This attachment contains the laboratory analytical reports prepared by Alpha Analytical Inc. of Sparks, Nevada and Columbia Analytical Services (CAS) of Simi Valley, California.



255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

**Date** 28-Feb-11

David Conner Battelle Memorial Institute 655 West Broadway San Diego, CA 92101 (619) 726-7311

Suite 1420

**CASE NARRATIVE** 

Job: Work Ordon		roundwater Monitoring		
Work Order:	BMI11022305		Cooler Temp: 0 °C	
Alpha's	s Sample ID	Client's Sample ID	Matrix	
1102	2305-01A	MW-21-5	Aqueous	
1102	2305-02A	MW-21-4	Aqueous	
1102	2305-03A	MW-21-3	Aqueous	
1102	2305-04A	MW-21-2	Aqueous	
1102	2305-05A	MW-21-1	Aqueous	
1102	2305-06A	DUPE-01-1Q11	Aqueous	
1102	2305-07A	EB-01-02/22/11	Aqueous	
1102	2305-08A	TB-01-02/22/11	Aqueous	
1102	2305-09A	SB-01-02/22/11	Aqueous	
		Manually Integrat	ed Analytes	
<u>Alpha's Sa</u>	ample ID	Test Reference	Analyte	
		· · · · · · · · · · · · · · · · · · ·		
NÜ	DNE			

Enclosed please find the analytical results of the samples received by Alpha Analytical, Inc. under the above mentioned Work Order/Chainof-Custody.

Alpha Analytical, Inc. has a formal Quality Assurance/Quality Control program, which is designed to meet or exceed the EPA requirements. All relevant QC met quality assurance objectives for this project unless otherwise stated in the footnotes.

If you have any questions with regards to this report, please contact Randy Gardner, Project Manager, at (800) 283-1183.

Walter Arm Roger Scholl Kandy Sandmer

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.



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## **ANALYTICAL REPORT**

Battelle Memorial Institute 655 West Broadway San Diego, CA 92101

David Conner Attn: Phone: (619) 726-7311 Fax: (614) 458-6641 Date Received : 02/23/11

#### Job: G005862/JPL Groundwater Monitoring

	94.4	Perchlorate by Ion Chromatography EPA Method 314.0			
	Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: <b>MW-21-5</b> Lab ID : BMI11022305-01A Date Sampled 02/22/11 11:37	Perchlorate	3.01	1.00 µg/L	02/22/11 10:40	02/23/11 12:56
Client ID: <b>MW-21-4</b> Lab ID : BMI11022305-02A Date Sampled 02/22/11 12:11	Perchlorate	2.42	1.00 µg/L	02/22/11 10:40	02/23/11 13:14
Client ID: <b>MW-21-3</b> Lab ID : BMI11022305-03A Date Sampled 02/22/11 12:35	Perchlorate	ND	1.00 µg/L	02/22/11 10:40	02/23/11 13:33
Client ID: MW-21-2 Lab ID : BMI11022305-04A Date Sampled 02/22/11 13:00	Perchlorate	1.91	1.00 µg/L	02/22/11 10:40	02/23/11 13:51
Client ID: <b>MW-21-1</b> Lab ID : BMI11022305-05A Date Sampled 02/22/11 13:37	Perchlorate	2.90	1.00 µg/L	02/22/11 10:40	02/23/11 15:41
Client ID: DUPE-01-1Q11 Lab ID : BM111022305-06A Date Sampled 02/22/11 00:00	Perchlorate	2.63	1.00 µg/L	02/22/11 10:40	02/23/11 14:28
Client ID: EB-01-02/22/11 Lab ID : BMI11022305-07A Date Sampled 02/22/11 13:22	Perchlorate	ND	1.00 µg/L	02/22/11 10:40	02/23/11 14:46
Client ID: <b>SB-01-02/22/11</b> Lab ID : BMI11022305-09A Date Sampled 02/22/11 13:26	Perchlorate	ND	1.00 μg/L	02/22/11 10:40	02/23/11 15:05

ND = Not Detected

Roger Scholl

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Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

3/7/11



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## ANALYTICAL REPORT

Battelle Memorial Institute 655 West Broadway San Diego, CA 92101 
 Attn:
 David Conner

