# 

# ANNUAL MONITORING REPORT

# YEAR(S): 1995- Jun-Sept.



05 Marquette NW, Ste. 1100 • Albuquerque, NM 87102 505) 842-0001 • FAX: (505) 842-0595

> Bill Olson OilConservation Division 2040 S. Pacheco Santa Fe, NM 87505

Dear Mr. Olson:

Enclosed you will find the analytical results for the 6th and 7th quarterly groundwater sampling events for June and September 1995, respectively. If you have any questions please feel free to contact me or Mr. Michael Selke at (505) 842-0001.

Sincerely, Geoscience Consultants, Ltd. (GCL)

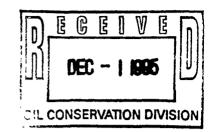
H. Hondas

Trent H. Thomas Program Manager

\QTRSUM.LTR

Enclosures

P.



November 30, 1995

Brickland Refinery Site Quarterly Groundwater Monitoring Summary 6th Quarter (June 1995) (all results in ug/l)

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Parameter	MW-3S	MW-3D	S9-MM	MW-6D	S6-MM	MW-14	MW-15	MW-16	MW-17
PAHs			-						
Acenaphthene	QN	QN	ND,ND	QN	QN	QN	QN	ND	ND
Acenaphthylene	QN	QN	ND,ND	ND	ND	QN	QN	ND	ND
Anthracene	QN	QN	ND,ND	ŊŊ	QN	Q	QN	DN	Ŋ
Benzo(a)anthracene	QN	QN	ND,ND	ŊŊ	Ŋ	QN	ŊŊ	ND	DN
Benzo(b)fluoranthene	QN	QN	ND,ND	ND	DN	QN	QN	ND	ND
Benzo(k)fluoranthene	Q	QN	ND,ND	ND	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	QN	QN	ND,ND	Q	DN	QN	DD	ND	ND
Benzo(a)pyrene	Ð	QN	ND,ND	QN	QN	QN	QN	QN	Q
Chrysene	QN	QN	ND,ND	QN	ND	ΩN	ND	DN	QN
Dibenzo(a,h)anthracene	QN	QN	ND,ND	QN	DN	ΩN	ND	ND	QN
Fluoranthene	Q	QN	ND,ND	ND	ND	DN	ND	ND	DN
Fluorene	QN	QN	ND,ND	QN	ND	DN	ND	ND	ND
Indeno(1,2,3-cd)pyrene	QN	QN	ND,ND	QN	DD	ΩN	ND	ND	DN
1-Methylnaphthalene	QN	QN	ND,ND	QN	ND	12	ND	ND	ND
2-Methylnaphthalene	QN	QN	ND,ND	QN	ND	ND	ND	ND	ND
Naphthalene	QN	QN	15,10	DN	QN	QN	ND	ND	DN
Phenanthrene	QZ	QN	ND,ND	QN	ND	DN	ND	ND	QN
Pyrene	QN	ND	ND,ND	ND	ND	ND	ND	ND	DN
								G:\3031\5QPAHSUM.WQ2	V.WQ2

Brickland Refinery Site Quarterly Groundwater Monitoring Summary 6th Quarter (June 1995) (all results in ug/l)

Parameter	MW-3S	MW-3D	MW-4	WW-6S	Q9-MM	S6-MW	MW-14	<b>MW-15</b>	MW-16	MW-17
Phenols										
4-Chloro-3-methylphenol	DN	QN		ND, ND	QN	QN	ND	QN		ND
2-Chlorophenol	QN	QN		ND, ND	QN	DN	QN	DN		QN
2,4-Dichlorophenol	DN	QN		ND, ND	ND	QN	QN	QN		ND
2,4-Dimethylphenol	QN	DN		ND, ND	DN	QN	QN	DN		ND
2,4-Dinitrophenol	QN	QN		ND, ND	QN	ND	ND	DN		ND
4,6-Dinitro-2-methylphenol	QN	QN		ND, ND	ND	Q	DN	QN		ND
2-Nitrophenol	QN	QN		ND, ND	ND	ND	ND	QN		DN
4-Nitrophenol	Q	QN		ND, ND	DN	DN	ND	QN		DN
Pentachlorophenol	QN	QN		ND, ND	ND	ND	ND	QN		DN
Phenol	QN	QN		ND, ND	ND	QN	19	QN		DN
2,4,6-Trichlorophenol	DN	DN		ND, ND	ND	ŊŊ	ND	QN		QN
BTEX				-						
Benzene	QN	QN	800	220,220	ND,ND	QN	10000	21	Q	1500
Toluene	QN	QN	QN	ND,ND	ND,ND	QN	ND	0.5	ND	ND
Ethyl Benzene	QN	QN	12	180,150	ND,ND	ND	ND	QN	ND	54
Xylencs	QN	QN	QN	260,210	ND,ND	ND	ND	0.6	DN	29
								G:\3031\5QPHNSUM.WQ2	M.WQ2	

BRICKLAND REFINERY SITE QUARTERLY GROUNDWATER MONITORING SUMMARY 6th. QUARTER (June 1995)

(All results in ug/l)

Ð	150	S	46	380	ND	ND	ND	ND	2.3	QN	109	SN	Xylenes
Q	160	38	42	180	ΠN	ND	380	ND	ND	DN	68	NS	hyl benzene
Q	12	3	91	82	ND	ND	ND	ND	0.9	ND	380	SN	Toluene
Ð	170	94	800	4300	5600	ND	10000	<i>1</i> 700	5.4	ŊŊ	800	SN	Benzene
													BTEX
WP-15	WP-13	WP-12	WP-10	WP-9	WP-8	WP-7	WP-6	WP-5	WP-4	WP-3	WP-2	WP-1	PARAMETER

WP-29		1200	54	44	49
WP-28		2600	DN	QN	QN
WP-27d		880	60	240	240
WP-26d		81	9	QN	44
WP-24		200	ND	ND	QN
WP-23		QN	DN	QN	QN
WP-22		1500	DN	36	DN
WP-21		21000	DN	1000	pu
WP-20		2000	QN	QN	QN
WP-19		16000	QN	730	320
WP-18		7	QN	Q	QN
WP-16 WP-17		5400	81	110	QN
WP-16		12	QN	0.8	QN
	BTEX	Benzene	Toluene	Ethyl benzene	Xylenes

Note: ND = Not Detected, NA = Not Analyzed, NS = Not Sampled.

Brickland Refinery Site Quarterly Groundwater Monitoring Summary 7th Quarter (Sept. 1995) (all results in ug/l)

Parameter	MW-3S	MW-3D	MW-5	S9-WM	MW-6D	MW-8	S6-MW	MW-11	MW-14
PAHs									
Acenaphthene	QN	DN	ND	QN	DN	QN	QN	QN	QN
Acenaphthylene	QN	QN	DN	QN	QN	Q	QN	QN	QN
Anthracene	QN	QN	QN	QN	QN	Q	QN	Q	QN
Benzo(a)anthracene	DN	QN	DN	QN	DN	Q	DN	QN	QN
Benzo(b)fluoranthene	QN	QN	DN	QN	QN	QN	DN	QN	QN
Benzo(k)fluoranthene	QN	QN	DN	QN	DN	QN	QN	QN	QN
Benzo(g,h,i)perylene	QN	QN	DN	QN	QN	QN	QN	QN	QN
Benzo(a)pyrene	QN	QN	ND	QN	DN	QN	QN	QN	QN
Chrysene	QN	DN	QN	QN	DN	QN	QN	QN	QN
Dibenzo(a,h)anthracene	QN	QN	DN	QN	QN	QN	QN	QN	QN
Fluoranthene	QN	DN	ND	QN	QN	QN	ND	QN	Q
Fluorene	QN	DN	ND	QN	an	QN	QN	QN	QN
Indeno(1,2,3-cd)pyrene	QN	QN	QN	QN	DN	QN	DN	QN	an
1-Methylnaphthalene	QN	QN	ND	QN	<b>DN</b>	QN	QN	140	QN
2-Methylnaphthalene	QN	DN	ND	QN	QN	QN	DN	QN	QN
Naphthalene	DN	DN	DD	QN	QN	140	ND	QN	QN
Phenanthrene	ND	ND	ND	ΩN	ND	QN	ND	ND	QN
Pyrene	ND	ND	ND	ND	ND	ND	ND	DN	ND
								G:\3031\SQPAHSUM.WQ2	A.WQ2

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# Quarterly Groundwater Monitoring Summary 7th Quarter (Sept. 1995) (all results in ug/l) **Brickland Refinery Site**

Parameter	MW-15	MW-17	
PAHs			
Acenaphthene	ND	QN	
Acenaphthylene	QN	ND	
Anthracene	QN	QN	
Benzo(a)anthracene	DN	QN	
Benzo(b)fluoranthene	QN	DN	
Benzo(k)fluoranthene	DN	ND	
Benzo(g,h,i)perylene	ND	QN	
Benzo(a)pyrene	ΟN	QN	
Chrysene	DN	DN	
Dibenzo(a,h)anthracene	DN	QN	
Fluoranthene	QN	QN	
Fluorene	DN	QN	
Indeno(1,2,3-cd)pyrene	DN	DN	
1-Methylnaphthalene	ND	ND	
2-Methylnaphthalene	DN	ND	
Naphthalene	DN	ND	
Phenanthrene	DN	ND	
Pyrene	QN	QN	
			Giantophanewicki Giantophanewic

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# Brickland Refinery Site Quarterly Groundwater Monitoring Summary 7th Quarter (Sept. 1995) (all results in ug/l)

Parameter	SE-WM	MW-3D	MW-4	MW-5	S9-MW	MW-6D	7-WM	MW-8	S6-WM	<b>MW-11</b>
Phenols										
4-Chloro-3-methylphenol	DN	QN		QN	DN	DN		QN	ND	ND
2-Chlorophenol	DN	QN		QN	DN	ND		QN	ND	ND
2,4-Dichlorophenol	DN	QN		QN	QN	QN		QN	QN	QN
2,4-Dimethylphenol	DN	QN		QN	QN	QN		QN	QN	QN
2,4-Dinitrophenol	DN	QN		QN	QN	QN		QN	QN	ND
4,6-Dinitro-2-methylphenol	DN	QN		QN	ND	QN		DN	ND	ND
2-Nitrophenol	DN	QN		QN	QN	QN		QN	DN	ND
4-Nitrophenol	ND	QN		QN	ND	ND		QN	ND	QN
Pentachlorophenol	DN	ND		QN	ND	ND		QN	DN	QN
Phenol	DN	QN		QN	ND	DN		ND	ND	Ŋ
2,4,6-Trichlorophenol	ND	ND		QN	QN	QN		Q	QN	Q
BTEX										
Benzene	DN	QN	2200	4400	180	QN	4.9	13000	QN	80
Toluene	QN	QN	QN	Q	120	QN	QN	300	QN	QN
Ethyl Benzene	DN	QN	ND		ND	ND	ND	ND	DN	QN
Xylenes	ND	ND	DN	ND	30	ND	ND	800	DN	10
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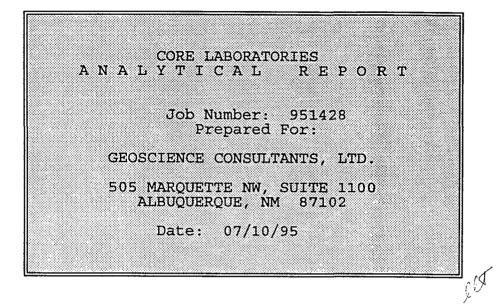
Brickland Refinery Site Quarterly Groundwater Monitoring Summary 7th Quarter (Sept. 1995) (all results in ug/l)

Parameter	<b>MW-14</b>	MW-15	MW-16	MW-17				
BLAND								
4-Chloro-3-methylphenol	QN	QN		QN				Τ
2-Chlorophenol	QN	QN		QN				Ţ
2,4-Dichlorophenol	QN	QN		QN				
2,4-Dimethylphenol	QN	QN		QN				Γ
2,4-Dinitrophenol	DN	QN		QN				
4,6-Dinitro-2-methylphenol	QN	Q		- QN				
2-Nitrophenol	QN	QN		QN	 			
4-Nitrophenol	QN	QN		QN				[
Pentachlorophenol	QN	QN		DN				
Phenol	QN	QN		DN				
2,4,6-Trichlorophenol	ND	ND		ND				
BTEX								
Benzene	5.7	66	QN	390	-			
Toluene	QN	QN	QN	QN				
Ethyl Benzene	DN	DN	DN	ND				
Xylenes	QN	QN	DN	ND				
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#### **CORE LABORATORIES**



nature Binker

**7-10-95** Date:

Name: Linda L. Benkers

Core Laboratories 10703 East Bethany Drive Aurora, CO 80014

Title: QA/QC COORDINATOR

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#### LABORATORY TESTS RESULTS 07/10/95

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

#### JOB NUMBER: 951428

CLIENT I.D.....: REXENE COC #8373 DATE SAMPLED.....: 06/21/95 TIME SAMPLED.....: 09:00 WORK DESCRIPTION...: 9506210900

LABORATORY I.D...: 951428-0001 

ATTN:

TEST DESCRIPTION	FINAL RESULT	LINITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECHN
602 - VOLATILE AROMATIC ORGANICS		*50		602 (6)	06/30/95	DMJ
Benzene Toluene Ethyl benzene Xylenes 4-Bromofluorobenzene (Surrogate) Time Analyzed	800 380 68 150 109 1847	25 · 25 25 25 0 0	ug/L ug/L ug/L ug/L % Recovery	89-110% Limit		
······································	, 		Auro (303	3 East Bethany Drive ra, CO 80014 ) 751-1780		
		PAGE:1	7			

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LABORATORY I.D...: 951428-0002

DATE RECEIVED....: 06/23/95 TIME RECEIVED....: 11:00

# LABORATORY TESTS RESULTS 07/10/95

#### JOB NUMBER: 951428

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CUSTOMER: GEOSCIENCE CONSULTANTS, LTD. ATTN:

CLIENT I.D..... REXENE COC #8373 DATE SAMPLED.....: 06/21/95 TIME SAMPLED.....: 09:45 WORK DESCRIPTION...: 9506210945

WORK DESCRIPTION: 9506210945			REMARKS	ED: 11:00 : WP-3		
TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECH
602 - VOLATILE AROMATIC ORGANICS		*1		602 (6)	06/26/95	DMJ
Benzene Toluene Ethyl benzene Xylenes 4-Bromofluorobenzene (Surrogate) Time Analyzed	ND ND ND 98 2115	0.5 0.5 0.5 0.5 0 0	ug/L ug/L ug/L ug/L % Recovery	89-110% Limit		
-						
J			 107( Auro (30)	)3 East Bethany Drive Dra, CO 80014 5) 751-1780	e	

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# LABORATORY TESTS RESULTS 07/10/95

#### JOB NUMBER: 951428

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD. ATTN:

CLIENT I.D..... REXENE COC #8373 DATE SAMPLED.....: 06/21/95 TIME SAMPLED.....: 10:30 WORK DESCRIPTION...: 9506211030

LABORATORY I.D:	951428-0003
DATE RECEIVED:	06/23/95
TIME RECEIVED:	11:00
REMARKS:	WP-12 /

2 - VOLATILE AROMATIC ORGANICS				Transferration and the second s		TECH
		*5		602 (6)	06/30/95	DMJ
Benzene Toluene Ethyl benzene Xylenes 4-Bromofluorobenzene (Surrogate) Time Analyzed	94 / 3 38 5 98 1922	2 V 2 2 2 0 0	ug/L ug/L ug/L ug/L % Recovery	89-110% Limit		
				*		
			1070	3 East Bethany Drive		
			Auro	ra, CO 80014 ) 751-1780		

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LABORATORY I.D...: 951428-0004

DATE RECEIVED....: 06/23/95 TIME RECEIVED....: 11:00 REMARKS..... WP-13

#### LABORATORY TESTS RESULTS 07/10/95

#### JOB NUMBER: 951428

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD. ATTN:

# CLIENT I.D.....: REXENE COC #8373 DATE SAMPLED.....: 06/21/95 TIME SAMPLED...... 10:45 WORK DESCRIPTION...: 9506211045

EST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECH
502 - VOLATILE AROMATIC ORGANICS		*20		602 (6)	07/01/95	DMJ
Benzene Toluene Ethyl benzene Xylenes 4-Bromofluorobenzene (Surrogate) Time Analyzed	170 12 160 150 90 1720	10 10 10 10 0 0 0	ug/L ug/L ug/L ug/L % Recovery	89-110% Limit		
-		.	 107 Aur (30	703 East Bethany Dr Tora, CO 80014 33) 751-1780	ive	<u></u>

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	LABORATO	RY TESTS 07/10/95	RESULTS	·····		
JOB NUMBER: 951428 CUSTOMER:	GEOSCIENCE CONSU	JLTANTS, LTD.	ATTN:			
CLIENT I.D: REXENE COC #8373 DATE SAMPLED: 06/21/95 TIME SAMPLED: 10:55 WORK DESCRIPTION: 9506211055			DATE RECEIV TIME RECEIV	I.D: 951428-0005 ED: 06/23/95 ED: 11:00 : WP-29		
TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECHN
602 - VOLATILE AROMATIC ORGANICS		<b>*</b> 50		602 (6)	06/28/95	DMJ
Benzene Toluene Ethyl benzene Xylenes 4-Bromofluorobenzene (Surrogate) Time Analyzed	1200 54 44 49 91 0058	25 25 25 25 0 0	ug/L ug/L ug/L ug/L % Recovery	89-110% Limit		
-						
			Auro (303	3 East Bethany Drive ra, CO 80014 ) 751-1780		
		PAGE:5 A				

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#### LABORATORY TESTS RESULTS 07/10/95 JOB NUMBER: 951428 CUSTOMER: GEOSCIENCE CONSULTANTS, LTD. ATTN: CLIENT I.D.....: REXENE COC #8373 LABORATORY 1.D...: 951428-0006 DATE SAMPLED.....: 06/21/95 DATE RECEIVED....: 06/23/95 TIME SAMPLED.....: 11:10 TIME RECEIVED....: 11:00 WORK DESCRIPTION ....: 9506211110 REMARKS..... WP-21 LINITS/\*DILUTION UNITS OF MEASURE TEST DESCRIPTION FINAL RESULT TEST METHOD DATE TECHN 602 - VOLATILE AROMATIC ORGANICS \*500 602 (6) 06/30/95 DMJ 250 🗸 21000 V Benzene ug/L 250 Toluene ND ug/L Ethyl benzene 1000 250 ug/L Xylenes ND 250 ug/L 104 89-110% Limit 4-Bromofluorobenzene (Surrogate) 0 % Recovery 2032 0 Time Analyzed 10703 East Bethany Drive Aurora, CO 80014 (303) 751-1780

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#### LABORATORY TESTS RESULTS 07/10/95 JOB NUMBER: 951428 CUSTOMER: GEOSCIENCE CONSULTANTS, LTD. ATTN: CLIENT I.D.....: REXENE COC #8373 LABORATORY I.D...: 951428-0007 DATE SAMPLED.....: 06/21/95 DATE RECEIVED....: 06/23/95 TIME SAMPLED.....: 11:20 TIME RECEIVED....: 11:00 WORK DESCRIPTION ...: 9506211120 REMARKS..... WP-23 V TEST DESCRIPTION FINAL RESULT LIMITS/\*DILUTION UNITS OF MEASURE TEST METHOD DATE TECHN 602 - VOLATILE AROMATIC ORGANICS \*1 602 (6) 06/27/95 DMJ 0.5 🗸 Benzene ND ug/L L ND Toluene 0.5 ug/L Ethyl benzene ND 0.5 ug/L ug/L Xylenes ND 0.5 4-Bromofluorobenzene (Surrogate) 101 0 % Recovery 89-110% Limit 0041 Ō Time Analyzed 10703 East Bethany Drive Aurora, CO 80014 (303) 751-1780

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# LABORATORY TESTS RESULTS 07/10/95

#### JOB NUMBER: 951428

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD. ATTN:

CLIENT I.D.....: REXENE COC #8373 DATE SAMPLED.....: 06/21/95 TIME SAMPLED.....: 11:30 WORK DESCRIPTION...: 9506211130

# 

TEST	DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECHN
602	- VOLATILE AROMATIC ORGANICS		*1		602 (6)	07/01/95	DMJ
	Benzene Toluene Ethyl benzene Xylenes 4-Bromofluorobenzene (Surrogate) Time Analyzed	5.4 0.9 ND 2.3 94 0439	0.5 0.5 0.5 0.5 0 0	ug/L ug/L ug/L ug/L % Recovery	89-110% Limit		
-							
				1070 Auro (303	3 East Bethany Drive ra, CO 80014 ) 751-1780		
			PAGE:8	9			

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#### LABORATORY TESTS RESULTS 07/10/95 JOB NUMBER: 951428 CUSTOMER: GEDSCIENCE CONSULTANTS, LTD. ATTN: CLIENT I.D.....: REXENE COC #8373 LABORATORY I.D...: 951428-0009 DATE SAMPLED.....: 06/21/95 DATE RECEIVED....: 06/23/95 TIME SAMPLED.....: 11:45 TIME RECEIVED....: 11:00 WORK DESCRIPTION ...: 9506211145 REMARKS ...... WP-6 TEST DESCRIPTION FINAL RESULT LIMITS/\*DILUTION UNITS OF MEASURE TEST METHOD DATE TECHN 602 - VOLATILE AROMATIC ORGANICS \*500 602 (6) 06/30/95 DMJ 250 V Benzene 10000 V ug/L Toluene ND 250 ug/L Ethyl benzene 380 250 ug/L 250 ug/L Xylenes ND 4-Bromofluorobenzene (Surrogate) 105 % Recovery 89-110% Limit 0 Time Analyzed 2106 0 10703 East Bethany Drive Aurora, CO 80014 (303) 751-1780

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#### LABORATORY TESTS RESULTS 07/10/95 JOB NUMBER: 951428 CUSTOMER: GEOSCIENCE CONSULTANTS, LTD. ATTN: CLIENT I.D.....: REXENE COC #8373 LABORATORY I.D...: 951428-0010 DATE SAMPLED.....: 06/21/95 DATE RECEIVED....: 06/23/95 TIME RECEIVED....: 11:00 TIME SAMPLED.....: 12:05 WORK DESCRIPTION ...: 9506211205 REMARKS..... WP-5 , TEST DESCRIPTION FINAL RESULT LIMITS/\*DILUTION UNITS OF MEASURE TEST METHOD DATE TECHN 602 - VOLATILE AROMATIC ORGANICS \*500 602 (6) 06/30/95 DMJ $\checkmark$ Benzene 7700 $\checkmark$ 250 ug/L 250 Toluene ND ug/L Ethyl benzene 250 ND ug/L Xylenes 250 ND ug/L 102 4-Bromofluorobenzene (Surrogate) % Recovery 89-110% Limit 0 Time Analyzed 2141 0 10703 East Bethany Drive Aurora, CO 80014 (303) 751-1780 PAGE:10 A

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## LABORATORY TESTS RESULTS 07/10/95

#### JOB NUMBER: 951428

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CLIENT I.D.....: DATE SAMPLED.....: / / TIME SAMPLED.....: : WORK DESCRIPTION...: METHOD BLANK √

LABORATORY I.D...: 951428-0011 DATE RECEIVED....: / / TIME RECEIVED....: : REMARKS......

ATTN:

TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECHN
602 - VOLATILE AROMATIC ORGANICS		*1		602 (6)	06/26/95	DMJ
Benzene Toluene Ethyl benzene Xylenes 4-Bromofluorobenzene (Surrogate) Time Analyzed	ND ND ND 99 0932	0.5 0.5 0.5 0.5 0	ug/L ug/L ug/L % Recovery	89-110% Limit		
				-		
			 1070 Auro (303	3 East Bethamy Drive ra, CO 80014 5 751-1780		

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LABORATORY I.D:	951428-0012
DATE RECEIVED:	11
TIME RECEIVED:	:
REMARKS	

ATTN:

TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECH
02 - VOLATILE AROMATIC ORGANICS		*1		602 (6)	06/27/95	DMJ
Benzene Toluene Ethyl benzene Xylenes 4-Bromofluorobenzene (Surrogate) Time Analyzed	ND ND ND 101 2049	0.5 0.5 0.5 0.5 0 0	ug/L ug/L ug/L ug/L % Recovery	89-110% Limit		
- -						
-						
			107 Aur (30	03 East Bethany Dri ora, CO 80014 3) 751-1780	ve	

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#### LABORATORY TESTS RESULTS 07/10/95 JOB NUMBER: 951428 CUSTOMER: GEOSCIENCE CONSULTANTS, LTD. ATTN: CLIENT I.D.....: LABORATORY I.D...: 951428-0013 DATE RECEIVED....: / / DATE SAMPLED.....: 11 TIME SAMPLED..... TIME RECEIVED....: : WORK DESCRIPTION ...: METHOD BLANK REMARKS..... TEST DESCRIPTION FINAL RESULT LIMITS/\*DILUTION UNITS OF MEASURE TEST METHOD DATE TECHN 602 - VOLATILE AROMATIC ORGANICS \*1 602 (6) 06/30/95 DMJ **Benzene** ND 0.5 ug/L Toluene ND 0.5 ug/L Ethyl benzene 0.5 ug/L ND Xylenes ND 0.5 ug/L 4-Bromofluorobenzene (Surrogate) 104 % Recovery 89-110% Limit ۵ 0929 Time Analyzed 0 10703 East Bethany Drive Aurora, CO 80014 (303) 751-1780

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JOB NUMBER: 951428

CLIENT I.D.....: DATE SAMPLED.....: / / TIME SAMPLED.....: : WORK DESCRIPTION...: METHOD BLANK /

LABORATORY I.D...: 951428-0014 DATE RECEIVED....: / / TIME RECEIVED....: : REMARKS......

ATTN:

EST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECH
502 - VOLATILE AROMATIC ORGANICS		*1		602 (6)	07/01/95	DMJ
Benzene Toluene Ethyl benzene Xylenes 4-Bromofluorobenzene (Surrogate) Time Analyzed	ND ND ND 106 1610	0.5 0.5 0.5 0.5 0	ug/L ug/L ug/L ug/L % Recovery	89-110% Limit		
-			107	03 East Bethany Drive Dra, CO 80014		

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JOB NUMBER: 951428

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD. ATTN:

CLIENT I.D.....: DATE SAMPLED.....: / / TIME SAMPLED.....: : WORK DESCRIPTION...: METHOD BLANK ✓

#### LABORATORY I.D...: 951428-0015 DATE RECEIVED....: / / TIME RECEIVED....: : REMARKS......

TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECHN
602 - VOLATILE AROMATIC ORGANICS		*1		602 (6)	07/03/95	DMJ
Benzene Toluene Ethyl benzene Xylenes 4-Bromofluorobenzene (Surrogate) Time Analyzed	ND ND ND 105 0947	0.5 0.5 0.5 0.5 0	ug/L ug/L ug/L ug/L % Recovery	89-110% Limit		
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		-	Auro	3 East Bethany Drive Tra, CO 80014 5 751-1780		

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			QUAL	ΙΤΥ	C O N 07/1	TROL 0/95	REP	ORT				
10B 1	IUMBER: 951428 CUSTO	MER: GE	OSCIENCE	CONSULTAI	NTS, LTI	D.		ATTN:				
502 ·	VOLATILE AROMATIC ORGANICS	DATE	ANALYZED	: 06/26/9	5 TIME	ANALYZED:	07:29	METHOD: 602 (6	)	Q	C NUMBER	:332578
				I	BLAN	K S						
EST	DESCRIPTION	ANALY	SUB-TYPE	ANALYSIS	I.D.	DILUTION	FACTOR	ANALYZED VALUE	DETECTION	LIMIT	UNITS O	F MEASUR
ſime	Analyzed	SB SBD		0810 0851		1 1		0 0	0			
	•											
								4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4				
			-									
-						•						
								10703 Eas Aurora, C (303) 751	t Bethany ( 0 80014 -1780	rive		

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· · · · · · · · · · · · · · · · · · ·	Q U	ALITY	C O N T R 07/10/95	OL REP	ORT			
JOB NUMBER: 951428 CUSTO	MER: GEOSCI	ENCE CONSULT	ANTS, LTD.		ATTN:			
602 - VOLATILE AROMATIC ORGANICS	DATE ANAL	YZED: 06/26/	95 TIME ANA	NLYZED: 07:29	METHOD: 60	2 (6)	QC	NUMBER:332578
		REFERE	NCE SI		s			
TEST DESCRIPTION	ANALYSIS SUB-TYPE	ANALYSIS I. D.	DILUTION FACTOR	ANALYZED VALUE	TRUE VALUE	PERCENT RECOVERY	DETECTION	UNITS OF MEASURE
Benzene	SB SBD	T062695B T062695B	1	20.8 21.5	20.0 20.0	104 108	0.5	ug/L ug/L
Toluene	SB SBD	T062695B T062695B		20.2	20.0 20.0	101 104	0.5	ug/L ug/L
Ethyl benzene	SB SBD	T062695B T062695B		20.6	20.0	103 106	0.5	ug/L ug/L
Xylenes 4-Bromofluorobenzene (Surrogate)	SB SBD SB SBD	T062695B T062695B T062695B T062695B	1 1 1 1	60.7 62.7 96 97	60.0 60.0 100 100	101 105 96 97	0.5 0.5 0 0	ug/L ug/L 89-110% Limit 89-110% Limit
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	QUAL	ITY CON 07/1	TROL REP 0/95	ORT		
JOB NUMBER: 951428 CUSTO	MER: GEOSCIENCE			ATTN:		
602 - VOLATILE AROMATIC ORGANICS				METHOD: 602 (6	) Q	C NUMBER:332580
		BLAN	K S			
TEST DESCRIPTION	ANALY SUB-TYPE	ANALYSIS I.D.	DILUTION FACTOR	ANALYZED VALUE	DETECTION LIMIT	UNITS OF MEASURE
Time Analyzed	SB SBD	1147 1229	1	0 0	0	
			-			
	1	1	1	1 10703 Eas Aurora, Ci (303) 751	l t Bethany Drive D 80014 -1780	
		PAG	E:18			

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	QI	UALITY	C O N T R 07/10/9		ORT			
JOB NUMBER: 951428 CUST	OMER: GEOSC	IENCE CONSUL	TANTS, LTD.		ATTN:			
602 - VOLATILE AROMATIC ORGANICS	DATE ANA	LYZED: 06/27	/95 TIME AN/	ALYZED: 11:05	METHOD: 60	)2 (6)	QC	NUMBER:332580
		REFERE	NCE S	TANDARC	S			
TEST DESCRIPTION	ANALYSIS SUB-TYPE	ANALYSIS I. D.	DILUTION	ANALYZED VALUE	TRUE VALUE	PERCENT RECOVERY	DETECTION LIMITS	UNITS OF MEASURE
Benzene	SB SBD	Т062795В Т062795В	1	21.1 20.3	20.0 20.0	106 102	0.5	ug/L ug/L
Toluene	SB SBD	T062795B T062795B	1	20.4	20.0	102	0.5	ug/L ug/L
Ethyl benzene	SB	T062795B	1	20.7	20.0	103 99	0.5	ug/L ug/L
Xylenes	SB SBD	T062795B T062795B	1	61.5 59.1	60.0 60.0	102 98	0.5	ug/L
4-Bromofluorobenzene (Surrogate)	SBD SBD	T062795B T062795B		97 97 97	100 100	90 97 97	0.5 0 0	ug/L 89-110% Limit 89-110% Limit
-				. [				
					Auro	3 East Betha ra, CO 800 ) 751-1780		
			PAGE:1	9				

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OB NUMBER: 951428 CUSTO	MER: GEOSCIENCE	CONSULTANTS, LT	D.	ATTN:		
02 - VOLATILE AROMATIC ORGANICS	DATE ANALYZED	: 06/30/95 TIME	ANALYZED: 07:44	METHOD: 602 (6)	) Q	C NUMBER:332584
		BLAN	K S			
EST DESCRIPTION	ANALY SUB-TYPE	ANALYSIS I.D.	DILUTION FACTOR	ANALYZED VALUE	DETECTION LIMIT	UNITS OF MEASUR
ime Analyzed	SB SBD	0819 0854	1	0 0	0 0	
-						
				10703 East Aurora, CC (303) 751-	t Bethany Drive 0 80014 -1780	

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	QUALITY CONTROL REPORT 07/10/95										
JOB NUMBER: 951428 CUST	OMER: GEOSC	IENCE CONSUL	TANTS, LTD.		ATTN:						
602 - VOLATILE AROMATIC ORGANICS	DATE ANA	LYZED: 06/30	/95 TIME AN	ALYZED: 07:4	4 METHOD: 6	602 (6)	QC	NUMBER: 332584			
	1	REFERE	NCE S	TANDAR	D S	-1					
TEST DESCRIPTION	ANALYSIS SUB-TYPE	ANALYSIS I. D.	DILUTION FACTOR	ANALYZED VALUE	TRUE VALUE	PERCENT RECOVERY	DETECTION	UNITS OF MEASURE			
Benzene	SB SBD	T950630B T950630B	1	19.3 20.2	20.0 20.0	97 101	0.5	ug/L ug/L			
Toluene	SBD SBD SBD	T950630B		20.0	20.0	100 104	0.5	ug/L ug/L			
Ethyl benzene	SB SBD	T950630B T950630B		19.6	20.0	98 102	0.5	ug/L ug/L			
Xylenes	SB SBD	T950630B T950630B		61.3 64.2	60.0 60.0	102 107	0.5	ug/L ug/L			
4-Bromofluorobenzene (Surrogate)	SB SBD	T950630B T950630B		105 107	100 100	105 107	0	89-110% Limit 89-110% Limit			
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-	1		1	· 1	1	 					
					Auro	)3 East Betha Dra, CO 800 3) 751-1780	iny Drive )14				
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	QUAI	. I T Y C O N 07/1	TROL REP 10/95	ORT		
JOB NUMBER: 951428 CUS	TOMER: GEOSCIENCE			ATTN:		
502 - VOLATILE AROMATIC ORGANICS	DATE ANALYZE	): 07/01/95 TIM	E ANALYZED: 14:18	METHOD: 602 (6	) a	C NUMBER:332586
		BLAI	1			
TEST DESCRIPTION	ANALY SUB-TYPE	ANALYSIS I.D.	DILUTION FACTOR	ANALYZED VALUE	DETECTION LIMIT	UNITS OF MEASURE
	SBD	1536	1	0	0	
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·····	•	<u>.</u>	<u> </u>	10703 Eas Aurora, C (303) 751	t Bethany Drive 0 80014 -1780	•

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	Q	UALITY	C O N T R 07/10/9	OL RE	PORT						
JOB NUMBER: 951428 CUST	DMER: GEOSC	IENCE CONSUL			ATTN:						
602 - VOLATILE AROMATIC ORGANICS	DATE ANA	LYZED: 07/01	/95 TIME AN	ALYZED: 14:1	8 METHOD:	502 (6)	QC	NUMBER:332586			
REFERENCE STANDARDS											
TEST DESCRIPTION	ANALYSIS SUB-TYPE	ANALYSIS I. D.	DILUTION FACTOR	ANALYZED VALUE	TRUE VALUE	PERCENT RECOVERY	DETECTION	UNITS OF MEASURE			
Benzene	SB SBD	T950701B T950701B	1	19.9 20.5	20.0	99	0.5	ug/L			
Toluene	SB SBD	T950701B	1	19.9	20.0	102 99	0.5	ug/L ug/L			
Ethyl benzene	SB SB SBD	T950701B T950701B T950701B	1	20.4 19.8	20.0	102 99	0.5	ug/L ug/L			
Xylenes	SB	T950701B		20.4 61.8	20.0	102 103	0.5	ug/L ug/L			
4-Bromofluorobenzene (Surrogate)	SBD SB SBD	T950701B T950701B T950701B	1 1 1	63.4 104 105	60.0 100 100	106 104 105	0.5 0 0	ug/L 89–110% Limit 89–110% Limit			
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	QUAL	ITY CON 07/1	TROL REP 0/95	ORT		
JOB NUMBER: 951428 CUSTO	MER: GEOSCIENCE	CONSULTANTS, LTI	).	ATTN:		
602 - VOLATILE AROMATIC ORGANICS	DATE ANALYZED	: 07/03/95 TIME	ANALYZED: 09:12	METHOD: 602 (6	) Q	C NUMBER:332589
		BLAN	K S			
TEST DESCRIPTION	ANALY SUB-TYPE	ANALYSIS I.D.	DILUTION FACTOR	ANALYZED VALUE	DETECTION LIMIT	UNITS OF MEASUR
	MS (1428) MS (1429) MS (1430) MS (1431)	1612 1647 1722 1757		0 0 0	0 0 0	
-		-				
				10703 East Aurora, CC (303) 751-	t Bethany Drive 0 80014 1780	

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<del></del>		QUAL	TY CO	) N T R O L 07/10/95	REPO	RT			
JOB NUMBER: 951428	CUSTOMER:	GEOSCIENCE				ATTN:			
602 - VOLATILE AROMATIC ORGAN	ICS DAT	E ANALYZED:	07/03/95 1	TIME ANALYZI	ED: 09:12	METHOD: 602	2 (6)	QC	NUMBER:332589
			MATRIX	(SP1)	C E S				
TEST DESCRIPTION	ANALYSIS SUB-TYPE	ANALYSIS I. D.	DILUTION	ANALYZED VALUE	ORIGINAL VALUE	SPIKE ADDED	PERCENT	DETECTION	UNITS OF MEASURE
Benzene	MS MS MS	951428-7 951429-9 951430-3	1 1 1 1	20.2 22.6 20.6	0 0 0	20.0 20.0 20.0	101 113 103	0.5 0.5 0.5	ug/L ug/L ug/L
Toluene	MS MS MS MS	951431-7 951428-7 951429-9 951430-3	1 1 1	22.5 19.6 22.3 20.6	0 0 0	20.0 20.0 20.0 20.0	112 98 112 103	0.5 0.5 0.5 0.5	ug/L ug/L ug/L ug/L
Ethyl benzene	MS MS MS MS	951431-7 951428-7 951429-9 951430-3	1 1 1 1	22.4 19.4 22.3 20.6	0 0 0 0	20.0 20.0 20.0 20.0 20.0	112 97 112 103	0.5 0.5 0.5 0.5	ug/L ug/L ug/L ug/L
Xylenes	MS MS MS MS	951431-7 951428-7 951429-9 951430-3	1 1 1 1	22.4 60.4 69.4 64.1	0 0 0 0	20.0 60.0 60.0 60.0	112 101 116 107	0.5 0.5 0.5	ug/L ug/L ug/L ug/L
4-Bromofluorobenzene (Surroga	MS MS MS MS MS	951431-7 951428-7 951429-9 951430-3 951431-7	1 1 1 1 1	68.8 104 108 107 109	0 0 0 0 0	60.0 100 100 100 100	115 104 108 107 109	0	ug/L 89-110% Limit 89-110% Limit 89-110% Limit 89-110% Limit
-	1	1		<u> </u> .		Aurora	East Betha a, CO 800 751-1780		

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PAGE:25



#### **QUALITY CONTROL FOOTER** METHOD REFERENCES (1) EPA 600/4-79-020, Methods For Chemical Analysis Of Water And Wastes, March 1983 (2) EPA SW-846, Test Methods For Evaluating Solid Waste, Third Edition, November 1986 (3) Standard Methods For The Examination Of Water And Wastewater, 17th Edition, 1989 (4) EPA 600/4-80-032, Prescribed Procedures For Measurement Of Radioactivity In Drinking Water, August 1980 (5) EPA 600/8-78-017, Microbiological Methods For Monitoring The Environment, December 1978 Federal Register, July 1, 1990 (40 CFR Part 136) (6) (7) EPA 600/4-88-039, Methods For The Determination Of Organics Compounds In Drinking Water, December 1988 (8) U.S.G.S. Methods For The Determination Of Inorganic Substances In Water And Fluvial Sediments, Book 5, Chapter A1, 1985 (9) Federal Register, Friday, June 7, 1991, (40 CFR Parts 141 and 142) (10)Standard Methods For The Examination Of Water And Wastewater, 16th Edition, 1985 (11)ASTM, Section 11 Water And Environmental Technology, Volume 11.01 Water (1), 1991 (12)Methods Of Soil Analysis, American Society Of Agronomy, Agronomy No. 9, 1965 (13)EPA SW-846, Test Methods For Evaluating Solid Waste, Third Edition, Revision 1, November 1990 (14)ASTM, Section 5, Petroleum Products, Lubricants, and Fossil Fuels, Volume 05.05, Gaseous Fuels, Coal and Coke (15) EPA 600/2-78-054, Field and Laboratory Methods Applicable To Overburdens and Mine Soils, March 1978 (16)ASTM, Part 19, Soils and Rock; Building Stones, 1981 Comments: Data in QA report may differ from final results due to digestion and/or dilution of sample into analytical ranges. The "Time Analyzed" in the QA report refers to the start time of the analytical batch which may not reflect the actual time of each analysis. The "Date Analyzed" is the actual date of analysis. Results for soil and sludge samples are reported on a wet weight basis (i.e. not corrected for percent moisture) unless otherwise indicated, NC = Not Calculable Due To Value(s) Lower Than The Detection Limit. Blank QC Sample Identification Spike QC Sample Identification MB Method Blank MS Method (Matrix) Spike ICB Initial Calibration Blank MSD Method (Matrix) Spike Duplicate CCB **Continuing Calibration Blank** PDS Post Digestion Spike Reference Standard QC Sample Identification SB Spiked Blank

