<0.5
1,1,1-TRICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	<0.2
TRICHLOROETHENE	<0.2
TRICHLOROFLUOROMETHANE	<0.5
VINYL CHLORIDE	<0.2
TOTAL XYLENES	<0.5
TRICHLOROTRIFLUOROETHANE	<2.0

## SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	103
BROMOFLUOROBENZENE (%)	98



GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30767004

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

CLIENT : ROY F. WESTON  
PROJECT # : 06405-055-010-0503  
PROJECT NAME : MARYATT IND.  
CLIENT I.D. : AVB40-0507-4062  
SAMPLE MATRIX : AQUEOUS

DATE SAMPLED : 07/13/93  
DATE RECEIVED : 07/13/93  
DATE EXTRACTED : N/A  
DATE ANALYZED : 07/14/93  
UNITS : UG/L  
DILUTION FACTOR : 100

COMPOUNDS	RESULTS
BENZENE	<50
BROMODICHLOROMETHANE	<20
BROMOFORM	<20
BROMOMETHANE	<20
CARBON TETRACHLORIDE	<20
CHLOROBENZENE	<20
CHLOROETHANE	<20
CHLOROFORM	<20
CHLOROMETHANE	<20
DIBROMOCHLOROMETHANE	<20
2-CHLOROETHYL VINYL ETHER	<50
1,3-DICHLOROBENZENE	<50
1,2 & 1,4-DICHLOROBENZENE	<50
DICHLORODIFLUOROMETHANE	<20
1,1-DICHLOROETHANE	<20
1,2-DICHLOROETHANE	<20
1,1-DICHLOROETHENE	<20
1,2-DICHLOROETHENE (TOTAL)	<20
1,2-DICHLOROPROPANE	<20
CIS-1,3-DICHLOROPROPENE	<20
TRANS-1,3-DICHLOROPROPENE	<20
ETHYLBENZENE	<50
METHYLENE CHLORIDE	<200
1,1,2,2-TETRACHLOROETHANE	<20
TETRACHLOROETHENE	3000
TOLUENE	<50
1,1,1-TRICHLOROETHANE	<20
1,1,2-TRICHLOROETHANE	<20
TRICHLOROETHENE	240
TRICHLOROFLUOROMETHANE	<50
VINYL CHLORIDE	<20
TOTAL XYLENES	<50
TRICHLOROTRIFLUOROETHANE	<200

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	106
BROMOFLUOROBENZENE (%)	102



GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30767003

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

CLIENT : ROY F. WESTON  
PROJECT # : 06405-055-010-0503  
PROJECT NAME : MARYATT IND.  
CLIENT I.D. : AVB40-0707-4063  
SAMPLE MATRIX : AQUEOUS

DATE SAMPLED : 07/13/93  
DATE RECEIVED : 07/13/93  
DATE EXTRACTED : N/A  
DATE ANALYZED : 07/15/93  
UNITS : UG/L  
DILUTION FACTOR : 1000

COMPOUNDS	RESULTS
BENZENE	<500
BROMODICHLOROMETHANE	<200
BROMOFORM	<200
BROMOMETHANE	<200
CARBON TETRACHLORIDE	<200
CHLOROBENZENE	<500
CHLOROETHANE	<200
CHLOROFORM	<200
CHLOROMETHANE	<200
DIBROMOCHLOROMETHANE	<200
2-CHLOROETHYL VINYL ETHER	<500
1,3-DICHLOROBENZENE	<500
1,2 & 1,4-DICHLOROBENZENE	<200
DICHLORODIFLUOROMETHANE	<200
1,1-DICHLOROETHANE	<200
1,2-DICHLOROETHANE	<200
1,1-DICHLOROETHENE	<200
1,2-DICHLOROETHENE (TOTAL)	<200
1,2-DICHLOROPROPANE	<200
CIS-1,3-DICHLOROPROPENE	<200
TRANS-1,3-DICHLOROPROPENE	<200
ETHYLBENZENE	<500
METHYLENE CHLORIDE	<2000
1,1,2,2-TETRACHLOROETHANE	<200
TETRACHLOROETHENE	29000
TOLUENE	<500
1,1,1-TRICHLOROETHANE	<200
1,1,2-TRICHLOROETHANE	<200
TRICHLOROETHENE	400
TRICHLOROFLUOROMETHANE	<500
VINYL CHLORIDE	<200
TOTAL XYLENES	<500
TRICHLOROTRIFLUOROETHANE	<2000

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	119
BROMOFLUOROBENZENE (%)	102

## GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30767002

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

 CLIENT : ROY F. WESTON  
 PROJECT # : 06405-055-010-0503  
 PROJECT NAME : MARYATT IND.  
 CLIENT I.D. : AVB40-0607-3063  
 SAMPLE MATRIX : AQUEOUS

 DATE SAMPLED : 07/13/93  
 DATE RECEIVED : 07/13/93  
 DATE EXTRACTED : N/A  
 DATE ANALYZED : 07/14/93  
 UNITS : UG/L  
 DILUTION FACTOR : 250

COMPOUNDS	RESULTS
BENZENE	<125
BROMODICHLOROMETHANE	<50
BROMOFORM	<50
BROMOMETHANE	<50
CARBON TETRACHLORIDE	<50
CHLOROBENZENE	<125
CHLOROETHANE	<50
CHLOROFORM	<50
CHLOROMETHANE	<50
DIBROMOCHLOROMETHANE	<50
2-CHLOROETHYL VINYL ETHER	<125
1,3-DICHLOROBENZENE	<125
1,2 & 1,4-DICHLOROBENZENE	<125
DICHLORODIFLUOROMETHANE	<50
1,1-DICHLOROETHANE	<50
1,2-DICHLOROETHANE	<50
1,1-DICHLOROETHENE	<50
1,2-DICHLOROETHENE (TOTAL)	<50
1,2-DICHLOROPROPANE	<50
CIS-1,3-DICHLOROPROPENE	<50
TRANS-1,3-DICHLOROPROPENE	<50
ETHYLBENZENE	<125
METHYLENE CHLORIDE	<500
1,1,2,2-TETRACHLOROETHANE	<50
TETRACHLOROETHENE	8900
TOLUENE	<125
1,1,1-TRICHLOROETHANE	<50
1,1,2-TRICHLOROETHANE	<50
TRICHLOROETHENE	130
TRICHLOROFLUOROMETHANE	<125
VINYL CHLORIDE	<50
TOTAL XYLENES	<125
TRICHLOROTRIFLUOROETHANE	<500

## SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	101
BROMOFLUOROBENZENE (%)	99



## GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30767005

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

CLIENT : ROY F. WESTON  
 PROJECT # : 06405-055-010-0503  
 PROJECT NAME : MARYATT IND.  
 CLIENT I.D. : AVB40-0807-3063  
 SAMPLE MATRIX : AQUEOUS

DATE SAMPLED : 07/13/93  
 DATE RECEIVED : 07/13/93  
 DATE EXTRACTED : N/A  
 DATE ANALYZED : 07/14/93  
 UNITS : UG/L  
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
BENZENE	<0.5
BROMODICHLOROMETHANE	<0.2
BROMOFORM	<0.2
BROMOMETHANE	<0.2
CARBON TETRACHLORIDE	<0.2
CHLOROBENZENE	<0.5
CHLOROETHANE	<0.2
CHLOROFORM	1.3
CHLOROMETHANE	<0.2
DIBROMOCHLOROMETHANE	<0.2
2-CHLOROETHYL VINYL ETHER	<0.5
1,3-DICHLOROBENZENE	<0.5
1,2 & 1,4-DICHLOROBENZENE	<0.5
DICHLORODIFLUOROMETHANE	<0.2
1,1-DICHLOROETHANE	<0.2
1,2-DICHLOROETHANE	<0.2
1,1-DICHLOROETHENE	0.2
1,2-DICHLOROETHENE (TOTAL)	0.3
1,2-DICHLOROPROPANE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2
TRANS-1,3-DICHLOROPROPENE	<0.2
ETHYLBENZENE	<0.5
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.2
TETRACHLOROETHENE	550 D
TOLUENE	<0.5
1,1,1-TRICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	<0.2
TRICHLOROETHENE	130 D
TRICHLOROFLUOROMETHANE	<0.5
VINYL CHLORIDE	<0.2
TOTAL XYLENES	<0.5
TRICHLOROTRIFLUOROETHANE	<2.0

## SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	88
BROMOFLUOROBENZENE (%)	107



## REAGENT BLANK

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

CLIENT : ROY F. WESTON  
 PROJECT # : 06405-055-010-0503  
 PROJECT NAME : MARYATT IND.  
 CLIENT I.D. : REAGENT BLANK

ATI I.D. : 307670  
 DATE EXTRACTED : 07/14/93  
 DATE ANALYZED : 07/14/93  
 UNITS : UG/L  
 DILUTION FACTOR : N/A

COMPOUNDS	RESULTS
-----------	---------

BENZENE	<0.5
BROMODICHLOROMETHANE	<0.2
BROMOFORM	<0.2
BROMOMETHANE	<0.2
CARBON TETRACHLORIDE	<0.2
CHLOROBENZENE	<0.5
CHLOROETHANE	<0.2
CHLOROFORM	<0.2
CHLOROMETHANE	<0.2
DIBROMOCHLOROMETHANE	<0.2
2-CHLOROETHYL VINYL ETHER	<0.5
1,3-DICHLOROBENZENE	<0.5
1,2 & 1,4-DICHLOROBENZENE	<0.5
DICHLORODIFLUOROMETHANE	<0.2
1,1-DICHLOROETHANE	<0.2
1,2-DICHLOROETHANE	<0.2
1,1-DICHLOROETHENE	<0.2
1,2-DICHLOROETHENE (TOTAL)	<0.2
1,2-DICHLOROPROPANE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2
TRANS-1,3-DICHLOROPROPENE	<0.2
ETHYLBENZENE	<0.5
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.2
TETRACHLOROETHENE	<0.2
TOLUENE	<0.5
1,1,1-TRICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	<0.2
TRICHLOROETHENE	<0.2
TRICHLOROFLUOROMETHANE	<0.5
VINYL CHLORIDE	<0.2
TOTAL XYLENES	<0.5
TRICHLOROTRIFLUOROETHANE	<2.0

## SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	120
BROMOFLUOROBENZENE (%)	96



## REAGENT BLANK

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

CLIENT : ROY F. WESTON  
 PROJECT # : 06405-055-010-0503  
 PROJECT NAME : MARYATT IND.  
 CLIENT I.D. : REAGENT BLANK

ATI I.D. : 307670  
 DATE EXTRACTED : 07/15/93  
 DATE ANALYZED : 07/15/93  
 UNITS : UG/L  
 DILUTION FACTOR : N/A

-----  
 COMPOUNDS RESULTS  
 -----

BENZENE	<0.5
BROMODICHLOROMETHANE	<0.2
BROMOFORM	<0.2
BROMOMETHANE	<0.2
CARBON TETRACHLORIDE	<0.2
CHLOROBENZENE	<0.2
CHLOROETHANE	<0.2
CHLOROFORM	<0.2
CHLOROMETHANE	<0.2
DIBROMOCHLOROMETHANE	<0.2
2-CHLOROETHYL VINYL ETHER	<0.5
1,3-DICHLOROBENZENE	<0.5
1,2 & 1,4-DICHLOROBENZENE	<0.5
DICHLORODIFLUOROMETHANE	<0.2
1,1-DICHLOROETHANE	<0.2
1,2-DICHLOROETHANE	<0.2
1,1-DICHLOROETHENE	<0.2
1,2-DICHLOROETHENE (TOTAL)	<0.2
1,2-DICHLOROPROPANE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2
TRANS-1,3-DICHLOROPROPENE	<0.2
ETHYLBENZENE	<0.5
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.2
TETRACHLOROETHENE	<0.2
TOLUENE	<0.5
1,1,1-TRICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	<0.2
TRICHLOROETHENE	<0.2
TRICHLOROFLUOROMETHANE	<0.5
VINYL CHLORIDE	<0.2
TOTAL XYLENES	<0.5
TRICHLOROTRIFLUOROETHANE	<2.0

## SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	116
BROMOFLUOROBENZENE (%)	98



QUALITY CONTROL DATA

ATI I.D. : 307670

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

CLIENT : ROY F. WESTON  
 PROJECT # : 06405-055-010-0503  
 PROJECT NAME : MARYATT IND.  
 REF I.D. : 30749927

DATE ANALYZED : 07/14/93  
 SAMPLE MATRIX : AQUEOUS  
 UNITS : UG/L

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. %		RPD
					SPIKED SAMPLE REC.	DUP. % REC.	
1,1-DICHLOROETHENE	<0.2	20	16	80	17	85	6
TRICHLOROETHENE	0.2	20	18	89	19	94	5
TETRACHLOROETHENE	<0.2	20	20	100	20	100	0
BENZENE	<0.5	20	21	105	20	100	5
BROMODICHLOROMETHANE	<0.2	20	19	95	19	95	0
CHLOROFORM	<0.2	20	21	105	22	110	5
1,1,1-TRICHLOROETHANE	<0.2	20	16	80	17	85	6
TOLUENE	<0.5	20	21	105	19	95	10
CHLOROBENZENE	<0.5	20	22	110	22	110	0
M-XYLENE	<0.5	20	20	100	18	90	11

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$



Analytical Technologies, Inc. • Seattle • Pensacola • Ft. Collins • Portland  
San Diego • Phoenix

**CHAIN OF CUSTODY**

DATE: 13 JUL 1993 PAGE 1 OF 1

ATI LAB I.D. 307670

PROJECT MANAGER: RICH PETRUS  
 COMPANY: ROY F. WESTON  
 ADDRESS: 1600 W. BROADWAY, STE 210  
 TEMPE AZ. 85282  
 PHONE: 1-602-966-2537  
 FAX:  
 BILL TO: SAME  
 COMPANY:  
 ADDRESS:

SAMPLE ID	DATE	TIME	MATRIX	LAB ID
AVB 40-0602-1000	13 JUL 93	0900	AG	1
AVB 40-0607-3063	13 JUL 93	1020	AG	2
AVB 40-0707-4063	13 JUL 93	1110	AG	3
AVB 40-0807-4062	13 JUL 93	1205	AG	4
AVB 40-0807-3063	13 JUL 93	1255	AG	5

**ANALYSIS REQUEST**

ANALYSIS REQUEST	NUMBER OF CONTAINERS
Petroleum Hydrocarbons (418.1)	
(MOD 8015) Gas/Diesel	
Diesel/Gasoline/BTXE/MTBE (MOD 8015/8020)	
BTXE/MTBE (8020)	
Chlorinated Hydrocarbons (607/8049)	X
Aromatic Hydrocarbons (602/8029)	X
SDWA Volatiles (502.1/503.1, 502.2 Reg. & Unreg.)	X
Pesticides/PCB (608/8080)	
Herbicides (615/8150)	
Base/Neutral/Acid Compounds GC/MS (625/8270)	
Volatile Organics GC/MS (624/8240)	
Polynuclear Aromatics (610/8310)	
SDWA Primary Standards - Arizona	
SDWA Secondary Standards - Arizona	
SDWA Primary Standards - Federal	
SDWA Secondary Standards - Federal	
The 13 Priority Pollutant Metals	
PCRA Metals by Total Digestion	
PCRA Metals by TCLP (1311)	

**PROJECT INFORMATION**

PROJ. NO.: 06405-055-010-0503  
 PROJ. NAME: MARY KAY FND.  
 P.O. NO.:  
 SHIPPED VIA:

**SAMPLE RECEIPT**

NO. CONTAINERS: 13  
 CUSTODY SEALS: (Y) N / NA  
 RECEIVED INTACT: Y  
 RECEIVED COLD: Y

**PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS**

(RUSH)  24hr  48hr  72hr  1 WEEK (NORMAL)  2 WEEK

Comments: AVB 40-0602-1000 Trip Blank

**SAMPLED & RELINQUISHED BY: 1.**

Signature: [Signature] Time: 3:30pm  
 Printed Name: J. H. Clark Date: 7-13-93  
 Company: [Company] Phone: 966-2537

**RELINQUISHED BY: 2.**

Signature: [Signature] Time: 3:30  
 Printed Name: [Name] Date: 7-13-93  
 Company: [Company]

**RECEIVED BY: 1.**

Signature: [Signature] Time: 3:23  
 Printed Name: J. H. Clark Date: 7-13-93  
 Company: [Company]

**RECEIVED BY: 2.**

Signature: [Signature] Time: 3:30  
 Printed Name: [Name] Date: 7-13-93  
 Company: [Company]

**RECEIVED BY: 3.**

Signature: [Signature] Time: 3:30  
 Printed Name: [Name] Date: 7-13-93  
 Company: [Company]

PLEASE FILL THIS FORM IN COMPLETELY. SHADED AREAS ARE FOR LAB USE ONLY.



Analytical **Technologies, Inc.**

9830 S. 51st Street Suite B-113 Phoenix, AZ 85044 (602) 496-4400

ATI I.D. 307692

July 26, 1993

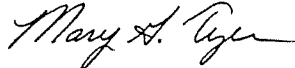
Roy F. Weston  
1600 W. Broadway  
Suite 210  
Tempe, AZ 85282

Project Name/Number: W. Van Buren/06405-056-010-0003

Attention: Rich Petrus

On 07/14/93, Analytical Technologies, Inc., (ADHS License No. AZ0061), received a request to analyze **aqueous** sample(s). The sample(s) were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

If you have any questions or comments, please do not hesitate to contact us at (602) 496-4400.

  
Mary Tyer  
Project Manager

Robert V. Woods  
Laboratory Manager

RVW/st

Enclosure



Analytical Technologies, Inc.

CLIENT : ROY F. WESTON  
PROJECT # : 06405-056-010-0003  
PROJECT NAME : W. VAN BUREN

DATE RECEIVED : 07/14/93

REPORT DATE : 07/22/93

ATI I.D. : 307692

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	AVB05-0102-1000(TB)	AQUEOUS	07/01/93
02	AVB05-0100-3000	AQUEOUS	07/14/93

----- TOTALS -----

MATRIX	# SAMPLES
AQUEOUS	2

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in thirty (30) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.



GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30769201

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

CLIENT : ROY F. WESTON  
 PROJECT # : 06405-056-010-0003  
 PROJECT NAME : W. VAN BUREN  
 CLIENT I.D. : AVB05-0102-1000(TB)  
 SAMPLE MATRIX : AQUEOUS

DATE SAMPLED : 07/01/93  
 DATE RECEIVED : 07/14/93  
 DATE EXTRACTED : N/A  
 DATE ANALYZED : 07/20/93  
 UNITS : UG/L  
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
	<0.5
BENZENE	<0.2
BROMODICHLOROMETHANE	<0.2
BROMOFORM	<0.2
BROMOMETHANE	<0.2
CARBON TETRACHLORIDE	<0.5
CHLOROBENZENE	<0.2
CHLOROETHANE	<0.2
CHLOROFORM	<0.2
CHLOROMETHANE	<0.2
DIBROMOCHLOROMETHANE	<0.5
2-CHLOROETHYL VINYL ETHER	<0.5
1,3-DICHLOROBENZENE	<0.5
1,2 & 1,4-DICHLOROBENZENE	<0.2
DICHLORODIFLUOROMETHANE	<0.2
1,1-DICHLOROETHANE	<0.2
1,2-DICHLOROETHANE	<0.2
1,1-DICHLOROETHENE	<0.2
1,2-DICHLOROETHENE (TOTAL)	<0.2
1,2-DICHLOROPROPANE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2
TRANS-1,3-DICHLOROPROPENE	<0.5
ETHYLBENZENE	<2.0
METHYLENE CHLORIDE	<0.2
1,1,2,2-TETRACHLOROETHANE	<0.2
TETRACHLOROETHENE	<0.5
TOLUENE	<0.2
1,1,1-TRICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	<0.2
TRICHLOROETHENE	<0.5
TRICHLOROFLUOROMETHANE	<0.2
VINYL CHLORIDE	<0.5
TOTAL XYLENES	<2.0
TRICHLOROTRIFLUOROETHANE	

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	104
BROMOFLUROBENZENE (%)	114



## GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30769202

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

CLIENT : ROY F. WESTON  
 PROJECT # : 06405-056-010-0003  
 PROJECT NAME : W. VAN BUREN  
 CLIENT I.D. : AVB05-0100-3000  
 SAMPLE MATRIX : AQUEOUS

DATE SAMPLED : 07/14/93  
 DATE RECEIVED : 07/14/93  
 DATE EXTRACTED : N/A  
 DATE ANALYZED : 07/20/93  
 UNITS : UG/L  
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
-----------	---------

BENZENE	<0.5
BROMODICHLOROMETHANE	<0.2
BROMOFORM	<0.2
BROMOMETHANE	<0.2
CARBON TETRACHLORIDE	<0.2
CHLOROBENZENE	<0.2
CHLOROETHANE	<0.2
CHLOROFORM	<0.2
CHLOROMETHANE	<0.2
DIBROMOCHLOROMETHANE	<0.2
2-CHLOROETHYL VINYL ETHER	<0.5
1,3-DICHLOROBENZENE	<0.5
1,2 & 1,4-DICHLOROBENZENE	<0.5
DICHLORODIFLUOROMETHANE	<0.2
1,1-DICHLOROETHANE	<0.2
1,2-DICHLOROETHANE	<0.2
1,1-DICHLOROETHENE	<0.2
1,2-DICHLOROETHENE (TOTAL)	<0.2
1,2-DICHLOROPROPANE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2
TRANS-1,3-DICHLOROPROPENE	<0.2
ETHYLBENZENE	<0.5
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.2
TETRACHLOROETHENE	<0.2
TOLUENE	<0.5
1,1,1-TRICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	<0.2
TRICHLOROETHENE	<0.2
TRICHLOROFLUOROMETHANE	<0.5
VINYL CHLORIDE	<0.2
TOTAL XYLENES	<0.5
TRICHLOROTRIFLUOROETHANE	<2.0

## SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	102
BROMOFLUOROBENZENE (%)	113



## REAGENT BLANK

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

CLIENT : ROY F. WESTON  
 PROJECT # : 06405-056-010-0003  
 PROJECT NAME : W. VAN BUREN  
 CLIENT I.D. : REAGENT BLANK

ATI I.D. : 307692  
 DATE EXTRACTED : 07/20/93  
 DATE ANALYZED : 07/20/93  
 UNITS : UG/L  
 DILUTION FACTOR : N/A

COMPOUNDS	RESULTS
BENZENE	<0.5
BROMODICHLOROMETHANE	<0.2
BROMOFORM	<0.2
BROMOMETHANE	<0.2
CARBON TETRACHLORIDE	<0.2
CHLOROBENZENE	<0.5
CHLOROETHANE	<0.2
CHLOROFORM	<0.2
CHLOROMETHANE	<0.2
DIBROMOCHLOROMETHANE	<0.2
2-CHLOROETHYL VINYL ETHER	<0.5
1,3-DICHLOROBENZENE	<0.5
1,2 & 1,4-DICHLOROBENZENE	<0.5
DICHLORODIFLUOROMETHANE	<0.2
1,1-DICHLOROETHANE	<0.2
1,2-DICHLOROETHANE	<0.2
1,1-DICHLOROETHENE	<0.2
1,2-DICHLOROETHENE (TOTAL)	<0.2
1,2-DICHLOROPROPANE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2
TRANS-1,3-DICHLOROPROPENE	<0.2
ETHYLBENZENE	<0.5
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.2
TETRACHLOROETHENE	<0.2
TOLUENE	<0.5
1,1,1-TRICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	<0.2
TRICHLOROETHENE	<0.2
TRICHLOROFLUOROMETHANE	<0.5
VINYL CHLORIDE	<0.2
TOTAL XYLENES	<0.5
TRICHLOROTRIFLUOROETHANE	<2.0

## SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	101
BROMOFLUOROBENZENE (%)	116



Analytical Technologies, Inc.

QUALITY CONTROL DATA

ATI I.D. : 307692

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

CLIENT : ROY F. WESTON  
 PROJECT # : 06405-056-010-0003  
 PROJECT NAME : W. VAN BUREN  
 REF I.D. : 30769202

DATE ANALYZED : 07/20/93  
 SAMPLE MATRIX : AQUEOUS  
 UNITS : UG/L

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	DUP. % SPIKED		RPD
				REC. SAMPLE	REC.	
1,1-DICHLOROETHENE	<0.2	20	18	90	17	6
TRICHLOROETHENE	<0.2	20	17	85	16	6
TETRACHLOROETHENE	<0.2	20	20	100	19	5
BENZENE	<0.5	20	21	105	20	5
BROMODICHLOROMETHANE	<0.2	20	18	90	17	6
CHLOROFORM	<0.2	20	19	95	18	5
1,1,1-TRICHLOROETHANE	<0.2	20	17	85	16	6
TOLUENE	<0.5	20	21	105	19	10
CHLOROBENZENE	<0.5	20	21	105	21	0
M-XYLENE	<0.5	20	21	105	20	5

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$



Analytical Technologies, Inc., Phoenix, Arizona  
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**CHAIN OF CUSTODY**  
 DATE: 14 Jul 93 PAGE 1 OF 1

ATI LAB I.D. 307692

PLEASE FILL THIS FORM IN COMPLETELY. SHADED AREAS ARE FOR LAB USE ONLY.

PROJECT MANAGER: RICH PETRUS  
 COMPANY: ROY F. WESTON  
 ADDRESS: 1600 W. BROADWAY STE 40  
Tempe AZ 85285  
 PHONE: 966-2337  
 FAX:  
 BILL TO: AS ABOVE  
 COMPANY:  
 ADDRESS:

SAMPLE ID	DATE	TIME	MATRIX	LAB ID
AV305-0102-1000	13 JUL 93	1045	AQ	1
AV305-0100-3600	14 JUL 93	1400	AQ	2

**PROJECT INFORMATION**

PROJ. NO.: 06405-056010-0003 NO. CONTAINERS 4

PROJ. NAME: W. VAN BUREN CUSTODY SEALS DN/NA

P.O. NO.: RECEIVED INTACT Y

SHIPPED VIA: RECEIVED COLD Y

**PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS**

(RUSH)  24hr  48hr  72hr  1 WEEK (NORMAL)  2 WEEK

Comments:

ANALYSIS REQUEST		NUMBER OF CONTAINERS
Petroleum Hydrocarbons (418.1)		
(MOD 8015) Gas/Diesel		
Diesel/Gasoline/BTXE/MTBE (MOD 8015/8020)		
BTXE/MTBE (8020)		
Chlorinated Hydrocarbons (601/8010)	<u>XX</u>	
Aromatic Hydrocarbons (602/8020)	<u>XX</u>	
SDWA Volatiles (502.1/503.1, 502.2 Reg. & Unreg.)		
Pesticides/PCB (608/8080)		
Herbicides (615/8150)		
Base/Neutral/Acid Compounds GC/MS (625/8270)		
Volatile Organics GC/MS (624/8240)		
Polynuclear Aromatics (610/8310)		
SDWA Primary Standards - Arizona		
SDWA Secondary Standards - Arizona		
SDWA Primary Standards - Federal		
SDWA Secondary Standards - Federal		
The 13 Priority Pollutant Metals		
RCRA Metals by Total Digestion		
RCRA Metals by TCLP (1311)		<u>3</u>

SAMPLED & RELINQUISHED BY:	1.	RELINQUISHED BY:	2.	RELINQUISHED BY:	3.
Signature: <u>[Signature]</u>	Signature: <u>[Signature]</u>	Signature: <u>[Signature]</u>	Signature: <u>[Signature]</u>	Signature: <u>[Signature]</u>	Signature: <u>[Signature]</u>
Printed Name: <u>[Name]</u>	Printed Name: <u>[Name]</u>	Printed Name: <u>[Name]</u>	Printed Name: <u>[Name]</u>	Printed Name: <u>[Name]</u>	Printed Name: <u>[Name]</u>
Date: <u>[Date]</u>	Date: <u>[Date]</u>	Date: <u>[Date]</u>	Date: <u>[Date]</u>	Date: <u>[Date]</u>	Date: <u>[Date]</u>
Company: <u>[Company]</u>	Company: <u>[Company]</u>	Company: <u>[Company]</u>	Company: <u>[Company]</u>	Company: <u>[Company]</u>	Company: <u>[Company]</u>
Time: <u>[Time]</u>	Time: <u>[Time]</u>	Time: <u>[Time]</u>	Time: <u>[Time]</u>	Time: <u>[Time]</u>	Time: <u>[Time]</u>

# T. P. H. ANALYSIS DATA SHEET

LAB #: 93070036

REPORT DATE: 07/23/93

PROJECT #: 932584

ANALYSIS DATE: 07/22/93

SAMPLE CODE: 584-WW1-01

COLLECTION DATE: 07/01/93

PROJECT NAME: AZTEC CONSTRUCTION

PROJ. MGR.: CARL KOHLMAYER

MATRIX: SOIL


FAA METHOD: EPA 418.1 (modified)

TOTAL PETROLEUM HYDROCARBONS

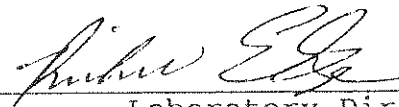
CONC. mg/Kg      Q  
16.2

## QUALIFIERS:

U - Indicates that the Total Petroleum Hydrocarbons were analyzed for but were not detected or were detected below the sample quantitation limit. The results are the sample quantitation limit.

Analysis by: 

Laboratory Analyst

Reviewed by: 

Laboratory Director

**VOLATILE ORGANICS ANALYSIS DATA SHEET**  
**EPA Method 8240 (modified GC/MS)**

LAB #: 93070036

REPORT DATE: 07/16/93

PROJECT #: 932584

ANALYSIS DATE: 07/08/93

SAMPLE CODE: WW1-01

COLLECTION DATE: 07/01/93

PROJECT NAME: AZTEC CONSTRUCTION

PROJ. MGR.: CARL KOHLMAYER

MATRIX: SOIL


<u>CAS NUMBER</u>	<u>TARGET COMPOUND</u>	<u>CONC ug/Kg</u>	<u>Q</u>
000074-87-3	Chloromethane	10.0	U
000074-83-9	Bromomethane	10.0	U
000075-01-4	Vinyl Chloride	10.0	U
000075-00-3	Chloroethane	10.0	U
000075-09-2	Methylene Chloride	10.0	U
000108-05-4	Vinyl Acetate	10.0	U
000067-64-1	Acetone	10.0	U
000075-15-0	Carbon Disulfide	10.0	U
000075-35-4	1,1-Dichloroethylene	10.0	U
000075-34-3	1,1-Dichloroethane	10.0	U
000540-59-0	1,2-Dichloroethylene (total)	10.0	U
000067-66-3	Chloroform	10.0	U
000107-06-2	1,2-Dichloroethane	10.0	U
000078-93-3	2-Butanone	10.0	U
000071-55-6	1,1,1-Trichloroethane	10.0	U
000056-23-5	Carbon Tetrachloride	10.0	U
000075-27-4	Bromodichloromethane	10.0	U
000078-87-5	1,2-Dichloropropane	10.0	U
010061-01-5	cis-1,3-Dichloropropene	10.0	U
000079-01-6	Trichloroethene	10.0	U
000124-48-1	Dibromochloromethane	10.0	U
000079-00-5	1,1,2-Trichloroethane	10.0	U
000071-43-2	Benzene	10.0	U
010061-02-6	trans-1,3-Dichloropropene	10.0	U
000075-25-2	Bromoform	10.0	U
000108-10-1	4-Methyl-2-Pentanone	10.0	U
000591-78-6	2-Hexanone	10.0	U
000127-18-4	Tetrachloroethene	10.0	U
000079-34-5	1,1,2,2-Tetrachloroethane	10.0	U
000108-88-3	Toluene	10.0	U
000108-90-7	Chlorobenzene	10.0	U
000100-41-4	Ethylbenzene	10.0	U
000100-42-5	Styrene	10.0	U
001330-20-7	Xylene (total)	30.0	U

**QUALIFIERS:**

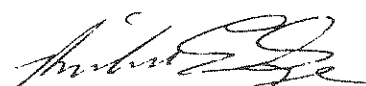
U - Indicates that the compound was analyzed for but was not detected. The results are the sample quantitation limit.

J - Indicates an estimated value or a value below the sample quantitation limit.

N - Indicates presumptive evidence of a tentatively identified compound.

Analysis by: 

Analyst

Reviewed by: 

Laboratory Director

# T. P. H. ANALYSIS DATA SHEET

LAB #: 93070037

REPORT DATE: 07/23/93

PROJECT #: 932584

ANALYSIS DATE: 07/22/93

SAMPLE CODE: 584-WW1-02

COLLECTION DATE: 07/01/93

PROJECT NAME: AZTEC CONSTRUCTION

PROJ. MGR.: CARL KOHLMAYER

MATRIX: SOIL

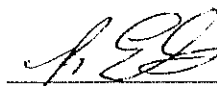
FAA METHOD: EPA 418.1 (modified)

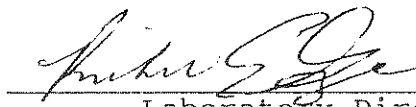
TOTAL PETROLEUM HYDROCARBONS

CONC. mg/Kg    **Q**  
11.0

## QUALIFIERS:

U - Indicates that the Total Petroleum Hydrocarbons were analyzed for but were not detected or were detected below the sample quantitation limit. The results are the sample quantitation limit.

Analysis by:   
Laboratory Analyst

Reviewed by:   
Laboratory Director

**VOLATILE ORGANICS ANALYSIS DATA SHEET**  
**EPA Method 8240 (modified GC/MS)**

LAB #: 93070037

REPORT DATE: 07/16/93

PROJECT #: 932584

ANALYSIS DATE: 07/08/93

SAMPLE CODE: WW1-02

COLLECTION DATE: 07/01/93

PROJECT NAME: AZTEC CONSTRUCTION

PROJ. MGR.: CARL KOHLMAYER

MATRIX: SOIL

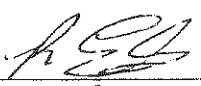
<u>CAS NUMBER</u>	<u>TARGET COMPOUND</u>	<u>CONC ug/Kg</u>	<u>Q</u>
000074-87-3	Chloromethane	10.0	U
000074-83-9	Bromomethane	10.0	U
000075-01-4	Vinyl Chloride	10.0	U
000075-00-3	Chloroethane	10.0	U
000075-09-2	Methylene Chloride	10.0	U
000108-05-4	Vinyl Acetate	10.0	U
000067-64-1	Acetone	10.0	U
000075-15-0	Carbon Disulfide	10.0	U
000075-35-4	1,1-Dichloroethylene	10.0	U
000075-34-3	1,1-Dichloroethane	10.0	U
000540-59-0	1,2-Dichloroethylene (total)	10.0	U
000067-66-3	Chloroform	10.0	U
000107-06-2	1,2-Dichloroethane	10.0	U
000078-93-3	2-Butanone	10.0	U
000071-55-6	1,1,1-Trichloroethane	10.0	U
000056-23-5	Carbon Tetrachloride	10.0	U
000075-27-4	Bromodichloromethane	10.0	U
000078-87-5	1,2-Dichloropropane	10.0	U
010061-01-5	cis-1,3-Dichloropropene	10.0	U
000079-01-6	Trichloroethene	10.0	U
000124-48-1	Dibromochloromethane	10.0	U
000079-00-5	1,1,2-Trichloroethane	10.0	U
000071-43-2	Benzene	10.0	U
010061-02-6	trans-1,3-Dichloropropene	10.0	U
000075-25-2	Bromoform	10.0	U
000108-10-1	4-Methyl-2-Pentanone	10.0	U
000591-78-6	2-Hexanone	10.0	U
000127-18-4	Tetrachloroethene	10.0	U
000079-34-5	1,1,2,2-Tetrachloroethane	10.0	U
000108-88-3	Toluene	10.0	U
000108-90-7	Chlorobenzene	10.0	U
000100-41-4	Ethylbenzene	10.0	U
000100-42-5	Styrene	10.0	U
001330-20-7	Xylene (total)	30.0	U

**QUALIFIERS:**

U - Indicates that the compound was analyzed for but was not detected. The results are the sample quantitation limit.

J - Indicates an estimated value or a value below the sample quantitation limit.

N - Indicates presumptive evidence of a tentatively identified compound.

Analysis by:   
 Analyst

Reviewed by:   
 Laboratory Director

# T. P. H. ANALYSIS DATA SHEET

LAB #: 93070038

REPORT DATE: 07/23/93

PROJECT #: 932584

ANALYSIS DATE: 07/22/93

SAMPLE CODE: 584-WW1-03

COLLECTION DATE: 07/01/93

PROJECT NAME: AZTEC CONSTRUCTION

PROJ. MGR.: CARL KOHLMAYER

MATRIX: SOIL

FAA METHOD: EPA 418.1 (modified)

TOTAL PETROLEUM HYDROCARBONS

CONC. mg/Kg      **Q**  
10.9

## QUALIFIERS:

**U** - Indicates that the Total Petroleum Hydrocarbons were analyzed for but were not detected or were detected below the sample quantitation limit. The results are the sample quantitation limit.

Analysis by: \_\_\_\_\_

*M. E. G.*  
Laboratory Analyst

Reviewed by: \_\_\_\_\_

*Frank E. G.*  
Laboratory Director

**VOLATILE ORGANICS ANALYSIS DATA SHEET**  
**EPA Method 8240 (modified GC/MS)**

LAB #: 93070038

REPORT DATE: 07/16/93

PROJECT #: 932584

ANALYSIS DATE: 07/08/93

SAMPLE CODE: WW1-03

COLLECTION DATE: 07/01/93

PROJECT NAME: AZTEC CONSTRUCTION

PROJ. MGR.: CARL KOHLMAYER

MATRIX: SOIL

<u>CAS NUMBER</u>	<u>TARGET COMPOUND</u>	<u>CONC ug/Kg</u>	<u>Q</u>
000074-87-3	Chloromethane	10.0	U
000074-83-9	Bromomethane	10.0	U
000075-01-4	Vinyl Chloride	10.0	U
000075-00-3	Chloroethane	10.0	U
000075-09-2	Methylene Chloride	10.0	U
000108-05-4	Vinyl Acetate	10.0	U
000067-64-1	Acetone	10.0	U
000075-15-0	Carbon Disulfide	10.0	U
000075-35-4	1,1-Dichloroethylene	10.0	U
000075-34-3	1,1-Dichloroethane	10.0	U
000540-59-0	1,2-Dichloroethylene (total)	10.0	U
000067-66-3	Chloroform	10.0	U
000107-06-2	1,2-Dichloroethane	10.0	U
000078-93-3	2-Butanone	10.0	U
000071-55-6	1,1,1-Trichloroethane	10.0	U
000056-23-5	Carbon Tetrachloride	10.0	U
000075-27-4	Bromodichloromethane	10.0	U
000078-87-5	1,2-Dichloropropane	10.0	U
010061-01-5	cis-1,3-Dichloropropene	10.0	U
000079-01-6	Trichloroethene	10.0	U
000124-48-1	Dibromochloromethane	10.0	U
000079-00-5	1,1,2-Trichloroethane	10.0	U
000071-43-2	Benzene	10.0	U
010061-02-6	trans-1,3-Dichloropropene	10.0	U
000075-25-2	Bromoform	10.0	U
000108-10-1	4-Methyl-2-Pentanone	10.0	U
000591-78-6	2-Hexanone	10.0	U
000127-18-4	Tetrachloroethene	10.0	U
000079-34-5	1,1,2,2-Tetrachloroethane	10.0	U
000108-88-3	Toluene	10.0	U
000108-90-7	Chlorobenzene	10.0	U
000100-41-4	Ethylbenzene	10.0	U
000100-42-5	Styrene	10.0	U
001330-20-7	Xylene (total)	30.0	U

**QUALIFIERS:**

U - Indicates that the compound was analyzed for but was not detected. The results are the sample quantitation limit.

J - Indicates an estimated value or a value below the sample quantitation limit.

N - Indicates presumptive evidence of a tentatively identified compound.

Analysis by:

  
 Analyst

Reviewed by:

  
 Laboratory Director

# T. P. H. ANALYSIS DATA SHEET

LAB #: 93070039

REPORT DATE: 07/23/93

PROJECT #: 932584

ANALYSIS DATE: 07/22/93

SAMPLE CODE: 584-WW1-06

COLLECTION DATE: 07/01/93

PROJECT NAME: AZTEC CONSTRUCTION

PROJ. MGR.: CARL KOHLMAYER

MATRIX: SOIL

FAA METHOD: EPA 418.1 (modified)

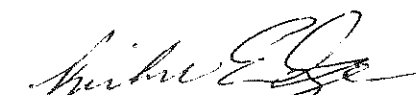
TOTAL PETROLEUM HYDROCARBONS

CONC. mg/Kg Q  
56.2

## QUALIFIERS:

U - Indicates that the Total Petroleum Hydrocarbons were analyzed for but were not detected or were detected below the sample quantitation limit. The results are the sample quantitation limit.

Analysis by:   
Laboratory Analyst

Reviewed by:   
Laboratory Director

**VOLATILE ORGANICS ANALYSIS DATA SHEET**  
**EPA Method 8240 (modified GC/MS)**

LAB #: 93070039

REPORT DATE: 07/16/93

PROJECT #: 932584

ANALYSIS DATE: 07/08/93

SAMPLE CODE: WW1-06

COLLECTION DATE: 07/01/93

PROJECT NAME: AZTEC CONSTRUCTION

PROJ. MGR.: CARL KOHLMAYER

MATRIX: SOIL

<u>CAS NUMBER</u>	<u>TARGET COMPOUND</u>	<u>CONC ug/Kg</u>	<u>Q</u>
000074-87-3	Chloromethane	10.0	U
000074-83-9	Bromomethane	10.0	U
000075-01-4	Vinyl Chloride	10.0	U
000075-00-3	Chloroethane	10.0	U
000075-09-2	Methylene Chloride	10.0	U
000108-05-4	Vinyl Acetate	10.0	U
000067-64-1	Acetone	10.0	U
000075-15-0	Carbon Disulfide	10.0	U
000075-35-4	1,1-Dichloroethylene	10.0	U
000075-34-3	1,1-Dichloroethane	10.0	U
000540-59-0	1,2-Dichloroethylene (total)	10.0	U
000067-66-3	Chloroform	10.0	U
000107-06-2	1,2-Dichloroethane	10.0	U
000078-93-3	2-Butanone	10.0	U
000071-55-6	1,1,1-Trichloroethane	10.0	U
000056-23-5	Carbon Tetrachloride	10.0	U
000075-27-4	Bromodichloromethane	10.0	U
000078-87-5	1,2-Dichloropropane	10.0	U
010061-01-5	cis-1,3-Dichloropropene	10.0	U
000079-01-6	Trichloroethene	10.0	U
000124-48-1	Dibromochloromethane	10.0	U
000079-00-5	1,1,2-Trichloroethane	10.0	U
000071-43-2	Benzene	10.0	U
010061-02-6	trans-1,3-Dichloropropene	10.0	U
000075-25-2	Bromoform	10.0	U
000108-10-1	4-Methyl-2-Pentanone	10.0	U
000591-78-6	2-Hexanone	10.0	U
000127-18-4	Tetrachloroethene	10.0	U
000079-34-5	1,1,2,2-Tetrachloroethane	10.0	U
000108-88-3	Toluene	10.0	U
000108-90-7	Chlorobenzene	10.0	U
000100-41-4	Ethylbenzene	10.0	U
000100-42-5	Styrene	10.0	U
001330-20-7	Xylene (total)	30.0	U

**QUALIFIERS:**

U - Indicates that the compound was analyzed for but was not detected. The results are the sample quantitation limit.

J - Indicates an estimated value or a value below the sample quantitation limit.

N - Indicates presumptive evidence of a tentatively identified compound.

Analysis by:   
 Analyst

Reviewed by:   
 Laboratory Director

**VOLATILE ORGANICS ANALYSIS DATA SHEET**  
**EPA Method 8240 (modified GC/MS)**

LAB #: 93070039

REPORT DATE: 07/16/93

PROJECT #: 932584

ANALYSIS DATE: 07/08/93

SAMPLE CODE: WW1-06

COLLECTION DATE: 07/01/93

PROJECT NAME: AZTEC CONSTRUCTION

PROJ. MGR.: CARL KOHLMAYER

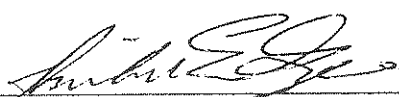
MATRIX: SOIL

#	CAS NUMBER	TENTATIVELY IDENTIFIED COMPOUND	CONC ug/Kg	Q
1		Unidentified organic compound	16.2	J
2				
3				
4				
5				
6				
7				
8				
9				
10				

**QUALIFIERS:**

- U - Indicates that the compound was analyzed for but was not detected. The results are the sample quantitation limit.
- J - Indicates an estimated value or a value below the sample quantitation limit.
- N - Indicates presumptive evidence of a tentatively identified compound.

Analysis by:   
Laboratory Analyst

Reviewed by:   
Laboratory Director

# T. P. H. ANALYSIS DATA SHEET

LAB #: 93070040

REPORT DATE: 07/23/93

PROJECT #: 932584

ANALYSIS DATE: 07/22/93

SAMPLE CODE: 584-WW1-07

COLLECTION DATE: 07/01/93

PROJECT NAME: AZTEC CONSTRUCTION

PROJ. MGR.: CARL KOHLMAYER

MATRIX: SOIL

FAA METHOD: EPA 418.1 (modified)


TOTAL PETROLEUM HYDROCARBONS

CONC. mg/Kg      Q  
4,122

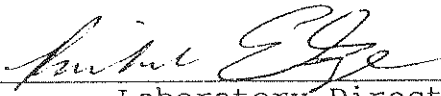
## QUALIFIERS:

U - Indicates that the Total Petroleum Hydrocarbons were analyzed for but were not detected or were detected below the sample quantitation limit. The results are the sample quantitation limit.

Analysis by: \_\_\_\_\_

  
Laboratory Analyst

Reviewed by: \_\_\_\_\_

  
Laboratory Director

**VOLATILE ORGANICS ANALYSIS DATA SHEET**  
**EPA Method 8240 (modified GC/MS)**

LAB #: 93070040

REPORT DATE: 07/16/93

PROJECT #: 932584

ANALYSIS DATE: 07/08/93

SAMPLE CODE: WW1-07

COLLECTION DATE: 07/01/93

PROJECT NAME: AZTEC CONSTRUCTION

PROJ. MGR.: CARL KOHLMAYER

MATRIX: SOIL

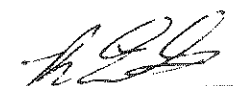
<u>CAS NUMBER</u>	<u>TARGET COMPOUND</u>	<u>CONC ug/Kg</u>	<u>Q</u>
000074-87-3	Chloromethane	10.0	U
000074-83-9	Bromomethane	10.0	U
000075-01-4	Vinyl Chloride	10.0	U
000075-00-3	Chloroethane	10.0	U
000075-09-2	Methylene Chloride	10.0	U
000108-05-4	Vinyl Acetate	10.0	U
000067-64-1	Acetone	27.2	
000075-15-0	Carbon Disulfide	10.0	U
000075-35-4	1,1-Dichloroethylene	10.0	U
000075-34-3	1,1-Dichloroethane	10.0	U
000540-59-0	1,2-Dichloroethylene (total)	10.0	U
000067-66-3	Chloroform	10.0	U
000107-06-2	1,2-Dichloroethane	10.0	U
000078-93-3	2-Butanone	10.0	U
000071-55-6	1,1,1-Trichloroethane	10.0	U
000056-23-5	Carbon Tetrachloride	10.0	U
000075-27-4	Bromodichloromethane	10.0	U
000078-87-5	1,2-Dichloropropane	10.0	U
010061-01-5	cis-1,3-Dichloropropene	10.0	U
000079-01-6	Trichloroethene	10.0	U
000124-48-1	Dibromochloromethane	10.0	U
000079-00-5	1,1,2-Trichloroethane	10.0	U
000071-43-2	Benzene	10.0	U
010061-02-6	trans-1,3-Dichloropropene	10.0	U
000075-25-2	Bromoform	10.0	U
000108-10-1	4-Methyl-2-Pentanone	10.0	U
000591-78-6	2-Hexanone	10.0	U
000127-18-4	Tetrachloroethene	10.0	U
000079-34-5	1,1,2,2-Tetrachloroethane	10.0	U
000108-88-3	Toluene	10.0	U
000108-90-7	Chlorobenzene	10.0	U
000100-41-4	Ethylbenzene	10.0	U
000100-42-5	Styrene	10.0	U
001330-20-7	Xylene (total)	30.0	U

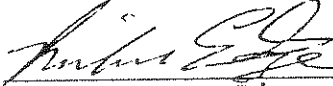
**QUALIFIERS:**

U - Indicates that the compound was analyzed for but was not detected. The results are the sample quantitation limit.

J - Indicates an estimated value or a value below the sample quantitation limit.

N - Indicates presumptive evidence of a tentatively identified compound.

Analysis by:   
 Analyst

Reviewed by:   
 Laboratory Director

**VOLATILE ORGANICS ANALYSIS DATA SHEET**  
**EPA Method 8240 (modified GC/MS)**

LAB #: 93070040

REPORT DATE: 07/16/93

PROJECT #: 932584

ANALYSIS DATE: 07/08/93

SAMPLE CODE: WW1-07

COLLECTION DATE: 07/01/93

PROJECT NAME: AZTEC CONSTRUCTION

PROJ. MGR.: CARL KOHLMAYER

MATRIX: SOIL

<u>#</u>	<u>CAS NUMBER</u>	<u>TENTATIVELY IDENTIFIED COMPOUND</u>	<u>CONC ug/Kg</u>	<u>Q</u>
1		Unidentified organic compound	193.1	J
2				
3				
4				
5				
6				
7				
8				
9				
10				

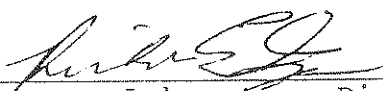
**QUALIFIERS:**

**U** - Indicates that the compound was analyzed for but was not detected. The results are the sample quantitation limit.

**J** - Indicates an estimated value or a value below the sample quantitation limit.

**N** - Indicates presumptive evidence of a tentatively identified compound.

Analysis by:   
Laboratory Analyst

Reviewed by:   
Laboratory Director

# T. P. H. ANALYSIS DATA SHEET

LAB #: 93070041

REPORT DATE: 07/23/93

PROJECT #: 932584

ANALYSIS DATE: 07/22/93

SAMPLE CODE: 584-WW1-08

COLLECTION DATE: 07/01/93

PROJECT NAME: AZTEC CONSTRUCTION

PROJ. MGR.: CARL KOHLMAYER

MATRIX: SOIL

FAA METHOD: EPA 418.1 (modified)

TOTAL PETROLEUM HYDROCARBONS

CONC. mg/Kg      Q  
19.7

## QUALIFIERS:

U - Indicates that the Total Petroleum Hydrocarbons were analyzed for but were not detected or were detected below the sample quantitation limit. The results are the sample quantitation limit.