 Phone:
 (619) 726-7311

 Fax:
 (614) 458-6641

 Date Received : 02/23/11

## Job: G005862/JPL Groundwater Monitoring

		Metals by ICPMS EPA Method 200.8			
	Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: MW-21-5 Lab ID : BMI11022305-01A Date Sampled 02/22/11 11:37	Chromium (Cr)	ND	0.0050 mg/L	02/28/11 09:47	03/02/11 13:54
Client ID: MW-21-4 Lab ID : BMI11022305-02A Date Sampled 02/22/11 12:11	Chromium (Cr)	ND	0.0050 mg/L	02/28/11 09:47	03/02/11 14:00
Client ID: MW-21-3 Lab ID : BMI11022305-03A Date Sampled 02/22/11 12:35	Chromium (Cr)	ND	0.0050 mg/L	02/28/11 09:47	03/02/11 14:06
Client ID: MW-21-2 Lab ID : BMI11022305-04A Date Sampled 02/22/11 13:00	Chromium (Cr)	ND	0.0050 mg/L	02/28/11 09:47	03/02/11 14:11
Client ID: <b>MW-21-1</b> Lab ID : BMI11022305-05A Date Sampled 02/22/11 13:37	Chromium (Cr)	ND	0.0050 mg/L	02/28/11 09:47	03/02/11 14:17
Client ID: DUPE-01-1Q11 Lab ID : BM111022305-06A Date Sampled 02/22/11 00:00	Chromium (Cr)	ND	0.0050 mg/L	02/28/11 09:47	03/02/11 14:22
Client ID: EB-01-02/22/11 Lab ID : BMI11022305-07A Date Sampled 02/22/11 13:22	Chromium (Cr)	ND	0.0050 mg/L	02/28/11 09:47	03/02/11 14:28
Client ID: <b>SB-01-02/22/11</b> Lab ID : BMI11022305-09A Date Sampled 02/22/11 13:26	Chromium (Cr)	ND	0.0050 mg/L	02/28/11 09:47	03/02/11 14:34

ND = Not Detected

Roger Scholl

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3/7/11 Report Date



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## **ANALYTICAL REPORT**

Battelle Memorial Institute 655 West Broadway San Diego, CA 92101 Job: G005862/JPL Groundwater Monitoring Attn: David Conner Phone: (619) 726-7311 Fax: (614) 458-6641

Tentatively Identified Compounds - Volatile Organics by GC/MS

			Estimated		
	Parameter	Estimated	Reporting	Date	Date
		Concentration	Limit	Extracted	Analyzed
Client ID :       MW-21-5         Lab ID :       BMI11022305-01A         Date Received :       02/23/11         Date Sampled :       02/22/11 11:37	*** None Found ***	ND	2.0 µg/L		02/24/11 14:45
Client ID :       MW-21-4         Lab ID :       BMII1022305-02A         Date Received :       02/23/11         Date Sampled :       02/22/11 12:11	* * * None Found * * *	ND	2.0 µg/L	02/24/11 15:06	02/24/11 15:06
Client ID :       MW-21-3         Lab ID :       BMI11022305-03A         Date Received :       02/23/11         Date Sampled :       02/22/11 12:35	*** None Found ***	ND	2.0 µg/L	02/24/11 15:28	02/24/11 15:28
Client ID :       MW-21-2         Lab ID :       BM111022305-04A         Date Received :       02/23/11         Date Sampled :       02/22/11 13:00	*** None Found ***	ND	2.0 µg/L	02/24/11 15:49	02/24/11 15:49
Client ID :       MW-21-1         Lab ID :       BMI11022305-05A         Date Received :       02/23/11         Date Sampled :       02/22/11 13:37	*** None Found ***	ND	2.0 µg/L	02/24/11 16:11	02/24/11 16:11
Client ID :       DUPE-01-1Q11         Lab ID :       BMI11022305-06A         Date Received :       02/23/11         Date Sampled :       02/22/11 00:00	* * * None Found * * *	ND	2.0 µg/L	02/24/11 16:32	02/24/11 16:32
Client ID :       EB-01-02/22/11         Lab ID :       BMI11022305-07A         Date Received :       02/23/11         Date Sampled :       02/22/11 13:22	* * * None Found * * *	ND	2.0 µg/L	02/24/11 12:57	02/24/11 12:57
Client ID : <b>TB-01-02/22/11</b> Lab ID :       BMI11022305-08A         Date Received :       02/23/11         Date Sampled :       02/22/11 07:00	*** None Found ***	ND	2.0 µg/L	02/24/11 12:35	02/24/11 12:35
Client ID :       SB-01-02/22/11         Lab ID :       BMI11022305-09A         Date Received :       02/23/11         Date Sampled :       02/22/11 13:26	*** None Found ***	ND	2.0 µg/L	02/24/11 13:19	02/24/11 13:19

## G005862/JPL Groundwater Monitoring



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Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Kandy Sandmer lter #1

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Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.