LCS Laboratory Control Standard SBD Spiked Blank Duplicate RS **Reference Standard Duplicate QC Sample Identification** ICV Initial Calibration Verification Standard MD Method (Matrix) Duplicate CCV Continuing Calibration Verification Standard ED **Extraction Duplicate** ISA/ISB ICP Interference Check Samples DD **Digestion Duplicate** 

Analyses performed by a subcontract laboratory are indicated on the analytical and/or quality control reports under

Subcontract Laboratory	<u>Code</u>	Subcontract Laboratory	Code	
Core Laboratories - Anaheim, CA	* AN	Core Laboratories - Lake Charles, LA	• LC	
Core Laboratories - Casper, WY	• CA	Core Laboratories - Long Beach, CA	• LB	
Core Laboratories - Corpus Christi, TX	• cc	Other Subcontract Laboratories	• xx	
Core Laboratories - Houston, TX	* HP			

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CORE LABORATORIES ANALYTICAL REPORT Job Number: 951431 Prepared For: GEOSCIENCE CONSULTANTS, LTD. 505 MARQUETTE NW, SUITE 1100 ALBUQUERQUE, NM 87102 Date: 07/11/95

Tenkers 7-11-95 nature Date:

Name: Linda L. Benkers

Title: QA/QC Coordinator

Core Laboratories 10703 East Bethany Drive Aurora, CO 80014

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# LABORATORY TESTS RESULTS 07/11/95

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

#### JOB NUMBER: 951431

CLIENT I.D.....: REXENE COC #8374 DATE SAMPLED.....: 06/21/95 TIME SAMPLED.....: 12:20 WORK DESCRIPTION...: 9506211220

LABORATORY I.D...: 951431-0001 DATE RECEIVED...: 06/23/95 TIME RECEIVED...: 11:00 REMARKS...... WP-18

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ATTN:

ST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TEC
2 - VOLATILE AROMATIC ORGANICS		*10		602 (6)	07/01/95	DM
Benzene Toluene Ethyl benzene Xylenes 4-Bromofluorobenzene (Surrogate) Time Analyzed	7 ND ND ND 101 0110	5 5 5 0 0	ug/L ug/L ug/L ug/L % Recovery	89-110% Limit		
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#### LABORATORY TESTS RESULTS 07/11/95

#### JOB NUMBER: 951431

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CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

CLIENT I.D..... REXENE COC #8374 DATE SAMPLED.....: 06/21/95 TIME SAMPLED.....: 13:20 WORK DESCRIPTION...: 9506211320

LABORATORY I.D:	951431-0002
DATE RECEIVED:	06/23/95
TIME RECEIVED:	11:00
REMARKS	WP-19 🖊

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ATTN:

		*500		602 (6)	07/01/05	<u></u>
2 - VOLATILE AROMATIC ORGANICS		*500		602 (6)	07/01/95	DM
Benzene	16000	250 250	ug/L			
Toluene Ethyl benzene	ND 730	250	ug/L ug/L			
Xylenes	320	250	ug/L			
4-Bromofluorobenzene (Surrogate) Time Analyzed	104 1941	0	% Recovery	89-110% Limit		
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	LABORATO	RY TESTS 07/11/95	RESULTS			
JOB NUMBER: 951431 CUSTOMER:	GEOSCIENCE CONSI	JLTANTS, LTD.	ATTN:			
CLIENT I.D REXENE COC #8374 DATE SAMPLED 06/21/95 TIME SAMPLED 13:35 WORK DESCRIPTION: 9506211335			DATE RECEIV TIME RECEIV	I.D: 951431-0003 FED: 06/23/95 FED: 11:00 : WP-16		
TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE T	ECHN
602 - VOLATILE AROMATIC ORGANICS		*1		602 (6)	07/01/95	DMJ
Benzene Toluene Ethyl benzene Xylenes 4-Bromofluorobenzene (Surrogate) Time Analyzed	12 ND 0.8 ND 104 0329	0.5 0.5 0.5 0.5 0 0 0	ug/L ug/L ug/L ug/L % Recovery	89-110% Limit		
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			Auro	3 East Bethany Drive Tra, CO 80014 () 751-1780		
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CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

CLIENT I.D..... REXENE COC #8374 DATE SAMPLED.....: 06/21/95 TIME SAMPLED.....: 13:45 WORK DESCRIPTION...: 9506211345

ATTN:

TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECH
602 - VOLATILE AROMATIC ORGANICS		*1		602 (6)	07/01/95	DMJ
Benzene Toluene Ethyl benzene Xylenes 4-Bromofluorobenzene (Surrogate) Time Analyzed	ND ND ND 107 0404	0.5 0.5 0.5 0.5 0 0	ug/L ug/L ug/L ug/L % Recovery	89–110% Limit		
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			Auror	5 East Bethany Drive ra, CO 80014 ) 751-1780		
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CLIENT I.D..... REXENE COC #8374 DATE SAMPLED.....: 06/21/95 TIME SAMPLED.....: 14:00 WORK DESCRIPTION...: 9506211400

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TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECHN
602 - VOLATILE AROMATIC ORGANICS		*100		602 (6)	07/01/95	DMJ
Benzene Toluene Ethyl benzene Xylenes 4-Bromofluorobenzene (Surrogate) Time Analyzed	880 60 240 240 103 0255	50 / 50 50 50 0 0	ug/L ug/L ug/L ug/L % Recovery	89-110% Limit		
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	· ·		Auror	5 East Bethany Drive ra, CO 80014 ) 751-1780		
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#### LABORATORY TESTS RESULTS 07/11/95 JOB NUMBER: 951431 CUSTOMER: GEOSCIENCE CONSULTANTS, LTD. ATTN: CLIENT I.D.....: REXENE COC #8374 LABORATORY I.D...: 951431-0006 DATE SAMPLED.....: 06/21/95 DATE RECEIVED....: 06/23/95 TIME SAMPLED..... 14:20 TIME RECEIVED....: 11:00 WORK DESCRIPTION ...: 9506211420 REMARKS..... MW-15 TEST DESCRIPTION FINAL RESULT LIMITS/\*DILUTION UNITS OF MEASURE TEST METHOD DATE TECHN 602 - VOLATILE AROMATIC ORGANICS \*1 602 (6) 07/01/95 DMJ 0.5 Benzene 21 ug/L $\mathbf{V}$ 0.5 1 Toluene 0.5 ug/L Ethyl benzene ND 0.5 ug/L Xylenes 0.6 0.5 ug/L 4-Bromofluorobenzene (Surrogate) 104 89-110% Limit 0 % Recovery Time Analyzed 1830 0 \*1 8270 (2) PAH AND PHENOLS LIST BY 8270 06/30/95 MLA Acenaphthene 10 ND ug/L Acenaphthylene ND 10 ug/L Anthracene ND 10 ug/L Benzo(a)anthracene 10 ug/L ND Benzo(b)fluoranthene ND 10 ug/L Benzo(k)fluoranthene ND 10 ug/L Benzo(ghi)perylene ND 10 ug/L Benzo(a)pyrene ND 10 ug/L 10 Chrysene ND ug/L Dibenzo(a,h)anthracene ND 10 ug/L Fluoranthene ND 10 ug/L ND 10 Fluorene ug/L Indeno(1,2,3-cd)pyrene ND 10 ug/L 1-Methylnaphthalene ND 10 ug/L 2-Methylnaphthalene ND 10 ug/L Naphthalene ND 10 ug/L Phenanthrene ug/L ND 10 ND V Pyrene 10 ug/L 4-Chloro-3-methylphenol ND 10 ug/L 2-Chlorophenol ND 10 ug/L 2,4-Dichlorophenol ND 10 ug/L 2,4-Dimethylphenol ND 10 ug/L 2,4-Dinitrophenol ND 50 ug/L 2-Methyl-4,6-dinitrophenol ND 50 ug/L 10 2-Nitrophenol ND ug/L 4-Nitrophenol ND 50 ug/L Pentachlorophenol 50 ug/L ND 10 Phenol ND ug/L 2,4,6-Trichlorophenol ND 10 ug/L Nitrobenzene-d5 (Surrogate) 75 0 % Recovery 35-114% Limit 79 43-116% Limit 2-Fluorobiphenyl (Surrogate) n % Recovery 4-Terphenyl-d14 (Surrogate) 113 0 % Recovery 33-141% Limit Phenol-d6 (Surrogate) 10-94% Limit 31 0 % Recovery 21-100% Limit 48 0 % Recovery 2-Fluorophenol (Surrogate) 10703 East Bethany Drive Aurora, CO 80014 (303) 751-1780 PAGE:6 , Ł



#### LABORATORY TESTS RESULTS 07/11/95

JOB NUMBER: 951431

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

ATTN:

CLIENT I.D.....: REXENE COC #8374 DATE SAMPLED.....: 06/21/95 TIME SAMPLED.....: 14:20 WORK DESCRIPTION...: 9506211420

TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE TECHN					
2,4,6-Tribromophenol (Surrogate) Time Analyzed Date Extracted	110 1959 06/26/95	0 0 0	X Recovery	10-123% Limit						
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	10703 East Bethany Drive Aurora, CO 80014 (303) 751-1780									
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# LABORATORY TESTS RESULTS 07/11/95

#### JOB NUMBER: 951431

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

ATTN:

CLIENT I.D.....: REXENE COC #8374 DATE SAMPLED.....: 06/21/95 TIME SAMPLED.....: 15:05 WORK DESCRIPTION...: 9506211505

LABORATORY I.D:	951431-0007
DATE RECEIVED:	06/23/95
TIME RECEIVED:	11:00
REMARKS	MW-9s 🗸

EST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECH
02 - VOLATILE AROMATIC ORGANICS		*1		602 (6)	06/27/95	DMJ
Benzene	ND	0.5	ug/L			
Toluene	ND	0.5	ug/L			
Ethyl benzene	ND	0.5	ug/L			
Xylenes	ND	0.5	ug/L			
4-Bromofluorobenzene (Surrogate)	98	0	% Recovery	89-110% Limit		
Time Analyzed	1515	ŏ				
AH AND PHENOLS LIST BY 8270		*1		8270 (2)	06/30/95	ML
Acenaphthene	ND	10	ug/L			
Acenaphthylene	ND	10	ug/L			
Anthracene	ND	10	ug/L			
Benzo(a)anthracene	ND	10	ug/L	•		
Benzo(b)fluoranthene	ND	10	ug/L			
Benzo(k)fluoranthene	ND	10	ug/L			
Benzo(ghi)perylene	ND	10	ug/L			
Benzo(a)pyrene	ND	10	ug/L		1	
Chrysene	ND	10	ug/L			
Dibenzo(a,h)anthracene	ND	10	ug/L			
Fluoranthene	ND	10	ug/L			
Fluorene	ND	10	ug/L			
Indeno(1,2,3-cd)pyrene	ND	10	ug/L			
1-Methylnaphthalene	ND	10	ug/L			
2-Methylnaphthalene	ND	10	ug/L			
Naphthalene	ND	10	ug/L			
Phenanthrene	ND	10	ug/L			
Pyrene	ND	10	ug/L			
4-Chloro-3-methylphenol	ND	10	ug/L			
2-Chlorophenol	ND	10	ug/L			
2,4-Dichlorophenol	ND	10	ug/L			
2,4-Dimethylphenol	ND	10	ug/L			
2,4-Dinitrophenol	ND	50	ug/L			
2-Methyl-4,6-dinitrophenol	ND	50	ug/L			
2-Nitrophenol	ND	10	ug/L			
4-Nitrophenol	ND	50	ug/L			
Pentachlorophenol	ND	50	ug/L			
Phenol	ND	10	ug/L			
2,4,6-Trichlorophenol	NDV	10	ug/L			
Nitrobenzene-d5 (Surrogate)	69	- 0	% Recovery	35-114% Limit	1	
2-Fluorobiphenyl (Surrogate)	72	0	% Recovery	43-116% Limit		
4-Terphenyl-d14 (Surrogate)	89	Ō	% Recovery	33-141% Limit		
Phenol-d6 (Surrogate)	27	0 -	% Recovery	10-94% Limit		
2-Fluorophenol (Surrogate)	38	0	% Recovery	21-100% Limit		
		·	Auro	1 3 East Bethany Driv 3 ra, CO 80014 5) 751-1780	e	

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# LABORATORY TESTS RESULTS 07/11/95 JOB NUMBER: 951431 CUSTOMER: GEOSCIENCE CONSULTANTS, LTD. ATTN: CLIENT I.D...... REXENE COC #8374 LABORATORY I.D...: 951431-0007 DATE SAMPLED.....: 06/21/95 DATE RECEIVED....: 06/23/95 TIME SAMPLED.....: 15:05 TIME RECEIVED....: 11:00 WORK DESCRIPTION ...: 9506211505 REMARKS..... MW-9s FINAL RESULT LIMITS/\*DILUTION UNITS OF MEASURE TEST DESCRIPTION TEST METHOD DATE TECHN 10-123% Limit 2,4,6-Tribromophenol (Surrogate) 105 0 % Recovery 2056 Time Analyzed 0 Date Extracted 06/26/95 0 '10703 East Bethany Drive Aurora, CO 80014 (303) 751-1780 PAGE:9 0



# LABORATORY TESTS RESULTS 07/11/95

#### JOB NUMBER: 951431

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#### CUSTOMER: GEOSCIENCE CONSULTANTS, LTD. ATTN:

CLIENT I.D..... REXENE COC #8374 DATE SAMPLED.....: 06/21/95 TIME SAMPLED.....: 15:45 WORK DESCRIPTION...: 9506211545

#### LABORATORY I.D...: 951431-0008 DATE RECEIVED...: 06/23/95 TIME RECEIVED...: 11:00 REMARKS............ MW-6d

TESI	DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECHI
602	- VOLATILE AROMATIC ORGANICS		*1		602 (6)	06/27/95	DMJ
	Benzene	ND 🗸	0.5 🗸	ug/L		1	
	Toluene	ND	0.5	ug/L	1		
	Ethyl benzene	ND	0.5	ug/L			
	Xylenes	ND	0.5	ug/L		ļ	
	4-Bromofluorobenzene (Surrogate)	100	0	% Recovery	89-110% Limit	1	
	Time Analyzed	1557	0				
PAH	AND PHENOLS LIST BY 8270		*1		8270 (2)	06/30/95	MLA
	Acenaphthene	ND	10	ug/L			
	Acenaphthylene	ND	· 10	ug/L			
	Anthracene	ND	10	ug/L			
	Benzo(a)anthracene	ND	10	ug/L			
	Benzo(b)fluoranthene	ND	10	ug/L		l	
	Benzo(k)fluoranthene	ND	10	ug/L			
	Benzo(ghi)perylene	ND	10	ug/L		Í	
	Benzo(a)pyrene	ND	10	ug/L			
	Chrysene	ND	10	ug/L			
	Dibenzo(a,h)anthracene	ND	10	ug/L			
	Fluoranthene	ND	10	ug/L			
	Fluorene	ND	10	ug/L			
	Indeno(1,2,3-cd)pyrene	ND	10	ug/L			
	1-Methylnaphthalene	ND	10	ug/L			
	2-Methylnaphthalene	ND	10	ug/L	1		
	Naphthalene	ND	10	ug/L			
J	Phenanthrene	ND	10	ug/L			
•	Pyrene	ND	10	ug/L			
	4-Chloro-3-methylphenol	ND	10	ug/L			
	2-Chlorophenol	ND	10	ug/L	1	1	
	2,4-Dichlorophenol	ND	10	ug/L			
	2,4-Dimethylphenol	ND	10	ug/L			
	2,4-Dinitrophenol	· ND	50	ug/L			
	2-Methyl-4,6-dinitrophenol	ND	50	ug/L		Į	
	2-Nitrophenol	ND	10	ug/L			
	4-Nitrophenol	ND	50	ug/L			
.1	Pentachlorophenol Phenol	ND	50	ug/L			
v	Phenol	ND	10	ug/L		1	
	2,4,6-Trichlorophenol	ND	10	ug/L	75 44/4 1 1		
	Nitrobenzene-d5 (Surrogate)	85 76	0	% Recovery	35-114% Limit		
	2-Fluorobiphenyl (Surrogate)	100	0	% Recovery % Recovery	43-116% Limit 33-141% Limit		
	4-Terphenyl-d14 (Surrogate)	37	0 -	X Recovery	10-94% Limit		
	Phenol-d6 (Surrogate) 2-Fluorophenol (Surrogate)	56	0	% Recovery	21-100% Limit	1	
	2-rtuorophenot (Surrogate)			A Recovery	21-100% LIMIT		
					3 East Bethany Drive Dra, CO 80014		



# LABORATORY TESTS RESULTS 07/11/95

#### JOB NUMBER: 951431

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CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

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ATTN:

CLIENT I.D..... REXENE COC #8374 DATE SAMPLED.....: 06/21/95 TIME SAMPLED.....: 15:45 WORK DESCRIPTION...: 9506211545

#### LABORATORY I.D...: 951431-0008 DATE RECEIVED...: 06/23/95 TIME RECEIVED...: 11:00 REMARKS............ MW-6d

TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE TECHN
2,4,6-Tribromophenol (Surrogate) Time Analyzed Date Extracted	103 2154 06/26/95	0 0 0	X Recovery	10-123% Limit	
		-			
			1070 Auro (303	3 East Bethany Drive ra, CO 80014 ) 751-1780	

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# LABORATORY TESTS RESULTS 07/11/95

#### JOB NUMBER: 951431

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

CLIENT I.D..... REXENE COC #8374 DATE SAMPLED..... 06/21/95 TIME SAMPLED..... 15:50 WORK DESCRIPTION... 9506211550

LABORATORY I.D:	951431-0009
DATE RECEIVED:	06/23/95
TIME RECEIVED:	11:00
REMARKS:	MW-6dA 🖉

ATTN:

EST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECH
02 - VOLATILE AROMATIC ORGANICS		*1		602 (6)	06/30/95	DMJ
Benzene Toluene Ethyl benzene Xylenes 4-Bromofluorobenzene (Surrogate) Time Analyzed	ND V ND ND 107 2216	0.5 0.5 0.5 0.5 0 0	ug/L ug/L ug/L ug/L % Recovery	89-110% Limit		
					,	
		-				
		· · · · · · · · · · · · · · · · · · ·	Auro	03 East Bethany Dr Dra, CO 80014 5) 751-1780	ive	



# LABORATORY TESTS RESULTS 07/11/95

#### JOB NUMBER: 951431

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#### CUSTOMER: GEOSCIENCE CONSULTANTS, LTD. ATTN:

CLIENT I.D..... REXENE COC #8374 DATE SAMPLED..... 06/22/95 TIME SAMPLED..... 10:40 WORK DESCRIPTION... 9506221040

LABORATORY I.D:	951431-0010
DATE RECEIVED:	06/23/95
TIME RECEIVED:	11:00
REMARKS	EQUIP BLANK

EST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TEC
02 - VOLATILE AROMATIC ORGANICS		*1		602 (6)	06/30/95	DM
Benzene Toluene Ethyl benzene Xylenes 4-Bromofluorobenzene (Surrogate) Time Analyzed	ND ND ND 103 2251	0.5 0.5 0.5 0.5 0 0	ug/L ug/L ug/L ug/L % Recovery	89–110% Limit		
						<u>,</u>
			-			
		-				
	·	·	Auro	' 3 East Bethany Dri ra, CO 80014 ) 751-1780	ve	



# LABORATORY TESTS RESULTS 07/11/95

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

#### JOB NUMBER: 951431

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CLIENT I.D.....

DATE SAMPLED...... / / TIME SAMPLED...... / / WORK DESCRIPTION...: METHOD BLANK

#### LABORATORY I.D...: 951431-0011 DATE RECEIVED...: / / TIME RECEIVED...: : REMARKS.....

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ATTN:

ES	DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECI
02	- VOLATILE AROMATIC ORGANICS		*1		602 (6)	06/27/95	DM.
	Benzene	ND	0.5	ug/L			
	Toluene	0.7	0.5	ug/L			
	Ethyl benzene	ND	0.5	ug/L			
	Xylenes	ND	0.5	ug/L			
	4-Bromofluorobenzene (Surrogate)	102	0	% Recovery	89-110% Limit		
	Time Analyzed	1310	0				
AH	AND PHENOLS LIST BY 8270		*1		8270 (2)	06/26/95	ML
	Acenaphthene	ND	10	ug/L			
	Acenaphthylene	ND	10	ug/L			
	Anthracene	ND	10	ug/L			
	Benzo(a)anthracene	ND	10	ug/L			
	Benzo(b)fluoranthene	ND	10	ug/L			
	Benzo(k)fluoranthene	ND	10	ug/L			
	Benzo(ghi)perylene	ND	10	ug/L			
	Benzo(a)pyrene	ND	10	ug/L			
	Chrysene	ND	10	ug/L			
	Dibenzo(a,h)anthracene	ND	10	ug/L			
	Fluoranthene	ND	10	ug/L			
	Fluorene	ND	10	ug/L			
	Indeno(1,2,3-cd)pyrene	ND	10	ug/L			
	1-Methylnaphthalene	ND	10	ug/L	1		
	2-Methylnaphthalene	ND	10	ug/L			
	Naphthalene	ND	10	ug/L			
	Phenanthrene	ND	10	ug/L			
	Pyrene	ND	10	ug/L	1		
	4-Chloro-3-methylphenol	ND	10	ug/L			
	2-Chlorophenol	ND	10	ug/L			
	2,4-Dichlorophenol	ND	10	ug/L			
	2,4-Dimethylphenol	ND	10	ug/L			
	2,4-Dinitrophenol	ND "	50	ug/L			
	2-Methyl-4,6-dinitrophenol	ND	50	ug/L			
	2-Nitrophenol	ND	10	ug/L		1	
	4-Nitrophenol	ND	50	ug/L			
	Pentachlorophenol	ND	50	ug/L			
	Phenol	ND	10	ug/L			
	2,4,6-Trichlorophenol	ND	10	ug/L			
	Nitrobenzene-d5 (Surrogate)	73	0	% Recovery	35-114% Limit		
	2-Fluorobiphenyl (Surrogate)	65	0	% Recovery	43-116% Limit		
	4-Terphenyl-d14 (Surrogate)	97	0	% Recovery	33-141% Limit		
	Phenol-d6 (Surrogate)	32	0 -	% Recovery	10-94% Limit		
	2-Fluorophenol (Surrogate)	54	0	% Recovery	21-100% Limit		
-		1 24	· ·				
		<u></u>		107	03 East Bethany Dri	ve	
				Aur	ora, CO 80014		
					3) 751-1780		

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# LABORATORY TESTS RESULTS 07/11/95

JOB NUMBER: 951431

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CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

CLIENT I.D.....: DATE SAMPLED.....: / / TIME SAMPLED.....: : WORK DESCRIPTION...: METHOD BLANK

#### LABORATORY I.D...: 951431-0011 DATE RECEIVED....: / / TIME RECEIVED....: : REMARKS......

ATTN:

TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE TECHN				
2,4,6-Tribromophenol (Surrogate) Time Analyzed Date Extracted	103 2009 06/26/95	0 0 0	X Recovery	10-123% Limit					
		-							
-									
	10703 East Bethany Drive Aurora, CO 80014 (303) 751-1780								



#### LABORATORY TESTS RESULTS 07/11/95

#### JOB NUMBER: 951431

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD. ATTN:

CLIENT I.D.....: DATE SAMPLED.....: / / TIME SAMPLED.....: : WORK DESCRIPTION...: METHOD BLANK

### LABORATORY I.D...: 951431-0012 DATE RECEIVED....: / / TIME RECEIVED....: : REMARKS.....

TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECHI
602 - VOLATILE AROMATIC ORGANICS		*1		602 (6)	07/01/95	DMJ
Benzene Toluene Ethyl benzene Xylenes 4-Bromofluorobenzene (Surrogate) Time Analyzed	ND ND ND 106 1610	0.5 0.5 0.5 0.5 0 0	ug/L ug/L ug/L ug/L % Recovery	89-110% Limit		
		- -				
••••••••••••••••••••••••••••••••••••••			1070 Auro (303	3 East Bethany Drive Dra, CO 80014 D 751-1780		

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# LABORATORY TESTS RESULTS 07/11/95

#### JOB NUMBER: 951431 CUSTOMER: GEOSCIENCE CONSULTANTS, LTD. ATTN:

CLIENT I.D.....: DATE SAMPLED.....: / / TIME SAMPLED.....: : WORK DESCRIPTION...: METHOD BLANK

LABORATORY I.D:	951431-0013
DATE RECEIVED:	11
TIME RECEIVED:	:
REMARKS:	

TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECHN
602 - VOLATILE AROMATIC ORGANICS		*1		602 (6)	06/30/95	DMJ
Benzene Toluene Ethyl benzene Xylenes 4-Bromofluorobenzene (Surrogate) Time Analyzed	ND ND ND 104 0929	0.5 0.5 0.5 0.5 0 0	ug/L ug/L ug/L ug/L % Recovery	89-110% Limit		
			-			
-		-				
			107 Aur (30	03 East Bethany Driv ora, CO 80014 3) 751-1780	/e	



# LABORATORY TESTS RESULTS 07/11/95

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

JOB NUMBER: 951431

CLIENT I.D.....: DATE SAMPLED.....: / / TIME SAMPLED.....: : WORK DESCRIPTION...: METHOD BLANK

#### LABORATORY I.D...: 951431-0014 DATE RECEIVED....: / / TIME RECEIVED....: : REMARKS......

ATTN:

TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECHN
602 - VOLATILE AROMATIC ORGANICS		*1		602 (6)	07/03/95	DMJ
Benzene Toluene Ethyl benzene Xylenes 4-Bromofluorobenzene (Surrogate) Time Analyzed	ND ND ND 105 0947	0.5 0.5 0.5 0.5 0 0 0	ug/L ug/L ug/L ug/L % Recovery	89–110% Limit		
	· · ·					
		-				
· · · ·			1070 Auro (303	3 East Bethany Drive ra, CO 80014 ) 751-1780		

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	QUAL	ITY CON 07/1	TROL REP 1/95	ORT		
JOB NUMBER: 951431 CUSTO	MER: GEOSCIENCE	CONSULTANTS, LT	D.	ATTN:		
502 - VOLATILE AROMATIC ORGANICS	DATE ANALYZED	: 06/27/95 TIME	ANALYZED: 11:05	METHOD: 602 (6	) Q	C NUMBER:332580
		BLAN	K S			
TEST DESCRIPTION	ANALY SUB-TYPE	ANALYSIS I.D.	DILUTION FACTOR	ANALYZED VALUE	DETECTION LIMIT	UNITS OF MEASURE
Time Analyzed	SB SBD	1147 1229	1	0 0	0 0	
_				10703 Eas Aurora, C (303) 751	t Bethany Drive 0 80014 -1780	



	פו	JALITY	C O N T R 07/11/95	OL REF	PORT	<u></u>	<u> </u>	<u> </u>
JOB NUMBER: 951431 CUSTO	MER: GEOSCI	ENCE CONSULT	ANTS, LTD.		ATTN:			
602 - VOLATILE AROMATIC ORGANICS	DATE ANAL	YZED: 06/27/	95 TIME ANA	LYZED: 11:05	METHOD: 60	2 (6)	QC :	NUMBER:332580
		REFERE	NCE ST	ANDARD	) S			
TEST DESCRIPTION	ANALYSIS SUB-TYPE	ANALYSIS I. D.	DILUTION FACTOR	ANALYZED VALUE	TRUE VALUE	PERCENT RECOVERY	DETECTION	UNITS OF MEASURE
Benzene	SB SBD	Т062795В Т062795В	1	21.1 20.3	20.0 20.0	106 102	0.5	ug/L
Toluene	SBD	T062795B T062795B		20.3	20.0	102 102 98	0.5	ug/L ug/L ug/L
Ethyl benzene	SB	T0627958 T0627958	1	20.7	20.0	103 99	0.5	ug/L ug/L
Xylenes	SB SBD	T062795B T062795B	1	61.5 59.1	60.0 60.0	102 98	0.5	ug/L ug/L
4-Bromofluorobenzene (Surrogate)	SB SBD	T062795B T062795B	1	97 97	100	97 97	0	89-110% Limit 89-110% Limit
		·	· · · · · · · · · · · · · · · · · · ·	<u>,</u>	Auror	East Betha a, CO 800 751-1780		1
			PAGE:20		(303)	101-1780		



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NUMBER: 951431 CUST	OMER: GEOS	CIENCE	CONSULTAN	S, LTI	).		ATTN:					
2 - VOLATILE AROMATIC ORGANICS	DATE AN	ALYZED:	06/30/95	TIME	ANALYZED	: 07:44	METHOD:	602 (6)	)	QC	NUMBER	
			В	LAN	K S							
BT DESCRIPTION	ANALY SU		ANALYSIS I	.D.	DILUTION	FACTOR	ANALYZED	VALUE	DETECTION	LIMIT	UNITS O	F MEASUR
							0		0			
							10 Au	703 East rora, CC	: Bethany D 80014 1780	rive		
							(3)	012, 00	1780			



OB NUMBER: 951431 CUSTO	MER: GEOSC	IENCE CONSUL	TANTS, LTD.		ATTN:			
02 - VOLATILE AROMATIC ORGANICS	DATE ANA	LYZED: 06/30,	/95 TIME AN	ALYZED: 07:44	4 METHOD:	602 (6)	QC	NUMBER: 332584
	T	REFERE	NCE S	TANDARI	o s		- <b>1</b>	
EST ESCRIPTION	ANALYSIS SUB-TYPE	ANALYSIS I. D.	DILUTION FACTOR	ANALYZED VALUE	TRUE VALUE	PERCENT RECOVERY	DETECTION	UNITS OF MEASURE
enzene oluene thyl benzene	SB SBD SB SBD SB	T950630B T950630B T950630B T950630B T950630B T950630B	1 1 1 1	19.3 20.2 20.0 20.8 19.6	20.0 20.0 20.0 20.0 20.0 20.0	97 101 100 104 98	0.5 0.5 0.5 0.5 0.5	ug/L ug/L ug/L ug/L ug/L
ylenes -Bromofluorobenzene (Surrogate)	SB SBD SBD SBD SB	19506308 19506308 19506308 19506308	1 1 1 1	20.5 61.4 64.2 105	20.0 20.0 60.0 60.0 100	102 102 107 105	0.5 0.5 0.5 0	ug/L ug/L ug/L ug/L 89-110% Limít
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				•				
-					Aur	03 East Beth ora, CO 800 3) 751-1780		

sent the best judgment of Core Laboratories. Core Laboratories, however, assumes no responsibility and makes no warrantly or representations, express or implied, as to the productivity, proper operations, or profitableness of any oil, gas, coal or

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	QUAL	ITY CON 07/1	TROL REP 1/95	ORT	- <u></u>	
JOB NUMBER: 951431 CUSTO	MER: GEOSCIENCE	CONSULTANTS, LT		ATTN:		
602 - VOLATILE AROMATIC ORGANICS	DATE ANALYZED	: 07/01/95 TIME	ANALYZED: 14:18	METHOD: 602 (6)	) Q	C NUMBER:332586
		BLAN	K S			
TEST DESCRIPTION	ANALY SUB-TYPE	ANALYSIS I.D.	DILUTION FACTOR	ANALYZED VALUE	DETECTION LIMIT	UNITS OF MEASURE
Time Analyzed	SB	1453 1536	1	0 0	0 0	
-						-
	· · · · ·			10703 Eas Aurora, C (303) 751	t Bethany Drive D 80014 -1780	
		PAG	E:23	(303) 751	-1780	



	Q	UALITY	C O N T R 07/11/9	OL RE	PORT			
JOB NUMBER: 951431 CUST	OMER: GEOSC	IENCE CONSUL	TANTS, LTD.		ATTN:			
602 - VOLATILE AROMATIC ORGANICS	DATE ANA	LYZED: 07/01	/95 TIME AN	ALYZED: 14:1	8 METHOD:	602 (6)	QC	NUMBER: 332586
		REFERE	N C E S	TANDAR	DS			
TEST DESCRIPTION	ANALYSIS SUB-TYPE	ANALYSIS I. D.	DILUTION FACTOR	ANALYZED VALUE	TRUE VALUE	PERCENT RECOVERY	DETECTION	UNITS OF MEASURE
Benzene	SB SBD	T950701B T950701B	1	19.9 20.5	20.0	99	0.5	ug/L
Toluene	SB SBD	T950701B T950701B	1	19.9	20.0	102 99	0.5	ug/L ug/L
Ethyl benzene	SB SBD	T950701B T950701B	1	19.8 20.4	20.0	102 99	0.5	ug/L ug/L
Xylenes	SB	T950701B T950701B	1	61.8 63.4	20.0 60.0	102 103	0.5	ug/L ug/L
4-Bromofluorobenzene (Surrogate)	SBD SBD	T950701B T950701B T950701B	1	104 105	60.0 100 100	106 104 105	0.5 0 0	ug/L 89-110% Limit 89-110% Limit
			·	•	Aur			·

PAGE:24



	QUAL	ITY CON 07/*	TROL REP 11/95	ORT		
DB NUMBER: 951431 CUST	OMER: GEOSCIENCE	X		ATTN:		
02 - VOLATILE AROMATIC ORGANICS	DATE ANALYZED	: 07/03/95 TIM	E ANALYZED: 09:12	METHOD: 602 (6	5) Q	C NUMBER:332589
		BLAI	1 K S			
EST DESCRIPTION	ANALY SUB-TYPE	ANALYSIS I.D.	DILUTION FACTOR	ANALYZED VALUE	DETECTION LIMIT	UNITS OF MEASURI
ime Analyzed	MS (1428) MS (1429) MS (1430) MS (1431)	1612 1647 1722 1757	1 1 1 1	0 0 0 0	0 0 0 0	
	· · · · · · · · · · · · · · · · · · ·			10703 Eas Aurora, C (303) 751	t Bethany Drive 0 80014 -1780	<u> </u>



		QUALI		NTROL 07/11/95	REPO	RT			<u>,</u>
JOB NUMBER: 951431	CUSTOMER: (	EOSCIENCE	ONSULTANTS,	LTD.		ATTN:			
602 - VOLATILE AROMATIC ORGAN	ICS DATE	ANALYZED:	07/03/95 т	IME ANALYZE	D: 09:12 M	ETHOD: 602	(6)	QC	NUMBER:332589
			MATRIX	SPIK	ES				
TEST DESCRIPTION	ANALYSIS SUB-TYPE	ANALYSIS I. D.	DILUTION FACTOR	ANALYZED VALUE	ORIGINAL VALUE	SPIKE ADDED	PERCENT RECOVERY	DETECTION LIMITS	UNITS OF MEASURE
Benzene	MS MS	951428-7 951429-9	1	20.2	0	20.0	101 113	0.5	ug/L
	MS	951430-3	1	20.6	0	20.0	103	0.5	ug/L ug/L
Toluene	MS MS	951431-7 951428-7	1	22.5	0	20.0	112 98	0.5	ug/L ug/L
	MS MS	951429-9 951430-3	1	22.3 20.6	0	20.0	112	0.5	ug/L
	MS	951431-7	1	22.4	0	20.0 20.0	103 112	0.5	ug/L ug/L
Ethyl benzene	MS MS	951428-7 951429-9	1	19.4	0	20.0	97 112	0.5	ug/L ug/L
	MS	951430-3	1	20.6	0	20.0	103	0.5	ug/L
(ylenes	MS MS	951431-7 951428-7	1	22.4	0	20.0 60.0	112 101	0.5	ug/L ug/L
	MS MS	951429-9 951430-3		69.4 64.1	0	60.0	116	0.5	ug/L
	MS	951431-7	1	68.7	0	60.0 60.0	107 114	0.5	ug/L ug/L
-Bromofluorobenzene (Surroga	t MS MS	951428-7 951429-9		104	0	100	104 108	0	89-110% Limit 89-110% Limit
	MS	951430-3	1	107	0	100	107	0	89-110% Limit
	MS	951431-7	1.	109	0	100	109	0	89-110% Limit
-									
			-						
						· ·			
			1						
-									
	·		-			10703 =	ast Betha	ny Drivo	• 
						Aurora,	CO 800	14	
						(303) 7	51-1780		

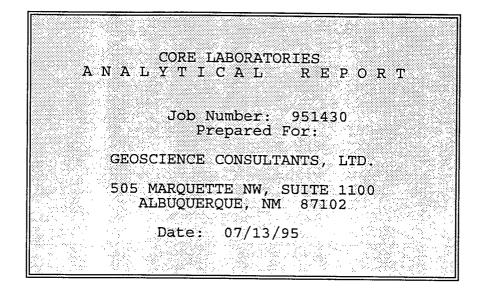


#### QUALITY CONTROL FOOTER **METHOD REFERENCES** EPA 600/4-79-020, Methods For Chemical Analysis Of Water And Wastes, March 1983 (1) (2)EPA SW-846, Test Methods For Evaluating Solid Waste, Third Edition, November 1986 (3) Standard Methods For The Examination Of Water And Wastewater, 17th Edition, 1989 EPA 600/4-80-032, Prescribed Procedures For Measurement Of Radioactivity In Drinking Water, August 1980 (4)EPA 600/8-78-017, Microbiological Methods For Monitoring The Environment, December 1978 (5) Federal Register, July 1, 1990 (40 CFR Part 136) (6) (7) EPA 600/4-88-039, Methods For The Determination Of Organics Compounds In Drinking Water, December 1988 (8) U.S.G.S. Methods For The Determination Of Inorganic Substances In Water And Fluvial Sediments, Book 5, Chapter A1, 1985 (9) Federal Register, Friday, June 7, 1991, (40 CFR Parts 141 and 142) (10) Standard Methods For The Examination Of Water And Wastewater, 16th Edition, 1985 (11)ASTM, Section 11 Water And Environmental Technology, Volume 11.01 Water (1), 1991 (12)Methods Of Soil Analysis, American Society Of Agronomy, Agronomy No. 9, 1965 EPA SW-846, Test Methods For Evaluating Solid Waste, Third Edition, Revision 1, November 1990 (13)ASTM, Section 5, Petroleum Products, Lubricants, and Fossil Fuels, Volume 05.05, Gaseous Fuels, Coal and Coke (14) (15)EPA 600/2-78-054, Field and Laboratory Methods Applicable To Overburdens and Mine Soils, March 1978 (16)ASTM, Part 19, Soils and Rock; Building Stones, 1981 Date in QA report may differ from final results due to digestion and/or dilution of sample into analytical ranges. Comments: The "Time Analyzed" in the QA report refers to the start time of the analytical batch which may not reflect the actual time of each analysis. The "Date Analyzed" is the actual date of analysis. Results for soil and sludge samples are reported on a wet weight basis (i.e. not corrected for percent moisture) unless otherwise indicated. NC = Not Calculable Due To Value(s) Lower Than The Detection Limit. Blank QC Sample Identification Spike QC Sample Identification MS Method (Matrix) Spike MB Method Blank Method (Matrix) Spike Duplicate ICB Initial Calibration Blank MSD CCB **Continuing Calibration Blank** PDS Post Digestion Spike Reference Standard QC Sample Identification SB Spiked Blank LCS Laboratory Control Standard SBD Spiked Blank Duplicate RS Duplicate QC Sample Identification **Reference Standard** Method (Matrix) Duplicate ICV Initial Calibration Verification Standard MD CCV **Continuing Calibration Verification Standard** ED **Extraction Duplicate** ISA/ISB **ICP Interference Check Samples** DD **Digestion Duplicate** Analyses performed by a subcontract laboratory are indicated on the analytical and/or quality control reports under "Technician" using the following codes: Subcontract Laboratory Subcontract Laboratory Code Code • AN \* LC Core Laboratories - Lake Charles, LA Core Laboratories - Anaheim, CA • LB • CA Core Laboratories - Long Beach, CA Core Laboratories - Casper, WY • CC • XX Other Subcontract Laboratories Core Laboratories - Corpus Christi, TX • HP Core Laboratories - Houston, TX 10703 East Bethany Drive Aurora, CO 80014 (303) 751-1780

RECEIVED JUL 1 4 1995



### **CORE LABORATORIES**



Signature Benkers 7-13-95 Date:

Name: Linda L. Benkers

Core Laboratories 10703 East Bethany Drive Aurora, CO 80014

Title: QA/QC Coordinator

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Environmental Science (505) 84 Environmental Science Albuque (505) 84 and Engineering (505) 84 ABDM International Company FAX: (5)	D Abuquerque 505 Marquette NW, Ste. 1100 Abuquerque, NM 87102 (505) 842-0001 FAX: (505) 842-0595	<ul> <li>Mid Atlantic Region</li> <li>4221 Forbes Blvd., Ste. 240 Lanharn, MD 20706-4325</li> <li>(301) 459-9677</li> <li>FAX: (301) 459-3064</li> </ul>	c Region Bvd., Ste. 240 20706-4325 7 9-3064	<ul> <li>U ASA-WSTF</li> <li>PO Drawer MM</li> <li>PO Drawer MM</li> <li>Las Cruces, NM 88004</li> <li>(505) 524-5353</li> <li>FAX: (505) 524-5315</li> </ul>	_	σ	hair	of Cus	tody
						Date	66/12/2	Page	0 –
ABORA					Analysis Request	-			
Address <u>10/03 East Be</u> <u>Aurora, CO 8</u> Telephone <u>303/751-1780</u>	Bethany Drive 80014-2696 80		spunodud sp 0108/	seb nod					tainers.
Samplers (SIGNATURES)		lenated les 601/8010 atic Volatiles 020 020	biges/PCB uclear Arom carbon661 le Compoun is 624/8240 is 624/8240 Veu/Acid Co	IS 625/6270 Organic Car Organic Hal ) 415/9060 ) 9020 BTEX BTEX BTEX BTEX BTEX BTEX BTEX BTEX	cides, Pestic - Metals //	Point Sivity	926979	negyző tsör negyző tsör (GOC) bru	iber of Cor
Sample Number Matrix	trix Location	moiA 8\C03	Base GC/N Polat Polyn Polyn Pestic	Total Total Total TPH/ Hydro Hydro Hydro	CCAM Pertal Pertori Metal Metal	onoo		Среи	μυΝ
2010/11/610 120	0 Mal-tota	100	2						H
1506211620 HPO	MW-651	) V	X						4
506211725 H2U	0 mu-3d	7 7 7	2						4
506211735 H20	0 MW-35	5 2	Ĵ						4
06211810 H20	0 1210-16	4 M /	2 NO 2	602 BTEX DUL	٢				M
1506220750 H70	pl-MU Q.	7 N V	7						Ч
	FI-WM O	7 7	7						4
506220820 HZU	H-MW 0	53							ŝ
1506220915 H20	0 -410- 9'	Μ							3
506220920 H20	0 -4WP-3	Ŋ							3
Project Information	Sample Receipt		Relinquished B	1.	Relinquished By		2. Relir	Relinquished By	ຕ່
XENE	Total No. of Containers	R					(Signature)	hrei	(Tima)
Project Director TRENT T.	Chain of Custody Seals		0	NEE 6/23/95					(enni)
Charge Code No.	Rec'd Good Condition/Cold		(Printed Nargeh	(Date)	(Printed Name)		(Date) (Printe	(Printed Name)	(Date)
Shipping ID. No.	Conforms to Record	<u>Q</u>	Company)		(Company)		(Company)	(Auto)	
3 20365712	Lab No.	(	Received By	1.	Received By		2. Poo	Received By (Laboratory)	Э
ED X	KやI<し	S	(Signature)	(Time)	(Signature)		(Time) (Signature)	1 min	
Special Instructions/Comments:			(Printed Name)	(Date)	(Printed Name)		(Date) (Print	(Printed Name)	
			(Comoanv)		(Company)			(Laboratory)	

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### SAMPLE DELIVERY GROUP NARRATIVE

July 13, 1995

Customer:Geoscience Consultants, Ltd.Project:Rexene COC 9051Core Laboratories Project Number:951430

### Method 8270 GC/MS Organics

The spike blank and spike blank duplicate analyzed with this set of samples had recovery of 4-nitrophenol at 96% and 95% respectively with acceptance criteria set at 10-80%.