Analysis by: \_\_\_\_\_

Laboratory Analyst

Reviewed by: \_\_\_\_\_

Laboratory Director

**VOLATILE ORGANICS ANALYSIS DATA SHEET**  
**EPA Method 8240 (modified GC/MS)**

LAB #: 93070041

REPORT DATE: 07/16/93

PROJECT #: 932584

ANALYSIS DATE: 07/08/93

SAMPLE CODE: WW1-08

COLLECTION DATE: 07/01/93

PROJECT NAME: AZTEC CONSTRUCTION

PROJ. MGR.: CARL KOHLMAYER

MATRIX: SOIL

<u>CAS NUMBER</u>	<u>TARGET COMPOUND</u>	<u>CONC ug/Kg</u>	<u>Q</u>
000074-87-3	Chloromethane	10.0	U
000074-83-9	Bromomethane	10.0	U
000075-01-4	Vinyl Chloride	10.0	U
000075-00-3	Chloroethane	10.0	U
000075-09-2	Methylene Chloride	10.0	U
000108-05-4	Vinyl Acetate	10.0	U
000067-64-1	Acetone	10.0	U
000075-15-0	Carbon Disulfide	10.0	U
000075-35-4	1,1-Dichloroethylene	10.0	U
000075-34-3	1,1-Dichloroethane	10.0	U
000540-59-0	1,2-Dichloroethylene (total)	10.0	U
000067-66-3	Chloroform	10.0	U
000107-06-2	1,2-Dichloroethane	10.0	U
000078-93-3	2-Butanone	10.0	U
000071-55-6	1,1,1-Trichloroethane	10.0	U
000056-23-5	Carbon Tetrachloride	10.0	U
000075-27-4	Bromodichloromethane	10.0	U
000078-87-5	1,2-Dichloropropane	10.0	U
010061-01-5	cis-1,3-Dichloropropene	10.0	U
000079-01-6	Trichloroethene	10.0	U
000124-48-1	Dibromochloromethane	10.0	U
000079-00-5	1,1,2-Trichloroethane	10.0	U
000071-43-2	Benzene	10.0	U
010061-02-6	trans-1,3-Dichloropropene	10.0	U
000075-25-2	Bromoform	10.0	U
000108-10-1	4-Methyl-2-Pentanone	10.0	U
000591-78-6	2-Hexanone	10.0	U
000127-18-4	Tetrachloroethene	10.0	U
000079-34-5	1,1,2,2-Tetrachloroethane	10.0	U
000108-88-3	Toluene	10.0	U
000108-90-7	Chlorobenzene	10.0	U
000100-41-4	Ethylbenzene	10.0	U
000100-42-5	Styrene	10.0	U
001330-20-7	Xylene (total)	30.0	U

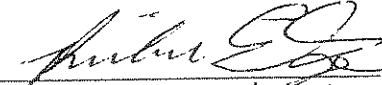
**QUALIFIERS:**

U - Indicates that the compound was analyzed for but was not detected. The results are the sample quantitation limit.

J - Indicates an estimated value or a value below the sample quantitation limit.

N - Indicates presumptive evidence of a tentatively identified compound.

Analysis by:   
 Analyst

Reviewed by:   
 Laboratory Director

# T. P. H. ANALYSIS DATA SHEET

LAB #: 93070042

REPORT DATE: 07/23/93

PROJECT #: 932584

ANALYSIS DATE: 07/22/93

SAMPLE CODE: 584-WW2-01

COLLECTION DATE: 07/01/93

PROJECT NAME: AZTEC CONSTRUCTION

PROJ. MGR.: CARL KOHLMAYER

MATRIX: SOIL

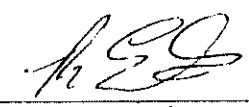
FAA METHOD: EPA 418.1 (modified)

TOTAL PETROLEUM HYDROCARBONS

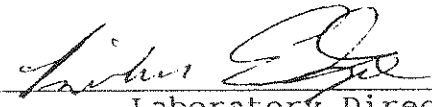
CONC. mg/Kg Q  
15.9

## QUALIFIERS:

U - Indicates that the Total Petroleum Hydrocarbons were analyzed for but were not detected or were detected below the sample quantitation limit. The results are the sample quantitation limit.

Analysis by: 

Laboratory Analyst

Reviewed by: 

Laboratory Director

**VOLATILE ORGANICS ANALYSIS DATA SHEET**  
**EPA Method 8240 (modified GC/MS)**

LAB #: 93070042

REPORT DATE: 07/16/93

PROJECT #: 932584

ANALYSIS DATE: 07/08/93

SAMPLE CODE: WW2-01

COLLECTION DATE: 07/01/93

PROJECT NAME: AZTEC CONSTRUCTION

PROJ. MGR.: CARL KOHLMAYER

MATRIX: SOIL

<u>CAS NUMBER</u>	<u>TARGET COMPOUND</u>	<u>CONC ug/Kg</u>	<u>Q</u>
000074-87-3	Chloromethane	10.0	U
000074-83-9	Bromomethane	10.0	U
000075-01-4	Vinyl Chloride	10.0	U
000075-00-3	Chloroethane	10.0	U
000075-09-2	Methylene Chloride	10.0	U
000108-05-4	Vinyl Acetate	10.0	U
000067-64-1	Acetone	10.0	U
000075-15-0	Carbon Disulfide	10.0	U
000075-35-4	1,1-Dichloroethylene	10.0	U
000075-34-3	1,1-Dichloroethane	10.0	U
000540-59-0	1,2-Dichloroethylene (total)	10.0	U
000067-66-3	Chloroform	13.4	
000107-06-2	1,2-Dichloroethane	10.0	U
000078-93-3	2-Butanone	10.0	U
000071-55-6	1,1,1-Trichloroethane	10.0	U
000056-23-5	Carbon Tetrachloride	10.0	U
000075-27-4	Bromodichloromethane	10.0	U
000078-87-5	1,2-Dichloropropane	10.0	U
010061-01-5	cis-1,3-Dichloropropene	10.0	U
000079-01-6	Trichloroethene	10.0	U
000124-48-1	Dibromochloromethane	10.0	U
000079-00-5	1,1,2-Trichloroethane	10.0	U
000071-43-2	Benzene	10.0	U
010061-02-6	trans-1,3-Dichloropropene	10.0	U
000075-25-2	Bromoform	10.0	U
000108-10-1	4-Methyl-2-Pentanone	10.0	U
000591-78-6	2-Hexanone	10.0	U
000127-18-4	Tetrachloroethene	10.0	U
000079-34-5	1,1,2,2-Tetrachloroethane	10.0	U
000108-88-3	Toluene	10.0	U
000108-90-7	Chlorobenzene	10.0	U
000100-41-4	Ethylbenzene	10.0	U
000100-42-5	Styrene	10.0	U
001330-20-7	Xylene (total)	30.0	U

**QUALIFIERS:**

U - Indicates that the compound was analyzed for but was not detected. The results are the sample quantitation limit.

J - Indicates an estimated value or a value below the sample quantitation limit.

N - Indicates presumptive evidence of a tentatively identified compound.

Analysis by:

  
 Analyst

Reviewed by:

  
 Laboratory Director

# T. P. H. ANALYSIS DATA SHEET

LAB #: 93070043

REPORT DATE: 07/23/93

PROJECT #: 932584

ANALYSIS DATE: 07/22/93

SAMPLE CODE: 584-WW2-02

COLLECTION DATE: 07/01/93

PROJECT NAME: AZTEC CONSTRUCTION

PROJ. MGR.: CARL KOHLMAYER

MATRIX: SOIL


FAA METHOD: EPA 418.1 (modified)

TOTAL PETROLEUM HYDROCARBONS

CONC. mg/Kg      Q  
13.2

## QUALIFIERS:

U - Indicates that the Total Petroleum Hydrocarbons were analyzed for but were not detected or were detected below the sample quantitation limit. The results are the sample quantitation limit.

Analysis by:   
Laboratory Analyst

Reviewed by:   
Laboratory Director



# T. P. H. ANALYSIS DATA SHEET

LAB #: 93070044

REPORT DATE: 07/23/93

PROJECT #: 932584

ANALYSIS DATE: 07/22/93

SAMPLE CODE: 584-WW2-03

COLLECTION DATE: 07/01/93

PROJECT NAME: AZTEC CONSTRUCTION

PROJ. MGR.: CARL KOHLMAYER

MATRIX: SOIL

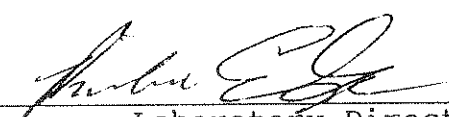
FAA METHOD: EPA 418.1 (modified)

	<u>CONC. mg/Kg</u>	<u>Q</u>
TOTAL PETROLEUM HYDROCARBONS	10.7	

## QUALIFIERS:

U - Indicates that the Total Petroleum Hydrocarbons were analyzed for but were not detected or were detected below the sample quantitation limit. The results are the sample quantitation limit.

Analysis by:   
Laboratory Analyst

Reviewed by:   
Laboratory Director

**VOLATILE ORGANICS ANALYSIS DATA SHEET**  
**EPA Method 8240 (modified GC/MS)**

LAB #: 93070044

REPORT DATE: 07/16/93

PROJECT #: 932584

ANALYSIS DATE: 07/12/93

SAMPLE CODE: WW2-03

COLLECTION DATE: 07/01/93

PROJECT NAME: AZTEC CONSTRUCTION

PROJ. MGR.: CARL KOHLMAYER

MATRIX: SOIL


<u>CAS NUMBER</u>	<u>TARGET COMPOUND</u>	<u>CONC ug/Kg</u>	<u>Q</u>
000074-87-3	Chloromethane	10.0	U
000074-83-9	Bromomethane	10.0	U
000075-01-4	Vinyl Chloride	10.0	U
000075-00-3	Chloroethane	10.0	U
000075-09-2	Methylene Chloride	10.0	U
000108-05-4	Vinyl Acetate	10.0	U
000067-64-1	Acetone	10.0	U
000075-15-0	Carbon Disulfide	10.0	U
000075-35-4	1,1-Dichloroethylene	10.0	U
000075-34-3	1,1-Dichloroethane	10.0	U
000540-59-0	1,2-Dichloroethylene (total)	10.0	U
000067-66-3	Chloroform	10.0	U
000107-06-2	1,2-Dichloroethane	10.0	U
000078-93-3	2-Butanone	10.0	U
000071-55-6	1,1,1-Trichloroethane	10.0	U
000056-23-5	Carbon Tetrachloride	10.0	U
000075-27-4	Bromodichloromethane	10.0	U
000078-87-5	1,2-Dichloropropane	10.0	U
010061-01-5	cis-1,3-Dichloropropene	10.0	U
000079-01-6	Trichloroethene	10.0	U
000124-48-1	Dibromochloromethane	10.0	U
000079-00-5	1,1,2-Trichloroethane	10.0	U
000071-43-2	Benzene	10.0	U
010061-02-6	trans-1,3-Dichloropropene	10.0	U
000075-25-2	Bromoform	10.0	U
000108-10-1	4-Methyl-2-Pentanone	10.0	U
000591-78-6	2-Hexanone	10.0	U
000127-18-4	Tetrachloroethene	10.0	U
000079-34-5	1,1,2,2-Tetrachloroethane	10.0	U
000108-88-3	Toluene	10.0	U
000108-90-7	Chlorobenzene	10.0	U
000100-41-4	Ethylbenzene	10.0	U
000100-42-5	Styrene	10.0	U
001330-20-7	Xylene (total)	30.0	U

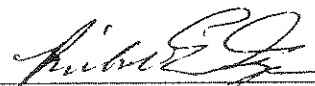
**QUALIFIERS:**

U - Indicates that the compound was analyzed for but was not detected. The results are the sample quantitation limit.

J - Indicates an estimated value or a value below the sample quantitation limit.

N - Indicates presumptive evidence of a tentatively identified compound.

Analysis by:   
 Analyst

Reviewed by:   
 Laboratory Director

# T. P. H. ANALYSIS DATA SHEET

LAB #: 93070045

REPORT DATE: 07/23/93

PROJECT #: 932584

ANALYSIS DATE: 07/22/93

SAMPLE CODE: 584-WW2-04

COLLECTION DATE: 07/01/93

PROJECT NAME: AZTEC CONSTRUCTION

PROJ. MGR.: CARL KOHLMAYER

MATRIX: SOIL

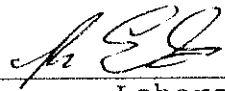
FAA METHOD: EPA 418.1 (modified)

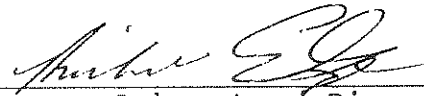
TOTAL PETROLEUM HYDROCARBONS

CONC. mg/Kg      **Q**  
20.8

## QUALIFIERS:

**U** - Indicates that the Total Petroleum Hydrocarbons were analyzed for but were not detected or were detected below the sample quantitation limit. The results are the sample quantitation limit.

Analysis by:   
Laboratory Analyst

Reviewed by:   
Laboratory Director

**VOLATILE ORGANICS ANALYSIS DATA SHEET**  
**EPA Method 8240 (modified GC/MS)**

LAB #: 93070045

REPORT DATE: 07/16/93

PROJECT #: 932584

ANALYSIS DATE: 07/12/93

SAMPLE CODE: WW2-04

COLLECTION DATE: 07/01/93

PROJECT NAME: AZTEC CONSTRUCTION

PROJ. MGR.: CARL KOHLMAYER

MATRIX: SOIL

<u>CAS NUMBER</u>	<u>TARGET COMPOUND</u>	<u>CONC ug/Kg</u>	<u>Q</u>
000074-87-3	Chloromethane	10.0	U
000074-83-9	Bromomethane	10.0	U
000075-01-4	Vinyl Chloride	10.0	U
000075-00-3	Chloroethane	10.0	U
000075-09-2	Methylene Chloride	10.0	U
000108-05-4	Vinyl Acetate	10.0	U
000067-64-1	Acetone	10.0	U
000075-15-0	Carbon Disulfide	10.0	U
000075-35-4	1,1-Dichloroethylene	10.0	U
000075-34-3	1,1-Dichloroethane	10.0	U
000540-59-0	1,2-Dichloroethylene (total)	10.0	U
000067-66-3	Chloroform	10.0	U
000107-06-2	1,2-Dichloroethane	10.0	U
000078-93-3	2-Butanone	10.0	U
000071-55-6	1,1,1-Trichloroethane	10.0	U
000056-23-5	Carbon Tetrachloride	10.0	U
000075-27-4	Bromodichloromethane	10.0	U
000078-87-5	1,2-Dichloropropane	10.0	U
010061-01-5	cis-1,3-Dichloropropene	10.0	U
000079-01-6	Trichloroethene	10.0	U
000124-48-1	Dibromochloromethane	10.0	U
000079-00-5	1,1,2-Trichloroethane	10.0	U
000071-43-2	Benzene	10.0	U
010061-02-6	trans-1,3-Dichloropropene	10.0	U
000075-25-2	Bromoform	10.0	U
000108-10-1	4-Methyl-2-Pentanone	10.0	U
000591-78-6	2-Hexanone	10.0	U
000127-18-4	Tetrachloroethene	10.0	U
000079-34-5	1,1,2,2-Tetrachloroethane	10.0	U
000108-88-3	Toluene	10.0	U
000108-90-7	Chlorobenzene	10.0	U
000100-41-4	Ethylbenzene	10.0	U
000100-42-5	Styrene	10.0	U
001330-20-7	Xylene (total)	30.0	U

**QUALIFIERS:**

U - Indicates that the compound was analyzed for but was not detected. The results are the sample quantitation limit.

J - Indicates an estimated value or a value below the sample quantitation limit.

N - Indicates presumptive evidence of a tentatively identified compound.

Analysis by:   
 Analyst

Reviewed by:   
 Laboratory Director

# T. P. H. ANALYSIS DATA SHEET

LAB #: 93070046

REPORT DATE: 07/23/93

PROJECT #: 932584

ANALYSIS DATE: 07/22/93

SAMPLE CODE: 584-WW2-05

COLLECTION DATE: 07/01/93

PROJECT NAME: AZTEC CONSTRUCTION

PROJ. MGR.: CARL KOHLMAYER

MATRIX: SOIL


FAA METHOD: EPA 418.1 (modified)

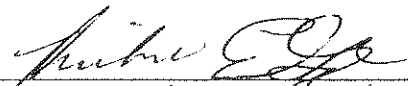
TOTAL PETROLEUM HYDROCARBONS

CONC. mg/Kg      Q  
11.2

## QUALIFIERS:

**U** - Indicates that the Total Petroleum Hydrocarbons were analyzed for but were not detected or were detected below the sample quantitation limit. The results are the sample quantitation limit.

Analysis by:   
Laboratory Analyst

Reviewed by:   
Laboratory Director

**VOLATILE ORGANICS ANALYSIS DATA SHEET**  
**EPA Method 8240 (modified GC/MS)**

LAB #: 93070046

REPORT DATE: 07/16/93

PROJECT #: 932584

ANALYSIS DATE: 07/12/93

SAMPLE CODE: WW2-05

COLLECTION DATE: 07/01/93

PROJECT NAME: AZTEC CONSTRUCTION

PROJ. MGR.: CARL KOHLMAYER

MATRIX: SOIL

<u>CAS NUMBER</u>	<u>TARGET COMPOUND</u>	<u>CONC ug/Kg</u>	<u>Q</u>
000074-87-3	Chloromethane	10.0	U
000074-83-9	Bromomethane	10.0	U
000075-01-4	Vinyl Chloride	10.0	U
000075-00-3	Chloroethane	10.0	U
000075-09-2	Methylene Chloride	10.0	U
000108-05-4	Vinyl Acetate	10.0	U
000067-64-1	Acetone	10.0	U
000075-15-0	Carbon Disulfide	10.0	U
000075-35-4	1,1-Dichloroethylene	10.0	U
000075-34-3	1,1-Dichloroethane	10.0	U
000540-59-0	1,2-Dichloroethylene (total)	10.0	U
000067-66-3	Chloroform	10.0	U
000107-06-2	1,2-Dichloroethane	10.0	U
000078-93-3	2-Butanone	10.0	U
000071-55-6	1,1,1-Trichloroethane	10.0	U
000056-23-5	Carbon Tetrachloride	10.0	U
000075-27-4	Bromodichloromethane	10.0	U
000078-87-5	1,2-Dichloropropane	10.0	U
010061-01-5	cis-1,3-Dichloropropene	10.0	U
000079-01-6	Trichloroethene	10.0	U
000124-48-1	Dibromochloromethane	10.0	U
000079-00-5	1,1,2-Trichloroethane	10.0	U
000071-43-2	Benzene	10.0	U
010061-02-6	trans-1,3-Dichloropropene	10.0	U
000075-25-2	Bromoform	10.0	U
000108-10-1	4-Methyl-2-Pentanone	10.0	U
000591-78-6	2-Hexanone	10.0	U
000127-18-4	Tetrachloroethene	10.0	U
000079-34-5	1,1,2,2-Tetrachloroethane	10.0	U
000108-88-3	Toluene	10.0	U
000108-90-7	Chlorobenzene	10.0	U
000100-41-4	Ethylbenzene	10.0	U
000100-42-5	Styrene	10.0	U
001330-20-7	Xylene (total)	30.0	U

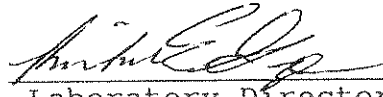
**QUALIFIERS:**

U - Indicates that the compound was analyzed for but was not detected. The results are the sample quantitation limit.

J - Indicates an estimated value or a value below the sample quantitation limit.

N - Indicates presumptive evidence of a tentatively identified compound.

Analysis by:   
 Analyst

Reviewed by:   
 Laboratory Director

# T. P. H. ANALYSIS DATA SHEET

LAB #: 93070047

REPORT DATE: 07/23/93

PROJECT #: 932584

ANALYSIS DATE: 07/23/93

SAMPLE CODE: 584-WW2-06

COLLECTION DATE: 07/01/93

PROJECT NAME: AZTEC CONSTRUCTION

PROJ. MGR.: CARL KOHLMAYER


MATRIX: SOIL


FAA METHOD: EPA 418.1 (modified)

	<u>CONC. mg/Kg</u>	<u>Q</u>
TOTAL PETROLEUM HYDROCARBONS	285	

## QUALIFIERS:

**U** - Indicates that the Total Petroleum Hydrocarbons were analyzed for but were not detected or were detected below the sample quantitation limit. The results are the sample quantitation limit.

Analysis by:   
Laboratory Analyst

Reviewed by:   
Laboratory Director



**VOLATILE ORGANICS ANALYSIS DATA SHEET**  
**EPA Method 8240 (modified GC/MS)**

LAB #: 93070047

REPORT DATE: 07/16/93

PROJECT #: 932584

ANALYSIS DATE: 07/12/93

SAMPLE CODE: WW2-06

COLLECTION DATE: 07/01/93

PROJECT NAME: AZTEC CONSTRUCTION

PROJ. MGR.: CARL KOHLMAYER

MATRIX: SOIL

<u>#</u>	<u>CAS NUMBER</u>	<u>TENTATIVELY IDENTIFIED COMPOUND</u>	<u>CONC ug/Kg</u>	<u>Q</u>
1		Unidentified organic compound	21.8	J
2				
3				
4				
5				
6				
7				
8				
9				
10				

**QUALIFIERS:**

**U** - Indicates that the compound was analyzed for but was not detected. The results are the sample quantitation limit.

**J** - Indicates an estimated value or a value below the sample quantitation limit.

**N** - Indicates presumptive evidence of a tentatively identified compound.

Analysis by:   
Laboratory Analyst

Reviewed by:   
Laboratory Director

# T. P. H. ANALYSIS DATA SHEET

LAB #: 93070048

REPORT DATE: 07/23/93

PROJECT #: 932584

ANALYSIS DATE: 07/23/93

SAMPLE CODE: 584-WW2-08

COLLECTION DATE: 07/01/93

PROJECT NAME: AZTEC CONSTRUCTION

PROJ. MGR.: CARL KOHLMAYER

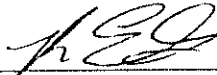
MATRIX: SOIL

FAA METHOD: EPA 418.1 (modified)

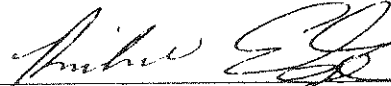
	<u>CONC. mg/Kg</u>	<u>Q</u>
TOTAL PETROLEUM HYDROCARBONS	56.4	

## QUALIFIERS:

U - Indicates that the Total Petroleum Hydrocarbons were analyzed for but were not detected or were detected below the sample quantitation limit. The results are the sample quantitation limit.

Analysis by: 

Laboratory Analyst

Reviewed by: 

Laboratory Director

**VOLATILE ORGANICS ANALYSIS DATA SHEET**  
**EPA Method 8240 (modified GC/MS)**

LAB #: 93070048

REPORT DATE: 07/16/93

PROJECT #: 932584

ANALYSIS DATE: 07/12/93

SAMPLE CODE: WW2-08

COLLECTION DATE: 07/01/93

PROJECT NAME: AZTEC CONSTRUCTION

PROJ. MGR.: CARL KOHLMAYER

MATRIX: SOIL

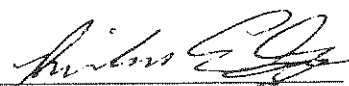
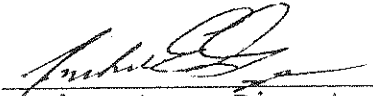
<u>CAS NUMBER</u>	<u>TARGET COMPOUND</u>	<u>CONC ug/Kg</u>	<u>Q</u>
000074-87-3	Chloromethane	10.0	U
000074-83-9	Bromomethane	10.0	U
000075-01-4	Vinyl Chloride	10.0	U
000075-00-3	Chloroethane	10.0	U
000075-09-2	Methylene Chloride	10.0	U
000108-05-4	Vinyl Acetate	10.0	U
000067-64-1	Acetone	10.0	U
000075-15-0	Carbon Disulfide	10.0	U
000075-35-4	1,1-Dichloroethylene	10.0	U
000075-34-3	1,1-Dichloroethane	10.0	U
000540-59-0	1,2-Dichloroethylene (total)	10.0	U
000067-66-3	Chloroform	10.0	U
000107-06-2	1,2-Dichloroethane	10.0	U
000078-93-3	2-Butanone	10.0	U
000071-55-6	1,1,1-Trichloroethane	10.0	U
000056-23-5	Carbon Tetrachloride	10.0	U
000075-27-4	Bromodichloromethane	10.0	U
000078-87-5	1,2-Dichloropropane	10.0	U
010061-01-5	cis-1,3-Dichloropropene	10.0	U
000079-01-6	Trichloroethene	10.0	U
000124-48-1	Dibromochloromethane	10.0	U
000079-00-5	1,1,2-Trichloroethane	10.0	U
000071-43-2	Benzene	10.0	U
010061-02-6	trans-1,3-Dichloropropene	10.0	U
000075-25-2	Bromoform	10.0	U
000108-10-1	4-Methyl-2-Pentanone	10.0	U
000591-78-6	2-Hexanone	10.0	U
000127-18-4	Tetrachloroethene	10.0	U
000079-34-5	1,1,2,2-Tetrachloroethane	10.0	U
000108-88-3	Toluene	10.0	U
000108-90-7	Chlorobenzene	10.0	U
000100-41-4	Ethylbenzene	10.0	U
000100-42-5	Styrene	10.0	U
001330-20-7	Xylene (total)	30.0	U

**QUALIFIERS:**

U - Indicates that the compound was analyzed for but was not detected. The results are the sample quantitation limit.

J - Indicates an estimated value or a value below the sample quantitation limit.

N - Indicates presumptive evidence of a tentatively identified compound.

Analysis by:  Reviewed by:   
 Analyst Laboratory Director

# T. P. H. ANALYSIS DATA SHEET

LAB #: 93070049

REPORT DATE: 07/23/93

PROJECT #: 932584

ANALYSIS DATE: 07/23/93

SAMPLE CODE: 584-CC-01

COLLECTION DATE: 07/01/93

PROJECT NAME: AZTEC CONSTRUCTION

PROJ. MGR.: CARL KOHLMAYER

MATRIX: SOIL

FAA METHOD: EPA 418.1 (modified)


TOTAL PETROLEUM HYDROCARBONS

CONC. mg/Kg Q  
63.5

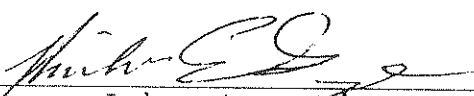
## QUALIFIERS:

U - Indicates that the Total Petroleum Hydrocarbons were analyzed for but were not detected or were detected below the sample quantitation limit. The results are the sample quantitation limit.

Analysis by: \_\_\_\_\_

  
Laboratory Analyst

Reviewed by: \_\_\_\_\_

  
Laboratory Director

**VOLATILE ORGANICS ANALYSIS DATA SHEET**  
**EPA Method 8240 (modified GC/MS)**

LAB #: 93070049

REPORT DATE: 07/16/93

PROJECT #: 932584

ANALYSIS DATE: 07/12/93

SAMPLE CODE: CC-01

COLLECTION DATE: 07/01/93

PROJECT NAME: AZTEC CONSTRUCTION

PROJ. MGR.: CARL KOHLMAYER

MATRIX: SOIL

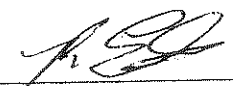
<u>CAS NUMBER</u>	<u>TARGET COMPOUND</u>	<u>CONC ug/Kg</u>	<u>Q</u>
000074-87-3	Chloromethane	10.0	U
000074-83-9	Bromomethane	10.0	U
000075-01-4	Vinyl Chloride	10.0	U
000075-00-3	Chloroethane	10.0	U
000075-09-2	Methylene Chloride	10.0	U
000108-05-4	Vinyl Acetate	10.0	U
000067-64-1	Acetone	10.0	U
000075-15-0	Carbon Disulfide	10.0	U
000075-35-4	1,1-Dichloroethylene	10.0	U
000075-34-3	1,1-Dichloroethane	10.0	U
000540-59-0	1,2-Dichloroethylene (total)	10.0	U
000067-66-3	Chloroform	10.0	U
000107-06-2	1,2-Dichloroethane	10.0	U
000078-93-3	2-Butanone	10.0	U
000071-55-6	1,1,1-Trichloroethane	10.0	U
000056-23-5	Carbon Tetrachloride	10.0	U
000075-27-4	Bromodichloromethane	10.0	U
000078-87-5	1,2-Dichloropropane	10.0	U
010061-01-5	cis-1,3-Dichloropropene	10.0	U
000079-01-6	Trichloroethene	10.0	U
000124-48-1	Dibromochloromethane	10.0	U
000079-00-5	1,1,2-Trichloroethane	10.0	U
000071-43-2	Benzene	10.0	U
010061-02-6	trans-1,3-Dichloropropene	10.0	U
000075-25-2	Bromoform	10.0	U
000108-10-1	4-Methyl-2-Pentanone	10.0	U
000591-78-6	2-Hexanone	10.0	U
000127-18-4	Tetrachloroethene	10.0	U
000079-34-5	1,1,2,2-Tetrachloroethane	10.0	U
000108-88-3	Toluene	10.0	U
000108-90-7	Chlorobenzene	10.0	U
000100-41-4	Ethylbenzene	10.0	U
000100-42-5	Styrene	10.0	U
001330-20-7	Xylene (total)	30.0	U


**QUALIFIERS:**

U - Indicates that the compound was analyzed for but was not detected. The results are the sample quantitation limit.

J - Indicates an estimated value or a value below the sample quantitation limit.

N - Indicates presumptive evidence of a tentatively identified compound.

Analysis by:   
 Analyst

Reviewed by:   
 Laboratory Director

**VOLATILE ORGANICS ANALYSIS DATA SHEET**  
**EPA Method 8240 (modified GC/MS)**

LAB #: 93070049

REPORT DATE: 07/16/93

PROJECT #: 932584

ANALYSIS DATE: 07/12/93

SAMPLE CODE: CC-01

COLLECTION DATE: 07/01/93

PROJECT NAME: AZTEC CONSTRUCTION

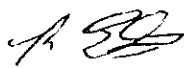
PROJ. MGR.: CARL KOHLMAYER

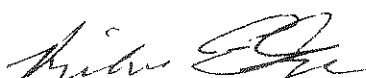
MATRIX: SOIL

#	CAS NUMBER	TENTATIVELY IDENTIFIED COMPOUND	CONC ug/Kg	Q
1	000095-63-6	Benzene, 1,2,4-trimethyl	38.2	N
2				
3				
4				
5				
6				
7				
8				
9				
10				

**QUALIFIERS:**

- U - Indicates that the compound was analyzed for but was not detected. The results are the sample quantitation limit.
- J - Indicates an estimated value or a value below the sample quantitation limit.
- N - Indicates presumptive evidence of a tentatively identified compound.

Analysis by:   
Laboratory Analyst

Reviewed by:   
Laboratory Director

# T. P. H. ANALYSIS DATA SHEET

LAB #: 93070050

REPORT DATE: 07/23/93

PROJECT #: 932584

ANALYSIS DATE: 07/23/93

SAMPLE CODE: 584-CC-02

COLLECTION DATE: 07/01/93

PROJECT NAME: AZTEC CONSTRUCTION

PROJ. MGR.: CARL KOHLMAYER

MATRIX: SOIL

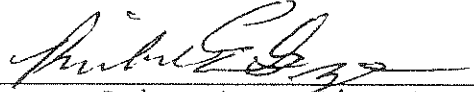
FAA METHOD: EPA 418.1 (modified)

	<u>CONC. mg/Kg</u>	<u>Q</u>
TOTAL PETROLEUM HYDROCARBONS	13.7	

## QUALIFIERS:

U - Indicates that the Total Petroleum Hydrocarbons were analyzed for but were not detected or were detected below the sample quantitation limit. The results are the sample quantitation limit.

Analysis by:   
Laboratory Analyst

Reviewed by:   
Laboratory Director

**VOLATILE ORGANICS ANALYSIS DATA SHEET**  
**EPA Method 8240 (modified GC/MS)**

LAB #: 93070050

REPORT DATE: 07/16/93

PROJECT #: 932584

ANALYSIS DATE: 07/08/93

SAMPLE CODE: CC-02

COLLECTION DATE: 07/01/93

PROJECT NAME: AZTEC CONSTRUCTION

PROJ. MGR.: CARL KOHLMAYER

MATRIX: SOIL

<u>CAS NUMBER</u>	<u>TARGET COMPOUND</u>	<u>CONC ug/Kg</u>	<u>Q</u>
000074-87-3	Chloromethane	10.0	U
000074-83-9	Bromomethane	10.0	U
000075-01-4	Vinyl Chloride	10.0	U
000075-00-3	Chloroethane	10.0	U
000075-09-2	Methylene Chloride	10.0	U
000108-05-4	Vinyl Acetate	10.0	U
000067-64-1	Acetone	10.0	U
000075-15-0	Carbon Disulfide	10.0	U
000075-35-4	1,1-Dichloroethylene	10.0	U
000075-34-3	1,1-Dichloroethane	10.0	U
000540-59-0	1,2-Dichloroethylene (total)	10.0	U
000067-66-3	Chloroform	10.0	U
000107-06-2	1,2-Dichloroethane	10.0	U
000078-93-3	2-Butanone	10.0	U
000071-55-6	1,1,1-Trichloroethane	10.0	U
000056-23-5	Carbon Tetrachloride	10.0	U
000075-27-4	Bromodichloromethane	10.0	U
000078-87-5	1,2-Dichloropropane	10.0	U
010061-01-5	cis-1,3-Dichloropropene	10.0	U
000079-01-6	Trichloroethene	10.0	U
000124-48-1	Dibromochloromethane	10.0	U
000079-00-5	1,1,2-Trichloroethane	10.0	U
000071-43-2	Benzene	10.0	U
010061-02-6	trans-1,3-Dichloropropene	10.0	U
000075-25-2	Bromoform	10.0	U
000108-10-1	4-Methyl-2-Pentanone	10.0	U
000591-78-6	2-Hexanone	10.0	U
000127-18-4	Tetrachloroethene	10.0	U
000079-34-5	1,1,2,2-Tetrachloroethane	10.0	U
000108-88-3	Toluene	10.0	U
000108-90-7	Chlorobenzene	10.0	U
000100-41-4	Ethylbenzene	10.0	U
000100-42-5	Styrene	10.0	U
001330-20-7	Xylene (total)	30.0	U

**QUALIFIERS:**

U - Indicates that the compound was analyzed for but was not detected. The results are the sample quantitation limit.

J - Indicates an estimated value or a value below the sample quantitation limit.

N - Indicates presumptive evidence of a tentatively identified compound.

Analysis by:   
 Analyst

Reviewed by:   
 Laboratory Director

**T. P. H. ANALYSIS DATA SHEET  
QUALITY CONTROL REPORT**

PROJECT #: 932584

REPORT DATE: 07/23/93

PROJECT NAME: AZTEC CONSTRUCTION

PROJ. MGR.: CARL KOHLMAYER

MATRIX: SOIL

FAA METHOD: EPA 418.1 (modified)

**BLANK RESULTS:**

TOTAL PETROLEUM HYDROCARBONS	<u>CONC. mg/Kg</u> 10.2	Q
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**MATRIX SPIKE RESULTS:**


TOTAL PETROLEUM HYDROCARBONS	<u>CONC. mg/Kg</u> 196.9	Q
PERCENT RECOVERY	96.4 %	

**MATRIX SPIKE DUPLICATE RESULTS:**

TOTAL PETROLEUM HYDROCARBONS	<u>CONC. mg/Kg</u> 225.6	Q
PERCENT RECOVERY	110.4 %	
RELATIVE PERCENT DIFFERENCE	13.6 %	

**QUALIFIERS:**

U - Indicates that the Total Petroleum Hydrocarbons were analyzed for but were not detected or were detected below the sample quantitation limit. The results are the sample quantitation limit.

Analysis by:   
Laboratory Analyst

Reviewed by:   
Laboratory Director



**VOLATILE ORGANICS ANALYSIS DATA SHEET**  
**EPA Method 8240 (modified GC/MS)**

LAB #: BL03\_7C3.D

REPORT DATE: 07/16/93

PROJECT #: 932584

ANALYSIS DATE: 07/12/93

SAMPLE CODE: LABORATORY BLANK

COLLECTION DATE: 07/12/93

PROJECT NAME: AZTEC CONSTRUCTION

PROJ. MGR.: CARL KOHLMAYER

MATRIX: WATER

<u>CAS NUMBER</u>	<u>TARGET COMPOUND</u>	<u>CONC ug/Kg</u>	<u>Q</u>
000074-87-3	Chloromethane	10.0	U
000074-83-9	Bromomethane	10.0	U
000075-01-4	Vinyl Chloride	10.0	U
000075-00-3	Chloroethane	10.0	U
000075-09-2	Methylene Chloride	10.0	U
000108-05-4	Vinyl Acetate	10.0	U
000067-64-1	Acetone	10.0	U
000075-15-0	Carbon Disulfide	10.0	U
000075-35-4	1,1-Dichloroethylene	10.0	U
000075-34-3	1,1-Dichloroethane	10.0	U
000540-59-0	1,2-Dichloroethylene (total)	10.0	U
000067-66-3	Chloroform	10.0	U
000107-06-2	1,2-Dichloroethane	10.0	U
000078-93-3	2-Butanone	10.0	U
000071-55-6	1,1,1-Trichloroethane	10.0	U
000056-23-5	Carbon Tetrachloride	10.0	U
000075-27-4	Bromodichloromethane	10.0	U
000078-87-5	1,2-Dichloropropane	10.0	U
010061-01-5	cis-1,3-Dichloropropene	10.0	U
000079-01-6	Trichloroethene	10.0	U
000124-48-1	Dibromochloromethane	10.0	U
000079-00-5	1,1,2-Trichloroethane	10.0	U
000071-43-2	Benzene	10.0	U
010061-02-6	trans-1,3-Dichloropropene	10.0	U
000075-25-2	Bromoform	10.0	U
000108-10-1	4-Methyl-2-Pentanone	10.0	U
000591-78-6	2-Hexanone	10.0	U
000127-18-4	Tetrachloroethene	10.0	U
000079-34-5	1,1,2,2-Tetrachloroethane	10.0	U
000108-88-3	Toluene	10.0	U
000108-90-7	Chlorobenzene	10.0	U
000100-41-4	Ethylbenzene	10.0	U
000100-42-5	Styrene	10.0	U
001330-20-7	Xylene (total)	30.0	U

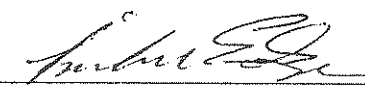
**QUALIFIERS:**

U - Indicates that the compound was analyzed for but was not detected. The results are the sample quantitation limit.

J - Indicates an estimated value or a value below the sample quantitation limit.

N - Indicates presumptive evidence of a tentatively identified compound.

Analysis by:   
 Analyst

Reviewed by:   
 Laboratory Director

Spike Recovery and RPD Summary Report - WATER

Method: SOIL\_VOC.M

Title: VOA Standards for 5 point calibration

Spike  
Sample

Spike  
Duplicate Sample

Lab ID:

File Code: BLMS\_7C3.D

BLSD\_7C3.D

Date Analyzed: 12 Jul 93 3:24 pm

12 Jul 93 4:41 pm

Compound	Sample Conc	Spike Added	Spike Res	Dup Spike Res	Spike %Rec	Dup %Rec	RPD	QC Limits RPD	QC Limits % Rec
1,1-Dichloroethene	0.0	50	35	35	69	71	1	14	61-145
Benzene	0.0	50	42	41	83	82	0	11	76-127
Trichloroethene	0.0	50	41	46	82	93	3	14	71-170
Toluene	1.1	50	42	42	81	82	0	13	76-125
Chlorobenzene	7.7	50	52	52	88	88	0	13	75-130

**VOLATILE ORGANICS ANALYSIS DATA SHEET**  
**EPA Method 8240 (modified GC/MS)**

LAB #: BLMS\_7C3.D

REPORT DATE: 07/16/93

PROJECT #: 932584

ANALYSIS DATE: 07/12/93

SAMPLE CODE: MATRIX SPIKE, BLANK

COLLECTION DATE: 07/12/93

PROJECT NAME: AZTEC CONSTRUCTION

PROJ. MGR.: CARL KOHLMAYER

MATRIX: WATER

<u>CAS NUMBER</u>	<u>TARGET COMPOUND</u>	<u>CONC ug/Kg</u>	<u>Q</u>
000074-87-3	Chloromethane	10.0	U
000074-83-9	Bromomethane	10.0	U
000075-01-4	Vinyl Chloride	10.0	U
000075-00-3	Chloroethane	10.0	U
000075-09-2	Methylene Chloride	10.0	U
000108-05-4	Vinyl Acetate	10.0	U
000067-64-1	Acetone	10.0	U
000075-15-0	Carbon Disulfide	10.0	U
000075-35-4	1,1-Dichloroethylene	34.6	
000075-34-3	1,1-Dichloroethane	10.0	U
000540-59-0	1,2-Dichloroethylene (total)	10.0	U
000067-66-3	Chloroform	10.0	U
000107-06-2	1,2-Dichloroethane	10.0	U
000078-93-3	2-Butanone	10.0	U
000071-55-6	1,1,1-Trichloroethane	10.0	U
000056-23-5	Carbon Tetrachloride	10.0	U
000075-27-4	Bromodichloromethane	10.0	U
000078-87-5	1,2-Dichloropropane	10.0	U
010061-01-5	cis-1,3-Dichloropropene	10.0	U
000079-01-6	Trichloroethene	41.2	
000124-48-1	Dibromochloromethane	10.0	U
000079-00-5	1,1,2-Trichloroethane	10.0	U
000071-43-2	Benzene	41.6	
010061-02-6	trans-1,3-Dichloropropene	10.0	U
000075-25-2	Bromoform	10.0	U
000108-10-1	4-Methyl-2-Pentanone	10.0	U
000591-78-6	2-Hexanone	10.0	U
000127-18-4	Tetrachloroethene	10.0	U
000079-34-5	1,1,2,2-Tetrachloroethane	10.0	U
000108-88-3	Toluene	41.6	
000108-90-7	Chlorobenzene	51.6	
000100-41-4	Ethylbenzene	10.0	U
000100-42-5	Styrene	10.0	U
001330-20-7	Xylene (total)	30.0	U

**QUALIFIERS:**

U - Indicates that the compound was analyzed for but was not detected. The results are the sample quantitation limit.

J - Indicates an estimated value or a value below the sample quantitation limit.

N - Indicates presumptive evidence of a tentatively identified compound.

Analysis by:

  
 Analyst

Reviewed by:

  
 Laboratory Director

**VOLATILE ORGANICS ANALYSIS DATA SHEET**  
**EPA Method 8240 (modified GC/MS)**

LAB #: BLSD\_7C3.D

REPORT DATE: 07/16/93

PROJECT #: 932584

ANALYSIS DATE: 07/12/93

SAMPLE CODE: SPIKE DUPLICATE, BLANK

COLLECTION DATE: 07/12/93

PROJECT NAME: AZTEC CONSTRUCTION

PROJ. MGR.: CARL KOHLMAYER

MATRIX: WATER

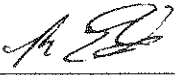
<u>CAS NUMBER</u>	<u>TARGET COMPOUND</u>	<u>CONC ug/Kg</u>	<u>Q</u>
000074-87-3	Chloromethane	10.0	U
000074-83-9	Bromomethane	10.0	U
000075-01-4	Vinyl Chloride	10.0	U
000075-00-3	Chloroethane	10.0	U
000075-09-2	Methylene Chloride	10.0	U
000108-05-4	Vinyl Acetate	10.0	U
000067-64-1	Acetone	10.0	U
000075-15-0	Carbon Disulfide	10.0	U
000075-35-4	1,1-Dichloroethylene	35.4	
000075-34-3	1,1-Dichloroethane	10.0	U
000540-59-0	1,2-Dichloroethylene (total)	10.0	U
000067-66-3	Chloroform	10.0	U
000107-06-2	1,2-Dichloroethane	10.0	U
000078-93-3	2-Butanone	10.0	U
000071-55-6	1,1,1-Trichloroethane	10.0	U
000056-23-5	Carbon Tetrachloride	10.0	U
000075-27-4	Bromodichloromethane	10.0	U
000078-87-5	1,2-Dichloropropane	10.0	U
010061-01-5	cis-1,3-Dichloropropene	10.0	U
000079-01-6	Trichloroethene	46.4	
000124-48-1	Dibromochloromethane	10.0	U
000079-00-5	1,1,2-Trichloroethane	10.0	U
000071-43-2	Benzene	40.8	
010061-02-6	trans-1,3-Dichloropropene	10.0	U
000075-25-2	Bromoform	10.0	U
000108-10-1	4-Methyl-2-Pentanone	10.0	U
000591-78-6	2-Hexanone	10.0	U
000127-18-4	Tetrachloroethene	10.0	U
000079-34-5	1,1,2,2-Tetrachloroethane	10.0	U
000108-88-3	Toluene	42.3	
000108-90-7	Chlorobenzene	51.5	
000100-41-4	Ethylbenzene	10.0	U
000100-42-5	Styrene	10.0	U
001330-20-7	Xylene (total)	30.0	U


**QUALIFIERS:**

U - Indicates that the compound was analyzed for but was not detected. The results are the sample quantitation limit.

J - Indicates an estimated value or a value below the sample quantitation limit.

N - Indicates presumptive evidence of a tentatively identified compound.

Analysis by:   
 Analyst

Reviewed by:   
 Laboratory Director

# T. P. H. ANALYSIS DATA SHEET

LAB #: 93070350

REPORT DATE: 07/28/93

PROJECT #: 932584

ANALYSIS DATE: 07/27/93

SAMPLE CODE: WELL-1

COLLECTION DATE: 07/21/93

PROJECT NAME: 4022 W. LINCOLN STREET

PROJ. MGR.: CARL KOHLMAYER

MATRIX: WATER

FAA METHOD: EPA 418.1 (modified)

TOTAL PETROLEUM HYDROCARBONS

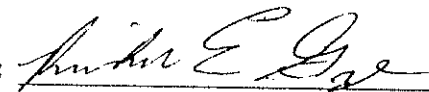
CONC. mg/L  
0.67

Q

## QUALIFIERS:

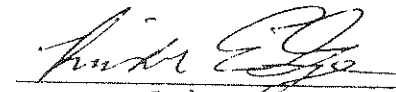
U - Indicates that the Total Petroleum Hydrocarbons were analyzed for but were not detected or were detected below the sample quantitation limit. The results are the sample quantitation limit.

Analysis by:



Laboratory Analyst

Reviewed by:



Laboratory Director

# T. P. H. ANALYSIS DATA SHEET

LAB #: 93070352

REPORT DATE: 07/28/93

PROJECT #: 932584

ANALYSIS DATE: 07/27/93

SAMPLE CODE: WELL-2

COLLECTION DATE: 07/21/93

PROJECT NAME: 4022 W. LINCOLN STREET

PROJ. MGR.: CARL KOHLMAYER

MATRIX: WATER

FAA METHOD: EPA 418.1 (modified)

TOTAL PETROLEUM HYDROCARBONS

CONC. mg/L  
0.52

Q

## QUALIFIERS:

U - Indicates that the Total Petroleum Hydrocarbons were analyzed for but were not detected or were detected below the sample quantitation limit. The results are the sample quantitation limit.

Analysis by: \_\_\_\_\_

Laboratory Analyst

Reviewed by: \_\_\_\_\_

Laboratory Director

**VOLATILE ORGANICS ANALYSIS DATA SHEET**  
**EPA Method 8240 (modified GC/MS)**

LAB #: 93070349

REPORT DATE: 07/28/93

PROJECT #: 932584

ANALYSIS DATE: 07/27/93

SAMPLE CODE: WELL-1

COLLECTION DATE: 07/21/93

PROJECT NAME: 4022 W. LINCOLN STREET

PROJ. MGR.: CARL KOHLMAYER

MATRIX: WATER

<u>CAS NUMBER</u>	<u>TARGET COMPOUND</u>	<u>CONC ug/L</u>	<u>Q</u>
000074-87-3	Chloromethane	10.0	U
000074-83-9	Bromomethane	10.0	U
000075-01-4	Vinyl Chloride	10.0	U
000075-00-3	Chloroethane	10.0	U
000075-09-2	Methylene Chloride	10.0	U
000108-05-4	Vinyl Acetate	10.0	U
000067-64-1	Acetone	10.0	U
000075-15-0	Carbon Disulfide	10.0	U
000075-35-4	1,1-Dichloroethylene	10.0	U
000075-34-3	1,1-Dichloroethane	10.0	U
000540-59-0	1,2-Dichloroethylene (total)	10.0	U
000067-66-3	Chloroform	10.0	U
000107-06-2	1,2-Dichloroethane	10.0	U
000078-93-3	2-Butanone	10.0	U
000071-55-6	1,1,1-Trichloroethane	10.0	U
000056-23-5	Carbon Tetrachloride	10.0	U
000075-27-4	Bromodichloromethane	10.0	U
000078-87-5	1,2-Dichloropropane	10.0	U
010061-01-5	cis-1,3-Dichloropropene	10.0	U
000079-01-6	Trichloroethene	29.1	U
000124-48-1	Dibromochloromethane	10.0	U
000079-00-5	1,1,2-Trichloroethane	10.0	U
000071-43-2	Benzene	10.0	U
010061-02-6	trans-1,3-Dichloropropene	10.0	U
000075-25-2	Bromoform	10.0	U
000108-10-1	4-Methyl-2-Pentanone	10.0	U
000591-78-6	2-Hexanone	10.0	U
000127-18-4	Tetrachloroethene	12.4	U
000079-34-5	1,1,2,2-Tetrachloroethane	10.0	U
000108-88-3	Toluene	10.0	U
000108-90-7	Chlorobenzene	10.0	U
000100-41-4	Ethylbenzene	10.0	U
000100-42-5	Styrene	10.0	U
001330-20-7	Xylene (total)	30.0	U

**QUALIFIERS:**

U - Indicates that the compound was analyzed for but was not detected. The results are the sample quantitation limit.