Report Date



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### ANALYTICAL REPORT

Battelle Memorial Institute	Attn:	David Conner
655 West Broadway	Phone:	(619) 726-7311
San Diego, CA 92101	Fax:	(614) 458-6641
Job: G005862/JPL Groundwater Monitoring		

Alpha Analytical Number: BMI11022305-01A Client I.D. Number: MW-21-5

Sampled:	02/22/11	11:37
Received:	02/23/11	
Extracted:	02/24/11	14:45
Analyzed:	02/24/11	14:45

#### Volatile Organics by GC/MS EPA Method SW8260B

	Compound	Concentration	Reporting	Limit		Compound	Concentration	Reporting L	imit
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1.1.1.2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	μg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14		ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	4.3	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	.,	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP	) ND	2.5	µg/L
25		ND	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	101	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	112	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	104	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	1.8	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl

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Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

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Report Date



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### ANALYTICAL REPORT

Battelle	Memorial Institute	Attn:	David Conner
655 West Broadway		Phone:	(619) 726-7311
San Die	go, CA 92101	Fax:	(614) 458-6641
Job:	G005862/JPL Groundwater Monitoring		

Alpha Analytical Number: BMI11022305-02A Client I.D. Number: MW-21-4

Sampled:	02/22/11	12:11
Received:	02/23/11	
Extracted:	02/24/11	15:06
Analyzed:	02/24/11	15:06

#### Volatile Organics by GC/MS EPA Method SW8260B

	Compound	Concentration	Reporting	Limit		Compound	Concentration	Reporting L	imit
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	5.8	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	μg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21		ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBC	P) ND	2.5	µg/L
25		ND	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	1.0	μg/L
27	, , , , , , , , , , , , , , , , , , , ,	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	100	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	111	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	98	(70-130)	%REC
32		ND	0.50	μg/L					
33		ND	0.50	µg/L					
34	,,	ND	1.0	µg/L					
35	Tetrachloroethene	1.3	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl

Walter Acrim Kandy Santur

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.



**Report Date** 

Page 1 of 1



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#### **ANALYTICAL REPORT**

Battelle Memorial Institute	Attn:	David Conner
655 West Broadway	Phone:	(619) 726-7311
San Diego, CA 92101	Fax:	(614) 458-6641
Job: G005862/JPL Groundwater Monitoring		

Alpha Analytical Number: BMI11022305-03A Client I.D. Number: MW-21-3

Sampled:	02/22/11	12:35
Received:	02/23/11	
Extracted:	02/24/11	15:28
Analyzed:	02/24/11	15:28

#### Volatile Organics by GC/MS EPA Method SW8260B

	Compound	Concentration	Reporting	Limit		Compound	Concentration	Reporting L	.imit
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	, , , , , , , , , , , , , , , , , , ,	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14		0.75	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15		ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16		4.5	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	-/	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18		ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	,,	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	,	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22		ND	0.50	μg/L	57	1,2-Dichlorobenzene	ND ·	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	μg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCI	P) ND	2.5	µg/L
25	Trichloroethene	1.2	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	101	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	114	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	102	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L				,	
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	5.5	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl

Kandy Santan

Dalter Hiridm

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.



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Page 1 of 1



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## ANALYTICAL REPORT

Battelle Memorial Institute	Attn:	David Conner
655 West Broadway	Phone:	(619) 726-7311
San Diego, CA 92101	Fax:	(614) 458-6641
Job: G005862/JPL Groundwater Monitoring		. ,

Alpha Analytical Number: BMI11022305-04A Client I.D. Number: MW-21-2

Sampled:	02/22/11	13:00
Received:	02/23/11	
Extracted:	02/24/11	15:49
Analyzed:	02/24/11	15:49

#### Volatile Organics by GC/MS EPA Method SW8260B

Compound		Concentration	Reporting	Limit		Compound	Concentration	Reporting L	imit
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	0.61	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	4.9	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	=,= =	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCI	P) ND	2.5	µg/L
25	Trichloroethene	ND	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	104	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	114	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	97	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	8.5	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl

Kandy Sandmer

Walter Arihm

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

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Page 1 of 1



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### **ANALYTICAL REPORT**

Battelle	Memorial Institute
655 Wes	t Broadway
San Dieg	go, CA 92101
Job:	G005862/JPL Groundwater Monitoring

Alpha Analytical Number: BMI11022305-05A Client I.D. Number: MW-21-1

Attn:	David Conner
Phone:	(619) 726-7311
Fax:	(614) 458-6641

### Sampled: 02/22/11 13:37 Received: 02/23/11 Extracted: 02/24/11 16:11 Analyzed: 02/24/11 16:11

#### Volatile Organics by GC/MS EPA Method SW8260B

Compound		Concentration	Reporting I	_imit	nit Compound		Concentration Reporting		j Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L	
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L	
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L	
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L	
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L	
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L	
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L	
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L	
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L	
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L	
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L	
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L	
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L	
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L	
16	Chloroform	1.3	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L	
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L	
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L	
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L	
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L	
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L	
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L	
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L	
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCI	P) ND	2.5	µg/L	
25	Trichloroethene	ND	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L	
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	1.0	µg/L	
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L	
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L	
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	104	(70-130)	%REC	
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	112	(70-130)	%REC	
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	98	(70-130)	%REC	
32	1,3-Dichloropropane	ND	0.50	µg/L						
33	Dibromochloromethane	ND	0.50	µg/L			1			
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L						
35	Tetrachloroethene	ND	0.50	µg/L						

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl

Kandy Santur

Walter Acrilmon

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.