Linder Benkus

Linda L. Benkers QA/QC Coordinator

James H. Travis

Laboratory Supervisor



#### LABORATORY TESTS RESULTS 07/13/95

### JOB NUMBER: 951430 CUSTOMER: GEOSCIENCE CONSULTANTS, LTD. ATTN:

CLIENT I.D..... REXENE COC #9051 DATE SAMPLED.....: 06/21/95 TIME SAMPLED.....: 16:10 WORK DESCRIPTION...: 9506211610

LABORATORY I.D:	951430-0001
DATE RECEIVED:	06/23/95
TIME RECEIVED:	11:00
REMARKS:	MW-6S

ST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TEÇI
02 - VOLATILE AROMATIC ORGANICS		*100		602 (6)	07/01/95	DM.
Benzene	220	50	ug/L			
Toluene	ND	50	ug/L			
Ethyl benzene	180	50	ug/L	<b>\</b>		
Xylenes	260	50	ug/L			
4-Bromofluorobenzene (Surrogate)	105	0	% Recovery	89-110% Limit		
Time Analyzed	0733	0				
AH AND PHENOLS LIST BY 8270		*1		8270 (2)	06/30/95	ML
Acenaphthene	ND	10	ug/L			
Acenaphthylene	ND	10	ug/L			
Anthracene	ND	10	ug/L			
Benzo(a)anthracene	ND	10	ug/L	1		
Benzo(b)fluoranthene	ND	10	ug/L			
Benzo(k)fluoranthene	ND	10	ug/L			
Benzo(ghi)perylene	ND	10	ug/L			
Benzo(a)pyrene	ND	10	ug/L			
Chrysene	ND	10	ug/L			
Dibenzo(a,h)anthracene	ND	10	ug/L			
Fluoranthene	ND	10	ug/L			
Fluorene	ND	10	ug/L	1		
Indeno(1,2,3-cd)pyrene	ND	10	ug/L			
1-Methylnaphthalene	ND	10	ug/L			
2-Methylnaphthalene	ND	10	ug/L			
Naphthalene	15	10	ug/L			
Phenanthrene	ND	10	ug/L	}		
Pyrene	ND	10	ug/L		1	
4-Chloro-3-methylphenol	ND	10	ug/L			
2-Chlorophenol	ND	10	ug/L	l		
2,4-Dichlorophenol	ND	10	ug/L			
2,4-Dimethylphenol	ND	10	ug/L			
2,4-Dinitrophenol	ND	50	ug/L			
2-Methyl-4,6-dinitrophenol	ND	50	ug/L			
2-Nitrophenol	ND	10	ug/L			
4-Nitrophenol	ND	50	ug/L			
Pentachlorophenol	ND	50	ug/L	1		
Phenol	ND	10	ug/L			
2,4,6-Trichlorophenol	ND	10	ug/L			
Nitrobenzene-d5 (Surrogate)	94	0	% Recovery	35-114% Limit		
2-Fluorobiphenyl (Surrogate)	51	ŏ	% Recovery	43-116% Limit		
4-Terphenyl-d14 (Surrogate)	77	ŏ	% Recovery	33-141% Limit		
Phenol-d6 (Surrogate)	85	ŏ	% Recovery	10-94% Limit	{	
2-Fluorophenol (Surrogate)	23	Ō	% Recovery	21-100% Limit		
	·	l 		3 East Bethany Drive Ta, CO 80014	۱ 	

PAGE:1



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# **CORE LABORATORIES**

	LABORATO	RY TESTS 07/13/95	RESULTS		
JOB NUMBER: 951430 CUSTOMER:	GEOSCIENCE CONS	JLTANTS, LTD.	ATTN:		
CLIENT I.D: REXENE COC #9051 DATE SAMPLED: 06/21/95 TIME SAMPLED: 16:10 WORK DESCRIPTION: 9506211610			DATE RECEIV Time receiv	I.D: 951430-0001 ED: 06/23/95 ED: 11:00 : MW-6S	
TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE TECHN
2,4,6-Tribromophenol (Surrogate) Time Analyzed Date Extracted	105 2252 06/26/95		% Recovery	10-123% Limit	
	1	1	Auro	1 3 East Bethany Drive pra, CO 80014 ) 751-1780	1

PAGE:2



#### LABORATORY TESTS RESULTS 07/13/95

### JOB NUMBER: 951430 CUSTOMER: GEOSCIENCE CONSULTANTS, LTD. ATTN:

CLIENT I.D..... REXENE COC #9051 DATE SAMPLED..... 06/21/95 TIME SAMPLED..... 16:20 WORK DESCRIPTION...: 9506211620

#### LABORATORY I.D...: 951430-0002 DATE RECEIVED....: 06/23/95 TIME RECEIVED....: 11:00 REMARKS...... MW-6SA

				+ ····	4	<u> </u>
02 - VOLATILE AROMATIC ORGANICS		*100		602 (6)	07/01/95	DMJ
Benzene	220	50	ug/L			
Toluene	ND	50	ug/L			
Ethyl benzene	150	50	ug/L		1	
Xylenes	210	50	ug/L			
4-Bromofluorobenzene (Surrogate)	104	0	% Recovery	89-110% Limit		
Time Analyzed	0808	0				
AH AND PHENOLS LIST BY 8270		*1		8270 (2)	06/30/95	MLA
Acenaphthene	ND	10	ug/L			
Acenaphthylene	ND	10	ug/L			
Anthracene	ND	10	ug/L	4		
Benzo(a)anthracene	ND	10	ug/L		1	
Benzo(b)fluoranthene	ND	10	ug/L		1	
Benzo(k)fluoranthene	ND	10	ug/L			
Benzo(ghi)perylene	ND	10	ug/L			
Benzo(a)pyrene	ND	10	ug/L			
Chrysene	ND	10	ug/L			
Dibenzo(a,h)anthracene	ND	10	ug/L	]		
Fluoranthene	ND	10	ug/L		ſ	
Fluorene	ND	10	ug/L	1		
Indeno(1,2,3-cd)pyrene	ND	10	ug/L			
1-Methylnaphthalene	ND	10	ug/L			
2-Methylnaphthalene	ND	10	ug/L			
Naphthalene	10	10	ug/L		}	
Phenanthrene	ND	10	ug/L			
Pyrene	ND	10	ug/L			
4-Chloro-3-methylphenol	ND	10	ug/L		ļ	
2-Chlorophenol	ND	10	ug/L			
2,4-Dichlorophenol	ND	10	ug/L			
2,4-Dimethylphenol	ND	10	ug/L			
2,4-Dinitrophenol	ND	50	ug/L	]		
2-Methyl-4,6-dinitrophenol	ND	50	ug/L			
2-Nitrophenol	ND	10	ug/L			
4-Nitrophenol	ND	50	ug/L		1	
Pentachlorophenol	ND	50	ug/L			
Phenol	ND	10	ug/L		1	
2,4,6-Trichlorophenol	ND	10	ug/L	1		
Nitrobenzene-d5 (Surrogate)	85	0	% Recovery	35-114% Limit		
2-Fluorobiphenyl (Surrogate)	46	0	% Recovery	43-116% Limit		
4-Terphenyl-d14 (Surrogate)	48 93	0	% Recovery	33-141% Limit	ļ	
Phenol-d6 (Surrogate)	71	0	% Recovery	10-94% Limit	1	
2-Fluorophenol (Surrogate)	35	0	% Recovery	21-100% Limit	1	
2 rtuorophenot (surrogate)	55	, v	1/2 Recovery			
			1070	3 East Bethany Drive		
				ra, CO 80014		
				) 751-1780		

PAGE:3



#### LABORATORY TESTS RESULTS 07/13/95

### JOB NUMBER: 951430 CUSTOMER: GEOSCIENCE CONSULTANTS, LTD. ATTN:

CLIENT I.D..... REXENE COC #9051 DATE SAMPLED...... 06/21/95 TIME SAMPLED..... 16:20 WORK DESCRIPTION...: 9506211620

### LABORATORY I.D...: 951430-0002 DATE RECEIVED....: 06/23/95 TIME RECEIVED....: 11:00 REMARKS........... MW-6SA

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ST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE TEC
2,4,6-Tribromophenol (Surrogate) Fime Analyzed Date Extracted	88 2349 06/26/95	0 0 0	% Recovery	10-123% Limit	
,,,,,,,	·		Auro	03 East Bethany Drive Dra, CO 80014 3) 751-1780	

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#### LABORATORY TESTS RESULTS 07/13/95 k wa JOB NUMBER: 951430 CUSTOMER: GEOSCIENCE CONSULTANTS, LTD. ATTN: CLIENT I.D..... REXENE COC #9051 LABORATORY I.D...: 951430-0003 DATE SAMPLED.....: 06/21/95 DATE RECEIVED....: 06/23/95 TIME SAMPLED..... 17:25 TIME RECEIVED....: 11:00 WORK DESCRIPTION ...: 9506211725 REMARKS..... MW-3d LIMITS/\*DILUTION UNITS OF MEASURE TEST METHOD TEST DESCRIPTION FINAL RESULT DATE TECHN 602 - VOLATILE AROMATIC ORGANICS \*1 602 (6) 06/27/95 DMJ Benzene ND 0.5 ug/L Toluene ND 0.5 ug/L Ethyl benzene ND 0.5 ug/L 0.5 Xylenes ND ug/L 4-Bromofluorobenzene (Surrogate) 100 0 89-110% Limit % Recovery Time Analyzed 1352 0 PAH AND PHENOLS LIST BY 8270 \*1 8270 (2) 06/26/95 MLA 10 Acenaphthene ND ug/L Acenaphthylene ND 10 ug/L Anthracene ND 10 ug/L ug/L Benzo(a)anthracene ND 10 10 Benzo(b)fluoranthene ND ug/L Benzo(k)fluoranthene ND 10 ug/L Benzo(ghi)perylene ND 10 ug/L 10 Benzo(a)pyrene ND ug/L 10 Chrysene ND ug/L ND 10 ug/L Dibenzo(a,h)anthracene Fluoranthene ND 10 ug/L 10 Fluorene ND uq/L 10 Indeno(1,2,3-cd)pyrene ND ug/L 1-Methylnaphthalene ND 10 ug/L 2-Methylnaphthalene ND 10 ug/L Naphthalene ND 10 ug/L ug/L Phenanthrene ND 10 10 Pyrene ND ug/L 4-Chloro-3-methylphenol 10 ND ug/L 2-Chlorophenol ND 10 ug/L 2,4-Dichlorophenol ND 10 ug/L 10 2,4-Dimethylphenol ND uq/L 50 ug/L 2,4-Dinitrophenol ND 2-Methyl-4,6-dinitrophenol ND 50 ug/L 10 2-Nitrophenol ND ug/L 50 4-Nitrophenol ND ug/L Pentachlorophenol 50 ND ug/L ND 10 ug/L Phenol 2,4,6-Trichlorophenol ND 10 ug/L 0 35-114% Limit Nitrobenzene-d5 (Surrogate) 73 % Recovery 68 ٥ 43-116% Limit 2-Fluorobiphenyl (Surrogate) % Recovery 4-Terphenyl-d14 (Surrogate) 99 0 % Recovery 33-141% Limit Phenol-d6 (Surrogate) 10-94% Limit 33 0 % Recovery 21-100% Limit n 2-Fluorophenol (Surrogate) 48 % Recovery 10703 East Bethany Drive Aurora, CO 80014 (303) 751-1780

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#### LABORATORY TESTS RESULTS 07/13/95

### JOB NUMBER: 951430 CUSTOMER: GEOSCIENCE CONSULTANTS, LTD. ATTN:

CLIENT I.D..... REXENE COC #9051 DATE SAMPLED.....: 06/21/95 TIME SAMPLED.....: 17:25 WORK DESCRIPTION...: 9506211725

#### LABORATORY I.D...: 951430-0003 DATE RECEIVED...: 06/23/95 TIME RECEIVED...: 11:00 REMARKS........... MW-3d

EST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE
2,4,6-Tribromophenol (Surrogate) Time Analyzed Date Extracted	73 2302 06/26/95	0 0 0	% Recovery	10–123% Limit	
		-			
	• 	•	1070 Auro (303	3 East Bethany Drive ra, CO 80014 ) 751-1780	·

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#### LABORATORY TESTS RESULTS 07/13/95

### JOB NUMBER: 951430 CUSTOMER: GEOSCIENCE CONSULTANTS, LTD. ATTN:

CLIENT I.D.....: REXENE COC #9051 DATE SAMPLED.....: 06/21/95 TIME SAMPLED.....: 17:35 WORK DESCRIPTION...: 9506211735

#### LABORATORY I.D...: 951430-0004 DATE RECEIVED...: 06/23/95 TIME RECEIVED...: 11:00 REMARKS............ MW-3s

TEST D	DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECHN
602 -	VOLATILE AROMATIC ORGANICS		*1		602 (6)	06/27/95	DMJ
Be	enzene	ND	0.5	ug/L			
To	oluene	ND	0.5	ug/L			
Et	thyl benzene	ND	0.5	ug/L			
Xy	lenes	ND	0.5	ug/L			
4-	-Bromofluorobenzene (Surrogate)	100	0	% Recovery	89-110% Limit		
	ime Analyzed	1434	0				
PAH AN	ND PHENOLS LIST BY 8270		*1		8270 (2)	06/29/95	MLA
Ac	cenaphthene	ND	10	ug/L			
Ac	cenaphthylene	ND	10	ug/L			
Ar	nthracene	ND	10	ug/L	1	L .	
B€	enzo(a)anthracene	ND	10	ug/L			
Be	enzo(b)fluoranthene	ND	10	ug/L			
Be	enzo(k)fluoranthene	ND	10	ug/L			
Be	enzo(ghi)perylene	ND	10	ug/L			
B€	enzo(a)pyrene	ND	10	ug/L			
Ch	nrysene	ND	10	ug/L			
Di	ibenzo(a,h)anthracene	ND	10	ug/L			
Fl	luoranthene	ND	10	ug/L			
Fl	luorene	ND	10	ug/L			
ir	ndeno(1,2,3-cd)pyrene	ND	10	ug/L		1	
1-	-Methylnaphthalene	ND	10	ug/L			
2-	Methylnaphthalene	ND	10	ug/L			
	aphthalene	ND	10	ug/L			
Ph	nenanthrene	ND	10	ug/L		·	
Py	yrene	ND	10	ug/L			
4-	-Chloro-3-methylphenol	ND	10	ug/L			
2-	-Chlorophenol	ND	10	ug/L			
2,	4-Dichlorophenol	ND	10	ug/L			
	4-Dimethylphenol	ND	10	ug/L			
2.	4-Dinitrophenol	ND	50	ug/L			
2-	Methyl-4,6-dinitrophenol	ND	50	ug/L			
	-Nitrophenol	ND	10	ug/L			
4-	-Nitrophenol	ND	50	ug/L			
Pe	entachlorophenol	ND	50	ug/L			
Ph	henol	ND	10	ug/L		1	
2,	,4,6-Trichlorophenol	ND	10	ug/L	1	1	
	trobenzene-d5 (Surrogate)	64	0	% Recovery	35-114% Limit	[	
	-fluorobiphenyl (Surrogate)	55	0	% Recovery	43-116% Limit	1	
	Terphenyl-d14 (Surrogate)	80	0	% Recovery	33-141% Limit		
Ph	henol-d6 (Surrogate)	68	0	% Recovery	10-94% Limit	1	
2-	-Fluorophenol (Surrogate)	43	0	% Recovery	21-100% Limit		
		<u> </u>	1	Au	1 703 East Bethany Drive 10707 CO 80014 103) 751-1780	۱ ع	

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		07/13/95				·
JOB NUMBER: 951430 CUSTOMER:	GEOSCIENCE CONS	ULTANTS, LTD.		ATTN:		
CLIENT I.D REXENE COC #9051 DATE SAMPLED: 06/21/95 TIME SAMPLED: 17:35 WORK DESCRIPTION: 9506211735			l	DATE RECEIV TIME RECEIV	I.D: 951430-0004 ED: 06/23/95 ED: 11:00 : MW-3s	
EST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF	MEASURE	TEST METHOD	DATE TECHN
2,4,6-Tribromophenol (Surrogate) Time Analyzed Date Extracted	72 1735 06/26/95		% Recover	y	10-123% Limit	
			·	Auro	3 East Bethany Drive ra, CO 80014 ) 751-1780	
				Auro	ra, CO 80014	

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## **CORE LABORATORIES**

### LABORATORY TESTS RESULTS 07/13/95

# JOB NUMBER: 951430 CUSTOMER: GEOSCIENCE CONSULTANTS, LTD. ATTN:

CLIENT I.D..... REXENE COC #9051 DATE SAMPLED.....: 06/21/95 TIME SAMPLED.....: 18:10 WORK DESCRIPTION...: 9506211810

### LABORATORY I.D...: 951430-0005 DATE RECEIVED...: 06/23/95 TIME RECEIVED...: 11:00 REMARKS............ MW-16

TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE TECH
602 - VOLATILE AROMATIC ORGANICS		*1		602 (6)	07/01/95 DM.
Benzene Toluene Ethyl benzene Xylenes 4-Bromofluorobenzene (Surrogate) Time Analyzed	ND ND ND 102 1906	0.5 0.5 0.5 0.5 0	ug/L ug/L ug/L % Recovery	89-110% Limit	
					•
			Auro	3 East Bethany Drive ra, CO 80014 ) 751-1780	

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#### LABORATORY TESTS RESULTS 07/13/95

### JOB NUMBER: 951430 CUSTOMER: GEOSCIENCE CONSULTANTS, LTD. ATTN:

CLIENT I.D.....: REXENE COC #9051 DATE SAMPLED.....: 06/22/95 TIME SAMPLED.....: 07:50 WORK DESCRIPTION...: 9506220750

### 

Ber To Ett Xy 4-E	VOLATILE AROMATIC ORGANICS nzene luene		*500		602 (6)	07/01/95	
To Etl Xy 4-1					002 (0)	01/01/35	DMJ
Etl Xy 4-1	luene	10000	250	ug/L			
Ху 4-і		ND	250	ug/L			
4-1	hyl benzene	ND	250	ug/L			
4-1	lenes	ND	250	ug/L			
	Bromofluorobenzene (Surrogate)	106	0	% Recovery	89-110% Limit	Î	
1 11	me Analyzed	2016	0				
PAH AN	D PHENOLS LIST BY 8270		*1		8270 (2)	06/28/95	MLA
Ace	enaphthene	ND	10	ug/L			
Ace	enaphthylene	ND	10	ug/L			
	thracene	ND	10	ug/L	4	Į.	
Ber	nzo(a)anthracene	ND	10	ug/L			
	nzo(b)fluoranthene	ND	10	ug/L			
	nzo(k)fluoranthene	ND	10	ug/L			
	nzo(ghi)perylene	ND	10	ug/L			
	nzo(a)pyrene	ND	10	ug/L	1		
	rysene	ND	10	ug/L			
	benzo(a,h)anthracene	ND	10	ug/L			
	uoranthene	ND	10	ug/L			
	uorene	ND	10	ug/L		1	
	deno(1,2,3-cd)pyrene	ND	10	ug/L	<b>\</b>		
	Methylnaphthalene	12	10	ug/L		1	
	Methylnaphthalene	ND	10	ug/L			
	phthalene	ND	10	ug/L			
	enanthrene	ND	10	ug/L			
	rene	ND	10	ug/L	1	1	
	Chloro-3-methylphenol	ND	10	ug/L			
	Chlorophenol	ND	10	ug/L			
	4-Dichlorophenol	ND	10	ug/L			
•	4-Dimethylphenol	ND	10	ug/L			
	4-Dinitrophenol	ND	50	ug/L	4	l	
	Methyl-4,6-dinitrophenol	ND	50	ug/L			
2-1	Nitrophenol	ND	10	ug/L			
	Nitrophenol	ND	50	ug/L			
	ntachlorophenol	ND	50	ug/L			
	enol	19	10	ug/L	\ \	ļ	
	4,6-Trichlorophenol	ND	10	ug/L		1	
	trobenzene-d5 (Surrogate)	69	0	% Recovery	35-114% Limit	1	
	Fluorobiphenyl (Surrogate)	64	l o	% Recovery	43-116% Limit		
	Terphenyl-d14 (Surrogate)	105	0	% Recovery	33-141% Limit		
Phi	enol-d6 (Surrogate)	32	ů ů	% Recovery	10-94% Limit	1	
2-1	Fluorophenol (Surrogate)	47	Ŏ	% Recovery	21-100% Limit		
-							
					3 East Bethany Drive ora, CO 80014		

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## **CORE LABORATORIES**

14449999 <b></b>	LABORATO	RY TESTS 07/13/95	RESULTS		· · · · · · · · · · · · · · · · · · ·
OB NUMBER: 951430 CUSTOMER:	GEOSCIENCE CONS	ULTANTS, LTD.	ATTN:		
CLIENT I.D REXENE COC #9051 ATE SAMPLED: 06/22/95 TIME SAMPLED: 07:50 WORK DESCRIPTION: 9506220750		I.D: 951430-0006 VED: 06/23/95 VED: 11:00 : MW-14			
EST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE TECHN
2,4,6-Tribromophenol (Surrogate) Time Analyzed Date Extracted	89 1712 06/26/95	0 0	% Recovery	10-123% Limit	
			Aur	03 East Bethany Drive ora, CO 80014 3) 751-1780	

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### LABORATORY TESTS RESULTS 07/13/95

### JOB NUMBER: 951430 CUSTOMER: GEOSCIENCE CONSULTANTS, LTD. ATTN:

CLIENT I.D..... REXENE COC #9051 DATE SAMPLED..... 06/22/95 TIME SAMPLED..... 08:15 WORK DESCRIPTION...: 9506220815

TEST	DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECHN
602	- VOLATILE AROMATIC ORGANICS		*50		602 (6)	07/01/95	DMJ
	Benzene	1500	25	ug/L			
	Toluene	ND	25	ug/L			
	Ethyl benzene	54	25	ug/L			
	Xylenes	29	25	ug/L			
	4-Bromofluorobenzene (Surrogate)	97	0	% Recovery	89-110% Limit		
	Time Analyzed	2125	0				
PAH	AND PHENOLS LIST BY 8270		*1		8270 (2)	06/28/95	MLA
	Acenaphthene	ND	10	ug/L			
	Acenaphthylene	ND	10	ug/L			
	Anthracene	ND	10	ug/L			
	Benzo(a)anthracene	ND	10	ug/L			
	Benzo(b)fluoranthene	ND	10	ug/L			
	Benzo(k)fluoranthene	ND	10	ug/L		1	
	Benzo(ghi)perylene	ND	10	ug/L			
	Benzo(a)pyrene	ND	10	ug/L			
	Chrysene	ND	10	ug/L			
	Dibenzo(a,h)anthracene	ND	10	ug/L			
	Fluoranthene	ND	10	ug/L			
	Fluorene	ND	10	ug/L			
	Indeno(1,2,3-cd)pyrene	ND	10	ug/L			
	1-Methylnaphthalene	ND	10	ug/L			
	2-Methylnaphthalene	ND	10	ug/L			
	Naphthalene	ND	10	ug/L			
	Phenanthrene	ND	10	ug/L			
	Pyrene	ND	10	ug/L			
	4-Chloro-3-methylphenol	ND	10	ug/L		1	
	2-Chlorophenol	ND	10	ug/L			
	2,4-Dichlorophenol	ND	10	ug/L			
	2,4-Dimethylphenol	ND	10	ug/L			
	2,4-Dinitrophenol	ND	50	ug/L			
	2-Methyl-4,6-dinitrophenol	ND	50	ug/L			
	2-Nitrophenol	ND	10	ug/L			
	4-Nitrophenol	ND	50	ug/L			
	Pentachlorophenol	ND	50	ug/L			
	Phenol	ND	10	ug/L			
	2,4,6-Trichlorophenol	ND	10	ug/L			
	Nitrobenzene-d5 (Surrogate)	85	0	% Recovery	35-114% Limit		
	2-Fluorobiphenyl (Surrogate)	66	0	% Recovery	43-116% Limit		
	4-Terphenyl-d14 (Surrogate)	116	ŏ	% Recovery	33-141% Limit		
	Phenol-d6 (Surrogate)	27	Ő	% Recovery	10-94% Limit		
	2-Fluorophenol (Surrogate)	45	ŏ	% Recovery	21-100% Limit		
1							
					03 East Bethany Driv ora, CO 80014	e	
					3) 751-1780		

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an a	LABORATO	RY TESTS 07/13/95	RESULTS		<u> </u>				
JOB NUMBER: 951430 CUSTOMER:	GEOSCIENCE CONS	ULTANTS, LTD.	ATTN:						
CLIENT I.D: REXENE COC #9051       LABORATORY I.D: 951430-0007         DATE SAMPLED: 06/22/95       DATE RECEIVED: 06/23/95         TIME SAMPLED: 08:15       TIME RECEIVED: 11:00         WORK DESCRIPTION: 9506220815       REMARKS: MW-17									
TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECHN			
2,4,6-Tribromophenol (Surrogate) Time Analyzed Date Extracted	88 1809 06/26/95		% Recovery	10-123% Limit					
			Auro	3 East Bethany Dri ora, CO 80014 5) 751-1780	ve				
		PAGE:13							

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### TESTS LABORATORY RESULTS 07/13/95 JOB NUMBER: 951430 CUSTOMER: GEOSCIENCE CONSULTANTS, LTD. ATTN: CLIENT I.D..... REXENE COC #9051 LABORATORY I.D...: 951430-0008 DATE SAMPLED.....: 06/22/95 DATE RECEIVED....: 06/23/95 TIME SAMPLED.....: 08:20 WORK DESCRIPTION...: 9506220820 TIME RECEIVED....: 11:00 REMARKS..... MW-4 TEST DESCRIPTION FINAL RESULT LIMITS/\*DILUTION UNITS OF MEASURE TEST METHOD DATE TECHN 602 - VOLATILE AROMATIC ORGANICS \*20 602 (6) 07/01/95 DMJ 800 10 Benzene ug/L ug/L Toluene ND 10 12 Ethyl benzene 10 ug/L Xylenes ND 10 ug/L 4-Bromofluorobenzene (Surrogate) 105 0 % Recovery 89-110% Limit Time Analyzed 2345 0 10703 East Bethany Drive Aurora, CO 80014 (303) 751-1780

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#### LABORATORY TESTS RESULTS 07/13/95

### JOB NUMBER: 951430 CUSTOMER: GEOSCIENCE CONSULTANTS, LTD. ATTN:

CLIENT I.D..... REXENE COC #9051 DATE SAMPLED..... 06/22/95 TIME SAMPLED..... 09:15 WORK DESCRIPTION...: 9506220915

#### LABORATORY I.D...: 951430-0009 DATE RECEIVED...: 06/23/95 TIME RECEIVED...: 11:00 REMARKS...... WP-9

TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECHN
602 - VOLATILE AROMATIC ORGANICS		*100		602 (6)	07/01/95	DMJ
Benzene Toluene Ethyl benzene Xylenes 4-Bromofluorobenzene (Surrogate) Time Analyzed	4300 82 180 380 105 2051	50 50 50 50 0 0	ug/L ug/L ug/L ug/L % Recovery	89-110% Limit		
		-				
<u></u>	·	·	Au	703 East Bethany Drive rora, CO 80014 03) 751-1780	•	

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### LABORATORY RESULTS TESTS 07/13/95 JOB NUMBER: 951430 CUSTOMER: GEOSCIENCE CONSULTANTS, LTD. ATTN: CLIENT I.D.....: REXENE COC #9051 LABORATORY 1.D...: 951430-0010 DATE SAMPLED.....: 06/22/95 DATE RECEIVED....: 06/23/95 TIME SAMPLED..... 09:20 TIME RECEIVED....: 11:00 WORK DESCRIPTION ...: 9506220920 REMARKS.....: WP-8 TEST DESCRIPTION FINAL RESULT LIMITS/\*DILUTION UNITS OF MEASURE TEST METHOD DATE TECHN 602 - VOLATILE AROMATIC ORGANICS \*500 602 (6) 07/03/95 DMJ 5600 250 Benzene ug/L Toluene ND 250 ug/L 250 Ethyl benzene ND ug/L ND 250 Xylenes ug/L 104 89-110% Limit 4-Bromofluorobenzene (Surrogate) % Recovery 0 Time Analyzed 2126 0 10703 East Bethany Drive Aurora, CO 80014 (303) 751-1780

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### LABORATORY TESTS RESULTS 07/13/95

### JOB NUMBER: 951430 CUSTOMER: GEOSCIENCE CONSULTANTS, LTD. ATTN:

CLIENT I.D.....: DATE SAMPLED.....: / / TIME SAMPLED.....: : WORK DESCRIPTION...: METHOD BLANK LABORATORY I.D...: 951430-0011 DATE RECEIVED....: / / TIME RECEIVED....: : REMARKS......

TEST	DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECH
602	- VOLATILE AROMATIC ORGANICS		*1		602 (6)	06/27/95	DMJ
	Benzene	ND	0.5	ug/L			
	Toluene	0.7	0.5	ug/L	1		
	Ethyl benzene	ND	0.5	ug/L			
	Xylenes	ND	0.5	ug/L			
	4-Bromofluorobenzene (Surrogate)	102	0	% Recovery	89-110% Limit		
	Time Analyzed	1310	0				
PAH	AND PHENOLS LIST BY 8270		*1		8270 (2)	06/26/95	MLA
	Acenaphthene	ND	10	ug/L			
	Acenaphthylene	ND	10	ug/L			
	Anthracene	ND	10	ug/L			
	Benzo(a)anthracene	ND	10	ug/L		ļ	
	Benzo(b)fluoranthene	ND	10	ug/L			
	Benzo(k)fluoranthene	ND	10	ug/L			
	Benzo(ghi)perylene	ND	10	ug/L			
	Benzo(a)pyrene	ND	10	ug/L			
	Chrysene	ND	10	ug/L		ļ	
	Dibenzo(a,h)anthracene	ND	10	ug/L			
	Fluoranthene	ND	10	ug/L			
	Fluorene	ND	10	ug/L			
	Indeno(1,2,3-cd)pyrene	ND	10	ug/L		1	
	1-Methylnaphthalene	ND	10	ug/L			
	2-Methylnaphthalene	ND	10	ug/L	1		
	Naphthalene	ND	10	ug/L			
	Phenanthrene	ND	10	ug/L			
	Pyrene	ND	10	ug/L			
	4-Chloro-3-methylphenol	ND	10	ug/L			
	2-Chlorophenol	ND	10	ug/L	1	1	
	2,4-Dichlorophenol	ND	10	ug/L			
	2,4-Dimethylphenol	ND	10	ug/L			
	2,4-Dinitrophenol	ND	50	ug/L			
	2-Methyl-4,6-dinitrophenol	ND	50	ug/L	1		
	2-Nitrophenol	ND	10	ug/L	]	1	
	4-Nitrophenol	ND	50	ug/L			
	Pentachlorophenol	ND	50	ug/L			
	Phenol .	ND	10	ug/L			
	2,4,6-Trichlorophenol	ND	10	ug/L			
	Nitrobenzene-d5 (Surrogate)	73	0	% Recovery	35-114% Limit	1	
	2-Fluorobiphenyl (Surrogate)	65	0	% Recovery	43-116% Limit		
	4-Terphenyl-d14 (Surrogate)	97	0	% Recovery	33-141% Limit		
	Phenol-d6 (Surrogate)	32	0	% Recovery	10-94% Limit		
	2-Fluorophenol (Surrogate)	54	0	% Recovery	21-100% Limit		
		·			03 East Bethany Drive ora, CO 80014	• 	

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	LABORATO	RY TESTS	RESULTS					
JOB NUMBER: 951430 CUSTOMER:	GEOSCIENCE CONS	07/13/95	ATTN:					
CLIENT I.D: LABORATORY I.D: 951430-0011 DATE SAMPLED: / / TIME SAMPLED: : / / TIME SAMPLED: : WORK DESCRIPTION: METHOD BLANK REMARKS								
TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE TECHN			
2,4,6-Tribromophenol (Surrogate) Time Analyzed Date Extracted	103 2009 06/26/95	0 0 0	% Recovery	10-123% Limit				
					-			
			Aur	03 East Bethany Drive ora, CO 80014 3) 751-1780				
		PAGE:18						

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### LABORATORY TESTS RESULTS 07/13/95

### JOB NUMBER: 951430 CUSTOMER: GEOSCIENCE CONSULTANTS, LTD. ATTN:

CLIENT I.D.....: DATE SAMPLED.....: / / TIME SAMPLED.....: : WORK DESCRIPTION...: METHOD BLANK LABORATORY I.D...: 951430-0012 DATE RECEIVED....: / / TIME RECEIVED....: : REMARKS......

ST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECH
H AND PHENOLS LIST BY 8270		*1		8270 (2)	06/29/95	MLA
Acenaphthene	ND	10	ug/L			
Acenaphthylene	ND	10	ug/i.			
Anthracene	ND	10	ug/L	-		
Benzo(a)anthracene	ND	10	ug/L			
Benzo(b)fluoranthene	ND	10	ug/L			
Benzo(k)fluoranthene	ND	10	ug/L	}		
Benzo(ghi)perylene	ND	10	ug/L			
Benzo(a)pyrene	ND	10	ug/L			
Chrysene	ND	10	ug/L			
Dibenzo(a,h)anthracene	ND	10	ug/L	}		
Fluoranthene	ND	10	ug/L			
Fluorene	ND	10	ug/L			
Indeno(1,2,3-cd)pyrene	ND	10	ug/L			
1-Methylnaphthalene	ND	10	ug/L			
2-Methylnaphthalene	ND	10	ug/L			
Naphthalene	ND	10	ug/L			
Phenanthrene	ND	10	ug/L			
Pyrene	ND	10	ug/L			
4-Chloro-3-methylphenol	ND	10	ug/L		1	
2-Chlorophenol	ND	10	ug/L			
2,4-Dichlorophenol	ND	10	ug/L			
2,4-Dimethylphenol	ND	10	ug/L			
2,4-Dinitrophenol	ND	50	ug/L			
2-Methyl-4,6-dinitrophenol	ND	50	ug/L			
2-Nitrophenol	ND	10	ug/L			
4-Nitrophenol	ND	50	ug/L			
Pentachlorophenol	ND	50	ug/L			
Phenol	ND	10	ug/L			
2,4,6-Trichlorophenol	ND	10	ug/L			
Nitrobenzene-d5 (Surrogate)	72	0	% Recovery	35-114% Limit		
2-Fluorobiphenyl (Surrogate)	68	ŏ	% Recovery	43-116% Limit		
4-Terphenyl-d14 (Surrogate)	99	Ō	% Recovery	33-141% Limit	1	
Phenol-d6 (Surrogate)	66	ŏ	% Recovery	10-94% Limit		
2-Fluorophenol (Surrogate)	46	Ő	% Recovery	21-100% Limit		
2,4,6-Tribromophenol (Surrogate)	88	ŏ	% Recovery	10-123% Limit		
Time Analyzed	1442	Ő	in Recovery			
Date Extracted	06/26/95	ő				
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			ł			
and the second					\	
				703 East Bethany Drive rora, CO 80014		
				03) 751-1780		
			()			

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## CORE LABORATORIES

		07/13/95							
IOB NUMBER: 951430 CUSTOMER:	GEOSCIENCE CONS	ULTANTS, LTD.	ATTN:						
CLIENT I.D: DATE SAMPLED: / / FIME SAMPLED: : WORK DESCRIPTION: METHOD BLANK	LABORATORY I.D: 951430-0013 DATE RECEIVED: / / TIME RECEIVED: : REMARKS								
TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECHN			
602 - VOLATILE AROMATIC ORGANICS		*1		602 (6)	06/30/95	DMJ			
Benzene Toluene Ethyl benzene Xylenes 4-Bromofluorobenzene (Surrogate) Time Analyzed	ND ND ND 104 0929	0.5 0.5 0.5 0.5 0	ug/L ug/L ug/L ug/L % Recovery	89-110% Limit					
		· . <u></u> <u>.</u>	Au	703 East Bethany Drive rora, CO 80014 D3) 751-1780					

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#### LABORATORY TESTS RESULTS 07/13/95

### JOB NUMBER: 951430 CUSTOMER: GEOSCIENCE CONSULTANTS, LTD. ATTN:

CLIENT I.D.....: DATE SAMPLED.....: / / TIME SAMPLED.....: : WORK DESCRIPTION...: METHOD BLANK

.

LABORATORY I.D...: 951430-0014 DATE RECEIVED....: / / TIME RECEIVED....: : REMARKS......