J - Indicates an estimated value or a value below the sample quantitation limit.

N - Indicates presumptive evidence of a tentatively identified compound.

Analysis by:

  
Analyst

Reviewed by:

  
Laboratory Director

**VOLATILE ORGANICS ANALYSIS DATA SHEET**  
**EPA Method 8240 (modified GC/MS)**

LAB #: 93070349

REPORT DATE: 07/28/93

PROJECT #: 932584

ANALYSIS DATE: 07/27/93

SAMPLE CODE: WELL-1

COLLECTION DATE: 07/21/93

PROJECT NAME: 4022 W. LINCOLN STREET

PROJ. MGR.: CARL KOHLMAYER

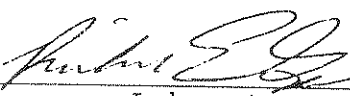
MATRIX: WATER

<u>#</u>	<u>CAS NUMBER</u>	<u>TENTATIVELY IDENTIFIED COMPOUND</u>	<u>CONC ug/Kg</u>	<u>Q</u>
1		Unidentified organic compound	20.3	J
2		Unidentified organic compound	19.3	J
3		Unidentified organic compound	15.8	J
4				
5				
6				
7				
8				
9				
10				

**QUALIFIERS:**

- U** - Indicates that the compound was analyzed for but was not detected. The results are the sample quantitation limit.
- J** - Indicates an estimated value or a value below the sample quantitation limit.
- N** - Indicates presumptive evidence of a tentatively identified compound.

Analysis by:   
Laboratory Analyst

Reviewed by:   
Laboratory Director

**VOLATILE ORGANICS ANALYSIS DATA SHEET**  
**EPA Method 8240 (modified GC/MS)**

LAB #: 93070351

REPORT DATE: 07/28/93

PROJECT #: 932584

ANALYSIS DATE: 07/27/93

SAMPLE CODE: WELL-2

COLLECTION DATE: 07/21/93

PROJECT NAME: 4022 W. LINCOLN STREET

PROJ. MGR.: CARL KOHLMAYER

MATRIX: WATER

<u>CAS NUMBER</u>	<u>TARGET COMPOUND</u>	<u>CONC ug/L</u>	<u>Q</u>
000074-87-3	Chloromethane	10.0	U
000074-83-9	Bromomethane	10.0	U
000075-01-4	Vinyl Chloride	10.0	U
000075-00-3	Chloroethane	10.0	U
000075-09-2	Methylene Chloride	10.0	U
000108-05-4	Vinyl Acetate	10.0	U
000067-64-1	Acetone	10.0	U
000075-15-0	Carbon Disulfide	10.0	U
000075-35-4	1,1-Dichloroethylene	10.0	U
000075-34-3	1,1-Dichloroethane	10.0	U
000540-59-0	1,2-Dichloroethylene (total)	10.0	U
000067-66-3	Chloroform	10.0	U
000107-06-2	1,2-Dichloroethane	10.0	U
000078-93-3	2-Butanone	10.0	U
000071-55-6	1,1,1-Trichloroethane	10.0	U
000056-23-5	Carbon Tetrachloride	10.0	U
000075-27-4	Bromodichloromethane	10.0	U
000078-87-5	1,2-Dichloropropane	10.0	U
010061-01-5	cis-1,3-Dichloropropene	10.0	U
000079-01-6	Trichloroethene	27.6	
000124-48-1	Dibromochloromethane	10.0	U
000079-00-5	1,1,2-Trichloroethane	10.0	U
000071-43-2	Benzene	10.0	U
010061-02-6	trans-1,3-Dichloropropene	10.0	U
000075-25-2	Bromoform	10.0	U
000108-10-1	4-Methyl-2-Pentanone	10.0	U
000591-78-6	2-Hexanone	10.0	U
000127-18-4	Tetrachloroethene	11.4	
000079-34-5	1,1,2,2-Tetrachloroethane	10.0	U
000108-88-3	Toluene	10.0	U
000108-90-7	Chlorobenzene	10.0	U
000100-41-4	Ethylbenzene	10.0	U
000100-42-5	Styrene	10.0	U
001330-20-7	Xylene (total)	30.0	U

**QUALIFIERS:**

U - Indicates that the compound was analyzed for but was not detected. The results are the sample quantitation limit.

J - Indicates an estimated value or a value below the sample quantitation limit.

N - Indicates presumptive evidence of a tentatively identified compound.

Analysis by: *J. EG*  
 Analyst

Reviewed by: *Arthur EG*  
 Laboratory Director

**VOLATILE ORGANICS ANALYSIS DATA SHEET**  
**EPA Method 8240 (modified GC/MS)**

LAB #: 93070351

REPORT DATE: 07/28/93

PROJECT #: 932584

ANALYSIS DATE: 07/27/93

SAMPLE CODE: WELL-2

COLLECTION DATE: 07/21/93

PROJECT NAME: 4022 W. LINCOLN STREET

PROJ. MGR.: CARL KOHLMAYER

MATRIX: WATER

<u>#</u>	<u>CAS NUMBER</u>	<u>TENTATIVELY IDENTIFIED COMPOUND</u>	<u>CONC ug/Kg</u>	<u>Q</u>
1		Unidentified organic compound	24.0	J
2		Unidentified organic compound	16.8	J
3		Unidentified organic compound	13.6	J
4				
5				
6				
7				
8				
9				
10				

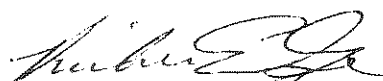
**QUALIFIERS:**

**U** - Indicates that the compound was analyzed for but was not detected. The results are the sample quantitation limit.

**J** - Indicates an estimated value or a value below the sample quantitation limit.

**N** - Indicates presumptive evidence of a tentatively identified compound.

Analysis by:   
Laboratory Analyst

Reviewed by:   
Laboratory Director

# ADVANCED ANALYTICAL LABORATORY

2414 West 12th Street, Tempe, Arizona 85281

## LABORATORY REPORT

**Client:** Burge & Associates  
8869 South Myrtle Avenue  
Tempe, Arizona 85284  
**Project:** Bashas 35th Ave

**Sampling Date:** 7/16/93  
**Date Received:** 7/16/93  
**Date Extracted:** 7/19/93  
**Date of Analysis:** 7/20/93

### EPA METHOD 418.1-Total Petroleum Hydrocarbons

Sample Name	Sample #	Concentration mg/L
MW-1	93-07-0067	<0.2
MW-2	93-07-0068	<0.2
MW-3	93-07-0069	<0.2

**Duplicate, %diff.:** 0%  
**Spike, %recovery:** 114%  
**Limit of Detection:** 0.2 mg/L

Checked By:

Analyst:

*Tom J. Dulak*  
*Kathy H. DeKey*

**REPORT OF ANALYSIS**

Advanced Analytical Laboratory, Inc.  
Attn: Kathy McCloskey  
2414 West 12th Street, Suite 1  
Tempe, AZ 85281

Date Sampled: N/A  
Date Received: N/A  
Date Analyzed: 07/26/93  
Date Reported: 08/04/93  
McKenzie I.D.: N/A  
Units Reported: µg/L (ppb)  
Project ID: B & A  
Page 1 of 2

EPA 502.2

<u>Compound</u>	<u>Method Blank</u>	<u>MRL</u>
Benzene	ND	0.5
Bromobenzene	ND	0.5
Bromochloromethane	ND	0.5
Bromodichloromethane	ND	0.5
Bromoform	ND	1.0
Bromomethane	ND	5.0
n-Butylbenzene	ND	0.5
sec-Butylbenzene	ND	1.0
tert-Butylbenzene	ND	1.0
Carbon tetrachloride	ND	0.5
Chlorobenzene	ND	0.5
Chloroethane	ND	1.0
Chloroform	ND	0.5
Chloromethane	ND	5.0
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	1.0
Dibromochloromethane	ND	1.0
1,2-Dibromo-3-chloropropane	ND	5.0
1,2-Dibromoethane	ND	1.0
Dibromomethane	ND	1.0
1,2-Dichlorobenzene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
Dichlorodifluoromethane	ND	1.0
1,1-Dichloroethane	ND	0.5
1,2-Dichloroethane	ND	0.5
1,1-Dichloroethene	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
1,3-Dichloropropane	ND	0.5
2,2-Dichloropropane	ND	2.0
1,1-Dichloropropene	ND	0.5

**REPORT OF ANALYSIS**

Advanced Analytical Laboratory, Inc.

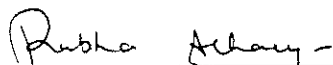
Date Sampled: N/A  
Date Received: N/A  
Date Analyzed: 07/26/93  
Date Reported: 08/04/93  
McKenzie I.D.: N/A  
Units Reported: µg/L (ppb)  
Project ID: B & A  
Page 2 of 2

EPA 502.2

<u>Compound</u>	<u>Method Blank</u>	<u>MRL</u>
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
Ethylbenzene	ND	0.5
Hexachlorobutadiene	ND	0.5
Isopropylbenzene	ND	0.5
p-Isopropyltoluene	ND	1.0
Methylene chloride	ND	2.0
Naphthalene	ND	0.5
n-Propylbenzene	ND	1.0
Styrene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	1.0
1,1,2,2-Tetrachloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Toluene	ND	0.5
1,2,3-Trichlorobenzene	ND	1.0
1,2,4-Trichlorobenzene	ND	1.0
1,1,1-Trichloroethane	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Trichloroethene	ND	0.5
Trichlorofluoromethane	ND	1.0
1,2,3-Trichloropropane	ND	1.0
1,2,4-Trimethylbenzene	ND	1.0
1,3,5-Trimethylbenzene	ND	0.5
Vinyl chloride	ND	1.0
m,p-Xylene	ND	1.0
o-Xylene	ND	0.5

Surrogate (% Recovery)  
1-Chloro-2-fluorobenzene (PID) 99  
1-Chloro-2-fluorobenzene (ELCD) 104

MRL = Minimum Reporting Limit  
ND = None Detected

  
Prabha Acharya, Organic Lab Manager

**REPORT OF ANALYSIS**

Advanced Analytical Laboratory, Inc.  
Attn: Kathy McCloskey  
2414 West 12th Street, Suite 1  
Tempe, AZ 85281

Date Sampled: 07/16/93  
Date Received: 07/19/93  
Date Analyzed: 07/26/93  
Date Reported: 08/04/93  
McKenzie I.D.: E93-3854  
Units Reported: µg/L (ppb)  
Project ID: B & A  
Page 1 of 2

EPA 502.2

<u>Compound</u>	<u>MW-1 93-07-0067</u>	<u>MRL</u>
Benzene	ND	0.5
Bromobenzene	ND	0.5
Bromochloromethane	ND	0.5
Bromodichloromethane	ND	0.5
Bromoform	ND	1.0
Bromomethane	ND	5.0
n-Butylbenzene	ND	0.5
sec-Butylbenzene	ND	1.0
tert-Butylbenzene	ND	1.0
Carbon tetrachloride	ND	0.5
Chlorobenzene	ND	0.5
Chloroethane	ND	1.0
Chloroform	0.9	0.5
Chloromethane	ND	5.0
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	1.0
Dibromochloromethane	ND	1.0
1,2-Dibromo-3-chloropropane	ND	5.0
1,2-Dibromoethane	ND	1.0
Dibromomethane	ND	1.0
1,2-Dichlorobenzene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
Dichlorodifluoromethane	ND	1.0
1,1-Dichloroethane	1.2	0.5
1,2-Dichloroethane	ND	0.5
1,1-Dichloroethene	1.1	0.5
cis-1,2-Dichloroethene	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
1,3-Dichloropropane	ND	0.5
2,2-Dichloropropane	ND	2.0
1,1-Dichloropropene	ND	0.5

## REPORT OF ANALYSIS

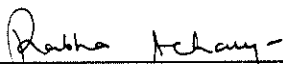
Advanced Analytical Laboratory, Inc.

Date Sampled: 07/16/93  
 Date Received: 07/19/93  
 Date Analyzed: 07/26/93  
 Date Reported: 08/04/93  
 McKenzie I.D.: E93-3854  
 Units Reported: µg/L (ppb)  
 Project ID: B & A  
Page 2 of 2

### EPA 502.2

<u>Compound</u>	<u>MW-1 93-07-0067</u>	<u>MRL</u>
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
Ethylbenzene	ND	0.5
Hexachlorobutadiene	ND	0.5
Isopropylbenzene	ND	0.5
p-Isopropyltoluene	ND	1.0
Methylene chloride	ND	2.0
Naphthalene	ND	0.5
n-Propylbenzene	ND	1.0
Styrene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	1.0
1,1,2,2-Tetrachloroethane	ND	0.5
Tetrachloroethene	11	0.5
Toluene	1.0	0.5
1,2,3-Trichlorobenzene	ND	1.0
1,2,4-Trichlorobenzene	ND	1.0
1,1,1-Trichloroethane	0.7	0.5
1,1,2-Trichloroethane	ND	0.5
Trichloroethene	4.1	0.5
Trichlorofluoromethane	ND	1.0
1,2,3-Trichloropropane	ND	1.0
1,2,4-Trimethylbenzene	ND	1.0
1,3,5-Trimethylbenzene	ND	0.5
Vinyl chloride	ND	1.0
m,p-Xylene	1.5	1.0
o-Xylene	1.0	0.5
Surrogate (% Recovery)		
1-Chloro-2-fluorobenzene (PID)	89	
1-Chloro-2-fluorobenzene (ELCD)	90	

MRL = Minimum Reporting Limit  
 ND = None Detected

  
 Prabha Acharya, Organic Lab Manager

**REPORT OF ANALYSIS**

Advanced Analytical Laboratory, Inc.  
Attn: Kathy McCloskey  
2414 West 12th Street, Suite 1  
Tempe, AZ 85281

Date Sampled: 07/16/93  
Date Received: 07/19/93  
Date Analyzed: 07/26/93  
Date Reported: 08/04/93  
McKenzie I.D.: E93-3855  
Units Reported: µg/L (ppb)  
Project ID: B & A  
Page 1 of 2

EPA 502.2

<u>Compound</u>	<u>MW-2 93-07-0068</u>	<u>MRL</u>
Benzene	ND	0.5
Bromobenzene	ND	0.5
Bromochloromethane	ND	0.5
Bromodichloromethane	16	0.5
Bromoform	ND	1.0
Bromomethane	ND	5.0
n-Butylbenzene	ND	0.5
sec-Butylbenzene	ND	1.0
tert-Butylbenzene	ND	1.0
Carbon tetrachloride	ND	0.5
Chlorobenzene	ND	0.5
Chloroethane	ND	1.0
Chloroform	55	0.5
Chloromethane	ND	5.0
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	1.0
Dibromochloromethane	2.5	1.0
1,2-Dibromo-3-chloropropane	ND	5.0
1,2-Dibromomethane	ND	1.0
Dibromomethane	ND	1.0
1,2-Dichlorobenzene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
Dichlorodifluoromethane	ND	1.0
1,1-Dichloroethane	ND	0.5
1,2-Dichloroethane	ND	0.5
1,1-Dichloroethene	0.7	0.5
cis-1,2-Dichloroethene	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
1,3-Dichloropropane	ND	0.5
2,2-Dichloropropane	ND	2.0
1,1-Dichloropropene	ND	0.5

## REPORT OF ANALYSIS

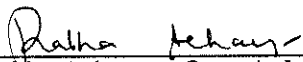
Advanced Analytical Laboratory, Inc.

Date Sampled: 07/16/93  
 Date Received: 07/19/93  
 Date Analyzed: 07/26/93  
 Date Reported: 08/04/93  
 McKenzie I.D.: E93-3855  
 Units Reported: µg/L (ppb)  
 Project ID: B & A  
Page 2 of 2

### EPA 502.2

<u>Compound</u>	<u>MW-2 93-07-0068</u>	<u>MRL</u>
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
Ethylbenzene	ND	0.5
Hexachlorobutadiene	ND	0.5
Isopropylbenzene	ND	0.5
p-Isopropyltoluene	ND	1.0
Methylene chloride	ND	2.0
Naphthalene	ND	0.5
n-Propylbenzene	ND	1.0
Styrene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	1.0
1,1,2,2-Tetrachloroethane	ND	0.5
Tetrachloroethene	3.0	0.5
Toluene	1.1	0.5
1,2,3-Trichlorobenzene	ND	1.0
1,2,4-Trichlorobenzene	ND	1.0
1,1,1-Trichloroethane	0.5	0.5
1,1,2-Trichloroethane	ND	0.5
Trichloroethene	2.2	0.5
Trichlorofluoromethane	ND	1.0
1,2,3-Trichloropropane	ND	1.0
1,2,4-Trimethylbenzene	ND	1.0
1,3,5-Trimethylbenzene	ND	0.5
Vinyl chloride	ND	1.0
m,p-Xylene	1.5	1.0
o-Xylene	1.0	0.5
Surrogate (% Recovery)		
1-Chloro-2-fluorobenzene (PID)	89	
1-Chloro-2-fluorobenzene (ELCD)	93	

MRL = Minimum Reporting Limit  
 ND = None Detected

  
 Prabha Acharya, Organic Lab Manager

## REPORT OF ANALYSIS

Advanced Analytical Laboratory, Inc.  
 Attn: Kathy McCloskey  
 2414 West 12th Street, Suite 1  
 Tempe, AZ 85281

Date Sampled: 07/16/93  
 Date Received: 07/19/93  
 Date Analyzed: 07/26/93  
 Date Reported: 08/04/93  
 McKenzie I.D.: E93-3856  
 Units Reported: µg/L (ppb)  
 Project ID: B & A  
Page 1 of 2

### EPA 502.2

<u>Compound</u>	<u>MW-3 93-07-0069</u>	<u>MRL</u>
Benzene	1.3	0.5
Bromobenzene	ND	0.5
Bromochloromethane	ND	0.5
Bromodichloromethane	ND	0.5
Bromoform	ND	1.0
Bromomethane	ND	5.0
n-Butylbenzene	ND	0.5
sec-Butylbenzene	ND	1.0
tert-Butylbenzene	ND	1.0
Carbon tetrachloride	ND	0.5
Chlorobenzene	ND	0.5
Chloroethane	ND	1.0
Chloroform	0.9	0.5
Chloromethane	ND	5.0
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	1.0
Dibromochloromethane	ND	1.0
1,2-Dibromo-3-chloropropane	ND	5.0
1,2-Dibromoethane	ND	1.0
Dibromomethane	ND	1.0
1,2-Dichlorobenzene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
Dichlorodifluoromethane	ND	1.0
1,1-Dichloroethane	1.3	0.5
1,2-Dichloroethane	ND	0.5
1,1-Dichloroethene	0.6	0.5
cis-1,2-Dichloroethene	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
1,3-Dichloropropane	ND	0.5
2,2-Dichloropropane	ND	2.0
1,1-Dichloropropene	ND	0.5

**REPORT OF ANALYSIS**

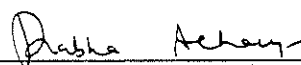
Advanced Analytical Laboratory, Inc.

Date Sampled: 07/16/93  
Date Received: 07/19/93  
Date Analyzed: 07/26/93  
Date Reported: 08/04/93  
McKenzie I.D.: E93-3856  
Units Reported: µg/L (ppb)  
Project ID: B & A  
Page 2 of 2

EPA 502.2

<u>Compound</u>	<u>MW-3 93-07-0069</u>	<u>MRL</u>
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
Ethylbenzene	ND	0.5
Hexachlorobutadiene	ND	0.5
Isopropylbenzene	ND	0.5
p-Isopropyltoluene	ND	1.0
Methylene chloride	ND	2.0
Naphthalene	ND	0.5
n-Propylbenzene	ND	1.0
Styrene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	1.0
1,1,2,2-Tetrachloroethane	ND	0.5
Tetrachloroethene	6.3	0.5
Toluene	2.3	0.5
1,2,3-Trichlorobenzene	ND	1.0
1,2,4-Trichlorobenzene	ND	1.0
1,1,1-Trichloroethane	0.6	0.5
1,1,2-Trichloroethane	ND	0.5
Trichloroethene	3.1	0.5
Trichlorofluoromethane	ND	1.0
1,2,3-Trichloropropane	ND	1.0
1,2,4-Trimethylbenzene	1.5	1.0
1,3,5-Trimethylbenzene	1.6	0.5
Vinyl chloride	ND	1.0
m,p-Xylene	2.3	1.0
o-Xylene	1.9	0.5
Surrogate (% Recovery)		
1-Chloro-2-fluorobenzene (PID)	93	
1-Chloro-2-fluorobenzene (ELCD)	93	

MRL = Minimum Reporting Limit  
ND = None Detected

  
Prabha Acharya, Organic Lab Manager

# CHAIN OF CUSTODY RECORD

## ADVANCED ANALYTICAL LABORATORY, INC.

### CLIENT INFORMATION

Client Name <b>Burge &amp; Associates</b>	Address 8869 South Myrtle Ave.	City Tempe	State AZ	Zip Code 85284	Phone Number 897-8608	Contact
Project Identification <i>Burbas 35th Ave</i>	Project Manager <i>Scott Burge</i>	Name of Sampler (Please Print) <i>George V. Polansky</i>			Sampler Signature <i>[Signature]</i>	Date <i>7/16/93</i>

### SAMPLER INFORMATION

Sample Description	Other (Describe)
<input type="checkbox"/> Soil <input checked="" type="checkbox"/> Water <input type="checkbox"/> Wastewater	<input type="checkbox"/> Waste <input type="checkbox"/> Oil <input type="checkbox"/> Groundwater

No.	Sample Identification	Date	Time	Comp	Grab	Sample Location	Number of Containers	SAMPLE METHOD	ANALYSIS METHOD	Laboratory Number
01	MW-1	7/16/93			X		3	SW-846		93-07-0017
02	MW-2	7/16/93			X		3	BLS-181 8010 8020 8015 (Modified) TCLP Metals (8 STD)	502.2 418.1	93-07-0018
03	MW-3	7/16/93			X		3			93-07-0019
04										
05										
06										
07										
08										
09										
10										

**ADVANCED ANALYTICAL LABORATORY, INC.**  
 2414 West 12th Street, Suite 1  
 Tempe, Arizona 85281  
 602-829-1141  
 602-894-1675 FAX

No. of Containers <i>0</i>	Special Instructions <i>Wait for further instructions</i>
Custody Seals <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Received Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Received Cold <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

### CUSTODY CHAIN

Relinquished By <i>[Signature]</i>	Date / Time <i>7/16/93 2:10</i>	Received By	Date / Time
Received By <i>[Signature]</i>	Date / Time	Relinquished By	Date / Time

Received By (LAB) Signature: *Michelle Fuller* Date: *7/16*

Printed Name: *Michelle Fuller* Date: *7/16*

ADVANCED ANALYTICAL LABORATORY, INC.



Analytical Technologies, Inc.

CLIENT : SEACOR  
PROJECT # : M0003-001-02  
PROJECT NAME : CIRCLEK 0608

DATE RECEIVED : 08/13/93

REPORT DATE : 08/19/93

ATI I.D. : 308731

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	MW2	AQUEOUS	08/13/93
02	MW4	AQUEOUS	08/13/93
03	MW3	AQUEOUS	08/13/93
04	MW1	AQUEOUS	08/13/93
05	MW5	AQUEOUS	08/13/93
06	TRIP BLANK	AQUEOUS	08/12/93

----- TOTALS -----

MATRIX	# SAMPLES
AQUEOUS	6

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in thirty (30) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.



GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30784601

TEST : EPA METHOD 502.2

CLIENT : SEACOR DATE SAMPLED : 07/22/93  
PROJECT # : M0003-001-02 DATE RECEIVED : 07/22/93  
PROJECT NAME : CIRCLE K DATE EXTRACTED : N/A  
CLIENT I.D. : MW1 DATE ANALYZED : 07/22/93  
SAMPLE MATRIX : AQUEOUS UNITS : UG/L  
DILUTION FACTOR : 1

COMPOUNDS	RESULTS
VINYL CHLORIDE	<0.2
BENZENE	27
CARBON TETRACHLORIDE	<0.2
1,2-DICHLOROETHANE	<0.2
TRICHLOROETHYLENE (TCE)	15
PARA-DICHLOROBENZENE	<0.5
1,1-DICHLOROETHYLENE	<0.2
1,1,1-TRICHLOROETHANE	<0.2
CIS-1,2-DICHLOROETHYLENE	0.5
1,2-DICHLOROPROPANE	<0.2
ETHYLBENZENE	3.0
CHLOROBENZENE	<0.5
ORTHO-DICHLOROBENZENE	<0.5
STYRENE	<0.5
TETRACHLOROETHYLENE	5.1
TOLUENE	160 D
TRANS-1,2-DICHLOROETHYLENE	<0.2
META, PARA-XYLENE (TOTAL)	58
ORTHO-XYLENE	14
CHLOROMETHANE	<0.2
BROMOMETHANE	<0.2
CHLOROETHANE	<0.2
1,3-DICHLOROPROPENE (TOTAL)	<0.2
DIBROMOMETHANE	<0.2
1,1-DICHLOROPROPENE	<0.2
1,3-DICHLOROPROPANE	<0.2
1,2,3-TRICHLOROPROPANE	<0.2
2,2-DICHLOROPROPANE	<0.2
CHLOROFORM	2.0
BROMOFORM	<0.2
BROMODICHLOROMETHANE	<0.2
CHLORODIBROMOMETHANE	<0.2
DICHLOROMETHANE	<2.0
ORTHO-CHLOROTOLUENE	<0.5
PARA-CHLOROTOLUENE	<0.5
META-DICHLOROBENZENE	<0.5
1,1-DICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	<0.2
1,1,1,2-TETRACHLOROETHANE	<0.2
1,1,2,2-TETRACHLOROETHANE	<0.2
BROMOBENZENE	<0.5

## GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30784601

TEST : EPA METHOD 502.2

COMPOUNDS	RESULTS
DICHLORODIFLUOROMETHANE	<0.5
TRICHLOROFUOROMETHANE	<0.5
BROMOCHLOROMETHANE	<0.2
1,2-DIBROMOETHANE	<1.0
ISO-PROPYLBENZENE	<2.0
N-PROPYLBENZENE	<1.0
1,3,5-TRIMETHYLBENZENE	<1.0
1,2,4-TRIMETHYLBENZENE	0.9
TERT-BUTYLBENZENE	<0.5
SEC-BUTYLBENZENE	<0.5
P-ISOPROPYLTOLUENE	<0.5
N-BUTYLBENZENE	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	<1.0
1,2,4-TRICHLOROBENZENE	<0.5
NAPHTHALENE	<1.0
1,2,3-TRICHLOROBENZENE	<0.5
HEXACHLOROBUTADIENE	<1.0
TRANS-1,3-DICHLOROPROPENE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2

## SURROGATE PERCENT RECOVERIES

1-CHLORO-2-FLUOROBENZENE (PID) (%)	85
1-CHLORO-2-FLUOROBENZENE (HALL) (%)	93



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30784602

TEST : EPA METHOD 502.2

CLIENT : SEACOR  
PROJECT # : M0003-001-02  
PROJECT NAME : CIRCLE K#608  
CLIENT I.D. : MW2  
SAMPLE MATRIX : AQUEOUS

DATE SAMPLED : 07/22/93  
DATE RECEIVED : 07/22/93  
DATE EXTRACTED : N/A  
DATE ANALYZED : 07/22/93  
UNITS : UG/L  
DILUTION FACTOR : 1

COMPOUNDS	RESULTS
VINYL CHLORIDE	<0.2
BENZENE	<0.5
CARBON TETRACHLORIDE	<0.2
1,2-DICHLOROETHANE	<0.2
TRICHLOROETHYLENE (TCE)	14
PARA-DICHLOROBENZENE	<0.5
1,1-DICHLOROETHYLENE	<0.2
1,1,1-TRICHLOROETHANE	<0.2
CIS-1,2-DICHLOROETHYLENE	0.6
1,2-DICHLOROPROPANE	<0.2
ETHYLBENZENE	<0.5
CHLOROBENZENE	<0.5
ORTHO-DICHLOROBENZENE	<0.5
STYRENE	<0.5
TETRACHLOROETHYLENE	5.0
TOLUENE	<0.5
TRANS-1,2-DICHLOROETHYLENE	<0.2
META, PARA-XYLENE (TOTAL)	<0.5
ORTHO-XYLENE	<0.5
CHLOROMETHANE	<0.2
BROMOMETHANE	<0.2
CHLOROETHANE	<0.2
1,3-DICHLOROPROPENE (TOTAL)	<0.2
DIBROMOMETHANE	<0.2
1,1-DICHLOROPROPENE	<0.2
1,3-DICHLOROPROPANE	<0.2
1,2,3-TRICHLOROPROPANE	<0.2
2,2-DICHLOROPROPANE	<0.2
CHLOROFORM	1.8
BROMOFORM	<0.2
BROMODICHLOROMETHANE	<0.2
CHLORODIBROMOMETHANE	<0.2
DICHLOROMETHANE	<2.0
ORTHO-CHLOROTOLUENE	<0.5
PARA-CHLOROTOLUENE	<0.5
META-DICHLOROBENZENE	<0.5
1,1-DICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	<0.2
1,1,1,2-TETRACHLOROETHANE	<0.2
1,1,2,2-TETRACHLOROETHANE	<0.2
BROMOBENZENE	<0.5



## GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30784602

TEST : EPA METHOD 502.2

COMPOUNDS	RESULTS
DICHLORODIFLUOROMETHANE	<0.5
TRICHLOROFLUOROMETHANE	<0.5
BROMOCHLOROMETHANE	<0.2
1,2-DIBROMOETHANE	<1.0
ISO-PROPYLBENZENE	<2.0
N-PROPYLBENZENE	<1.0
1,3,5-TRIMETHYLBENZENE	<1.0
1,2,4-TRIMETHYLBENZENE	<0.5
TERT-BUTYLBENZENE	<0.5
SEC-BUTYLBENZENE	<0.5
P-ISOPROPYLTOLUENE	<0.5
N-BUTYLBENZENE	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	<1.0
1,2,4-TRICHLOROBENZENE	<0.5
NAPHTHALENE	<1.0
1,2,3-TRICHLOROBENZENE	<0.5
HEXACHLOROBUTADIENE	<1.0
TRANS-1,3-DICHLOROPROPENE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2

## SURROGATE PERCENT RECOVERIES

1-CHLORO-2-FLUOROBENZENE (PID) (%)	92
1-CHLORO-2-FLUOROBENZENE (HALL) (%)	103



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30784603

TEST : EPA METHOD 502.2

CLIENT : SEACOR  
PROJECT # : M0003-001-02  
PROJECT NAME : CIRCLE K#608  
CLIENT I.D. : MW3  
SAMPLE MATRIX : AQUEOUS

DATE SAMPLED : 07/22/93  
DATE RECEIVED : 07/22/93  
DATE EXTRACTED : N/A  
DATE ANALYZED : 07/22/93  
UNITS : UG/L  
DILUTION FACTOR : 1

COMPOUNDS	RESULTS
VINYL CHLORIDE	<0.2
BENZENE	5.1
CARBON TETRACHLORIDE	<0.2
1,2-DICHLOROETHANE	<0.2
TRICHLOROETHYLENE (TCE)	11
PARA-DICHLOROBENZENE	<0.5
1,1-DICHLOROETHYLENE	<0.2
1,1,1-TRICHLOROETHANE	<0.2
CIS-1,2-DICHLOROETHYLENE	0.3
1,2-DICHLOROPROPANE	<0.2
ETHYLBENZENE	<0.5
CHLOROBENZENE	<0.5
ORTHO-DICHLOROBENZENE	<0.5
STYRENE	<0.5
TETRACHLOROETHYLENE	3.6
TOLUENE	<0.5
TRANS-1,2-DICHLOROETHYLENE	<0.2
META, PARA-XYLENE (TOTAL)	<0.5
ORTHO-XYLENE	<0.5
CHLOROMETHANE	<0.2
BROMOMETHANE	<0.2
CHLOROETHANE	<0.2
1,3-DICHLOROPROPENE (TOTAL)	<0.2
DIBROMOMETHANE	<0.2
1,1-DICHLOROPROPENE	<0.2
1,3-DICHLOROPROPANE	<0.2
1,2,3-TRICHLOROPROPANE	<0.2
2,2-DICHLOROPROPANE	<0.2
CHLOROFORM	1.6
BROMOFORM	<0.2
BROMODICHLOROMETHANE	<0.2
CHLORODIBROMOMETHANE	<0.2
DICHLOROMETHANE	<2.0
ORTHO-CHLOROTOLUENE	<0.5
PARA-CHLOROTOLUENE	<0.5
META-DICHLOROBENZENE	<0.5
1,1-DICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	<0.2
1,1,1,2-TETRACHLOROETHANE	<0.2
1,1,2,2-TETRACHLOROETHANE	<0.2
BROMOBENZENE	<0.5



TEST : EPA METHOD 502.2

COMPOUNDS	RESULTS
DICHLORODIFLUOROMETHANE	<0.5
TRICHLOROFLUOROMETHANE	<0.5
BROMOCHLOROMETHANE	<0.2
1,2-DIBROMOETHANE	<1.0
ISO-PROPYLBENZENE	<2.0
N-PROPYLBENZENE	<1.0
1,3,5-TRIMETHYLBENZENE	<1.0
1,2,4-TRIMETHYLBENZENE	<0.5
TERT-BUTYLBENZENE	<0.5
SEC-BUTYLBENZENE	<0.5
P-ISOPROPYLTOLUENE	<0.5
N-BUTYLBENZENE	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	<1.0
1,2,4-TRICHLOROBENZENE	<0.5
NAPHTHALENE	<1.0
1,2,3-TRICHLOROBENZENE	<0.5
HEXACHLOROBUTADIENE	<1.0
TRANS-1,3-DICHLOROPROPENE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2

## SURROGATE PERCENT RECOVERIES

1-CHLORO-2-FLUOROBENZENE (PID) (%)	85
1-CHLORO-2-FLUOROBENZENE (HALL) (%)	85



Analytical Technologies, Inc.

GENERAL CHEMISTRY RESULTS

ATI I.D. : 308731

CLIENT : SEACOR  
PROJECT # : M0003-001-02  
PROJECT NAME : CIRCLEK 0608

DATE RECEIVED : 08/13/93

REPORT DATE : 08/19/93

PARAMETER	UNITS	01	02	03	04	05
PETROLEUM HYDROCARBONS, 418.1	MG/L	<1	<1	<1	<1	<1



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30873102

TEST : EPA METHOD 502.2

CLIENT : SEACOR  
 PROJECT # : M0003-001-02  
 PROJECT NAME : CIRCLEK 0608  
 CLIENT I.D. : MW4  
 SAMPLE MATRIX : AQUEOUS

DATE SAMPLED : 08/13/93  
 DATE RECEIVED : 08/13/93  
 DATE EXTRACTED : N/A  
 DATE ANALYZED : 08/13/93  
 UNITS : UG/L  
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
VINYL CHLORIDE	<0.2
BENZENE	<0.5
CARBON TETRACHLORIDE	<0.2
1,2-DICHLOROETHANE	<0.2
TRICHLOROETHYLENE (TCE)	13
PARA-DICHLOROBENZENE	<0.5
1,1-DICHLOROETHYLENE	<0.2
1,1,1-TRICHLOROETHANE	<0.2
CIS-1,2-DICHLOROETHYLENE	0.5
1,2-DICHLOROPROPANE	<0.2
ETHYLBENZENE	<0.5
CHLOROBENZENE	<0.5
ORTHO-DICHLOROBENZENE	<0.5
STYRENE	<0.5
TETRACHLOROETHYLENE	4.7
TOLUENE	<0.5
TRANS-1,2-DICHLOROETHYLENE	<0.2
META, PARA-XYLENE (TOTAL)	<0.5
ORTHO-XYLENE	<0.5
CHLOROMETHANE	<0.2
BROMOMETHANE	<0.2
CHLOROETHANE	<0.2
1,3-DICHLOROPROPENE (TOTAL)	<0.2
DIBROMOMETHANE	<0.2
1,1-DICHLOROPROPENE	<0.2
1,3-DICHLOROPROPANE	<0.2
1,2,3-TRICHLOROPROPANE	<0.2
2,2-DICHLOROPROPANE	<0.2
CHLOROFORM	2.6
BROMOFORM	<0.2
BROMODICHLOROMETHANE	<0.2
CHLORODIBROMOMETHANE	<0.2
DICHLOROMETHANE	<2.0
ORTHO-CHLOROTOLUENE	<0.5
PARA-CHLOROTOLUENE	<0.5
META-DICHLOROBENZENE	<0.5
1,1-DICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	<0.2
1,1,1,2-TETRACHLOROETHANE	<0.2
1,1,2,2-TETRACHLOROETHANE	<0.2
BROMOBENZENE	<0.5



TEST : EPA METHOD 502.2

COMPOUNDS	RESULTS
DICHLORODIFLUOROMETHANE	<0.5
TRICHLOROFLUOROMETHANE	<0.5
BROMOCHLOROMETHANE	<0.2
1,2-DIBROMOETHANE	<1.0
ISO-PROPYLBENZENE	<2.0
N-PROPYLBENZENE	<1.0
1,3,5-TRIMETHYLBENZENE	<1.0
1,2,4-TRIMETHYLBENZENE	<0.5
TERT-BUTYLBENZENE	<0.5
SEC-BUTYLBENZENE	<0.5
P-ISOPROPYLTOLUENE	<0.5
N-BUTYLBENZENE	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	<1.0
1,2,4-TRICHLOROBENZENE	<0.5
NAPHTHALENE	<1.0
1,2,3-TRICHLOROBENZENE	<0.5
HEXACHLOROBUTADIENE	<1.0
TRANS-1,3-DICHLOROPROPENE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2

## SURROGATE PERCENT RECOVERIES

1-CHLORO-2-FLUOROBENZENE (PID) (%)	93
1-CHLORO-2-FLUOROBENZENE (HALL) (%)	91



GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30873105

TEST : EPA METHOD 502.2

CLIENT : SEACOR  
PROJECT # : M0003-001-02  
PROJECT NAME : CIRCLEK 0608  
CLIENT I.D. : MW5  
SAMPLE MATRIX : AQUEOUS

DATE SAMPLED : 08/13/93  
DATE RECEIVED : 08/13/93  
DATE EXTRACTED : N/A  
DATE ANALYZED : 08/16/93  
UNITS : UG/L  
DILUTION FACTOR : 1

COMPOUNDS	RESULTS
VINYL CHLORIDE	<0.2
BENZENE	25
CARBON TETRACHLORIDE	<0.2
1,2-DICHLOROETHANE	<0.2
TRICHLOROETHYLENE (TCE)	11
PARA-DICHLOROBENZENE	<0.5
1,1-DICHLOROETHYLENE	<0.2
1,1,1-TRICHLOROETHANE	<0.2
CIS-1,2-DICHLOROETHYLENE	<0.2
1,2-DICHLOROPROPANE	<0.2
ETHYLBENZENE	<0.5
CHLOROBENZENE	<0.5
ORTHO-DICHLOROBENZENE	<0.5
STYRENE	<0.5
TETRACHLOROETHYLENE	4.7
TOLUENE	5.9
TRANS-1,2-DICHLOROETHYLENE	<0.2
META, PARA-XYLENE (TOTAL)	11
ORTHO-XYLENE	1.1
CHLOROMETHANE	<0.2
BROMOMETHANE	<0.2
CHLOROETHANE	<0.2
1,3-DICHLOROPROPENE (TOTAL)	<0.2
DIBROMOMETHANE	<0.2
1,1-DICHLOROPROPENE	<0.2
1,3-DICHLOROPROPANE	<0.2
1,2,3-TRICHLOROPROPANE	<0.2
2,2-DICHLOROPROPANE	<0.2
CHLOROFORM	1.4
BROMOFORM	<0.2
BROMODICHLOROMETHANE	<0.2
CHLORODIBROMOMETHANE	<0.2
DICHLOROMETHANE	<2.0
ORTHO-CHLOROTOLUENE	<0.5
PARA-CHLOROTOLUENE	<0.5
META-DICHLOROBENZENE	<0.5
1,1-DICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	<0.2
1,1,1,2-TETRACHLOROETHANE	<0.2
1,1,2,2-TETRACHLOROETHANE	<0.2
BROMOBENZENE	<0.5



TEST : EPA METHOD 502.2

COMPOUNDS	RESULTS
DICHLORODIFLUOROMETHANE	<0.5
TRICHLOROFLUOROMETHANE	<0.5
BROMOCHLOROMETHANE	<0.2
1,2-DIBROMOETHANE	<1.0
ISO-PROPYLBENZENE	<2.0
N-PROPYLBENZENE	<1.0
1,3,5-TRIMETHYLBENZENE	<1.0
1,2,4-TRIMETHYLBENZENE	<0.5
TERT-BUTYLBENZENE	<0.5
SEC-BUTYLBENZENE	<0.5
P-ISOPROPYLTOLUENE	<0.5
N-BUTYLBENZENE	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	<1.0
1,2,4-TRICHLOROBENZENE	<0.5
NAPHTHALENE	<1.0
1,2,3-TRICHLOROBENZENE	<0.5
HEXACHLOROBUTADIENE	<1.0
TRANS-1,3-DICHLOROPROPENE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2

## SURROGATE PERCENT RECOVERIES

1-CHLORO-2-FLUOROBENZENE (PID) (%)	81
1-CHLORO-2-FLUOROBENZENE (HALL) (%)	83



## GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30873106

TEST : EPA METHOD 502.2

CLIENT : SEACOR  
 PROJECT # : M0003-001-02  
 PROJECT NAME : CIRCLEK 0608  
 CLIENT I.D. : TRIP BLANK  
 SAMPLE MATRIX : AQUEOUS

DATE SAMPLED : 08/12/93  
 DATE RECEIVED : 08/13/93  
 DATE EXTRACTED : N/A  
 DATE ANALYZED : 08/16/93  
 UNITS : UG/L  
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
VINYL CHLORIDE	<0.2
BENZENE	<0.5
CARBON TETRACHLORIDE	<0.2
1,2-DICHLOROETHANE	<0.2
TRICHLOROETHYLENE (TCE)	<0.2
PARA-DICHLOROBENZENE	<0.5
1,1-DICHLOROETHYLENE	<0.2
1,1,1-TRICHLOROETHANE	<0.2
CIS-1,2-DICHLOROETHYLENE	<0.2
1,2-DICHLOROPROPANE	<0.2
ETHYLBENZENE	<0.5
CHLOROBENZENE	<0.5
ORTHO-DICHLOROBENZENE	<0.5
STYRENE	<0.5
TETRACHLOROETHYLENE	<0.2
TOLUENE	<0.5
TRANS-1,2-DICHLOROETHYLENE	<0.2
META, PARA-XYLENE (TOTAL)	<0.5
ORTHO-XYLENE	<0.5
CHLOROMETHANE	<0.2
BROMOMETHANE	<0.2
CHLOROETHANE	<0.2
1,3-DICHLOROPROPENE (TOTAL)	<0.2
DIBROMOMETHANE	<0.2
1,1-DICHLOROPROPENE	<0.2
1,3-DICHLOROPROPANE	<0.2
1,2,3-TRICHLOROPROPANE	<0.2
2,2-DICHLOROPROPANE	<0.2
CHLOROFORM	<0.2
BROMOFORM	<0.2
BROMODICHLOROMETHANE	<0.2
CHLORODIBROMOMETHANE	<0.2
DICHLOROMETHANE	<2.0
ORTHO-CHLOROTOLUENE	<0.5
PARA-CHLOROTOLUENE	<0.5
META-DICHLOROBENZENE	<0.5
1,1-DICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	<0.2
1,1,1,2-TETRACHLOROETHANE	<0.2
1,1,2,2-TETRACHLOROETHANE	<0.2
BROMOBENZENE	<0.5

(CONTINUED NEXT PAGE)



TEST : EPA METHOD 502.2

COMPOUNDS	RESULTS
DICHLORODIFLUOROMETHANE	<0.5
TRICHLOROFLUOROMETHANE	<0.5
BROMOCHLOROMETHANE	<0.2
1,2-DIBROMOETHANE	<1.0
ISO-PROPYLBENZENE	<2.0
N-PROPYLBENZENE	<1.0
1,3,5-TRIMETHYLBENZENE	<1.0
1,2,4-TRIMETHYLBENZENE	<0.5
TERT-BUTYLBENZENE	<0.5
SEC-BUTYLBENZENE	<0.5
P-ISOPROPYLTOLUENE	<0.5
N-BUTYLBENZENE	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	<1.0
1,2,4-TRICHLOROBENZENE	<0.5
NAPHTHALENE	<1.0
1,2,3-TRICHLOROBENZENE	<0.5
HEXACHLOROBUTADIENE	<1.0
TRANS-1,3-DICHLOROPROPENE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2

## SURROGATE PERCENT RECOVERIES

1-CHLORO-2-FLUOROBENZENE (PID) (%)	88
1-CHLORO-2-FLUOROBENZENE (HALL) (%)	81



## REAGENT BLANK

TEST : EPA METHOD 502.2

CLIENT : SEACOR  
PROJECT # : M0003-001-02  
PROJECT NAME : CIRCLEK 0608  
CLIENT I.D. : REAGENT BLANK

ATI I.D. : 308731  
DATE EXTRACTED : 08/13/93  
DATE ANALYZED : 08/13/93  
UNITS : UG/L  
DILUTION FACTOR : N/A

COMPOUNDS	RESULTS
VINYL CHLORIDE	<0.2
BENZENE	<0.5
CARBON TETRACHLORIDE	<0.2
1,2-DICHLOROETHANE	<0.2
TRICHLOROETHYLENE (TCE)	<0.2
PARA-DICHLOROBENZENE	<0.5
1,1-DICHLOROETHYLENE	<0.2
1,1,1-TRICHLOROETHANE	<0.2
CIS-1,2-DICHLOROETHYLENE	<0.2
1,2-DICHLOROPROPANE	<0.2
ETHYLBENZENE	<0.5
CHLOROBENZENE	<0.5
ORTHO-DICHLOROBENZENE	<0.5
STYRENE	<0.5
TETRACHLOROETHYLENE	<0.2
TOLUENE	<0.5
TRANS-1,2-DICHLOROETHYLENE	<0.2
META, PARA-XYLENE (TOTAL)	<0.5
ORTHO-XYLENE	<0.5
CHLOROMETHANE	<0.2
BROMOMETHANE	<0.2
CHLOROETHANE	<0.2
1,3-DICHLOROPROPENE (TOTAL)	<0.2
DIBROMOMETHANE	<0.2
1,1-DICHLOROPROPENE	<0.2
1,3-DICHLOROPROPANE	<0.2
1,2,3-TRICHLOROPROPANE	<0.2
2,2-DICHLOROPROPANE	<0.2
CHLOROFORM	<0.2
BROMOFORM	<0.2
BROMODICHLOROMETHANE	<0.2
CHLORODIBROMOMETHANE	<0.2
DICHLOROMETHANE	<2.0
ORTHO-CHLOROTOLUENE	<0.5
PARA-CHLOROTOLUENE	<0.5
META-DICHLOROBENZENE	<0.5
1,1-DICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	<0.2
1,1,1,2-TETRACHLOROETHANE	<0.2
1,1,2,2-TETRACHLOROETHANE	<0.2
BROMOBENZENE	<0.5
DICHLORODIFLUOROMETHANE	<0.5
TRICHLOROFLUOROMETHANE	<0.5

(CONTINUED NEXT PAGE)



REAGENT BLANK

ATI I.D. : 308731

TEST : EPA METHOD 502.2

COMPOUNDS	RESULTS
BROMOCHLOROMETHANE	<0.2
1,2-DIBROMOETHANE	<1.0
ISO-PROPYLBENZENE	<2.0
N-PROPYLBENZENE	<1.0
1,3,5-TRIMETHYLBENZENE	<1.0
1,2,4-TRIMETHYLBENZENE	<0.5
TERT-BUTYLBENZENE	<0.5
SEC-BUTYLBENZENE	<0.5
P-ISOPROPYLTOLUENE	<0.5
N-BUTYLBENZENE	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	<1.0
1,2,4-TRICHLOROBENZENE	<0.5
NAPHTHALENE	<1.0
1,2,3-TRICHLOROBENZENE	<0.5
HEXACHLOROBUTADIENE	<1.0
TRANS-1,3-DICHLOROPROPENE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2

## SURROGATE PERCENT RECOVERIES

1-CHLORO-2-FLUOROBENZENE (PID) (%)	93
1-CHLORO-2-FLUOROBENZENE (HALL) (%)	82



## REAGENT BLANK

TEST : EPA METHOD 502.2

CLIENT : SEACOR  
 PROJECT # : M0003-001-02  
 PROJECT NAME : CIRCLEK 0608  
 CLIENT I.D. : REAGENT BLANK

ATI I.D. : 308731  
 DATE EXTRACTED : 08/16/93  
 DATE ANALYZED : 08/16/93  
 UNITS : UG/L  
 DILUTION FACTOR : N/A

COMPOUNDS	RESULTS
VINYL CHLORIDE	<0.2
BENZENE	<0.5
CARBON TETRACHLORIDE	<0.2
1,2-DICHLOROETHANE	<0.2
TRICHLOROETHYLENE (TCE)	<0.2
PARA-DICHLOROBENZENE	<0.5
1,1-DICHLOROETHYLENE	<0.2
1,1,1-TRICHLOROETHANE	<0.2
CIS-1,2-DICHLOROETHYLENE	<0.2
1,2-DICHLOROPROPANE	<0.2
ETHYLBENZENE	<0.5
CHLOROBENZENE	<0.5
ORTHO-DICHLOROBENZENE	<0.5
STYRENE	<0.5
TETRACHLOROETHYLENE	<0.2
TOLUENE	<0.5
TRANS-1,2-DICHLOROETHYLENE	<0.2
META, PARA-XYLENE (TOTAL)	<0.5
ORTHO-XYLENE	<0.5
CHLOROMETHANE	<0.2
BROMOMETHANE	<0.2
CHLOROETHANE	<0.2
1,3-DICHLOROPROPENE (TOTAL)	<0.2
DIBROMOMETHANE	<0.2
1,1-DICHLOROPROPENE	<0.2
1,3-DICHLOROPROPANE	<0.2
1,2,3-TRICHLOROPROPANE	<0.2
2,2-DICHLOROPROPANE	<0.2
CHLOROFORM	<0.2
BROMOFORM	<0.2
BROMODICHLOROMETHANE	<0.2
CHLORODIBROMOMETHANE	<0.2
DICHLOROMETHANE	<2.0
ORTHO-CHLOROTOLUENE	<0.5
PARA-CHLOROTOLUENE	<0.5
META-DICHLOROBENZENE	<0.5
1,1-DICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	<0.2
1,1,1,2-TETRACHLOROETHANE	<0.2
1,1,2,2-TETRACHLOROETHANE	<0.2
BROMOBENZENE	<0.5
DICHLORODIFLUOROMETHANE	<0.5
TRICHLOROFLUOROMETHANE	<0.5

(CONTINUED NEXT PAGE)



REAGENT BLANK

ATI I.D. : 308731

TEST : EPA METHOD 502.2

COMPOUNDS	RESULTS
BROMOCHLOROMETHANE	<0.2
1,2-DIBROMOETHANE	<1.0
ISO-PROPYLBENZENE	<2.0
N-PROPYLBENZENE	<1.0
1,3,5-TRIMETHYLBENZENE	<1.0
1,2,4-TRIMETHYLBENZENE	<0.5
TERT-BUTYLBENZENE	<0.5
SEC-BUTYLBENZENE	<0.5
P-ISOPROPYLTOLUENE	<0.5
N-BUTYLBENZENE	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	<1.0
1,2,4-TRICHLOROBENZENE	<0.5
NAPHTHALENE	<1.0
1,2,3-TRICHLOROBENZENE	<0.5
HEXACHLOROBUTADIENE	<1.0
TRANS-1,3-DICHLOROPROPENE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2

## SURROGATE PERCENT RECOVERIES

1-CHLORO-2-FLUOROBENZENE (PID) (%)	93
1-CHLORO-2-FLUOROBENZENE (HALL) (%)	81



Analytical Technologies, Inc.