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Page 1 of 1



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### ANALYTICAL REPORT

Battelle	Memorial Institute				
655 West Broadway					
San Dieg	go, CA 92101				
Job:	G005862/JPL Groundwater Monitoring				

Alpha Analytical Number: BMI11022305-06A Client I.D. Number: DUPE-01-1Q11

Attn:	David Conner
Phone:	(619) 726-7311
Fax:	(614) 458-6641

### Sampled: 02/22/11 00:00 Received: 02/23/11 Extracted: 02/24/11 16:32 Analyzed: 02/24/11 16:32

#### Volatile Organics by GC/MS EPA Method SW8260B

	Compound	Concentration	Reporting	Limit		Compound	Concentration	Reporting L	imit
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	μg/L
3	Vinyl chloride	ND	0.50	μg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xvlene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	μg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	μg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	μg/L
16	Chloroform	4.9	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	μg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	μg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	μg/L	54	1,3-Dichlorobenzene	ND	0.50	μg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	μg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	μg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	μg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCI	P) ND	2.5	µg/L
25	Trichloroethene	ND	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	105	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	112	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	99	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	μg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	1.1	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl

Kandy Saulmer

Walter Hiridmon

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.



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Page 1 of 1



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### **ANALYTICAL REPORT**

Battelle Memorial Institute	Attn:	David Conner
655 West Broadway	Phone:	(619) 726-7311
San Diego, CA 92101	Fax:	(614) 458-6641
Job: G005862/JPL Groundwater Monitoring		

Alpha Analytical Number: BMI11022305-07A Client I.D. Number: EB-01-02/22/11

Sampled:	02/22/11	13:22
Received:	02/23/11	
Extracted:	02/24/11	12:57
Analyzed:	02/24/11	12:57

### Volatile Organics by GC/MS EPA Method SW8260B

	Compound	Concentration	Reporting	Limit		Compound	Concentration	Reporting L	imit
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	30	Chlorobenzene	ND	0.50	μg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	μg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	μg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	μg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xvlene	ND	0.50	μg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12		ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoiuene	ND	0.50	μg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	μg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyttoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCI	P) ND	2.5	µg/L
25		ND	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	1.0	μg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28		ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	100	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	103	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	99	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl

Kandy Sandmer

Walter Aridmon

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

Alpha Analytical. Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.



**Report Date** 



255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

#### **ANALYTICAL REPORT**

Battelle Memorial Institute	Attn:	David Conner
655 West Broadway	Phone:	(619) 726-7311
San Diego, CA 92101	Fax:	(614) 458-6641
Job: G005862/JPL Groundwater Monitoring		( )

Alpha Analytical Number: BMI11022305-08A Client I.D. Number: TB-01-02/22/11

Sampled:	02/22/11 07:00
Received:	02/23/11
Extracted:	02/24/11 12:35
Analyzed:	02/24/11 12:35

#### Volatile Organics by GC/MS EPA Method SW8260B

			211			02000			
	Compound	Concentration	Reporting	Limit		Compound	Concentration	Reporting L	imit
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chiorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butyibenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCI	P) ND	2.5	µg/L
25	Trichloroethene	ND	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	96	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	103	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	98	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl

Kandy Sandmer

Walter Arridmon

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.



**Report Date** 



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## ANALYTICAL REPORT

Battelle Memorial Institute	Attn:	David Conner
655 West Broadway	Phone:	(619) 726-7311
San Diego, CA 92101	Fax:	(614) 458-6641
Job: G005862/JPL Groundwater Monitoring		

Alpha Analytical Number: BMI11022305-09A Client I.D. Number: SB-01-02/22/11

Sampled:	02/22/11	13:26
Received:	02/23/11	
Extracted:	02/24/11	13:19
Analyzed:	02/24/11	13:19

#### Volatile Organics by GC/MS EPA Method SW8260B

				1110011		02000			
	Compound	Concentration	Reporting	Limit		Compound	Concentration	Reporting L	imit
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCI	P) ND	2.5	μg/L
25	Trichloroethene	ND	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	97	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	103	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	99	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L			ł		
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl

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Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

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**Report Date** 



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# **VOC Sample Preservation Report**