EST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECH
502 - VOLATILE AROMATIC ORGANICS		*1		602 (6)	07/01/95	DMJ
Benzene Toluene Ethyl benzene Xylenes 4-Bromofluorobenzene (Surrogate) Time Analyzed	ND ND ND 106 1610	0.5 0.5 0.5 0.5 0	ug/L ug/L ug/L ug/L % Recovery	89-110% Limit		
			Auro	3 East Bethany Drive ra, CO 80014 5) 751-1780		

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	LABORATO	RY TESTS 07/13/95	RESULTS	<u></u>						
JOB NUMBER: 951430 CUSTOMER:	GEOSCIENCE CONSU		ATTN:							
CLIENT I.D: DATE SAMPLED: / / TIME SAMPLED: : WORK DESCRIPTION: METHOD BLANK	LABORATORY I.D: 951430-0015 DATE RECEIVED: / / TIME RECEIVED: : REMARKS									
TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE TECHN					
602 - VOLATILE AROMATIC ORGANICS		*1		602 (6)	07/03/95 DMJ					
Benzene Toluene Ethyl benzene Xylenes 4-Bromofluorobenzene (Surrogate) Time Analyzed	ND ND ND 105 0947	0.5 0.5 0.5	ug/L ug/L ug/L ug/L % Recovery	89–110% Limit						
			Auro	03 East Bethany Drive ora, CO 80014 3) 751-1780						

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	QUAL	ITY CON	TROL REP 13/95	ORT		<u> </u>
JOB NUMBER: 951430	CUSTOMER: GEOSCIENCE			ATTN:		
BNA SPIKED ANALYSIS-WATER	DATE ANALYZED	: 06/29/95 TIME	E ANALYZED: 08:55	METHOD: 8270 (	2)	QC NUMBER:332572
		BLAI	I K S			
TEST DESCRIPTION	ANALY SUB-TYPE	ANALYSIS I.D.	DILUTION FACTOR	ANALYZED VALUE	DETECTION LIM	IT UNITS OF MEASURE
Time Analyzed	SB SBD	1540 1637	1	0	0	
Date Extracted	SB SBD	06/26/95 06/26/95	1	0	0	
		-				
				10703 Eas Aurora, C (303) 751	t Bethany Drive 0 80014 -1780	2

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	u 	UALITY	CONTR 07/13/9		PORT			
OB NUMBER: 951430 CUSI	OMER: GEOSC	IENCE CONSUL	TANTS, LTD.		ATTN:			na stant se stant Stant Stant Stant Stant Stant
NA SPIKED ANALYSIS-WATER	DATE ANA	LYZED: 06/29	95 TIME AN	ALYZED: 08:5	5 METHOD:	8270 (2)	QC	NUMBER:332572
		REFERE	NCES	TANDAR	DS			
TEST DESCRIPTION	ANALYSIS SUB-TYPE	ANALYSIS I. D.	DILUTION FACTOR	ANALYZED VALUE	TRUE VALUE	PERCENT RECOVERY	DETECTION LIMITS	UNITS OF MEASURE
Phenol	SB	8950525B 8950525B	1	82 63	100 100	82 63	10	ug/L
2-Chlorophenol	SBD SB SBD	B950525B B950525B B950525B	1	80 55	100	80 55	10 10 10	ug/L ug/L ug/L
,4-Dichlorobenzene	SB	8950525B 8950525B		73 62	100	73 62	10 10	ug/L ug/L
-Nitrosodi-n-propylamine	SB SBD	89505258 89505258	1	96 83	100 100	96 83	10 10	ug/L ug/L
1,2,4-Trichlorobenzene	SB SBD	В950525В В950525В	1	77 66	100 100	77 66	10 10	ug/L ug/L
-Chloro-3-methyiphenoi	SB SBD	89505258 89505258	1	96 83	100 100	96 83	10 10	ug/L ug/L
Acenaphthene	SB SBD	B950525B B950525B	1	89 78	100 100	89 78	10 10	ug/L ug/L
-Nitrophenol	SB SBD	B950525B B950525B	- 1	96 95	100 100	96 95	50 50	ug/L ug/L
2,4-Dinitrotoluene	SB SBD	8950525B 8950525B		95 90	100	95 90	10 10	ug/L ug/L
Pentachlorophenol	SB SBD	8950525B 8950525B	1   1   1	. 89 . 99	100 100 100	89 99	50 50	ug/L ug/L
yrene litrobenzene-d5 (Surrogate)	SB SBD SB	89505258 89505258 89505258		112 103 83	100	112 103 83	10 10 0	ug/L  ug/L  35-114% Limit
-Fluorobiphenyl (Surrogate)	SBD SBD SB	B950525B B950525B	1	77	100	77 81	0	35-114% Limit 43-116% Limit
-Terphenyl-d14 (Surrogate)	SBD	B950525B B950525B	1	72 108	100	72 108	0	43-116% Limit 33-141% Limit
Phenol-d6 (Surrogate)	SBD SBD	B950525B B950525B		93	100	93 80	0	33-141% Limit
2-Fluorophenol (Surrogate)	SBD SB	B950525B B950525B	1	62 60	100	62 60	0	10-94% Limit 21-100% Limit
2,4,6-Tribromophenol (Surrogate)	SBD SBD	8950525B 8950525B	1	38 102	100 100	38 102	0	21-100% Limit 10-123% Limit
	SBD	в950525в	1	91	100	91	0	10-123% Limit
								:
				<u> </u>				
					Aur	03 East Betha ora, CO 800 3) 751-1780	•	

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	QUAL		TROL REP 13/95	ORT		
DB NUMBER: 951430 CUS	TOMER: GEOSCIENCE	····	·····	ATTN:		
02 - VOLATILE AROMATIC ORGANICS	DATE ANALYZED	: 06/27/95 TIME	ANALYZED: 11:05	METHOD: 602 (6	·) (	C NUMBER:332580
		BLAN	i K S			
EST DESCRIPTION	ANALY SUB-TYPE	ANALYSIS I.D.	DILUTION FACTOR	ANALYZED VALUE		UNITS OF MEASUR
	SBD	1229	1	0	0	
				10703 Eas Aurora, C (303) 751	t Bethany Drive 0 80014 -1780	

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	Q	UALITY	C O N T R 07/13/9		PORT	·		
JOB NUMBER: 951430 CUST	DMER: GEOSC	IENCE CONSUL	TANTS, LTD.		ATTN:			
602 - VOLATILE AROMATIC ORGANICS	DATE ANA	LYZED: 06/27	795 TIME AN	ALYZED: 11:0	5 METHOD: 6	6) (6)	QC	NUMBER: 332580
		REFERE	N C E S	TANDAR	DS			
TEST DESCRIPTION	ANALYSIS SUB-TYPE	ANALYSIS I. D.	DILUTION FACTOR	ANALYZED VALUE	TRUE VALUE	PERCENT RECOVERY	DETECTION	UNITS OF MEASURE
Benzene Toluene Ethyl benzene Xylenes 4-Bromofluorobenzene (Surrogate)	SB SBD SB SBD SB SBD SB SBD SB SBD	T062795B T062795B T062795B T062795B T062795B T062795B T062795B T062795B T062795B T062795B	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	21.1 20.3 20.4 19.7 20.7 19.9 61.5 59.1 97 97	20.0 20.0 20.0 20.0 20.0 60.0 60.0 100 100	106 102 102 98 103 99 102 98 97 97 97	0.5 0.5 0.5 0.5 0.5 0.5 0.5 0 0	ug/L ug/L ug/L ug/L ug/L ug/L 89-110% Limit 89-110% Limit
					Auro	3 East Betha ra, CO 800 5) 751-1780		

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	QUAL	ITY CON 07/1	TROL REP 3/95	ORT		
JOB NUMBER: 951430	CUSTOMER: GEOSCIENCE	CONSULTANTS, LI	D.	ATTN:		
502 - VOLATILE AROMATIC ORGA	NICS DATE ANALYZED	: 06/30/95 TIME	ANALYZED: 07:44	METHOD: 602 (6	>) Q	C NUMBER:332584
		BLAN	KS			
TEST DESCRIPTION	ANALY SUB-TYPE	ANALYSIS I.D.	DILUTION FACTOR	ANALYZED VALUE	DETECTION LIMIT	UNITS OF MEASURE
fime Analyzed	SB SBD	0819 0854	1	0 0	0	
			-			
				10703 Fac	t Bethany Drive	
				Aurora, 0 (303) 751	:0 80014	

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	Q	UALITY	C O N T R 07/13/9	OL RE 5	PORT			
JOB NUMBER: 951430 CUSTO	DMER: GEOSC	IENCE CONSUL	TANTS, LTD.		ATTN:			
602 - VOLATILE AROMATIC ORGANICS	DATE ANA	LYZED: 06/30	/95 TIME AN	ALYZED: 07:4	4 METHOD: 6	602 (6)	QC	NUMBER:332584
		REFERE	NCES	TANDAR	DS			
TEST DESCRIPTION	ANALYSIS SUB-TYPE	ANALYSIS I. D.	DILUTION FACTOR	ANALYZED VALUE		PERCENT RECOVERY	DETECTION	UNITS OF MEASURE
Benzene	SB SBD	T950630B T950630B	1	19.3 20.2	20.0 20.0	97 101	0.5	ug/L ug/L
Toluene	SB SBD	T950630B T950630B		20.0	20.0	100	0.5	ug/L ug/L
Ethyl benzene	SB SBD	T950630B	1	19.6	20.0	98 102	0.5	ug/L ug/L
Xylenes	SB SBD	T950630B		61.4	60.0 60.0	102	0.5	ug/L ug/L
4-Bromofluorobenzene (Surrogate)	SB	T950630B	1	105	100	105	0	89-110% Limit 89-110% Limit
					Auro	03 East Beth bra, CO 800 3) 751-1780	any Drive D14	
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	QUAL	ITY CON 07/1	TROL REP 13/95	ORT	<u></u>	
JOB NUMBER: 951430 CUS	TOMER: GEOSCIENCE			ATTN:		
602 - VOLATILE AROMATIC ORGANICS	DATE ANALYZED	: 07/01/95 TIME	E ANALYZED: 14:18	METHOD: 602 (6	) Q(	NUMBER:332586
		BLAN	IKS			
TEST DESCRIPTION	ANALY SUB-TYPE	ANALYSIS I.D.	DILUTION FACTOR	ANALYZED VALUE	DETECTION LIMIT	UNITS OF MEASURE
Time Analyzed	SB SBD	1453 1536	1	0 0	0 0	
				10703 Eas Aurora, C (303) 751	t Bethany Drive O 80014 -1780	
		PAG	GE:29		<u> </u>	<u></u>

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	Q	UALITY	C O N T R 07/13/9		PORT			
JOB NUMBER: 951430 CUST	DMER: GEOSC	IENCE CONSUL	TANTS, LTD.		ATTN:			
602 - VOLATILE AROMATIC ORGANICS	DATE ANA	LYZED: 07/01	/95 TIME AN	IALYZED: 14:1	8 METHOD:	602 (6)	QC	NUMBER:332586
TEST DESCRIPTION	ANALYSIS SUB-TYPE	ANALYSIS I. D.	DILUTION FACTOR	ANALYZED VALUE	TRUE VALUE	PERCENT RECOVERY	DETECTION	
Benzene Toluene Ethyl benzene Xylenes 4-Bromofluorobenzene (Surrogate)	SB SBD SB SBD SB SBD SB SBD SB SBD	T950701B T950701B T950701B T950701B T950701B T950701B T950701B T950701B T950701B		19.9 20.5 19.9 20.4 19.8 20.4 61.8 63.4 104 105	20.0 20.0 20.0 20.0 20.0 60.0 60.0 100 100	99 102 99 102 103 106 104 105	0.5 0.5 0.5 0.5 0.5 0.5 0.5 0 0	ug/L ug/L ug/L ug/L ug/L ug/L 89-110% Limit 89-110% Limit
					Aur	03 East Betha ora, CO 800 3) 751-1780		

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JOB NUMBER: 951430 CUSTO	JOB NUMBER: 951430 CUSTOMER: GEOSCIENCE CONSULTANTS, LTD. ATTN:												
602 - VOLATILE AROMATIC ORGANICS	DATE ANALYZED	: 07/03/95 TIME	ANALYZED: 09:12	METHOD: 602 (6	) Q	C NUMBER:332589							
		BLAN	K S										
TEST DESCRIPTION	ANALY SUB-TYPE	ANALYSIS I.D.	DILUTION FACTOR	ANALYZED VALUE	DETECTION LIMIT	UNITS OF MEASURE							
Time Analyzed	MS (1428) MS (1429) MS (1430) MS (1431)	1612 1647 1722 1757											
				10703 Eas Aurora, C (303) 751	t Bethany Drive 0 80014 -1780								

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I.

QUALITY CONTROL REPORT 07/13/95												
USTOMER: 0	EOSCIENCE	CONSULTANTS	, LTD.		ATTN:							
02 - VOLATILE AROMATIC ORGANICS DATE ANALYZED: 07/03/95 TIME ANALYZED: 09:12 METHOD: 602 (6) QC NUMBER:332589												
		MATRI	(SPI)	ES.								
ANALYSIS SUB-TYPE	ANALYSIS I. D.	DILUTION	ANALYZED VALUE	ORIGINAL VALUE	SP I KE ADDED			UNITS OF MEASURE				
MS MS MS	951428-7 951429-9 951430-3	1 1 1	20.2 22.6 20.6	0 0 0	20.0 20.0 20.0	101 113 103	0.5 0.5 0.5	ug/L ug/L ug/L				
MS MS MS	951431-7 951428-7 951429-9 951430-3		22.5 19.6 22.3 20.6	0 0 0 0	20.0 20.0 20.0	112 98 112 103	0.5	ug/L ug/L ug/L ug/L				
MS MS MS	951431-7 951428-7 951429-9	1 1 1	22.4 19.4 22.3	0 0 0	20.0 20.0 20.0	112 97 112	0.5 0.5 0.5	ug/L ug/L ug/L				
MS MS MS	951431-7 951428-7 951429-9	1 1 1	22.4 60.4 69.4	0 0 0	20.0 60.0 60.0	112 101 116	0.5 0.5 0.5	ug/L ug/L ug/L ug/L ug/L				
MS MS MS MS	951431-7 951428-7 951429-9 951430-3	1 1 1 1	68.7 104 108 107	0 0 0	60.0 100 100 100	114 104 108 107	0.5 0 0 0	ug/L 89-110% Limit 89-110% Limit 89-110% Limit				
MS	951431-7	1	109	0	100	109	0	89-110% Limit				
ļ												
					*							
1	1		l 	1	Aurora	, CO 800		l				
	CS DATE ANALYSIS SUB-TYPE MS MS MS MS MS MS MS MS MS MS MS MS MS	USTOMER: GEOSCIENCE ( CS DATE ANALYZED: ANALYSIS ANALYZED: SUB-TYPE I. D. MS 951428-7 MS 951429-9 MS 951429-9 MS 951430-3 MS 951429-9 MS 951429-9 MS 951429-9 MS 951429-9 MS 951429-9 MS 951429-7 MS 951429-9 MS 951429-7 MS 951428-7 MS 951428-7 MS 951429-9 MS 951429-9 MS 951429-9 MS 951429-9 MS 951429-9 MS 951428-7 MS 951429-9 MS 951428-7 MS 951429-9 MS 951428-7 MS 951429-9 MS 951429-9	CS DATE ANALYZED: 07/03/95 T ANALYSIS ANALYZED: 07/03/95 T ANALYSIS ANALYSIS DILUTION SUB-TYPE I. D. FACTOR MS 951428-7 1 MS 951429-9 1 MS 951428-7 1 MS 951429-9 1 MS 951428-7 1 MS 951429-9 1 MS 951428-7 1 MS 951429-9 1 MS 951429-9 1 MS 951428-7 1 MS 951429-9 1 MS 951428-7 1 MS 951430-3 1	07/13/95 USTOMER: GEOSCIENCE CONSULTANTS, LTD. CS DATE ANALYZED: 07/03/95 TIME ANALYZED M A T R T X S P I K ANALYSIS ANALYSIS DILUTION ANALYZED SUB-TYPE I. D. FACTOR VALUE MS 951428-7 1 20.2 MS 951429-9 1 22.6 MS 951430-3 1 20.6 MS 951429-9 1 22.5 MS 951428-7 1 19.6 MS 951428-7 1 19.4 MS 951428-7 1 19.4 MS 951428-7 1 20.6 MS 951428-7 1 20.6 MS 951428-7 1 20.6 MS 951428-7 1 0.4 MS 951428-7 1 60.4 MS 951428-7 1 60.4 MS 951428-7 1 60.4 MS 951428-7 1 104 MS 951429-9 1 108 MS 951429-9 1 108 MS 951430-3 1 107	07/13/95           USTOMER: GEOSCIENCE CONSULTANTS, LTD.           CS DATE ANALYZED: 07/03/95 TIME ANALYZED: 09:12 I           M A T R I X         S P I K E S           ANALYSIS         DILUTION         ANALYZED         ORIGINAL           SUB-TYPE         I. D.         FACTOR         VALUE         VALUE           MS         951428-7         1         20.2         0           MS         951428-7         1         20.6         0           MS         951428-7         1         19.6         0           MS         951428-7         1         19.6         0           MS         951428-7         1         19.4         0           MS         951428-7         1         19.4         0           MS         951428-7         1         19.4         0           MS         951428-7         1         22.3         0           MS         951428-7         1         22.4	07/13/95       JSTOMER: GEOSCIENCE CONSULTANTS, LTD.     ATM:       CS DATE ANALYZED: 07/03/95 TIME ANALYZED: 09:12 METHOD: 602       MALYSIS     DILUTION     ANALYZED     ORIGINAL     SPIKE       ANALYSIS     DILUTION     ANALYSED     ORIGINAL     SPIKE       ANALYSIS     DILUTION     ANALYSED     ORIGINAL     SPIKE       MS     SPI428-7     1     1     20.0 <td>107/13/95 USTOMER: GEOSCIENCE CONSULTANTS, LTD. ATM: CS DATE ANALYZED: 07/03/95 TIME ANALYZED: 09:12 METHOD: 602 (6) MATRIX SPIKES ANALYSIS ANALYZED: 07/03/95 TIME ANALYZED 0RIGINAL SPIKE RECOVERY MS 951428-7 1 20.2 0 20.0 101 MS 951428-7 1 20.6 0 20.0 103 MS 951428-7 1 12.5 0 20.0 103 MS 951428-7 1 12.5 0 20.0 112 MS 951428-7 1 12.3 0 20.0 112 MS 951428-7 1 19.6 0 20.0 103 MS 951428-7 1 19.4 0 20.0 98 MS 951428-7 1 19.4 0 20.0 97 MS 951428-7 1 22.3 0 20.0 112 MS 951428-7 1 22.4 0 20.0 103 MS 951428-7 1 19.4 0 20.0 112 MS 951428-7 1 60.4 0 60.0 101 MS 951428-7 1 60.4 0 60.0 101 MS 951428-7 1 60.4 0 60.0 101 MS 951430-3 1 20.6 0 20.0 103 MS 951431-7 1 22.4 0 20.0 103 MS 951431-7 1 12.4 0 20.0 103 MS 951431-7 1 100 100 104 MS 951429-9 1 69.4 0 60.0 101 MS 951431-7 1 100 100 104 MS 951431-7 1 100 0 100 104 MS 951431-7 1 100 0 100 104 MS 951431-7 1 100 0 100 104 MS 951431-7 1 109 0 100 107 MS 951431-7 1 109 0 100 108 HS 951431-7 1 109 0 100 108 HS 951431-7 1 109 0 100 107 MS 951431-7 1 109 0 100 107 MS 951431-7 1 109 0 100 107 MS 951431-7 1 109 0 100 108 HS 951431-7 1 109 0 100 109 MS 951431-7 1 109 MS 951430-3 100 107 HS 951430-3 100 107 HS 951430-3 100 107 HS 951430-3 100 107 HS 951430-3 100 100 109 MS 951430-3 100 100 109 MS 951430-3 100 100 109 MS 951430-7 1 100 100 100 MS 951430-7 1 100 100 100 MS 951430-7 1 100 100 109 MS 951430-7 1 100 100 100 MS 951430-7 1 100 100 109 MS 951430-7 1 100 100 100 MS 951430-7 1</td> <td>07/13/95           ATTN:           ATTN:           CS DATE ANALYZED: 07/03/95 TIME ANALYZED: 09:12 METHOD: 602 (6)         QC           M A T R I X S P I K E S           ANALYSIS DILUTION FACTOR         ANALYZED ORIGINAL SPIKE PERCENT LIMITS           SUB-TYPE         ANALYSIS DILUTION FACTOR         ANALYZED ORIGINAL SPIKE ADDED         PERCENT DETECTION RECOVERY LIMITS           MS 951428-7 1         20.0         101         0.5           MS 951428-7         1         22.6         0         20.0         101         0.5           MS 951428-7         1         22.5         0         20.0         112         0.5           MS 951428-7         1         22.3         0         20.0         112         0.5           MS 951428-7         1         22.3         20.0         112         0.5           MS 951428-7         1         122.3         <th colspa<="" td=""></th></td>	107/13/95 USTOMER: GEOSCIENCE CONSULTANTS, LTD. ATM: CS DATE ANALYZED: 07/03/95 TIME ANALYZED: 09:12 METHOD: 602 (6) MATRIX SPIKES ANALYSIS ANALYZED: 07/03/95 TIME ANALYZED 0RIGINAL SPIKE RECOVERY MS 951428-7 1 20.2 0 20.0 101 MS 951428-7 1 20.6 0 20.0 103 MS 951428-7 1 12.5 0 20.0 103 MS 951428-7 1 12.5 0 20.0 112 MS 951428-7 1 12.3 0 20.0 112 MS 951428-7 1 19.6 0 20.0 103 MS 951428-7 1 19.4 0 20.0 98 MS 951428-7 1 19.4 0 20.0 97 MS 951428-7 1 22.3 0 20.0 112 MS 951428-7 1 22.4 0 20.0 103 MS 951428-7 1 19.4 0 20.0 112 MS 951428-7 1 60.4 0 60.0 101 MS 951428-7 1 60.4 0 60.0 101 MS 951428-7 1 60.4 0 60.0 101 MS 951430-3 1 20.6 0 20.0 103 MS 951431-7 1 22.4 0 20.0 103 MS 951431-7 1 12.4 0 20.0 103 MS 951431-7 1 100 100 104 MS 951429-9 1 69.4 0 60.0 101 MS 951431-7 1 100 100 104 MS 951431-7 1 100 0 100 104 MS 951431-7 1 100 0 100 104 MS 951431-7 1 100 0 100 104 MS 951431-7 1 109 0 100 107 MS 951431-7 1 109 0 100 108 HS 951431-7 1 109 0 100 108 HS 951431-7 1 109 0 100 107 MS 951431-7 1 109 0 100 107 MS 951431-7 1 109 0 100 107 MS 951431-7 1 109 0 100 108 HS 951431-7 1 109 0 100 109 MS 951431-7 1 109 MS 951430-3 100 107 HS 951430-3 100 107 HS 951430-3 100 107 HS 951430-3 100 107 HS 951430-3 100 100 109 MS 951430-3 100 100 109 MS 951430-3 100 100 109 MS 951430-7 1 100 100 100 MS 951430-7 1 100 100 100 MS 951430-7 1 100 100 109 MS 951430-7 1 100 100 100 MS 951430-7 1 100 100 109 MS 951430-7 1 100 100 100 MS 951430-7 1	07/13/95           ATTN:           ATTN:           CS DATE ANALYZED: 07/03/95 TIME ANALYZED: 09:12 METHOD: 602 (6)         QC           M A T R I X S P I K E S           ANALYSIS DILUTION FACTOR         ANALYZED ORIGINAL SPIKE PERCENT LIMITS           SUB-TYPE         ANALYSIS DILUTION FACTOR         ANALYZED ORIGINAL SPIKE ADDED         PERCENT DETECTION RECOVERY LIMITS           MS 951428-7 1         20.0         101         0.5           MS 951428-7         1         22.6         0         20.0         101         0.5           MS 951428-7         1         22.5         0         20.0         112         0.5           MS 951428-7         1         22.3         0         20.0         112         0.5           MS 951428-7         1         22.3         20.0         112         0.5           MS 951428-7         1         122.3 <th colspa<="" td=""></th>				

PAGE:32

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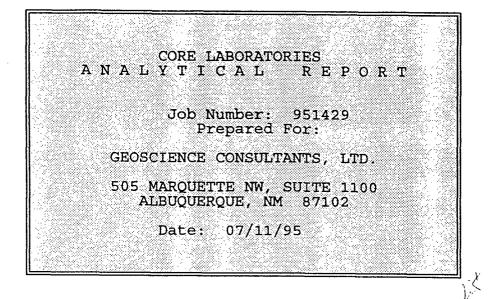


		QUALITY CO	NTROL FO	OTER	
		METHOD	REFERENCES	3	
(1)	EPA 600/4-79-020, Methods For Chen	nical Analysis Of W	ater And Wa	stes, March 1983	
(2)	EPA SW-846, Test Methods For Evaluation	ating Solid Waste,	Third Edition,	November 1986	
(3)	Standard Methods For The Examination	n Of Water And Wa	astewater, 17	th Edition, 1989	
(4)	EPA 600/4-80-032, Prescribed Proced	ures For Measurem	ent Of Radioa	ictivity In Drinking Water, August	1980
(5)	EPA 600/8-78-017, Microbiological Me	thods For Monitori	ing The Enviro	onment, December 1978	
(6)	Federal Register, July 1, 1990 (40 CFF	l Part 136)			
(7)	EPA 600/4-88-039, Methods For The	Determination Of O	rganics Comp	oounds in Drinking Water, Decemb	er 1988
(8)	U.S.G.S. Methods For The Determinati	on Of In <mark>organic</mark> Su	bstances in V	Vater And Fluvial Sediments, Book	5, Chapter A1, 1985
(9)	Federal Register, Friday, June 7, 1991	, (40 CFR Parts 14	1 and 142)		
(10)	Standard Methods For The Examination	n Of Water And Wa	astewater, 16	th Edition, 1985	
(11)	ASTM, Section 11 Water And Environ	mental Technology,	, Volume 11.0	01 Water (1), 1991	
(12)	Methods Of Soil Analysis, American S				
(13)	EPA SW-846, Test Methods For Evaluation				
(14)	ASTM, Section 5, Petroleum Products,				
(15)	EPA 600/2-78-054, Field and Laborato	ry Methods Applic	able To Overb	ourdens and Mine Soils, March 197	78
(16)	ASTM, Part 19, Soils and Rock; Buildin	ng Stones, 1981			
	NC = Not Calculable Due To			for percent moisture) unless other ion Limit.	
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	Blank QC Sample Identification			<u>1C Sample Identification</u>	
	MB Method Blank		MS	Method (Matrix) Spike	_
	MB Method Blank ICB Initial Calibration Blank		MS MSD	Method (Matrix) Spike Method (Matrix) Spike Duplicate	e
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	MB       Method Blank         ICB       Initial Calibration Blank         CCB       Continuing Calibration Blank         Reference Standard QC Sample Identif         LCS       Laboratory Control Standard         RS       Reference Standard		MS MSD PDS SB SBD <u>Duplica</u>	Method (Matrix) Spike Method (Matrix) Spike Duplicate Post Digestion Spike Spiked Blank Spiked Blank Duplicate ate QC Sample Identification	8
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Benkins 7-11-95 Date:

Name: Linda L. Benkers

Core Laboratories 10703 East Bethany Drive Aurora, CO 80014

Title: QA/QC Coordinator

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	LABORATORIES	East Bethany a, CO 80014- 51-1780		Matrix	H20	K70	H 20	VCH	H70	H20	HZD	H20	061	190 H			ドド	000				ients:		
	Lab Name CORE LAB	10703 Aurora 303/7:	Samplers (SIGNATURES)	Sample Number	9506220925	9506220930	9596220940	0506220945	95/6220950	9506221000	9506221005	9506221015	9586231820	9506221030	Project Information	Project DEVEL IE	Project Director	Charge Code No. 3031.006	Shipping ID. No.	3238365712	" Led X	Special Instructions/Comments:		
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 FAX: (301) 459-3054

NASA-WSTF
 PO Drawer MM
 Las Cruces, NM 88004
 (505) 524-5353
 FAX: (505) 524-5315

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### SAMPLE DELIVERY GROUP NARRATIVE

July 11, 1995

Customer: Geoscience Consultants, Ltd. Project: Rexene COC 9052 Core Laboratories Project Number: 951429

### Method 602 GC Organics

Sample 951429-2 (9506220930) is reported with elevated detection limits. The sample matrix did not show acceptable surrogate recovery at a higher sample concentration due to an interfering analyte that coeluted with the internal standard.

Jima Berken

Linda L. Benkers QA/QC Coordinator

James H. Travis Laboratory Supervisor

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## LABORATORY TESTS RESULTS 07/11/95

## JOB NUMBER: 951429 CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

CLIENT I.D..... REXENE COC #9052 DATE SAMPLED.....: 06/22/95 TIME SAMPLED.....: 09:25 WORK DESCRIPTION...: 9506220925

LABORATORY I.D:	951429-0001
DATE RECEIVED:	06/23/95
TIME RECEIVED:	11:00
REMARKS:	WP-10 🖌

T DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TEC
- VOLATILE AROMATIC ORGANICS		*50		602 (6)	07/02/95	DH
Benzene Toluene Ethyl benzene Xylenes 4-Bromofluorobenzene (Surrogate) Time Analyzed	800 V 91 42 46 108 0129	25 25 25 25 0 0	ug/L ug/L ug/L ug/L % Recovery	89-110% Limit		
	[		 107 Aur (30	03 East Bethany Drive ora, CO 80014 3) 751-1780	;	<u> </u>

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## LABORATORY TESTS RESULTS 07/11/95

### JOB NUMBER: 951429 CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

CLIENT I.D..... REXENE COC #9052 DATE SAMPLED.....: 06/22/95 TIME SAMPLED.....: 09:30 WORK DESCRIPTION...: 9506220930

LABORATORY I.D:	951429-0002
DATE RECEIVED:	06/23/95
TIME RECEIVED:	11:00
REMARKS:	WP-7 🗸

EST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECH
02 - VOLATILE AROMATIC ORGANICS		*20		602 (6)	07/03/95	DMJ
Benzene Toluene Ethyl benzene Xylenes 4-Bromofluorobenzene (Surrogate) Time Analyzed	ND ND ND 104 2200	10 / 10 10 10 0 0	ug/L ug/L ug/L ug/L % Recovery	89-110% Limit		
		1	Aur	03 East Bethany Drive ora, CO 80014 3) 751-1780		

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	LABORATO	RY TESTS 07/11/95	RESULTS								
JOB NUMBER: 951429 CUSTOMER:	GEOSCIENCE CONSU	JLTANTS, LTD.	ATTN:								
CLIENT I.D: REXENE COC #9052       LABORATORY I.D: 951429-0003         DATE SAMPLED: 06/22/95       DATE RECEIVED: 06/23/95         TIME SAMPLED: 09:40       TIME RECEIVED: 11:00         WORK DESCRIPTION: 9506220940       REMARKS: WP-26d											
IEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST. METHOD	DATE	TECH					
602 - VOLATILE AROMATIC ORGANICS		*10		602 (6)	07/02/95	DMJ					
Benzene Toluene Ethyl benzene Xylenes 4-Bromofluorobenzene (Surrogate) Time Analyzed	81 6 ND 44 103 0204	5 5 5 5 0 0	ug/L ug/L ug/L ug/L % Recovery	89-110% Limit							
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# CORE LABORATORIES

	LABORATO	RY TESTS 07/11/95	RESULTS							
JOB NUMBER: 951429 CUSTOMER:	GEOSCIENCE CONSI	JLTANTS, LTD.	ATTN:							
CLIENT 1.D: REXENE COC #9052       LABORATORY I.D: 951429-0004         DATE SAMPLED: 06/22/95       DATE RECEIVED: 06/23/95         TIME SAMPLED: 09:45       TIME RECEIVED: 11:00         WORK DESCRIPTION: 9506220945       REMARKS: WP-20										
TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE TI	ECHN				
602 - VOLATILE AROMATIC ORGANICS		*100		602 (6)	07/02/95	DMJ				
Benzene Toluene Ethyl benzene Xylenes 4-Bromofluorobenzene (Surrogate) Time Analyzed	2000 ND ND 106 0238	50 50 50 50 0 0	ug/L ug/L ug/L ug/L % Recovery	89-110% Limit						
			Aur	03 East Bethany Drive ora, CO 80014 3) 751-1780						

PAGE:4 B

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#### LABORATORY TESTS RESULTS 07/11/95

#### JOB NUMBER: 951429

CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

#### ATTN:

LABORATORY I.D...: 951429-0005

DATE RECEIVED....: 06/23/95

TIME RECEIVED....: 11:00 REMARKS...... WP-28

CLIENT I.D..... REXENE COC #9052 DATE SAMPLED.....: 06/22/95 
 FIME
 SAMPLED......:
 09:50

 VORK
 DESCRIPTION...:
 9506220950

TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE TECH
502 - VOLATILE AROMATIC ORGANICS Benzene Toluene Ethyl benzene	2600 V ND ND	*50 25 25 25 25	ug/L ug/L ug/L	602 (6)	07/02/95 DMJ
Xylenes 4-Bromofluorobenzene (Surrogate) Time Analyzed	ND 102 0313	25 0 0	ug/L X Recovery	89-110% Limit	
			10 Au	703 East Bethany Dr rora, CO 80014	ive
			(3	03) 751-1780	

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	LABORATORY TESTS RESULTS 07/11/95							
JOB NUMBER: 951429 CUSTOMER:	GEOSCIENCE CONSULTANTS, LTD. ATTN:							
CLIENT I.D: REXENE COC #9052 DATE SAMPLED: 06/22/95 TIME SAMPLED: 10:00 WORK DESCRIPTION: 9506221000	LABORATORY I.D: 951429-0006 DATE RECEIVED: 06/23/95 TIME RECEIVED: 11:00 REMARKS WP-17							
TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECHN		
602 - VOLATILE AROMATIC ORGANICS		*100		602 (6)	06/27/95	DMJ		
Benzene Toluene Ethyl benzene Xylenes 4-Bromofluorobenzene (Surrogate) Time Analyzed	5400 81 110 ND 104 2130	50 50 50 50 0 0	ug/L ug/L ug/L ug/L % Recovery	89-110% Limit				
	: •							
			Aur (30	03 East Bethany Drive ora, CO 80014 3) 751-1780	·			
		PAGE:6	ß					

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	LABORATO	RY TESTS 07/11/95	RESULTS				
JOB NUMBER: 951429 CUSTOMER:	GEOSCIENCE CONSU		ATTN:				
CLIENT I.D: REXENE COC #9052 DATE SAMPLED: 06/22/95 TIME SAMPLED: 10:05 WORK DESCRIPTION: 9506221005	LABORATORY I.D: 951429-0007 DATE RECEIVED: 06/23/95 TIME RECEIVED: 11:00 REMARKS WP-22						
TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE TECH		
602 - VOLATILE AROMATIC ORGANICS		*50		602 (6)	07/03/95 DHJ		
Benzene Toluene Ethyl benzene Xylenes 4-Bromofluorobenzene (Surrogate) Time Analyzed	1500 ND 36 ND 105 2016	25 25 25 25 25 0 0	ug/L ug/L ug/L ug/L ug/L % Recovery	89-110% Limit			
		-					
			107	703 East Bethany Drive			
			Aur	rora, CO 80014 03) 751-1780			

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# LABORATORY TESTS RESULTS 07/11/95

#### JOB NUMBER: 951429 CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

CLIENT I.D.....: REXENE COC #9052 DATE SAMPLED.....: 06/22/95 TIME SAMPLED.....: 10:15 WORK DESCRIPTION...: 9506221015

LABORATORY I.D:	951429-0008
DATE RECEIVED:	06/23/95
TIME RECEIVED:	
REMARKS:	WP-24 🗸

*10 5 5 5 0 0	ug/L ug/L ug/L ug/L % Recovery	602 (6) 89-110% Limit	07/03/95	DMJ
5 5 5 0	ug/L ug/L ug/L	89-110% Limit		
	-			
	107 Aur (30	703 East Bethany Driv ora, CO 80014 33) 751-1780	ve	
	PAGE-8	Aur (30	Aurora, CO 80014 (303) 751-1780	

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# LABORATORY TESTS RESULTS 07/11/95

# JOB NUMBER: 951429 CUSTOMER: GEOSCIENCE CONSULTANTS, LTD.

CLIENT I.D.....: REXENE COC #9052 DATE SAMPLED.....: 06/22/95 TIME SAMPLED.....: 10:30 WORK DESCRIPTION...: 9506221030

#### LABORATORY I.D...: 951429-0009 DATE RECEIVED...: 06/23/95 TIME RECEIVED...: 11:00 REMARKS..... FIELD BLANK

TEST	DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECH
602	- VOLATILE AROMATIC ORGANICS		*1		602 (6)	06/26/95	DMJ
	Benzene Toluene Ethyl benzene Xylenes 4-Bromofluorobenzene (Surrogate) Time Analyzed	ND ND ND 97 1749	0.5 0.5 0.5 0.5 0 0	ug/L ug/L ug/L ug/L % Recovery	89-110% Limīt		
				107 Aur (30	703 East Bethany Drive Fora, CO 80014 73) 751-1780	!	

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### JOB NUMBER: 951429 CUSTOMER: GEOSCIENCE CONSULTANTS, LTD. ATTN:

CLIENT I.D.....: DATE SAMPLED.....: / / TIME SAMPLED.....: : WORK DESCRIPTION...: METHOD BLANK

LABORATORY I.D...: 951429-0010 DATE RECEIVED...: / / TIME RECEIVED...: : REMARKS.....