QUALITY CONTROL DATA

ATI I.D. : 308731

TEST : EPA METHOD 502.2

CLIENT : SEACOR  
 PROJECT # : M0003-001-02  
 PROJECT NAME : CIRCLEK 0608  
 REF I.D. : 30873601

DATE ANALYZED : 08/13/93  
 SAMPLE MATRIX : AQUEOUS  
 UNITS : UG/L

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
1,1-DICHLOROETHYLENE	<0.2	20	18	90	20	100	11
TRICHLOROETHENE	<0.2	20	20	100	19	95	5
TETRACHLOROETHENE	<0.2	20	20	100	20	100	0
BENZENE	<0.5	20	23	115	23	115	0
BROMODICHLOROMETHANE	<0.2	20	23	115	24	120	4
CHLOROFORM	<0.2	20	20	100	19	95	5
1,1,1-TRICHLOROETHANE	<0.2	20	24	120	24	120	0
TOLUENE	<0.5	20	19	95	19	95	0
CHLOROBENZENE	<0.5	20	23	115	23	115	0
META-XYLENE	<0.5	20	20	100	20	100	0

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$



Analytical Technologies, Inc., Phoenix, Arizona  
 San Diego • Phoenix • Seattle • Pensacola • Ft. Collins • Portland

# CHAIN OF CUSTODY

DATE: 8/13/93 PAGE 1 OF 1

ATI LAB I.D. 30873

PROJECT MANAGER: Dave Pettigrew  
 COMPANY: SEACOR  
 ADDRESS: 5025 E. Washington, Ste 100  
 Phoenix, AZ  
 PHONE: (602) 220-0114  
 FAX: 220-0254  
 BILL TO: Same  
 COMPANY:  
 ADDRESS:

SAMPLE ID	DATE	TIME	MATRIX	LAB ID
MW2	8/13/93	1040	Aqueous	1
MW4		1130		2
MW3		1205		3
MW1		1250		4
MW5		1330	V	5
TRIP BLANK	8/12/93	4:00		6

## ANALYSIS REQUEST

TEST	SDWA Volatiles (502.1/503.1), 502.2 Reg. & Unreg.	Aromatic Hydrocarbons (602/8020)	Chlorinated Hydrocarbons (601/8010)	Diesel/Gasoline/BTXE/MTBE (MOD 8015/8020)	BTXE/MTBE (8020)	Petroleum Hydrocarbons (418.1)	(MOD 8015) Gas/Diesel	Diesel/Gasoline/BTXE/MTBE (MOD 8015/8020)	Herbicides (615/8150)	Base/Neutral/Acid Compounds GC/MS (625/8270)	Volatile Organics GC/MS (624/8240)	Polynuclear Aromatics (610/8310)	SDWA Primary Standards - Arizona	SDWA Secondary Standards - Arizona	SDWA Primary Standards - Federal	SDWA Secondary Standards - Federal	The 13 Priority Pollutant Metals	HCRA Metals by Total Digestion	HCRA Metals by TCLP (1311)	NUMBER OF CONTAINERS
	X					X														6
						X														2
						X														2
						X														2
						X														6

**PROJECT INFORMATION**

PROJ. NO.: M003-001-02  
 PROJ. NAME: CRUX #0608  
 P.O. NO.:  
 SHIPPED VIA:

**SAMPLE RECEIPT**

NO. CONTAINERS: 17  
 CUSTODY SEALS: Q/N/A  
 RECEIVED INTACT:   
 RECEIVED COLD:

**PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS**

(RUSH)  24hr  48hr  72hr  1 WEEK (NORMAL)  2 WEEK

Comments:  
 Run 502.2 analyses on  
 72 hr TRIP

**SAMPLED & RELINQUISHED BY: 1.**

Signature: [Signature] Time: 1422  
 Printed Name: D. Pettigrew Date: 9/13/93  
 Company: SEACOR Phone: 220-0114

**RECEIVED BY: 1.**

Signature: [Signature] Time:  
 Printed Name: Analytical Technologies, Inc. Date:  
 Company: Analytical Technologies, Inc.

**RELINQUISHED BY: 2.**

Signature:  
 Printed Name:  
 Company:

**RECEIVED BY: 2.**

Signature: [Signature] Time:  
 Printed Name: Analytical Technologies, Inc. Date:  
 Company: Analytical Technologies, Inc.

PLEASE FILL THIS FORM IN COMPLETELY. SHADED AREAS ARE FOR LAB USE ONLY.

**APPENDIX B**

**LABORATORY REPORTS, CHAIN-OF-CUSTODY DOCUMENTATION,  
AND LABORATORY QA/QC PROCEDURES**



Environmental  
Science &  
Engineering, Inc.

8901 North Industrial Road  
Peoria, IL 61615-1589  
Phone (309) 692-4422  
Lab Fax (309) 692-5232

An IEPA Contract Laboratory

PAGE NUMBER: 1  
REPORT DATE: 08-30-93  
DATE RECEIVED: 08-12-93  
PROJECT NUMBER: 592-5884

TO: ENVIRONMENTAL SCIENCE & ENGINEERING, INC.  
2255 NORTH 44TH STREET, SUITE 200  
PHOENIX, AZ 85008  
ATTN: MR. STEVE WILLIS

CLIENT PROJECT NAME: PHOENIX-CIRCLE K 01992  
CLIENT PROJECT NUMBER: 693-6343

ESE SAMPLE 13972\*1 13972\*2 13972\*3  
SAMPLE DATE 08/11/93 08/11/93 08/11/93

DESCRIPTION	UNITS	CKMW-1 WATER	CKMW-3 WATER	CKMW-2 WATER	METHOD NO.	DATE ANALYZED	ANALYST
VOLATILE ORGANIC COMPOUNDS							
BENZENE	UG/L	< 2	< 2	< 2	524.2	08-19-93	LDM
VINYL CHLORIDE	UG/L	< 2	< 2	< 2	524.2	08-19-93	LDM
CARBON TETRACHLORIDE	UG/L	< 2	< 2	< 2	524.2	08-19-93	LDM
1,2-DICHLOROETHANE	UG/L	< 2	< 2	< 2	524.2	08-19-93	LDM
TRICHLOROETHENE	UG/L	< 2	< 2	< 2	524.2	08-19-93	LDM
1,1-DICHLOROETHENE	UG/L	< 2	< 2	< 2	524.2	08-19-93	LDM
1,1,1-TRICHLOROETHANE	UG/L	< 2	< 2	< 2	524.2	08-19-93	LDM
1,4-DICHLOROBENZENE	UG/L	< 2	< 2	< 2	524.2	08-19-93	LDM
BROMOBENZENE	UG/L	< 2	< 2	< 2	524.2	08-19-93	LDM
BROMODICHLOROMETHANE	UG/L	< 2	< 2	< 2	524.2	08-19-93	LDM
BROMOFORM	UG/L	< 2	< 2	< 2	524.2	08-19-93	LDM
BROMOMETHANE	UG/L	< 2	< 2	< 2	524.2	08-19-93	LDM
CHLOROBENZENE	UG/L	< 2	< 2	< 2	524.2	08-19-93	LDM
DIBROMOCHLOROMETHANE	UG/L	< 2	< 2	< 2	524.2	08-19-93	LDM
CHLOROETHANE	UG/L	< 2	< 2	< 2	524.2	08-19-93	LDM

Report Approved by: *Vickie M. Wynkoop*  
Vickie M. Wynkoop  
Project Manager



Environmental  
Science &  
Engineering, Inc.

8901 North Industrial Road  
Peoria, IL 61615-1589  
Phone (309) 692-4422  
Lab Fax (309) 692-5232

An IEPA Contract Laboratory

PAGE NUMBER: 2  
REPORT DATE: 08-30-93  
DATE RECEIVED: 08-12-93  
PROJECT NUMBER: 592-5884

TO: ENVIRONMENTAL SCIENCE & ENGINEERING, INC.  
2255 NORTH 44TH STREET, SUITE 200  
PHOENIX, AZ 85008  
ATTN: MR. STEVE WILLIS

CLIENT PROJECT NAME: PHOENIX-CIRCLE K 01992  
CLIENT PROJECT NUMBER: 693-6343

ESE SAMPLE 13972\*1 13972\*2 13972\*3  
SAMPLE DATE 08/11/93 08/11/93 08/11/93

DESCRIPTION UNITS CKMW-1 WATER CKMW-3 WATER CKMW-2 WATER ANALYZED DATE ANALYZED ANALYST

VOLATILE ORGANIC COMPOUNDS (CONT'D)

DESCRIPTION	UNITS	CKMW-1 WATER	CKMW-3 WATER	CKMW-2 WATER	METHOD NO.	DATE ANALYZED	ANALYST
CHLOROFORM	UG/L	< 2	< 2	6	524.2	08-19-93	LDM
CHLOROMETHANE	UG/L	< 2	< 2	< 2	524.2	08-19-93	LDM
4-CHLOROTOLUENE	UG/L	< 2	< 2	< 2	524.2	08-19-93	LDM
DIBROMOMETHANE	UG/L	< 2	< 2	< 2	524.2	08-19-93	LDM
1,2-DICHLOROBENZENE	UG/L	< 2	< 2	< 2	524.2	08-19-93	LDM
DICHLOROMETHANE	UG/L	< 2	< 2	< 2	524.2	08-19-93	LDM
1,1-DICHLOROETHANE	UG/L	< 2	< 2	< 2	524.2	08-19-93	LDM
1,1-DICHLOROPROPENE	UG/L	< 2	< 2	< 2	524.2	08-19-93	LDM
1,2-DICHLOROPROPANE	UG/L	< 2	< 2	< 2	524.2	08-19-93	LDM
1,3-DICHLOROPROPANE	UG/L	< 2	< 2	< 2	524.2	08-19-93	LDM
CIS-1,3-DICHLOROPROPENE	UG/L	< 2	< 2	< 2	524.2	08-19-93	LDM
TRANS-1,3-DICHLOROPROPENE	UG/L	< 2	< 2	< 2	524.2	08-19-93	LDM
2,2-DICHLOROPROPANE	UG/L	< 2	< 2	< 2	524.2	08-19-93	LDM
ETHYLBENZENE	UG/L	< 2	< 2	< 2	524.2	08-19-93	LDM
STYRENE	UG/L	< 2	< 2	< 2	524.2	08-19-93	LDM
1,1,2-TRICHLOROETHANE	UG/L	< 2	< 2	< 2	524.2	08-19-93	LDM

Report Approved by: *Vickie M. Wynkoop*  
Vickie M. Wynkoop  
Project Manager



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Science &  
Engineering, Inc.

8901 North Industrial Road  
Peoria, IL 61615-1589  
Phone (309) 692-4422  
Lab Fax (309) 692-5232

An IEPA Contract Laboratory

PAGE NUMBER: 3  
REPORT DATE: 08-30-93  
DATE RECEIVED: 08-12-93  
PROJECT NUMBER: 592-5884

TO: ENVIRONMENTAL SCIENCE & ENGINEERING, INC.  
2255 NORTH 44TH STREET, SUITE 200  
PHOENIX, AZ 85008  
ATTN: MR. STEVE WILLIS

CLIENT PROJECT NAME: PHOENIX-CIRCLE K 01992  
CLIENT PROJECT NUMBER: 693-6343

ESE SAMPLE 13972\*1 13972\*2 13972\*3  
SAMPLE DATE 08/11/93 08/11/93 08/11/93

DESCRIPTION	UNITS	CKMW-1 WATER	CKMW-3 WATER	CKMW-2 WATER	METHOD NO.	DATE ANALYZED	ANALYST
VOLATILE ORGANIC COMPOUNDS (CONT'D)							
1,1,1,2-TETRACHLOROETHANE	UG/L	< 2	< 2	< 2	524.2	08-19-93	LDM
1,1,2,2-TETRACHLOROETHANE	UG/L	< 2	< 2	< 2	524.2	08-19-93	LDM
TETRACHLOROETHENE	UG/L	< 2	< 2	< 2	524.2	08-19-93	LDM
1,2,3-TRICHLOROPROPANE	UG/L	< 2	< 2	< 2	524.2	08-19-93	LDM
TOLUENE	UG/L	< 2	< 2	< 2	524.2	08-19-93	LDM
1,2,4-TRIMETHYLBENZENE	UG/L	< 2	< 2	< 2	524.2	08-19-93	LDM
1,2,3-TRICHLOROBENZENE	UG/L	< 2	< 2	< 2	524.2	08-19-93	LDM
1,3,5-TRIMETHYLBENZENE	UG/L	< 2	< 2	< 2	524.2	08-19-93	LDM
ISOPROPYLBENZENE	UG/L	< 2	< 2	< 2	524.2	08-19-93	LDM
DICHLORODIFLUOROMETHANE	UG/L	< 2	< 2	< 2	524.2	08-19-93	LDM
BROMOCHLOROMETHANE	UG/L	< 2	< 2	< 2	524.2	08-19-93	LDM
2-CHLOROTOLUENE	UG/L	< 2	< 2	< 2	524.2	08-19-93	LDM
1,3-DICHLOROBENZENE	UG/L	< 2	< 2	< 2	524.2	08-19-93	LDM
CIS-1,2-DICHLOROETHENE	UG/L	< 2	< 2	< 2	524.2	08-19-93	LDM
TRANS-1,2-DICHLOROETHENE	UG/L	< 2	< 2	< 2	524.2	08-19-93	LDM
M/P-XYLENE	UG/L	< 2	< 2	< 2	524.2	08-19-93	LDM

Report Approved by: *Vickie M. Wynkoop*  
Vickie M. Wynkoop  
Project Manager



Env  
Science &  
Engineering, Inc.

8901 North Industrial Road  
Peoria, IL 61615-1589  
Phone (309) 692-4422  
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An IEPA Contract Laboratory

PAGE NUMBER: 4  
REPORT DATE: 08-30-93  
DATE RECEIVED: 08-12-93  
PROJECT NUMBER: 592-5884

TO: ENVIRONMENTAL SCIENCE & ENGINEERING, INC.  
2255 NORTH 44TH STREET, SUITE 200  
PHOENIX, AZ 85008  
ATTN: MR. STEVE WILLIS

CLIENT PROJECT NAME: PHOENIX-CIRCLE K 01992  
CLIENT PROJECT NUMBER: 693-6343

ESE SAMPLE 13972\*1 13972\*2 13972\*3  
SAMPLE DATE 08/11/93 08/11/93 08/11/93

DESCRIPTION UNITS CKMW-1 WATER CKMW-3 WATER CKMW-2 WATER METHOD NO. DATE ANALYZED ANALYST

VOLATILE ORGANIC COMPOUNDS (CONT'D)

O-XYLENE	UG/L	< 2	< 2	< 2	524.2	08-19-93	LDM
N-PROPYLBENZENE	UG/L	< 2	< 2	< 2	524.2	08-19-93	LDM
N-BUTYLBENZENE	UG/L	< 2	< 2	< 2	524.2	08-19-93	LDM
NAPHTHALENE	UG/L	< 2	< 2	< 2	524.2	08-19-93	LDM
HEXACHLOROBUTADIENE	UG/L	< 2	< 2	< 2	524.2	08-19-93	LDM
P-ISOPROPYLTOLUENE	UG/L	< 2	< 2	< 2	524.2	08-19-93	LDM
TERT-BUTYLBENZENE	UG/L	< 2	< 2	< 2	524.2	08-19-93	LDM
SEC-BUTYLBENZENE	UG/L	< 2	< 2	< 2	524.2	08-19-93	LDM
TRICHLOROFLUOROMETHANE	UG/L	< 2	< 2	< 2	524.2	08-19-93	LDM
1,2-DIBROMOETHANE (EDB)	UG/L	< 2	< 2	< 2	524.2	08-19-93	LDM
1,2-DIBROMO-3-CHLOROPROPANE	UG/L	< 2	< 2	< 2	524.2	08-19-93	LDM
1,2,4-TRICHLOROBENZENE	UG/L	< 2	< 2	< 2	524.2	08-19-93	LDM

TOTAL PETROLEUM 418.1 08-26-93 EMU  
HYDROCARBONS (IR) < 1 < 1 < 1

Report Approved by: *Vickie M. Wynkoop*  
Vickie M. Wynkoop  
Project Manager



Environmental  
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8901 North Industrial Road -- Peoria, Illinois 61615  
Telephone: (309) 692-4422 -- Fax: (309) 692-5232

FOR LAB USE ONLY

Project Number: 572-5884

Due Date: 8-24-93

# Chain of Custody Record

No 4793

Company: ESC, Inc.  
 Address: 2255 N. 44th Street - Phoenix, ARIZONA 85203  
 Phone #: (602) 241-192 Fax #: (602) 244-9280  
 P.O. #: 8866AK  
 Client Contact: WASEM KIRAN / Steve Willis  
 Project # / Location: 693-6343-0004 / Phoenix

Sample Type: Container Type:  
 Water P - Plastic  
 Soil G - Glass  
 Sludge V - VOC  
 Oil  
 Tissue  
 Other: \_\_\_\_\_  
 Preservative:  
 1. None 3. HNO3  
 2. H2SO4 4. NaOH

Sample ID (10 Characters ONLY)	Sample Type	Container Size	Container Type	No.	Sampling Date	Sampling Time	Preservative	Lab I.D.	Comments
Ckmsw-1	Ground water			6	8-19-93	0920	MCS #	13972-1	TPH 418.1 IR 582-2 844.2 VOCs
Ckmsw-3	↓			6	↓	1025	↓	-3	
Ckmsw-2	↓			6	↓	1030	↓	-3	

Relinquished By: Waseem Kiran Date: 8-11-93 Time: \_\_\_\_\_ Received By: FEI EX  
 Relinquished By: \_\_\_\_\_ Date: -- -- -- -- Time: \_\_\_\_\_ Received For Lab By: Waseem Kiran Date: 8-12-93 Time: \_\_\_\_\_

TURNAROUND TIME: 8-11-93 FOR LAB USE ONLY  
 RUSH: \_\_\_\_\_ day Samples Received Chilled  
 Turnaround Yes  
 ROUTINE No

**SPECIAL INSTRUCTIONS:**



Environmental Science and Engineering, Inc.  
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Lab Fax (309) 692-5232

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Environmental Science and Engineering, Inc.  
 Table of Definitions for QC Reports  
 Columnar Terms

Item	Title	Definition
FOUND #1	Sample Concentration of UNSPIKED Sample	SPIKE SAMPLE CONC - LESS THE UNSPIKED SAMPLE CONC.
FOUND #2	Concentration of UNSPIKED Sample	
%RECV	Percent Recovery:	$100 * (\text{FOUND} / \text{TARGET})$ displayed in appropriate significant figures.
RECV CRIT	Recovery Criteria	Criteria for Percent Recovery set in the parameter record
UNSPIKED	Unspiked Sample Concentration	Concentration of the DA or UN sample.
M*BLK	Concentration of Method Blank	
R.P.D.	Relative Percent Difference (Matrix Spikes)	$100 * (\text{ABS } \% \text{RECV SPMn} - \% \text{RECV SPMn-1}) / (\% \text{RECV SPMn} + \% \text{RECV SPMn-1}) / 2$ .
R.P.D.	Replicate Percent Difference (Control Spikes)	$100 * (\text{ABS } \% \text{RECV SPn} - \% \text{RECV SP1}) / (\% \text{RECV SPn} + \% \text{RECV SP1}) / 2$ .
R.P.D.	Replicate Percent Difference (Replicate Samples)	$100 * (\text{ABS } (\text{Conc Rep \#2} - \text{Conc Rep \#1}) / (\text{Conc Rep \#2} + \text{Conc Rep \#1}) / 2)$ .
MAX % REPL DIFF	Maximum value of Replicate Difference	
C.D.L.	Calibration Curve Detection Limit	
NA	Not Analyzed	
N/A	Not Available	
UNSPIKED = 0		If the parameter is reported as a "LESS THAN", the data is converted to 0 for calculation purposes.
MIN.REC	Minimum Recovery Limit	Average Recovery - Recovery Limit.
MAX.REC	Maximum Recovery Limit	Average Recovery + Recovery Limit.
DA		Refers to sample.
UN		Refers to second analysis of sample for QC purposes.
SP		Spike of reagent (blank) water or soil.
SPM1, SPM2		Duplicate Matrix Spikes of a sample.
SPM		Matrix Spike of a sample.
MB		Refers to Method Blank.

NAME	UNITS	STOR*METH	BATCH	SAMPLE	DATE	FOUND
TRPH (IR)	MG/L	45501*PMH	P15817	MB*NONE*1	08/26/93	<1
BENZENE	UG/L	34030*PBH	P15699	MB*NONE*1	08/19/93	<2
VINYL CHLORIDE	UG/L	39175*PBH		MB*NONE*1		<2
CARBON TETRACHLORIDE	UG/L	32102*PBH		MB*NONE*1		<2
1,2-DICHLOROETHANE	UG/L	34531*PBH		MB*NONE*1		<2
TRICHLOROETHENE	UG/L	39180*PBH		MB*NONE*1		<2
1,1-DICHLOROETHENE	UG/L	34501*PBH		MB*NONE*1		<2
1,1,1-TRICHLOROETHANE	UG/L	34506*PBH		MB*NONE*1		<2
1,4-DICHLOROBENZENE	UG/L	34571*PBH		MB*NONE*1		<2
BROMOBENZENE	UG/L	97036*PBH		MB*NONE*1		<2
BROMODICHLOROMETHANE	UG/L	32101*PBH		MB*NONE*1		<2
BROMOFORM	UG/L	32104*PBH		MB*NONE*1		<2
BROMOMETHANE	UG/L	34413*PBH		MB*NONE*1		<2
CHLOROBENZENE	UG/L	34301*PBH		MB*NONE*1		<2
DIBROMOCHLOROMETHANE	UG/L	32105*PBH		MB*NONE*1		<2
CHLOROETHANE	UG/L	34311*PBH		MB*NONE*1		<2
CHLOROFORM	UG/L	32106*PBH		MB*NONE*1		<2
CHLOROMETHANE	UG/L	34418*PBH		MB*NONE*1		<2
4-CHLOROTOLUENE	UG/L	97626*PBH		MB*NONE*1		<2
DIBROMOMETHANE	UG/L	97718*PBH		MB*NONE*1		<2
1,2-DICHLOROBENZENE	UG/L	34536*PBH		MB*NONE*1		<2
DICHLOROMETHANE	UG/L	98312*PBH		MB*NONE*1		<2
1,1-DICHLOROETHANE	UG/L	34496*PBH		MB*NONE*1		<2
1,1-DICHLOROPROPENE	UG/L	77168*PBH		MB*NONE*1		<2
1,2-DICHLOROPROPANE	UG/L	34541*PBH		MB*NONE*1		<2
1,3-DICHLOROPROPANE	UG/L	77173*PBH		MB*NONE*1		<2
CIS-1,3-DICHLOROPROPENE	UG/L	34704*PBH		MB*NONE*1		<2
TRANS-1,3-DICHLOROPROPENE	UG/L	34699*PBH		MB*NONE*1		<2
2,2-DICHLOROPROPANE	UG/L	77170*PBH		MB*NONE*1		<2
ETHYLBENZENE	UG/L	34371*PBH		MB*NONE*1		<2
STYRENE	UG/L	99210*PBH		MB*NONE*1		<2
1,1,2-TRICHLOROETHANE	UG/L	34511*PBH		MB*NONE*1		<2
1,1,1,2-TETRACHLOROETHANE	UG/L	97204*PBH		MB*NONE*1		<2
1,1,2,2-TETRACHLOROETHANE	UG/L	34516*PBH		MB*NONE*1		<2
TETRACHLOROETHENE	UG/L	34475*PBH		MB*NONE*1		<2
1,2,3-TRICHLOROPROPANE	UG/L	77443*PBH		MB*NONE*1		<2
TOLUENE	UG/L	34010*PBH		MB*NONE*1		<2
1,2,4-TRIMETHYLBENZENE	UG/L	77222*PBH		MB*NONE*1		<2
1,2,3-TRICHLOROBENZENE	UG/L	77613*PBH		MB*NONE*1		<2
1,3,5-TRIMETHYLBENZENE	UG/L	77226*PBH		MB*NONE*1		<2
ISOPROPYLBENZENE	UG/L	77223*PBH		MB*NONE*1		<2
DICHLORODIFLUOROMETHANE	UG/L	34668*PBH		MB*NONE*1		<2
BROMOCHLOROMETHANE	UG/L	77297*PBH		MB*NONE*1		<2
2-CHLOROTOLUENE	UG/L	97625*PBH		MB*NONE*1		<2
1,3-DICHLOROBENZENE	UG/L	34566*PBH		MB*NONE*1		<2
CIS-1,2-DICHLOROETHENE	UG/L	77093*PBH		MB*NONE*1		<2
TRANS-1,2-DICHLOROETHENE	UG/L	34549*PBH		MB*NONE*1		<2
M/P-XYLENE	UG/L	815511*PBH		MB*NONE*1		<2
O-XYLENE	UG/L	815512*PBH		MB*NONE*1		<2
N-PROPYLBENZENE	UG/L	77224*PBH		MB*NONE*1		<2
N-BUTYLBENZENE	UG/L	77342*PBH		MB*NONE*1		<2
NAPHTHALENE	UG/L	34696*PBH		MB*NONE*1		<2
HEXACHLOROBUTADIENE	UG/L	34391*PBH		MB*NONE*1		<2

## Method Blank (MB) Sample Summary

NAME	UNITS	STOR*METH	BATCH	SAMPLE	DATE	FOUND
P-ISOPROPYLTOLUENE	UG/L	98527*PBH	P15699	MB*NONE*1	08/19/93	<2
TERT-BUTYLBENZENE	UG/L	77353*PBH		MB*NONE*1		<2
SEC-BUTYLBENZENE	UG/L	77350*PBH		MB*NONE*1		<2
TRICHLOROFLUOROMETHANE	UG/L	34488*PBH		MB*NONE*1		<2
1,2-DIBROMOETHANE (EDB)	UG/L	77651*PBH		MB*NONE*1		<2
1,2-DIBROMO-3-CHLOROPROPANE	UG/L	98607*PBH		MB*NONE*1		<2
1,2,4-TRICHLOROBENZENE	UG/L	34551*PBH		MB*NONE*1		<2

## Standard Matrix Spike (SP) Recovery and Replicate Summary

NAME	UNITS	STOR*METH	BATCH	SAMPLE	DATE	TARGET	FOUND	%REC	RECV	CRIT	R.P.D.	CRIT	R.P.D.
BENZENE	UG/L	34030*PBH	P15699	SP1*NONE*1	08/19/93	10	11	110.0	70-130	20	20	Advisory	20
BENZENE	UG/L			SP2*NONE*1		10	10	100.0	70-130	10.0	20	Advisory	20
VINYL CHLORIDE	UG/L	39175*PBH		SP1*NONE*1		10	11	110.0	70-130	20.0	20	Advisory	20
VINYL CHLORIDE	UG/L			SP2*NONE*1		10	9	90.0	70-130	20.0	20	Advisory	20
CARBON TETRACHLORIDE	UG/L	32102*PBH		SP1*NONE*1		10	11	110.0	70-130	20.0	20	Advisory	20
CARBON TETRACHLORIDE	UG/L			SP2*NONE*1		10	9	90.0	70-130	20.0	20	Advisory	20
1,2-DICHLOROETHANE	UG/L	34531*PBH		SP1*NONE*1		10	10	100.0	70-130	11.0	20	Advisory	20
1,2-DICHLOROETHANE	UG/L			SP2*NONE*1		10	9	90.0	70-130	18.0	20	Advisory	20
TRICHLOROETHENE	UG/L	39180*PBH		SP1*NONE*1		10	12	120.0	70-130	26.0	20	Advisory	20
TRICHLOROETHENE	UG/L			SP2*NONE*1		10	10	100.0	70-130	20.0	20	Advisory	20
1,1-DICHLOROETHENE	UG/L	34501*PBH		SP1*NONE*1		10	10	100.0	70-130	20.0	20	Advisory	20
1,1-DICHLOROETHENE	UG/L			SP2*NONE*1		10	13	130.0	70-130	18.0	20	Advisory	20
1,1,1-TRICHLOROETHANE	UG/L	34506*PBH		SP1*NONE*1		10	10	100.0	70-130	20.0	20	Advisory	20
1,1,1-TRICHLOROETHANE	UG/L			SP2*NONE*1		10	9	90.0	70-130	20.0	20	Advisory	20
1,1,1-TRICHLOROETHANE	UG/L	34571*PBH		SP1*NONE*1		10	11	110.0	70-130	20.0	20	Advisory	20
1,1,1-TRICHLOROETHANE	UG/L			SP2*NONE*1		10	9	90.0	70-130	20.0	20	Advisory	20
1,4-DICHLOROBENZENE	UG/L	97036*PBH		SP1*NONE*1		10	12	120.0	70-130	18.0	20	Advisory	20
1,4-DICHLOROBENZENE	UG/L			SP2*NONE*1		10	10	100.0	70-130	32.0	20	Advisory	20
BROMOBENZENE	UG/L	32101*PBH		SP1*NONE*1		10	13	130.0	70-130	17.0	20	Advisory	20
BROMOBENZENE	UG/L			SP2*NONE*1		10	11	110.0	70-130	10.0	20	Advisory	20
BROMODICHLOROMETHANE	UG/L	32104*PBH		SP1*NONE*1		10	10	100.0	70-130	22.0	20	Advisory	20
BROMODICHLOROMETHANE	UG/L			SP2*NONE*1		10	14	140.0	70-130	15.0	20	Advisory	20
BROMOFORM	UG/L	34413*PBH		SP1*NONE*1		10	12	120.0	70-130	22.0	20	Advisory	20
BROMOFORM	UG/L			SP2*NONE*1		10	10	100.0	70-130	20.0	20	Advisory	20
BROMOMETHANE	UG/L	34301*PBH		SP1*NONE*1		10	8	80.0	70-130	18.0	20	Advisory	20
BROMOMETHANE	UG/L			SP2*NONE*1		10	11	110.0	70-130	22.0	20	Advisory	20
CHLOROBENZENE	UG/L	32105*PBH		SP1*NONE*1		10	11	110.0	70-130	17.0	20	Advisory	20
CHLOROBENZENE	UG/L			SP2*NONE*1		10	11	110.0	70-130	10.0	20	Advisory	20
DIBROMOCHLOROMETHANE	UG/L	34311*PBH		SP1*NONE*1		10	10	100.0	70-130	22.0	20	Advisory	20
DIBROMOCHLOROMETHANE	UG/L			SP2*NONE*1		10	8	80.0	70-130	20.0	20	Advisory	20
CHLOROETHANE	UG/L	32106*PBH		SP1*NONE*1		10	12	120.0	70-130	15.0	20	Advisory	20
CHLOROETHANE	UG/L			SP2*NONE*1		10	10	100.0	70-130	22.0	20	Advisory	20
CHLOROFORM	UG/L	34418*PBH		SP1*NONE*1		10	8	80.0	70-130	18.0	20	Advisory	20
CHLOROFORM	UG/L			SP2*NONE*1		10	12	120.0	70-130	20.0	20	Advisory	20
CHLOROMETHANE	UG/L	97626*PBH		SP1*NONE*1		10	10	100.0	70-130	20.0	20	Advisory	20
CHLOROMETHANE	UG/L			SP2*NONE*1		10	10	100.0	70-130	20.0	20	Advisory	20
4-CHLOROTOLUENE	UG/L	97718*PBH		SP1*NONE*1		10	11	110.0	70-130	20.0	20	Advisory	20
4-CHLOROTOLUENE	UG/L			SP2*NONE*1		10	9	90.0	70-130	20.0	20	Advisory	20
DIBROMOMETHANE	UG/L	34536*PBH		SP1*NONE*1		10	11	110.0	70-130	20.0	20	Advisory	20
DIBROMOMETHANE	UG/L			SP2*NONE*1		10	9	90.0	70-130	20.0	20	Advisory	20
1,2-DICHLOROBENZENE	UG/L	98312*PBH		SP1*NONE*1		10	10	100.0	70-130	22.0	20	Advisory	20
1,2-DICHLOROBENZENE	UG/L			SP2*NONE*1		10	8	80.0	70-130	20.0	20	Advisory	20
DICHLOROMETHANE	UG/L	34496*PBH		SP1*NONE*1		10	11	110.0	70-130	20.0	20	Advisory	20
DICHLOROMETHANE	UG/L			SP2*NONE*1		10	9	90.0	70-130	18.0	20	Advisory	20
1,1-DICHLOROETHANE	UG/L	77168*PBH		SP1*NONE*1		10	12	120.0	70-130	20.0	20	Advisory	20
1,1-DICHLOROETHANE	UG/L			SP2*NONE*1		10	10	100.0	70-130	20.0	20	Advisory	20
1,1-DICHLOROPROPENE	UG/L	34541*PBH		SP1*NONE*1		10	10	100.0	70-130	20.0	20	Advisory	20
1,1-DICHLOROPROPENE	UG/L			SP2*NONE*1		10	11	110.0	70-130	18.0	20	Advisory	20
1,2-DICHLOROPROPANE	UG/L	77173*PBH		SP1*NONE*1		10	9	90.0	70-130	20.0	20	Advisory	20
1,2-DICHLOROPROPANE	UG/L			SP2*NONE*1		10	12	120.0	70-130	9.0	20	Advisory	20
1,3-DICHLOROPROPANE	UG/L	34704*PBH		SP1*NONE*1		10	13	130.0	70-130	8.0	20	Advisory	20
1,3-DICHLOROPROPANE	UG/L			SP2*NONE*1		10	12	120.0	70-130	20.0	20	Advisory	20
1,3-DICHLOROPROPANE	UG/L	34699*PBH		SP1*NONE*1		10	10	100.0	70-130	20.0	20	Advisory	20
1,3-DICHLOROPROPANE	UG/L			SP2*NONE*1		10	12	120.0	70-130	20.0	20	Advisory	20
CIS-1,3-DICHLOROPROPENE	UG/L			SP1*NONE*1		10	10	100.0	70-130	20.0	20	Advisory	20
CIS-1,3-DICHLOROPROPENE	UG/L			SP2*NONE*1		10	12	120.0	70-130	20.0	20	Advisory	20
TRANS-1,3-DICHLOROPROPENE	UG/L			SP1*NONE*1		10	10	100.0	70-130	20.0	20	Advisory	20
TRANS-1,3-DICHLOROPROPENE	UG/L			SP2*NONE*1		10	12	120.0	70-130	20.0	20	Advisory	20

## Standard Matrix Spike (SP) Recovery and Replicate Summary

NAME	UNITS	STOR*METH	BATCH	SAMPLE	DATE	TARGET	FOUND	%RECV	RECV	R.P.D.	R.P.D.	CRIT.
TRANS-1,3-DICHLOROPROPENE	UG/L	34699*PBH	P15699	SP2*NONE*1	08/19/93	10	10	100.0	70-130	20	20	Advisory
2,2-DICHLOROPROPANE	UG/L	77170*PBH		SP1*NONE*1		12	12	120.0	70-130	20	20	Advisory
2,2-DICHLOROPROPANE	UG/L			SP2*NONE*1		10	10	100.0	70-130	18.0	20	Advisory
ETHYLBENZENE	UG/L	34371*PBH		SP1*NONE*1		13	13	130.0	70-130	20	20	Advisory
ETHYLBENZENE	UG/L			SP2*NONE*1		10	11	110.0	70-130	17.0	20	Advisory
STYRENE	UG/L	99210*PBH		SP1*NONE*1		13	13	130.0	70-130	20	20	Advisory
STYRENE	UG/L			SP2*NONE*1		10	10	100.0	70-130	26.0	20	Advisory
1,1,2-TRICHLOROETHANE	UG/L	34511*PBH		SP1*NONE*1		12	12	120.0	70-130	20	20	Advisory
1,1,2-TRICHLOROETHANE	UG/L			SP2*NONE*1		10	10	100.0	70-130	18.0	20	Advisory
1,1,1,2-TETRACHLOROETHANE	UG/L	97204*PBH		SP1*NONE*1		12	12	120.0	70-130	20	20	Advisory
1,1,1,2-TETRACHLOROETHANE	UG/L			SP2*NONE*1		10	10	100.0	70-130	18.0	20	Advisory
1,1,1,2-TETRACHLOROETHANE	UG/L	34516*PBH		SP1*NONE*1		12	12	120.0	70-130	20	20	Advisory
1,1,2,2-TETRACHLOROETHANE	UG/L			SP2*NONE*1		10	10	100.0	70-130	18.0	20	Advisory
1,1,2,2-TETRACHLOROETHANE	UG/L	34475*PBH		SP1*NONE*1		12	12	120.0	70-130	20	20	Advisory
TETRACHLOROETHENE	UG/L			SP2*NONE*1		10	10	100.0	70-130	18.0	20	Advisory
TETRACHLOROETHENE	UG/L	77443*PBH		SP1*NONE*1		12	12	120.0	70-130	20	20	Advisory
1,2,3-TRICHLOROPROPANE	UG/L			SP2*NONE*1		10	10	100.0	70-130	18.0	20	Advisory
1,2,3-TRICHLOROPROPANE	UG/L	34010*PBH		SP1*NONE*1		14	14	140.0	70-130	24.0	20	Advisory
TOLUENE	UG/L			SP2*NONE*1		10	11	110.0	70-130	20	20	Advisory
TOLUENE	UG/L	77222*PBH		SP1*NONE*1		12	12	120.0	70-130	18.0	20	Advisory
1,2,4-TRIMETHYLBENZENE	UG/L			SP2*NONE*1		10	10	100.0	70-130	20.0	20	Advisory
1,2,4-TRIMETHYLBENZENE	UG/L	77613*PBH		SP1*NONE*1		10	11	110.0	70-130	20	20	Advisory
1,2,3-TRICHLOROBENZENE	UG/L			SP2*NONE*1		9	9	90.0	70-130	20.0	20	Advisory
1,2,3-TRICHLOROBENZENE	UG/L	77226*PBH		SP1*NONE*1		10	12	120.0	70-130	18.0	20	Advisory
1,3,5-TRIMETHYLBENZENE	UG/L			SP2*NONE*1		10	10	100.0	70-130	18.0	20	Advisory
1,3,5-TRIMETHYLBENZENE	UG/L	77223*PBH		SP1*NONE*1		13	13	130.0	70-130	17.0	20	Advisory
ISOPROPYLBENZENE	UG/L			SP2*NONE*1		10	11	110.0	70-130	20	20	Advisory
ISOPROPYLBENZENE	UG/L	34668*PBH		SP1*NONE*1		9	9	90.0	70-130	25.0	20	Advisory
DICHLORODIFLUOROMETHANE	UG/L			SP2*NONE*1		10	7	70.0	70-130	20	20	Advisory
DICHLORODIFLUOROMETHANE	UG/L	77297*PBH		SP1*NONE*1		10	10	100.0	70-130	11.0	20	Advisory
BROMOCHLOROMETHANE	UG/L			SP2*NONE*1		10	9	90.0	70-130	18.0	20	Advisory
BROMOCHLOROMETHANE	UG/L	97625*PBH		SP1*NONE*1		10	12	120.0	70-130	20	20	Advisory
2-CHLOROTOLUENE	UG/L			SP2*NONE*1		10	10	100.0	70-130	18.0	20	Advisory
2-CHLOROTOLUENE	UG/L	34566*PBH		SP1*NONE*1		10	11	110.0	70-130	10.0	20	Advisory
1,3-DICHLOROBENZENE	UG/L			SP2*NONE*1		10	10	100.0	70-130	20	20	Advisory
1,3-DICHLOROBENZENE	UG/L	77093*PBH		SP1*NONE*1		12	12	120.0	70-130	18.0	20	Advisory
CIS-1,2-DICHLOROETHENE	UG/L			SP2*NONE*1		10	10	100.0	70-130	20	20	Advisory
CIS-1,2-DICHLOROETHENE	UG/L	34549*PBH		SP1*NONE*1		10	11	110.0	70-130	20	20	Advisory
TRANS-1,2-DICHLOROETHENE	UG/L			SP2*NONE*1		10	9	90.0	70-130	20.0	20	Advisory
TRANS-1,2-DICHLOROETHENE	UG/L	815511*PBH		SP1*NONE*1		10	24	240.0	70-130	20	20	Advisory
M/P-XYLENE	UG/L			SP2*NONE*1		10	20	200.0	70-130	18.0	20	Advisory
M/P-XYLENE	UG/L	815512*PBH		SP1*NONE*1		10	12	120.0	70-130	18.0	20	Advisory
O-XYLENE	UG/L			SP2*NONE*1		10	10	100.0	70-130	18.0	20	Advisory
O-XYLENE	UG/L	77224*PBH		SP1*NONE*1		10	12	120.0	70-130	18.0	20	Advisory
N-PROPYLBENZENE	UG/L			SP2*NONE*1		10	10	100.0	70-130	18.0	20	Advisory
N-PROPYLBENZENE	UG/L	77324*PBH		SP1*NONE*1		10	10	100.0	70-130	18.0	20	Advisory
N-BUTYLBENZENE	UG/L			SP2*NONE*1		10	13	130.0	70-130	26.0	20	Advisory
N-BUTYLBENZENE	UG/L	34696*PBH		SP1*NONE*1		10	10	100.0	70-130	18.0	20	Advisory
NAPHTHALENE	UG/L			SP2*NONE*1		10	10	100.0	70-130	18.0	20	Advisory
NAPHTHALENE	UG/L	34391*PBH		SP1*NONE*1		10	12	120.0	70-130	29.0	20	Advisory
HEXACHLOROBUTADIENE	UG/L			SP2*NONE*1		10	9	90.0	70-130	20	20	Advisory
HEXACHLOROBUTADIENE	UG/L	98527*PBH		SP1*NONE*1		10	12	120.0	70-130	18.0	20	Advisory
P-ISOPROPYLTOLUENE	UG/L			SP2*NONE*1		10	10	100.0	70-130	20	20	Advisory
P-ISOPROPYLTOLUENE	UG/L			SP2*NONE*1		10	10	100.0	70-130	18.0	20	Advisory

## Standard Matrix Spike (SP) Recovery and Replicate Summary

NAME	UNITS	STOR*METH	BATCH	SAMPLE	DATE	TARGET	FOUND	%RECV	RECV CRIT	R.P.D.	R.P.D.	CRIT.
TERT-BUTYLBENZENE	UG/L	77353*PBH	P15699	SP1*NONE*1	08/19/93	10	12	120.0	70-130	20	20	Advisory
TERT-BUTYLBENZENE	UG/L			SP2*NONE*1		10	10	100.0	70-130	18.0	20	Advisory
SEC-BUTYLBENZENE	UG/L	77350*PBH		SP1*NONE*1		10	13	130.0	70-130	20	20	Advisory
SEC-BUTYLBENZENE	UG/L			SP2*NONE*1		10	10	100.0	70-130	26.0	20	Advisory
TRICHLOROFLUOROMETHANE	UG/L	34488*PBH		SP1*NONE*1		10	8	80.0	70-130	0.0	20	Advisory
TRICHLOROFLUOROMETHANE	UG/L			SP2*NONE*1		10	8	80.0	70-130	0.0	20	Advisory
1,2-DIBROMOETHANE (EDB)	UG/L	77651*PBH		SP1*NONE*1		10	13	130.0	70-130	8.0	20	Advisory
1,2-DIBROMOETHANE (EDB)	UG/L			SP2*NONE*1		10	12	120.0	70-130	8.0	20	Advisory
1,2-DIBROMO-3-CHLOROPROPANE	UG/L	98607*PBH		SP1*NONE*1		10	11	110.0	70-130	10.0	20	Advisory
1,2-DIBROMO-3-CHLOROPROPANE	UG/L			SP2*NONE*1		10	10	100.0	70-130	10.0	20	Advisory
1,2,4-TRICHLOROBENZENE	UG/L	34551*PBH		SP1*NONE*1		10	11	110.0	70-130	10.0	20	Advisory
1,2,4-TRICHLOROBENZENE	UG/L			SP2*NONE*1		10	10	100.0	70-130	10.0	20	Advisory

## Surrogate (SUR) Spike Recovery Summary

NAME	UNITS	STOR*METH	BATCH	SAMPLE	DATE	TARGET	FOUND	%RECV	RECV_CRIT
BROMOFLUOROBENZENE	UG/L	98402*SUR	P15699	MB*NONE*1	08/19/93	1.0	0.9	90.0	74-121
BROMOFLUOROBENZENE	UG/L			DA*13972*1		1.0	0.9	90.0	74-121
BROMOFLUOROBENZENE	UG/L			DA*13972*2		1.0	0.9	90.0	74-121
BROMOFLUOROBENZENE	UG/L			DA*13972*3		1.0	0.9	90.0	74-121
BROMOFLUOROBENZENE	UG/L			SP1*NONE*1		1.0	1.2	120	74-121
BROMOFLUOROBENZENE	UG/L			SP2*NONE*1		1.0	1.1	110	74-121
1,2-DICHLOROBENZENE-D4	UG/L	21996911*SUR		MB*NONE*1		1.0	0.8	80.0	16-110
1,2-DICHLOROBENZENE-D4	UG/L			DA*13972*1		1.0	0.8	80.0	16-110
1,2-DICHLOROBENZENE-D4	UG/L			DA*13972*2		1.0	0.8	80.0	16-110
1,2-DICHLOROBENZENE-D4	UG/L			DA*13972*3		1.0	0.8	80.0	16-110
1,2-DICHLOROBENZENE-D4	UG/L			SP1*NONE*1		1.0	1.1	110	16-110
1,2-DICHLOROBENZENE-D4	UG/L			SP2*NONE*1		1.0	1.0	100	16-110



## GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30850105

TEST : EPA METHOD 502.2

CLIENT	: WOODWARD-CLYDE CONSULTANTS-DENVER	DATE SAMPLED	: 08/01/93
PROJECT #	: 23121E	DATE RECEIVED	: 08/02/93
PROJECT NAME	: WESTERN PAO	DATE EXTRACTED	: N/A
CLIENT I.D.	: PAO-03-201	DATE ANALYZED	: 08/12/93
SAMPLE MATRIX	: AQUEOUS	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
VINYL CHLORIDE	<0.2
BENZENE	1.0
CARBON TETRACHLORIDE	<0.2
1,2-DICHLOROETHANE	<0.2
TRICHLOROETHYLENE (TCE)	54
PARA-DICHLOROBENZENE	<0.5
1,1-DICHLOROETHYLENE	0.7
1,1,1-TRICHLOROETHANE	<0.2
CIS-1,2-DICHLOROETHYLENE	0.4
1,2-DICHLOROPROPANE	<0.2
ETHYLBENZENE	<0.5
CHLOROBENZENE	<0.5
ORTHO-DICHLOROBENZENE	<0.5
STYRENE	<0.5
TETRACHLOROETHYLENE	28
TOLUENE	<0.5
TRANS-1,2-DICHLOROETHYLENE	<0.2
META, PARA-XYLENE (TOTAL)	0.7
ORTHO-XYLENE	<0.5
CHLOROMETHANE	<0.2
BROMOMETHANE	<0.2
CHLOROETHANE	<0.2
1,3-DICHLOROPROPENE (TOTAL)	<0.2
DIBROMOMETHANE	<0.2
1,1-DICHLOROPROPENE	<0.2
1,3-DICHLOROPROPANE	<0.2
1,2,3-TRICHLOROPROPANE	<0.2
2,2-DICHLOROPROPANE	<0.2
CHLOROFORM	1.0
BROMOFORM	<0.2
BROMODICHLOROMETHANE	<0.2
CHLORODIBROMOMETHANE	<0.2
DICHLOROMETHANE	<2.0
ORTHO-CHLOROTOLUENE	<0.5
PARA-CHLOROTOLUENE	<0.5
META-DICHLOROBENZENE	<0.5
1,1-DICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	<0.2
1,1,1,2-TETRACHLOROETHANE	<0.2
1,1,2,2-TETRACHLOROETHANE	<0.2
BROMOBENZENE	<0.5

*ml*  
9-21-93

(CONTINUED NEXT PAGE)



TEST : EPA METHOD 502.2

COMPOUNDS	RESULTS
DICHLORODIFLUOROMETHANE	<0.5
TRICHLOROFLUOROMETHANE	<0.5
BROMOCHLOROMETHANE	<0.2
1,2-DIBROMOETHANE	<1.0
ISO-PROPYLBENZENE	<2.0
N-PROPYLBENZENE	<1.0
1,3,5-TRIMETHYLBENZENE	<1.0
1,2,4-TRIMETHYLBENZENE	<0.5
TERT-BUTYLBENZENE	<0.5
SEC-BUTYLBENZENE	<0.5
P-ISOPROPYLTOLUENE	<0.5
N-BUTYLBENZENE	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	<1.0
1,2,4-TRICHLOROBENZENE	<0.5
NAPHTHALENE	<1.0
1,2,3-TRICHLOROBENZENE	<0.5
HEXACHLOROBUTADIENE	<1.0
TRANS-1,3-DICHLOROPROPENE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2

## SURROGATE PERCENT RECOVERIES

1-CHLORO-2-FLUOROBENZENE (PID) (%)	96
1-CHLORO-2-FLUOROBENZENE (HALL) (%)	92

ml  
9-21-93



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30850106

TEST : EPA METHOD 502.2

CLIENT	: WOODWARD-CLYDE CONSULTANTS-DENVER	DATE SAMPLED	: 08/01/93
PROJECT #	: 23121E	DATE RECEIVED	: 08/02/93
PROJECT NAME	: WESTERN PAO	DATE EXTRACTED	: N/A
CLIENT I.D.	: PAO-03-261	DATE ANALYZED	: 08/12/93
SAMPLE MATRIX	: AQUEOUS	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
VINYL CHLORIDE	<0.2
BENZENE	1.2
CARBON TETRACHLORIDE	<0.2
1,2-DICHLOROETHANE	<0.2
TRICHLOROETHYLENE (TCE)	52
PARA-DICHLOROBENZENE	<0.5
1,1-DICHLOROETHYLENE	0.8
1,1,1-TRICHLOROETHANE	<0.2
CIS-1,2-DICHLOROETHYLENE	0.4
1,2-DICHLOROPROPANE	<0.2
ETHYLBENZENE	<0.5
CHLOROBENZENE	<0.5
ORTHO-DICHLOROBENZENE	<0.5
STYRENE	<0.5
TETRACHLOROETHYLENE	27
TOLUENE	<0.5
TRANS-1,2-DICHLOROETHYLENE	<0.2
META, PARA-XYLENE (TOTAL)	0.7
ORTHO-XYLENE	<0.5
CHLOROMETHANE	<0.2
BROMOMETHANE	<0.2
CHLOROETHANE	<0.2
1,3-DICHLOROPROPENE (TOTAL)	<0.2
DIBROMOMETHANE	<0.2
1,1-DICHLOROPROPENE	<0.2
1,3-DICHLOROPROPANE	<0.2
1,2,3-TRICHLOROPROPANE	<0.2
2,2-DICHLOROPROPANE	<0.2
CHLOROFORM	1.1
BROMOFORM	<0.2
BROMODICHLOROMETHANE	<0.2
CHLORODIBROMOMETHANE	<0.2
DICHLOROMETHANE	<2.0
ORTHO-CHLOROTOLUENE	<0.5
PARA-CHLOROTOLUENE	<0.5
META-DICHLOROBENZENE	<0.5
1,1-DICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	<0.2
1,1,1,2-TETRACHLOROETHANE	<0.2
1,1,2,2-TETRACHLOROETHANE	<0.2
BROMOBENZENE	<0.5

*Field  
dup of PAO-03-201*

*vl  
9-21-93*



TEST : EPA METHOD 502.2

COMPOUNDS	RESULTS
DICHLORODIFLUOROMETHANE	<0.5
TRICHLOROFLUOROMETHANE	<0.5
BROMOCHLOROMETHANE	<0.2
1,2-DIBROMOETHANE	<1.0
ISO-PROPYLBENZENE	<2.0
N-PROPYLBENZENE	<1.0
1,3,5-TRIMETHYLBENZENE	<1.0
1,2,4-TRIMETHYLBENZENE	<0.5
TERT-BUTYLBENZENE	<0.5
SEC-BUTYLBENZENE	<0.5
P-ISOPROPYLTOLUENE	<0.5
N-BUTYLBENZENE	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	<1.0
1,2,4-TRICHLOROBENZENE	<0.5
NAPHTHALENE	<1.0
1,2,3-TRICHLOROBENZENE	<0.5
HEXACHLOROBUTADIENE	<1.0
TRANS-1,3-DICHLOROPROPENE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2

## SURROGATE PERCENT RECOVERIES

1-CHLORO-2-FLUOROBENZENE (PID) (%)	96
1-CHLORO-2-FLUOROBENZENE (HALL) (%)	99

nl  
9-21-93





ATI I.D. 307002

August 17, 1993

Geotechnical & Environmental Consultants  
2447 W. 12th Street  
Suite 4  
Tempe, AZ 85281

Project Name/Number: 92-0001A

Attention: Jeff Owens

On **07/30/93**, Analytical Technologies, Inc., (ADHS License No. AZ0061), received a request to analyze **aqueous** sample(s). The sample(s) were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

D indicates the compound was analyzed at a greater dilution.