Work Order: BMI11022305	<b>Job:</b> G005862/JPL G	roundwater Monitoring		
Alpha's Sample ID	Client's Sample ID	Matrix	рН	
11022305-01A	MW-21-5	Aqueous	2	
11022305-02A	MW-21-4	Aqueous	2	
11022305-03A	MW-21-3	Aqueous	2	
11022305-04A	MW-21-2	Aqueous	2	
11022305-05A	MW-21-1	Aqueous	2	
11022305-06A	DUPE-01-1Q11	Aqueous	2	
11022305-07A	EB-01-02/22/11	Aqueous	2	
11022305-08A	TB-01-02/22/11	Aqueous	2	
11022305-09A	SB-01-02/22/11	Aqueous	2	

3/7/11 Report Date



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<b>Date:</b> 25-Feb-11		(	QC S	ummar	y Repor	t			<b>Work Orde</b> 11022305	
<b>Method Blan</b> File ID: <b>22</b> Sample ID: Analyte	k MB-26041	Units : <b>µg/L</b> Result	Type M	B Run ID: <b>IC</b>	est Code: EF atch ID: 2604 C_3_1102224 SpkRefVal	11		Analysis Date Prep Date:	e: 02/22/2011 14:04 02/22/2011 10:40 efVal %RPD(Limit)	Qual
Perchlorate		ND		1						
Laboratory I File ID: 23 Sample ID: Analyte	Fortified Blank LFB-26041	Units : <b>µg/L</b> Result	Type <b>I</b> PQL	B Run ID: IC	est Code: Ef atch ID: 2604 C_3_1102224 SpkRefVal	41 N		Analysis Date Prep Date:	e: 02/22/2011 14:22 02/22/2011 10:40 efVal %RPD(Limit)	Qual
Perchlorate		24.8	2	2 25		99	85	115		
Sample Matr File ID: 25 Sample ID: Analyte	rix Spike 11022241-08ALFM	Units : <b>µg/L</b> Result	Type I	B Run ID: <b>I</b>	est Code: El atch ID: 260 C_3_110222/ SpkRefVal	41 A		Analysis Date Prep Date:	e: 02/22/2011 14:59 02/22/2011 10:40 efVal %RPD(Limit)	Qual
Perchlorate	· · · · · · · · · · · · · · · · · · ·	3340	20	0 2500	859	99	80	120		
Sample Matu File ID: 26	rix Spike Duplicate		Туре І		est Code: El atch ID: 260		thod 314.0		e: <b>02/22/2011 15:1</b> 7	
Sample ID:	11022241-08ALFMD	Units : µg/L			C_3_110222/			Prep Date:	02/22/2011 10:40	-
Analyte		Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)		efVal %RPD(Limit)	Qua
Perchlorate		3600	20	0 2500	859	110	80	120 33	39 7.5(15)	

#### **Comments:**

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.



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Date: 07-Mar-11	QC Summary Report	<b>Work Order:</b> 11022305
Method Blank           File ID: 030211.B\021_M.D\           Sample ID: MB-26067           Analyte	Type MBLK Test Code: EPA Method 200.8 Batch ID: 26067 Analysis Dat Units : mg/L Run ID: ICP/MS_110302A Prep Date: Result PQL SpkVal SpkRefVal %REC LCL(ME) UCL(ME) RPDR	e: 03/02/2011 13:04 02/28/2011 09:47
Chromium (Cr)	ND 0.005	
Laboratory Control Spike File ID: 030211.B\022_M.D\ Sample ID: LCS-26067 Analyte	Type       LCS       Test Code:       EPA Method 200.8         Batch ID:       26067       Analysis Dat         Units : mg/L       Run ID:       ICP/MS_110302A       Prep Date:         Result       PQL       SpkVal       SpkRefVal       %REC       LCL(ME)       UCL(ME)       RPDR	e: 03/02/2011 13:09 02/28/2011 09:47 etVal %RPD(Limit) Qual
Chromium (Cr)	0.0472 0.005 0.05 94 85 115	
Sample Matrix Spike File ID: 030211.B\027_M.D\ Sample ID: 11022504-01AMS Analyte	Type MS Test Code: EPA Method 200.8 Batch ID: 26067 Analysis Dat Units : mg/L Run ID: ICP/MS_110302A Prep Date: Result PQL SpkVal SpkRefVal %REC LCL(ME) UCL(ME) RPDRe	e: 03/02/2011 13:37 02/28/2011 09:47 efVal %RPD(Limit) Qual
Chromium (Cr)	0.0541 0.005 0.05 0 108 70 130	
Sample Matrix Spike Duplicate File ID: 030211.B\028_M.D\ Sample ID: 11022504-01AMSD Analyte	Type       MSD       Test Code:       EPA Method 200.8         Batch ID:       26067       Analysis Date         Units : mg/L       Run ID:       ICP/MS_110302A       Prep Date:         Result       PQL       SpkVal       SpkRefVal       %REC       LCL(ME)       UCL(ME)       RPDRefVal	e: 03/02/2011 13:43 02/28/2011 09:47 efVal %RPD(Limit) Qual
Chromium (Cr)		408 3.6(20)

Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.