EST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECH
502 - VOLATILE AROMATIC ORGANICS		*1		602 (6)	06/26/95	DMJ
Benzene Toluene Ethyl benzene Xylenes 4-Bromofluorobenzene (Surrogate) Time Analyzed	ND ND ND 99 0932	0.5 0.5 0.5 0.5 0 0	ug/L ug/L ug/L ug/L % Recovery	89-110% Limit		
- -						
			Au	703 East Bethany Drive rora, CO 80014 03) 751-1780		

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#### JOB NUMBER: 951429 CUSTOMER: GEOSCIENCE CONSULTANTS, LTD. ATTN:

CLIENT I.D.....: DATE SAMPLED.....: / / TIME SAMPLED.....: : WORK DESCRIPTION...: METHOD BLANK

#### LABORATORY I.D...: 951429-0011 DATE RECEIVED...: / / TIME RECEIVED...: : REMARKS.....

TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECH
602 - VOLATILE AROMATIC ORGANICS		*1		602 (6)	06/27/95	DMJ
Benzene Toluene Ethyl benzene Xylenes 4-Bromofluorobenzene (Surrogate) Time Analyzed	ND ND ND 101 2049	0.5 0.5 0.5 0.5 0 0	ug/L ug/L ug/L úg/L % Recovery	89-110% Limit		
			Aur	03 East Bethany Driv ora, CO 80014 3) 751-1780	e	

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	LABORATORY TESTS RESULTS 07/11/95 GEOSCIENCE CONSULTANTS LTD.								
OB NUMBER: 951429 CUSTOMER:	GEOSCIENCE CONS	ULTANTS, LTD.	ATTN:						
CLIENT I.D DATE SAMPLED: / / TIME SAMPLED: : WORK DESCRIPTION: METHOD BLANK	LABORATORY I.D: 951429-0012 DATE RECEIVED: / / TIME RECEIVED: : REMARKS								
TEST DESCRIPTION	FINAL RESULT LIMITS/*DILU		UNITS OF MEASURE	TEST METHOD	DATE TEC				
502 - VOLATILE AROMATIC ORGANICS		*1		602 (6)	07/01/95 DM				
Benzene Toluene Ethyl benzene Xylenes 4-Bromofluorobenzene (Surrogate) Time Analyzed	ND ND ND 106 1610	0.5 0.5 0.5 0.5 0 0	ug/L ug/L ug/L ug/L % Recovery	89-110% Limit					
			Auro	03 East Bethany Drive ora, CO 80014 3) 751-1780					
		PAGE:12							

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OB NUMBER: 951429 CUSTOMER: GEOSCIENCE CONSULTANTS, LTD. ATTN:

LIENT I.D..... ATE SAMPLED.....: / / IME SAMPLED.....: : FORK DESCRIPTION...: METHOD BLANK

#### LABORATORY I.D...: 951429-0013 DATE RECEIVED....: / / TIME RECEIVED....: : REMARKS......

EST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECHN
JO2 - VOLATILE AROMATIC ORGANICS		*1		602 (6)	07/03/95	DMJ
Benzene Toluene Ethyl benzene Xylenes 4-Bromofluorobenzene (Surrogate) Time Analyzed	ND ND ND 105 0947	0.5 0.5 0.5 0.5 0 0	ug/L ug/L ug/L ug/L % Recovery	89-110% Limit		
			10 Au (3)	703 East Bethany Drive rora, CO 80014 03) 751-1780	: 	

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	QUAL	ITY CON 07/1	TROL REP 1/95	ORT		
DB NUMBER: 951429	CUSTOMER: GEOSCIENCE	CONSULTANTS, LI	D.	ATTN:		
02 - VOLATILE AROMATIC ORGAN	IICS DATE ANALYZED	: 06/26/95 TIME	ANALYZED: 07:29	METHOD: 602 (6	) 0	C NUMBER:332578
		BLAJ	<u> </u>			
EST DESCRIPTION	ANALY SUB-TYPE	· · · · · · · · · · · · · · · · · · ·	· · · ·	ANALYZED VALUE	DETECTION LIMIT	UNITS OF MEASUR
ime Analyzed	SB SBD	0810 0851	1	0 0	0	
		<u> </u>		10703 Ea Aurora, (303) 75	 st Bethany Drive CO 80014 1-1780	

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OB NUMBER: 951429 CUST	MER. GEUSC	IENCE CONSUL	TANTS, LTD.		ATTN:			
02 - VOLATILE AROMATIC ORGANICS	DATE ANA			ALYZED: 07:2				IUMBER:332578
TEST DESCRIPTION	ANALYSIS SUB-TYPE	REFERE ANALYSIS I. D.	N C E S DILUTION FACTOR	T A N D A R ANALYZED VALUE	D S TRUE VALUE	PERCENT RECOVERY	DETECTION	UNITS OF MEASURE
Benzene	SB	T062695B	1	20.8	20.0	104	0.5	ug/L
Toluene	SBD SB	T062695B T062695B		21.5	20.0	108	0.5	ug/L ug/L
thyl benzene	SBD SB	T062695B T062695B T062695B	1	20.8 20.6 21.2	20.0 20.0 20.0	104 103 106	0.5 0.5 0.5	ug/L ug/L ug/L
lenes	SBD SB SBD	T0626958	1	60.7 62.7	60.0 60.0	101	0.5	ug/L ug/L
4-Bromofiuorobenzene (Surrogate)	SBD SBD SBD	T062695B	1	96 97	100	96 97	0	89–110% Limit 89–110% Limit
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	QUAL	ITY CON 07/	TROL REP 11/95	ORT		
JOB NUMBER: 951429	CUSTOMER: GEOSCIENCE			ATTN:		·····
602 - VOLATILE AROMATIC ORGA	ANICS DATE ANALYZED	: 06/27/95 TIM	E ANALYZED: 11:05	METHOD: 602 (6		C NUMBER:332580
		BLA	N K S			
TEST DESCRIPTION	ANALY SUB-TYPE	ANALYSIS I.D.	DILUTION FACTOR	ANALYZED VALUE	DETECTION LIMIT	UNITS OF MEASURE
Time Analyzed	SB SBD	1147 1229	1 1	0	0 0	
			· · ·	10703 Ea Aurora, (303) 75	st Bethany Drive CO 80014 1-1780	<u>.</u>

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OB NUMBER: 951429 CUSTO	MER: GEOSC	IENCE CONSUL	TANTS, LTD.		ATTN:			
02 - VOLATILE AROMATIC ORGANICS	DATE ANA	LYZED: 06/27	795 TIME AN	ALYZED: 11:0	5 METHOD:	602 (6)	90 1	IUMBER:332580
		REFERE	NCES	TANDAR	DS			
EST DESCRIPTION	ANALYSIS SUB-TYPE	ANALYSIS I. D.	DILUTION FACTOR	ANALYZED VALUE	TRUE VALUE	PERCENT RECOVERY	DETECTION LIMITS	UNITS OF MEASURE
Benzene	SB SBD	T062795B	1	21.1 20.3	20.0	106 102	0.5	ug/L ug/L
foluene	SBD	T062795B	1	20.4	20.0	102 98	0.5	ug/L ug/L
thyl benzene	SB SBD	T0627958 T062795B	1	20.7	20.0	103 99	0.5	ug/L ug/L
ylenes	SB SBD	T062795B T062795B	1	61.5 59.1	60.0 60.0	102 98	0.5	ug/L ug/L
-Bromofluorobenzene (Surrogate)	SB SBD	T062795B T062795B	1	97 97	100 100	97 97	0	89-110% Limit 89-110% Limit
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	QUAL	ITY CON 07/	TROL REP 11/95	ORT	- <b>Mari</b>	
JOB NUMBER: 951429	CUSTOMER: GEOSCIENCE	CONSULTANTS, L	ю.	ATTN:		
502 - VOLATILE AROMATIC ORG		: 07/01/95 TIM	E ANALYZED: 14:18	METHOD: 602 (6	) Q	C NUMBER:332586
		BLA	<u></u>			
TEST DESCRIPTION	ANALY SUB-TYPE	ANALYSIS I.D.	DILUTION FACTOR	ANALYZED VALUE	DETECTION LIMIT	UNITS OF MEASURE
Time Analyzed	SB SBD	1453 1536	1 1	0 0	0 0	
				10703 Ea	st Bethany Drive	
				Aurora, (303) 75	CO 80014 1-1780	

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	QL	JALITY	CONTR 07/11/9		PORT			
OB NUMBER: 951429 CUSTO	DMER: GEOSCI	ENCE CONSUL	TANTS, LTD.		ATTN:			
502 - VOLATILE AROMATIC ORGANICS				ALYZED: 14:1				NUMBER:332586
TEST DESCRIPTION	ANALYSIS SUB-TYPE	REFERE ANALYSIS I. D.	N C E S DILUTION FACTOR	TANDAR ANALYZED VALUE	D S TRUE VALUE	PERCENT RECOVERY	DETECTION	UNITS OF MEASURE
Benzene	SB	т950701в	1	19.9	20.0	99	0.5	ug/L
Toluene	SBD SB SBD	T950701B T950701B T950701B	1 1 1	20.5 19.9 20.4	20.0 20.0 20.0	102 99 102	0.5 0.5 0.5	ug/L ug/L ug/L
Ethyl benzene	SB SBD	T950701B T950701B	1	19.8 20.4	20.0	99	0.5	ug/L
Xylenes	SBD SBD SBD	T950701B T950701B	1	61.8	60.0	102	0.5	ug/L ug/L
4-Bromofluorobenzene (Surrogate)	SBD SB SBD	1950701B 1950701B 1950701B	1 1 1	63.4 104 105	60.0 100 100	106 104 105	0.5 0 0	ug/L 89-110% Limit 89-110% Limit
······································						703 East Beth		,, <b>.</b> ,
						rora, CO 80 03) 751-1780	014	

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	QUAL	ITY CON 07/1	TROL REP 1/95	ORT		
JOB NUMBER: 951429 CUSTO	MER: GEOSCIENCE			ATTN:		
502 - VOLATILE AROMATIC ORGANICS	DATE ANALYZED	: 07/03/95 TIME	ANALYZED: 09:12	METHOD: 602 (6	) Q	C NUMBER:332589
	1	BLAN	1			
TEST DESCRIPTION	ANALY SUB-TYPE	ANALYSIS I.D.	DILUTION FACTOR	ANALYZED VALUE	DETECTION LIMIT	UNITS OF MEASURE
Time Analyzed	MS (1428) MS (1429) MS (1430) MS (1431)	1612 1647 1722 1757	1 1 1 1	0 0 0 0	0 0 0 0	
				10703 Ea: Aurora, ( (303) 75	st Bethany Drive 80014	

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		QUALI		ONTROL 07/11/95	REPO	RT			<u></u>
JOB NUMBER: 951429 C	USTOMER: (	EOSCIENCE (	CONSULTANTS	LTD.		ATTN:			
602 - VOLATILE AROMATIC ORGANI	CS DATI	E ANALYZED:		81.15.19.45.8 s.24.	New Joseph Control of	4ethod: 602	(6)	QC	NUMBER: 332589
TEST DESCRIPTION	ANALYSIS SUB-TYPE	ANALYSIS I. D.	N A T R L ) DILUTION FACTOR	(SPI) ANALYZED VALUE	CES ORIGINAL VALUE	SPIKE ADDED	PERCENT	DETECTION	
Benzene	MS MS MS	951428-7 951429-9 951430-3	1 1 1	20.2 22.6 20.6	0 0 0	20.0 20.0 20.0	101 113 103	0.5 0.5 0.5	ug/L ug/L ug/L
Toluene	MS MS MS MS	951431-7 951428-7 951429-9 951430-3	1 1 1 1	22.5 19.6 22.3 20.6	0 0 0	20.0 20.0 20.0 20.0	112 98 112 103	0.5 0.5 0.5 0.5	ug/L ug/L ug/L ug/L
Ethyl benzene	MS MS MS MS	951431-7 951428-7 951429-9 951430-3		22.4 19.4 22.3 20.6	0 0 0	20.0 20.0 20.0 20.0	112 97 112 103	0.5 0.5 0.5 0.5	ug/L ug/L ug/L ug/L
Xylenes	MS MS MS MS	951431-7 951428-7 951429-9 951430-3	1 1 1	22.4 60.4 69.4 64.1	0 0 0 0	20.0 60.0 60.0 60.0	112 101 116 107	0.5 0.5 0.5 0.5	ug/L ug/L ug/L ug/L
4-Bromofluorobenzene (Surrogat	MS MS MS MS MS	951431-7 951428-7 951429-9 951430-3 951431-7	1 1 1 1 1	68.7 104 108 107 109	0 0 0 0	60.0 100 100 100 100	114 104 108 107 109	0.5 0 0 0 0	ug/L 89-110% Limit 89-110% Limit 89-110% Limit 89-110% Limit
	r 	I 		1	1 	Auror	East Betha a, CO 800 751-1780	•	1

PAGE:21

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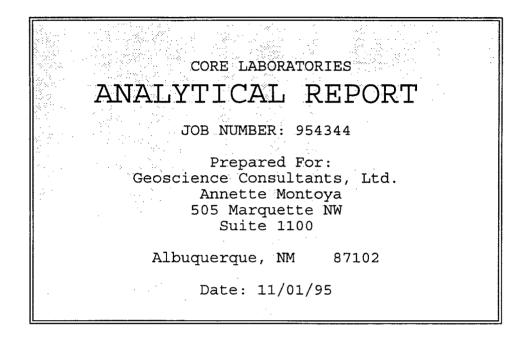


		METHOD	REFERENCES		
)	EPA 600/4-79-020, Methods For Ch	emical Analysis Of W	ster And Was	ites, March 1983	
2)	EPA SW-846, Test Methods For Eva	uating Solid Waste, T	hird Edition,	November 1986	
3)	Standard Methods For The Examinat	on Of Water And Wa	stewater, 17	th Edition, 1989	
4)	EPA 600/4-80-032, Prescribed Proce	dures For Measureme	ent Of Radioa	ctivity In Drinking Water, August 1	980
5)	EPA 600/8-78-017, Microbiological	Methods For Monitoria	ng The Enviro	nment, December 1978	
5)	Federal Register, July 1, 1990 (40 C				
7)	EPA 600/4-88-039, Methods For Th	a Determination Of O	rganics Comp	ounds In Drinking Water, Decembe	er 1988
3)	U.S.G.S. Methods For The Determin	ation Of Inorganic Sul	ostances in W	/ater And Fluvial Sediments, Book	5, Chapter A1, 1985
3)	Federal Register, Friday, June 7, 199	1, (40 CFR Parts 141	and 142)		
10)	Standard Methods For The Examinat				
11)	ASTM, Section 11 Water And Enviro				
12)	Methods Of Soil Analysis, American				
13)	EPA SW-846, Test Methods For Eva	-			
14}	ASTM, Section 5, Petroleum Produc	•	-		
15) 16)	EPA 600/2-78-054, Field and Labora ASTM, Part 19, Soils and Rock; Buil		able To Overb	ourgens and Mine Soils, March 197	8
	Blank QC Sample Identification           MB         Method Blank           ICB         Initial Calibration Blank           CCB         Continuing Calibration Blank           Reference Standard QC Sample Ident           LCS         Laboratory Control Standard           RS         Reference Standard	ntification	MS MSD PDS SB SBD	<u>2C Sample Identification</u> Method (Matrix) Spike Method (Matrix) Spike Duplicate Post Digestion Spike Spiked Blank Spiked Blank Duplicate ate QC Sample Identification	,
	ICV Initial Calibration Verification	1 Standard	MD	Method (Matrix) Duplicate	
	CCV Continuing Calibration Verifi	cation Standard	ED	Extraction Duplicate	
	ISA/ISB ICP Interference Check S	amples	DD	Digestion Duplicate	
	Analyses performed by a subcontra "Technician" using the following co	des:			
	Subcontract Laboratory	Code		ntract Laboratory	
	Core Laboratories - Anaheim, CA	• AN		aboratories - Lake Charles, LA	+ LC
		• CA		aboratories - Long Beach, CA	• LB
	Core Laboratories - Casper, WY		CITMME '	Subcontract Laboratories	• XX
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# **CORE LABORATORIES**



art. Berchand Signature

Name: Linda L. Benkers Title: QA/QC Coordinator

11-1-95

Date

CORE LABORATORIES, INC. Analytical Chemistry Division 10703 East Bethany Drive Aurora, CO 80014

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 (505) 524-5353
 FAX: (505) 524-5315

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Signature     Comparison     Comparison       Comparison     Comp	Sector     Sector <th>Drive     Drive       Drive     2696       2696     2696       2696     2696       2696     26046010       Multiple     4000000000000000000000000000000000000</th> <th>Image: Second /th>	Drive     Drive       Drive     2696       2696     2696       2696     2696       2696     26046010       Multiple     4000000000000000000000000000000000000	Image: Second
		Drive       Drive       Drive       2696       2696       2696       2696       2696       2696       2696       2696       2696       2696       2696       2696       2696       2696       2696       2696       2696       2600       2600       274344       9544344	ORIES       ORIES       Beethany Drive       B0014-2696       B0014-2696       Bould atrix       Location       Halogenated       Volatilies 601/8010       Conterner       Conterner       Conterner       Contormes to Receipt       Total No. of Containers       Conformes to Record       Lab No.       Styles 44

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### SAMPLE DELIVERY GROUP NARRATIVE

#### October 31, 1995

Customer:Geoscience Consultants, Ltd.Project:Rexene Quarterly Waters COC # 9423Core Laboratories Project Number:954344

#### Method 8270 GC/MS Semi-volatiles Analysis:

Sample 954344-1 (9509251205) has results reported at a 10x dilution because quality control would not pass method acceptance criteria on the 1x analysis.

Samples 954344-2 (9509251240), 954344-3 (9509251310), 954344-4 (9509251350), 954344-5 (9509251450), 954344-7 (9509251535), and 954344-8 (9509251540) were all extracted at a 10x preparation dilution because the samples emulsified when extracted at a 1x.

Linda Borkers

Linda L. Benkers QA/QC Coordinator

Laboratory Manager



Job Number Customer Job Received Date:	Geoscience Consultants, Ltd.	Project Number 95000161 Customer Project ID: REXENE COC #942 Project Description: GCL Rexene Quar	3 terly Waters
----------------------------------------------	------------------------------	---------------------------------------------------------------------------------------------------------	-------------------

Sample ID	Sample ID	Matrix	Sampled	Sampled	Received	Received
954344-1	9509251205	Water	09/25/95	12:05	09/26/95	10:30
954344-2	9509251240	Water	09/25/95	12:40	09/26/95	10:30
954344-3	9509251310	Water	09/25/95	13:10	09/26/95	10:30
954344-4	9509251350	Water	09/25/95	13:50	09/26/95	10:30
954344-5	9509251450	Water	09/25/95	14:50	09/26/95	10:30
954344-6	9509251455	Water	09/25/95	14:55	09/26/95	10:30
954344-7	9509251535	Water	09/25/95	15:35	09/26/95	10:30
954344-8	9509251540	Water	09/25/95	15:40	09/26/95	10:30
954344-9	9509251550	Water	09/25/95	15:50	09/26/95	10:30

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LABORATORY TEST RESULTS Job Number: 954344

Report Date: 11/01/95

CUSTOMER: Geoscience Consultants, Ltd. PROJECT: REXENE COC #9423

ATTN: Annette Montoya

Customer Sample ID: 9509251205 Sample Date.....: 09/25/95 Sample Time.....: 12:05 Sample Matrix....: Water Laboratory Sample ID: 954344-1 Date Received.....: 09/26/95 Time Received.....: 10:30

# MW-14

TEST DESCRIPTION	TEST MATRIX	FINAL RESULT	DETECTION LIMIT	UNITS	TEST METHOD	ANALYZED
Volatile Organics -Aromatics Benzene Ethylbenzene Toluene Xylenes (total)		ND ND ND ND	0.5 0.5 0.5 0.5	ug/L ug/L ug/L ug/L	SW-846 8020	10/10/95 10/10/95 10/10/95 10/10/95
-						

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Job Number: 954344

LABORATORY TEST RESULTS

Report Date: 11/01/95

#### CUSTOMER: Geoscience Consultants, Ltd. PROJECT: REXENE COC #9423

ATTN: Annette Montoya

Customer Sample ID: 9509251240 Sample Date.....: 09/25/95 Sample Time.....: 12:40 Sample Matrix....: Water Laboratory Sample ID: 954344-2 Date Received.....: 09/26/95 Time Received.....: 10:30  $\mu \cup - //$ 

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TEST DESCRIPTION	TEST MATRIX	FINAL RESULT	DETECTION LIMIT	UNITS	TEST I	METHOD	ANALYZED
Extraction (Sep. Funnel) SVOC	i				SW-846	3510	р 8 -
Separatory Funnel Liq/Liq Extraction		Complete		mL			10/02/95
Semivolatile Organics (Client List)					SW-846	8270	
Acenaphthene		ND	100	ug/L			10/03/95
Acenaphthylene		ND	100	ug/L			10/03/95
Anthracene		ND	100	ug/L			10/03/95
Benzo(a)anthracene		ND	100	ug/L			10/03/95
Benzo(b)fluoranthene		ND	100	ug/L			10/03/95
Benzo(k)fluoranthene		ND	100	ug/L			10/03/95
Benzo(ghi)perylene		ND	100	ug/L			10/03/95
Benzo(a)pyrene		ND	100	ug/L			10/03/95
Chrysene		ND	100	ug/L			10/03/95
Dibenzo(a,h)anthracene		ND	100	ug/L			10/03/95
Fluoranthene	1	ND	100	ug/L			10/03/95
Fluorene		ND	100	ug/L			10/03/95
Indeno(1,2,3-cd)pyrene		ND	100	ug/L			10/03/95
1-Methylnaphthalene		140	100	ug/L			10/03/95
2-Methylnaphthalene		ND	100	ug/L			10/03/95
Naphthalene		ND	100	ug/L			10/03/95
Phenanthrene		ND	100	ug/L			10/03/95
Pyrene		ND	100	ug/L			10/03/95
4-Chloro-3-methylphenol		ND	100	ug/L	1		10/03/95
2-Chlorophenol		ND	100	ug/L			10/03/95
2,4-Dichlorophenol		ND	100	ug/L			10/03/95
2,4-Dimethylphenol	1	ND	100	ug/L			10/03/95
2,4-Dinitrophenol		ND	500	ug/L			10/03/95
2-Methyl-4,6-dinitrophenol		ND	500	ug/L			10/03/95
2-Nitrophenol		ND	100	ug/L			10/03/95
4-Nitrophenol		ND	500	ug/L			10/03/95
Pentachlorophenol		ND	500	ug/L			10/03/95
Phenol		ND	100	ug/L			10/03/95
2,4,6-Trichlorophenol		ND	100	ug/L			10/03/95
Volatile Organics -Aromatics					SW-846	8020	
Benzene		80	10	ug/L			10/07/95
Ethylbenzene		ND	10	ug/L			10/07/95
Toluene		ND	10	ug/L			10/07/95
Xylenes (total)		10	10	ug/L			10/07/95
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LABORATORY TEST RESULTS Job Number: 954344
CUSTOMER: Geoscience Consultants, Ltd. PROJECT: REXENE COC #9423
ATTN: Annette Montoya
Customet Semple ID: 9500251310

Customer Sample ID: 9509251310 Sample Date.....: 09/25/95 Sample Time.....: 13:10 Sample Matrix....: Water

Laboratory Sample ID: 954344-3 Date Received.....: 09/26/95 Time Received.....: 10:30 MM W-8

TEST DESCRIPTION	TEST MATRIX	FINAL RESULT	DETECTION LIMIT	UNITS	TEST METHOD	ANALYZED
Extraction (Sep. Funnel) SVOC Separatory Funnel Liq/Liq Extraction		Complete		mL	SW-846 3510	10/02/95
Semivolatile Organics (Client List) Acenaphthene		ND	100	ug/L	SW-846 8270	10/03/95
Acenaphthylene Anthracene Benzo(a)anthracene		ND ND ND	100 100 100	ug/L ug/L ug/L		10/03/95 10/03/95 10/03/95
Benzo(b)fluoranthene Benzo(k)fluoranthene Benzo(ghi)perylene Benzo(a)pyrene		ND ND ND ND	100 100 100 100	ug/L ug/L ug/L ug/L		10/03/95 10/03/95 10/03/95 10/03/95
Chrysene Dibenzo(a,h)anthracene Fluoranthene Fluorene		ND ND ND ND	100 100 100 100 100	ug/L ug/L ug/L ug/L		10/03/95 10/03/95 10/03/95 10/03/95 10/03/95
Indeno(1,2,3-cd)pyrene 1-Methylnaphthalene 2-Methylnaphthalene Naphthalene		ND ND ND 140	100 100 100 100	ug/L ug/L ug/L ug/L		10/03/95 10/03/95 10/03/95 10/03/95
Phenanthrene Pyrene 4-Chloro-3-methylphenol 2-Chlorophenol		ND ND ND ND	100 100 100 100 100	ug/L ug/L ug/L		10/03/95 10/03/95 10/03/95 10/03/95 10/03/95
2,4-Dichlorophenol 2,4-Dimethylphenol 2,4-Dinitrophenol		ND ND ND	100 100 500	ug/L ug/L ug/L ug/L		10/03/95 10/03/95 10/03/95
2-Methyl-4,6-dinitrophenol 2-Nitrophenol 4-Nitrophenol Pentachlorophenol		ND ND ND	500 100 500 500	ug/L ug/L ug/L ug/L		10/03/95 10/03/95 10/03/95 10/03/95
Phenol 2,4,6-Trichlorophenol		ND ND	100 100	ug/L ug/L		10/03/95
Volatile Organics -Aromatics Benzene Ethylbenzene Toluene		13000 300 ND	200 200 200	ug/L ug/L ug/L	SW-846 8020	10/06/95 10/06/95 10/06/95
Xylenes (total)		800	200	ug/L		10/06/95
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Job Number: 954344

# **CORE LABORATORIES**

LABORATORY TEST RESULTS

Report Date: 11/01/95

#### CUSTOMER: Geoscience Consultants, Ltd. PROJECT: REXENE COC #9423

Customer Sample ID: 9509251350 Sample Date.....: 09/25/95 Sample Time.....: 13:50 Sample Matrix....: Water Laboratory Sample ID: 954344-4 Date Received.....: 09/26/95 Time Received.....: 10:30

ATTN: Annette Montoya

MW-S

Extraction (Sep. Funnel) SVOC Separatory Funnel Liq/Liq Extraction Semivolatile Organics (Client List) Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene		Complete	100	mL	SW-846 3510 SW-846 8270	10/02/9
Separatory Funnel Liq/Liq Extraction Semivolatile Organics (Client List) Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene		ND	100			10/02/9
Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene			100		SW-846 8270	1
Acenaphthylene Anthracene Benzo(a)anthracene			100			
Anthracene Benzo(a)anthracene			1 100	ug/L		10/03/9
Anthracene Benzo(a)anthracene		ND ND	100	ug/L		10/03/9
	1	ND	100	ug/L		10/03/9
		ND	100	ug/L		10/03/9
Benzo(b)fluoranthene	l i	ND	100	ug/L		10/03/9
Benzo(k)fluoranthene		ND	100	ug/L		10/03/9
Benzo(ghi)perylene	i	ND	100	ug/L		10/03/9
Benzo(a)pyrene		ND	100	ug/L		10/03/9
Chrysene		ND	100	ug/L		10/03/9
Dibenzo(a,h)anthracene	l	ND	100	ug/L		10/03/9
Fluoranthene		ND	100	ug/L		10/03/9
Fluorene		ND	100	ug/L		10/03/9
Indeno(1,2,3-cd)pyrene		ND	100	ug/L		10/03/9
1-Methylnaphthalene		ND	100	ug/L		10/03/9
2-Methylnaphthalene		ND	100	ug/L		10/03/9
Naphthalene		ND	100	ug/L		10/03/9
Phenanthrene		ND	100	ug/L		10/03/9
Pyrene		ND	100	ug/L		10/03/9
4-Chloro-3-methylphenol	I	ND	100	ug/L		10/03/9
2-Chlorophenol		ND	100	ug/L		10/03/9
2,4-Dichlorophenol		ND	100	ug/L		10/03/9
2,4-Dimethylphenol		ND	100	ug/L		10/03/9
2,4-Dinitrophenol	i i	ND	500	ug/L		10/03/9
2-Methyl-4,6-dinitrophenol	İ	ND	500			
2-Nitrophenol	1		100	ug/L		10/03/9
4-Nitrophenol		ND		ug/L		10/03/9
		ND	500	ug/L		10/03/9
Pentachlorophenol	1	ND	500	ug/L		10/03/9
Phenol	1	ND	100	ug/L		10/03/9
2,4,6-Trichlorophenol		ND	100	ug/L		10/03/9
Volatile Organics -Aromatics					SW-846 8020	
Benzene		4400	200	ug/L		10/06/9
Ethylbenzene		ND	200	ug/L		10/06/9
Toluene		ND	200	ug/L		10/06/9
(ylenes (total)		ND	200	ug/L		10/06/9

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Job Number: 954344

# **CORE LABORATORIES**

LABORATORY TEST RESULTS

Report Date: 11/01/95

#### CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9423

ATTN: Annette Montoya

Customer Sample ID: 9509251450 Sample Date.....: 09/25/95 Sample Time.....: 14:50 Sample Matrix....: Water Laboratory Sample ID: 954344-5 Date Received.....: 09/26/95 Time Received.....: 10:30  $M \ W - 6 D$ 

TEST DESCRIPTION	TEST MATRIX	FINAL RESULT	DETECTION LIMIT	UNITS	TEST METHOD	ANALYZED
Extraction (Sep. Funnel) SVOC Separatory Funnel Lig/Lig Extraction		Complete		mL	SW-846 3510	10/02/95
Semivolatile Organics (Client List)					SW-846 8270	
Acenaphthene		ND	100	ug/L		10/03/95
Acenaphthylene		ND	100	ug/L		10/03/95
Anthracene		ND	100	ug/L		10/03/95
Benzo(a)anthracene		ND	100	ug/L		10/03/95
Benzo(b)fluoranthene		ND	100	ug/L		10/03/95
Benzo(k)fluoranthene		ND	100	ug/L		10/03/95
Benzo(ghi)pervlene		ND	100	ug/L		10/03/95
Benzo(a)pyrene		ND	100	ug/L		10/03/95
Chrysene		ND	100	ug/L		10/03/95
Dibenzo(a,h)anthracene	1	ND	100	ug/L		10/03/95
Fluoranthene		ND	100	ug/L		10/03/95
Fluorene		ND	100	ug/L		10/03/95
Indeno(1,2,3-cd)pyrene		ND	100	ug/L		10/03/95
1-Methylnaphthalene		ND	100	ug/L		10/03/95
2-Methylnaphthalene		ND	100	ug/L		10/03/95
Naphthalene		ND	100	ug/L		10/03/95
Phenanthrene		ND	100	ug/L		10/03/95
Pyrene		ND	100	ug/L		10/03/95
4-Chloro-3-methylphenol		ND	100	ug/L		10/03/95
2-Chlorophenol		ND	100	ug/L		10/03/95
2,4-Dichlorophenol		ND	100	ug/L		10/03/95
2,4-Dimethylphenol		ND	100	ug/L		10/03/95
2,4-Dinitrophenol		ND	500	ug/L		10/03/95
2-Methyl-4,6-dinitrophenol		ND	500	ug/L		10/03/95
2-Nitrophenol		ND	100	ug/L		10/03/95
4-Nitrophenol		ND	500	ug/L		10/03/95
Pentachlorophenol		ND	500	ug/L		10/03/95
Phenol		ND	100	ug/L		10/03/95
2,4,6-Trichlorophenol		ND	100	ug/L		10/03/95
Volatile Organics -Aromatics					SW-846 8020	
Benzene		ND	0.5	ug/L		10/04/95
Ethylbenzene		ND	0.5	ug/L		10/04/95
Toluene		ND	0.5	ug/L		10/04/95
Xylenes (total)		ND	0.5	ug/L		10/04/95

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RESULTS LABORATORY TEST Job Number: 954344 Report Date: 11/01/95 CUSTOMER: Geoscience Consultants, Ltd. PROJECT: REXENE COC #9423 ATTN: Annette Montoya Customer Sample ID: 9509251455 Laboratory Sample ID: 954344-6 Sample Date..... 09/25/95 Date Received.....: 09/26/95 Sample Time.....: 14:55 Sample Matrix....: Water Time Received.....: 10:30 MW-60 DETECTION LIMIT  $\frac{1}{2}$ TEST DESCRIPTION TEST MATRIX FINAL RESULT UNITS TEST METHOD ANALYZED Volatile Organics -Aromatics SW-846 8020 ug/L 10/04/95 ND 0.5 Benzene Ethylbenzene ND 0.5 ug/L 10/04/95 ND 0.5 10/04/95 Toluene ug/L Xylenes (total) 0.5 10/04/95 ND ug/L

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Job Number: 954344

# **CORE LABORATORIES**

LABORATORY TEST RESULTS

Report Date: 11/01/95

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9423

ATTN: Annette Montoya

Customer Sample ID: 9509251535 Sample Date.....: 09/25/95 Sample Time.....: 15:35 Sample Matrix....: Water Laboratory Sample ID: 954344-7 Date Received.....: 09/26/95 Time Received.....: 10:30

TEST DESCRIPTION	TEST MATRIX	FINAL RESULT	DETECTION LIMIT	UNITS	TEST METHOD	ANALYZED
Extraction (Sep. Funnel) SVOC					S₩-846 3510	
Separatory Funnel Liq/Liq Extraction		Complete		mL		10/02/95
Semivolatile Organics (Client List)					SW-846 8270	
Acenaphthene		ND	100	ug/L		10/03/95
Acenaphthylene		ND	100	ug/L		10/03/95
Anthracene		ND	100	ug/L		10/03/95
Benzo(a)anthracene		ND	100	ug/L		10/03/95
Benzo(b)fluoranthene		ND	100	ug/L		10/03/95
Benzo(k)fluoranthene		ND	100	ug/L		10/03/95
Benzo(ghi)perylene		ND	100	ug/L		10/03/95
Benzo(a)pyrene		ND	100	ug/L		10/03/95
Chrysene		ND	100	ug/L		10/03/95
Dibenzo(a,h)anthracene		ND	100	ug/L		10/03/95
Fluoranthene	1	ND	100	ug/L		10/03/95
Fluorene		ND	100	ug/L		10/03/95
Indeno(1,2,3-cd)pyrene		ND	100	ug/L		10/03/95
1-Methylnaphthalene		ND	100	ug/L		10/03/95
2-Methylnaphthalene		ND	100	ug/L		10/03/95
Naphthalene		ND	100	ug/L		10/03/95
Phenanthrene		ND	100	ug/L		10/03/95
Pyrene		ND	100	ug/L		10/03/95
4-Chloro-3-methylphenol		ND	100	ug/L		10/03/95
2-Chlorophenol		ND	100	ug/L		10/03/95
2,4-Dichlorophenol		ND	100	ug/L		10/03/95
2,4-Dimethylphenol		ND	100	ug/L		10/03/95
2,4-Dinitrophenol		ND	500	ug/L		10/03/95
2-Methyl-4,6-dinitrophenol		ND	500	ug/L		10/03/95
2-Nitrophenol		ND	100	ug/L		10/03/95
4-Nitrophenol		ND	500	ug/L		10/03/95
Pentachlorophenol		ND	500	ug/L		10/03/95
Phenol		ND	100	ug/L		10/03/95
2,4,6-Trichlorophenol		ND	100	ug/L		10/03/95
Volatile Organics -Aromatics					SW-846 8020	
Benzene		180	20	ug/L		10/06/95
Ethylbenzene		120	20	ug/L		10/06/95
Toluene		ND	20	ug/L		10/06/95
Xylenes (total)		30	20	ug/L		10/06/95
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TEST RESULTS LABORATORY Job Number: 954344 Report Date: 11/01/95 CUSTOMER: Geoscience Consultants, Ltd. PROJECT: REXENE COC #9423 ATTN: Annette Montova Customer Sample ID: 9509251540 Laboratory Sample ID: 954344-8 Sample Date....: 09/25/95 Date Received.....: 09/26/95 Sample Time....: 15:40 Time Received.....: 10:30 Sample Matrix....: Water MW-65 TEST DESCRIPTION TEST MATRIX FINAL RESULT DETECTION LIMIT UNITS TEST METHOD ANALYZED Extraction (Sep. Funnel) SVOC sw-846 3510 10/02/95 Separatory Funnel Lig/Lig Extraction Complete mL S₩-846 8270 Semivolatile Organics (Client List) 100 10/03/95 Acenaphthene ND ug/L Acenaphthylene ND 100 ug/L 10/03/95 100 10/03/95 Anthracene ND ug/L Benzo(a)anthracene ND 100 ug/L 10/03/95 Benzo(b)fluoranthene 100 ug/L 10/03/95 ND Benzo(k)fluoranthene ND 100 ug/L 10/03/95 Benzo(ghi)perylene ND 100 ug/L 10/03/95 100 ug/L Benzo(a)pyrene ND 10/03/95 Chrysene ND 100 ug/L 10/03/95 Dibenzo(a,h)anthracene ND 100 10/03/95 ug/L 100 Fluoranthene ND ug/L 10/03/95 Fluorene ND 100 ug/L 10/03/95 100 Indeno(1,2,3-cd)pyrene ND ug/L 10/03/95 1-Methylnaphthalene ND 100 ug/L 10/03/95 2-Methylnaphthalene 100 10/03/95 ND ug/L 100 Naphthalene ND ug/L 10/03/95 Phenanthrene ND 100 ug/L 10/03/95 100 ug/L 10/03/95 Pyrene ND 4-Chloro-3-methylphenol ND 100 ug/L 10/03/95 ND 100 ug/L 10/03/95 2-Chiorophenol 100 2,4-Dichlorophenol ND ug/L 10/03/95 2,4-Dimethylphenol ND 100 ug/L 10/03/95 500 10/03/95 2,4-Dinitrophenol ND ug/L 2-Methyl-4,6-dinitrophenol ND 500 ug/L 10/03/95 2-Nitrophenol 100 10/03/95 ND ug/L 4-Nitrophenol ND 500 ug/L 10/03/95 Pentachlorophenol ND 500 ug/L 10/03/95 100 Phenol 10/03/95 ND ug/L 2,4,6-Trichlorophenol ND 100 ug/L 10/03/95 Volatile Organics -Aromatics SW-846 8020 Benzene 180 20 ug/L 10/09/95 10/09/95 Ethylbenzene 20 110 ug/L Toluene ND 20 ug/L 10/09/95 Xylenes (total) 30 20 ug/L 10/09/95

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LABORATORY TEST RESULTS Job Number: 954344 Report Date: 11/01/95 CUSTOMER: Geoscience Consultants, Ltd. PROJECT: REXENE COC #9423 ATTN: Annette Montoya Customer Sample ID: 9509251550 Laboratory Sample ID: 954344-9 Sample Date.....: 09/25/95 Sample Time.....: 15:50 Date Received.....: 09/26/95 Time Received.....: 10:30 Sample Matrix....: Water TEST DESCRIPTION TEST MATRIX FINAL RESULT DETECTION LIMIT UNITS TEST METHOD ANALYZED Volatile Organics -Aromatics SW-846 8020 Benzene ND 0.5 ug/L 10/03/95 Ethylbenzene ND 0.5 ug/L 10/03/95 10/03/95 Toluene ND 0.5 ug/L Xylenes (total) ND 0.5 ug/L 10/03/95

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# **CORE LABORATORIES**

	954344					Report Date: 11/			
USTOMER: Geoscience Consulta	nts, Ltd.	PROJE	CT: RE)	(ENE COC #9423	ATTN: Annette Montoya				
QC Туре D	escription		Rea	ag. Code	Lab ID	Dilution Fa	ctor	Date	Time
Method SW Method Description.: Vo		omatics			: 2687 : ug/L	Analys	t:	: dmj	
B Method Blank	· · · · · · · · · · · · · · · · · · ·	·		: •:				10/03/95	102
est Description	QC Result	Det. L	imit	True Value	Orig. Value	Alt. Value	Calc	c Re	sult
izene	ND	0	.5						
ylbenzene	ND		.5						
uene	ND		.5						
enes (total)	ND	0	.5						
B Spiked Blank			T100	)395B				10/03/95	082
est Description	QC Result	Det. L	imit	True Value	Orig. Value	Alt. Value	Calc	c Re	sult
zene	20.7	0	.5	20.0			% R	DEC 10	3.5
ylbenzene	20.1		.5	20.0			% R		0.5
uene	20.3		.5	20.0			% R		1.5
enes (total)	59.8	0	.5	60.0			% F	REC 9	9.7
BD Spiked Blank Dup	olicate		T 100	)395B				10/03/95	090
est Description	QC Result	Det. L	imit	True Value	Orig. Value	Alt. Value	Calc	c Re	sult
zene	20.7	0	.5	20.0		20.7	% R	REC 10	3.5
									0.0
ylbenzene	20.3	0	.5	20.0		20.1	% R		1.5
	<b>20</b> /	~	E	20.0		20.7			1.0
uene	20.4	U	.5	20.0		20.3	% R		2.0 0.5
enes (total)	60.1	n	.5	60.0		59.8	% R		0.2
		·							0.5
Method Sw	-846 8020		<u> </u>	Batch	: 2689	Analys	t:	: clm j	
Method Description.: Vo	latile Organics -Ar	omatics		Units	: ug/L				

Test Description	QC Result	Det. Limit
Benzene	ND	0.5
Ethylbenzene	ND	0.5
Toluene	ND	0.5
Xylenes (total)	ND	0.5

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True Value Orig. Value Alt. Value Calc

Result

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CUSTOMER: Geoscience Consultants, Ltd. PROJECT: RE				XENE COC #9423		ATTN: Annette Mo	ntoya	
QC Type	Des	cription	Re	ag. Code	Lab ID	Dilution Fac	tor Date	e Time
SB	Spiked Blank	· · · .	т10	0695B			10/(	06/95 1643
Test Descrip	tion	QC Result	Det. Limit	True Value	Orig. Value	Alt. Value	Calc	Result
enzene thylbenzene oluene ylenes (total)	)	21.7 21.1 21.5 63.1	0.5 0.5 0.5 0.5	20.0 20.0 20.0 60.0			% REC % REC % REC % REC	108.5 105.5 107.5 105.2
SBD	Spiked Blank Dupli	cate	T10	0695в	<u></u>		10/0	06/95 1720
Test Descrip	tion	QC Result	Det. Limit	True Value	Orig. Value	Alt. Value	Calc	Result
enzene		21.7	0.5	20.0		21.7	% REC RPD	108.5 0.0
thylbenzene		21.1	0.5	20.0		21.1	% REC RPD	105.5 0.0
oluene		21.4	0.5	20.0		21.5	% REC RPD	107.0 0.5
ylenes (total)	)	62.9	0.5	60.0		63.1	% REC RPD	104.8 0.3
	SW-8 Description.: Vola		omatics		: 2691 : ug/L	Analyst	:: dmj	

Test Description	QC Result	Det. Limit	True Value Orig. Value	Alt. Value	Calc	Result
Benzene	ND	0.5				
Ethylbenzene	ND	0.5				
Toluene	ND	0.5				
Xylenes (total)	ND	0.5				

Method SW-846 8020	Batch 2692	Analyst: dmj	ļ
Method Description.: Volatile Organics -Aromatics	Units ug/L		

MB Method Blank						10/10/95 1325
Test Description	QC Result	Det. Limit	True Value Orig. Value	Alt. Value	Calc	Result
Benzene	ND	0.5				
Ethylbenzene	ND	0.5				
Toluene	ND	0.5				
Xylenes (total)	ND	0.5				

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	Job Number: 954344	QUALITY	CONTROL	REPORT	Report Date: 11/01/95	i	
CUSTOMER: Ge	eoscience Consultants, Ltd.	PROJEC	T: REXENE COC #94	23	ATTN: Annette Montoy	/8	
QC Type	Descriptio	'n	Reag. Code	Lab ID	Dilution Factor	Date	Time

Method .....: SW-846 8270 Method Description.: Semivolatile Organics (Client List)

.