If you have any questions or comments, please do not hesitate to contact us at (602) 496-4400.

Steven E. Stanley  
Project Manager

Robert V. Woods  
Laboratory Manager

RVW/ktd

Enclosure



Analytical **Technologies**, Inc.

CLIENT : GEOTECHNICAL & ENVIRONMENTAL CONS.      DATE RECEIVED : 07/30/93  
PROJECT # : 92-0001A  
PROJECT NAME : (NONE)      REPORT DATE : 08/11/93  
ATI I.D. : 307002

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	MW-1	AQUEOUS	07/30/93
02	MW-2	AQUEOUS	07/30/93
03	MW-3	AQUEOUS	07/30/93
04	TRIP BLANK	AQUEOUS	07/29/93

----- TOTALS -----

MATRIX	# SAMPLES
AQUEOUS	4

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in thirty (30) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.



Analytical **Technologies**, Inc.

GENERAL CHEMISTRY RESULTS

ATI I.D. : 307002

CLIENT : GEOTECHNICAL & ENVIRONMENTAL CONS.  
PROJECT # : 92-0001A  
PROJECT NAME : (NONE)

DATE RECEIVED : 07/30/93

REPORT DATE : 08/11/93

PARAMETER	UNITS	01	02	03
PETROLEUM HYDROCARBONS, 418.1	MG/L	<1	<1	<1



Analytical Technologies, Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

CLIENT : GEOTECHNICAL & ENVIRONMENTAL CONS.  
PROJECT # : 92-0001A  
PROJECT NAME : (NONE)

ATI I.D. : 307002

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC	% REC
PETROLEUM HYDROCARBONS	MG/L	30700202	<1	<1	NA	7	7	100

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$



## GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30700201

TEST : EPA METHOD 502.2

CLIENT	: GEOTECHNICAL & ENVIRONMENTAL CONS.	DATE SAMPLED	: 07/30/93
PROJECT #	: 92-0001A	DATE RECEIVED	: 07/30/93
PROJECT NAME	: (NONE)	DATE EXTRACTED	: N/A
CLIENT I.D.	: MW-1	DATE ANALYZED	: 08/05/93
SAMPLE MATRIX	: AQUEOUS	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
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VINYL CHLORIDE	<0.2
BENZENE	<0.5
CARBON TETRACHLORIDE	<0.2
1,2-DICHLOROETHANE	<0.2
TRICHLOROETHYLENE (TCE)	130 D
PARA-DICHLOROBENZENE	<0.5
1,1-DICHLOROETHYLENE	<0.2
1,1,1-TRICHLOROETHANE	<0.2
CIS-1,2-DICHLOROETHYLENE	4.8
1,2-DICHLOROPROPANE	<0.2
ETHYLBENZENE	<0.5
CHLOROBENZENE	<0.5
ORTHO-DICHLOROBENZENE	<0.5
STYRENE	<0.5
TETRACHLOROETHYLENE	3.4
TOLUENE	<0.5
TRANS-1,2-DICHLOROETHYLENE	<0.2
META, PARA-XYLENE (TOTAL)	<0.5
ORTHO-XYLENE	<0.5
CHLOROMETHANE	<0.2
BROMOMETHANE	<0.2
CHLOROETHANE	<0.2
1,3-DICHLOROPROPENE (TOTAL)	<0.2
DIBROMOMETHANE	<0.2
1,1-DICHLOROPROPENE	<0.2
1,3-DICHLOROPROPANE	<0.2
1,2,3-TRICHLOROPROPANE	<0.2
2,2-DICHLOROPROPANE	<0.2
CHLOROFORM	2.0
BROMOFORM	<0.2
BROMODICHLOROMETHANE	<0.2
CHLORODIBROMOMETHANE	<0.2
DICHLOROMETHANE	<2.0
ORTHO-CHLOROTOLUENE	<0.5
PARA-CHLOROTOLUENE	<0.5
META-DICHLOROBENZENE	<0.5
1,1-DICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	<0.2
1,1,1,2-TETRACHLOROETHANE	<0.2
1,1,2,2-TETRACHLOROETHANE	<0.2
BROMOBENZENE	<0.5

(CONTINUED NEXT PAGE)



## GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30700201

TEST : EPA METHOD 502.2

COMPOUNDS	RESULTS
DICHLORODIFLUOROMETHANE	<0.5
TRICHLOROFLUOROMETHANE	1.7
BROMOCHLOROMETHANE	<0.2
1,2-DIBROMOETHANE	<1.0
ISO-PROPYLBENZENE	<2.0
N-PROPYLBENZENE	<1.0
1,3,5-TRIMETHYLBENZENE	<1.0
1,2,4-TRIMETHYLBENZENE	<0.5
TERT-BUTYLBENZENE	<0.5
SEC-BUTYLBENZENE	<0.5
P-ISOPROPYLTOLUENE	<0.5
N-BUTYLBENZENE	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	<1.0
1,2,4-TRICHLOROENZENE	<0.5
NAPHTHALENE	<1.0
1,2,3-TRICHLOROENZENE	<0.5
HEXACHLOROBUTADIENE	<1.0
TRANS-1,3-DICHLOROPROPENE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2

## SURROGATE PERCENT RECOVERIES

1-CHLORO-2-FLUOROENZENE (PID) (%)	98
1-CHLORO-2-FLUOROENZENE (HALL) (%)	97

## GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30700202

TEST : EPA METHOD 502.2

CLIENT	: GEOTECHNICAL & ENVIRONMENTAL CONS.	DATE SAMPLED	: 07/30/93
PROJECT #	: 92-0001A	DATE RECEIVED	: 07/30/93
PROJECT NAME	: (NONE)	DATE EXTRACTED	: N/A
CLIENT I.D.	: MW-2	DATE ANALYZED	: 08/05/93
SAMPLE MATRIX	: AQUEOUS	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
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VINYL CHLORIDE	<0.2
BENZENE	<0.5
CARBON TETRACHLORIDE	<0.2
1,2-DICHLOROETHANE	<0.2
TRICHLOROETHYLENE (TCE)	85 D
PARA-DICHLOROBENZENE	<0.5
1,1-DICHLOROETHYLENE	<0.2
1,1,1-TRICHLOROETHANE	<0.2
CIS-1,2-DICHLOROETHYLENE	3.8
1,2-DICHLOROPROPANE	<0.2
ETHYLBENZENE	<0.5
CHLOROBENZENE	<0.5
ORTHO-DICHLOROBENZENE	<0.5
STYRENE	<0.5
TETRACHLOROETHYLENE	2.6
TOLUENE	<0.5
TRANS-1,2-DICHLOROETHYLENE	<0.2
META, PARA-XYLENE (TOTAL)	<0.5
ORTHO-XYLENE	<0.5
CHLOROMETHANE	<0.2
BROMOMETHANE	<0.2
CHLOROETHANE	<0.2
1,3-DICHLOROPROPENE (TOTAL)	<0.2
DIBROMOMETHANE	<0.2
1,1-DICHLOROPROPENE	<0.2
1,3-DICHLOROPROPANE	<0.2
1,2,3-TRICHLOROPROPANE	<0.2
2,2-DICHLOROPROPANE	<0.2
CHLOROFORM	1.6
BROMOFORM	<0.2
BROMODICHLOROMETHANE	<0.2
CHLORODIBROMOMETHANE	<0.2
DICHLOROMETHANE	<2.0
ORTHO-CHLOROTOLUENE	<0.5
PARA-CHLOROTOLUENE	<0.5
META-DICHLOROBENZENE	<0.5
1,1-DICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	<0.2
1,1,1,2-TETRACHLOROETHANE	<0.2
1,1,2,2-TETRACHLOROETHANE	<0.2
BROMOBENZENE	<0.5

## GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30700202

TEST : EPA METHOD 502.2

COMPOUNDS	RESULTS
DICHLORODIFLUOROMETHANE	<0.5
TRICHLOROFLUOROMETHANE	1.0
BROMOCHLOROMETHANE	<0.2
1,2-DIBROMOETHANE	<1.0
ISO-PROPYLBENZENE	<2.0
N-PROPYLBENZENE	<1.0
1,3,5-TRIMETHYLBENZENE	<1.0
1,2,4-TRIMETHYLBENZENE	<0.5
TERT-BUTYLBENZENE	<0.5
SEC-BUTYLBENZENE	<0.5
P-ISOPROPYLTOLUENE	<0.5
N-BUTYLBENZENE	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	<1.0
1,2,4-TRICHLOROBENZENE	<0.5
NAPHTHALENE	<1.0
1,2,3-TRICHLOROBENZENE	<0.5
HEXACHLOROBUTADIENE	<1.0
TRANS-1,3-DICHLOROPROPENE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2

## SURROGATE PERCENT RECOVERIES

1-CHLORO-2-FLUOROBENZENE (PID) (%)	96
1-CHLORO-2-FLUOROBENZENE (HALL) (%)	104



GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30700203

TEST : EPA METHOD 502.2

CLIENT	: GEOTECHNICAL & ENVIRONMENTAL CONS.	DATE SAMPLED	: 07/30/93
PROJECT #	: 92-0001A	DATE RECEIVED	: 07/30/93
PROJECT NAME	: (NONE)	DATE EXTRACTED	: N/A
CLIENT I.D.	: MW-3	DATE ANALYZED	: 08/05/93
SAMPLE MATRIX	: AQUEOUS	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
VINYL CHLORIDE	<0.2
BENZENE	<0.5
CARBON TETRACHLORIDE	<0.2
1,2-DICHLOROETHANE	<0.2
TRICHLOROETHYLENE (TCE)	92 D
PARA-DICHLOROBENZENE	<0.5
1,1-DICHLOROETHYLENE	<0.2
1,1,1-TRICHLOROETHANE	<0.2
CIS-1,2-DICHLOROETHYLENE	4.0
1,2-DICHLOROPROPANE	<0.2
ETHYLBENZENE	<0.5
CHLOROBENZENE	<0.5
ORTHO-DICHLOROBENZENE	<0.5
STYRENE	<0.5
TETRACHLOROETHYLENE	2.4
TOLUENE	<0.5
TRANS-1,2-DICHLOROETHYLENE	<0.2
META, PARA-XYLENE (TOTAL)	<0.5
ORTHO-XYLENE	<0.5
CHLOROMETHANE	<0.2
BROMOMETHANE	<0.2
CHLOROETHANE	<0.2
1,3-DICHLOROPROPENE (TOTAL)	<0.2
DIBROMOMETHANE	<0.2
1,1-DICHLOROPROPENE	<0.2
1,3-DICHLOROPROPANE	<0.2
1,2,3-TRICHLOROPROPANE	<0.2
2,2-DICHLOROPROPANE	<0.2
CHLOROFORM	1.6
BROMOFORM	<0.2
BROMODICHLOROMETHANE	<0.2
CHLORODIBROMOMETHANE	<0.2
DICHLOROMETHANE	<2.0
ORTHO-CHLOROTOLUENE	<0.5
PARA-CHLOROTOLUENE	<0.5
META-DICHLOROBENZENE	<0.5
1,1-DICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	<0.2
1,1,1,2-TETRACHLOROETHANE	<0.2
1,1,2,2-TETRACHLOROETHANE	<0.2
BROMOBENZENE	<0.5

## GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30700203

TEST : EPA METHOD 502.2

COMPOUNDS	RESULTS
DICHLORODIFLUOROMETHANE	<0.5
TRICHLOROFLUOROMETHANE	0.7
BROMOCHLOROMETHANE	<0.2
1,2-DIBROMOETHANE	<1.0
ISO-PROPYLBENZENE	<2.0
N-PROPYLBENZENE	<1.0
1,3,5-TRIMETHYLBENZENE	<1.0
1,2,4-TRIMETHYLBENZENE	<0.5
TERT-BUTYLBENZENE	<0.5
SEC-BUTYLBENZENE	<0.5
P-ISOPROPYLTOLUENE	<0.5
N-BUTYLBENZENE	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	<1.0
1,2,4-TRICHLOROBENZENE	<0.5
NAPHTHALENE	<1.0
1,2,3-TRICHLOROBENZENE	<0.5
HEXACHLOROBUTADIENE	<1.0
TRANS-1,3-DICHLOROPROPENE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2

## SURROGATE PERCENT RECOVERIES

1-CHLORO-2-FLUOROBENZENE (PID) (%)	93
1-CHLORO-2-FLUOROBENZENE (HALL) (%)	88



GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30700204

TEST : EPA METHOD 502.2

CLIENT	: GEOTECHNICAL & ENVIRONMENTAL CONS.	DATE SAMPLED	: 07/29/93
PROJECT #	: 92-0001A	DATE RECEIVED	: 07/30/93
PROJECT NAME	: (NONE)	DATE EXTRACTED	: N/A
CLIENT I.D.	: TRIP BLANK	DATE ANALYZED	: 08/05/93
SAMPLE MATRIX	: AQUEOUS	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
VINYL CHLORIDE	<0.2
BENZENE	<0.5
CARBON TETRACHLORIDE	<0.2
1,2-DICHLOROETHANE	<0.2
TRICHLOROETHYLENE (TCE)	<0.2
PARA-DICHLOROBENZENE	<0.5
1,1-DICHLOROETHYLENE	<0.2
1,1,1-TRICHLOROETHANE	<0.2
CIS-1,2-DICHLOROETHYLENE	<0.2
1,2-DICHLOROPROPANE	<0.2
ETHYLBENZENE	<0.5
CHLOROBENZENE	<0.5
ORTHO-DICHLOROBENZENE	<0.5
STYRENE	<0.5
TETRACHLOROETHYLENE	<0.2
TOLUENE	<0.5
TRANS-1,2-DICHLOROETHYLENE	<0.2
META, PARA-XYLENE (TOTAL)	<0.5
ORTHO-XYLENE	<0.5
CHLOROMETHANE	<0.2
BROMOMETHANE	<0.2
CHLOROETHANE	<0.2
1,3-DICHLOROPROPENE (TOTAL)	<0.2
DIBROMOMETHANE	<0.2
1,1-DICHLOROPROPENE	<0.2
1,3-DICHLOROPROPANE	<0.2
1,2,3-TRICHLOROPROPANE	<0.2
2,2-DICHLOROPROPANE	<0.2
CHLOROFORM	<0.2
BROMOFORM	<0.2
BROMODICHLOROMETHANE	<0.2
CHLORODIBROMOMETHANE	<0.2
DICHLOROMETHANE	<2.0
ORTHO-CHLOROTOLUENE	<0.5
PARA-CHLOROTOLUENE	<0.5
META-DICHLOROBENZENE	<0.5
1,1-DICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	<0.2
1,1,1,2-TETRACHLOROETHANE	<0.2
1,1,2,2-TETRACHLOROETHANE	<0.2
BROMOBENZENE	<0.5



TEST : EPA METHOD 502.2

COMPOUNDS	RESULTS
DICHLORODIFLUOROMETHANE	<0.5
TRICHLOROFUOROMETHANE	<0.5
BROMOCHLOROMETHANE	<0.2
1,2-DIBROMOETHANE	<1.0
ISO-PROPYLBENZENE	<2.0
N-PROPYLBENZENE	<1.0
1,3,5-TRIMETHYLBENZENE	<1.0
1,2,4-TRIMETHYLBENZENE	<0.5
TERT-BUTYLBENZENE	<0.5
SEC-BUTYLBENZENE	<0.5
P-ISOPROPYLTOLUENE	<0.5
N-BUTYLBENZENE	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	<1.0
1,2,4-TRICHLOROBENZENE	<0.5
NAPHTHALENE	<1.0
1,2,3-TRICHLOROBENZENE	<0.5
HEXACHLOROBUTADIENE	<1.0
TRANS-1,3-DICHLOROPROPENE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2

## SURROGATE PERCENT RECOVERIES

1-CHLORO-2-FLUOROBENZENE (PID) (%)	94
1-CHLORO-2-FLUOROBENZENE (HALL) (%)	85



## GAS CHROMATOGRAPHY - RESULTS

## REAGENT BLANK

TEST : EPA METHOD 502.2

CLIENT	: GEOTECHNICAL & ENVIRONMENTAL CONS.	ATI I.D.	: 307002
PROJECT #	: 92-0001A	DATE EXTRACTED	: 08/05/93
PROJECT NAME	: (NONE)	DATE ANALYZED	: 08/05/93
CLIENT I.D.	: REAGENT BLANK	UNITS	: UG/L
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
VINYL CHLORIDE	<0.2
BENZENE	<0.5
CARBON TETRACHLORIDE	<0.2
1,2-DICHLOROETHANE	<0.2
TRICHLOROETHYLENE (TCE)	<0.2
PARA-DICHLOROBENZENE	<0.5
1,1-DICHLOROETHYLENE	<0.2
1,1,1-TRICHLOROETHANE	<0.2
CIS-1,2-DICHLOROETHYLENE	<0.2
1,2-DICHLOROPROPANE	<0.2
ETHYLBENZENE	<0.5
CHLOROBENZENE	<0.5
ORTHO-DICHLOROBENZENE	<0.5
STYRENE	<0.5
TETRACHLOROETHYLENE	<0.2
TOLUENE	<0.5
TRANS-1,2-DICHLOROETHYLENE	<0.2
META, PARA-XYLENE (TOTAL)	<0.5
ORTHO-XYLENE	<0.5
CHLOROMETHANE	<0.2
BROMOMETHANE	<0.2
CHLOROETHANE	<0.2
1,3-DICHLOROPROPENE (TOTAL)	<0.2
DIBROMOMETHANE	<0.2
1,1-DICHLOROPROPENE	<0.2
1,3-DICHLOROPROPANE	<0.2
1,2,3-TRICHLOROPROPANE	<0.2
2,2-DICHLOROPROPANE	<0.2
CHLOROFORM	<0.2
BROMOFORM	<0.2
BROMODICHLOROMETHANE	<0.2
CHLORODIBROMOMETHANE	<0.2
DICHLOROMETHANE	<2.0
ORTHO-CHLOROTOLUENE	<0.5
PARA-CHLOROTOLUENE	<0.5
META-DICHLOROBENZENE	<0.5
1,1-DICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	<0.2
1,1,1,2-TETRACHLOROETHANE	<0.2
1,1,2,2-TETRACHLOROETHANE	<0.2
BROMOBENZENE	<0.5
DICHLORODIFLUOROMETHANE	<0.5
TRICHLOROFLUOROMETHANE	<0.5

(CONTINUED NEXT PAGE)



## GAS CHROMATOGRAPHY - RESULTS

REAGENT BLANK

ATI I.D. : 307002

TEST : EPA METHOD 502.2

COMPOUNDS	RESULTS
BROMOCHLOROMETHANE	<0.2
1,2-DIBROMOETHANE	<1.0
ISO-PROPYLBENZENE	<2.0
N-PROPYLBENZENE	<1.0
1,3,5-TRIMETHYLBENZENE	<1.0
1,2,4-TRIMETHYLBENZENE	<0.5
TERT-BUTYLBENZENE	<0.5
SEC-BUTYLBENZENE	<0.5
P-ISOPROPYLTOLUENE	<0.5
N-BUTYLBENZENE	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	<1.0
1,2,4-TRICHLOROBENZENE	<0.5
NAPHTHALENE	<1.0
1,2,3-TRICHLOROBENZENE	<0.5
HEXACHLOROBUTADIENE	<1.0
TRANS-1,3-DICHLOROPROPENE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2

## SURROGATE PERCENT RECOVERIES

1-CHLORO-2-FLUOROBENZENE (PID) (%)	99
1-CHLORO-2-FLUOROBENZENE (HALL) (%)	91



## QUALITY CONTROL DATA

ATI I.D. : 307002

TEST : EPA METHOD 502.2

CLIENT : GEOTECHNICAL & ENVIRONMENTAL CONS.  
 PROJECT # : 92-0001A  
 PROJECT NAME : (NONE)  
 REF I.D. : 30849803

DATE ANALYZED : 08/05/93  
 SAMPLE MATRIX : AQUEOUS  
 UNITS : UG/L

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP.		RPD
					SPIKED SAMPLE	% REC.	
1,1-DICHLOROETHYLENE	<0.2	20	19	95	19	95	0
TRICHLOROETHENE	<0.2	20	23	115	21	105	9
TETRACHLOROETHENE	<0.2	20	21	105	21	105	0
BENZENE	<0.5	20	20	100	20	100	0
BROMODICHLOROMETHANE	<0.2	20	22	110	21	105	5
CHLOROFORM	<0.2	20	20	100	19	95	5
1,1,1-TRICHLOROETHANE	<0.2	20	23	115	23	115	0
TOLUENE	2.6	20	23	102	22	97	4
CHLOROBENZENE	<0.5	20	21	105	19	95	10
META-XYLENE	<0.5	20	22	110	21	105	5

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$



Analytical Technologies, Inc., Albuquerque, NM  
 San Diego • Phoenix • Seattle • Pensacola • Ft. Collins • Portland

**CHAIN OF CUSTODY**

DATE: 7/30/93 PAGE 1 OF 1

ATI LAB I.D.

307002

PROJECT MANAGER: Jeff Owens

COMPANY:

ADDRESS:

PHONE:

FAX:

BILL TO:

COMPANY:

ADDRESS:

GEC  
 2447 W. 12th St. Suite 4  
 Tempe AZ 85281  
 966-8631  
 Same

SAMPLE ID	DATE	TIME	MATRIX	LAB ID
MW-1	7/30/93	0635	water	1
MW-2	"	0809	"	2
MW-3	"	0900	"	3
Trip Blank	7/29/93		"	4

**ANALYSIS REQUEST**

ANALYSIS REQUEST	NUMBER OF CONTAINERS
Petroleum Hydrocarbons (418.1)	4
(MOD 8015) Gas/Diesel	4
Diesel/Gasoline/BTXE/MTBE (MOD 8015/8020)	4
BTXE/MTBE (8020)	4
Chlorinated Hydrocarbons (601/8010)	4
Aromatic Hydrocarbons (602/8020)	4
SDWA Volatiles (502.1/503.1) 502.2 Reg. & Unreg.	4
Pesticides/PCB (608/8080)	1
Herbicides (615/8150)	
Base/Neutral/Acid Compounds GC/MS (625/8270)	
Volatile Organics GC/MS (624/8240)	
Polynuclear Aromatics (610/8310)	
SDWA Primary Standards - Arizona	
SDWA Secondary Standards - Arizona	
SDWA Primary Standards - Federal	
SDWA Secondary Standards - Federal	
The 13 Priority Pollutant Metals	
RCRA Metals by Total Digestion	
RCRA Metals by TCLP (1311)	

**PROJECT INFORMATION**

PROJ. NO.: 92-0001A

PROJ. NAME: ON/NA

P.O. NO.: 4

SHIPPED VIA: 4

**SAMPLE RECEIPT**

NO. CONTAINERS: 13

CUSTODY SEALS: ON/NA

RECEIVED INTACT: [ ]

RECEIVED COLD: [ ]

**PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS**

(RUSH)  24hr  48hr  72hr  1 WEEK (NORMAL)  2 WEEK

Comments:

**SAMPLED & RELINQUISHED BY:**

1. Signature: David Foreman Time: 1032  
 Printed Name: David Foreman Date: 7/30/93  
 Company: GEC 966-8631

2. Signature: [ ] Time: [ ]  
 Printed Name: [ ] Date: [ ]  
 Company: [ ]

3. Signature: [ ] Time: [ ]  
 Printed Name: [ ] Date: [ ]  
 Company: [ ]

**RECEIVED BY:**

1. Signature: [ ] Time: [ ]  
 Printed Name: [ ] Date: [ ]  
 Company: [ ]

2. Signature: [ ] Time: [ ]  
 Printed Name: [ ] Date: [ ]  
 Company: [ ]

3. Signature: [ ] Time: [ ]  
 Printed Name: [ ] Date: [ ]  
 Company: [ ]



Analytical **Technologies**, Inc.

9830 S. 51st Street Suite B-113 Phoenix, AZ 85044 (602) 496-4400

ATI I.D. 306897

July 14, 1993

Dames & Moore  
7500 N. Dreamy Draw Drive  
Suite 145  
Phoenix, AZ 85020

Project Name/Number: RMC/01151-139-033

Attention: Dave Carr

On 06/18/93, Analytical Technologies, Inc., (ADHS License No. AZ0061), received a request to analyze **aqueous** sample(s). The sample(s) were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

D indicates the compound was analyzed at a greater dilution.

Methylene chloride and trichlorotrifluoroethane hits in the Trip Blank are due to laboratory contamination. Several compounds were detected in the reagent blank associated with Trip Blank. There was insufficient sample to reanalyze. None of the compounds found in the reagent blank were found in the sample.

Methyl-t-Butyl Ether hits were confirmed by EPA Method 624 (GC/MS) for two representative samples: PS-4 and PS-DUP 10.

If you have any questions or comments, please do not hesitate to contact us at (602) 496-4400.

Jane M. Foote  
Project Manager

Robert V. Woods  
Laboratory Manager

RVW/ktd

Enclosure



Analytical Technologies, Inc.

CLIENT : DAMES & MOORE, PHOENIX  
PROJECT # : 01151-139-033  
PROJECT NAME : RMC

DATE RECEIVED : 06/18/93

REPORT DATE : 07/14/93

ATI I.D. : 306897

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	PS-1	AQUEOUS	06/18/93
02	PS-2	AQUEOUS	06/18/93
03	PS-3	AQUEOUS	06/18/93
04	PS-4	AQUEOUS	06/18/93
05	PS-5	AQUEOUS	06/18/93
06	PS-6	AQUEOUS	06/18/93
07	PS-DUP 10	AQUEOUS	06/18/93
08	TRIP BLANK	AQUEOUS	06/18/93
09	TANK	AQUEOUS	06/18/93

----- TOTALS -----

MATRIX	# SAMPLES
AQUEOUS	9

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in thirty (30) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.



Analytical Technologies, Inc.

GENERAL CHEMISTRY RESULTS

ATI I.D. : 306897

CLIENT : DAMES & MOORE, PHOENIX  
PROJECT # : 01151-139-033  
PROJECT NAME : RMC

DATE RECEIVED : 06/18/93

REPORT DATE : 07/14/93

PARAMETER	UNITS	09
CYANIDE, TOTAL (EPA 335.3)	MG/L	<0.01



Analytical Technologies, Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

CLIENT : DAMES & MOORE, PHOENIX
PROJECT # : 01151-139-033
PROJECT NAME : RMC

ATI I.D. : 306897

Table with 9 columns: PARAMETER, UNITS, ATI I.D., SAMPLE RESULT, DUP. RESULT, RPD, SPIKED SAMPLE CONC, SPIKE CONC, % REC. Row 1: CYANIDE, TOTAL, MG/L, 30689709, <0.01, <0.01, NA, 0.54, 0.50, 108

% Recovery = (Spike Sample Result - Sample Result) / Spike Concentration X 100

RPD (Relative Percent Difference) = (Sample Result - Duplicate Result) / Average Result X 100



Analytical Technologies, Inc.

METALS RESULTS

ATI I.D. : 306897

CLIENT : DAMES & MOORE, PHOENIX  
PROJECT # : 01151-139-033  
PROJECT NAME : RMC

DATE RECEIVED : 06/18/93

REPORT DATE : 07/14/93

PARAMETER	UNITS	09
SILVER (EPA 200.7/6010)	MG/L	<0.010
ARSENIC (EPA 206.2/7060)	MG/L	0.008
BORON (EPA 200.7/6010)	MG/L	0.80
BARIUM (EPA 200.7/6010)	MG/L	0.088
CADMIUM (EPA 213.2/7131)	MG/L	<0.0005
CHROMIUM (EPA 200.7/6010)	MG/L	0.018
COPPER (EPA 200.7/6010)	MG/L	0.020
MERCURY (EPA 245.1/7470)	MG/L	<0.0002
MANGANESE (EPA 200.7/6010)	MG/L	0.232
LEAD (EPA 239.2/7421)	MG/L	0.003
SELENIUM (EPA 270.2/7740)	MG/L	<0.005
ZINC (EPA 200.7/6010)	MG/L	0.483



## METALS - QUALITY CONTROL

CLIENT : DAMES & MOORE, PHOENIX  
 PROJECT # : 01151-139-033  
 PROJECT NAME : RMC

ATI I.D. : 306897

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC	% REC
SILVER	MG/L	30689101	<0.010	<0.010	NA	0.414	0.500	83
ARSENIC	MG/L	30689709	0.008	0.008	0	0.056	0.050	96
BORON	MG/L	30688601	<0.10	<0.10	NA	1.04	1.00	104
BARIUM	MG/L	30691101	0.182	0.176	3	1.12	1.00	94
CADMIUM	MG/L	30689709	<0.0005	<0.0005	NA	0.0040	0.0050	80
CHROMIUM	MG/L	30691101	<0.010	<0.010	NA	0.921	1.00	92
COPPER	MG/L	30603503	0.014	0.017	19	0.478	0.500	93
MERCURY	MG/L	30689102	<0.0002	<0.0002	NA	0.0052	0.0050	104
MANGANESE	MG/L	30603503	0.691	0.703	2	1.58	1.00	89
LEAD	MG/L	30689709	0.003	0.003	0	0.042	0.050	78
SELENIUM	MG/L	30689709	<0.005	<0.005	NA	0.026	0.050	52
ZINC	MG/L	30603503	0.042	0.034	21	0.485	0.500	89

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30689701

TEST : VOLATILE HALOCARBONS/AROMATICS (601/602) & MTBE

CLIENT	: DAMES & MOORE, PHOENIX	DATE SAMPLED	: 06/18/93
PROJECT #	: 01151-139-033	DATE RECEIVED	: 06/18/93
PROJECT NAME	: RMC	DATE EXTRACTED	: N/A
CLIENT I.D.	: PS-1	DATE ANALYZED	: 06/26/93
SAMPLE MATRIX	: AQUEOUS	UNITS	: UG/L
		DILUTION FACTOR	: 5

COMPOUNDS	RESULTS
BENZENE	<2.5
BROMODICHLOROMETHANE	1
BROMOFORM	<1.0
BROMOMETHANE	<1.0
CARBON TETRACHLORIDE	<1.0
CHLOROBENZENE	<2.5
CHLOROETHANE	<1.0
CHLOROFORM	8
CHLOROMETHANE	<1.0
DIBROMOCHLOROMETHANE	<1.0
2-CHLOROETHYL VINYL ETHER	<2.5
1,3-DICHLOROBENZENE	<2.5
1,2 & 1,4-DICHLOROBENZENE	<2.5
DICHLORODIFLUOROMETHANE	<1.0
1,1-DICHLOROETHANE	22
1,2-DICHLOROETHANE	1
1,1-DICHLOROETHENE	8
1,2-DICHLOROETHENE (TOTAL)	2
1,2-DICHLOROPROPANE	<1.0
CIS-1,3-DICHLOROPROPENE	<1.0
TRANS-1,3-DICHLOROPROPENE	<1.0
ETHYLBENZENE	<2.5
METHYLENE CHLORIDE	<10.0
1,1,2,2-TETRACHLOROETHANE	<1.0
TETRACHLOROETHENE	33
TOLUENE	<2.5
1,1,1-TRICHLOROETHANE	24
1,1,2-TRICHLOROETHANE	<1.0
TRICHLOROETHENE	60
TRICHLOROFLUOROMETHANE	<2.5
VINYL CHLORIDE	<1.0
TOTAL XYLENES	<2.5
TRICHLOROTRIFLUOROETHANE	<10.0
METHYL-t-BUTYL ETHER	190
1,2-DIBROMOETHANE	<5.0
ACETONE	<250

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	100
BROMOFLUOROBENZENE (%)	95



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30689702

TEST : VOLATILE HALOCARBONS/AROMATICS (601/602) & MTBE

CLIENT	: DAMES & MOORE, PHOENIX	DATE SAMPLED	: 06/18/93
PROJECT #	: 01151-139-033	DATE RECEIVED	: 06/18/93
PROJECT NAME	: RMC	DATE EXTRACTED	: N/A
CLIENT I.D.	: PS-2	DATE ANALYZED	: 06/26/93
SAMPLE MATRIX	: AQUEOUS	UNITS	: UG/L
		DILUTION FACTOR	: 5

COMPOUNDS	RESULTS
BENZENE	<2.5
BROMODICHLOROMETHANE	<1.0
BROMOFORM	<1.0
BROMOMETHANE	<1.0
CARBON TETRACHLORIDE	<1.0
CHLOROBENZENE	<2.5
CHLOROETHANE	<1.0
CHLOROFORM	8
CHLOROMETHANE	<1.0
DIBROMOCHLOROMETHANE	<1.0
2-CHLOROETHYL VINYL ETHER	<2.5
1,3-DICHLOROBENZENE	<2.5
1,2 & 1,4-DICHLOROBENZENE	<2.5
DICHLORODIFLUOROMETHANE	<1.0
1,1-DICHLOROETHANE	10
1,2-DICHLOROETHANE	1
1,1-DICHLOROETHENE	15
1,2-DICHLOROETHENE (TOTAL)	1
1,2-DICHLOROPROPANE	<1.0
CIS-1,3-DICHLOROPROPENE	<1.0
TRANS-1,3-DICHLOROPROPENE	<1.0
ETHYLBENZENE	<2.5
METHYLENE CHLORIDE	<10.0
1,1,2,2-TETRACHLOROETHANE	<1.0
TETRACHLOROETHENE	13
TOLUENE	<2.5
1,1,1-TRICHLOROETHANE	61
1,1,2-TRICHLOROETHANE	<1.0
TRICHLOROETHENE	25
TRICHLOROFLUOROMETHANE	<2.5
VINYL CHLORIDE	<1.0
TOTAL XYLENES	<2.5
TRICHLOROTRIFLUOROETHANE	<10.0
METHYL-t-BUTYL ETHER	770 D
1,2-DIBROMOETHANE	<5.0
ACETONE	<250

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	96
BROMOFLUOROBENZENE (%)	112



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30689703

TEST : VOLATILE HALOCARBONS/AROMATICS (601/602) & MTBE

CLIENT	: DAMES & MOORE, PHOENIX	DATE SAMPLED	: 06/18/93
PROJECT #	: 01151-139-033	DATE RECEIVED	: 06/18/93
PROJECT NAME	: RMC	DATE EXTRACTED	: N/A
CLIENT I.D.	: PS-3	DATE ANALYZED	: 06/26/93
SAMPLE MATRIX	: AQUEOUS	UNITS	: UG/L
		DILUTION FACTOR	: 5

COMPOUNDS	RESULTS
BENZENE	<2.5
BROMODICHLOROMETHANE	<1.0
BROMOFORM	<1.0
BROMOMETHANE	<1.0
CARBON TETRACHLORIDE	<1.0
CHLOROBENZENE	<2.5
CHLOROETHANE	<1.0
CHLOROFORM	10
CHLOROMETHANE	<1.0
DIBROMOCHLOROMETHANE	<1.0
2-CHLOROETHYL VINYL ETHER	<2.5
1,3-DICHLOROBENZENE	<2.5
1,2 & 1,4-DICHLOROBENZENE	<2.5
DICHLORODIFLUOROMETHANE	<1.0
1,1-DICHLOROETHANE	<1.0
1,2-DICHLOROETHANE	1
1,1-DICHLOROETHENE	<1.0
1,2-DICHLOROETHENE (TOTAL)	<1.0
1,2-DICHLOROPROPANE	<1.0
CIS-1,3-DICHLOROPROPENE	<1.0
TRANS-1,3-DICHLOROPROPENE	<1.0
ETHYLBENZENE	<2.5
METHYLENE CHLORIDE	<10.0
1,1,2,2-TETRACHLOROETHANE	<1.0
TETRACHLOROETHENE	18
TOLUENE	<2.5
1,1,1-TRICHLOROETHANE	<1.0
1,1,2-TRICHLOROETHANE	<1.0
TRICHLOROETHENE	25
TRICHLOROFLUOROMETHANE	<2.5
VINYL CHLORIDE	<1.0
TOTAL XYLENES	<2.5
TRICHLOROTRIFLUOROETHANE	<10.0
METHYL-t-BUTYL ETHER	650 D
1,2-DIBROMOETHANE	<5.0
ACETONE	<250

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	93
BROMOFLUOROBENZENE (%)	105



## GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30689704

TEST : VOLATILE HALOCARBONS/AROMATICS (601/602) &amp; MTBE

CLIENT	: DAMES & MOORE, PHOENIX	DATE SAMPLED	: 06/18/93
PROJECT #	: 01151-139-033	DATE RECEIVED	: 06/18/93
PROJECT NAME	: RMC	DATE EXTRACTED	: N/A
CLIENT I.D.	: PS-4	DATE ANALYZED	: 06/26/93
SAMPLE MATRIX	: AQUEOUS	UNITS	: UG/L
		DILUTION FACTOR	: 10

COMPOUNDS	RESULTS
BENZENE	13
BROMODICHLOROMETHANE	<2.0
BROMOFORM	<2.0
BROMOMETHANE	<2.0
CARBON TETRACHLORIDE	<2.0
CHLOROBENZENE	<5.0
CHLOROETHANE	<2.0
CHLOROFORM	5
CHLOROMETHANE	<2.0
DIBROMOCHLOROMETHANE	<2.0
2-CHLOROETHYL VINYL ETHER	<5.0
1,3-DICHLOROBENZENE	<5.0
1,2 & 1,4-DICHLOROBENZENE	<5.0
DICHLORODIFLUOROMETHANE	<2.0
1,1-DICHLOROETHANE	<2.0
1,2-DICHLOROETHANE	<2.0
1,1-DICHLOROETHENE	<2.0
1,2-DICHLOROETHENE (TOTAL)	4
1,2-DICHLOROPROPANE	<2.0
CIS-1,3-DICHLOROPROPENE	<2.0
TRANS-1,3-DICHLOROPROPENE	<2.0
ETHYLBENZENE	<5.0
METHYLENE CHLORIDE	<20.0
1,1,2,2-TETRACHLOROETHANE	<2.0
TETRACHLOROETHENE	22
TOLUENE	<5.0
1,1,1-TRICHLOROETHANE	<2.0
1,1,2-TRICHLOROETHANE	<2.0
TRICHLOROETHENE	74
TRICHLOROFLUOROMETHANE	<5.0
VINYL CHLORIDE	<2.0
TOTAL XYLENES	<5.0
TRICHLOROTRIFLUOROETHANE	<20.0
METHYL-t-BUTYL ETHER	1700 D *
1,2-DIBROMOETHANE	<10.0
ACETONE	<500

## SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	96
BROMOFLUOROBENZENE (%)	96

\* Identification confirmed by EPA Method 624 (GC/MS)



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30689705

TEST : VOLATILE HALOCARBONS/AROMATICS (601/602) & MTBE

CLIENT	: DAMES & MOORE, PHOENIX	DATE SAMPLED	: 06/18/93
PROJECT #	: 01151-139-033	DATE RECEIVED	: 06/18/93
PROJECT NAME	: RMC	DATE EXTRACTED	: N/A
CLIENT I.D.	: PS-5	DATE ANALYZED	: 06/26/93
SAMPLE MATRIX	: AQUEOUS	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
BENZENE	<0.5
BROMODICHLOROMETHANE	0.2
BROMOFORM	<0.2
BROMOMETHANE	<0.2
CARBON TETRACHLORIDE	<0.2
CHLOROBENZENE	<0.5
CHLOROETHANE	<0.2
CHLOROFORM	12
CHLOROMETHANE	<0.2
DIBROMOCHLOROMETHANE	<0.2
2-CHLOROETHYL VINYL ETHER	<0.5
1,3-DICHLOROBENZENE	<0.5
1,2 & 1,4-DICHLOROBENZENE	<0.5
DICHLORODIFLUOROMETHANE	<0.2
1,1-DICHLOROETHANE	2.3
1,2-DICHLOROETHANE	1.0
1,1-DICHLOROETHENE	4.7
1,2-DICHLOROETHENE (TOTAL)	<0.2
1,2-DICHLOROPROPANE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2
TRANS-1,3-DICHLOROPROPENE	<0.2
ETHYLBENZENE	<0.5
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.2
TETRACHLOROETHENE	9.4
TOLUENE	<0.5
1,1,1-TRICHLOROETHANE	4.3
1,1,2-TRICHLOROETHANE	<0.2
TRICHLOROETHENE	6.7
TRICHLOROFLUOROMETHANE	<0.5
VINYL CHLORIDE	<0.2
TOTAL XYLENES	<0.5
TRICHLOROTRIFLUOROETHANE	<2.0
METHYL-t-BUTYL ETHER	58
1,2-DIBROMOETHANE	<1.0
ACETONE	<50

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	83
BROMOFLUOROBENZENE (%)	89



## GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30689706

TEST : VOLATILE HALOCARBONS/AROMATICS (601/602) &amp; MTBE

CLIENT	: DAMES & MOORE, PHOENIX	DATE SAMPLED	: 06/18/93
PROJECT #	: 01151-139-033	DATE RECEIVED	: 06/18/93
PROJECT NAME	: RMC	DATE EXTRACTED	: N/A
CLIENT I.D.	: PS-6	DATE ANALYZED	: 06/26/93
SAMPLE MATRIX	: AQUEOUS	UNITS	: UG/L
		DILUTION FACTOR	: 5

COMPOUNDS	RESULTS
BENZENE	<2.5
BROMODICHLOROMETHANE	<1.0
BROMOFORM	<1.0
BROMOMETHANE	<1.0
CARBON TETRACHLORIDE	<1.0
CHLOROBENZENE	<2.5
CHLOROETHANE	<1.0
CHLOROFORM	5
CHLOROMETHANE	<1.0
DIBROMOCHLOROMETHANE	<1.0
2-CHLOROETHYL VINYL ETHER	<2.5
1,3-DICHLOROBENZENE	<2.5
1,2 & 1,4-DICHLOROBENZENE	<2.5
DICHLORODIFLUOROMETHANE	<1.0
1,1-DICHLOROETHANE	5
1,2-DICHLOROETHANE	1
1,1-DICHLOROETHENE	6
1,2-DICHLOROETHENE (TOTAL)	1
1,2-DICHLOROPROPANE	<1.0
CIS-1,3-DICHLOROPROPENE	<1.0
TRANS-1,3-DICHLOROPROPENE	<1.0
ETHYLBENZENE	<2.5
METHYLENE CHLORIDE	<10.0
1,1,2,2-TETRACHLOROETHANE	<1.0
TETRACHLOROETHENE	55
TOLUENE	<2.5
1,1,1-TRICHLOROETHANE	3
1,1,2-TRICHLOROETHANE	<1.0
TRICHLOROETHENE	100
TRICHLOROFLUOROMETHANE	<2.5
VINYL CHLORIDE	<1.0
TOTAL XYLENES	<2.5
TRICHLOROTRIFLUOROETHANE	<10.0
METHYL-t-BUTYL ETHER	160
1,2-DIBROMOETHANE	<5.0
ACETONE	<250

## SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	85
BROMOFLUOROBENZENE (%)	115



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30689707

TEST : VOLATILE HALOCARBONS/AROMATICS (601/602) & MTBE

CLIENT	: DAMES & MOORE, PHOENIX	DATE SAMPLED	: 06/18/93
PROJECT #	: 01151-139-033	DATE RECEIVED	: 06/18/93
PROJECT NAME	: RMC	DATE EXTRACTED	: N/A
CLIENT I.D.	: PS-DUP 10	DATE ANALYZED	: 06/26/93
SAMPLE MATRIX	: AQUEOUS	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
BENZENE	<0.5
BROMODICHLOROMETHANE	<0.2
BROMOFORM	<0.2
BROMOMETHANE	<0.2
CARBON TETRACHLORIDE	<0.2
CHLOROBENZENE	<0.5
CHLOROETHANE	<0.2
CHLOROFORM	6.5
CHLOROMETHANE	<0.2
DIBROMOCHLOROMETHANE	<0.2
2-CHLOROETHYL VINYL ETHER	<0.5
1,3-DICHLOROBENZENE	<0.5
1,2 & 1,4-DICHLOROBENZENE	<0.5
DICHLORODIFLUOROMETHANE	<0.2
1,1-DICHLOROETHANE	7.1
1,2-DICHLOROETHANE	0.8
1,1-DICHLOROETHENE	14
1,2-DICHLOROETHENE (TOTAL)	0.8
1,2-DICHLOROPROPANE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2
TRANS-1,3-DICHLOROPROPENE	<0.2
ETHYLBENZENE	<0.5
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.2
TETRACHLOROETHENE	12
TOLUENE	<0.5
1,1,1-TRICHLOROETHANE	56
1,1,2-TRICHLOROETHANE	<0.2
TRICHLOROETHENE	24
TRICHLOROFLUOROMETHANE	<0.5
VINYL CHLORIDE	<0.2
TOTAL XYLENES	<0.5
TRICHLOROTRIFLUOROETHANE	<2.0
METHYL-t-BUTYL ETHER	860 D *
1,2-DIBROMOETHANE	<1.0
ACETONE	<50

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	93
BROMOFLUOROBENZENE (%)	108

\* Identification confirmed by EPA Method 624 (GC/MS)



## GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30689708

TEST : VOLATILE HALOCARBONS/AROMATICS (601/602) &amp; MTBE

CLIENT	: DAMES & MOORE, PHOENIX	DATE SAMPLED	: 06/18/93
PROJECT #	: 01151-139-033	DATE RECEIVED	: 06/18/93
PROJECT NAME	: RMC	DATE EXTRACTED	: N/A
CLIENT I.D.	: TRIP BLANK	DATE ANALYZED	: 07/01/93
SAMPLE MATRIX	: AQUEOUS	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
BENZENE	<0.5
BROMODICHLOROMETHANE	<0.2
BROMOFORM	<0.2
BROMOMETHANE	<0.2
CARBON TETRACHLORIDE	<0.2
CHLOROBENZENE	<0.5
CHLOROETHANE	<0.2
CHLOROFORM	<0.2
CHLOROMETHANE	<0.2
DIBROMOCHLOROMETHANE	<0.2
2-CHLOROETHYL VINYL ETHER	<0.5
1,3-DICHLOROBENZENE	<0.5
1,2 & 1,4-DICHLOROBENZENE	<0.5
DICHLORODIFLUOROMETHANE	<0.2
1,1-DICHLOROETHANE	<0.2
1,2-DICHLOROETHANE	<0.2
1,1-DICHLOROETHENE	<0.2
1,2-DICHLOROETHENE (TOTAL)	<0.2
1,2-DICHLOROPROPANE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2
TRANS-1,3-DICHLOROPROPENE	<0.2
ETHYLBENZENE	<0.5
METHYLENE CHLORIDE	220 D
1,1,2,2-TETRACHLOROETHANE	<0.2
TETRACHLOROETHENE	<0.2
TOLUENE	<0.5
1,1,1-TRICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	<0.2
TRICHLOROETHENE	<0.2
TRICHLOROFLUOROMETHANE	<0.5
VINYL CHLORIDE	<0.2
TOTAL XYLENES	<0.5
TRICHLOROTRIFLUOROETHANE	2.3
METHYL-t-BUTYL ETHER	<1.0
1,2-DIBROMOETHANE	<1.0
ACETONE	<50

## SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	111
BROMOFLUOROBENZENE (%)	90



## REAGENT BLANK

TEST : VOLATILE HALOCARBONS/AROMATICS (601/602) &amp; MTBE

CLIENT : DAMES & MOORE, PHOENIX  
 PROJECT # : 01151-139-033  
 PROJECT NAME : RMC  
 CLIENT I.D. : REAGENT BLANK

ATI I.D. : 306897  
 DATE EXTRACTED : 06/26/93  
 DATE ANALYZED : 06/26/93  
 UNITS : UG/L  
 DILUTION FACTOR : N/A

COMPOUNDS	RESULTS
BENZENE	<0.5
BROMODICHLOROMETHANE	<0.2
BROMOFORM	<0.2
BROMOMETHANE	<0.2
CARBON TETRACHLORIDE	<0.2
CHLOROBENZENE	<0.5
CHLOROETHANE	<0.2
CHLOROFORM	<0.2
CHLOROMETHANE	<0.2
DIBROMOCHLOROMETHANE	<0.2
2-CHLOROETHYL VINYL ETHER	<0.5
1,3-DICHLOROBENZENE	<0.5
1,2 & 1,4-DICHLOROBENZENE	<0.5
DICHLORODIFLUOROMETHANE	<0.2
1,1-DICHLOROETHANE	<0.2
1,2-DICHLOROETHANE	<0.2
1,1-DICHLOROETHENE	<0.2
1,2-DICHLOROETHENE (TOTAL)	<0.2
1,2-DICHLOROPROPANE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2
TRANS-1,3-DICHLOROPROPENE	<0.2
ETHYLBENZENE	<0.5
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.2
TETRACHLOROETHENE	<0.2
TOLUENE	<0.5
1,1,1-TRICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	<0.2
TRICHLOROETHENE	<0.2
TRICHLOROFLUOROMETHANE	<0.5
VINYL CHLORIDE	<0.2
TOTAL XYLENES	<0.5
TRICHLOROTRIFLUOROETHANE	<2.0
METHYL-t-BUTYL ETHER	<1.0
1,2-DIBROMOETHANE	<1.0
ACETONE	<50

## SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	113
BROMOFLUOROBENZENE (%)	115



## REAGENT BLANK

TEST : VOLATILE HALOCARBONS/AROMATICS (601/602) &amp; MTBE

CLIENT	: DAMES & MOORE, PHOENIX	ATI I.D.	: 306897
PROJECT #	: 01151-139-033	DATE EXTRACTED	: 07/01/93
PROJECT NAME	: RMC	DATE ANALYZED	: 07/01/93
CLIENT I.D.	: REAGENT BLANK	UNITS	: UG/L
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
BENZENE	<0.5
BROMODICHLOROMETHANE	<0.2
BROMOFORM	<0.2
BROMOMETHANE	<0.2
CARBON TETRACHLORIDE	<0.2
CHLOROBENZENE	<0.5
CHLOROETHANE	<0.2
CHLOROFORM	0.4
CHLOROMETHANE	<0.2
DIBROMOCHLOROMETHANE	<0.2
2-CHLOROETHYL VINYL ETHER	<0.5
1,3-DICHLOROBENZENE	<0.5
1,2 & 1,4-DICHLOROBENZENE	<0.5
DICHLORODIFLUOROMETHANE	<0.2
1,1-DICHLOROETHANE	<0.2
1,2-DICHLOROETHANE	<0.2
1,1-DICHLOROETHENE	0.3
1,2-DICHLOROETHENE (TOTAL)	<0.2
1,2-DICHLOROPROPANE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2
TRANS-1,3-DICHLOROPROPENE	<0.2
ETHYLBENZENE	<0.5
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.2
TETRACHLOROETHENE	0.3
TOLUENE	<0.5
1,1,1-TRICHLOROETHANE	0.6
1,1,2-TRICHLOROETHANE	<0.2
TRICHLOROETHENE	0.3
TRICHLOROFLUOROMETHANE	<0.5
VINYL CHLORIDE	<0.2
TOTAL XYLENES	<0.5
TRICHLOROTRIFLUOROETHANE	<2.0
METHYL-t-BUTYL ETHER	<1.0
1,2-DIBROMOETHANE	<1.0
ACETONE	<50

## SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	116
BROMOFLUOROBENZENE (%)	95



Analytical Technologies, Inc.