Method Blank         Type MBLK         Test Code: EPA Method SW62606           Pie (D: 11622402.0)         Batch 1D: MS15W0224M         Analysis Date: 02/24/2011 09-42           Sample ID.         MBLK MS15W0224M         Units: yg/L         Run ID: MSD. 15: 110224B         Prep Date: 02/24/2011 09-42           Analysis         Result         POL         SpkVal         Sp	<b>Date:</b> 28-Feb-11		(	QC Sun	nmary Repo	ort			Work Orde 11022305	
DickbordBusing         ND         0.5           Chioranethane         ND         0.5           Chioranethane         ND         0.5           Brommethane         ND         1           Trichoronethane         ND         0.5           Stationarethane         ND         0.5	File ID: <b>1102</b> Sample ID:	2406.D		Ru	Batch ID: MS In ID: MSD_15_11	615W0224M 0224B		Analysis Date: Prep Date:	02/24/2011 09:42 02/24/2011 09:42	
Chicomethane         ND         0.5           Chicotehane         ND         0.5           Bemomethane         ND         0.5           Inconcentane         ND         0.5           Semomethane         ND         0.5           Inconcentane         ND         0.5           Semonochromethane         ND         0.5			Result	PQL	SpkVal SpkRefVa	al %REC LC	L(ME) UC	CL(ME) RPDRef	Val %RPD(Limit)	Qual
Viryl chorde         ND         0.5           Bromomethane         ND         0.5           Bromomethane         ND         0.5           Trichtordiscontehane         ND         0.5           Statuanone (MEK)         ND         0.5           Statuanone (MEK)         ND         0.5           Statuanone (MEK)         ND         0.5           Cholorophane         ND         0.5           Cholorophane         ND         0.5           Cholorophane         ND         0.5           Cholorophane         ND         0.5           Tablehophophane         ND         0.5           Cholorophane         ND         0.5           Tablehophophane         ND         0.5           Tablehophophane         ND         0.5           Tablehophophane         ND         0.5           Tablehophophane         ND         0.5										
Chicreanne         ND         0.5           Bromomethane         ND         0.5           1Dockhoroethane         ND         0.5           Dichoromethane         ND         0.5           Fremo-113         ND         0.5           Tanas-12-Dichoroethane         ND         0.5           Hally tet-doughethere         ND         0.5           1Dichoroethane         ND         0.5           1Dichoroethane         ND         0.5           1Dichoroethane         ND         0.5           2Dichoroethane         ND         0.5           Dioromomethane         ND         0.5           Dioromomethane         ND         0.5           1Dichoroethane         ND         0.5 <td></td>										
Bromomethane         ND         1           Trichicrofitoromethane         ND         0.5           Trichicrofitoromethane         ND         0.5           Dichoromethane         ND         0.5           Trichicrofitoromethane         ND         0.5           Maily fart-buly other (MTBE)         ND         0.5           Maily fart-buly other (MTBE)         ND         0.5           Stamone (MCM)         ND         0.5           Bromochicomethane         ND         0.5           Chichorophane         ND         0.5           Chichorophane         ND         0.5           1.2-Dichlorophane         ND         0.5           1.1-Dichorophane         ND         0.5           1.1-Dichorophane         ND         0.5           1.1-Dichorophane         ND         0.5           1.1-Dichorophane         ND         0.5           Dichonomethane         ND         0.5           Dichonomethane         ND         0.5           Dichonophane         ND         0.5           Dichonophane         ND         0.5           Dichonophane         ND         0.5           Dichonophane         ND								:		
1.1-Dickloroethene         ND         0.5           Dickloroethene         ND         0.5           Tarsn 1.2-Dickloroethene         ND         0.5           Methy Iterbuky ether (NTBE)         ND         0.5           2-Bulanone (MEK)         ND         0.5           2-Bulanone (MEK)         ND         0.5           2-Bulanone (MEK)         ND         0.5           Bromachizomethene         ND         0.5           Bromachizomethene         ND         0.5           Chordsorm         ND         0.5           Dictoropropane         ND         0.5           2.2-Dichloroethene         ND         0.5           Dictoroethene         ND         0.5           2.2-Dichloropthene         ND         0.5           Dictoroethene         ND         0.5           Dictoroethene         ND         0.5           Dictoroethene         ND         0.5           Table Dictoroethene         ND         0.5           1.2-Dichloroethene         ND         0.5           Table Dictoroethone ND         0.5           1.2-Dichloroethene         ND         0.5           Table Dictoroethoneone(MBK)         ND										