Batch..... 2781 Units..... ug/L Analyst ...: mla

MB Method Blank		мв07	42				10/03/95	1921
Test Description	QC Result	Det. Limit	True Value	Orig. Value	Alt. Value	Calc	Resu	ılt
Acenaphthene	ND	10						
Acenaphthylene	ND	10						
Anthracene	ND	10						
Benzo(a)anthracene	ND	10						
Benzo(b)fluoranthene	ND	10						
Benzo(k)fluoranthene	ND	10						
Benzo(ghi)perylene	ND	10						
Benzo(a)pyrene	ND	10						
Chrysene	ND	10						
)ibenzo(a,h)anthracene	ND	10						
Fluoranthene	ND	10						
luorene	ND	10						
Indeno(1,2,3-cd)pyrene	ND	10						
I-Methylnaphthalene	ND	10						
2-Methylnaphthalene	ND	10						
Naphthalene	ND	10						
henanthrene	ND	10						
oyrene	ND	10						
-Chloro-3-methylphenol	ND	10						
2-Chlorophenot	ND	10						
2,4-Dichlorophenol	ND	10						
2,4-Dimethylphenol	ND	10						
2,4-Dinitrophenol	ND	50						
2-Methyl-4,6-dinitrophenol	ND	50						
2-Nitrophenol	ND	10						
-Nitrophenol	ND	50						
Pentachlorophenol	ND	50						
henol	ND	10						
2,4,6-Trichlorophenol	ND	10						

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Job Number.: 954344

SURROGATE

Report Date: 11/01/95

Flag

Date

i.

Time

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9423

RECOVERIES

ATTN: Annette Montoya

Method..... SW-846 Method Code.....: 8020

Batch....: 2687 Analyst..... dmj

Analyst..... dmj

REPORT

Surrogate			Dilution Factor	Units	
BFB (Surrogate	;)		3.5	ug/L	
Lab ID	Matrix	QC Type	Result	True Value	Percent Recovery

			20,0800	100 (	40.07.05	4024
	MB	20.2	20.0800	100.6		1026
	SB	19.2	20.0800	95.6	10/03/95	0826
	SBD	19.2	20.0800	95.6	10/03/95	0904
954344-9		19.7	20.0800	98.1	10/03/95	1334
954344-5		20.0	20.0800	99.6	10/04/95	0246
954344-6		19.7	20.0800	98.1	10/04/95	0324

Method..... SW-846 Method Code..... 8020

Surrogate	Dilution Factor	Units
BFB (Surrogate)	3.5	ug/L

Lab ID	Matrix	QC Type	Result	True Value	Percent Recovery	Flag	Date	Time
•	<u></u>		19.5	20.0800	97.1		10/06/95	1024
		SB	19.2	20.0800	95.6		10/06/95	1643
		SBD	19.0	20.0800	94.6		10/06/95	1720
954344-3			19.0	20.0800	94.6		10/06/95	1414
954344-4			20.0	20.0800	99.6		10/06/95	1451
954344-7			18.0	20.0800	89.6		10/06/95	1528
954344-2			18.0	20,0800	89.6		10/07/95	0318

Surrogate			Dilution Factor	Units				
BFB (Surrogate	e)		3.5	ug/L				
Lab ID Mat	Matrix	Matrix QC Type	Result	True Value	Percent Recovery	Flag	Date	Time
954344-8	·	МВ	19.8 18.3	20.0800 20.0800	98.6 91.1		10/09/95 10/09/95	1151 1305

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Job Number.: 954344

SURROGATE RECOVERIES REPORT

Report Date: 11/01/95

CUSTOMER: Geoscience Consultants, Ltd. PROJECT: REXENE COC #9423

ATTN: Annette Montoya

Method..... SW-846 Method Code..... 8020 Batch..... 2692 Analyst..... dmj

Surrogate			tion Factor		Units
BFB (Surrogate)		3.5		ug/L	
	Hatrix Of		Posult	т.	

Lab ID	Matrix	QC Type	Result	True Value	Percent Recovery	Flag	Date	Time
		 МВ	19.7	20.0800	98.1		10/10/95	1325
954344-1			18.8	20.0800	93.6		10/10/95	1512
Method	 : Sh			Batch	: 2781		<u></u>	
Method Code 8270C				Analyst				

Surrogate		•	Dilution Factor	Units	
2,4,6-Tribrom	ophenol			ug/L	

Lab ID	Matrix "	QC Type	Result	True Value	Percent Recovery	Flag	Date	Time
	·······		29.37	1000.10	29		10/03/95	1921
954344-2			87.87	1000.10	88		10/03/95	2019
954344-3			101.12	1000.10	101		10/03/95	2117
954344-4			107.38	1000.10	107		10/03/95	2215
954344-5			107.28	1000.10	107		10/03/95	2313
954344-7			106.97	1000.10	107		10/03/95	0011
954344-8			106.35	1000.10	106		10/03/95	0110

Surrogate		Dilution Factor	Units
2-Fluorobiphenyl			ug/L

Lab ID	Matrix	QC Type	Result	True Value	Percent Recovery	Flag	Date	Time
	• <u>•</u>		35.71	500.10	71		10/03/95	1921
954344-2			42.87	500.10	86		10/03/95	2019
954344-3			34.21	500.10	68		10/03/95	2117
954344-4			38.61	500.10	77		10/03/95	2215
954344-5			35.97	500.10	72		10/03/95	2313
954344-7			37.15	500.10	74		10/03/95	0011
954344-8			35.44	500.10	71		10/03/95	0110

Surrogate			Dilution Factor	Units				
2-Fluorophenol	· · · · · · · · · · · · · · · · · · ·			ug/L				
Lab ID	Matrix	QC Туре	Result	True Value	Percent Recovery	Flag	Date	Time
		MB	17.12	1000.00	17	x	10/03/95	1921



SURROGATE RECOVERIES REPORT Job Number.: 954344

Report Date: 11/01/95

CUSTOMER: Geoscience Consultants, Ltd. PROJECT: REXENE COC #9423

ATTN: Annette Montoya

Surrogate			Dilution Factor	Units				
2-Fluorophenol				ug/L				
Lab ID	Matrix	QC Type	Result	True Value	Percent Recovery	Flag	Date	Time
954344-2 954344-3 954344-4 954344-5 954344-7 954344-8			37.65 39.57 48.71 53.32 56.10 55.19	1000.00 1000.00 1000.00 1000.00 1000.00 1000.00	38 40 49 53 56 55		10/03/95 10/03/95 10/03/95 10/03/95 10/03/95 10/03/95	2019 2117 2215 2313 0011 0110
Surrogate			Dilution Factor	Units				
Nitrobenzene-d5				ug/L				
Lab ID	Matrix	QC Туре	Result	True Value	Percent Recovery	Flag	Date	Time
954344-2 954344-3 954344-4 954344-5 954344-7 954344-8		MB	36.36 41.79 31.40 37.88 44.33 42.36 41.38	500.00 500.00 500.00 500.00 500.00 500.00 500.00	73 84 63 76 89 85 83		10/03/95 10/03/95 10/03/95 10/03/95 10/03/95 10/03/95 10/03/95	1921 2019 2117 2215 2313 0011 0110
Surrogate			Dilution Factor	Units				
Phenol-d6				ug/L				
Lab ID	Matrix	QC Type	Result	True Value	Percent Recovery	Flag	Date	Time
954344-2 954344-3 954344-4 954344-5 954344-7 954344-8		MB	17.04 27.66 24.73 28.79 33.90 35.01 36.21	1000.20 1000.20 1000.20 1000.20 1000.20 1000.20 1000.20	17 28 25 29 34 35 36		10/03/95 10/03/95 10/03/95 10/03/95 10/03/95 10/03/95 10/03/95	1921 2019 2117 2215 2313 0011 0110
Surrogate			Dilution Factor	Units				
Terphenyl-d14				ug/L				
Lab ID	Matrix	QC Type	Result	True Value	Percent Recovery	Flag	Date	Time
954344-2 954344-3 954344-4 954344-5		MB	50.60 54.29 45.39 50.28 58.47	500.00 500.00 500.00 500.00 500.00	101 109 91 101 117		10/03/95 10/03/95 10/03/95 10/03/95 10/03/95	1921 2019 2117 2215 2313
				Page 16				

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SURROGATE RECOVERIES REPORT

Job Number.: 954344

Report Date: 11/01/95

CUSTOMER: Geoscience Consultants, Ltd. PROJECT: REXENE COC #9423

ATTN: Annette Montoya

Surrogate		······································	Dilution Factor	Units				
Terphenyl-d14			ug/L					
Lab ID	Matrix	ас туре	Result	True Value	Percent Recovery	Flag	Date	Time
954344-7 954344-8			50.30 47.93	500.00	101 96	<u> </u>	10/03/95	

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QUALITY	ASSURA	NCE	METH	O D S	
REFEREN	ICES A	ND	NOTES		
	Report Date:	: 11/0;	1/95		
Volatile Organics Method 602/8020 Surrogate Recovery Limit					
	Water		Soil		
Bromofluorobenzene Spike/Spike Duplicate Re	89-110% Covery Limit	g	78-123%		
	Water	-0	Soil		
Benzene Ethylbenzene	75-125% 75-125%		75-125% 75-125%	,	
Toluene	75-125%		75-125%		
Xylenes	75-125%		75-125%		1
Method 8015 Modified Spike/Spike Duplicate Re		s			
TVPH	Water 81-124%		Soil 81-124%		
TEPH	54-135%		54-135%		
Method 624/8240/8260 Surrogate Recovery Limit					
Dibromofluoromethane	Water 86-118%		Soil 80-120%		
Toluene-(d8)	88-110%		81-117%		
4-Bromofluorobenzene Spike/Spike Duplicate Re	86-115% coverv & RPI	) Limit	74-121% IS		
	Water		Soil		
1,1-Dichloroethene	Recovery 61-145%	RPD 14	Recovery 59-172%	RPD 22	
Trichloroethene	71-120%	14	62-137%	24	
Benzene Toluene	76-127% 76-125%	11 13	66-142% 59-139%	21 21	
Chlorobenzene	75-130%	13	60-133%	21	
Pesticides/PCB Organics Method 608/8080					
Surrogate Recovery Limit	.s Water		Soil		
Tetrachloro-m-xylene 4,4'-Dichlorobiphenyl	60-150% 60-150%		60-150% 60-150%	,	
Method 8140 Surrogate Recovery Limit					
Tributylphosphate	Water 36-152%		Soil 36-152%		
Triphenylphosphate	40-152%		40-152%		
Base/Neutral/Acid Organics Method 625/8270 Surrogate Recovery Limit					
Nitrobenzene-d5	Water 35-114%		Soil 23-120%		
2-Fluorobiphenyl	43-116%		30-115%		
4-Terphenyl-dl4 Phenol-d6	33-141% 10-94%		18-137% 24-113%		
2-Fluorophenol	21~100%		25-121%		
2,4,6-Tribromophenol	10-123%		19-122%		
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Page 1



QUALITY ASS REFERENCE Repor		N O			
Matrix Spike/Matrix Spike Dup Phenol 2-Chlorophenol 1,4-Dichlorobenzene N-Nitroso-di-n-propylamine 1,2,4-Trichlorobenzene 4-Chloro-3-methylphenol Acenaphthene 4-Nitrophenol 2,4-Dintrotoluene Pentachlorophenol Pyrene	Water Recovery 12-110% 27-123% 36-97%	RPD 42 40 28	Soil Recovery 26-90% 25-102% 28-104% 41-126% 38-107% 26-103%	RPD 35 50 27 38 23 33 19 50 47 47 36	



	QUALITY ASSURANCE METHODS	
	REFERENCES AND NOTES	
	Report Date: 11/01/95	
(1)	EPA 600/4-79-020, Methods for Chemical Analysis of Water and Wastes, March 1983	
(2)	EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, 1989	
(3)	Standard Methods for The Examination of Water and Wastewater, 17th Edition, 1989	
(4)	EPA 600/4-80-032, Prescribed Procedures For Measurement Of Radioactivity In Drinking Water, August 1980	
(5)	EPA 600/8-78-017, Microbiological Methods For Monitoring The Environment, December 1978	
(6)	Federal Register, July 1, 1990 (40 CFR Part 136)	
(7)	EPA 600/4-88-03, Methods For The Determination of Organics Compounds in Drinking Water, December 1988	
(8)	U.S.G.S. Methods For Determination of Inorganic Substances In Water And Fluvial Sediments, Book 5, Chapter A1, 1985	
(9)	Federal Register, Friday, June 7, 1991 (40 CFR Parts 141 & 142)	
(10)	Standard Methods For The Examination of Water and Wastewater, 16th Edition, 1985	
(11)	ASTM, Section 11 Water and Environmental Technology, Volume 11.01 Water (1), 1991	
(12)	Methods of Soil Analysis, American Society of Agronomy, Agronomy No. 9, 1965	
(13)	EPA SW-846, Test Methods For Evaluating Solid Waste, Third Edition, Revision 1, November 1990	
(14)	ASTM, Section 5, Petroleum Products, Lubricants, and Fossil Fuels, Volume 05.05, Gaseous Fuels, Coal, and Coke	
(15)	EPA 600/2-78-054, Field and Laboratory Methods Applicable To Overburdens and Mine Soils, March 1978	
(16)	ASTM, Part 19, Soils and Rocks; Building Stones, 1981	
Comme NC =	ents: Data in the QA report may differ from final results due to digestion and/or dilution of sample into analytical ranges. The "Time Analyzed" in the QA report refers to the start time of the analytical batch which may not reflect the actual time of each analysis. The "Date Analyzed" is the actual date of analysis. Results for soil and sludge samples are reported on a wet weight basis (i.e. not corrected for percent moisture) unless otherwise indicated. Not Calculable Due to Value(s) lower than the Detection Limit.	
BLANK	QC SAMPLE IDENTIFICATION	

Page 3

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#### Q U A L I T Y A S S U R A N C E METHODS REFERENCES AND NOTES Report Date: 11/01/95 MB Method Blank ICB Initial Calibration Blank CCB Continuing Calibration Blank SPIKE OC SAMPLE IDENTIFICATION Method (Matrix) Spike Method (Matrix) Spike Duplicate MS MSD Post Digestion Spike PDS SB Spiked Blank SBD Spike Blank Duplicate REFERENCE STANDARD OC SAMPLE IDENTIFICATION LCS Laboratory Control Standard Reference Standard RS ICV Initial Calibration Verification Standard CCV Continuing Calibration Verification Standard ICP Interface Check Sample Initial Calibration/Laboratory Control Sample ISA/ISB ICL DSC Distilled Standard Check DUPLICATE OC SAMPLE IDENTIFICATION MD Method (Matrix) Duplicate Extraction Duplicate ED DD Digestion Duplicate Analyses performed by a subcontract laboratory are indicated on the analytical and/or quality control reports under "technician" using the following codes: SUBCONTRACT LABORATORY CODE Core Laboratories - Anaheim, CA \* AN Core Laboratories - Casper, WY Core Laboratories - Corpus Christi, TX CA \* CC Core Laboratories - Houston, TX \* HP Core Laboratories - Lake Charles, L Core Laboratories - Long Beach, CA \* LC LA \* LB Other Subcontract Laboratories \* XX EXPLANATION OF DATA FLAGS B - This flag is used to indicate that an analyte is present in the method blank as well as in the sample. It indicates that the client should consider this when evaluating the results. D - This flag indicates that surrogates were diluted out of calibration range and cannot be quantified. E - Indicates that a sample result is an estimate because the concentration exceeded the calibration range of the instrument. I - Used to indicate matrix interference. J - Indicates that a value is an estimate. It is used when a compound is determined to be present based on the mass spectral data, but at a concentration less than the practical quantitation limit of the method.

Page 4



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## **CORE LABORATORIES**

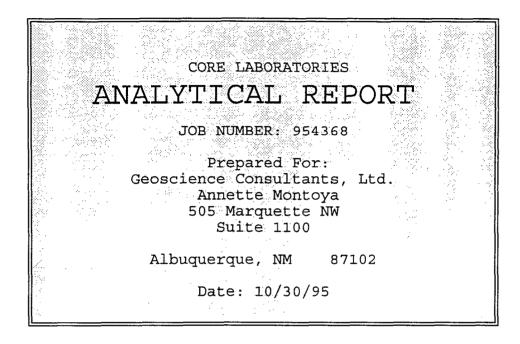
QUALITY ASSURANCE METHODS REFERENCES AND NOTES Report Date: 11/01/95 This flag is also used when estimating the concentration of a tentatively identified compound. X - Indicates that a surrogate recovery is outside the specified quality control limits. Y - Used to identify a spike or spike duplicate recovery that is outside the specified quality control limits. Z - Indicates a relative percent difference for a spike and spike duplicate is outside the specified quality control limits. \* - Indicates a relative percent difference for a duplicate analysis is outside the specified quality control limits. \* - Used to indicate that a standard is outside specified quality control limits.

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Page 5

# CORELAB

# **CORE LABORATORIES**



Linda L. Benkers Signature

Name: Linda L. Benkers Title: QA/QC Coordinator

10-30-95

Date

CORE LABORATORIES, INC. Analytical Chemistry Division 10703 East Bethany Drive Aurora, CO 80014

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**ENVIRONMENTAL TESTING SERVICES** 

## SAMPLE DELIVERY GROUP NARRATIVE

#### October 30, 1995

Customer:Geoscience Consultants, Ltd.Project:Rexene Quarterly Waters COC # 9424Core Laboratories Project Number:954368

#### Method 8270 GC/MS Semi-volatiles Analysis:

Sample 954368-5 (9509261010) had low internal standards chrysene-d12 and perylene-d12 when compared to the daily continuing calibration verification standard. This sample also had the surrogate, terphenyl-d14, above method acceptance criteria.

Sample 954368-6 (9509261110) had a low internal standard, perylene-d12, when compared to the daily continuing calibration verification standard.

Both of the above samples were reanalyzed to confirm the internal standards and surrogates.

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Linda L. Benkers QA/QC Coordinator

James H. Travis Laboratory Manager



Job Number: 954368 Customer: Geoscience Consultants, Ltd. Job Received Date: 09/27/95 Project Number: 95000161 Customer Project ID: REXENE COC #9424 Project Description: GCL Rexene Quarterly Waters									
aboratory ample ID	Customer Sample ID	Sample Matrix	Date Sampled	Time Sampled	Date Received	Time Received			
954368-1	9509260810	Water	09/26/95	08:10	09/27/95	10:15			
954368-2	9509260830	Water	09/26/95	08:30	09/27/95	10:15			
954368-3	9509260905	Water	09/26/95	09:05	09/27/95	10:15			
954368-4	9509260840	Water	09/26/95	08:40	09/27/95	10:15			
954368-5	9509261010	Water	09/26/95	10:10	09/27/95	10:15			
954368-6	9509261110	Water	09/26/95	11:10	09/27/95	10:15			
954368-7	9509261155	Water	09/26/95	11:55	09/27/95	10:15			
954368-8	9509261235	Water	09/26/95	12:35	09/27/95	10:15			
954368-9	9509261245	Water	09/26/95	12:45	09/27/95	10:15			
954368-10	9509261340	Water	09/26/95	13:40	09/27/95	10:15			



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## **CORE LABORATORIES**

Job Number: 954368

LABORATORY

Report Date: 10/30/95

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9424

TEST

RESULTS

ATTN: Annette Montoya

Customer Sample ID: 9509260810 Sample Date.....: 09/26/95 Sample Time.....: 08:10 Sample Matrix....: Water Laboratory Sample ID: 954368-1 Date Received.....: 09/27/95 Time Received.....: 10:15 MW-7

TEST DESCRIPTION	TEST MATRIX	FINAL RESULT	DETECTION LIMIT	UNITS	TEST METHOD	ANALYZE
Volatile Organics -Aromatics Benzene Ethylbenzene Toluene Xylenes (total)		4.9 ND ND ND	0.5 0.5 0.5 0.5	ug/L ug/L ug/L ug/L	SW-846 8020	10/05/95 10/05/95 10/05/95 10/05/95
	-					

Page 2



Job Number: 954368

PROJECT: REXENE COC #9424

TEST

RESULTS

LABORATORY

Report Date: 10/30/95

ATTN: Annette Montoya

Customer Sample ID: 9509260830 Sample Date.....: 09/26/95 Sample Time.....: 08:30 Sample Matrix....: Water

CUSTOMER: Geoscience Consultants, Ltd.

Laboratory Sample ID: 954368-2 Date Received.....: 09/27/95 Time Received.....: 10:15

TEST DESCRIPTION	TEST MATRIX	FINAL RESULT	DETECTION LIMIT	UNITS	TEST METHOD	ANALYZED
Volatile Organics -Aromatics Benzene Ethylbenzene Toluene Xylenes (total)		ND ND ND ND	0.5 0.5 0.5 0.5	ug/L ug/L ug/L ug/L	SW-846 8020	10/05/95 10/05/95 10/05/95 10/05/95
	-					
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Job Number: 954368

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TEST

LABORATORY

Report Date: 10/30/95

PROJECT: REXENE COC #9424

RESULTS

ATTN: Annette Montoya

Customer Sample ID: 9509260905 Sample Date.....: 09/26/95 Sample Time.....: 09:05 Sample Matrix....: Water

CUSTOMER: Geoscience Consultants, Ltd.

Laboratory Sample ID: 954368-3 Date Received.....: 09/27/95 Time Received.....: 10:15

MW-4

TEST DESCRIPTION	TEST MATRIX	FINAL RESULT	DETECTION LIMIT	UNITS	TEST METHOD	ANALYZE
Volatile Organics -Aromatics Benzene Sthylbenzene Toluene Vylenes (total)		2200 ND ND ND	50 50 50 50	ug/L ug/L ug/L ug/L	SW-846 8020	10/09/9 10/09/9 10/09/9 10/09/9

Page 4



Job Number: 954368

LABORATORY TEST RESULTS

Report Date: 10/30/95

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9424 ATTN

ATTN: Annette Montoya

Customer Sample ID: 9509260840 Sample Date.....: 09/26/95 Sample Time.....: 08:40 Sample Matrix....: Water Laboratory Sample ID: 954368-4 Date Received.....: 09/27/95 Time Received.....: 10:15 M (4) - 4

TEST DESCRIPTION	TEST MATRIX	FINAL RESULT	DETECTION LIMIT	UNITS	TEST METHOD	ANALYZED
Volatile Organics -Aromatics Benzene Ethylbenzene Toluene Xylenes (total)		ND ND ND ND	0.5 0.5 0.5 0.5	ug/L ug/L ug/L ug/L	SW-846 8020	10/05/95 10/05/95 10/05/95 10/05/95

Page 5



Job Number: 954368

PROJECT: REXENE COC #9424

TEST

RESULTS

LABORATORY

Report Date: 10/30/95

ATTN: Annette Montoya

CUSTOMER: Geoscience Consultants, Ltd.

Customer Sample ID: 9509261010 Sample Date.....: 09/26/95 Sample Time.....: 10:10 Sample Matrix....: Water Laboratory Sample ID: 954368-5 Date Received.....: 09/27/95 Time Received.....: 10:15  $/M \ \omega - / J$ 

TEST DESCRIPTION	TEST MATRIX	FINAL RESULT	DETECTION LIMIT	UNITS	TEST METHOD	ANALYZE
Extraction (Sep. Funnel) SVOC Separatory Funnel Liq/Liq Extraction		Complete		mL	S₩-846 3510	10/03/9
Semivolatile Organics (Client List)					SW-846 8270	
Acenaphthene		ND	10	ug/L		10/06/9
Acenaphthylene		ND	10	ug/L		10/06/9
Anthracene		ND	10	ug/L		10/06/9
Benzo(a)anthracene		ND	10	ug/L		10/06/9
Benzo(b)fluoranthene		ND	10	ug/L		10/06/9
Benzo(k)fluoranthene		ND	10	ug/L		10/06/9
Benzo(ghi)perylene		ND	10	ug/L		10/06/99
Benzo(a)pyrene		ND	10	ug/L		10/06/95
Chrysene		ND	10	ug/L		10/06/95
Dibenzo(a,h)anthracene		ND	· 10	ug/L		10/06/95
Fluoranthene		ND	10			10/06/95
			10	ug/L		
Fluorene		ND ND	1	ug/L		10/06/95
Indeno(1,2,3-cd)pyrene		ND	10	ug/L		10/06/95
1-Methylnaphthalene		ND	10	ug/L		10/06/95
2-Methylnaphthalene		ND	10	ug/L		10/06/95
Naphthalene		ND	10	ug/L		10/06/95
Phenanthrene		ND	10	ug/L		10/06/95
Pyrene		ND	10	ug/L		10/06/95
4-Chloro-3-methylphenol		ND	10	ug/L		10/06/95
2-Chlorophenol		ND	10	ug/L		10/06/95
2,4-Dichlorophenol		ND	10	ug/L		10/06/95
2,4-Dimethylphenol		ND	10	ug/L		10/06/95
2,4-Dinitrophenol		ND	50	ug/L		10/06/95
2-Methyl-4,6-dinitrophenol		ND	50	ug/L		10/06/95
2-Nitrophenol		ND	10	ug/L		10/06/95
4-Nitrophenol		ND	50	ug/L		10/06/95
Pentachlorophenol		ND	50	ug/L		10/06/9
Phenol		ND	10	ug/L		10/06/95
2,4,6-Trichlorophenol		ND	10	ug/L		10/06/9
Volatile Organics -Aromatics	-				SW-846 8020	
Benzene		90	50	ug/L	040 0020	10/07/9
Ethylbenzene		90 ND	50	ug/L		10/07/9
Toluene	1	ND	50	ug/L		10/07/9
Xylenes (total)		ND	50	ug/L		10/07/9

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Job Number: 954368

LABORATORY TEST RESULTS

Report Date: 10/30/95

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9424

ATTN: Annette Montoya

Customer Sample ID: 9509261110 Sample Date.....: 09/26/95 Sample Time.....: 11:10 Sample Matrix....: Water Laboratory Sample ID: 954368-6 Date Received...... 09/27/95 Time Received...... 10:15



TEST. DESCRIPTION	TEST MATRIX	FINAL RESULT	DETECTION LIMIT	UNITS	TEST METHOD	ANALYZED
Extraction (Sep. Funnel) SVOC Separatory Funnel Lig/Lig Extraction		Complete		mL	SW-846 3510	10/03/95
separatory runnet Erd/Erd Extraction		comprete		1016		10/03/93
Semivolatile Organics (Client List)					SW-846 8270	
Acenaphthene		ND	10	ug/L		10/06/95
Acenaphthylene		ND	10	ug/L		10/06/95
Anthracene		ND	10	ug/L		10/06/95
Benzo(a)anthracene		ND	10	ug/L		10/06/95
Benzo(b)fluoranthene		ND	10	ug/L		10/06/95
Benzo(k)fluoranthene		ND	10	ug/L		10/06/95
Benzo(ghi)perylene		ND	10	ug/L		10/06/95
Benzo(a)pyrene		ND	10	ug/L		10/06/95
Chrysene		ND	10	ug/L		10/06/95
Dibenzo(a,h)anthracene		ND	10	ug/L		10/06/95
Fluoranthene		ND	10	ug/L		10/06/95
Fluorene		ND	10	ug/L		10/06/95
Indeno(1,2,3-cd)pyrene		ND	10	ug/L		10/06/95
1-Methylnaphthalene		ND	10	ug/L		10/06/95
2-Methylnaphthalene		ND	10	ug/L		10/06/95
Naphthalene		ND	10	ug/L		10/06/95
Phenanthrene		ND	10	ug/L		10/06/95
Pyrene		ND	10	ug/L		10/06/95
4-Chloro-3-methylphenol		ND	10	ug/L		10/06/95
2-Chlorophenol		ND	10	ug/L		10/06/95
2,4-Dichlorophenol		ND	10	ug/L		10/06/95
2,4-Dimethylphenol		ND	10	ug/L		10/06/95
2,4-Dinitrophenol		ND	50	ug/L		10/06/95
2-Methyl-4,6-dinitrophenol		ND	50	ug/L		10/06/95
2-Nitrophenol		ND	10	ug/L		10/06/95
4-Nitrophenol		ND	50	ug/L		10/06/95
Pentachlorophenol		ND	50	ug/L		10/06/95
Phenol		ND	10	ug/L		10/06/95
2,4,6-Trichlorophenol		ND	10	ug/L		10/06/95
Volatile Organics -Aromatics		700	50		SW-846 8020	10 (07 (05
Benzene		390	50	ug/L		10/07/95
Ethylbenzene		ND	50	ug/L		10/07/95
Toluene		ND	50	ug/L		10/07/95
Xylenes (total)		ND	50	ug/L		10/07/95
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Job Number: 954368

LABORATORY

Report Date: 10/30/95

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9424

TEST

RESULTS

ATTN: Annette Montoya

Customer Sample ID: 9509261155 Sample Date.....: 09/26/95 Sample Time.....: 11:55 Sample Matrix....: Water Laboratory Sample ID: 954368-7 Date Received.....: 09/27/95 Time Received.....: 10:15  $M \cup -/4$ 

TEST DESCRIPTION	TEST MATRIX	FINAL RESULT.	DETECTION LIMIT	UNITS	TEST	METHOD	ANALYZED
Mercury (Hg)	Total	<0.0002	0.0002	mg/L	SW-846	7470	09/30/95
Extraction (Sep. Funnel) SVOC Separatory Funnel Liq/Liq Extraction		Complete		mL	SW-846	3510	10/03/95
Semivolatile Organics (Client List) Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(b)fluoranthene Benzo(b)fluoranthene Benzo(a)pyrene Chrysene Dibenzo(a,h)anthracene Fluoranthene Fluoranthene Fluoranthene Fluoranthene Pluoranthene Pathylnaphthalene 2-Methylnaphthalene Phenanthrene Pyrene 4-Chloro-3-methylphenol 2,4-Dichlorophenol 2,4-Dinitrophenol 2,4-Dinitrophenol 2-Methyl-4,6-dinitrophenol 2-Nitrophenol 4-Nitrophenol Phenol 2,4,6-Trichlorophenol Volatile Organics -Aromatics Benzene Ethylbenzene Toluene Xylenes (total)		ND ND ND ND ND ND ND ND ND ND ND ND ND N	$ \begin{array}{c} 10\\ 10\\ 10\\ 10\\ 10\\ 10\\ 10\\ 10\\ 10\\ 10\\$	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	SW-846		10/04/99 10/04/99 10/04/99 10/04/99 10/04/99 10/04/99 10/04/99 10/04/99 10/04/99 10/04/99 10/04/99 10/04/99 10/04/99 10/04/99 10/04/99 10/04/99 10/04/99 10/04/99 10/04/99 10/04/99 10/04/99 10/04/99 10/04/99 10/04/99 10/04/99 10/04/99 10/04/99 10/04/99 10/04/99 10/04/99 10/04/99 10/04/99 10/04/99 10/04/99 10/04/99 10/04/99 10/04/99 10/04/99 10/04/99 10/04/99 10/04/99 10/04/99 10/04/99 10/07/99

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Job Number: 954368

LABORATORY

TEST

Report Date: 10/30/95

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9424 ATTN: Annette Montoya

RESULTS

Customer Sample ID: 9509261235 Sample Date.....: 09/26/95 Sample Time.....: 12:35 Sample Matrix....: Water Laboratory Sample ID: 954368-8 Date Received.....: 09/27/95 Time Received.....: 10:15 MW-4S

TEST DESCRIPTION	TEST MATRIX	FINAL RESULT	DETECTION LIMIT	UNITS	TEST METHOD	ANALYZED
Extraction (Sep. Funnel) SVOC					SW-846 3510	
Separatory Funnel Liq/Liq Extraction		Complete		mL		10/03/95
Semivolatile Organics (Client List)					SW-846 8270	
Acenaphthene		ND	10	ug/L		10/04/95
Acenaphthylene		ND	10	ug/L		10/04/95
Anthracene		ND	10	ug/L		10/04/95
Benzo(a)anthracene		ND	10	ug/L		10/04/95
Benzo(b)fluoranthene		ND	10	ug/L		10/04/95
Benzo(k)fluoranthene		ND	10	ug/L		10/04/95
Benzo(ghi)perylene		ND	10	ug/L		10/04/95
Benzo(a)pyrene		ND	10	ug/L	İ	10/04/95
Chrysene		ND	10	ug/L		10/04/95
Dibenzo(a,h)anthracene		ND	10	ug/L		10/04/95
Fluoranthene		ND	10	ug/L		10/04/95
Fluorene		ND	10	ug/L		10/04/95
Indeno(1,2,3-cd)pyrene		ND	10	ug/L		10/04/95
1-Methylnaphthalene		ND	10	ug/L		10/04/95
2-Methylnaphthalene		ND	10	ug/L		10/04/95
Naphthalene		ND	10	ug/L		10/04/95
Phenanthrene		ND	10	ug/L		10/04/95
Pyrene		ND	10	ug/L		10/04/95
4-Chloro-3-methylphenol		ND	10	ug/L		10/04/95
2-Chlorophenol		ND	10	ug/L		10/04/95
2,4-Dichlorophenol		ND	10	ug/L		10/04/95
2,4-Dimethylphenol		ND	10	ug/L		10/04/95
2,4-Dinitrophenol		ND	50	ug/L		10/04/95
2-Methyl-4,6-dinitrophenol		ND	50	ug/L		10/04/95
2-Nitrophenol		ND	10	ug/L		10/04/95
4-Nitrophenol		ND	50 50	ug/L		10/04/95
Pentachlorophenol		ND ND	10	ug/L		10/04/95
Phenol		ND	10	ug/L		10/04/95
2,4,6-Trichlorophenol		ND	10	ug/L		10/04/95
Volatile Organics -Aromatics					SW-846 8020	
Benzene		ND	0.5	ug/L	SW-040 0020	10/10/95
Ethylbenzene		ND	0.5	ug/L		10/10/95
Toluene		ND	0.5	ug/L		10/10/95
Xylenes (total)		ND ND	0.5	ug/L		10/10/95
Ayrenes (totat)			0.5	ug/L		10/10/95
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Job Number: 954368

LABORATORY TEST RESULTS

<u>)</u>}

Report Date: 10/30/95

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9424

ATTN: Annette Montoya

Customer Sample ID: 9509261245 Sample Date.....: 09/26/95 Sample Time.....: 12:45 Sample Matrix....: Water Laboratory Sample ID: 954368-9 Date Received...... 09/27/95 Time Received...... 10:15

TEST DESCRIPTION	TEST MATRIX	FINAL RESULT	DETECTION LIMIT	UNITS	TEST METHOD	ANALYZE
/olatile Organics -Aromatics Benzene Chylbenzene Foluene (ylenes (total)		ND ND ND ND	0.5 0.5 0.5 0.5	ug/L ug/L ug/L ug/L	SW-846 8020	10/05/9 10/05/9 10/05/9 10/05/9
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Job Number: 954368

LABORATORY TEST

Report Date: 10/30/95

RESULTS

CUSTOMER: Geoscience Consultants, Ltd. PROJECT: REXENE COC #9424 ATTN: Annette Montoya

Customer Sample ID: 9509261340 Sample Date.....: 09/26/95 Sample Time.....: 13:40 Sample Matrix....: Water Laboratory Sample ID: 954368-10 Date Received.....: 09/27/95 Time Received.....: 10:15