QUALITY CONTROL DATA

TEST : VOLATILE HALOCARBONS/AROMATICS (601/602) & MTBE  
 ATI I.D. : 306897  
 CLIENT : DAMES & MOORE, PHOENIX  
 PROJECT # : 01151-139-033  
 PROJECT NAME : RMC  
 REF I.D. : 30749901  
 DATE ANALYZED : 06/25/93  
 SAMPLE MATRIX : AQUEOUS  
 UNITS : UG/L

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
1,1 DICHLOROETHENE	<0.2	20	20	100	19	95	5
TRICHLOROETHENE	<0.2	20	20	100	18	90	11
TETRACHLOROETHENE	<0.2	20	22	110	23	115	4
BENZENE	<0.5	20	17	85	18	90	6
BROMODICHLOROMETHANE	<0.2	20	22	110	21	105	5
CHLOROFORM	<0.2	20	23	115	23	115	0
1,1,1-TRICHLOROETHANE	<0.2	20	24	120	22	110	9
TOLUENE	<0.5	20	17	85	18	90	6
CHLOROBENZENE	<0.5	20	20	100	18	90	11
XYLENES	<0.5	20	17	85	18	90	6

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30689701

TEST : FUEL HYDROCARBONS (MOD. EPA 8015, BLS-191)

CLIENT : DAMES & MOORE, PHOENIX  
PROJECT # : 01151-139-033  
PROJECT NAME : RMC  
CLIENT I.D. : PS-1  
SAMPLE MATRIX : AQUEOUS

DATE SAMPLED : 06/18/93  
DATE RECEIVED : 06/18/93  
DATE EXTRACTED : 06/21/93  
DATE ANALYZED : 06/24/93  
UNITS : MG/L  
DILUTION FACTOR : 1

COMPOUNDS	RESULTS
FUEL HYDROCARBONS, C6-C10	<1
FUEL HYDROCARBONS, C10-C22 (BLS-191)	<1
FUEL HYDROCARBONS, C22-C36	<1
FUEL HYDROCARBONS (CALCULATED SUM)	<1

SURROGATE PERCENT RECOVERIES

O-TERPHENYL (%) 119



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30689702

TEST : FUEL HYDROCARBONS (MOD. EPA 8015, BLS-191)

CLIENT : DAMES & MOORE, PHOENIX  
PROJECT # : 01151-139-033  
PROJECT NAME : RMC  
CLIENT I.D. : PS-2  
SAMPLE MATRIX : AQUEOUS

DATE SAMPLED : 06/18/93  
DATE RECEIVED : 06/18/93  
DATE EXTRACTED : 06/21/93  
DATE ANALYZED : 06/24/93  
UNITS : MG/L  
DILUTION FACTOR : 1

COMPOUNDS	RESULTS
FUEL HYDROCARBONS, C6-C10	<1
FUEL HYDROCARBONS, C10-C22 (BLS-191)	2
FUEL HYDROCARBONS, C22-C36	<1
FUEL HYDROCARBONS (CALCULATED SUM)	2

SURROGATE PERCENT RECOVERIES

O-TERPHENYL (%) 124



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30689703

TEST : FUEL HYDROCARBONS (MOD. EPA 8015, BLS-191)

CLIENT : DAMES & MOORE, PHOENIX  
PROJECT # : 01151-139-033  
PROJECT NAME : RMC  
CLIENT I.D. : PS-3  
SAMPLE MATRIX : AQUEOUS

DATE SAMPLED : 06/18/93  
DATE RECEIVED : 06/18/93  
DATE EXTRACTED : 06/21/93  
DATE ANALYZED : 06/24/93  
UNITS : MG/L  
DILUTION FACTOR : 1

-----  
COMPOUNDS

RESULTS  
-----

FUEL HYDROCARBONS, C6-C10 <1  
FUEL HYDROCARBONS, C10-C22 (BLS-191) <1  
FUEL HYDROCARBONS, C22-C36 <1  
FUEL HYDROCARBONS (CALCULATED SUM) <1

SURROGATE PERCENT RECOVERIES

O-TERPHENYL (%) 120



Analytical **Technologies**, Inc.

**GAS CHROMATOGRAPHY - RESULTS**

ATI I.D. : 30689704

TEST : FUEL HYDROCARBONS (MOD. EPA 8015, BLS-191)

CLIENT : DAMES & MOORE, PHOENIX  
PROJECT # : 01151-139-033  
PROJECT NAME : RMC  
CLIENT I.D. : PS-4  
SAMPLE MATRIX : AQUEOUS

DATE SAMPLED : 06/18/93  
DATE RECEIVED : 06/18/93  
DATE EXTRACTED : 06/21/93  
DATE ANALYZED : 06/24/93  
UNITS : MG/L  
DILUTION FACTOR : 1

-----  
COMPOUNDS

RESULTS

-----  
FUEL HYDROCARBONS, C6-C10 <1  
FUEL HYDROCARBONS, C10-C22 (BLS-191) <1  
FUEL HYDROCARBONS, C22-C36 <1  
FUEL HYDROCARBONS (CALCULATED SUM) <1

SURROGATE PERCENT RECOVERIES

O-TERPHENYL (%) 119



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30689705

TEST : FUEL HYDROCARBONS (MOD. EPA 8015, BLS-191)

CLIENT	: DAMES & MOORE, PHOENIX	DATE SAMPLED	: 06/18/93
PROJECT #	: 01151-139-033	DATE RECEIVED	: 06/18/93
PROJECT NAME	: RMC	DATE EXTRACTED	: 06/21/93
CLIENT I.D.	: PS-5	DATE ANALYZED	: 06/24/93
SAMPLE MATRIX	: AQUEOUS	UNITS	: MG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
FUEL HYDROCARBONS, C6-C10	<1
FUEL HYDROCARBONS, C10-C22 (BLS-191)	<1
FUEL HYDROCARBONS, C22-C36	<1
FUEL HYDROCARBONS (CALCULATED SUM)	<1

SURROGAT                      SURROGATE PERCENT RECOVERIES

O-TERPHENYL (%)                      123



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30689706

TEST : FUEL HYDROCARBONS (MOD. EPA 8015, BLS-191)

CLIENT	: DAMES & MOORE, PHOENIX	DATE SAMPLED	: 06/18/93
PROJECT #	: 01151-139-033	DATE RECEIVED	: 06/18/93
PROJECT NAME	: RMC	DATE EXTRACTED	: 06/21/93
CLIENT I.D.	: PS-6	DATE ANALYZED	: 06/24/93
SAMPLE MATRIX	: AQUEOUS	UNITS	: MG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
FUEL HYDROCARBONS, C6-C10	<1
FUEL HYDROCARBONS, C10-C22 (BLS-191)	<1
FUEL HYDROCARBONS, C22-C36	<1
FUEL HYDROCARBONS (CALCULATED SUM)	<1
SURROGATE PERCENT RECOVERIES	
O-TERPHENYL (%)	122



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30689707

TEST : FUEL HYDROCARBONS (MOD. EPA 8015, BLS-191)

CLIENT	: DAMES & MOORE, PHOENIX	DATE SAMPLED	: 06/18/93
PROJECT #	: 01151-139-033	DATE RECEIVED	: 06/18/93
PROJECT NAME	: RMC	DATE EXTRACTED	: 06/21/93
CLIENT I.D.	: PS-DUP 10	DATE ANALYZED	: 06/24/93
SAMPLE MATRIX	: AQUEOUS	UNITS	: MG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
FUEL HYDROCARBONS, C6-C10	<1
FUEL HYDROCARBONS, C10-C22 (BLS-191)	2
FUEL HYDROCARBONS, C22-C36	<1
FUEL HYDROCARBONS (CALCULATED SUM)	2

SURROGATE PERCENT RECOVERIES

O-TERPHENYL (%)	122
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Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

REAGENT BLANK

TEST : FUEL HYDROCARBONS (MOD. EPA 8015, BLS-191)

CLIENT : DAMES & MOORE, PHOENIX  
PROJECT # : 01151-139-033  
PROJECT NAME : RMC  
CLIENT I.D. : REAGENT BLANK

ATI I.D. : 306897  
DATE EXTRACTED : 06/21/93  
DATE ANALYZED : 06/22/93  
UNITS : MG/L  
DILUTION FACTOR : N/A

-----  
COMPOUNDS

RESULTS

-----  
FUEL HYDROCARBONS, C6-C10 <1  
FUEL HYDROCARBONS, C10-C22 (BLS-191) <1  
FUEL HYDROCARBONS, C22-C36 <1  
FUEL HYDROCARBONS (CALCULATED SUM) <1

SURROGATE PERCENT RECOVERIES

O-TERPHENYL (%) 113



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

REAGENT BLANK

TEST : FUEL HYDROCARBONS (MOD. EPA 8015, BLS-191)

CLIENT : DAMES & MOORE, PHOENIX  
PROJECT # : 01151-139-033  
PROJECT NAME : RMC  
CLIENT I.D. : REAGENT BLANK

ATI I.D. : 306897  
DATE EXTRACTED : 06/21/93  
DATE ANALYZED : 06/23/93  
UNITS : MG/L  
DILUTION FACTOR : N/A

-----  
COMPOUNDS

RESULTS

-----  
FUEL HYDROCARBONS, C6-C10 <1  
FUEL HYDROCARBONS, C10-C22 (BLS-191) <1  
FUEL HYDROCARBONS, C22-C36 <1  
FUEL HYDROCARBONS (CALCULATED SUM) <1

SURROGATE PERCENT RECOVERIES

O-TERPHENYL (%) 125



Analytical Technologies, Inc.

QUALITY CONTROL DATA

TEST : FUEL HYDROCARBONS (MOD. EPA 8015, BLS-191)

ATI I.D. : 306897

CLIENT : DAMES & MOORE, PHOENIX  
 PROJECT # : 01151-139-033  
 PROJECT NAME : RMC  
 REF I.D. : 30689005

DATE ANALYZED : 06/22/93  
 SAMPLE MATRIX : AQUEOUS  
 UNITS : MG/L

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
FUEL HYDROCARBONS (C10-C22)	2	18	19	94	18	89	5

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$



Analytical Technologies, Inc.

QUALITY CONTROL DATA

TEST : FUEL HYDROCARBONS (MOD. EPA 8015, BLS-191)      ATI I.D. : 306897

CLIENT : DAMES & MOORE, PHOENIX

PROJECT # : 01151-139-033      DATE ANALYZED : 06/25/93

PROJECT NAME : RMC      SAMPLE MATRIX :

REF I.D. : 30649807      UNITS : MG/L

COMPOUNDS	SAMPLE CONC. RESULT	SAMPLE SPIKED	SAMPLE SPIKED	% REC.	DUP. SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	RPD
FUEL HYDROCARBONS (C10-C22)	<1	18	19	106	19	106	0	

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

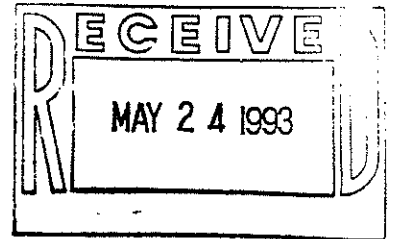




# SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063  
(415) 364-9600 • FAX (415) 364-9233

Delta Environmental Consultants  
1125 N. 28th Dr., D-115  
Phoenix, AZ 85029  
Attention: Phil Schneider



Project: Shell, 202-6364-3601

Enclosed are the results from 3 water samples received at Sequoia Analytical on May 5, 1993. The requested analyses are listed below:

SAMPLE #	SAMPLE DESCRIPTION	DATE OF COLLECTION	TEST METHOD
3E18201	BCS-3	5/4/93	EPA 502.2 EPA 418.1
3E18202	BCS-2	5/4/93	EPA 502.2 EPA 418.1
3E18203	BCS-1	5/4/93	EPA 502.2 EPA 418.1

Please contact me if you have any questions. In the meantime, thank you for the opportunity to work with you on this project.

Very truly yours,

SEQUOIA ANALYTICAL

Nokowhat D. Herrera  
Project Manager





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## REGULATED ORGANIC CHEMICALS CONTINUED

Test Method	Constituent ALL CONSTITUENTS REPORTED µg/L	Entry #	Analyses Results	MCL µg/L	* DLR µg/L
EPA 502.2	Trichlorofluoromethane (Freon 11)	34488	N.D.	150	1.0
EPA 502.2	Trichlorotrifluoroethane (Freon 113)	81611	N.D.	1200	10
EPA 502.2	Vinyl Chloride (VC)	39175	N.D.	0.5	0.50
EPA 502.2	m,p-Xylene	A-014	760	--	10
EPA 502.2	o-Xylene	77135	870	--	10
EPA 502.2	Total Xylenes (m,p & o)	81551	1,600	1750	10

EPA 504	Dibromochloropropane (DBCP)	38761	--	0.2	0.01
EPA 504	Ethylene Dibromide (EDB)	77651	--	0.02	0.02
EPA 505	Endrin	39390	--	0.2	0.1
EPA 505	Lindane (gamma-BHC)	39340	--	4	0.2
EPA 505	Methoxychlor	39480	--	100	10
EPA 505	Toxaphene	39400	--	5	1.0
EPA 505	Chlordane	39350	--	0.1	0.1
EPA 525	Diethylhexylphthalate (DEHP)	39100	--	4.0	3.0
EPA 505	Heptachlor	39410	--	0.01	0.01
EPA 505	Heptachlor expoxide	39420	--	0.01	0.01
EPA 507	Atrazine (AAtrex)	39033	--	3	1.0
EPA 507	Molinate (Ordram)	82199	--	20	2.0
EPA 507	Simazine (Princep)	39055	--	10	1.0
EPA 507	Thiobencarb (Bolero)	A-001	--	70	1.0
EPA 515.1	Bentazon (Basagran)	38710	--	18	2.0
EPA 515.1	2,4-D	39730	--	100	10
EPA 515.1	2,4,5-TP (Silvex)	39045	--	10	1.0
EPA 531	Carbofuran (Furadan)	81405	--	18	5.0
EPA 547	Glyphosate	79743	--	700	25

## UNREGULATED ORGANIC CHEMICALS

Test Method	Constituent ALL CONSTITUENTS REPORTED µg/L	Entry #	Analyses Results	MCL µg/L	* DLR µg/L
EPA 502.2	Bromobenzene	81555	N.D.	--	0.50
EPA 502.2	Bromochloromethane	A-012	N.D.	--	0.50
EPA 502.2	Bromomethane (Methyl Bromide)	34413	N.D.	--	0.50
EPA 502.2	n-Butylbenzene	A-010	N.D.	--	0.50
EPA 502.2	sec-Butylbenzene	77350	N.D.	--	0.50
EPA 502.2	tert-Butylbenzene	77353	900	--	200
EPA 502.2	Chloroethane	34311	N.D.	--	0.50
EPA 502.2	2-Chloroethylvinyl ether	34576	N.D.	--	1.0
EPA 502.2	Chloromethane (Methyl Chloride)	34418	N.D.	--	0.50
EPA 502.2	2-Chlorotoluene	A-008	N.D.	--	0.50
EPA 502.2	4-Chlorotoluene	A-009	N.D.	--	0.50
EPA 502.2	Dibromomethane	77596	N.D.	--	0.50
EPA 502.2	1,2-Dichlorobenzene (o-DCB)	34536	N.D.	--	0.50
EPA 502.2	1,3-Dichlorobenzene (m-DCB)	34566	N.D.	--	0.50
EPA 502.2	Dichlorodifluoromethane	34668	N.D.	--	1.0
EPA 502.2	1,3-Dichloropropane	77173	N.D.	--	0.50
EPA 502.2	2,2-Dichloropropane	77170	N.D.	--	0.50



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## UNREGULATED ORGANIC CHEMICALS CONTINUED

Test Method	Constituent ALL CONSTITUENTS REPORTED µg/L	Entry #	Analyses Results	MCL µg/L	* DLR µg/L
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EPA 502.2	1,1-Dichloropropene	77168	N.D.	--	0.50
EPA 502.2	Hexachlorobutadiene	34391	N.D.	--	0.50
EPA 502.2	Isopropylbenzene (Cumene)	77223	N.D.	--	0.50
EPA 502.2	p-Isopropyltoluene	A-011	N.D.	--	0.50
EPA 502.2	Methylene chloride	34423	N.D.	--	1.0
EPA 502.2	Naphthalene	34696	N.D.	--	0.50
EPA 502.2	n-Propylbenzene	77224	N.D.	--	0.50
EPA 502.2	Styrene	77128	N.D.	--	0.50
EPA 502.2	1,1,1,2-Tetrachloroethane	77562	N.D.	--	0.50
EPA 502.2	Toluene	34010	220	--	10
EPA 502.2	1,2,3-Trichlorobenzene	77613	N.D.	--	0.50
EPA 502.2	1,2,4-Trichlorobenzene	34551	N.D.	--	0.50
EPA 502.2	1,2,3-Trichloropropane	77443	N.D.	--	0.50
EPA 502.2	1,2,4-Trimethylbenzene	77222	N.D.	--	0.50
EPA 502.2	1,3,5-Trimethylbenzene	77336	470	--	0.50
EPA 524.2	Methyl ethyl ketone (MEK, Butanone)	81595	--	--	5.0
EPA 524.2	Methyl isobutyl ketone (MIBK)	81596	--	--	5.0
--	bis (2-Chloroethyl) Ether	34273	--	--	5.0

EPA 505	Alachlor (Alanex)	77825	--	--	1.0
EPA 507	Bromacil (Hyvar)	82198	--	--	10
EPA 507	Diazinon	39570	--	--	0.02
EPA 507	Prometryn (Caparol)	39057	--	--	2.0
EPA 508	Chlorothalonil (Daconil, Bravo)	70314	---	--	5.0
EPA 507	Dimethoate (Cygon)	38458	--	--	10
EPA 531	Aldicarb (Temik)	39053	--	--	3.0
EPA 508	Diuron	39650	--	--	1.0

Note and describe any additional compounds found: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

SEQUOIA ANALYTICAL

Nokowhat D. Herrera  
 Project Manager





# SEQUOIA ANALYTICAL

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## REGULATED ORGANIC CHEMICALS CONTINUED

Test Method	Constituent ALL CONSTITUENTS REPORTED µg/L	Entry #	Analyses Results	MCL µg/L	* DLR µg/L
EPA 502.2	Trichlorofluoromethane (Freon 11)	34488	2.1	150	1.0
EPA 502.2	Trichlorotrifluoroethane (Freon 113)	81611	N.D.	1200	10
EPA 502.2	Vinyl Chloride (VC)	39175	N.D.	0.5	0.50
EPA 502.2	m,p-Xylene	A-014	N.D.	--	10
EPA 502.2	o-Xylene	77135	N.D.	--	10
EPA 502.2	Total Xylenes (m,p & o)	81551	N.D.	1750	10

EPA 504	Dibromochloropropane (DBCP)	38761	--	0.2	0.01
EPA 504	Ethylene Dibromide (EDB)	77651	--	0.02	0.02
EPA 505	Endrin	39390	---	0.2	0.1
EPA 505	Lindane (gamma-BHC)	39340	--	4	0.2
EPA 505	Methoxychlor	39480	--	100	10
EPA 505	Toxaphene	39400	--	5	1.0
EPA 505	Chlordane	39350	--	0.1	0.1
EPA 525	Diethylhexylphthalate (DEHP)	39100	--	4.0	3.0
EPA 505	Heptachlor	39410	--	0.01	0.01
EPA 505	Heptachlor epoxide	39420	--	0.01	0.01
EPA 507	Atrazine (AAtrex)	39033	--	3	1.0
EPA 507	Molinate (Ordram)	82199	--	20	2.0
EPA 507	Simazine (Princep)	39055	--	10	1.0
EPA 507	Thiobencarb (Bolero)	A-001	--	70	1.0
EPA 515.1	Bentazon (Basagran)	38710	--	18	2.0
EPA 515.1	2,4-D	39730	--	100	10
EPA 515.1	2,4,5-TP (Silvex)	39045	--	10	1.0
EPA 531	Carbofuran (Furadan)	81405	--	18	5.0
EPA 547	Glyphosate	79743	--	700	25

## UNREGULATED ORGANIC CHEMICALS

Test Method	Constituent ALL CONSTITUENTS REPORTED µg/L	Entry #	Analyses Results	MCL µg/L	* DLR µg/L
EPA 502.2	Bromobenzene	81555	N.D.	--	0.50
EPA 502.2	Bromochloromethane	A-012	N.D.	--	0.50
EPA 502.2	Bromomethane (Methyl Bromide)	34413	N.D.	--	0.50
EPA 502.2	n-Butylbenzene	A-010	N.D.	--	0.50
EPA 502.2	sec-Butylbenzene	77350	N.D.	--	0.50
EPA 502.2	tert-Butylbenzene	77353	N.D.	--	0.50
EPA 502.2	Chloroethane	34311	N.D.	--	0.50
EPA 502.2	2-Chloroethylvinyl ether	34576	N.D.	--	1.0
EPA 502.2	Chloromethane (Methyl Chloride)	34418	N.D.	--	0.50
EPA 502.2	2-Chlorotoluene	A-008	N.D.	--	0.50
EPA 502.2	4-Chlorotoluene	A-009	N.D.	--	0.50
EPA 502.2	Dibromomethane	77596	N.D.	--	0.50
EPA 502.2	1,2-Dichlorobenzene (o-DCB)	34536	N.D.	--	0.50
EPA 502.2	1,3-Dichlorobenzene (m-DCB)	34566	N.D.	--	0.50
EPA 502.2	Dichlorodifluoromethane	34668	N.D.	--	1.0
EPA 502.2	1,3-Dichloropropane	77173	N.D.	--	0.50
EPA 502.2	2,2-Dichloropropane	77170	N.D.	--	0.50







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## REGULATED ORGANIC CHEMICALS CONTINUED

Test Method	Constituent ALL CONSTITUENTS REPORTED µg/L	Entry #	Analyses Results	MCL µg/L	* DLR µg/L
EPA 502.2	Trichlorofluoromethane (Freon 11)	34488	1.9	150	1.0
EPA 502.2	Trichlorotrifluoroethane (Freon 113)	81611	N.D.	1200	10
EPA 502.2	Vinyl Chloride (VC)	39175	N.D.	0.5	0.50
EPA 502.2	m,p-Xylene	A-014	N.D.	--	10
EPA 502.2	o-Xylene	77135	N.D.	--	10
EPA 502.2	Total Xylenes (m,p & o)	81551	N.D.	1750	10
EPA 504	Dibromochloropropane (DBCP)	38761	--	0.2	0.01
EPA 504	Ethylene Dibromide (EDB)	77651	--	0.02	0.02
EPA 505	Endrin	39390	--	0.2	0.1
EPA 505	Lindane (gamma-BHC)	39340	--	4	0.2
EPA 505	Methoxychlor	39480	--	100	10
EPA 505	Toxaphene	39400	--	5	1.0
EPA 505	Chlordane	39350	--	0.1	0.1
EPA 525	Diethylhexylphthalate (DEHP)	39100	--	4.0	3.0
EPA 505	Heptachlor	39410	--	0.01	0.01
EPA 505	Heptachlor epoxide	39420	--	0.01	0.01
EPA 507	Atrazine (AAtrex)	39033	--	3	1.0
EPA 507	Molinate (Ordram)	82199	--	20	2.0
EPA 507	Simazine (Princep)	39055	--	10	1.0
EPA 507	Thiobencarb (Bolero)	A-001	--	70	1.0
EPA 515.1	Bentazon (Basagran)	38710	--	18	2.0
EPA 515.1	2,4-D	39730	--	100	10
EPA 515.1	2,4,5-TP (Silvex)	39045	--	10	1.0
EPA 531	Carbofuran (Furadan)	81405	--	18	5.0
EPA 547	Glyphosate	79743	--	700	25

## UNREGULATED ORGANIC CHEMICALS

Test Method	Constituent ALL CONSTITUENTS REPORTED µg/L	Entry #	Analyses Results	MCL µg/L	* DLR µg/L
EPA 502.2	Bromobenzene	81555	N.D.	--	0.50
EPA 502.2	Bromochloromethane	A-012	N.D.	--	0.50
EPA 502.2	Bromomethane (Methyl Bromide)	34413	N.D.	--	0.50
EPA 502.2	n-Butylbenzene	A-010	N.D.	--	0.50
EPA 502.2	sec-Butylbenzene	77350	N.D.	--	0.50
EPA 502.2	tert-Butylbenzene	77353	N.D.	--	0.50
EPA 502.2	Chloroethane	34311	N.D.	--	0.50
EPA 502.2	2-Chloroethylvinyl ether	34576	N.D.	--	1.0
EPA 502.2	Chloromethane (Methyl Chloride)	34418	N.D.	--	0.50
EPA 502.2	2-Chlorotoluene	A-008	N.D.	--	0.50
EPA 502.2	4-Chlorotoluene	A-009	N.D.	--	0.50
EPA 502.2	Dibromomethane	77596	N.D.	--	0.50
EPA 502.2	1,2-Dichlorobenzene (o-DCB)	34536	N.D.	--	0.50
EPA 502.2	1,3-Dichlorobenzene (m-DCB)	34566	N.D.	--	0.50
EPA 502.2	Dichlorodifluoromethane	34668	N.D.	--	1.0
EPA 502.2	1,3-Dichloropropane	77173	N.D.	--	0.50
EPA 502.2	2,2-Dichloropropane	77170	N.D.	--	0.50





# SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063  
(415) 364-9600 • FAX (415) 364-9233

Delta Environmental Consultants 1125 N. 28th Dr., D-115 Phoenix, AZ 85029 Attention: Phil Schneider	Client Project ID: Shell, 202-6364-3601 Matrix Descript: Water Analysis Method: EPA 418.1 (I.R. with clean-up) First Sample #: 3E18201	Sampled: May 4, 1993 Received: May 5, 1993 Analyzed: May 10, 1993 Reported: May 14, 1993
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## TOTAL RECOVERABLE PETROLEUM HYDROCARBONS

Sample Number	Sample Description	Petroleum Oil mg/L (ppm)
3E18201	BCS-3	N.D.
3E18202	BCS-2	N.D.
3E18203	BCS-1	N.D.

Detection Limits:

1.0

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Nokowhat D. Herrera  
Project Manager

3E18201.DLT <10>





# SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063  
(415) 364-9600 • FAX (415) 364-9233

Delta Environmental Consultants  
1125 N. 28th Dr., D-115  
Phoenix, AZ 85029  
Attention: Phil Schneider

Client Project ID: Shell, 202-6364-3601  
Matrix: Water

QC Sample Group 3E18201 - 02

Reported: May 14, 1993

## QUALITY CONTROL DATA REPORT

ANALYTE	1,1-Dichloroethene	Trichloroethene	Chloro-benzene	Benzene	Toluene	Chloro-benzene
<b>Method:</b>	EPA 502.2	EPA 502.2	EPA 502.2	EPA 502.2	EPA 502.2	EPA 502.2
<b>Analyst:</b>	M.Laikhtman	M.Laikhtman	M.Laikhtman	M.Laikhtman	M.Laikhtman	M.Laikhtman
<b>Conc. Spiked:</b>	25	25	25	25	25	25
<b>Units:</b>	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
<b>LCS Batch#:</b>	VBLK051093	VBLK051093	VBLK051093	VBLK051093	VBLK051093	VBLK051093
<b>Date Prepared:</b>	-	-	-	-	-	-
<b>Date Analyzed:</b>	5/10/93	5/10/93	5/10/93	5/10/93	5/10/93	5/10/93
<b>Instrument I.D.#:</b>	HP-8	HP-8	HP-8	HP-8	HP-8	HP-8
<b>LCS % Recovery:</b>	80	80	108	96	92	92
<b>Control Limits:</b>	61-145	71-120	75-130	76-127	76-125	75-130

MS/MSD Batch #:	V3E32901	V3E32901	V3E32901	V3E32901	V3E32901	V3E32901
<b>Date Prepared:</b>	-	-	-	-	-	-
<b>Date Analyzed:</b>	5/11/93	5/11/93	5/11/93	5/11/93	5/11/93	5/11/93
<b>Instrument I.D.#:</b>	HP-8	HP-8	HP-8	HP-8	HP-8	HP-8
<b>Matrix Spike % Recovery:</b>	84	84	84	92	92	88
<b>Matrix Spike Duplicate % Recovery:</b>	80	84	80	88	88	88
<b>Relative % Difference:</b>	4.9	0.0	4.9	4.4	4.4	0.0

SEQUOIA ANALYTICAL

Nokowhat D. Herrera  
Project Manager

**Please Note:**

The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation and analytical methods employed for the samples. The LCS % recovery data is used for validation of sample batch results. Due to matrix effects, the QC limits for MS/MSD's are advisory only and are not used to accept or reject batch results.



# SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063  
(415) 364-9600 • FAX (415) 364-9233

Delta Environmental Consultants 1125 N. 28th Dr., D-115 Phoenix, AZ 85029 Attention: Phil Schneider	Client Project ID: Shell, 202-6364-3601 Matrix: Water  QC Sample Group 3E18203	Reported: May 14, 1993
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## QUALITY CONTROL DATA REPORT

ANALYTE	1,1-Dichloroethene	Trichloroethene	Chloro-benzene	Benzene	Toluene	Chloro-benzene
<b>Method:</b>	EPA 502.2	EPA 502.2	EPA 502.2	EPA 502.2	EPA 502.2	EPA 502.2
<b>Analyst:</b>	M.Laikhtman	M.Laikhtman	M.Laikhtman	M.Laikhtman	M.Laikhtman	M.Laikhtman
<b>Conc. Spiked:</b>	25	25	25	25	25	25
<b>Units:</b>	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
<b>LCS Batch#:</b>	VBLK051193	VBLK051193	VBLK051193	VBLK051193	VBLK051193	VBLK051193
<b>Date Prepared:</b>	-	-	-	-	-	-
<b>Date Analyzed:</b>	5/11/93	5/11/93	5/11/93	5/11/93	5/11/93	5/11/93
<b>Instrument I.D.#:</b>	HP-8	HP-8	HP-8	HP-8	HP-8	HP-8
<b>LCS % Recovery:</b>	72	100	80	76	76	76
<b>Control Limits:</b>	61-145	71-120	75-130	76-127	76-125	75-130

MS/MSD Batch #:	V3E32901	V3E32901	V3E32901	V3E32901	V3E32901	V3E32901
<b>Date Prepared:</b>	-	-	-	-	-	-
<b>Date Analyzed:</b>	5/11/93	5/11/93	5/11/93	5/11/93	5/11/93	5/11/93
<b>Instrument I.D.#:</b>	HP-8	HP-8	HP-8	HP-8	HP-8	HP-8
<b>Matrix Spike % Recovery:</b>	84	84	84	92	92	88
<b>Matrix Spike Duplicate % Recovery:</b>	80	84	80	88	88	88
<b>Relative % Difference:</b>	4.9	0.0	4.9	4.4	4.4	0.0

SEQUOIA ANALYTICAL

*N. Herrera*  
Nokowhat D. Herrera  
Project Manager

**Please Note:**

The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation and analytical methods employed for the samples. The LCS % recovery data is used for validation of sample batch results. Due to matrix effects, the QC limits for MS/MSD's are advisory only and are not used to accept or reject batch results.



**SHELL OIL COMPANY**  
RETAIL ENVIRONMENTAL ENGINEERING - WEST

Site Address: 303 N BUCK CANYON  
PHOENIX, AZ 85009

TC#: 202-6364-3601 / 985621

Shell Engineer:  
**RANDY ORLOWSKI**  
Phone No. 714-520-3362  
Fax #: 714-520-3417  
CONSULTANT NAME & ADDRESS: DELTA ENVIRONMENTAL CONSULTANTS, INC.  
11225 N 28TH DR. D-115  
PHOENIX, AZ 85029

Consultant Contact:  
**MR. PHIL SCHNIEGLER**  
Phone No. 602-866-3444  
Fax #: 602-789-9497

Comments: AMBER BOTTLES RESERVOIR / H<sub>2</sub>SO<sub>4</sub>  
NO PRESERVATIVES IN VOL'S.

Sampled By: *B. Parker*  
Printed Name: **BRAO PARKER**

Sample ID	Date	Soil	Water	Air	No. of conds.
BCS-3	5/4/93		X		4
BCS-2	5/4/93		X		4
BCS-1	5/4/93		X		4

**CHAIN OF CUSTODY RECORD**

Date: 5/4/93  
Page 1 of 1

LAB: **SEQUOIA ANALYTICAL**

CHECK ONE (1) BOX ONLY	CT/DT	TURN AROUND TIME
Quarterly Monitoring <input checked="" type="checkbox"/>	5461	24 hours <input type="checkbox"/>
Site Investigation <input type="checkbox"/>	5441	48 hours <input type="checkbox"/>
Soil for disposal <input type="checkbox"/>	5442	15 days <input checked="" type="checkbox"/> (Normal)
Water for disposal <input type="checkbox"/>	5443	Other <input type="checkbox"/>
Air Sample - Sys O&M <input type="checkbox"/>	5452	
Water Sample - Sys O&M <input type="checkbox"/>	5453	
Other <input type="checkbox"/>		

NOTE: Notify Lab as soon as possible of 24/48 hrs. TAT.

**Analysis Required**

TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602)	Volatile Organics (EPA 8240)	Test for Disposal
				4/8.1 3 hrs Res Analysis D. (1) & SO2.2 / REQUIREMENTS

Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
		N	WST/GAS/G. WATER	9305182-01
		N	WST/GAS/G. WATER	02
		N	WST/GAS/G. WATER	03

Inquired By (signature):	Date: 5/4/93	Received (signature):	Date: 5/4/93
<i>B. Parker</i>	Time: 14:30		Time: 14:30
Inquired By (signature):	Date:	Received (signature):	Date:
<i>B. Parker</i>	Time:		Time:
Inquired By (signature):	Date:	Received (signature):	Date:
<i>B. Parker</i>	Time:		Time:

THE LABORATORY MUST PROVIDE A COPY OF THIS CHAIN-OF-CUSTODY WITH INVOICE AND RESULTS



Analytical **Technologies**, Inc.

9830 S. 51st Street Suite B-113 Phoenix, AZ 85044 (602) 496-4400

Harding Lawson Associates  
JUL 15 1993  
RECEIVED

ATI I.D. 304981

May 14, 1993

Harding Lawson Associates  
2800 N. 44th Street  
Suite 500  
Phoenix, AZ 85008

Project Name/Number: Unocal 3870/10105.638

Attention: Rick Hill

On 04/28/93, Analytical Technologies, Inc., (ADHS License No. AZ0061), received a request to analyze **aqueous** sample(s). The sample(s) were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

If you have any questions or comments, please do not hesitate to contact us at (602) 496-4400.

*Mary St. Tyer*  
Mary Tyer  
Project Manager

*Robert V. Woods*  
Robert V. Woods  
Laboratory Manager

RVW/ktd

Enclosure



Analytical Technologies, Inc.

CLIENT : HARDING LAWSON ASSOCIATES  
PROJECT # : 10105.638  
PROJECT NAME : UNOCAL 3870  
ATI I.D. : 304981

DATE RECEIVED : 04/28/93  
REPORT DATE : 05/13/93

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	MW-4	AQUEOUS	04/28/93
02	MW-3	AQUEOUS	04/28/93
03	MW-2	AQUEOUS	04/28/93
04	MW-1	AQUEOUS	04/28/93
05	TB-1	AQUEOUS	04/28/93

----- TOTALS -----

MATRIX	# SAMPLES
AQUEOUS	5

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in thirty (30) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

## GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30498101

TEST : VOLATILE HALOCARBONS (EPA METHOD 601)

CLIENT	: HARDING LAWSON ASSOCIATES	DATE SAMPLED	: 04/28/93
PROJECT #	: 10105.638	DATE RECEIVED	: 04/28/93
PROJECT NAME	: UNOCAL 3870	DATE EXTRACTED	: N/A
CLIENT I.D.	: MW-4	DATE ANALYZED	: 05/05/93
SAMPLE MATRIX	: AQUEOUS	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
BROMODICHLOROMETHANE	0.5
BROMOFORM	<0.2
BROMOMETHANE	<0.2
CARBON TETRACHLORIDE	<0.2
CHLOROBENZENE	<0.5
CHLOROETHANE	<0.2
CHLOROFORM	20
CHLOROMETHANE	<0.2
DIBROMOCHLOROMETHANE	0.2
1,3-DICHLOROBENZENE	<0.5
1,4 & 1,2-DICHLOROBENZENE	<0.5
DICHLORODIFLUOROMETHANE	<0.2
1,1-DICHLOROETHANE	<0.2
1,2-DICHLOROETHANE	<0.2
1,1-DICHLOROETHENE	<0.2
1,2-DICHLOROETHENE (TOTAL)	<0.2
1,2-DICHLOROPROPANE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2
TRANS-1,3-DICHLOROPROPENE	<0.2
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.2
TETRACHLOROETHENE	3.7
1,1,1-TRICHLOROETHANE	0.3
1,1,2-TRICHLOROETHANE	<0.2
TRICHLOROETHENE	1.8
TRICHLOROFLUOROMETHANE	<0.5
VINYL CHLORIDE	<0.2
TRICHLOROTRIFLUOROETHANE	<2.0
2-CHLOROETHYL VINYL ETHER	<0.2

## SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	94
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## GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30498102

TEST : VOLATILE HALOCARBONS (EPA METHOD 601)

CLIENT	: HARDING LAWSON ASSOCIATES	DATE SAMPLED	: 04/28/93
PROJECT #	: 10105.638	DATE RECEIVED	: 04/28/93
PROJECT NAME	: UNOCAL 3870	DATE EXTRACTED	: N/A
CLIENT I.D.	: MW-3	DATE ANALYZED	: 05/03/93
SAMPLE MATRIX	: AQUEOUS	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
BROMODICHLOROMETHANE	1.2
BROMOFORM	<0.2
BROMOMETHANE	<0.2
CARBON TETRACHLORIDE	<0.2
CHLOROBENZENE	<0.5
CHLOROETHANE	<0.2
CHLOROFORM	30
CHLOROMETHANE	<0.2
DIBROMOCHLOROMETHANE	<0.2
1,3-DICHLOROBENZENE	<0.5
1,4 & 1,2-DICHLOROBENZENE	<0.5
DICHLORODIFLUOROMETHANE	<0.2
1,1-DICHLOROETHANE	<0.2
1,2-DICHLOROETHANE	<0.2
1,1-DICHLOROETHENE	0.3
1,2-DICHLOROETHENE (TOTAL)	<0.2
1,2-DICHLOROPROPANE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2
TRANS-1,3-DICHLOROPROPENE	<0.2
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.2
TETRACHLOROETHENE	3.5
1,1,1-TRICHLOROETHANE	1.2
1,1,2-TRICHLOROETHANE	<0.2
TRICHLOROETHENE	1.4
TRICHLOROFLUOROMETHANE	<0.5
VINYL CHLORIDE	<0.2
TRICHLOROTRIFLUOROETHANE	<2.0
2-CHLOROETHYL VINYL ETHER	<0.2

## SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	96
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GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30498103

TEST : VOLATILE HALOCARBONS (EPA METHOD 601)

CLIENT	: HARDING LAWSON ASSOCIATES	DATE SAMPLED	: 04/28/93
PROJECT #	: 10105.638	DATE RECEIVED	: 04/28/93
PROJECT NAME	: UNOCAL 3870	DATE EXTRACTED	: N/A
CLIENT I.D.	: MW-2	DATE ANALYZED	: 05/03/93
SAMPLE MATRIX	: AQUEOUS	UNITS	: UG/L
		DILUTION FACTOR	: 1

-----  
COMPOUNDS RESULTS  
-----

BROMODICHLOROMETHANE	3.5
BROMOFORM	0.3
BROMOMETHANE	<0.2
CARBON TETRACHLORIDE	<0.2
CHLOROBENZENE	<0.5
CHLOROETHANE	<0.2
CHLOROFORM	31
CHLOROMETHANE	<0.2
DIBROMOCHLOROMETHANE	0.8
1,3-DICHLOROBENZENE	<0.5
1,4 & 1,2-DICHLOROBENZENE	<0.5
DICHLORODIFLUOROMETHANE	<0.2
1,1-DICHLOROETHANE	<0.2
1,2-DICHLOROETHANE	<0.2
1,1-DICHLOROETHENE	<0.2
1,2-DICHLOROETHENE (TOTAL)	<0.2
1,2-DICHLOROPROPANE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2
TRANS-1,3-DICHLOROPROPENE	<0.2
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.2
TETRACHLOROETHENE	1.4
1,1,1-TRICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	<0.2
TRICHLOROETHENE	0.7
TRICHLOROFLUOROMETHANE	<0.5
VINYL CHLORIDE	<0.2
TRICHLOROTRIFLUOROETHANE	<2.0
2-CHLOROETHYL VINYL ETHER	<0.2

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%) 83

## GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30498104

TEST : VOLATILE HALOCARBONS (EPA METHOD 601)

CLIENT	: HARDING LAWSON ASSOCIATES	DATE SAMPLED	: 04/28/93
PROJECT #	: 10105.638	DATE RECEIVED	: 04/28/93
PROJECT NAME	: UNOCAL 3870	DATE EXTRACTED	: N/A
CLIENT I.D.	: MW-1	DATE ANALYZED	: 05/03/93
SAMPLE MATRIX	: AQUEOUS	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
BROMODICHLOROMETHANE	0.3
BROMOFORM	<0.2
BROMOMETHANE	<0.2
CARBON TETRACHLORIDE	<0.2
CHLOROBENZENE	<0.5
CHLOROETHANE	<0.2
CHLOROFORM	26
CHLOROMETHANE	<0.2
DIBROMOCHLOROMETHANE	<0.2
1,3-DICHLOROBENZENE	<0.5
1,4 & 1,2-DICHLOROBENZENE	<0.5
DICHLORODIFLUOROMETHANE	<0.2
1,1-DICHLOROETHANE	<0.2
1,2-DICHLOROETHANE	<0.2
1,1-DICHLOROETHENE	0.3
1,2-DICHLOROETHENE (TOTAL)	<0.2
1,2-DICHLOROPROPANE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2
TRANS-1,3-DICHLOROPROPENE	<0.2
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.2
TETRACHLOROETHENE	3.7
1,1,1-TRICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	<0.2
TRICHLOROETHENE	2.1
TRICHLOROFLUOROMETHANE	<0.5
VINYL CHLORIDE	<0.2
TRICHLOROTRIFLUOROETHANE	<2.0
2-CHLOROETHYL VINYL ETHER	<0.2

## SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	90
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## REAGENT BLANK

TEST : VOLATILE HALOCARBONS (EPA METHOD 601)

CLIENT	: HARDING LAWSON ASSOCIATES	ATI I.D.	: 304981
PROJECT #	: 10105.638	DATE EXTRACTED	: 05/05/93
PROJECT NAME	: UNOCAL 3870	DATE ANALYZED	: 05/05/93
CLIENT I.D.	: REAGENT BLANK	UNITS	: UG/L
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
BROMODICHLOROMETHANE	<0.2
BROMOFORM	<0.2
BROMOMETHANE	<0.2
CARBON TETRACHLORIDE	<0.2
CHLOROBENZENE	<0.5
CHLOROETHANE	<0.2
CHLOROFORM	<0.2
CHLOROMETHANE	<0.2
DIBROMOCHLOROMETHANE	<0.2
1,3-DICHLOROBENZENE	<0.5
1,4 & 1,2-DICHLOROBENZENE	<0.5
DICHLORODIFLUOROMETHANE	<0.2
1,1-DICHLOROETHANE	<0.2
1,2-DICHLOROETHANE	<0.2
1,1-DICHLOROETHENE	<0.2
1,2-DICHLOROETHENE (TOTAL)	<0.2
1,2-DICHLOROPROPANE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2
TRANS-1,3-DICHLOROPROPENE	<0.2
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.2
TETRACHLOROETHENE	<0.2
1,1,1-TRICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	<0.2
TRICHLOROETHENE	<0.2
TRICHLOROFLUOROMETHANE	<0.5
VINYL CHLORIDE	<0.2
TRICHLOROTRIFLUOROETHANE	<2.0
2-CHLOROETHYL VINYL ETHER	<0.2

## SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%) 98



## GAS CHROMATOGRAPHY - RESULTS

## REAGENT BLANK

TEST : VOLATILE HALOCARBONS (EPA METHOD 601)

CLIENT : HARDING LAWSON ASSOCIATES  
PROJECT # : 10105.638  
PROJECT NAME : UNOCAL 3870  
CLIENT I.D. : REAGENT BLANK

ATI I.D. : 304981  
DATE EXTRACTED : 05/03/93  
DATE ANALYZED : 05/03/93  
UNITS : UG/L  
DILUTION FACTOR : N/A

COMPOUNDS	RESULTS
BROMODICHLOROMETHANE	<0.2
BROMOFORM	<0.2
BROMOMETHANE	<0.2
CARBON TETRACHLORIDE	<0.2
CHLOROENZENE	<0.5
CHLOROETHANE	<0.2
CHLOROFORM	<0.2
CHLOROMETHANE	<0.2
DIBROMOCHLOROMETHANE	<0.2
1,3-DICHLOROENZENE	<0.5
1,4 & 1,2-DICHLOROENZENE	<0.5
DICHLORODIFLUOROMETHANE	<0.2
1,1-DICHLOROETHANE	<0.2
1,2-DICHLOROETHANE	<0.2
1,1-DICHLOROETHENE	<0.2
1,2-DICHLOROETHENE (TOTAL)	<0.2
1,2-DICHLOROPROPANE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2
TRANS-1,3-DICHLOROPROPENE	<0.2
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.2
TETRACHLOROETHENE	<0.2
1,1,1-TRICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	<0.2
TRICHLOROETHENE	<0.2
TRICHLOROFLUOROMETHANE	<0.5
VINYL CHLORIDE	<0.2
TRICHLOROTRIFLUOROETHANE	<2.0
2-CHLOROETHYL VINYL ETHER	<0.2

## SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%) 93



QUALITY CONTROL DATA

ATI I.D. : 304981

TEST : VOLATILE HALOCARBONS (EPA METHOD 601)

CLIENT : HARDING LAWSON ASSOCIATES  
 PROJECT # : 10105.638  
 PROJECT NAME : UNOCAL 3870  
 REF I.D. : 30549906

DATE ANALYZED : 05/05/93  
 SAMPLE MATRIX : AQUEOUS  
 UNITS : UG/L

COMPOUNDS	SAMPLE CONC.		SPIKED SAMPLE	DUP. % SPIKED		RPD
	RESULT	SPIKED		REC.	REC.	
1,1-DICHLOROETHENE	<0.2	20	18	90	17	6
TRICHLOROETHENE	0.4	20	18	88	19	5
TETRACHLOROETHENE	<0.2	20	23	115	24	4
BROMODICHLOROMETHANE	<0.2	20	17	85	19	11
CHLOROFORM	<0.2	20	20	100	20	0
1,1,1-TRICHLOROETHANE	<0.2	20	21	105	21	0
CHLOROBENZENE	<0.5	20	19	95	20	5

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$



GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30498105

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

CLIENT	: HARDING LAWSON ASSOCIATES	DATE SAMPLED	: 04/28/93
PROJECT #	: 10105.638	DATE RECEIVED	: 04/28/93
PROJECT NAME	: UNOCAL 3870	DATE EXTRACTED	: N/A
CLIENT I.D.	: TB-1	DATE ANALYZED	: 05/05/93
SAMPLE MATRIX	: AQUEOUS	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
BENZENE	<0.5
BROMODICHLOROMETHANE	<0.2
BROMOFORM	<0.2
BROMOMETHANE	<0.2
CARBON TETRACHLORIDE	<0.2
CHLOROENZENE	<0.5
CHLOROETHANE	<0.2
CHLOROFORM	<0.2
CHLOROMETHANE	<0.2
DIBROMOCHLOROMETHANE	<0.2
2-CHLOROETHYL VINYL ETHER	<0.5
1,3-DICHLOROBENZENE	<0.5
1,2 & 1,4-DICHLOROBENZENE	<0.5
DICHLORODIFLUOROMETHANE	<0.2
1,1-DICHLOROETHANE	<0.2
1,2-DICHLOROETHANE	<0.2
1,1-DICHLOROETHENE	<0.2
1,2-DICHLOROETHENE (TOTAL)	<0.2
1,2-DICHLOROPROPANE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2
TRANS-1,3-DICHLOROPROPENE	<0.2
ETHYLBENZENE	<0.5
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.2
TETRACHLOROETHENE	<0.2
TOLUENE	<0.5
1,1,1-TRICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	<0.2
TRICHLOROETHENE	<0.2
TRICHLOROFLUOROMETHANE	<0.5
VINYL CHLORIDE	<0.2
TOTAL XYLENES	<0.5
TRICHLOROTRIFLUOROETHANE	<2.0

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	95
BROMOFLUOROBENZENE (%)	101



## REAGENT BLANK

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

CLIENT	: HARDING LAWSON ASSOCIATES	ATI I.D.	: 304981
PROJECT #	: 10105.638	DATE EXTRACTED	: 05/05/93
PROJECT NAME	: UNOCAL 3870	DATE ANALYZED	: 05/05/93
CLIENT I.D.	: REAGENT BLANK	UNITS	: UG/L
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
BENZENE	<0.5
BROMODICHLOROMETHANE	<0.2
BROMOFORM	<0.2
BROMOMETHANE	<0.2
CARBON TETRACHLORIDE	<0.2
CHLOROBENZENE	<0.5
CHLOROETHANE	<0.2
CHLOROFORM	<0.2
CHLOROMETHANE	<0.2
DIBROMOCHLOROMETHANE	<0.2
2-CHLOROETHYL VINYL ETHER	<0.5
1,3-DICHLOROBENZENE	<0.5
1,2 & 1,4-DICHLOROBENZENE	<0.5
DICHLORODIFLUOROMETHANE	<0.2
1,1-DICHLOROETHANE	<0.2
1,2-DICHLOROETHANE	<0.2
1,1-DICHLOROETHENE	<0.2
1,2-DICHLOROETHENE (TOTAL)	<0.2
1,2-DICHLOROPROPANE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2
TRANS-1,3-DICHLOROPROPENE	<0.2
ETHYLBENZENE	<0.5
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.2
TETRACHLOROETHENE	<0.2
TOLUENE	<0.5
1,1,1-TRICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	<0.2
TRICHLOROETHENE	<0.2
TRICHLOROFLUOROMETHANE	<0.5
VINYL CHLORIDE	<0.2
TOTAL XYLENES	<0.5
TRICHLOROTRIFLUOROETHANE	<2.0

## SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	98
BROMOFLUOROBENZENE (%)	110

## QUALITY CONTROL DATA

ATI I.D. : 304981

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

 CLIENT : HARDING LAWSON ASSOCIATES  
 PROJECT # : 10105.638  
 PROJECT NAME : UNOCAL 3870  
 REF I.D. : 30549906

 DATE ANALYZED : 05/08/93  
 SAMPLE MATRIX : AQUEOUS  
 UNITS : UG/L

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP.		RPD
					SPIKED SAMPLE	% REC.	
1,1-DICHLOROETHENE	<0.2	20	18	90	19	95	5
TRICHLOROETHENE	<0.2	20	19	95	19	95	0
TETRACHLOROETHENE	<0.2	20	19	95	19	95	0
BENZENE	<0.5	20	21	105	23	115	9
BROMODICHLOROMETHANE	<0.2	20	17	85	17	85	0
CHLOROFORM	<0.2	20	20	100	21	105	5
1,1,1-TRICHLOROETHANE	<0.2	20	22	110	22	110	0
TOLUENE	<0.5	20	20	100	22	110	10
CHLOROBENZENE	<0.5	20	19	95	19	95	0
M-XYLENE	<0.5	20	19	95	20	100	5

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$



## GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30498101

TEST : BTEX/TPH (GAS) BY PURGE &amp; TRAP

CLIENT	: HARDING LAWSON ASSOCIATES	DATE SAMPLED	: 04/28/93
PROJECT #	: 10105.638	DATE RECEIVED	: 04/28/93
PROJECT NAME	: UNOCAL 3870	DATE EXTRACTED	: N/A
CLIENT I.D.	: MW-4	DATE ANALYZED	: 04/30/93
SAMPLE MATRIX	: AQUEOUS	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
BENZENE	4.9
TOLUENE	<0.5
ETHYLBENZENE	2.0
TOTAL XYLENES	50
TPH AS GASOLINE	1400

## SURROGATE PERCENT RECOVERIES

BROMOFLUOROBENZENE (%)	106
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Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30498102

TEST : BTEX/TPH (GAS) BY PURGE & TRAP

CLIENT	: HARDING LAWSON ASSOCIATES	DATE SAMPLED	: 04/28/93
PROJECT #	: 10105.638	DATE RECEIVED	: 04/28/93
PROJECT NAME	: UNOCAL 3870	DATE EXTRACTED	: N/A
CLIENT I.D.	: MW-3	DATE ANALYZED	: 04/30/93
SAMPLE MATRIX	: AQUEOUS	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
BENZENE	0.5
TOLUENE	0.9
ETHYLBENZENE	0.6
TOTAL XYLENES	4.4
TPH AS GASOLINE	120

SURROGATE PERCENT RECOVERIES

BROMOFLUOROBENZENE (%)	100
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Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30498103

TEST : BTEX/TPH (GAS) BY PURGE & TRAP

CLIENT : HARDING LAWSON ASSOCIATES  
PROJECT # : 10105.638  
PROJECT NAME : UNOCAL 3870  
CLIENT I.D. : MW-2  
SAMPLE MATRIX : AQUEOUS

DATE SAMPLED : 04/28/93  
DATE RECEIVED : 04/28/93  
DATE EXTRACTED : N/A  
DATE ANALYZED : 04/30/93  
UNITS : UG/L  
DILUTION FACTOR : 1

COMPOUNDS	RESULTS
BENZENE	<0.5
TOLUENE	1.2
ETHYLBENZENE	0.8
TOTAL XYLENES	10
TPH AS GASOLINE	180

SURROGATE PERCENT RECOVERIES

BROMOFLUOROBENZENE (%) 101



## GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30498104

TEST : BTEX/TPH (GAS) BY PURGE &amp; TRAP

CLIENT : HARDING LAWSON ASSOCIATES  
PROJECT # : 10105.638  
PROJECT NAME : UNOCAL 3870  
CLIENT I.D. : MW-1  
SAMPLE MATRIX : AQUEOUS

DATE SAMPLED : 04/28/93  
DATE RECEIVED : 04/28/93  
DATE EXTRACTED : N/A  
DATE ANALYZED : 04/30/93  
UNITS : UG/L  
DILUTION FACTOR : 1

COMPOUNDS	RESULTS
BENZENE	5.8
TOLUENE	1.6
ETHYLBENZENE	1.4
TOTAL XYLENES	7.3
TPH AS GASOLINE	140

## SURROGATE PERCENT RECOVERIES

BROMOFLUOROBENZENE (%) 103



## GAS CHROMATOGRAPHY - RESULTS

## REAGENT BLANK

TEST : BTEX/TPH (GAS) BY PURGE &amp; TRAP

CLIENT : HARDING LAWSON ASSOCIATES  
PROJECT # : 10105.638  
PROJECT NAME : UNOCAL 3870  
CLIENT I.D. : REAGENT BLANK

ATI I.D. : 304981  
DATE EXTRACTED : 04/30/93  
DATE ANALYZED : 04/30/93  
UNITS : UG/L  
DILUTION FACTOR : N/A

COMPOUNDS	RESULTS
BENZENE	<0.5
TOLUENE	<0.5
ETHYLBENZENE	<0.5
TOTAL XYLENES	<0.5
TPH AS GASOLINE	<50

## SURROGATE PERCENT RECOVERIES

BROMOFLUOROBENZENE (%) 95



QUALITY CONTROL DATA

ATI I.D. : 304981

TEST : BTEX/TPH (GAS) BY PURGE & TRAP

CLIENT : HARDING LAWSON ASSOCIATES
PROJECT # : 10105.638
PROJECT NAME : UNOCAL 3870
REF I.D. : 30498104

DATE ANALYZED : 04/30/93
SAMPLE MATRIX : AQUEOUS
UNITS : UG/L

Table with 8 columns: COMPOUNDS, SAMPLE CONC. RESULT, SPIKED SPIKED SAMPLE, % REC., DUP. SPIKED SAMPLE, DUP. % REC., RPD. Rows include BENZENE, TOLUENE, ETHYLBENZENE, TOTAL XYLENES, and TPH AS GASOLINE.

% Recovery = (Spike Sample Result - Sample Result) / Spike Concentration X 100

RPD (Relative % Difference) = (Spiked Sample Result - Duplicate Spike Sample Result) / Average of Spiked Sample X 100



TURNER/CAS LABORATORIES, INC.

Analytical Report

Client: Advanced Analytical Laboratory  
 Project: Valley Truck  
 Sample Matrix: Water

Date Analyzed: 09/08/93  
 Work Order No.: T93-29945

Volatile Organic Compounds  
 EPA Method 502.2  
 µg/L (ppb)

Sample Name: Method Blank  
 Lab Code: T29945-MB

Analyte	MRL	Result	Analyte	MRL	Result
Benzene	0.5	ND	1,1-Dichloropropene	0.5	ND
Toluene	0.5	ND	Carbon Tetrachloride	0.5	ND
Ethylbenzene	0.5	ND	1,2-Dichloroethane	0.5	ND
Total Xylenes	1.0	ND	Trichloroethene (TCE)	0.5	ND
Styrene	1.0	ND	1,2-Dichloropropane	0.5	ND
Isopropylbenzene	0.5	ND	Bromodichloromethane	1.0	ND
n-Propylbenzene	0.5	ND	Dibromomethane	0.5	ND
1,3,5-Trimethylbenzene	0.5	ND	<i>cis</i> -1,3-Dichloropropene	0.5	ND
<i>tert</i> -Butylbenzene	0.5	ND	<i>trans</i> -1,3-Dichloropropene	0.5	ND
1,2,4-Trimethylbenzene	0.5	ND	1,1,2-Trichloroethane	0.5	ND
<i>sec</i> -Butylbenzene	0.5	ND	1,3-Dichloropropane	0.5	ND
p-Isopropyltoluene	0.5	ND	Tetrachloroethene (PCE)	0.5	ND
n-Butylbenzene	0.5	ND	Dibromochloromethane	0.5	ND
Naphthalene	0.5	ND	1,2-Dibromoethane (EDB)	1.0	ND
Dichlorodifluoromethane (Freon 12)	5.0	ND	Chlorobenzene	0.5	ND
Chloromethane	5.0	ND	1,1,1,2-Tetrachloroethane	0.5	ND
Vinyl Chloride	1.0	ND	Bromoform	1.0	ND
Bromomethane	5.0	ND	1,1,2,2-Tetrachloroethane	0.5	ND
Chloroethane	1.0	ND	1,2,3-Trichloropropane	0.5	ND
Trichlorofluoromethane (Freon 11)	0.5	ND	Bromobenzene	0.5	ND
1,1-Dichloroethene	0.5	ND	2-Chlorotoluene	0.5	ND
Methylene Chloride	2.0	ND	4-Chlorotoluene	0.5	ND
<i>trans</i> -1,2-Dichloroethene	0.5	ND	1,3-Dichlorobenzene	1.0	ND
1,1-Dichloroethane	0.5	ND	1,4-Dichlorobenzene	1.0	ND
2,2-Dichloropropane	0.5	ND	1,2-Dichlorobenzene	1.0	ND
<i>cis</i> -1,2-Dichloroethene	0.5	ND	1,2-Dibromo-3-chloropropane (DBCP)	1.0	ND
Chloroform	0.5	ND	1,2,4-Trichlorobenzene	0.5	ND
Bromochloromethane	1.0	ND	Hexachlorobutadiene	0.5	ND
1,1,1-Trichloroethane (TCA)	0.5	ND	1,2,3-Trichlorobenzene	0.5	ND

MRL Method Reporting Limit  
 ND None Detected at or above the method reporting limit

Approved by  Date 9/16/93 Page 2 of 5

TURNER/CAS LABORATORIES, INC.

Analytical Report

Client: Advanced Analytical Laboratory  
 Project: Valley Truck  
 Sample Matrix: Water

Date Received: 09/02/93  
 Date Analyzed: 09/08/93  
 Work Order No.: T93-29945

Volatile Organic Compounds  
 EPA Method 502.2  
 µg/L (ppb)

Sample Name: MW-1 93-08-0160 08/26/93  
 Lab Code: T29945-1

Analyte	MRL	Result	Analyte	MRL	Result
Benzene	0.5	ND	1,1-Dichloropropene	0.5	ND
Toluene	0.5	ND	Carbon Tetrachloride	0.5	ND
Ethylbenzene	0.5	ND	1,2-Dichloroethane	0.5	ND
Total Xylenes	1.0	ND	Trichloroethene (TCE)	0.5	ND
Styrene	1.0	ND	1,2-Dichloropropane	0.5	ND
Isopropylbenzene	0.5	ND	Bromodichloromethane	1.0	ND
n-Propylbenzene	0.5	ND	Dibromomethane	0.5	ND
1,3,5-Trimethylbenzene	0.5	ND	cis-1,3-Dichloropropene	0.5	ND
tert-Butylbenzene	0.5	ND	trans-1,3-Dichloropropene	0.5	ND
1,2,4-Trimethylbenzene	0.5	ND	1,1,2-Trichloroethane	0.5	ND
sec-Butylbenzene	0.5	ND	1,3-Dichloropropane	0.5	ND
p-Isopropyltoluene	0.5	ND	Tetrachloroethene (PCE)	0.5	0.6
n-Butylbenzene	0.5	ND	Dibromochloromethane	0.5	ND
Naphthalene	0.5	ND	1,2-Dibromoethane (EDB)	1.0	ND
Dichlorodifluoromethane (Freon 12)	5.0	ND	Chlorobenzene	0.5	ND
Chloromethane	2.0	ND	1,1,1,2-Tetrachloroethane	0.5	ND
Vinyl Chloride	1.0	ND	Bromoform	1.0	ND
Bromomethane	2.0	ND	1,1,2,2-Tetrachloroethane	0.5	ND
Chloroethane	1.0	ND	1,2,3-Trichloropropane	0.5	ND
Trichlorofluoromethane (Freon 11)	0.5	ND	Bromobenzene	0.5	ND
1,1-Dichloroethene	0.5	ND	2-Chlorotoluene	0.5	ND
Methylene Chloride	2.0	ND	4-Chlorotoluene	0.5	ND
trans-1,2-Dichloroethene	0.5	ND	1,3-Dichlorobenzene	1.0	ND
1,1-Dichloroethane	0.5	ND	1,4-Dichlorobenzene	1.0	ND
2,2-Dichloropropane	0.5	ND	1,2-Dichlorobenzene	1.0	ND
cis-1,2-Dichloroethene	0.5	ND	1,2-Dibromo-3-chloropropane (DBCP)	1.0	ND
Chloroform	0.5	ND	1,2,4-Trichlorobenzene	0.5	ND
Bromochloromethane	1.0	ND	Hexachlorobutadiene	0.5	ND
1,1,1-Trichloroethane (TCA)	0.5	ND	1,2,3-Trichlorobenzene	0.5	ND

MRL Method Reporting Limit  
 ND None Detected at or above the method reporting limit

Approved by  Date 9/16/93 Page 3 of 5

TURNER/CAS LABORATORIES, INC.

QA/QC Report

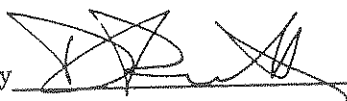
Client: Advanced Analytical Laboratory  
Project: Valley Truck  
Sample Matrix: Water

Date Received: 09/02/93  
Date Analyzed: 09/08/93  
Work Order No.: T93-29945

Surrogate Recovery Summary  
Volatile Organic Compounds  
EPA Method 502.2

Sample Name	Lab Code	Percent Recovery	
		Fluorobenzene	1-Chloro-2-Fluorobenzene
Method Blank	T29945-MB	87	79
MW-1 93-08-0160 08/26/93	T29945-1	91	83
Lab Control Sample	T29945-LCS	103	95
	Turner/CAS Acceptance Criteria	70-130	70-130

Approved by



Date

9/16/93

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TURNER/CAS LABORATORIES, INC.

QA/QC Report

Client: Advanced Analytical Laboratory  
Project: Valley Truck  
LCS Matrix: Water

Date Analyzed: 09/08/93  
Work Order No.: T93-29945

Laboratory Control Sample Summary  
Volatile Organic Compounds  
EPA Method 502.2  
 $\mu\text{g/L}$  (ppb)

Analyte	True Value	Result	Percent Recovery	Turner/CAS Percent Recovery Acceptance Criteria
Benzene	10	10.1	101	50-130
Chlorobenzene	10	10.2	102	50-130
1,1-Dichloroethene	10	10.3	103	50-130
Toluene	10	10.1	101	50-130
Trichloroethene	10	9.2	92	50-130

Approved by



Date

9/16/93

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# CHAIN OF CUSTODY RECORD

ADVANCED ANALYTICAL LABORATORY, INC.

29745

<b>CLIENT INFORMATION</b> Client Name: <b>Burge &amp; Associates, Inc.</b> Project Identification: <b>Valley Truck</b>		Address: <b>2414 West 12th Street Suite 1</b> City: <b>Tempe</b> State: <b>AZ</b> Zip Code: <b>85281</b>		Phone Number: <b>968-5141</b> Contact: _____	
Project Manager: <b>Scott Burge</b> Name of Sampler (Please Print): <b>George V. Palmieri</b>		Date: <b>8/26/93</b>		Sampler Signature: <i>[Signature]</i>	
<b>SAMPLER INFORMATION</b> Sample Description: _____ <input type="checkbox"/> Soil <input type="checkbox"/> Waste <input checked="" type="checkbox"/> Water <input type="checkbox"/> Oil <input type="checkbox"/> Wastewater <input type="checkbox"/> Groundwater Other (Describe): _____		<b>SAMPLE METHOD</b> SW-846 BLS-181 8010 8020 8015 (Modified) TCLP Metals (8 STD) 5202-2		<b>ANALYSIS METHOD</b> Laboratory Number: _____	
Sample Location: _____ Containers: <b>2</b>		Date: <b>8-26-93</b> Time: _____		Date / Time: _____	
No. of Containers: <b>2</b> Custody Seals: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA Received Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Received Cold: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Special Instructions: <b>PLEASE FORG ASAP ; MAIL TO ADVANCED ANALYTICAL LAB AT ABOVE ADDRESS.</b>		Received By (LAB): <b>Fran Mailhot</b> Signature: <i>[Signature]</i> Date: <b>9-29-93</b>	
<b>ADVANCED ANALYTICAL LABORATORY, INC.</b> 2414 West 12th Street, Suite 1 Tempe, Arizona 85281 602-829-1141 602-894-1675 FAX		Date / Time: <b>8-26-93 11:00</b>		Date / Time: _____	
<b>CUSTODY CHAIN</b> Relinquished By: <i>[Signature]</i> Date / Time: _____		Relinquished By: <i>[Signature]</i> Date / Time: _____		Relinquished By: _____ Date / Time: _____	



ATI I.D. 307843

August 20, 1993

Harding Lawson Associates  
AUG 30 1993  
RECEIVED

Harding Lawson Associates  
2800 N. 44th Street  
Suite 500  
Phoenix, AZ 85008

Project Name/Number: VW&R/Phoenix/11031-215.93

Attention: Kevin Snyder

On 07/22/93, Analytical Technologies, Inc., (ADHS License No. AZ0061), received a request to analyze aqueous sample(s). The sample(s) were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

The following samples were received in good condition on 07/22/93:

<u>Harding Lawson Assoc. I.D.</u>	<u>ATI I.D.</u>
MW-1	30784301
MW-2	30784302
MW-3	30784303
MW-4	30784304
MW-5	30784305
MW-6	30784306
MW-7	30784307
MW-8	30794308
MW-9	30784309
Trip Blank	30784310

Samples MW-5, MW-6, MW-8 were analyzed for metals and inorganics. See the following page for the dates of analyses.

All samples were analyzed for volatile halocarbons/aromatics by EPA Methods 601/602 as part of a set which ran 07/27/93-07/28/93. It was necessary to re-analyze samples MW-6 and MW-8 at a dilution. This re-analysis took place on 07/28/93.



Analytical Technologies, Inc.

Client: Harding Lawson Associates  
Project Name: VW&R/Phoenix  
Project Number: 11031-215-93  
ATI I.D.: 307843  
Page Two

Sample MW-9 was analyzed as the matrix spike/matrix spike duplicate for QC purposes. Due to the high concentration of trichloroethene (a spike compound) present in the sample the peak was off scale. It was not possible to accurately quantify this compound in the MS/MSD. The recoveries are outside ATI acceptance limits for this compound. There were no other problems associated with the Methods 601/602 analyses of this sample set.

If you have any questions or comments, please do not hesitate to contact us at (602) 496-4400.

Mary Tyer  
Project Manager

Robert V. Woods  
Laboratory Manager

Robert Hermerath  
QA Coordinator

RVW/mag

Enclosure



<u>PARAMETER</u>	<u>DATE ANALYZED</u>	<u>ANALYST</u>
Alkalinity	07/27/93	T. Kehler
Chloride	07/26/93	M. Rivera
Fluoride	07/30/93	T. Kehler
Nitrate	07/27/93	M. Rivera
pH (samples MW-6, MW-8)	07/27/93	T. Kehler
pH (sample MW-5)	07/30/93	T. Kehler
Sulfate	07/30/93	C. Warren
Total Dissolved Solids	07/26/93	T. Kehler
Arsenic	07/26/93	M. Wilson
Barium	07/28/93	J. Hrubant
Calcium	07/27/93	J. Hrubant
Cadmium	07/28/93	J. Hrubant
Chromium	07/28/93	J. Hrubant
Copper	07/29/93	J. Hrubant
Iron	07/28/93	J. Hrubant
Mercury	07/27/93	P. Van Cooney
Magnesium	07/27/93	J. Hrubant
Manganese	07/28/93	J. Hrubant
Lead	07/28/93	M. Wilson
Potassium	07/27/93	J. Hrubant
Selenium	07/23/93	M. Wilson
Silver	07/28/93	J. Hrubant
Sodium	07/28/93	J. Hrubant
Zinc	07/28/93	J. Hrubant

Reference(s): Methods for Chemical Analysis of Water and Wastes,  
March, 1983 EPA-600 4-79-020.



Analytical Technologies, Inc.

CLIENT : HARDING LAWSON ASSOCIATES
PROJECT # : 11031-215.93
PROJECT NAME : VWR/PHOENIX
ATI I.D. : 307843

DATE RECEIVED : 07/22/93
REPORT DATE : 08/27/93

Table with 4 columns: ATI #, CLIENT DESCRIPTION, MATRIX, DATE COLLECTED. Rows include MW-1 through MW-9 and TRIP BLANK, all with AQUEOUS matrix and dates from 07/15/93 to 07/21/93.

----- TOTALS -----

Summary table with 2 columns: MATRIX, # SAMPLES. Row: AQUEOUS, 10.

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in thirty (30) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.



Analytical Technologies, Inc.

GENERAL CHEMISTRY RESULTS

ATI I.D. : 307843

CLIENT : HARDING LAWSON ASSOCIATES  
PROJECT # : 11031-215.93  
PROJECT NAME : VWR/PHOENIX

DATE RECEIVED : 07/22/93

REPORT DATE : 08/27/93

PARAMETER	UNITS	05	06	08
CARBONATE (CACO3)	MG/L	<1	<1	<1
BICARBONATE (CACO3)	MG/L	403	405	388
HYDROXIDE (CACO3)	MG/L	<1	<1	<1
TOTAL ALKALINITY (AS CACO3)	MG/L	403	405	388
CHLORIDE (EPA 325.2)	MG/L	420	390	390
FLUORIDE (EPA 340.2)	MG/L	0.83	0.90	0.79
NITRATE AS N (EPA 353.2)	MG/L	6.9	6.7	6.8
PH (EPA 150.1)	UNITS	7.6	7.5	7.5
SULFATE (EPA 375.2)	MG/L	170	160	160
T. DISSOLVED SOLIDS (160.1)	MG/L	1330	1310	1290



Analytical Technologies, Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

CLIENT : HARDING LAWSON ASSOCIATES
PROJECT # : 11031-215.93
PROJECT NAME : VWR/PHOENIX

ATI I.D. : 307843

Table with 9 columns: PARAMETER, UNITS, ATI I.D., SAMPLE RESULT, DUP. RESULT, RPD, SPIKED SAMPLE CONC, SPIKE CONC, % REC. Rows include CARBONATE, BICARBONATE, HYDROXIDE, TOTAL ALKALINITY, CHLORIDE, FLUORIDE, NITRATE AS NITROGEN, PH, SULFATE, and TOTAL DISSOLVED SOLIDS.

% Recovery = (Spike Sample Result - Sample Result) / Spike Concentration X 100

RPD (Relative Percent Difference) = (Sample Result - Duplicate Result) / Average Result X 100



METALS RESULTS

ATI I.D. : 307843

CLIENT : HARDING LAWSON ASSOCIATES
PROJECT # : 11031-215.93
PROJECT NAME : VWR/PHOENIX

DATE RECEIVED : 07/22/93

REPORT DATE : 08/27/93

Table with 5 columns: PARAMETER, UNITS, 05, 06, 08. Rows include SILVER, ARSENIC, BARIUM, CALCIUM, CADMIUM, CHROMIUM, COPPER, IRON, HARDNESS, TOTAL, MERCURY, POTASSIUM, MAGNESIUM, MANGANESE, SODIUM, LEAD, SELENIUM, ZINC.



METALS - QUALITY CONTROL

CLIENT : HARDING LAWSON ASSOCIATES
PROJECT # : 11031-215.93
PROJECT NAME : VWR/PHOENIX

ATI I.D. : 307843

Table with 9 columns: PARAMETER, UNITS, ATI I.D., SAMPLE RESULT, DUP. RESULT, RPD, SPIKED SAMPLE, SPIKE CONC, % REC. Rows include SILVER, ARSENIC, BARIUM, CALCIUM, CADMIUM, CHROMIUM, COPPER, IRON, HARDNESS, MERCURY, POTASSIUM, MAGNESIUM, MANGANESE, SODIUM, LEAD, SELENIUM, ZINC.

% Recovery = (Spike Sample Result - Sample Result) / Spike Concentration X 100

RPD (Relative Percent Difference) = (Sample Result - Duplicate Result) / Average Result X 100



DATE: 08-02-93

ION BALANCE

ATI ACCESSION NUMBER: 30784305  
 SAMPLE IDENTIFICATION: MW-5  
 CLIENT: HARDING LAWSON ASSOCIATES

ANIONS	RESULT MG/L	FACTOR ME/L	TOTAL
ALKALINITY (AS CaCO <sub>3</sub> )	403.000	0.02000	8.06000
CHLORIDE	420.000	0.02821	11.84820
FLUORIDE	0.830	0.05264	0.04369
NITRATE AS N	6.900	0.01613	0.49305
SULFATE	170.000	0.02082	3.53940

TOTAL ANIONS 23.98434

CATIONS	RESULT	FACTOR	TOTAL
CALCIUM	74.600	0.04990	3.72254
POTASSIUM	5.500	0.02558	0.14069
MAGNESIUM	30.700	0.08229	2.52630
SODIUM	386.000	0.04350	16.79100
COPPER	<0.010	0.03147	0.00000
IRON	0.210	0.05372	0.01128
MANGANESE	<0.010	0.03640	0.00000
ZINC	0.060	0.03059	0.00184

TOTAL CATIONS 23.19365

%RPD (<10%) 3.35

TOTAL ANIONS/CATIONS 1337  
 TOTAL DISSOLVED SOLIDS 1330 %RPD (<15%) 0.50  
 ELECTRICAL COND. NA TDS/EC RATIO  
 (0.65+/-0.1) ERR



DATE: 08-02-93

ION BALANCE

ATI ACCESSION NUMBER: 30784306  
 SAMPLE IDENTIFICATION: MW-6  
 CLIENT: HARDING LAWSON ASSOCIATES

ANIONS	RESULT MG/L	FACTOR ME/L	TOTAL
ALKALINITY (AS CaCO3)	405.000	0.02000	8.10000
CHLORIDE	390.000	0.02821	11.00190
FLUORIDE	0.900	0.05264	0.04738
NITRATE AS N	6.700	0.01613	0.47875
SULFATE	160.000	0.02082	3.33120
TOTAL ANIONS			22.95923

CATIONS	RESULT	FACTOR	TOTAL
CALCIUM	69.800	0.04990	3.48302
POTASSIUM	5.600	0.02558	0.14325
MAGNESIUM	29.800	0.08229	2.45224
SODIUM	387.000	0.04350	16.83450
COPPER	<0.010	0.03147	0.00000
IRON	0.072	0.05372	0.00387
MANGANESE	<0.010	0.03640	0.00000
ZINC	0.050	0.03059	0.00153
TOTAL CATIONS			22.91841

%RPD (<10%) 0.18

TOTAL ANIONS/CATIONS 1293  
 TOTAL DISSOLVED SOLIDS 1310 %RPD (<15%) -1.31  
 ELECTRICAL COND. NA TDS/EC RATIO  
 (0.65+/-0.1) ERR

DATE: 08-02-93

## ION BALANCE

 ATI ACCESSION NUMBER: 30784308  
 SAMPLE IDENTIFICATION: MW-8  
 CLIENT: HARDING LAWSON ASSOCIATES

ANIONS	RESULT MG/L	FACTOR ME/L	TOTAL
ALKALINITY (AS CaCO <sub>3</sub> )	388.000	0.02000	7.76000
CHLORIDE	390.000	0.02821	11.00190
FLUORIDE	0.790	0.05264	0.04159
NITRATE AS N	6.800	0.01613	0.48590
SULFATE	160.000	0.02082	3.33120
TOTAL ANIONS			22.62059

CATIONS	RESULT	FACTOR	TOTAL
CALCIUM	77.200	0.04990	3.85228
POTASSIUM	5.600	0.02558	0.14325
MAGNESIUM	31.700	0.08229	2.60859
SODIUM	357.000	0.04350	15.52950
COPPER	<0.010	0.03147	0.00000
IRON	0.088	0.05372	0.00473
MANGANESE	<0.010	0.03640	0.00000
ZINC	0.029	0.03059	0.00089
TOTAL CATIONS			22.13924

	%RPD (<10%)	2.15
TOTAL ANIONS/CATIONS	1262	
TOTAL DISSOLVED SOLIDS	1290	%RPD (<15%) -2.19
ELECTRICAL COND.	NA	TDS/EC RATIO (0.65+/-0.1) ERR



## GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30784301

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

CLIENT	: HARDING LAWSON ASSOCIATES	DATE SAMPLED	: 07/21/93
PROJECT #	: 11031-215.93	DATE RECEIVED	: 07/22/93
PROJECT NAME	: VWR/PHOENIX	DATE EXTRACTED	: N/A
CLIENT I.D.	: MW-1	DATE ANALYZED	: 07/27/93
SAMPLE MATRIX	: AQUEOUS	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
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BENZENE	<0.5
BROMODICHLOROMETHANE	<0.2
BROMOFORM	<0.2
BROMOMETHANE	<0.2
CARBON TETRACHLORIDE	<0.2
CHLOROBENZENE	<0.5
CHLOROETHANE	<0.2
CHLOROFORM	8.4
CHLOROMETHANE	<0.2
DIBROMOCHLOROMETHANE	<0.2
2-CHLOROETHYL VINYL ETHER	<0.5
1,3-DICHLOROBENZENE	<0.5
1,2 & 1,4-DICHLOROBENZENE	<0.5
DICHLORODIFLUOROMETHANE	1.2
1,1-DICHLOROETHANE	0.8
1,2-DICHLOROETHANE	<0.2
1,1-DICHLOROETHENE	3.2
1,2-DICHLOROETHENE (TOTAL)	<0.2
1,2-DICHLOROPROPANE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2
TRANS-1,3-DICHLOROPROPENE	<0.2
ETHYLBENZENE	<0.5
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.2
TETRACHLOROETHENE	11
TOLUENE	<0.5
1,1,1-TRICHLOROETHANE	1.4
1,1,2-TRICHLOROETHANE	<0.2
TRICHLOROETHENE	24
TRICHLOROFLUOROMETHANE	<0.5
VINYL CHLORIDE	<0.2
TOTAL XYLENES	<0.5
TRICHLOROTRIFLUOROETHANE	<2.0
METHYL-TERT-BUTYL ETHER	29

## SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	89
BROMOFLUOROBENZENE (%)	99



## GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30784302

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

CLIENT	: HARDING LAWSON ASSOCIATES	DATE SAMPLED	: 07/21/93
PROJECT #	: 11031-215.93	DATE RECEIVED	: 07/22/93
PROJECT NAME	: VWR/PHOENIX	DATE EXTRACTED	: N/A
CLIENT I.D.	: MW-2	DATE ANALYZED	: 07/28/93
SAMPLE MATRIX	: AQUEOUS	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
-----------	---------

BENZENE	<0.5
BROMODICHLOROMETHANE	<0.2
BROMOFORM	<0.2
BROMOMETHANE	<0.2
CARBON TETRACHLORIDE	<0.2
CHLOROBENZENE	<0.5
CHLOROETHANE	<0.2
CHLOROFORM	3.4
CHLOROMETHANE	<0.2
DIBROMOCHLOROMETHANE	<0.2
2-CHLOROETHYL VINYL ETHER	<0.5
1,3-DICHLOROBENZENE	<0.5
1,2 & 1,4-DICHLOROBENZENE	<0.5
DICHLORODIFLUOROMETHANE	0.5
1,1-DICHLOROETHANE	0.5
1,2-DICHLOROETHANE	<0.2
1,1-DICHLOROETHENE	3.3
1,2-DICHLOROETHENE (TOTAL)	<0.2
1,2-DICHLOROPROPANE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2
TRANS-1,3-DICHLOROPROPENE	<0.2
ETHYLBENZENE	<0.5
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.2
TETRACHLOROETHENE	43
TOLUENE	<0.5
1,1,1-TRICHLOROETHANE	0.8
1,1,2-TRICHLOROETHANE	<0.2
TRICHLOROETHENE	37
TRICHLOROFLUOROMETHANE	<0.5
VINYL CHLORIDE	<0.2
TOTAL XYLENES	<0.5
TRICHLOROTRIFLUOROETHANE	<2.0
METHYL-TERT-BUTYL ETHER	8.8

## SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	98
BROMOFLUOROBENZENE (%)	105



## GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30784303

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

CLIENT	: HARDING LAWSON ASSOCIATES	DATE SAMPLED	: 07/21/93
PROJECT #	: 11031-215.93	DATE RECEIVED	: 07/22/93
PROJECT NAME	: VWR/PHOENIX	DATE EXTRACTED	: N/A
CLIENT I.D.	: MW-3	DATE ANALYZED	: 07/28/93
SAMPLE MATRIX	: AQUEOUS	UNITS	: UG/L
		DILUTION FACTOR	: 1

-----	-----
COMPOUNDS	RESULTS
-----	-----

BENZENE	<0.5
BROMODICHLOROMETHANE	<0.2
BROMOFORM	<0.2
BROMOMETHANE	<0.2
CARBON TETRACHLORIDE	<0.2
CHLOROBENZENE	<0.5
CHLOROETHANE	<0.2
CHLOROFORM	9.1
CHLOROMETHANE	<0.2
DIBROMOCHLOROMETHANE	<0.2
2-CHLOROETHYL VINYL ETHER	<0.5
1,3-DICHLOROBENZENE	<0.5
1,2 & 1,4-DICHLOROBENZENE	<0.5
DICHLORODIFLUOROMETHANE	2.0
1,1-DICHLOROETHANE	0.7
1,2-DICHLOROETHANE	<0.2
1,1-DICHLOROETHENE	3.4
1,2-DICHLOROETHENE (TOTAL)	<0.2
1,2-DICHLOROPROPANE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2
TRANS-1,3-DICHLOROPROPENE	<0.2
ETHYLBENZENE	<0.5
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.2
TETRACHLOROETHENE	18
TOLUENE	<0.5
1,1,1-TRICHLOROETHANE	1.1
1,1,2-TRICHLOROETHANE	<0.2
TRICHLOROETHENE	46
TRICHLOROFLUOROMETHANE	<0.5
VINYL CHLORIDE	<0.2
TOTAL XYLENES	<0.5
TRICHLOROTRIFLUOROETHANE	<2.0
METHYL-TERT-BUTYL ETHER	16

## SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	98
BROMOFLUOROBENZENE (%)	96



GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30784304

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

CLIENT	: HARDING LAWSON ASSOCIATES	DATE SAMPLED	: 07/21/93
PROJECT #	: 11031-215.93	DATE RECEIVED	: 07/22/93
PROJECT NAME	: VWR/PHOENIX	DATE EXTRACTED	: N/A
CLIENT I.D.	: MW-4	DATE ANALYZED	: 07/28/93
SAMPLE MATRIX	: AQUEOUS	UNITS	: UG/L
		DILUTION FACTOR	: 5

COMPOUNDS	RESULTS
BENZENE	<2.5
BROMODICHLOROMETHANE	<1.0
BROMOFORM	<1.0
BROMOMETHANE	<1.0
CARBON TETRACHLORIDE	<1.0
CHLOROBENZENE	<2.5
CHLOROETHANE	<1.0
CHLOROFORM	10
CHLOROMETHANE	<1.0
DIBROMOCHLOROMETHANE	<1.0
2-CHLOROETHYL VINYL ETHER	<2.5
1,3-DICHLOROBENZENE	<2.5
1,2 & 1,4-DICHLOROBENZENE	<2.5
DICHLORODIFLUOROMETHANE	<1.0
1,1-DICHLOROETHANE	1
1,2-DICHLOROETHANE	<1.0
1,1-DICHLOROETHENE	10
1,2-DICHLOROETHENE (TOTAL)	<1.0
1,2-DICHLOROPROPANE	<1.0
CIS-1,3-DICHLOROPROPENE	<1.0
TRANS-1,3-DICHLOROPROPENE	<1.0
ETHYLBENZENE	<2.5
METHYLENE CHLORIDE	<10.0
1,1,2,2-TETRACHLOROETHANE	<1.0
TETRACHLOROETHENE	87
TOLUENE	<2.5
1,1,1-TRICHLOROETHANE	2
1,1,2-TRICHLOROETHANE	<1.0
TRICHLOROETHENE	53
TRICHLOROFLUOROMETHANE	<2.5
VINYL CHLORIDE	<1.0
TOTAL XYLENES	<2.5
TRICHLOROTRIFLUOROETHANE	<10.0
METHYL-TERT-BUTYL ETHER	<12.5

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	96
BROMOFLUOROBENZENE (%)	97



GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30784305

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

CLIENT	: HARDING LAWSON ASSOCIATES	DATE SAMPLED	: 07/21/93
PROJECT #	: 11031-215.93	DATE RECEIVED	: 07/22/93
PROJECT NAME	: VWR/PHOENIX	DATE EXTRACTED	: N/A
CLIENT I.D.	: MW-5	DATE ANALYZED	: 07/28/93
SAMPLE MATRIX	: AQUEOUS	UNITS	: UG/L
		DILUTION FACTOR	: 5

COMPOUNDS	RESULTS
BENZENE	<2.5
BROMODICHLOROMETHANE	<1.0
BROMOFORM	<1.0
BROMOMETHANE	<1.0
CARBON TETRACHLORIDE	<1.0
CHLOROBENZENE	<2.5
CHLOROETHANE	<1.0
CHLOROFORM	13
CHLOROMETHANE	<1.0
DIBROMOCHLOROMETHANE	<1.0
2-CHLOROETHYL VINYL ETHER	<2.5
1,3-DICHLOROBENZENE	<2.5
1,2 & 1,4-DICHLOROBENZENE	<2.5
DICHLORODIFLUOROMETHANE	2
1,1-DICHLOROETHANE	<1.0
1,2-DICHLOROETHANE	<1.0
1,1-DICHLOROETHENE	5
1,2-DICHLOROETHENE (TOTAL)	<1.0
1,2-DICHLOROPROPANE	<1.0
CIS-1,3-DICHLOROPROPENE	<1.0
TRANS-1,3-DICHLOROPROPENE	<1.0
ETHYLBENZENE	<2.5
METHYLENE CHLORIDE	<10.0
1,1,2,2-TETRACHLOROETHANE	<1.0
TETRACHLOROETHENE	75
TOLUENE	<2.5
1,1,1-TRICHLOROETHANE	<1.0
1,1,2-TRICHLOROETHANE	<1.0
TRICHLOROETHENE	43
TRICHLOROFLUOROMETHANE	<2.5
VINYL CHLORIDE	<1.0
TOTAL XYLENES	<2.5
TRICHLOROTRIFLUOROETHANE	<10.0
METHYL-TERT-BUTYL ETHER	<12.5

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	96
BROMOFLUOROBENZENE (%)	98



GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30784306

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

CLIENT	: HARDING LAWSON ASSOCIATES	DATE SAMPLED	: 07/21/93
PROJECT #	: 11031-215.93	DATE RECEIVED	: 07/22/93
PROJECT NAME	: VWR/PHOENIX	DATE EXTRACTED	: N/A
CLIENT I.D.	: MW-6	DATE ANALYZED	: 07/28/93
SAMPLE MATRIX	: AQUEOUS	UNITS	: UG/L
		DILUTION FACTOR	: 10

COMPOUNDS	RESULTS
BENZENE	<5.0
BROMODICHLOROMETHANE	<2.0
BROMOFORM	<2.0
BROMOMETHANE	<2.0
CARBON TETRACHLORIDE	<2.0
CHLOROBENZENE	<5.0
CHLOROETHANE	<2.0
CHLOROFORM	44
CHLOROMETHANE	<2.0
DIBROMOCHLOROMETHANE	<2.0
2-CHLOROETHYL VINYL ETHER	<5.0
1,3-DICHLOROBENZENE	<5.0
1,2 & 1,4-DICHLOROBENZENE	<5.0
DICHLORODIFLUOROMETHANE	<2.0
1,1-DICHLOROETHANE	<2.0
1,2-DICHLOROETHANE	<2.0
1,1-DICHLOROETHENE	30
1,2-DICHLOROETHENE (TOTAL)	<2.0
1,2-DICHLOROPROPANE	<2.0
CIS-1,3-DICHLOROPROPENE	<2.0
TRANS-1,3-DICHLOROPROPENE	<2.0
ETHYLBENZENE	<5.0
METHYLENE CHLORIDE	<20.0
1,1,2,2-TETRACHLOROETHANE	<2.0
TETRACHLOROETHENE	470
TOLUENE	<5.0
1,1,1-TRICHLOROETHANE	20
1,1,2-TRICHLOROETHANE	<2.0
TRICHLOROETHENE	62
TRICHLOROFLUOROMETHANE	<5.0
VINYL CHLORIDE	<2.0
TOTAL XYLENES	<5.0
TRICHLOROTRIFLUOROETHANE	<20.0
METHYL-TERT-BUTYL ETHER	<25.0

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	117
BROMOFLUOROBENZENE (%)	104



GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30784307

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

CLIENT	: HARDING LAWSON ASSOCIATES	DATE SAMPLED	: 07/21/93
PROJECT #	: 11031-215.93	DATE RECEIVED	: 07/22/93
PROJECT NAME	: VWR/PHOENIX	DATE EXTRACTED	: N/A
CLIENT I.D.	: MW-7	DATE ANALYZED	: 07/28/93
SAMPLE MATRIX	: AQUEOUS	UNITS	: UG/L
		DILUTION FACTOR	: 5

COMPOUNDS	RESULTS
BENZENE	<2.5
BROMODICHLOROMETHANE	<1.0
BROMOFORM	<1.0
BROMOMETHANE	<1.0
CARBON TETRACHLORIDE	<1.0
CHLOROBENZENE	<2.5
CHLOROETHANE	<1.0
CHLOROFORM	50
CHLOROMETHANE	<1.0
DIBROMOCHLOROMETHANE	<1.0
2-CHLOROETHYL VINYL ETHER	<2.5
1,3-DICHLOROBENZENE	<2.5
1,2 & 1,4-DICHLOROBENZENE	<2.5
DICHLORODIFLUOROMETHANE	13
1,1-DICHLOROETHANE	4
1,2-DICHLOROETHANE	<1.0
1,1-DICHLOROETHENE	16
1,2-DICHLOROETHENE (TOTAL)	<1.0
1,2-DICHLOROPROPANE	<1.0
CIS-1,3-DICHLOROPROPENE	<1.0
TRANS-1,3-DICHLOROPROPENE	<1.0
ETHYLBENZENE	<2.5
METHYLENE CHLORIDE	<10.0
1,1,2,2-TETRACHLOROETHANE	<1.0
TETRACHLOROETHENE	92
TOLUENE	<2.5
1,1,1-TRICHLOROETHANE	7
1,1,2-TRICHLOROETHANE	<1.0
TRICHLOROETHENE	200
TRICHLOROFLUOROMETHANE	<2.5
VINYL CHLORIDE	<1.0
TOTAL XYLENES	<2.5
TRICHLOROTRIFLUOROETHANE	<10.0
METHYL-TERT-BUTYL ETHER	130

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	80
BROMOFLUOROBENZENE (%)	108



GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30784308

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

CLIENT	: HARDING LAWSON ASSOCIATES	DATE SAMPLED	: 07/21/93
PROJECT #	: 11031-215.93	DATE RECEIVED	: 07/22/93
PROJECT NAME	: VWR/PHOENIX	DATE EXTRACTED	: N/A
CLIENT I.D.	: MW-8	DATE ANALYZED	: 07/28/93
SAMPLE MATRIX	: AQUEOUS	UNITS	: UG/L
		DILUTION FACTOR	: 2

-----  
COMPOUNDS RESULTS  
-----

BENZENE	<1.0
BROMODICHLOROMETHANE	<0.4
BROMOFORM	<0.4
BROMOMETHANE	<0.4
CARBON TETRACHLORIDE	<0.4
CHLOROBENZENE	<1.0
CHLOROETHANE	<0.4
CHLOROFORM	8
CHLOROMETHANE	<0.4
DIBROMOCHLOROMETHANE	<0.4
2-CHLOROETHYL VINYL ETHER	<1.0
1,3-DICHLOROBENZENE	<1.0
1,2 & 1,4-DICHLOROBENZENE	<1.0
DICHLORODIFLUOROMETHANE	4
1,1-DICHLOROETHANE	2
1,2-DICHLOROETHANE	<0.4
1,1-DICHLOROETHENE	8
1,2-DICHLOROETHENE (TOTAL)	<0.4
1,2-DICHLOROPROPANE	<0.4
CIS-1,3-DICHLOROPROPENE	<0.4
TRANS-1,3-DICHLOROPROPENE	<0.4
ETHYLBENZENE	<1.0
METHYLENE CHLORIDE	<4.0
1,1,2,2-TETRACHLOROETHANE	<0.4
TETRACHLOROETHENE	79
TOLUENE	<1.0
1,1,1-TRICHLOROETHANE	2
1,1,2-TRICHLOROETHANE	<0.4
TRICHLOROETHENE	68
TRICHLOROFLUOROMETHANE	<1.0
VINYL CHLORIDE	<0.4
TOTAL XYLENES	<1.0
TRICHLOROTRIFLUOROETHANE	6
METHYL-TERT-BUTYL ETHER	<5.0

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	104
BROMOFLUOROBENZENE (%)	108



## GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30784309

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

CLIENT	: HARDING LAWSON ASSOCIATES	DATE SAMPLED	: 07/21/93
PROJECT #	: 11031-215.93	DATE RECEIVED	: 07/22/93
PROJECT NAME	: VWR/PHOENIX	DATE EXTRACTED	: N/A
CLIENT I.D.	: MW-9	DATE ANALYZED	: 07/28/93
SAMPLE MATRIX	: AQUEOUS	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
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BENZENE	<0.5
BROMODICHLOROMETHANE	<0.2
BROMOFORM	<0.2
BROMOMETHANE	<0.2
CARBON TETRACHLORIDE	<0.2
CHLOROBENZENE	<0.5
CHLOROETHANE	<0.2
CHLOROFORM	10
CHLOROMETHANE	<0.2
DIBROMOCHLOROMETHANE	<0.2
2-CHLOROETHYL VINYL ETHER	<0.5
1,3-DICHLOROBENZENE	<0.5
1,2 & 1,4-DICHLOROBENZENE	<0.5
DICHLORODIFLUOROMETHANE	2.7
1,1-DICHLOROETHANE	0.7
1,2-DICHLOROETHANE	<0.2
1,1-DICHLOROETHENE	3.2
1,2-DICHLOROETHENE (TOTAL)	<0.2
1,2-DICHLOROPROPANE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2
TRANS-1,3-DICHLOROPROPENE	<0.2
ETHYLBENZENE	<0.5
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.2
TETRACHLOROETHENE	18
TOLUENE	<0.5
1,1,1-TRICHLOROETHANE	1.4
1,1,2-TRICHLOROETHANE	<0.2
TRICHLOROETHENE	41
TRICHLOROFLUOROMETHANE	<0.5
VINYL CHLORIDE	<0.2
TOTAL XYLENES	<0.5
TRICHLOROTRIFLUOROETHANE	<2.0
METHYL-TERT-BUTYL ETHER	26

## SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	80
BROMOFLUOROBENZENE (%)	108

## GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30784310

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

CLIENT	: HARDING LAWSON ASSOCIATES	DATE SAMPLED	: 07/15/93
PROJECT #	: 11031-215.93	DATE RECEIVED	: 07/22/93
PROJECT NAME	: VWR/PHOENIX	DATE EXTRACTED	: N/A
CLIENT I.D.	: TRIP BLANK	DATE ANALYZED	: 07/28/93
SAMPLE MATRIX	: AQUEOUS	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
BENZENE	<0.5
BROMODICHLOROMETHANE	<0.2
BROMOFORM	<0.2
BROMOMETHANE	<0.2
CARBON TETRACHLORIDE	<0.2
CHLOROBENZENE	<0.5
CHLOROETHANE	<0.2
CHLOROFORM	<0.2
CHLOROMETHANE	<0.2
DIBROMOCHLOROMETHANE	<0.2
2-CHLOROETHYL VINYL ETHER	<0.5
1,3-DICHLOROBENZENE	<0.5
1,2 & 1,4-DICHLOROBENZENE	<0.5
DICHLORODIFLUOROMETHANE	<0.2
1,1-DICHLOROETHANE	<0.2
1,2-DICHLOROETHANE	<0.2
1,1-DICHLOROETHENE	<0.2
1,2-DICHLOROETHENE (TOTAL)	<0.2
1,2-DICHLOROPROPANE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2
TRANS-1,3-DICHLOROPROPENE	<0.2
ETHYLBENZENE	<0.5
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.2
TETRACHLOROETHENE	<0.2
TOLUENE	<0.5
1,1,1-TRICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	<0.2
TRICHLOROETHENE	<0.2
TRICHLOROFLUOROMETHANE	<0.5
VINYL CHLORIDE	<0.2
TOTAL XYLENES	<0.5
TRICHLOROTRIFLUOROETHANE	<2.0
METHYL-TERT-BUTYL ETHER	<2.5

## SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	102
BROMOFLUOROBENZENE (%)	100



## REAGENT BLANK

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

CLIENT : HARDING LAWSON ASSOCIATES  
 PROJECT # : 11031-215.93  
 PROJECT NAME : VWR/PHOENIX  
 CLIENT I.D. : REAGENT BLANK

ATI I.D. : 307843  
 DATE EXTRACTED : 07/27/93  
 DATE ANALYZED : 07/27/93  
 UNITS : UG/L  
 DILUTION FACTOR : N/A

COMPOUNDS	RESULTS
BENZENE	<0.5
BROMODICHLOROMETHANE	<0.2
BROMOFORM	<0.2
BROMOMETHANE	<0.2
CARBON TETRACHLORIDE	<0.2
CHLOROBENZENE	<0.5
CHLOROETHANE	<0.2
CHLOROFORM	<0.2
CHLOROMETHANE	<0.2
DIBROMOCHLOROMETHANE	<0.2
2-CHLOROETHYL VINYL ETHER	<0.5
1,3-DICHLOROBENZENE	<0.5
1,2 & 1,4-DICHLOROBENZENE	<0.5
DICHLORODIFLUOROMETHANE	<0.2
1,1-DICHLOROETHANE	<0.2
1,2-DICHLOROETHANE	<0.2
1,1-DICHLOROETHENE	<0.2
1,2-DICHLOROETHENE (TOTAL)	<0.2
1,2-DICHLOROPROPANE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2
TRANS-1,3-DICHLOROPROPENE	<0.2
ETHYLBENZENE	<0.5
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.2
TETRACHLOROETHENE	<0.2
TOLUENE	<0.5
1,1,1-TRICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	<0.2
TRICHLOROETHENE	<0.2
TRICHLOROFLUOROMETHANE	<0.5
VINYL CHLORIDE	<0.2
TOTAL XYLENES	<0.5
TRICHLOROTRIFLUOROETHANE	<2.0
METHYL-TERT-BUTYL ETHER	<2.5

## SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	92
BROMOFLUOROBENZENE (%)	103



## REAGENT BLANK

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

CLIENT	: HARDING LAWSON ASSOCIATES	ATI I.D.	: 307843
PROJECT #	: 11031-215.93	DATE EXTRACTED	: 07/28/93
PROJECT NAME	: VWR/PHOENIX	DATE ANALYZED	: 07/28/93
CLIENT I.D.	: REAGENT BLANK	UNITS	: UG/L
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
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BENZENE	<0.5
BROMODICHLOROMETHANE	<0.2
BROMOFORM	<0.2
BROMOMETHANE	<0.2
CARBON TETRACHLORIDE	<0.2
CHLOROBENZENE	<0.5
CHLOROETHANE	<0.2
CHLOROFORM	<0.2
CHLOROMETHANE	<0.2
DIBROMOCHLOROMETHANE	<0.2
2-CHLOROETHYL VINYL ETHER	<0.5
1,3-DICHLOROBENZENE	<0.5
1,2 & 1,4-DICHLOROBENZENE	<0.5
DICHLORODIFLUOROMETHANE	<0.2
1,1-DICHLOROETHANE	<0.2
1,2-DICHLOROETHANE	<0.2
1,1-DICHLOROETHENE	<0.2
1,2-DICHLOROETHENE (TOTAL)	<0.2
1,2-DICHLOROPROPANE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2
TRANS-1,3-DICHLOROPROPENE	<0.2
ETHYLBENZENE	<0.5
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.2
TETRACHLOROETHENE	<0.2
TOLUENE	<0.5
1,1,1-TRICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	<0.2
TRICHLOROETHENE	<0.2
TRICHLOROFLUOROMETHANE	<0.5
VINYL CHLORIDE	<0.2
TOTAL XYLENES	<0.5
TRICHLOROTRIFLUOROETHANE	<2.0
METHYL-TERT-BUTYL ETHER	<2.5

## SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	107
BROMOFLUOROBENZENE (%)	107



QUALITY CONTROL DATA

ATI I.D. : 307843

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

CLIENT : HARDING LAWSON ASSOCIATES  
 PROJECT # : 11031-215.93  
 PROJECT NAME : VWR/PHOENIX  
 REF I.D. : 30784309

DATE ANALYZED : 07/27/93  
 SAMPLE MATRIX : AQUEOUS  
 UNITS : UG/L

COMPOUNDS	SAMPLE CONC.		SPIKED SAMPLE	% SPIKED REC.	DUP. SPIKED SAMPLE REC.		RPD
	RESULT	SPIKED			%	%	
1,1-DICHLOROETHENE	3.2	20	23	99	22	94	4
TRICHLOROETHENE	41	20	51	50*	51	50*	0
TETRACHLOROETHENE	18	20	36	90	36	90	0
BENZENE	<0.5	20	23	115	23	115	0
BROMODICHLOROMETHANE	<0.2	20	19	95	20	100	5
CHLOROFORM	10	20	26	80	26	80	0
1,1,1-TRICHLOROETHANE	1.4	20	18	83	18	83	0
TOLUENE	<0.5	20	22	110	22	110	0
CHLOROBENZENE	<0.5	20	21	105	21	105	0
M-XYLENE	<0.5	20	21	105	22	110	5

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

\* Result out of limits due to sample matrix interference

Samplers: UBG/TSN

Job Number: 11031-245 93

Name/Location: Kut R / Phoenix

Project Manager: KCS

Recorder: [Signature]  
 (Signature Required)

ANALYSIS REQUESTED	
EPA 8015M/TPH	(SEE ATTACHED SHEET)
ICP METALS	
EPA 625/8270	
EPA 624/8240	
EPA 602/8020	
EPA 607/8010	

STATION DESCRIPTION/ NOTES
TRIP BLANK

SOURCE CODE	MATRIX			# CONTAINERS & PRESERV.	SAMPLE NUMBER OR LAB NUMBER			DATE			
	Water	Sediment	Oil		Yr	Wk	Seq	Yr	Mo	Dy	Time
23	X			2	MW	-19	307	21	16	08	
23	X			2	MW	-29	307	21	08	00	
23	X			2	MW	-39	307	21	09	40	
23	X			2	MW	-49	307	21	16	58	
23	X			5	MW	-59	307	21	11	18	
23	X			5	MW	-69	307	21	11	20	3
23	X			2	MW	-79	307	21	14	00	
23	X			5	MW	-89	307	21	11	45	5
23	X			2	MW	-99	307	21	10	15	
23	X						1307	15	12	45	

LAB NUMBER				DEPTH IN FEET				COL MTD CD		QA CODE		MISCELLANEOUS		
Yr	Wk	Seq		Yr	Wk	Seq		Yr	Wk	Seq		Yr	Wk	Seq

CHAIN OF CUSTODY RECORD			
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME	DATE/TIME
<u>[Signature]</u>	<u>[Signature]</u>		7/22/93
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME	DATE/TIME
<u>[Signature]</u>	<u>[Signature]</u>		
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME	DATE/TIME
<u>[Signature]</u>	<u>[Signature]</u>		
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME	DATE/TIME
<u>[Signature]</u>	<u>[Signature]</u>		
DISPATCHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME	DATE/TIME
<u>[Signature]</u>	<u>[Signature]</u>		7/22/93 1245
METHOD OF SHIPMENT			



Analytical **Technologies**, Inc.

9830 S. 51st Street Suite B-113 Phoenix, AZ 85044 (602) 496-4400

ATI I.D. 305720

June 1, 1993

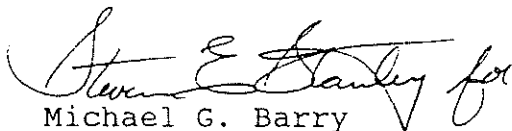
Kleinfelder, Inc.  
4920 E. McDowell Road  
Suite 101  
Phoenix, AZ 85008

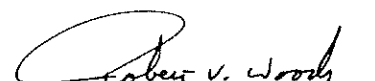
Project Name/Number: 52-1159-04(003)


Attention: Bill Golightly

On 05/13/93, Analytical Technologies, Inc., (ADHS License No. AZ0061), received a request to analyze **aqueous** sample(s). The sample(s) were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

If you have any questions or comments, please do not hesitate to contact us at (602) 496-4400.

  
Michael G. Barry  
Project Manager

  
Robert V. Woods  
Laboratory Manager

  
Robert Hermerath  
QA Coordinator

RVW/ktd

Enclosure



Analytical Technologies, Inc.

CLIENT : KLEINFELDER, INC.  
PROJECT # : 52-1159-04(003)  
PROJECT NAME : (NONE)

DATE RECEIVED : 05/13/93  
REPORT DATE : 05/25/93

ATI I.D. : 305720

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	W-01-01	AQUEOUS	05/13/93
02	W-02-01	AQUEOUS	05/13/93
03	W-03-01	AQUEOUS	05/13/93
04	W-04-01	AQUEOUS	05/13/93
05	W-35-01	AQUEOUS	05/13/93
06	W-PT-01	AQUEOUS	05/13/93
07	TRIP BLANK	AQUEOUS	05/11/93

----- TOTALS -----

MATRIX	# SAMPLES
AQUEOUS	7

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in thirty (30) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.



Analytical Technologies, Inc.

GENERAL CHEMISTRY RESULTS

ATI I.D. : 305720

CLIENT : KLEINFELDER, INC.  
PROJECT # : 52-1159-04(003)  
PROJECT NAME : (NONE)

DATE RECEIVED : 05/13/93

REPORT DATE : 05/25/93

PARAMETER	UNITS	01	02	03	04	05
PETROLEUM HYDROCARBONS, 418.1	MG/L	<1	<1	<1	<1	<1



Analytical Technologies, Inc.

GENERAL CHEMISTRY RESULTS

ATI I.D. : 305720

CLIENT : KLEINFELDER, INC.

DATE RECEIVED : 05/13/93

PROJECT # : 52-1159-04(003)

PROJECT NAME : (NONE)

REPORT DATE : 05/25/93

PARAMETER	UNITS	06
PETROLEUM HYDROCARBONS,	418.1 MG/L	<1



Analytical Technologies, Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

CLIENT : KLEINFELDER, INC.  
PROJECT # : 52-1159-04(003)  
PROJECT NAME : (NONE)

ATI I.D. : 305720

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC	% REC
PETROLEUM HYDROCARBONS	MG/L	30572001	<1	<1	NA	8	8	100

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30572001

TEST : EPA METHOD 502.2

CLIENT	: KLEINFELDER, INC.	DATE SAMPLED	: 05/13/93
PROJECT #	: 52-1159-04(003)	DATE RECEIVED	: 05/13/93
PROJECT NAME	: (NONE)	DATE EXTRACTED	: N/A
CLIENT I.D.	: W-01-01	DATE ANALYZED	: 05/19/93
SAMPLE MATRIX	: AQUEOUS	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
VINYL CHLORIDE	<0.2
BENZENE	<0.5
CARBON TETRACHLORIDE	<0.2
1,2-DICHLOROETHANE	<0.2
TRICHLOROETHYLENE (TCE)	2.0
PARA-DICHLOROBENZENE	<0.5
1,1-DICHLOROETHYLENE	<0.2
1,1,1-TRICHLOROETHANE	<0.2
CIS-1,2-DICHLOROETHYLENE	<0.2
1,2-DICHLOROPROPANE	<0.2
ETHYLBENZENE	<0.5
CHLOROBENZENE	<0.5
ORTHO-DICHLOROBENZENE	<0.5
STYRENE	<0.5
TETRACHLOROETHYLENE	1.6
TOLUENE	<0.5
TRANS-1,2-DICHLOROETHYLENE	<0.2
META, PARA-XYLENE (TOTAL)	<0.5
ORTHO-XYLENE	<0.5
CHLOROMETHANE	<0.2
BROMOMETHANE	<0.2
CHLOROETHANE	<0.2
1,3-DICHLOROPROPENE (TOTAL)	<0.2
DIBROMOMETHANE	<0.2
1,1-DICHLOROPROPENE	<0.2
1,3-DICHLOROPROPANE	<0.2
1,2,3-TRICHLOROPROPANE	<0.2
2,2-DICHLOROPROPANE	<0.2
CHLOROFORM	0.3
BROMOFORM	<0.2
BROMODICHLOROMETHANE	<0.2
CHLORODIBROMOMETHANE	<0.2
DICHLOROMETHANE	<2.0
ORTHO-CHLOROTOLUENE	<0.5
PARA-CHLOROTOLUENE	<0.5
META-DICHLOROBENZENE	<0.5
1,1-DICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	<0.2
1,1,1,2-TETRACHLOROETHANE	<0.2
1,1,2,2-TETRACHLOROETHANE	<0.2
BROMOBENZENE	<0.5



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30572001

TEST : EPA METHOD 502.2

COMPOUNDS	RESULTS
DICHLORODIFLUOROMETHANE	<0.5
TRICHLOROFLUOROMETHANE	<0.5
BROMOCHLOROMETHANE	<0.2
1,2-DIBROMOETHANE	<1.0
ISO-PROPYLBENZENE	<2.0
N-PROPYLBENZENE	<1.0
1,3,5-TRIMETHYLBENZENE	<1.0
1,2,4-TRIMETHYLBENZENE	<0.5
TERT-BUTYLBENZENE	<0.5
SEC-BUTYLBENZENE	<0.5
P-ISOPROPYLTOLUENE	<0.5
N-BUTYLBENZENE	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	<1.0
1,2,4-TRICHLOROBENZENE	<0.5
NAPHTHALENE	<1.0
1,2,3-TRICHLOROBENZENE	<0.5
HEXACHLOROBUTADIENE	<1.0
TRANS-1,3-DICHLOROPROPENE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2

SURROGATE PERCENT RECOVERIES

1-CHLORO-2-FLUOROBENZENE (PID) (%)	87
1-CHLORO-2-FLUOROBENZENE (HALL) (%)	83



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30572002

TEST : EPA METHOD 502.2

CLIENT : KLEINFELDER, INC.  
 PROJECT # : 52-1159-04(003)  
 PROJECT NAME : (NONE)  
 CLIENT I.D. : W-02-01  
 SAMPLE MATRIX : AQUEOUS

DATE SAMPLED : 05/13/93  
 DATE RECEIVED : 05/13/93  
 DATE EXTRACTED : N/A  
 DATE ANALYZED : 05/19/93  
 UNITS : UG/L  
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
VINYL CHLORIDE	<0.2
BENZENE	<0.5
CARBON TETRACHLORIDE	<0.2
1,2-DICHLOROETHANE	<0.2
TRICHLOROETHYLENE (TCE)	1.4
PARA-DICHLOROBENZENE	<0.5
1,1-DICHLOROETHYLENE	<0.2
1,1,1-TRICHLOROETHANE	<0.2
CIS-1,2-DICHLOROETHYLENE	<0.2
1,2-DICHLOROPROPANE	<0.2
ETHYLBENZENE	<0.5
CHLOROBENZENE	<0.5
ORTHO-DICHLOROBENZENE	<0.5
STYRENE	<0.5
TETRACHLOROETHYLENE	1.4
TOLUENE	<0.5
TRANS-1,2-DICHLOROETHYLENE	<0.2
META, PARA-XYLENE (TOTAL)	<0.5
ORTHO-XYLENE	<0.5
CHLOROMETHANE	<0.2
BROMOMETHANE	<0.2
CHLOROETHANE	<0.2
1,3-DICHLOROPROPENE (TOTAL)	<0.2
DIBROMOMETHANE	<0.2
1,1-DICHLOROPROPENE	<0.2
1,3-DICHLOROPROPANE	<0.2
1,2,3-TRICHLOROPROPANE	<0.2
2,2-DICHLOROPROPANE	<0.2
CHLOROFORM	0.4
BROMOFORM	<0.2
BROMODICHLOROMETHANE	<0.2
CHLORODIBROMOMETHANE	<0.2
DICHLOROMETHANE	<2.0
ORTHO-CHLOROTOLUENE	<0.5
PARA-CHLOROTOLUENE	<0.5
META-DICHLOROBENZENE	<0.5
1,1-DICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	<0.2
1,1,1,2-TETRACHLOROETHANE	<0.2
1,1,2,2-TETRACHLOROETHANE	<0.2
BROMOBENZENE	<0.5



TEST : EPA METHOD 502.2

COMPOUNDS	RESULTS
DICHLORODIFLUOROMETHANE	<0.5
TRICHLOROFUOROMETHANE	<0.5
BROMOCHLOROMETHANE	<0.2
1,2-DIBROMOETHANE	<1.0
ISO-PROPYLBENZENE	<2.0
N-PROPYLBENZENE	<1.0
1,3,5-TRIMETHYLBENZENE	<1.0
1,2,4-TRIMETHYLBENZENE	<0.5
TERT-BUTYLBENZENE	<0.5
SEC-BUTYLBENZENE	<0.5
P-ISOPROPYLTOLUENE	<0.5
N-BUTYLBENZENE	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	<1.0
1,2,4-TRICHLOROBENZENE	<0.5
NAPHTHALENE	<1.0
1,2,3-TRICHLOROBENZENE	<0.5
HEXACHLOROBUTADIENE	<1.0
TRANS-1,3-DICHLOROPROPENE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2

## SURROGATE PERCENT RECOVERIES

1-CHLORO-2-FLUOROBENZENE (PID) (%)	85
1-CHLORO-2-FLUOROBENZENE (HALL) (%)	82



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30572003

TEST : EPA METHOD 502.2

CLIENT : KLEINFELDER, INC.  
PROJECT # : 52-1159-04(003)  
PROJECT NAME : (NONE)  
CLIENT I.D. : W-03-01  
SAMPLE MATRIX : AQUEOUS

DATE SAMPLED : 05/13/93  
DATE RECEIVED : 05/13/93  
DATE EXTRACTED : N/A  
DATE ANALYZED : 05/19/93  
UNITS : UG/L  
DILUTION FACTOR : 1

COMPOUNDS	RESULTS
VINYL CHLORIDE	<0.2
BENZENE	<0.5
CARBON TETRACHLORIDE	<0.2
1,2-DICHLOROETHANE	<0.2
TRICHLOROETHYLENE (TCE)	1.0
PARA-DICHLOROBENZENE	<0.5
1,1-DICHLOROETHYLENE	<0.2
1,1,1-TRICHLOROETHANE	<0.2
CIS-1,2-DICHLOROETHYLENE	<0.2
1,2-DICHLOROPROPANE	<0.2
ETHYLBENZENE	<0.5
CHLOROBENZENE	<0.5
ORTHO-DICHLOROBENZENE	<0.5
STYRENE	<0.5
TETRACHLOROETHYLENE	1.0
TOLUENE	<0.5
TRANS-1,2-DICHLOROETHYLENE	<0.2
META, PARA-XYLENE (TOTAL)	<0.5
ORTHO-XYLENE	<0.5
CHLOROMETHANE	<0.2
BROMOMETHANE	<0.2
CHLOROETHANE	<0.2
1,3-DICHLOROPROPENE (TOTAL)	<0.2
DIBROMOMETHANE	<0.2
1,1-DICHLOROPROPENE	<0.2
1,3-DICHLOROPROPANE	<0.2
1,2,3-TRICHLOROPROPANE	<0.2
2,2-DICHLOROPROPANE	<0.2
CHLOROFORM	1.6
BROMOFORM	<0.2
BROMODICHLOROMETHANE	<0.2
CHLORODIBROMOMETHANE	<0.2
DICHLOROMETHANE	<2.0
ORTHO-CHLOROTOLUENE	<0.5
PARA-CHLOROTOLUENE	<0.5
META-DICHLOROBENZENE	<0.5
1,1-DICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	<0.2
1,1,1,2-TETRACHLOROETHANE	<0.2
1,1,2,2-TETRACHLOROETHANE	<0.2
BROMOBENZENE	<0.5



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30572003

TEST : EPA METHOD 502.2

COMPOUNDS	RESULTS
DICHLORODIFLUOROMETHANE	<0.5
TRICHLOROFLUOROMETHANE	<0.5
BROMOCHLOROMETHANE	<0.2
1,2-DIBROMOETHANE	<1.0
ISO-PROPYLBENZENE	<2.0
N-PROPYLBENZENE	<1.0
1,3,5-TRIMETHYLBENZENE	<1.0
1,2,4-TRIMETHYLBENZENE	<0.5
TERT-BUTYLBENZENE	<0.5
SEC-BUTYLBENZENE	<0.5
P-ISOPROPYLTOLUENE	<0.5
N-BUTYLBENZENE	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	<1.0
1,2,4-TRICHLOROBENZENE	<0.5
NAPHTHALENE	<1.0
1,2,3-TRICHLOROBENZENE	<0.5
HEXACHLOROBUTADIENE	<1.0
TRANS-1,3-DICHLOROPROPENE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2

SURROGATE PERCENT RECOVERIES

1-CHLORO-2-FLUOROBENZENE (PID) (%)	83
1-CHLORO-2-FLUOROBENZENE (HALL) (%)	83



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30572004

TEST : EPA METHOD 502.2

CLIENT : KLEINFELDER, INC.  
PROJECT # : 52-1159-04(003)  
PROJECT NAME : (NONE)  
CLIENT I.D. : W-04-01  
SAMPLE MATRIX : AQUEOUS

DATE SAMPLED : 05/13/93  
DATE RECEIVED : 05/13/93  
DATE EXTRACTED : N/A  
DATE ANALYZED : 05/19/93  
UNITS : UG/L  
DILUTION FACTOR : 1

COMPOUNDS	RESULTS
VINYL CHLORIDE	<0.2
BENZENE	<0.5
CARBON TETRACHLORIDE	<0.2
1,2-DICHLOROETHANE	<0.2
TRICHLOROETHYLENE (TCE)	1.6
PARA-DICHLOROBENZENE	<0.5
1,1-DICHLOROETHYLENE	<0.2
1,1,1-TRICHLOROETHANE	<0.2
CIS-1,2-DICHLOROETHYLENE	<0.2
1,2-DICHLOROPROPANE	<0.2
ETHYLBENZENE	<0.5
CHLOROBENZENE	<0.5
ORTHO-DICHLOROBENZENE	<0.5
STYRENE	<0.5
TETRACHLOROETHYLENE	1.2
TOLUENE	<0.5
TRANS-1,2-DICHLOROETHYLENE	<0.2
META, PARA-XYLENE (TOTAL)	0.5
ORTHO-XYLENE	<0.5
CHLOROMETHANE	<0.2
BROMOMETHANE	<0.2
CHLOROETHANE	<0.2
1,3-DICHLOROPROPENE (TOTAL)	<0.2
DIBROMOMETHANE	<0.2
1,1-DICHLOROPROPENE	<0.2
1,3-DICHLOROPROPANE	<0.2
1,2,3-TRICHLOROPROPANE	<0.2
2,2-DICHLOROPROPANE	<0.2
CHLOROFORM	3.6
BROMOFORM	<0.2
BROMODICHLOROMETHANE	0.6
CHLORODIBROMOMETHANE	<0.2
DICHLOROMETHANE	<2.0
ORTHO-CHLOROTOLUENE	<0.5
PARA-CHLOROTOLUENE	<0.5
META-DICHLOROBENZENE	<0.5
1,1-DICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	<0.2
1,1,1,2-TETRACHLOROETHANE	<0.2
1,1,2,2-TETRACHLOROETHANE	<0.2
BROMOBENZENE	<0.5



TEST : EPA METHOD 502.2

COMPOUNDS	RESULTS
DICHLORODIFLUOROMETHANE	<0.5
TRICHLOROFLUOROMETHANE	<0.5
BROMOCHLOROMETHANE	<0.2
1,2-DIBROMOETHANE	<1.0
ISO-PROPYLBENZENE	<2.0
N-PROPYLBENZENE	<1.0
1,3,5-TRIMETHYLBENZENE	<1.0
1,2,4-TRIMETHYLBENZENE	<0.5
TERT-BUTYLBENZENE	<0.5
SEC-BUTYLBENZENE	<0.5
P-ISOPROPYLTOLUENE	<0.5
N-BUTYLBENZENE	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	<1.0
1,2,4-TRICHLOROBENZENE	<0.5
NAPHTHALENE	<1.0
1,2,3-TRICHLOROBENZENE	<0.5
HEXACHLOROBUTADIENE	<1.0
TRANS-1,3-DICHLOROPROPENE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2

## SURROGATE PERCENT RECOVERIES

1-CHLORO-2-FLUOROBENZENE (PID) (%)	81
1-CHLORO-2-FLUOROBENZENE (HALL) (%)	82



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30572005

TEST : EPA METHOD 502.2

CLIENT : KLEINFELDER, INC.  
PROJECT # : 52-1159-04(003)  
PROJECT NAME : (NONE)  
CLIENT I.D. : W-35-01  
SAMPLE MATRIX : AQUEOUS

DATE SAMPLED : 05/13/93  
DATE RECEIVED : 05/13/93  
DATE EXTRACTED : N/A  
DATE ANALYZED : 05/20/93  
UNITS : UG/L  
DILUTION FACTOR : 1

COMPOUNDS	RESULTS
VINYL CHLORIDE	<0.2
BENZENE	<0.5
CARBON TETRACHLORIDE	<0.2
1,2-DICHLOROETHANE	<0.2
TRICHLOROETHYLENE (TCE)	2.6
PARA-DICHLOROBENZENE	<0.5
1,1-DICHLOROETHYLENE	<0.2
1,1,1-TRICHLOROETHANE	<0.2
CIS-1,2-DICHLOROETHYLENE	<0.2
1,2-DICHLOROPROPANE	<0.2
ETHYLBENZENE	<0.5
CHLOROBENZENE	<0.5
ORTHO-DICHLOROBENZENE	<0.5
STYRENE	<0.5
TETRACHLOROETHYLENE	2.2
TOLUENE	<0.5
TRANS-1,2-DICHLOROETHYLENE	<0.2
META, PARA-XYLENE (TOTAL)	<0.5
ORTHO-XYLENE	<0.5
CHLOROMETHANE	<0.2
BROMOMETHANE	<0.2
CHLOROETHANE	<0.2
1,3-DICHLOROPROPENE (TOTAL)	<0.2
DIBROMOMETHANE	<0.2
1,1-DICHLOROPROPENE	<0.2
1,3-DICHLOROPROPANE	<0.2
1,2,3-TRICHLOROPROPANE	<0.2
2,2-DICHLOROPROPANE	<0.2
CHLOROFORM	0.4
BROMOFORM	<0.2
BROMODICHLOROMETHANE	<0.2
CHLORODIBROMOMETHANE	<0.2
DICHLOROMETHANE	<2.0
ORTHO-CHLOROTOLUENE	<0.5
PARA-CHLOROTOLUENE	<0.5
META-DICHLOROBENZENE	<0.5
1,1-DICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	<0.2
1,1,1,2-TETRACHLOROETHANE	<0.2
1,1,2,2-TETRACHLOROETHANE	<0.2
BROMOBENZENE	<0.5



TEST : EPA METHOD 502.2

COMPOUNDS	RESULTS
DICHLORODIFLUOROMETHANE	<0.5
TRICHLOROFLUOROMETHANE	<0.5
BROMOCHLOROMETHANE	<0.2
1,2-DIBROMOETHANE	<1.0
ISO-PROPYLBENZENE	<2.0
N-PROPYLBENZENE	<1.0
1,3,5-TRIMETHYLBENZENE	<1.0
1,2,4-TRIMETHYLBENZENE	<0.5
TERT-BUTYLBENZENE	<0.5
SEC-BUTYLBENZENE	<0.5
P-ISOPROPYLTOLUENE	<0.5
N-BUTYLBENZENE	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	<1.0
1,2,4-TRICHLOROBENZENE	<0.5
NAPHTHALENE	<1.0
1,2,3-TRICHLOROBENZENE	<0.5
HEXACHLOROBUTADIENE	<1.0
TRANS-1,3-DICHLOROPROPENE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2

## SURROGATE PERCENT RECOVERIES

1-CHLORO-2-FLUOROBENZENE (PID) (%)	94
1-CHLORO-2-FLUOROBENZENE (HALL) (%)	85



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30572006

TEST : EPA METHOD 502.2

CLIENT : KLEINFELDER, INC.  
PROJECT # : 52-1159-04(003)  
PROJECT NAME : (NONE)  
CLIENT I.D. : W-PT-01  
SAMPLE MATRIX : AQUEOUS

DATE SAMPLED : 05/13/93  
DATE RECEIVED : 05/13/93  
DATE EXTRACTED : N/A  
DATE ANALYZED : 05/19/93  
UNITS : UG/L  
DILUTION FACTOR : 1

COMPOUNDS	RESULTS
VINYL CHLORIDE	<0.2
BENZENE	1.2
CARBON TETRACHLORIDE	<0.2
1,2-DICHLOROETHANE	<0.2
TRICHLOROETHYLENE (TCE)	1.3
PARA-DICHLOROBENZENE	<0.5
1,1-DICHLOROETHYLENE	<0.2
1,1,1-TRICHLOROETHANE	<0.2
CIS-1,2-DICHLOROETHYLENE	<0.2
1,2-DICHLOROPROPANE	<0.2
ETHYLBENZENE	0.8
CHLOROBENZENE	<0.5
ORTHO-DICHLOROBENZENE	<0.5
STYRENE	<0.5
TETRACHLOROETHYLENE	0.9
TOLUENE	1.3
TRANS-1,2-DICHLOROETHYLENE	<0.2
META,PARA-XYLENE (TOTAL)	3.5
ORTHO-XYLENE	1.8
CHLOROMETHANE	<0.2
BROMOMETHANE	<0.2
CHLOROETHANE	<0.2
1,3-DICHLOROPROPENE (TOTAL)	<0.2
DIBROMOMETHANE	<0.2
1,1-DICHLOROPROPENE	<0.2
1,3-DICHLOROPROPANE	<0.2
1,2,3-TRICHLOROPROPANE	<0.2
2,2-DICHLOROPROPANE	<0.2
CHLOROFORM	0.5
BROMOFORM	<0.2
BROMODICHLOROMETHANE	<0.2
CHLORODIBROMOMETHANE	<0.2
DICHLOROMETHANE	<2.0
ORTHO-CHLOROTOLUENE	<0.5
PARA-CHLOROTOLUENE	<0.5
META-DICHLOROBENZENE	<0.5
1,1-DICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	<0.2
1,1,1,2-TETRACHLOROETHANE	<0.2
1,1,2,2-TETRACHLOROETHANE	<0.2
BROMOBENZENE	<0.5



TEST : EPA METHOD 502.2

COMPOUNDS	RESULTS
DICHLORODIFLUOROMETHANE	<0.5
TRICHLOROFLUOROMETHANE	<0.5
BROMOCHLOROMETHANE	<0.2
1,2-DIBROMOETHANE	<1.0
ISO-PROPYLBENZENE	<2.0
N-PROPYLBENZENE	<1.0
1,3,5-TRIMETHYLBENZENE	<1.0
1,2,4-TRIMETHYLBENZENE	<0.5
TERT-BUTYLBENZENE	<0.5
SEC-BUTYLBENZENE	<0.5
P-ISOPROPYLTOLUENE	<0.5
N-BUTYLBENZENE	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	<1.0
1,2,4-TRICHLOROBENZENE	<0.5
NAPHTHALENE	<1.0
1,2,3-TRICHLOROBENZENE	<0.5
HEXACHLOROBUTADIENE	<1.0
TRANS-1,3-DICHLOROPROPENE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2

## SURROGATE PERCENT RECOVERIES

1-CHLORO-2-FLUOROBENZENE (PID) (%)	83
1-CHLORO-2-FLUOROBENZENE (HALL) (%)	82



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30572007

TEST : EPA METHOD 502.2

CLIENT : KLEINFELDER, INC.  
PROJECT # : 52-1159-04(003)  
PROJECT NAME : (NONE)  
CLIENT I.D. : TRIP BLANK  
SAMPLE MATRIX : AQUEOUS

DATE SAMPLED : 05/11/93  
DATE RECEIVED : 05/13/93  
DATE EXTRACTED : N/A  
DATE ANALYZED : 05/19/93  
UNITS : UG/L  
DILUTION FACTOR : 1

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COMPOUNDS RESULTS  
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VINYL CHLORIDE	<0.2
BENZENE	<0.5
CARBON TETRACHLORIDE	<0.2
1,2-DICHLOROETHANE	<0.2
TRICHLOROETHYLENE (TCE)	<0.2
PARA-DICHLOROBENZENE	<0.5
1,1-DICHLOROETHYLENE	<0.2
1,1,1-TRICHLOROETHANE	<0.2
CIS-1,2-DICHLOROETHYLENE	<0.2
1,2-DICHLOROPROPANE	<0.2
ETHYLBENZENE	<0.5
CHLOROBENZENE	<0.5
ORTHO-DICHLOROBENZENE	<0.5
STYRENE	<0.5
TETRACHLOROETHYLENE	<0.2
TOLUENE	<0.5
TRANS-1,2-DICHLOROETHYLENE	<0.2
META, PARA-XYLENE (TOTAL)	<0.5
ORTHO-XYLENE	<0.5
CHLOROMETHANE	<0.2
BROMOMETHANE	<0.2
CHLOROETHANE	<0.2
1,3-DICHLOROPROPENE (TOTAL)	<0.2
DIBROMOMETHANE	<0.2
1,1-DICHLOROPROPENE	<0.2
1,3-DICHLOROPROPANE	<0.2
1,2,3-TRICHLOROPROPANE	<0.2
2,2-DICHLOROPROPANE	<0.2
CHLOROFORM	<0.2
BROMOFORM	<0.2
BROMODICHLOROMETHANE	<0.2
CHLORODIBROMOMETHANE	<0.2
DICHLOROMETHANE	<2.0
ORTHO-CHLOROTOLUENE	<0.5
PARA-CHLOROTOLUENE	<0.5
META-DICHLOROBENZENE	<0.5
1,1-DICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	<0.2
1,1,1,2-TETRACHLOROETHANE	<0.2
1,1,2,2-TETRACHLOROETHANE	<0.2
BROMOBENZENE	<0.5



TEST : EPA METHOD 502.2

COMPOUNDS	RESULTS
DICHLORODIFLUOROMETHANE	<0.5
TRICHLOROFLUOROMETHANE	<0.5
BROMOCHLOROMETHANE	<0.2
1,2-DIBROMOETHANE	<1.0
ISO-PROPYLBENZENE	<2.0
N-PROPYLBENZENE	<1.0
1,3,5-TRIMETHYLBENZENE	<1.0
1,2,4-TRIMETHYLBENZENE	<0.5
TERT-BUTYLBENZENE	<0.5
SEC-BUTYLBENZENE	<0.5
P-ISOPROPYLTOLUENE	<0.5
N-BUTYLBENZENE	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	<1.0
1,2,4-TRICHLOROBENZENE	<0.5
NAPHTHALENE	<1.0
1,2,3-TRICHLOROBENZENE	<0.5
HEXACHLOROBUTADIENE	<1.0
TRANS-1,3-DICHLOROPROPENE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2

## SURROGATE PERCENT RECOVERIES

1-CHLORO-2-FLUOROBENZENE (PID) (%)	93
1-CHLORO-2-FLUOROBENZENE (HALL) (%)	80



## REAGENT BLANK

TEST : EPA METHOD 502.2

CLIENT : KLEINFELDER, INC.  
PROJECT # : 52-1159-04(003)  
PROJECT NAME : (NONE)  
CLIENT I.D. : REAGENT BLANK

ATI I.D. : 305720  
DATE EXTRACTED : 05/19/93  
DATE ANALYZED : 05/19/93  
UNITS : UG/L  
DILUTION FACTOR : N/A

COMPOUNDS	RESULTS
VINYL CHLORIDE	<0.2
BENZENE	<0.5
CARBON TETRACHLORIDE	<0.2
1,2-DICHLOROETHANE	<0.2
TRICHLOROETHYLENE (TCE)	<0.2
PARA-DICHLOROBENZENE	<0.5
1,1-DICHLOROETHYLENE	<0.2
1,1,1-TRICHLOROETHANE	<0.2
CIS-1,2-DICHLOROETHYLENE	<0.2
1,2-DICHLOROPROPANE	<0.2
ETHYLBENZENE	<0.5
CHLOROBENZENE	<0.5
ORTHO-DICHLOROBENZENE	<0.5
STYRENE	<0.5
TETRACHLOROETHYLENE	<0.2
TOLUENE	<0.5
TRANS-1,2-DICHLOROETHYLENE	<0.2
META, PARA-XYLENE (TOTAL)	<0.5
ORTHO-XYLENE	<0.5
CHLOROMETHANE	<0.2
BROMOMETHANE	<0.2
CHLOROETHANE	<0.2
1,3-DICHLOROPROPENE (TOTAL)	<0.2
DIBROMOMETHANE	<0.2
1,1-DICHLOROPROPENE	<0.2
1,3-DICHLOROPROPANE	<0.2
1,2,3-TRICHLOROPROPANE	<0.2
2,2-DICHLOROPROPANE	<0.2
CHLOROFORM	<0.2
BROMOFORM	<0.2
BROMODICHLOROMETHANE	<0.2
CHLORODIBROMOMETHANE	<0.2
DICHLOROMETHANE	<2.0
ORTHO-CHLOROTOLUENE	<0.5
PARA-CHLOROTOLUENE	<0.5
META-DICHLOROBENZENE	<0.5
1,1-DICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	<0.2
1,1,1,2-TETRACHLOROETHANE	<0.2
1,1,2,2-TETRACHLOROETHANE	<0.2
BROMOBENZENE	<0.5
DICHLORODIFLUOROMETHANE	<0.5
TRICHLOROFLUOROMETHANE	<0.5

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REAGENT BLANK

ATI I.D. : 305720

TEST : EPA METHOD 502.2

COMPOUNDS	RESULTS
BROMOCHLOROMETHANE	<0.2
1,2-DIBROMOETHANE	<1.0
ISO-PROPYLBENZENE	<2.0
N-PROPYLBENZENE	<1.0
1,3,5-TRIMETHYLBENZENE	<1.0
1,2,4-TRIMETHYLBENZENE	<0.5
TERT-BUTYLBENZENE	<0.5
SEC-BUTYLBENZENE	<0.5
P-ISOPROPYLTOLUENE	<0.5
N-BUTYLBENZENE	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	<1.0
1,2,4-TRICHLOROBENZENE	<0.5
NAPHTHALENE	<1.0
1,2,3-TRICHLOROBENZENE	<0.5
HEXACHLOROBUTADIENE	<1.0
TRANS-1,3-DICHLOROPROPENE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2

## SURROGATE PERCENT RECOVERIES

1-CHLORO-2-FLUOROBENZENE (PID) (%)	88
1-CHLORO-2-FLUOROBENZENE (HALL) (%)	82



## REAGENT BLANK

TEST : EPA METHOD 502.2

CLIENT : KLEINFELDER, INC.  
 PROJECT # : 52-1159-04(003)  
 PROJECT NAME : (NONE)  
 CLIENT I.D. : REAGENT BLANK

ATI I.D. : 305720  
 DATE EXTRACTED : 05/20/93  
 DATE ANALYZED : 05/20/93  
 UNITS : UG/L  
 DILUTION FACTOR : N/A

COMPOUNDS	RESULTS
VINYL CHLORIDE	<0.2
BENZENE	<0.5
CARBON TETRACHLORIDE	<0.2
1,2-DICHLOROETHANE	<0.2
TRICHLOROETHYLENE (TCE)	<0.2
PARA-DICHLOROBENZENE	<0.5
1,1-DICHLOROETHYLENE	<0.2
1,1,1-TRICHLOROETHANE	<0.2
CIS-1,2-DICHLOROETHYLENE	<0.2
1,2-DICHLOROPROPANE	<0.2
ETHYLBENZENE	<0.5
CHLOROBENZENE	<0.5
ORTHO-DICHLOROBENZENE	<0.5
STYRENE	<0.5
TETRACHLOROETHYLENE	<0.2
TOLUENE	<0.5
TRANS-1,2-DICHLOROETHYLENE	<0.2
META, PARA-XYLENE (TOTAL)	<0.5
ORTHO-XYLENE	<0.5
CHLOROMETHANE	<0.2
BROMOMETHANE	<0.2
CHLOROETHANE	<0.2
1,3-DICHLOROPROPENE (TOTAL)	<0.2
DIBROMOMETHANE	<0.2
1,1-DICHLOROPROPENE	<0.2
1,3-DICHLOROPROPANE	<0.2
1,2,3-TRICHLOROPROPANE	<0.2
2,2-DICHLOROPROPANE	<0.2
CHLOROFORM	<0.2
BROMOFORM	<0.2
BROMODICHLOROMETHANE	<0.2
CHLORODIBROMOMETHANE	<0.2
DICHLOROMETHANE	<2.0
ORTHO-CHLOROTOLUENE	<0.5
PARA-CHLOROTOLUENE	<0.5
META-DICHLOROBENZENE	<0.5
1,1-DICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	<0.2
1,1,1,2-TETRACHLOROETHANE	<0.2
1,1,2,2-TETRACHLOROETHANE	<0.2
BROMOBENZENE	<0.5
DICHLORODIFLUOROMETHANE	<0.5
TRICHLOROFLUOROMETHANE	<0.5

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Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

REAGENT BLANK

ATI I.D. : 305720

TEST : EPA METHOD 502.2

COMPOUNDS	RESULTS
BROMOCHLOROMETHANE	<0.2
1,2-DIBROMOETHANE	<1.0
ISO-PROPYLBENZENE	<2.0
N-PROPYLBENZENE	<1.0
1,3,5-TRIMETHYLBENZENE	<1.0
1,2,4-TRIMETHYLBENZENE	<0.5
TERT-BUTYLBENZENE	<0.5
SEC-BUTYLBENZENE	<0.5
P-ISOPROPYLTOLUENE	<0.5
N-BUTYLBENZENE	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	<1.0
1,2,4-TRICHLOROBENZENE	<0.5
NAPHTHALENE	<1.0
1,2,3-TRICHLOROBENZENE	<0.5
HEXACHLOROBUTADIENE	<1.0
TRANS-1,3-DICHLOROPROPENE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2

SURROGATE PERCENT RECOVERIES

1-CHLORO-2-FLUOROBENZENE (PID) (%)	87
1-CHLORO-2-FLUOROBENZENE (HALL) (%)	80



Analytical Technologies, Inc.

QUALITY CONTROL DATA

TEST : EPA METHOD 502.2

ATI I.D. : 305720

CLIENT : KLEINFELDER, INC.
PROJECT # : 52-1159-04(003)
PROJECT NAME : (NONE)
REF I.D. : 30549908

DATE ANALYZED : 05/19/93
SAMPLE MATRIX : AQUEOUS
UNITS : UG/L

Table with 8 columns: COMPOUNDS, SAMPLE RESULT, CONC. SPIKED, SPIKED SAMPLE, % SPIKED REC., DUP. SAMPLE, DUP. REC., RPD. Lists compounds like 1,1-DICHLOROETHYLENE, TRICHLOROETHENE, etc.

% Recovery = (Spike Sample Result - Sample Result) / Spike Concentration X 100

RPD (Relative % Difference) = (Spiked Sample Result - Duplicate Spike Sample Result) / Average of Spiked Sample X 100

PLEASE FILL THIS FORM IN COMPLETELY. SHADED AREAS ARE FOR LAB USE ONLY.

ATI LAB I.D. **30720**

CHAIN OF CUSTODY

DATE: 5-13-93 PAGE 1 OF 1

PROJECT MANAGER: Bill Golightly  
 COMPANY: Kleinfelder  
 ADDRESS: 4920 E. McDowell Rd #101  
Phoenix AZ  
 PHONE: 331-0992  
 FAX: 331-9552  
 BILL TO: Kleinfelder  
 COMPANY: \_\_\_\_\_  
 ADDRESS: \_\_\_\_\_

ANALYSIS REQUEST		NUMBER OF CONTAINERS	
TEST	DATE	NO. CONTAINERS	NO. CONTAINERS
Petroleum Hydrocarbons (418.1)	5-13-93	1	1
(MOD 8015) Gas/Diesel	5-13-93	1	1
Diesel/Gasoline/BTEX/MTBE (MOD 8015/8020)	5-13-93	1	1
BTEX/MTBE (8020)	5-13-93	1	1
Chlorinated Hydrocarbons (601/8010)	5-13-93	1	1
Aromatic Hydrocarbons (602/8020)	5-13-93	1	1
SDWA Volatiles (502.1/503.1) 502.2 Reg. & Unreg.	5-13-93	1	1
Pesticides/PCB (608/8080)	5-13-93	1	1
Herbicides (615/8150)	5-13-93	1	1
Base/Neutr/Acid Compounds GC/MS (625/8270)	5-13-93	1	1
Volatile Organics GC/MS (624/8240)	5-13-93	1	1
Polynuclear Aromatics (610/8310)	5-13-93	1	1
SDWA Primary Standards - Arizona	5-13-93	1	1
SDWA Secondary Standards - Arizona	5-13-93	1	1
SDWA Primary Standards - Federal	5-13-93	1	1
SDWA Secondary Standards - Federal	5-13-93	1	1
The 13 Priority Pollutant Metals	5-13-93	1	1
RCRA Metals by Total Digestion	5-13-93	1	1
RCRA Metals by TCLP (1311)	5-13-93	1	1

SAMPLE ID	DATE	TIME	MATRIX	LAB ID
W-01-01	5-13-93	11:50	Water	1
W-02-01	5-13-93	10:45	A	2
W-03-01	5-13-93	11:50		3
W-04-01	5-13-93	1:00		4
W-35-01	5-13-93	11:10		5
W-PT-01	5-13-93	1:10		6
Typ Blanks	5-13-93			7

PROJECT INFORMATION

PROJ NO: 52-1154-04 (005) NO. CONTAINERS: 25

PROJ NAME: \_\_\_\_\_ CUSTODY SEALS: YIN/NA

P.O. NO: \_\_\_\_\_ RECEIVED INTACT: Y

SHIPPED VIA: \_\_\_\_\_ RECEIVED COLD: Y

PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS

(RUSH)  24hr  48hr  72hr  1 WEEK (NORMAL)  2 WEEK

Comments: \_\_\_\_\_

SAMPLED & RELINQUISHED BY: 1. RELINQUISHED BY: 2. RELINQUISHED BY: 3.

Signature: Naime Carter Time: 3:28 Signature: \_\_\_\_\_ Time: \_\_\_\_\_

Printed Name: Naime Carter Date: 5-13-93 Printed Name: \_\_\_\_\_ Date: \_\_\_\_\_

Signature: Henry Huggert Time: 4:55 Signature: \_\_\_\_\_ Time: \_\_\_\_\_

Printed Name: Henry Huggert Date: 5-13-93 Printed Name: \_\_\_\_\_ Date: \_\_\_\_\_

Company: HAZU GILBERT Company: \_\_\_\_\_

Signature: Kleinfelder Time: 23:09 Signature: \_\_\_\_\_ Time: \_\_\_\_\_

Printed Name: Kleinfelder Date: 5-13-93 Printed Name: \_\_\_\_\_ Date: \_\_\_\_\_

Company: TSD Company: \_\_\_\_\_

Signature: Henry Huggert Time: 3:28 Signature: \_\_\_\_\_ Time: \_\_\_\_\_

Printed Name: Henry Huggert Date: 5-13-93 Printed Name: \_\_\_\_\_ Date: \_\_\_\_\_

Company: HAZU GILBERT Company: \_\_\_\_\_

Signature: \_\_\_\_\_ Time: \_\_\_\_\_ Signature: \_\_\_\_\_ Time: \_\_\_\_\_

Printed Name: \_\_\_\_\_ Date: \_\_\_\_\_ Printed Name: \_\_\_\_\_ Date: \_\_\_\_\_

Company: \_\_\_\_\_ Company: \_\_\_\_\_

Analytical Technologies/Inc.