Dichloromethane         ND         1           Frem-113         ND         0.5           trans.1.2-Dichloroethane         ND         0.5           1.1-Dichloroethane         ND         0.5           Subanone (MEK)         ND         10           cis1.2-Dichloroethane         ND         0.5           Emmochloromethane         ND         0.5           Chloroform         ND         0.5           1.2-Dichloropopane         ND         0.5           1.2-Dichloropopane         ND         0.5           1.2-Dichloropopane         ND         0.5           1.1-Dichloropopane         ND         0.5           1.1-Dichloropopane         ND         0.5           1.1-Dichloropopane         ND         0.5           1.2-Dichloropopane         ND         0.5           1.2-Dichloropopane         ND         0.5           1.2-Dichloropopane         ND         0.5           1.2-Dichloropopane         ND         0.5           Dibromochloromethane         ND         0.5           Dibromochloromethane         ND         0.5           Dibromochloromethane         ND         0.5           Dibromochloromethane<	Trichlorofluor	omethane	ND							
Freen-113         ND         0.5           Methy terbuly ether (MTBE)         ND         0.5           1Dickhoresthene         ND         0.5           2-Bulanone (MEK)         ND         10           cis1-2.Dickhoresthene         ND         0.5           Bromochoromethane         ND         0.5           Chorotorm         ND         0.5           J-Dickhoresthene         ND         0.5           Chorotorm         ND         0.5           J-Dickhoresthene         ND         0.5           J-Dickhoresthene         ND         0.5           J-Dickhoresthene         ND         0.5           J-Dickhoresthene         ND         0.5           Diromonethane         ND         0.5           Diromonethane         ND         0.5           Tickhoresthene         ND         0.5           Diromonethane         ND         0.5           Tickhoresthene         ND         0.5										
trans.1.2-Dickloreethane         ND         0.5           1.1-Dickloreethane         ND         0.5           2-Budanone (MEK)         ND         10           cis.1.2-Dickloreethane         ND         0.5           Bromachloromethane         ND         0.5           Chloroteethane         ND         0.5           1.2-Dickloropopane         ND         0.5           1.1-Dickloreethane         ND         0.5           1.1-Dickloropopane         ND         0.5           1.1-Dickloropopane         ND         0.5           1.1-Dickloropopane         ND         0.5           1.1-Dickloropopane         ND         0.5           1.2-Dickloropopane         ND         0.5           Dibromochloromethane (EDB)         ND         1           1.2-Dickloropopane         ND         0.5 <t< td=""><td></td><td>ane</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>		ane								
Methy inter-budy ether (MTRE)         ND         0.5           2-Butanore (MEK)         ND         10           c51-20-Chiloropethene         ND         0.5           Bromachiloromethane         ND         0.5           2.2-Dichiloropethene         ND         0.5           1.2-Dichiloropethene         ND         0.5           2.2-Dichiloropethene         ND         0.5           1.1.1-Tricholoropethene         ND         0.5           Carbon tetrachiloride         ND         0.5           Dibromomethane         ND         0.5           Dibromomethane         ND         0.5           Trichloropethene         ND         0.5           Bromachiloromethane         ND         0.5           Trichloropethene         ND         0.5           Bromachiloromethane         ND         0.5           Trichloropethene         ND         0.5           Trichloropethene         ND         0.5           Totalene         ND         0.5           Totalene         ND         0.5           Totalene         ND         0.5           Totalenorephene         ND         0.5           Totalenorephene		loroethene								
1.1-Dicitorophane     ND     0.5       2-Bulancen (MEK)     ND     0.5       Bromochloromethane     ND     0.5       Chloropopane     ND     0.5       2-Dichloropopane     ND     0.5       1.2-Dichloropopane     ND     0.5       1.2-Dichloropopane     ND     0.5       1.1-Dichloropopane     ND     0.5       1.1-Dichloropopane     ND     0.5       1.1-Dichloropopane     ND     0.5       Earcane     ND     0.5       Dibromonethane     ND     0.5       1.2-Dichloropopane     ND     0.5       Tichloropopane     ND     0.5       Tichloropopane <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>1</td><td></td><td></td></td<>								1		