# MW-3D

Extraction (Sep. Funnel) SV0C Separatory Funnel Lig/Lig Extraction  Semivolatile Organics (Client List) Acenaphthylene Acenaphthylene ND 10 ug/L Actinghthene ND 10 ug/L Benzo(b)fluoranthene ND 10 ug/L Benzo(b)fluoranthene ND 10 ug/L Benzo(c)fluoranthene ND 10 ug/L Chrysene ND 10 ug/L Indeno(1, 2, 3-cd)pyrene ND 10 ug/L 2-Methylaphthalene ND 10 ug/L 2-Methylaphthal ND 10 ug/L 2-Methylaphthal ND 10 ug/L 2-Methylaphthal ND 10 ug/L 2-Methylaphthal ND 10 ug/L 2-Methylaphthal ND 10 ug/L 2-Methylaphthal ND 10 ug/L 2-Methylaphthal ND 10 ug/L 2-Methylaphthal ND 10 ug/L 2-Methylaphthal ND 10 ug/L 2-Methylaphthal ND 10 ug/L 2-Methylaphthal ND 10 ug/L 2-Methylaphthal ND 10 ug/L 2-Methylaphthal ND 10 ug/L 2-Methylaphthal ND 10 ug/L 2-Methylaphthal ND 10 ug/L 2-Methylaphthal ND 10 ug/L 2-Methylaphthal ND 10 ug/L 2-Methylaphthal ND 10 ug/L 2-Methylaphthal ND 10 ug/L 2-Methylaphthal ND 10 ug/L 2-Methylaphthal ND 10 ug/L 2-Methylaphthal ND 10 ug/L 2-Methylaphthal ND 10 ug/L 2-Methylaphthal ND 10 ug/L 2-Methylaphthal ND 10 ug/L 2-Methylaphthal ND 10 ug/L 2-Methylaphthal ND 10 ug/L 2-Methylaphthal ND 10 ug/L 2-Methylaphthal ND 10 ug/L 2-Methylaphthal ND 10 ug/L 2-Methylaphthal ND 10 ug/L 2-Methylaphthal ND 10 ug/L 2-Methylaphthal ND 10 Ug/L 2-Methylaphthal ND 10 Ug/L 2-Methylaphthal ND 10 Ug/L 2-Methylaphthal ND 10 Ug/L 2-Methylaphthal ND 10 Ug/L 2-Methylaphthal ND 10 Ug/L 2-Methylaphthal ND 10 Ug/L 2-Methylaphthal ND 10 Ug/L 2-Methylaphthal ND 10 Ug/L 2-Methylaphthal ND	ANALYZED
Separatory Funnel Liq/Liq ExtractionCompletemLSemivolatile Organics (Client List) AcenaphthyteneND10ug/LAcenaphthyteneND10ug/LAcenaphtyteneND10ug/LAnthraceneND10ug/LBenzo(a)anthraceneND10ug/LBenzo(b)fluorantheneND10ug/LBenzo(ch)fluorantheneND10ug/LBenzo(ch)fluorantheneND10ug/LBenzo(a)pyreneND10ug/LChryseneND10ug/LFluorantheneND10ug/LFluorantheneND10ug/LFluorantheneND10ug/LFluorantheneND10ug/LFluorantheneND10ug/LFluorantheneND10ug/LFluorantheneND10ug/LFluorantheneND10ug/LFluorantheneND10ug/LPieneneND10ug/LAphthaleneND10ug/LAphthaleneND10ug/LZ-HethylnaphthaleneND10ug/LZ-HothylphenolND10ug/LZ-HothylphenolND10ug/LZ-HothylphenolND10ug/LZ-HothylphenolND10ug/LZ-HothylphenolND10ug/LZ-HothylphenolND10ug	
Acenaphthene         ND         10         ug/L           Acenaphthylene         ND         10         ug/L           Acenaphthylene         ND         10         ug/L           Anthracene         ND         10         ug/L           Benzo(b)fluoranthene         ND         10         ug/L           Benzo(c)fluoranthene         ND         10         ug/L           Chrysene         ND         10         ug/L           Dibenzo(a, h)anthracene         ND         10         ug/L           Fluoranthene         ND         10         ug/L           Fluoranthene         ND         10         ug/L           Fluoranthene         ND         10         ug/L           Portene         ND         10         ug/L           Acenaphthylenel         ND         10         ug/L           2-Methylnaphthalene         ND         10         ug/L	10/03/95
Acenaphthylene         ND         10         ug/L           Anthracene         ND         10         ug/L           Anthracene         ND         10         ug/L           Benzo(a)anthracene         ND         10         ug/L           Benzo(b)fluoranthene         ND         10         ug/L           Benzo(a)pyrene         ND         10         ug/L           Benzo(a)pyrene         ND         10         ug/L           Benzo(a)pyrene         ND         10         ug/L           Chrysene         ND         10         ug/L           Fluoranthene         ND         10         ug/L           Fluorene         ND         10         ug/L           Indeno(1, 2, 3-cd)pyrene         ND         10         ug/L           Indeno(1, 2, 3-cd)pyrene         ND         10         ug/L           Aphthalene         ND         10         ug/L           Pyrene         ND         10         ug/L           Pyrene         ND         10         ug/L           2,4-Dichlorphenol         ND         10         ug/L           2,4-Dichlorphenol         ND         10         ug/L	
Anthracene         ND         10         ug/L           Benzo(a)anthracene         ND         10         ug/L           Benzo(b)fluoranthene         ND         10         ug/L           Benzo(b)fluoranthene         ND         10         ug/L           Benzo(b)fluoranthene         ND         10         ug/L           Benzo(b)fluoranthene         ND         10         ug/L           Benzo(a)pyrene         ND         10         ug/L           Chrysene         ND         10         ug/L           Oibenzo(a, h)anthracene         ND         10         ug/L           Fluoranthene         ND         10         ug/L           Indeno(1, 2, 3-cd)pyrene         ND         10         ug/L           Indeno(1, 2, 3-cd)pyrene         ND         10         ug/L           Indenofi 2, 3-cd)pyrene         ND         10         ug/L           Settionphthalene         ND         10         ug/L           Pitoranthene         ND         10         ug/L           Settionphthalene         ND         10         ug/L           Pyrene         ND         10         ug/L           Chiorophenol         ND         10 </td <td>10/04/95</td>	10/04/95
Benzo(a)anthracene         ND         10         ug/L           Benzo(b)fluoranthene         ND         10         ug/L           Benzo(ch)fluoranthene         ND         10         ug/L           Benzo(ch)fluoranthene         ND         10         ug/L           Benzo(ch)fluoranthene         ND         10         ug/L           Benzo(a)pyrene         ND         10         ug/L           Chrysene         ND         10         ug/L           Dibenzo(a,h)anthracene         ND         10         ug/L           Fluorente         ND         10         ug/L           Fluoranthene         ND         10         ug/L           Fluorantene         ND         10         ug/L           Fluorantene         ND         10         ug/L           Fluorantene         ND         10         ug/L           Indeno(1,2,3-cd)pyrene         ND         10         ug/L           Indeno(1,2,3-cd)pyrene         ND         10         ug/L           Pethylnaphthalene         ND         10         ug/L           Pyrene         ND         10         ug/L           2-Chioro-3-methylphenol         ND         10	10/04/95
Benzo(b)fluoranthene         ND         10         ug/L           Benzo(k)fluoranthene         ND         10         ug/L           Benzo(k)fluoranthene         ND         10         ug/L           Benzo(k)fluoranthene         ND         10         ug/L           Benzo(k)fluoranthene         ND         10         ug/L           Chrysene         ND         10         ug/L           Dibenzo(a, h)anthracene         ND         10         ug/L           Fluoranthene         ND         10         ug/L           Fluoranthene         ND         10         ug/L           Indeno(1, 2, 3-cd)pyrene         ND         10         ug/L           Shethalene         ND         10         ug/L           Naphthalene         ND         10         ug/L           Pyrene         ND         10         ug/L           2-chtorophenol         ND         10         ug/L           2,4-Dinthrophenol         ND	10/04/95
Berzo(k)fluoranthene         ND         10         ug/L           Berzo(ghi)perylene         ND         10         ug/L           Berzo(a)pyrene         ND         10         ug/L           Chrysene         ND         10         ug/L           Dibenzo(a,h)anthracene         ND         10         ug/L           Fluoranthene         ND         10         ug/L           Fluoranthene         ND         10         ug/L           Fluoranthene         ND         10         ug/L           Indeno(1,2,3-cd)pyrene         ND         10         ug/L           2-Methylnaphthalene         ND         10         ug/L           Pyrene         ND         10         ug/L           Choroof-s-methylphenol         ND         10         ug/L           2,4-Dintrophenol         ND	10/04/95
Benzo(ghi)perylene         ND         10         ug/L           Benzo(a)pyrene         ND         10         ug/L           Chrysene         ND         10         ug/L           Dibenzo(a,h)anthracene         ND         10         ug/L           Fluorantheme         ND         10         ug/L           Fluorantheme         ND         10         ug/L           Indeno(1,2,3-cd)pyrene         ND         10         ug/L           1-Methylnaphthalene         ND         10         ug/L           2-Methylnaphthalene         ND         10         ug/L           Aphthalene         ND         10         ug/L           Pyrene         ND         10         ug/L           4-Chloro-3-methylphenol         ND         10         ug/L           2-4-Othorophenol         ND         10         ug/L           2,4-0 initrophenol         ND         10	10/04/95
Benzo(a)pyrene         ND         10         ug/L           Chrysene         ND         10         ug/L           Dibenzo(a,h)anthracene         ND         10         ug/L           Fluoranthene         ND         10         ug/L           Fluoranthene         ND         10         ug/L           Fluorene         ND         10         ug/L           Indeno(1, 2, 3-cd)pyrene         ND         10         ug/L           1-Methylaphthalene         ND         10         ug/L           2-Methylaphthalene         ND         10         ug/L           Naphthalene         ND         10         ug/L           Phenanthrene         ND         10         ug/L           Pyrene         ND         10         ug/L           4-Chlorophenol         ND         10         ug/L           2,4-Dintrophenol         ND         10         ug/L           2,4-Dintrophenol         ND         10         ug/L           2,4-Dintrophenol         ND         50         ug/L           2,4-Dintrophenol         ND         50         ug/L           2,4-Dintrophenol         ND         50         ug/L	10/04/95
Chrysene         ND         10         ug/L           Dibenzo(a,h)anthracene         ND         10         ug/L           Dibenzo(a,h)anthracene         ND         10         ug/L           Fluorentheme         ND         10         ug/L           Fluorene         ND         10         ug/L           Indeno(1,2,3-cd)pyrene         ND         10         ug/L           1-Methylnaphthalene         ND         10         ug/L           2-Methylnaphthalene         ND         10         ug/L           Naphthalene         ND         10         ug/L           Phenanthrene         ND         10         ug/L           Pyrene         ND         10         ug/L           2-Methylnaphthalene         ND         10         ug/L           Pyrene         ND         10         ug/L           2-Methyl-honol         ND         10         ug/L           2/4-Dichlorophenol         ND         10         ug/L           2/4-Dinitrophenol         ND         50         ug/L           2/4-Dinitrophenol         ND         50         ug/L           2/4-Dinitrophenol         ND         50         ug/L	10/04/95
Dibenzo(a,h)anthracene         ND         10         ug/L           Fluoranthene         ND         10         ug/L           Fluorene         ND         10         ug/L           Indeno(1,2,3-cd)pyrene         ND         10         ug/L           1-Methylnaphthalene         ND         10         ug/L           2-Methylnaphthalene         ND         10         ug/L           Naphthalene         ND         10         ug/L           Naphthalene         ND         10         ug/L           Phenanthrene         ND         10         ug/L           Pyrene         ND         10         ug/L           4-Chloro-3-methylphenol         ND         10         ug/L           2,4-Dichlorophenol         ND         10         ug/L           2,4-Dichlorophenol         ND         10         ug/L           2,4-Dintrophenol         ND         50         u	10/04/95
Fluoranthene       ND       10       ug/L         Fluorene       ND       10       ug/L         Indeno(1,2,3-cd)pyrene       ND       10       ug/L         2-Methylnaphthalene       ND       10       ug/L         Naphthalene       ND       10       ug/L         Phenathrene       ND       10       ug/L         Pyrene       ND       10       ug/L         4-Chloro-3-methylphenol       ND       10       ug/L         2-Alointrophenol       ND       10       ug/L         2-Alointrophenol       ND       10       ug/L         2,4-Dinitrophenol       ND       50       ug/L         2-Methyl-4,6-dinitrophenol       ND       50       ug/L         2-Mitrophenol       ND       50       ug/L         2-Mitrophenol       ND       50       ug	10/04/95
Fluorene       ND       10       ug/L         Indeno(1,2,3-cd)pyrene       ND       10       ug/L         1-Methylnaphthalene       ND       10       ug/L         2-Methylnaphthalene       ND       10       ug/L         Naphthalene       ND       10       ug/L         Naphthalene       ND       10       ug/L         Naphthalene       ND       10       ug/L         Pyrene       ND       10       ug/L         4-Chloro-3-methylphenol       ND       10       ug/L         2-Chlorophenol       ND       10       ug/L         2-A-Dichlorophenol       ND       10       ug/L         2,4-Dinthylphenol       ND       10       ug/L         2,4-Dintrophenol       ND       10       ug/L	10/04/95
Indeno(1,2,3-cd)pyrene       ND       10       ug/L         1-Methylnaphthalene       ND       10       ug/L         2-Methylnaphthalene       ND       10       ug/L         Naphthalene       ND       10       ug/L         Naphthalene       ND       10       ug/L         Naphthalene       ND       10       ug/L         Phenanthrene       ND       10       ug/L         Pyrene       ND       10       ug/L         4-Chloro-3-methylphenol       ND       10       ug/L         2,4-Dichlorophenol       ND       10       ug/L         2,4-Dinitrophenol       ND       10       ug/L         2-Nitrophenol       ND       10       ug/L         2-Nitrophenol       ND       10       ug/L	10/04/95
1-Methylnaphthalene       ND       10       ug/L         2-Methylnaphthalene       ND       10       ug/L         Naphthalene       ND       10       ug/L         Naphthalene       ND       10       ug/L         Phenanthrene       ND       10       ug/L         Pyrene       ND       10       ug/L         4-Chloro-3-methylphenol       ND       10       ug/L         2-Abichlorophenol       ND       10       ug/L         2,4-Dichlorophenol       ND       10       ug/L         2,4-Dichlorophenol       ND       10       ug/L         2,4-Dinitrophenol       ND       10       ug/L         2,4-Dinitrophenol       ND       50       ug/L         2-Nitrophenol       ND       10       ug/L         2-Nitrophenol       ND       50       ug/L         4-Nitrophenol       ND       50       ug/L         2+Nethyl-4,6-dinitrophenol       ND       10       ug/L         2-Nitrophenol       ND       10       ug/L         2-Nitrophenol       ND       10       ug/L         2,4,6-Trichlorophenol       ND       10       ug/L      <	10/04/95
1-Methylnaphthalene       ND       10       ug/L         2-Methylnaphthalene       ND       10       ug/L         Naphthalene       ND       10       ug/L         Naphthalene       ND       10       ug/L         Phenanthrene       ND       10       ug/L         Pyrene       ND       10       ug/L         4-Chloro-3-methylphenol       ND       10       ug/L         2-Abichlorophenol       ND       10       ug/L         2,4-Dichlorophenol       ND       10       ug/L         2,4-Dichlorophenol       ND       10       ug/L         2,4-Dinitrophenol       ND       10       ug/L         2,4-Dinitrophenol       ND       50       ug/L         2-Nitrophenol       ND       10       ug/L         2-Nitrophenol       ND       50       ug/L         4-Nitrophenol       ND       50       ug/L         2-Nitrophenol       ND       10       ug/L         2-Nitrophenol       ND       10       ug/L         2-Nitrophenol       ND       10       ug/L         2-Aoftarbelor       ND       10       ug/L         2,4,6-T	10/04/95
NaphthaleneND10ug/LPhenanthreneND10ug/LPyreneND10ug/L4-Chloro-3-methylphenolND10ug/L2-ChlorophenolND10ug/L2,4-DichlorophenolND10ug/L2,4-DichlorophenolND10ug/L2,4-DinitrophenolND10ug/L2,4-DinitrophenolND10ug/L2-Methyl-4,6-dinitrophenolND50ug/L2-Methyl-4,6-dinitrophenolND50ug/L2-NitrophenolND50ug/L2-NitrophenolND50ug/L2-NitrophenolND50ug/L2-NitrophenolND50ug/L2-NitrophenolND50ug/L2-NitrophenolND10ug/L2-NitrophenolND50ug/L2-NitrophenolND50ug/L2-NitrophenolND10ug/L2-NitrophenolND10ug/L2-A,6-TrichlorophenolND10ug/LVolatile Organics -AromaticsND0.5ug/LBenzeneND0.5ug/LEthylbenzeneND0.5ug/LTolueneND0.5ug/L	10/04/95
PhenanthreneND10ug/LPyreneND10ug/L4-Chloro-3-methylphenolND10ug/L2-ChlorophenolND10ug/L2,4-DichlorophenolND10ug/L2,4-DinitrophenolND10ug/L2,4-DinitrophenolND10ug/L2,4-DinitrophenolND10ug/L2,4-DinitrophenolND50ug/L2,4-DinitrophenolND50ug/L2,4-DinitrophenolND50ug/L2-Methyl-4,6-dinitrophenolND50ug/L2-NitrophenolND50ug/L2-NitrophenolND50ug/L2-NitrophenolND50ug/L2-NitrophenolND50ug/L2-NitrophenolND50ug/L2-NitrophenolND50ug/L2-NitrophenolND10ug/L2-A-NitrophenolND10ug/L2-A-NitrophenolND10ug/L2-A-NitrophenolND10ug/L2-A-Stile Organics -AromaticsND0.5ug/LBenzeneND0.5ug/LEthylbenzeneND0.5ug/LTolueneND0.5ug/L	10/04/95
PyreneND10ug/L4-Chloro-3-methylphenolND10ug/L2-ChlorophenolND10ug/L2,4-DichlorophenolND10ug/L2,4-DimethylphenolND10ug/L2,4-DinitrophenolND50ug/L2-Methyl-4,6-dinitrophenolND50ug/L2-NitrophenolND50ug/L2-NitrophenolND50ug/L2-NitrophenolND50ug/L2-NitrophenolND50ug/L2-NitrophenolND10ug/L2-NitrophenolND50ug/L2-NitrophenolND10ug/L2-NitrophenolND50ug/L2-NitrophenolND50ug/L4-NitrophenolND50ug/L2-NitrophenolND50ug/L2-NitrophenolND50ug/L2-NitrophenolND50ug/L2-NitrophenolND50ug/L2-NitrophenolND10ug/L2-A-StrichlorophenolND10ug/L2-A-StrichlorophenolND0.5ug/LVolatile Organics -AromaticsND0.5ug/LEthylbenzeneND0.5ug/LTolueneND0.5ug/L	10/04/95
4-Chloro-3-methylphenol       ND       10       ug/L         2-Chlorophenol       ND       10       ug/L         2.4-Dichlorophenol       ND       10       ug/L         2,4-Dimethylphenol       ND       10       ug/L         2,4-Dinitrophenol       ND       10       ug/L         2,4-Dinitrophenol       ND       10       ug/L         2,4-Dinitrophenol       ND       50       ug/L         2,4-Dinitrophenol       ND       50       ug/L         2-Methyl-4,6-dinitrophenol       ND       10       ug/L         2-Nitrophenol       ND       10       ug/L         2-Nitrophenol       ND       10       ug/L         4-Nitrophenol       ND       50       ug/L         2-Nitrophenol       ND       50       ug/L         Pentachlorophenol       ND       10       ug/L         2,4,6-Trichlorophenol       ND       10       ug/L         2,4,6-Trichlorophenol       ND       0.5       ug/L         Volatile Organics -Aromatics       ND       0.5       ug/L         Benzene       ND       0.5       ug/L         Ethylbenzene       ND       0.5	10/04/95
2-ChlorophenolND10ug/L2,4-DichlorophenolND10ug/L2,4-DimethylphenolND10ug/L2,4-DinitrophenolND10ug/L2,4-DinitrophenolND50ug/L2-Methyl-4,6-dinitrophenolND50ug/L2-NitrophenolND50ug/L2-NitrophenolND10ug/L2-NitrophenolND50ug/L2-NitrophenolND50ug/L2-NitrophenolND50ug/L2-NitrophenolND50ug/L2-NitrophenolND50ug/L2-NitrophenolND10ug/L2-NitrophenolND10ug/L2-NitrophenolND10ug/L2-NitrophenolND10ug/L2-NitrophenolND10ug/L2-A-FrichlorophenolND0.5ug/LVolatile Organics -AromaticsND0.5ug/LEthylbenzeneND0.5ug/LTolueneND0.5ug/L	10/04/95
2,4-DichlorophenolND10ug/L2,4-DimethylphenolND10ug/L2,4-DinitrophenolND50ug/L2,4-DinitrophenolND50ug/L2-Methyl-4,6-dinitrophenolND50ug/L2-NitrophenolND10ug/L2-NitrophenolND50ug/L2-NitrophenolND50ug/L2-NitrophenolND50ug/L2-NitrophenolND50ug/L2-NitrophenolND50ug/L2-NitrophenolND10ug/L2-NitrophenolND10ug/L2-NitrophenolND10ug/L2-NitrophenolND10ug/L2-NitrophenolND10ug/L2-NitrophenolND10ug/L2-NitrophenolND10ug/L2-NitrophenolND0.5ug/L2-Nitle Organics -AromaticsND0.5ug/LEthylbenzeneND0.5ug/LTolueneND0.5ug/L	10/04/95
2,4-DimethylphenolND10ug/L2,4-DinitrophenolND50ug/L2-Methyl-4,6-dinitrophenolND50ug/L2-NitrophenolND10ug/L2-NitrophenolND10ug/L4-NitrophenolND50ug/LPentachlorophenolND50ug/LPentachlorophenolND50ug/LPhenolND10ug/L2,4,6-TrichlorophenolND10ug/LVolatile Organics -AromaticsND0.5ug/LBenzeneND0.5ug/LEthylbenzeneND0.5ug/LTolueneND0.5ug/L	10/04/95
2,4-DinitrophenolND50ug/L2-Methyl-4,6-dinitrophenolND50ug/L2-NitrophenolND10ug/L2-NitrophenolND50ug/L4-NitrophenolND50ug/LPentachlorophenolND50ug/LPhenolND10ug/L2,4,6-TrichlorophenolND10ug/LVolatile Organics -AromaticsND0.5ug/LBenzeneND0.5ug/LEthylbenzeneND0.5ug/LTolueneND0.5ug/L	10/04/95
2-Methyl-4,6-dinitrophenolND50ug/L2-NitrophenolND10ug/L2-NitrophenolND50ug/L4-NitrophenolND50ug/LPentachlorophenolND50ug/LPhenolND10ug/L2,4,6-TrichlorophenolND10ug/LVolatile Organics -AromaticsND0.5ug/LBenzeneND0.5ug/LEthylbenzeneND0.5ug/LTolueneND0.5ug/L	10/04/95
2-Methyl-4,6-dinitrophenolND50ug/L2-NitrophenolND10ug/L2-NitrophenolND50ug/L4-NitrophenolND50ug/LPentachlorophenolND50ug/LPhenolND10ug/L2,4,6-TrichlorophenolND10ug/LVolatile Organics -AromaticsND0.5ug/LBenzeneND0.5ug/LEthylbenzeneND0.5ug/LTolueneND0.5ug/L	10/04/95
2-NitrophenolND10ug/L4-NitrophenolND50ug/LPentachlorophenolND50ug/LPhenolND10ug/L2,4,6-TrichlorophenolND10ug/LVolatile Organics -AromaticsND0.5ug/LBenzeneND0.5ug/LEthylbenzeneND0.5ug/LTolueneND0.5ug/L	10/04/95
Pentachlorophenol     ND     50     ug/L       Phenol     ND     10     ug/L       2,4,6-Trichlorophenol     ND     10     ug/L       Volatile Organics -Aromatics     ND     0.5     ug/L       Benzene     ND     0.5     ug/L       Ethylbenzene     ND     0.5     ug/L       Toluene     ND     0.5     ug/L	10/04/95
Phenol     ND     10     ug/L       2,4,6-Trichlorophenol     ND     10     ug/L       Volatile Organics -Aromatics     ND     0.5     ug/L       Benzene     ND     0.5     ug/L       Ethylbenzene     ND     0.5     ug/L       Toluene     ND     0.5     ug/L	10/04/95
2,4,6-Trichlorophenol     ND     10     ug/L       Volatile Organics -Aromatics     SW-846 8020       Benzene     ND     0.5     ug/L       Ethylbenzene     ND     0.5     ug/L       Toluene     ND     0.5     ug/L	10/04/95
Volatile Organics - AromaticsND0.5ug/LBenzeneND0.5ug/LEthylbenzeneND0.5ug/LTolueneND0.5ug/L	10/04/95
Benzene         ND         0.5         ug/L           Ethylbenzene         ND         0.5         ug/L           Toluene         ND         0.5         ug/L	10/04/95
Benzene         ND         0.5         ug/L           Ethylbenzene         ND         0.5         ug/L           Toluene         ND         0.5         ug/L	
Ethylbenzene         ND         0.5         ug/L           Toluene         ND         0.5         ug/L	10/05/95
ND 0.5 ug/L	
······································	10/05/95
	10/05/95
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Job Number: 954368

QUALITY CONTROL

Report Date: 10/30/95

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9424

REPORT

ATTN: Annette Montoya

Description	:: SW-846 7470 :: Mercury (CVA :: Mercury (Hg)				Limit: 233	002	Analyst.	: lmt
QC Lab ID	M Reagent	QC Result	Dil. Value	Orig. Value	Alt. Value	Calculation	Result	Analyzed
ICV ICB	950911B	0.00407	0.004000			% REC	101.8	09/30/95 1115 09/30/95 1117
MD 954371-1	T	0.00013		0.00013		ABS Diff.	0.00000	09/30/95 1120
MS 957371-7 MB	T 950929C	0.00506 0.00019	0.005000	0.00006		% REC	100.0	09/30/95 1123 09/30/95 1132
SB	950929C	0.00536	0.005000	0.00019		% REC	107.2	09/30/95 1133
CCV CCB	1013P	0.00264 -0.00001	0.002500			% REC	105.6	09/30/95 1135 09/30/95 1137
SBD	950929C	0.00496	0.005000	0.00019	0.00536	% REC RPD	99.2 7.8	09/30/95 1138
CCV CCB	1013P	0.00241 -0.00004	0.002500			% REC	96.4	09/30/95 1155 09/30/95 1157
MD 954367-1	D	0.00006		0.00009		ABS Diff.	0.00003	09/30/95 1202
MS 954367-2		0.00506	0.005000	-0.00005		% REC	102.2	09/30/95 1205
CCV CCB MB EB	1013P	0.00237 0.00002 0.00002 -0.00001	0.002500			% REC	94.8	09/30/95 1215 09/30/95 1217 09/30/95 1220 09/30/95 1222
DD 954329-1		0.00053		0.00030		ABS Diff.	0.00023	09/30/95 1225
ED 954329-1		0.00033		0.00030		ABS Diff.	0.00003	09/30/95 1227
SB	950929C	0.00509	0.005000			% REC	101.8	09/30/95 1228
MS 954329-1 CCV CCB	950929C 1013P	0.00502 0.00264 0.00006	0.005000 0.002500	0.00030		% REC % REC	94.4 105.6	09/30/95 1232 09/30/95 1233 09/30/95 1235



	Job Number: 95436	QUAL B	ΙΤΥ	CO	NTROL	REPORT	Report Date: 10	0/30/95	
CUSTOMER: Ge	oscience Consultants,	Ltd	PROJE	CT: RE)	KENE COC #942	24	ATTN: Annette	Montoya	
QC Type	Descri	ption		Rea	ag. Code	Lab ID	Dilution I	Factor Dat	e Time
	d SW-846 d Description.: Volatil		omatics			: 2704 : ug/L	Analy	/st: dmj	
MB	Method Blank	·						10/	05/95 1325
Test Descrip	otion	QC Result	Det. i	.imit	True Value	e Orig. Valu	e Alt. Value	Calc	Result
enzene thylbenzene oluene ylenes (total	.)	ND ND ND ND	(	).5 ).5 ).5 ).5					
SB	Spiked Blank	· · · · · · · · · · · · · · · · · · ·		T 100	0595в			10/	05/95 1129
Test Descrip	otion	QC Result	Det. l	imit	True Value	e Ori <mark>g.</mark> Value	e Alt. Value	Calc	Result
enzene hylbenzene bluene vlenes (total	1)	21.4 21.0 21.1 62.0	(	).5 ).5 ).5 ).5	20.0 20.0 20.0 60.0			% REC % REC % REC % REC	107.0 105.0 105.5 103.3
SBD	Spiked Blank Duplicat	e		т10	0595B			10/	05/95 1207
Test Descrip	otion	QC Result	Det. l	imit	True Value	e Orig. Value	e Alt. Value	Calc	Result
nzene		20.6	C	).5	20.0		21.4	% REC RPD	103.0 3.8
hylbenzene		20.1	(	).5	20.0		21.0	% REC RPD	100.5
luene		20.3	(	).5	20.0		21.1	% REC RPD	101.5 3.9
vlenes (total	()	60.0	(	).5	60.0		62.0	% REC RPD	100.0 3.3
	d: SW-846 d Description.: Volatil		omatics			: 2705 : ug/L	Analy	/st: dmj	
				-1			·····		
мв	Method Blank							10/	06/95 1024

	MB	Method Blank						10/06/95 1024
_	Test Descrip	otion	QC Result	Det. Limit	True Value Orig. Value	Alt. Value	Calc	Result
В	enzene		ND	0.5				
E	thylbenzene		ND	0.5				
T	oluene		ND	0.5				
X	ylenes (total	l)	ND	0.5				

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1

CUSTOMER: Geos	science Consulta	ints, Ltd.	PROJECT	REXENE COC #	9424	ATTN: Annette	Montoya	C C	
QC Туре	C	escription		Reag. Code	Lab ID	Dilution	Factor	Date	Time
		·····				······································			
SB	Spiked Blank			Т100695В				10/06/	95 1643
Test Descript	ion	QC Result	Det. Lia	nit True Va	lue Orig. Value	Alt. Value	Calc	: 1	Result
enzene		21.7	0.5				% R		108.5
hylbenzene Nuene		21.1 21.5	0.5				% R % R		105.5 107.5
lenes (total)		63.1	0.5				% R		107.5
SBD	Spiked Blank Dup	licate		T100695B				10/06/9	95 1720
Test Descript	· · · · · · · · · · · · · · · · · · ·	QC Result	Det. Lin	nit True Val	lue Orig. Value	Alt. Value	Calc		Result
enzene		21.7	0.5	5 20.0		21.7	% R		108.5
hylbenzene		21.1	0.5	5 20.0		21.1	% R		0.0
luene		21.4	0.5	5 20.0		21.5	% R		0.0
								00	
lenes (total)		62.9	0.5	60.0		63.1	~ % R	PD EC PD	0.5 104.8 0.3
			0.5			63.1	~ % R	EC	104.8
Method	Sb			Batch	: 2707 ug/L		~ % R	EC <sup>4</sup> PD	104.8
Method Method [	SW Description.: Vo	1-846 8020		Batch			% R R	EC <sup>·</sup> PD chmj	104.8 0.3
Method Method I MB N	SW Description.: Vo Method Blank	J-846 8020 Dlatile Organics -Ar	omatics	Batch. Units.	: ug/L	Analy	% R /st:	EC PD cm j	104.8 0.3 95 1151
Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Me	SW Description.: Vo Method Blank	I-846 8020 Datile Organics -Ar QC Result	omatics	Batch Units nit True Val			% R R	EC PD cm j	104.8 0.3
Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Me	SW Description.: Vo Method Blank	I-846 8020 Datile Organics -Ar QC Result ND	omatics Det. Lin	Batch Units nit True Val	: ug/L	Analy	% R /st:	EC PD cm j	104.8 0.3 95 1151
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Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Me	Method Blank	QC Result ND ND ND ND ND ND ND ND	omatics Det. Lin 0.5 0.5 0.5	Batch. Units. nit True Val	Lue Orig. Value	Analy Alt. Value	% R R /st: Calc	EC PD clm j 10/09/9 f clm j 10/10/9	104.8 0.3 25 1151 Result
Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Method Me	Method Blank	Q-846 8020 Datile Organics -Ar QC Result ND ND ND ND ND ND ND	omatics Det. Lin 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	Batch Units nit True Val 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	: ug/L	Analy Alt. Value Analy	% R R /st: Calc	EC PD clm j 10/09/9 f clm j 10/10/9	104.8 0.3 25 1151 Result
Method Method Method Method Method MB MB Method Method Method Method Method Method Method Method MB MB MB MB MB MEthod Method Method Method Method MB MB MB MB MEthod Method Method Method MB MB MB MB MB MEthod MB MB MB MB MB MB MB MB MB MB MB MB MB	Method Blank	QC Result QC Result ND ND ND ND ND ND ND QC Result	omatics Det. Lin 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	Batch. Units. nit True Val Batch. Units. nit True Val	: ug/L	Analy Alt. Value Analy	% R R /st: Calc	EC PD clm j 10/09/9 f clm j 10/10/9	104.8 0.3 25 1151 Result

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	Q Job Number: 954368	UALITY	CONTROL		port Date: 10/30/95		
CUSTOMER: Ge	oscience Consultants, Ltd.	PROJEC	CT: REXENE COC #9	)424 A1	ITN: Annette Montoy	a	
QC Type	Description		Reag. Code	Lab ID	Dilution Factor	Date	Time

Method .....: SW-846 8270 Method Description.: Semivolatile Organics (Client List)

Batch.....: 2797 Units.....: ug/L Analyst ...: mla

MB Method Blank		MB07	44		10,	/04/95 192
Test Description	QC Result	Det. Limit	True Value Orig. Value	Alt. Value	Calc	Result
Acenaphthene	ND	10				
Acenaphthylene	ND	10				
Anthracene	ND	10				
Benzo(a)anthracene	ND	10				
Benzo(b)fluoranthene	ND	10				
Benzo(k)fluoranthene	ND	10				
Benzo(ghi)perylene	ND	10				
Benzo(a)pyrene	ND	10				
Chrysene	ND	10				
)ibenzo(a,h)anthracene	ND	10				
Fluoranthene	ND	10				
luorene	ND	10				
(ndeno(1,2,3-cd)pyrene	ND	10				
I-Methylnaphthalene	ND	10				
2-Methylnaphthalene	ND	10				
laphthalene	ND	10				
Phenanthrene	ND	10				
Pyrene	ND	10				
-Chloro-3-methylphenol	ND	10				
2-Chlorophenol	ND	10				
2.4-Dichlorophenol	ND	10				
4-Dimethylphenol	ND	10				
4-Dinitrophenol	ND	50				
-Methyl-4,6-dinitrophenol	ND	50				
2-Nitrophenol	ND	10				
-Nitrophenol	ND	50				
Pentachlorophenol	ND	50				
Phenol	ND	10				
2,4,6-Trichlorophenol	ND	10				

Method: SW-846 8270	Batch 2798	Analyst: mla	
Method Description.: Semivolatile Organics (Client List)	Units ug/L		

MB	Method Blank		MB07	45			10	/06/95 1659
Test Des	cription	QC Result	Det. Limit	True Value	Orig. Value	Alt. Value	Calc	Result
cenaphthe	ne	ND	10					
cenaphthy		ND	10					
Anthracene		ND	10					
Benzo(a)an	ithracene	ND	10					
lenzo(b)fl	uoranthene	ND	10					
enzo(k)fl	uoranthene	ND	10					
enzo(ghi)		ND	10					
lenzo(a)py		ND	10					

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	QUALI Job Number: 954368	TY CONTROL		port Date: 10/30/95		
CUSTOMER: G	eoscience Consultants, Ltd.	PROJECT: REXENE COC #9	424 A1	TN: Annette Montoy	1	
QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time

MB Method Blank		MB0745				10,	(06/95 1659
Test Description	QC Result	Det. Limit	True Value	Orig. Value	Alt. Value	Calc	Result
Chrysene	ND	10					
Dibenzo(a,h)anthracene	ND	10					
Fluoranthene	ND	10					
Fluorene	ND	10					
Indeno(1,2,3-cd)pyrene	ND	10					
1-Methylnaphthalene	ND	10					
2-Methylnaphthalene	ND	10					
Naphthalene	ND	10					
Phenanthrene	ND	10					
Pyrene	ND	10					
4-Chloro-3-methylphenol	ND	10					
2-Chlorophenol	ND	10					
2,4-Dichlorophenol	ND	10					
2,4-Dimethylphenol	ND	10					
2,4-Dinitrophenol	ND	50					
2-Methyl-4,6-dinitrophenol	ND	50					
2-Nitrophenol	ND	10					
4-Nitrophenol	ND	50					
Pentachlorophenol	ND	50					
Phenol	ND	10					
2,4,6-Trichlorophenol	ND	10					

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#### RECOVERIES REPORT SURROGATE Job Number.: 954368

Report Date: 10/30/95

Batch..... 2704 Analyst..... dmj

Batch..... 2705

Analyst..... dmj

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9424

ATTN: Annette Montoya

Method..... SW-846 Method Code..... 8020

Surrogate			Dilution Factor	Units				
BFB (Surrogate	)		3.5	ug/L				
Lab ID	Matrix	QC Type	Result	True Value	Percent Recovery	Flag	Date	Time
		MB	19.8	20.0800	98.6		10/05/95	1325
		SB	19.0	20.0800	94.6		10/05/95	1129
		SBD	19.1	20.0800	95.1		10/05/95	1207
954368-2			19.7	20.0800	98.1		10/05/95	1402
954368-4			19.7	20.0800	98.1		10/05/95	1440
954368-9			19.7	20.0800	98.1		10/05/95	1517
<b>954368-</b> 10			19.8	20.0800	98.6		10/05/95	1555
954368-1			17.8	20.0800	88.6		10/05/95	1636

Method..... SW-846 Method Code....: 8020

Surrogate			Dilution Factor	Units				
BFB (Surrogate	:)	· · ·	3.5	ug/L				
Lab ID	Matrix	QC Type	Result	True Value	Percent Recovery	Flag	Date	Time
			19.5	20.0800	97.1		10/06/95	1024
		SB	19.2	20.0800	95.6		10/06/95	1643
		SBD	19.0	20.0800	94.6		10/06/95	1720
954368-7			19.4	20.0800	96.6		10/07/95	0240
954368-5			20.0	20.0800	99.6		10/07/95	0432
954368-6			18.4	20.0800	91.6		10/07/95	0509
	: s				2707 dmj			

Surrogate			Dilution Factor	Units				
BFB (Surrogate	2)		3.5	ug/L				
Lab ID	Matrix	QC Type	Result	True Value	Percent Recovery	Flag	Date	Time
954368-3		мв	19.8 18.9	20.0800	98.6 94.1		10/09/95 10/09/95	1151 1420



SURROGATE RECOVERIES REPORT

Job Number.: 954368

Report Date: 10/30/95

CUSTOMER: Geoscience Consultants, Ltd. P

PROJECT: REXENE COC #9424 ATTN: Annet

ATTN: Annette Montoya

	de				: 2708 : dmj			
Surrogate			Dilution Factor	Units				
BFB (Surrogate)			3.5	ug/L				
Lab ID	Matrix	QC Type	Result	True Value	Percent Recovery	Flag	Date	Time
954368-8		МВ	19.7 19.4	20.0800 20.0800	98.1 96.6		10/10/95 10/10/95	1325 1547
	de				: 2797 mla			· · · · · · · · ·
Surrogate			Dilution Factor	Units				
2,4,6-Tribromoph	henol			ug/L				
Lab ID	Matrix	QC Type	Result	True Value	Percent Recovery	Flag	Date	Time
954368-7 954368-8 954368-10		MB	78.35 86.26 95.03 82.07	100.0100 100.0100 100.0100 100.0100	78 86 95 82		10/04/95 10/04/95 10/04/95 10/04/95	1923 2025 2127 2228
Surrogate			Dilution Factor	Units				
2-Fluorobipheny	ι			ug/L				
Lab ID	Matrix	QC Type	Result	True Value	Percent Recovery	Flag	Date	Time
954368-7 954368-8 954368-10		MB	34.22 36.49 40.46 38.03	50.0100 50.0100 50.0100 50.0100 50.0100	68 73 81 76		10/04/95 10/04/95 10/04/95 10/04/95	1923 2025 2127 2228
Surrogate			Dilution Factor	Units				
2-Fluorophenol				ug/L				
Lab ID	Matrix	QC Type	Result	True Value	Percent Recovery	Flag	Date	Time
954368-7 954368-8 954368-10		MB	47.91 50.40 51.84 50.90	100.0000 100.0000 100.0000 100.0000	48 50 52 51		10/04/95 10/04/95 10/04/95 10/04/95	1923 2025 2127 2228



SURROGATE RECOVERIES REPORT Job Number.: 954368 Report Date: 10/30/95

CUSTOMER: Geoscience Consultants, Ltd. PROJECT: REXENE COC #9424

Surrogate			Dilution Factor	Units				
Nitrobenzene-c	15			ug/L				
Lab ID	Matrix	QC Type	Result	True Value	Percent Recovery	Flag	Date	Time
954368-7 954368-8 954368-10	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	МВ	34.88 36.94 39.58 36.51	50.0500 50.0500 50.0500 50.0500 50.0500	70 74 79 73		10/04/95 10/04/95 10/04/95 10/04/95	1923 2025 2127 2228
Surrogate			Dilution Factor	Units				
Phenol-d6				ug/L				
Lab ID	Matrix	QC Type	Result	True Value	Percent Recovery	Flag	Date	Time
954368-7 954368-8 954368-10		МВ	25.70 31.45 30.20 29.60	100.0200 100.0200 100.0200 100.0200	26 31 30 30		10/04/95 10/04/95 10/04/95 10/04/95	1923 2025 2127 2228
Surrogate	· · · · · · · · · · · · · · · · · · ·		Dilution Factor	Units				
Terphenyl-d14	· · · · · · · · · · ·			ug/L				
Lab ID	Matrix	QC Type	Result	True Value	Percent Recovery	Flag	Date	Time
954368-7 954368-8 954368-10		МВ	44.58 39.97 50.88 42.32	50.0000 50.0000 50.0000 50.0000	89 80 102 85		10/04/95 10/04/95 10/04/95 10/04/95	1923 2025 2127 2228
					: 2798 mla			

Surrogate	Dilution Factor	Units
2,4,6-Tribromophenol		ug/L

Lab ID	Matrix	QC Type	Result	True Value	Percent Recovery	Flag	Date	Time
		 MB	81.64	100.0100	82		10/06/95	1659
954369-1			101.32	100.0100	101		10/06/95	1800
954368-6			101.13	100.0100	101		10/06/95	1902
954368-5			102.17	100.0100	102		10/06/95	2004
954368-5			97.96	100.0100	98		10/09/95	0014

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#### SURROGATE RECOVERIES REPORT

Job Number.: 954368

Report Date: 10/30/95

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9424

ATTN: Annette Montoya

2-Fluorobiphenyl				ug/l				
Lab ID	Matrix	QC Type	Result	True Value	Percent Recovery	Flag	Date	Time
		MB	29.81	50.0100	60		10/06/95	1659
954369-1			41.36	50.0100	83		10/06/95	1800
954368-6			35.99	50.0100	72		10/06/95	1902
954368-5			39.95	50.0100	80		10/06/95	2004
954368-5			39.35	50.0100	79		10/09/95	0014
Surrogate			Dilution Factor	Units				
2-Fluorophenol				ug/L				
Lab ID	Matrix	QC Type	Result	True Value	Percent Recovery	Flag	Date	Time
		MB	48.22	100.0000	48		10/06/95	1659
954369-1			47.16	100.0000	47		10/06/95	1800
954368-6			61.68	100.0000	62		10/06/95	1902
954368-5			73.95	100.0000	74		10/06/95	2004
954368-5			69.92	100.0000	70		10/09/95	0014
Surrogate			Dilution Factor	Units				
Nitrobenzene-d5				ug/L				
Lab ID	Matrix	QC Type	Result	True Value	Percent Recovery	Flag	Date	Time
	·····	MB	29.32	50.0500	59		10/06/95	1659
954369-1			40.51	50.0500	81		10/06/95	1800
954368-6			34.42	50.0500	69		10/06/95	1902
954368-5			41.99	50.0500	84		10/06/95	2004
954368-5			41.83	50.0500	84		10/09/95	0014
Surrogate			Dilution Factor	Units				
Phenol-d6				ug/L				
Lab ID	Matrix	QC Type	Result	True Value	Percent Recovery	Flag	Date	Time
		МВ	49.78	100.0200	50		10/06/95	1659
954369-1			60.24	100.0200	60		10/06/95	1800
954368-6			76.31	100.0200	76		10/06/95	1902
954368-5			85.84	100.0200	86		10/06/95	2004
954368-5			78.55	100.0200	79		10/09/95	0014

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#### SURROGATE RECOVERIES REPORT Job Number.: 954368

Report Date: 10/30/95

CUSTOMER: Geoscience Consultants, Ltd. PROJECT: REXENE COC #9424

ATTN: Annette Montoya

Surrogate		an an an an an an an an an an an an an a	Dilution Factor	Units				
Terphenyl-d1	4			ug/L				
Lab ID	Matrix	QC Type	Result	True Value	Percent Recovery	Flag	Date	Time
		MB	44.72	50.0000	89		10/06/95	1659
954369-1			39.94	50.0000	80		10/06/95	1800
954368-6			50.43	50.0000	101		10/06/95	1902
954368-5			119.26	50.0000	239	х	10/06/95	2004
954368-5			133.66	50.0000	267	X	10/09/95	0014



## QUALITY ASSURANCE METHODS

#### REFERENCES AND NOTES

Report Date: 10/30/95

1	lle Organics Method 602/8020				
5	Surrogate Recovery Limit	S			
		Water		Soil	
	Bromofluorobenzene	89-110%		78-123%	
9	Spike/Spike Duplicate Re	covery Limit	s		
	······································	Water	~	Soil	
	Benzene	75-125%			
				75-125%	
	Ethylbenzene	75-125%		75-125%	
	Toluene	75-125%		75-125%	
	Xylenes	75-125%		75-125%	
	Nethod 8015 Modified				
S	Spike/Spike Duplicate Re	covery Limit	s		
		Water		Soil	
	TVPH	81-124%		81-124%	
	TEPH	54-135%		54-135%	
	Method 624/8240/8260 Surrogate Recovery Limit	s			
		Water		Soil	
	Dibromofluoromethane	86-118%		80-120%	
	Toluene-(d8)	88-110%		81-117%	
	4-Bromofluorobenzene	86-115%		74-121%	
9	Spike/Spike Duplicate Re	coverv & RPD	Limit	S	
		Water		Soil	
		Recovery	RPD	Recovery	RPD
	1,1-Dichloroethene	61-145%	14	59-172%	22
	Trichloroethene	71-120%			
			14	62-137%	24
	Benzene	76-127%	11	66-142%	21
	Toluene	76-125%	13	59-139%	21
	Chlorobenzene	75-130%	13	60-133%	21
М	eides/PCB Organics Method 608/8080				
	Surrogate Recovery Limit:	S			
	dirogate Recovery Limit.	s Water		Soil	
		Water		Soil 60-150%	
	Tetrachloro-m-xylene			60-150%	
	Tetrachloro-m-xylene 4,4'-Dichlorobiphenyl Method 8140	Water 60-150% 60-150%			
	Tetrachloro-m-xylene 4,4'-Dichlorobiphenyl	Water 60-150% 60-150%		60-150% 60-150%	
	Tetrachloro-m-xylene 4,4'-Dichlorobiphenyl Method 8140 Gurrogate Recovery Limit:	Water 60-150% 60-150% s Water		60-150% 60-150% Soil	
	Tetrachloro-m-xylene 4,4'-Dichlorobiphenyl Wethod 8140 Surrogate Recovery Limit: Tributylphosphate	Water 60-150% 60-150% s Water 36-152%		60-150% 60-150% Soil 36-152%	
S Base/N	Tetrachloro-m-xylene 4,4'-Dichlorobiphenyl Method 8140 Surrogate Recovery Limits Tributylphosphate Triphenylphosphate Seutral/Acid Organics	Water 60-150% 60-150% s Water		60-150% 60-150% Soil	
S Base/N M	Tetrachloro-m-xylene 4,4'-Dichlorobiphenyl Method 8140 Gurrogate Recovery Limit: Tributylphosphate Triphenylphosphate	Water 60-150% 60-150% Water 36-152% 40-152%		60-150% 60-150% Soil 36-152% 40-152%	
S Base/N M	Tetrachloro-m-xylene 4,4'-Dichlorobiphenyl Wethod 8140 urrogate Recovery Limits Tributylphosphate Triphenylphosphate Weutral/Acid Organics Wethod 625/8270 urrogate Recovery Limits	Water 60-150% 60-150% Water 36-152% 40-152% Water		60-150% 60-150% Soil 36-152% 40-152% Soil	
S Base/N M	Tetrachloro-m-xylene 4,4'-Dichlorobiphenyl Wethod 8140 Surrogate Recovery Limit: Tributylphosphate Triphenylphosphate Wethod 625/8270 Sethod 625/8270 Surrogate Recovery Limit: Nitrobenzene-d5	Water 60-150% 60-150% Water 36-152% 40-152% S Water 35-114%		60-150% 60-150% Soil 36-152% 40-152% Soil 23-120%	
S Base/N M	Tetrachloro-m-xylene 4,4'-Dichlorobiphenyl Method 8140 Gurrogate Recovery Limit: Tributylphosphate Triphenylphosphate Geutral/Acid Organics Method 625/8270 Gurrogate Recovery Limit: Nitrobenzene-d5 2-Fluorobiphenyl	Water 60-150% 60-150% Water 36-152% 40-152% Water 35-114% 43-116%		60-150% 60-150% Soil 36-152% 40-152% Soil 23-120% 30-115%	
S Base/N M	Tetrachloro-m-xylene 4,4'-Dichlorobiphenyl Method 8140 Surrogate Recovery Limit: Tributylphosphate Triphenylphosphate Seutral/Acid Organics Method 625/8270 Surrogate Recovery Limit: Nitrobenzene-d5 2-Fluorobiphenyl 4-Terphenyl-d14	Water 60-150% 60-150% Water 36-152% 40-152% Water 35-114% 43-116% 33-141%		60-150% 60-150% Soil 36-152% 40-152% Soil 23-120% 30-115% 18-137%	
S Base/N M	Tetrachloro-m-xylene 4,4'-Dichlorobiphenyl Method 8140 Surrogate Recovery Limit: Tributylphosphate Triphenylphosphate Seutral/Acid Organics Sethod 625/8270 Surrogate Recovery Limit: Nitrobenzene-d5 2-Fluorobiphenyl 4-Terphenyl-d14 Phenol-d6	Water 60-150% 60-150% Water 36-152% 40-152% Water 35-114% 43-116% 33-141% 10-94%		60-150% 60-150% Soil 36-152% 40-152% Soil 23-120% 30-115% 18-137% 24-113%	
S Base/N M	Tetrachloro-m-xylene 4,4'-Dichlorobiphenyl Wethod 8140 Surrogate Recovery Limits Tributylphosphate Triphenylphosphate Seutral/Acid Organics Sethod 625/8270 Surrogate Recovery Limits Nitrobenzene-d5 2-Fluorobiphenyl 4-Terphenyl-d14 Phenol-d6 2-Fluorophenol	Water 60-150% 60-150% Water 36-152% 40-152% Water 35-114% 43-116% 33-141% 10-94% 21-100%		60-150% 60-150% Soil 36-152% 40-152% Soil 23-120% 30-115% 18-137% 24-113% 25-121%	
S Base/N M	Tetrachloro-m-xylene 4,4'-Dichlorobiphenyl Method 8140 Surrogate Recovery Limit: Tributylphosphate Triphenylphosphate Seutral/Acid Organics Method 625/8270 Surrogate Recovery Limit: Nitrobenzene-d5 2-Fluorobiphenyl 4-Terphenyl-d14 Phenol-d6	Water 60-150% 60-150% Water 36-152% 40-152% Water 35-114% 43-116% 33-141% 10-94%		60-150% 60-150% Soil 36-152% 40-152% Soil 23-120% 30-115% 18-137% 24-113%	

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# **CORE LABORATORIES**

## QUALITY ASSURANCE METHODS

# REFERENCES AND NOTES

Report Date: 10/30/95

## Matrix Spike/Matrix Spike Duplicate Recovery & RPD Limits

	Water		Soil	
	Recovery	RPD	Recovery	RPD
Phenol	12-110%	42	26-90% -	35
2-Chlorophenol	27-1238	40	25-102%	50
1,4-Dichlorobenzene	36-97%	28	28-104%	27
N-Nitroso-di-n-propylamine	41-116%	38	41-126%	38
1,2,4-Trichlorobenzene	39-98%	28	38-107%	23
4-Chloro-3-methylphenol	23-97%	42	26-103%	33
Acenaphthene	46-118%	31	31-137%	19
4-Nitrophenol	10-80%	50	11-114%	50
2,4-Dintrotoluene	24-96%	38	28-89%	47
Pentachlorophenol	9-103%	50	17-109%	47
Pyrene	26-127%	31	35-142%	36



10. N #83

	QUALITY ASSURANCE METHODS
	REFERENCES AND NOTES
	Report Date: 10/30/95
(1)	EPA 600/4-79-020, Methods for Chemical Analysis of Water and Wastes, March 1983
(2)	EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, 1989
(3)	Standard Methods for The Examination of Water and Wastewater, 17th Edition, 1989
(4)	EPA 600/4-80-032, Prescribed Procedures For Measurement Of Radioactivity In Drinking Water, August 1980
(5)	EPA 600/8-78-017, Microbiological Methods For Monitoring The Environment, December 1978
(6)	Federal Register, July 1, 1990 (40 CFR Part 136)
(7)	EPA 600/4-88-03, Methods For The Determination of Organics Compounds in Drinking Water, December 1988
(8)	U.S.G.S. Methods For Determination of Inorganic Substances In Water And Fluvial Sediments, Book 5, Chapter A1, 1985
(9)	Federal Register, Friday, June 7, 1991 (40 CFR Parts 141 & 142)
(10)	Standard Methods For The Examination of Water and Wastewater, 16th Edition, 1985
(11)	ASTM, Section 11 Water and Environmental Technology, Volume 11.01 Water (1), 1991
(12)	Methods of Soil Analysis, American Society of Agronomy, Agronomy No. 9, 1965
(13)	EPA SW-846, Test Methods For Evaluating Solid Waste, Third Edition, Revision 1, November 1990
(14)	ASTM, Section 5, Petroleum Products, Lubricants, and Fossil Fuels, Volume 05.05, Gaseous Fuels, Coal, and Coke
(15)	EPA 600/2-78-054, Field and Laboratory Methods Applicable To Overburdens and Mine Soils, March 1978
(16)	ASTM, Part 19, Soils and Rocks; Building Stones, 1981
Comme NC =	nts: Data in the QA report may differ from final results due to digestion and/or dilution of sample into analytical ranges. The "Time Analyzed" in the QA report refers to the start time of the analytical batch which may not reflect the actual time of each analysis. The "Date Analyzed" is the actual date of analysis. Results for soil and sludge samples are reported on a wet weight basis (i.e. not corrected for percent moisture) unless otherwise indicated. Not Calculable Due to Value(s) lower than the Detection Limit.
	QC SAMPLE IDENTIFICATION

QUALITY ASSURANCE METHODS

#### Page 3



## QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 10/30/95

MBMethod BlankICBInitial Calibration BlankCCBContinuing Calibration Blank

SPIKE QC SAMPLE IDENTIFICATION

MS	Method (Matrix) Spike
MSD	Method (Matrix) Spike Duplicate
PDS	Post Digestion Spike
SB	Spiked Blank
SBD	Spike Blank Duplicate

REFERENCE STANDARD QC SAMPLE IDENTIFICATION

LCS	Laboratory Control Standard
RS	Reference Standard
ICV	Initial Calibration Verification Standard
CCV	Continuing Calibration Verification Standard
ISA/ISB	ICP Interface Check Sample
ICL	Initial Calibration/Laboratory Control Sample
DSC	Distilled Standard Check

DUPLICATE QC SAMPLE IDENTIFICATION

MD	Method (Matrix) Duplicate
ED	Extraction Duplicate
DD	Digestion Duplicate

Analyses performed by a subcontract laboratory are indicated on the analytical and/or quality control reports under "technician" using the following codes:

SUBCONTRACT LABORATORY

CODE

Core Laboratories	- Anaheim, CA	*	AN
Core Laboratories	- Casper, WY	*	CA
Core Laboratories	- Corpus Christi, TX	*	CC
Core Laboratories	- Houston, TX	*	HP
Core Laboratories	- Lake Charles, LA	*	LC
Core Laboratories	- Long Beach, CA	*	LB
Other Subcontract	Laboratories	*	XX

EXPLANATION OF DATA FLAGS

В	-	This flag is used to indicate that an analyte is
		present in the method blank as well as in the sample.
		It indicates that the client should consider this
		when evaluating the results.

- D This flag indicates that surrogates were diluted out of calibration range and cannot be quantified.
- E Indicates that a sample result is an estimate because the concentration exceeded the calibration range of the instrument.
- I Used to indicate matrix interference.
- J Indicates that a value is an estimate. It is used when a compound is determined to be present based on the mass spectral data, but at a concentration less than the practical quantitation limit of the method.

#### Page 4



#### ASSURANCE METHODS OUALITY

#### REFERENCES AND NOTES

Report Date: 10/30/95

This flag is also used when estimating the concentration of a tentatively identified compound. X - Indicates that a surrogate recovery is outside the

- Specified quality control limits.
   Y Used to identify a spike or spike duplicate recovery that is outside the specified quality control limits.
- Z Indicates a relative percent difference for a spike and spike duplicate is outside the specified quality control limits.
- \* Indicates a relative percent difference for a duplicate analysis is outside the specified quality control limits.
- Used to indicate that a standard is outside specified quality control limits.

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CORE LABORATORIES ANALYTICAL REPORT JOB NUMBER: 954369 Prepared For: Geoscience Consultants, Ltd. Annette Montoya 505 Marquette NW Suite 1100
Albuquerque, NM 87102 Date: 10/30/95

inda J-Birkens

Signature

Name: Linda L. Benkers Title: QA/QC Coordinator

10-30-95

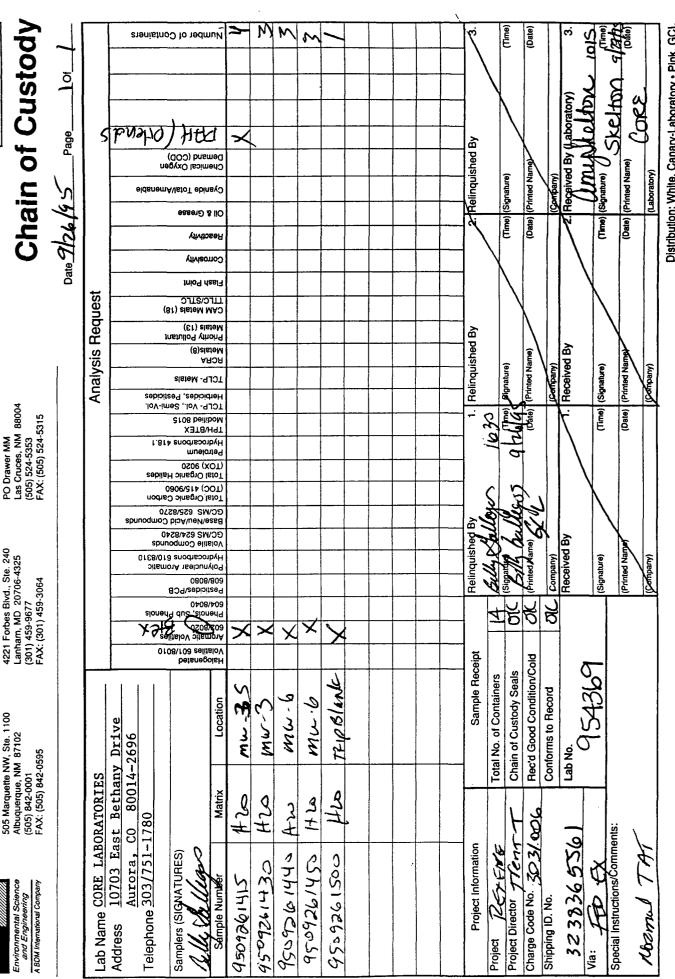
Date

CORE LABORATORIES, INC. Analytical Chemistry Division 10703 East Bethany Drive Aurora, CO 80014

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505 Marquette NW, Ste. 1100 Albuquerque, NM 87102 (505) 842-0001 FAX: (505) 842-0595 G Albuquerque

Environmental Science

GCL



Laboratory Sample ID         Customer Sample ID         Sample Sample ID         Date: Sampled         Time Sample ID         Date: Sampled         Time Sample ID         Date: Sample ID           954369-1         9509261415         Water         09/26/95         14:15         09/27/95           954369-2         9509261430         Water         09/26/95         14:30         09/27/95           954369-3         9509261440         Water         09/26/95         14:40         09/27/95           954369-4         9509261450         Water         09/26/95         14:50         09/27/95           954369-5         9509261500         Water         09/26/95         15:00         09/27/95           954369-5         9509261500         Water         09/26/95         15:00         09/27/95	rs 	425 rterly Waters	KENE COC #94	t ID: REX	Project Number Customer Proje Project Descri	: 954369 	Customer
954369-29509261430Water09/26/9514:3009/27/95954369-39509261440Water09/26/9514:4009/27/95954369-49509261450Water09/26/9514:5009/27/95	Time Received	Date Received					
954369-39509261440Water09/26/9514:4009/27/95954369-49509261450Water09/26/9514:5009/27/95	10:15	09/27/95	14:15	09/26/95	Water	9509261415	954369-1
954369-4 9509261450 Water 09/26/95 14:50 09/27/95	10:15	09/27/95	14:30	09/26/95	Water	9509261430	954369-2
	10:15	09/27/95	14:40	09/26/95	Water	9509261440	954369-3
954369-5 9509261500 Water 09/26/95 15:00 09/27/95	10:15	09/27/95	14:50	09/26/95	Water	9509261450	954369-4
	10:15	09/27/95	15:00	09/26/95	Water	9509261500	954369-5
			5				
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Page 1

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Job Number: 954369

LABORATORY TEST

Report Date: 10/30/95

RESULTS

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9425

ATTN: Annette Montoya

Customer Sample ID: 9509261415 Sample Date.....: 09/26/95 Sample Time.....: 14:15 Sample Matrix....: Water Laboratory Sample ID: 954369-1 Date Received.....: 09/27/95 Time Received.....: 10:15 M W-35

TEST DESCRIPTION	TEST MATRIX	FINAL RESULT	DETECTION LIMIT	UNITS	TEST METHOD	ANALYZED
Extraction (Sep. Funnel) SVOC					SW-846 3510	10 107 105
Separatory Funnel Liq/Liq Extraction		Complete		mL		10/03/95
Semivolatile Organics (Client List)					SW-846 8270	
Acenaphthene		ND	10	ug/L		10/06/95
Acenaphthylene		ND	10	ug/L		10/06/95
Anthracene		ND	10	ug/L		10/06/95
Benzo(a)anthracene		ND	10	ug/L		10/06/95
Benzo(b)fluoranthene		ND	10	ug/L		10/06/95
Benzo(k)fluoranthene		ND	10	ug/L		10/06/95
Benzo(ghi)perylene		ND	10	ug/L		10/06/95
Benzo(a)pyrene		ND	10	ug/L		10/06/95
Chrysene		ND	10	ug/L		10/06/95
Dibenzo(a,h)anthracene		ND	10	ug/L		10/06/95
Fluoranthene		ND	10	ug/L		10/06/95
Fluorene		ND	10	ug/L		10/06/95
Indeno(1,2,3-cd)pyrene		ND	10	ug/L		10/06/95
1-Methylnaphthalene		ND	10	ug/L		10/06/95
2-Methylnaphthalene		ND	10	ug/L		10/06/95
Naphthalene		ND	10	ug/L		10/06/95
Phenanthrene		ND	10	ug/L		10/06/95
Pyrene		ND	10	ug/L		10/06/95
4-Chloro-3-methylphenol		ND	10	ug/L		10/06/95
2-Chlorophenol		ND	10	ug/L		10/06/95
2,4-Dichlorophenol		ND	10	ug/L		10/06/95
2,4-Dimethylphenol		ND	10	ug/L		10/06/95
2,4-Dinitrophenol		ND	50	ug/L		10/06/95
2-Methyl-4,6-dinitrophenol		ND	50	ug/L		10/06/95
2-Nitrophenol		ND	10	ug/L		10/06/95
4-Nitrophenol		ND	50	ug/L		10/06/95
Pentachlorophenol		ND	50	ug/L		10/06/95
Phenol		ND	10	ug/L	·	10/06/95
2,4,6-Trichlorophenol		ND	10	ug/L		10/06/95
Volatile Organics -Aromatics				1	SW-846 8020	
Benzene		ND	0.5	ug/L		10/06/95
Ethylbenzene		ND	0.5	ug/L		10/06/95
Toluene		ND	0.5	ug/L		10/06/95
Xylenes (total)		ND	0.5	ug/L		10/06/95
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#### Page 2

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Job Number: 954369

LABORATORY

Report Date: 10/30/95

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9425

TEST

RESULTS

ATTN: Annette Montoya

Customer Sample ID: 9509261430 Sample Date.....: 09/26/95 Sample Time.....: 14:30 Sample Matrix....: Water Laboratory Sample ID: 954369-2 Date Received.....: 09/27/95 Time Received.....: 10:15

TEST DESCRIPTION	TEST MATRIX	FINAL RESULT	DETECTION LIMIT	UNITS	TEST METHOD	ANALYZEI
Volatile Organics -Aromatics Benzene Ethylbenzene Toluene Xylenes (total)		ND ND ND ND	0.5 0.5 0.5 0.5	ug/L ug/L ug/L ug/L	SW-846 8020	10/06/99 10/06/99 10/06/99 10/06/99

#### Page 3

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Job Number: 954369

LABORATORY TEST

Report Date: 10/30/95

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9425 ATTN: Annette Montoya

RESULTS

Customer Sample ID: 9509261440 Sample Date.....: 09/26/95 Sample Time.....: 14:40 Sample Matrix....: Water Laboratory Sample ID: 954369-3 Date Received.....: 09/27/95 Time Received.....: 10:15

TEST DESCRIPTION	TEST MATRIX	FINAL RESULT	DETECTION LIMIT	UNITS	TEST METHOD	ANALYZED
Volatile Organics -Aromatics Benzene Ethylbenzene Toluene Xylenes (total)		ND ND ND ND	0.5 0.5 0.5 0.5	ug/L ug/L ug/L ug/L	SW-846 8020	10/06/95 10/06/95 10/06/95 10/06/95

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Job Number: 954369

LABORATORY

Report Date: 10/30/95

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9425

TEST

RESULTS

ATTN: Annette Montoya

Customer Sample ID: 9509261450 Sample Date.....: 09/26/95 Sample Time.....: 14:50 Sample Matrix....: Water Laboratory Sample ID: 954369-4 Date Received.....: 09/27/95 Time Received.....: 10:15

TEST DESCRIPTION	TEST MATRIX	FINAL RESULT	DETECTION LIMIT	UNITS	TEST METHOD	ANALYZED
Volatile Organics -Aromatics Benzene Ethylbenzene Toluene Xylenes (total)		ND ND ND ND	0.5 0.5 0.5 0.5	ug/L ug/L ug/L ug/L	SW-846 8020	10/07/95 10/07/95 10/07/95 10/07/95
						*

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Job Number: 954369

LABORATORY

Report Date: 10/30/95

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9425

TEST

RESULTS

ATTN: Annette Montoya

Laboratory Sample ID: 954369-5 Date Received.....: 09/27/95 Time Received.....: 10:15

Customer Sample ID: 9509261500 Sample Date..... 09/26/95 Sample Time.....: 15:00 Sample Matrix....: Water

TEST DESCRIPTION	TEST MATRIX	FINAL RESULT	DETECTION LIMIT	UNITS	TEST METHOD	ANALYZE
Volatile Organics -Aromatics Benzene Ethylbenzene Toluene Xylenes (total)		ND ND ND ND	0.5 0.5 0.5 0.5	ug/L ug/L ug/L ug/L	S₩-846 8020	10/06/95 10/06/95 10/06/95 10/06/95

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Benzo(ghi)perylene

Benzo(a)pyrene

Chrysene

### **CORE LABORATORIES**

QC Type Method	eoscience Consultant Des	ts, Ltd. scription	PROJ	ECT: REX	ENE COC #9425		ATTN: Apporto M	ontove	1.01.088	
Metho		scription					ATTN: Annette Montoya			
				Rea	g. Code	Lab ID	Dilution Fac	ctor	Date	Time
	• • • • • • • • • • • • • • • • • • • •									
	Description.: Vola		omatics			: 2591 : ug/L	Analysi	t:	dmj	
MB	Method Blank		<u></u>						10/06/95	1024
Test Descri	otion	QC Result	Det.	 Limit	True Value	Orig. Value	Alt. Value	Calc	: Re	sult
nzene		ND		0.5						
hylbenzene		ND		0.5						
luene		ND ND		0.5 0.5						
rlenes (tota	.)	NU		0.5						
SB	Spiked Blank			T100	695B				10/06/95	1643
Test Descri	otion	QC Result	Det.	Limit	True Value	Orig. Value	Alt. Value	Calc	: Re	sult
nzene		21.7		0.5	20.0			% R	EC 10	8.5
hylbenzene	•	21.1		0.5	20.0			% R		5.5
luene lenes (tota	)	21.5 63.1		0.5 0.5	20.0 60.0			% R % R		7.5 5.2
tenes (tota	.,	05.1		0.5	50.0			70 1		5.6
SBD	Spiked Blank Dupli	icate		T100	695B				10/06/95	1720
Test Descri	otion	QC Result	Det.	Limit	True Value	Orig. Value	Alt. Value	Calc	Re	sult
nzene		21.7		0.5	20.0		21.7	% R		8.5 0.0
hylbenzene		21.1		0.5	20.0		21.1	% R		5.5
		21.4		0.5	20.0		<b>31 E</b>			0.0
luene		21.4		0.5	20.0		21.5	% R R		7.0 0.5
lenes (tota	)	62.9		0.5	60.0		63.1	% R		4.8
								R	PD	0.3
	d SW-8		(Clien	t List)		: 2798	Analys	t:	mla	
MB	Method Blank			мв07	45				10/06/95	1659
Test Descri	otion	QC Result	Det.	Limit	True Value	Orig. Value	Alt. Value	Calc	: Re	sult
enaphthene		ND		0						
enaphthylen	e	ND		0						
thracene nzo(a)anthr:	acene	ND ND	1							
nzo(b)fluor		ND	1	0						
nzo(k)fluora		ND ND	1	0 0						

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ND



QUALITY CONTROL REPORT Job Number: 954369 Report Date: 10/30/95 CUSTOMER: Geoscience Consultants, Ltd. PROJECT: REXENE. COC #9425 ATTN: Annette Montoya QC Type Description Reag. Code Lab ID Dilution Factor Date Time

#### MB0745 MB Method Blank 10/06/95 1659 QC Result Det. Limit True Value Orig. Value Test Description Alt. Value Calc Result 10 Dibenzo(a,h)anthracene ND Fluoranthene ND 10 10 Fluorene ND Indeno(1,2,3-cd)pyrene ND 10 1-Methylnaphthalene ND 10 2-Methylnaphthalene ND 10 Naphthalene ND 10 Phenanthrene ND 10 10 Pyrene ND 4-Chloro-3-methylphenol ND 10 2-Chlorophenol ND 10 2,4-Dichlorophenol 10 ND 2,4-Dimethylphenol ND 10 2,4-Dinitrophenol 50 ND 2-Methyl-4,6-dinitrophenol 50 ND 2-Nitrophenol ND 10 4-Nitrophenol 50 ND Pentachlorophenol ND 50 Phenol 10 ND 2,4,6-Trichlorophenol ND 10

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RECOVERIES SURROGATE REPORT Job Number.: 954369

Report Date: 10/30/95

CUSTOMER: Geoscience Consultants, Ltd.

PROJECT: REXENE COC #9425

ATTN: Annette Montoya

Method.....: SW-846 Method Code.....: 8020

Surrogate			Dilution Factor	Units				
BFB (Surrogate	)		3.5	ug/L				
Lab ID	Matrix	QC Type	Result	True Value	Percent Recovery	Flag	Date	Time
		 MB	19.5	20.0800	97.1		10/06/95	1024
		SB	19.2	20.0800	95.6		10/06/95	1643
		SBD	19.0	20.0800	94.6		10/06/95	1720
954369-5			19.4	20.0800	96.6		10/06/95	1101
954369-1			19.8	20.0800	98.6		10/06/95	2229
954369-2			19.4	20.0800	96.6		10/06/95	2259
954369-3			19.5	20.0800	97.1		10/06/95	2335
954369-4			19.5	20.0800	97.1		10/07/95	0012

Batch..... 2591

Analyst..... dmj

Surrogate	Dilution Factor	Units
2,4,6-Tribromophenol		ug/L

Lab ID	Matrix	ас туре	Result	True Value	Percent Recovery	Flag	Date	Time
			81.64	100.0100	82	·	10/06/95	1659
954369-1			101.32	100.0100	101		10/06/95	1800
954368-6			101.13	100.0100	101		10/06/95	1902
954368-5			102.17	100.0100	102		10/06/95	2004
954368-5			97.96	100.0100	98		10/09/95	0014

Surrogate	Dilution Factor	Units
2-Fluorobiphenyl		ug/L

Lab ID	Matrix	QC Type	Result	True Value	Percent Recovery	Flag	Date	Time
			29.81	50.0100	60		10/06/95	1659
954369-1			41.36	50.0100	83		10/06/95	1800
954368-6			35.99	50.0100	72		10/06/95	1902
954368-5			39.95	50.0100	80		10/06/95	2004
954368-5			39.35	50.0100	79		10/09/95	0014

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SURROGATE RECOVERIES REPORT Job Number.: 954369

Report Date: 10/30/95

CUSTOMER: Geoscience Consultants, Ltd. PROJECT: REXENE COC #9425 ATTN: Annette Montoya

	<u>erine en en en en en en en en en en en en e</u>		Dilution Factor	Unîts				
2-Fluorophenol				ug/L				
Lab ID	Matrix	QC Type	Result	True Value	Percent Recovery	Flag	Date	Time
			48.22	100.0000	48		10/06/95	1659
954369-1			47.16	100.0000	47		10/06/95	1800
954368-6			61.68	100.0000	62		10/06/95	1902
954368-5			73.95	100.0000	74		10/06/95	2004
954368-5			69.92	100.0000	70		10/09/95	0014
Surrogate			Dilution Factor	Units				
Nitrobenzene-d5				ug/L				
Lab ID	Matrix	QC Type	Result	True Value	Percent Recovery	Flag	Date	Time
			29.32	50.0500	59		10/06/95	1659
954369-1		MD	40.51	50.0500	81		10/06/95	1800
954368-6			34.42	50.0500	69		10/06/95	1902
954368-5			41.99	50.0500	84		10/06/95	2004
954368-5			41.83	50.0500	84		10/09/95	0014
Surrogate			Dilution Factor	Units				
Phenol-d6		· · ·	Dilution Factor	Units ug/L				
	Matrix	QC Type	Result		Percent Recovery	Flag	Date	Time
Phenol-d6		QC Type	Result	ug/L True Value		Flag		<u> </u>
Phenol-d6		. ·		ug/L	Percent Recovery 50 60	Flag	10/06/95	1659
Phenol-dó Lab ID		QC Type	Result 49.78	ug/L True Value 100.0200	50	Flag		<u> </u>
Phenol-d6 Lab ID 		QC Type	Result 49.78 60.24 76.31 85.84	Ug/L True Value 100.0200 100.0200 100.0200 100.0200	50 60 76 86	Flag	10/06/95 10/06/95	1659 1800
Phenol-d6 Lab ID 		QC Type	Result 49.78 60.24 76.31	Ug/L True Value 100.0200 100.0200 100.0200	50 60 76	Flag	10/06/95 10/06/95 10/06/95	1659 1800 1902
Phenol-d6 Lab ID 		QC Type	Result 49.78 60.24 76.31 85.84	Ug/L True Value 100.0200 100.0200 100.0200 100.0200	50 60 76 86	Flag . —	10/06/95 10/06/95 10/06/95 10/06/95	1800 1902 2004
Phenol-d6 Lab ID 954369-1 954368-6 954368-5 954368-5 Surrogate	Matrix	QC Type	Result 49.78 60.24 76.31 85.84 78.55	ug/L True Value 100.0200 100.0200 100.0200 100.0200 100.0200	50 60 76 86	Flag . —	10/06/95 10/06/95 10/06/95 10/06/95	1659 1800 1902 2004
Phenol-d6 Lab ID 954369-1 954368-6 954368-5 954368-5	Matrix	QC Type	Result 49.78 60.24 76.31 85.84 78.55	ug/L True Value 100.0200 100.0200 100.0200 100.0200 100.0200 Units	50 60 76 86	Flag Flag	10/06/95 10/06/95 10/06/95 10/06/95	1659 1800 1902 2004
Phenol-d6 Lab ID 954369-1 954368-6 954368-5 954368-5 954368-5 Surrogate Terphenyl-d14	Matrix	QC Type MB QC Type	Result 49.78 60.24 76.31 85.84 78.55 Dilution Factor Result	ug/L True Value 100.0200 100.0200 100.0200 100.0200 100.0200 Units ug/L True Value	50 60 76 86 79 Percent Recovery		10/06/95 10/06/95 10/06/95 10/06/95 10/09/95	1659 1800 1902 2004 0014 Time
Phenol-d6 Lab ID 954369-1 954368-6 954368-5 954368-5 954368-5 Surrogate Terphenyl-d14	Matrix	QC Type MB	Result 49.78 60.24 76.31 85.84 78.55 Dilution Factor	ug/L True Value 100.0200 100.0200 100.0200 100.0200 100.0200 Units ug/L	50 60 76 86 79		10/06/95 10/06/95 10/06/95 10/09/95 10/09/95 Date 10/06/95	1659 1800 1902 2004 0014
Phenol-d6 Lab ID 954369-1 954368-6 954368-5 954368-5 Surrogate Terphenyl-d14 Lab ID	Matrix	QC Type MB QC Type	Result 49.78 60.24 76.31 85.84 78.55 Dilution Factor Result 44.72	ug/L True Value 100.0200 100.0200 100.0200 100.0200 100.0200 Units ug/L True Value 50.0000	50 60 76 86 79 Percent Recovery 89		10/06/95 10/06/95 10/06/95 10/06/95 10/09/95	1659 1800 1902 2004 0014 Time 1659
Phenol-d6 Lab ID 954369-1 954368-6 954368-5 954368-5 Surrogate Terphenyl-d14 Lab ID 954369-1	Matrix	QC Type MB QC Type	Result 49.78 60.24 76.31 85.84 78.55 Dilution Factor Result 44.72 39.94	ug/L True Value 100.0200 100.0200 100.0200 100.0200 100.0200 Units ug/L True Value 50.0000 50.0000	50 60 76 86 79 Percent Recovery 89 80		10/06/95 10/06/95 10/06/95 10/09/95 10/09/95 Date 10/06/95 10/06/95	1659 1800 1902 2004 0014 Time 1659 1800

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### **CORE LABORATORIES**

#### QUALITY ASSURANCE METHODS

#### REFERENCES AND NOTES

Report Date: 10/30/95

Volatile Organics Method 602/8020	_		
Surrogate Recovery Limit:	Water	Soil	
Bromofluorobenzene	89-110%	78-123%	
Spike/Spike Duplicate Red			
Dongono	Water	Soil	
Benzene Ethylbenzene	75-125% 75-125%	75-125% 75-125%	
Toluene	75-125%	75-125%	
Xylenes	75-125%	75-125%	
Method 8015 Modified	nover Timita		
Spike/Spike Duplicate Red	Water	Soil	
TVPH	81-1248	81-124%	
TEPH	54-135%	54-135%	
Method 624/8240/8260	-		
Surrogate Recovery Limits	Water	Soil	
Dibromofluoromethane	86-118%	80-120%	
Toluene-(d8)	88-110%	81-117%	
4-Bromofluorobenzene	86-115%	74-121%	
Spike/Spike Duplicate Red			
	Water DDD	Soil	
1,1-Dichloroethene	Recovery RPD 61-145% 14	Recovery	RPD
Trichloroethene	71-120% 14	59-172% 62-137%	22 24
Benzene	76-127% 11	66-142%	24
Toluene	76-125% 13	59-139%	21
Chlorobenzene	75-130% 13	60-133%	21
Pesticides/PCB Organics Method 608/8080 Surrogate Recovery Limits		0-11	
Tetrachloro-m-xylene	Water 60-150%	Soil 60-150%	
4,4'-Dichlorobiphenyl	60-150%	60-150%	
Method 8140	_		
Surrogate Recovery Limits	3 Water	Soil	
Tributylphosphate	36-152%	36-152%	
Triphenylphosphate	40-152%	40-152%	
Base/Neutral/Acid Organics Method 625/8270 Surrogate Recovery Limits	5		
Mitmaherran JC	Water	Soil	
Nitrobenzene-d5	35-114% 43-116%	23-120%	
2-Fluorobiphenyl 4-Terphenyl-d14	33-1418	30-115% 18-137%	
Phenol-d6	10-94%	24-113%	
2-Fluorophenol	21-100%	25-121%	
2,4,6-Tribromophenol	10-123%	19-122%	

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#### QUALITY ASSURANCE METHODS REFERENCES AND NOTES Report Date: 10/30/95

Matrix Spike/Matrix Spike Dup	licate Recc Water	very &	RPD Limits Soil	
	Recovery	RPD	Recovery	RPD
Phenol	12-110%	42	26-90% -	35
2-Chlorophenol	27-123%	40	25-102%	50
1,4-Dichlorobenzene	36-97%	28	28-104%	27
N-Nitroso-di-n-propylamine	41-116%	38	41-126%	38
1,2,4-Trichlorobenzene	39-98%	28	38-107%	23
4-Chloro-3-methylphenol	23-97%	42	26-103%	33
Acenaphthene	46-118%	31	31-137%	19
4-Nitrophenol	10-80%	50	11-114%	50
2,4-Dintrotoluene	24-96%	38	28-89%	47
Pentachlorophenol	9-103%	50	17-109%	47
Pyrene	26-127%	31	35-142%	36

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Report Date: 10/30/95 (1) EPA 600/4-79-020, Methods for Chemical Analysis of Water and Wastes, March 1983 (2)EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, 1989 (3)Standard Methods for The Examination of Water and Wastewater, 17th Edition, 1989 EPA 600/4-80-032, Prescribed Procedures For Measurement Of (4)Radioactivity In Drinking Water, August 1980 (5)EPA 600/8-78-017, Microbiological Methods For Monitoring The Environment, December 1978 (6) Federal Register, July 1, 1990 (40 CFR Part 136) EPA 600/4-88-03, Methods For The Determination of Organics (7)Compounds in Drinking Water, December 1988 (8)U.S.G.S. Methods For Determination of Inorganic Substances In Water And Fluvial Sediments, Book 5, Chapter A1, 1985 Federal Register, Friday, June 7, 1991 (40 CFR Parts 141 & 142) (9) (10)Standard Methods For The Examination of Water and Wastewater, 16th Edition, 1985 ASTM, Section 11 Water and Environmental Technology, (11)Volume 11.01 Water (1), 1991 Methods of Soil Analysis, American Society of Agronomy, (12) Agronomy No. 9, 1965 (13) EPA SW-846, Test Methods For Evaluating Solid Waste, Third Edition, Revision 1, November 1990 ASTM, Section 5, Petroleum Products, Lubricants, and Fossil (14) Fuels, Volume 05.05, Gaseous Fuels, Coal, and Coke EPA 600/2-78-054, Field and Laboratory Methods Applicable To (15) Overburdens and Mine Soils, March 1978 (16) ASTM, Part 19, Soils and Rocks; Building Stones, 1981 Data in the QA report may differ from final results due to Comments: digestion and/or dilution of sample into analytical ranges. The "Time Analyzed" in the QA report refers to the start time of the analytical batch which may not reflect the actual time of each analysis. The "Date Analyzed" is the actual date of analysis. Results for soil and sludge samples are reported on a wet weight basis (i.e. not corrected for percent moisture) unless otherwise indicated. NC = Not Calculable Due to Value(s) lower than the Detection Limit. BLANK QC SAMPLE IDENTIFICATION

OUALITY ASSURANCE METHODS

AND

NOTES

REFERENCES

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#### OUALITY ASSURANCE METHODS

REFERENCES AND NOTES

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MB Method Blank ICB Initial Calibration Blank CCB Continuing Calibration Blank

SPIKE QC SAMPLE IDENTIFICATION

MS	Method (Matrix) Spike
MSD	Method (Matrix) Spike Duplicate
PDS	Post Digestion Spike
SB	Spiked Blank
SBD	Spike Blank Duplicate

REFERENCE STANDARD OC SAMPLE IDENTIFICATION

Laboratory Control Standard
Reference Standard
Initial Calibration Verification Standard
Continuing Calibration Verification Standard
ICP Interface Check Sample
Initial Calibration/Laboratory Control Sample Distilled Standard Check

DUPLICATE OC SAMPLE IDENTIFICATION

MD	Method (Matrix) Duplicate
ED	Extraction Duplicate
DD	Digestion Duplicate

Analyses performed by a subcontract laboratory are indicated on the analytical and/or quality control reports under "technician" using the following codes:

SUBCONTRACT LABORATORY

CODE

Core Laboratories	- Anaheim, CA	*	AN
Core Laboratories	- Casper, WY	*	CA
Core Laboratories	- Corpus Christi, TX		CC
Core Laboratories		*	HP
	- Lake Charles, LA	*	$\mathbf{LC}$
Core Laboratories			LB
Other Subcontract	Laboratories	*	XX

EXPLANATION OF DATA FLAGS

- B This flag is used to indicate that an analyte is present in the method blank as well as in the sample. It indicates that the client should consider this when evaluating the results.
- D This flag indicates that surrogates were diluted out of calibration range and cannot be quantified.
- E Indicates that a sample result is an estimate because the concentration exceeded the calibration range of the instrument.
- I Used to indicate matrix interference. J - Indicates that a value is an estimate. It is used when a compound is determined to be present based on the mass spectral data, but at a concentration less
  - than the practical quantitation limit of the method.

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#### QUALITY ASSURANCE METHODS

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This flag is also used when estimating the

- This flag is also used when estimating the concentration of a tentatively identified compound.
   X Indicates that a surrogate recovery is outside the specified quality control limits.
   Y Used to identify a spike or spike duplicate recovery that is outside the specified quality control limits. limits.
- Indicates a relative percent difference for a spike and spike duplicate is outside the specified quality control limits.
- \* Indicates a relative percent difference for a duplicate analysis is outside the specified quality control limits. ^ - Used to indicate that a standard is outside
- specified quality control limits.

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