cis-1.2-DichiorostheneND0.5ChioroformND0.52-DichioropropaneND0.51.2-DichiorosthaneND0.51.2-DichiorosthaneND0.51.1-DichiorosthaneND0.52-Rome MarchorosthaneND0.5BenzeneND0.5DibromomethaneND0.51.2-DichioropropaneND0.5TichiorosthaneND0.5TichiorosthaneND0.5BromochioromethaneND0.5TichiorosthaneND0.5BromochiorosthaneND0.5TichiorosthaneND0.5TichiorosthaneND0.5TichiorosthaneND0.5TichiorosthaneND0.51.3-DichioropropaneND0.51.3-DichioropropaneND0.51.3-DichiorosthaneND0.51.3-DichiorosthaneND0.51.3-DichiorosthaneND0.51.3-DichiorosthaneND0.51.3-DichiorosthaneND0.51.3-DichiorosthaneND0.51.3-DichiorosthaneND0.51.3-DichiorosthaneND0.51.3-DichiorosthaneND0.51.3-DichiorosthaneND0.51.3-DichiorosthaneND0.51.3-DichiorosthaneND0.51.3-DichiorosthaneND0.51.3-DichiorosthaneND0.51.3-Dich	1,1-Dichloroe	thane								
Bromochloromethane         ND         0.5           2.2-Dichloropropane         ND         0.5           2.2-Dichloropropane         ND         0.5           1.1.1-Trichloropethane         ND         0.5           Carbon tetrachloride         ND         0.5           Carbon tetrachloride         ND         0.5           Dibromomethane         ND         0.5           Dibromomethane         ND         0.5           Somadichloromethane         ND         0.5           Trichloropethane         ND         0.5           Somadichloromethane         ND         0.5           Trichloropethane         ND         0.5           Somadichloropropene         ND         0.5           Charbon tetrachloropethane         ND         0.5           Table/toropropene         ND         0.5           1.1.1_2-Trichloroethane         ND         0.5           1.2.Dichloropropene         ND         0.5				10						
Chloroform         ND         0.5           1.2-Dichloropropane         ND         0.5           1.1-Dichloropropane         ND         0.5           1.1-Dichloropropane         ND         0.5           Carbon tetrachoride         ND         0.5           Benzene         ND         0.5           Dibromomethane         ND         0.5           Dibromomethane         ND         0.5           Trichloropropane         ND         0.5           Trichloropropane         ND         0.5           Trichloropropane         ND         0.5           Stromodichloromethane         ND         0.5           Tarsh 1-3-Dichloropropane         ND         0.5           Tarsh 1-3-Dichloropropane         ND         0.5           Toluene         ND         0.5           Toluonefhane         ND         0.5           Dibromochloromethane         ND         0.5           Toluonefhane         ND         0.5										
2.2-Dichloropropane     ND     0.5       1.1.1-Trichloropethane     ND     0.5       1.1.1-Trichloropethane     ND     0.5       Benzene     ND     0.5       Benzene     ND     0.5       Dichnomethane     ND     0.5       Trichloropropane     ND     0.5       Trichloropropane     ND     0.5       Trichloropropane     ND     0.5       Bromodichloromethane     ND     0.5       Trichloropropane     ND     0.5       Bromodichloropropane     ND     0.5       Trichloropropane     ND     0.5       Trichloropropane     ND     0.5       1.3-Dichloropropane     ND     0.5       Dibromochloromethane (CDB)     ND     1       Tractarloropthene     ND     0.5       Ethylbenzene     ND     0.5       Styrene     ND     0.5		nethane								
1.2-Dichloroperhane       ND       0.5         1.1-Dichloropropene       ND       0.5         Carbon tetracholide       ND       0.5         Benzene       ND       0.5         Dibromomethane       ND       0.5         Tichloroptopene       ND       0.5         Trichloroptopene       ND       0.5         Bromodichloromethane       ND       0.5         Trichloroptopene       ND       0.5         Hathyl-2 pertanone (MIBK)       ND       2.5         cida       JChloropropene       ND       0.5         Tableropropene       ND       0.5       1.2-Tichloroptopene         ND       0.5       1.2-Tichloroptopene       ND       0.5         Toluene       ND       0.5       1.2-Dichloroptopene       ND       0.5         Toluene       ND       0.5       1.2-Dichloroptopene       ND       0.5         Lobioroptopene       ND       0.5       1.1.2-Tetrachorethane (EDB)       ND       1.5         Envisol       ND       0.5       5       1.1.2-Tetrachorethane       ND       0.5         Styrene       ND       0.5       5       1.1.2-Tetrachorethane       ND		ropane								
1.1.1-Tichloropapene       ND       0.5         Carbon tetrachloride       ND       0.5         Berzene       ND       0.5         Dibromontetrane       ND       0.5         1.2-Dichloropropane       ND       0.5         Trothorostheane       ND       0.5         Trothorostheane       ND       0.5         Bromodichloromethane       ND       0.5         Additive preventione       ND       0.5         Trothorostheane       ND       0.5         Trothorostheane       ND       0.5         Trothorostheane       ND       0.5         Trothorostheane       ND       0.5         1.1.2-Trichlorostheane       ND       0.5         1.3-Dichloropropane       ND       0.5         Dibromodifromethane       ND       0.5         1.2-Dioromethane       ND       0.5         Dibromodifromethane       ND       0.5         Chlorobarcene       ND       0.5         Dibromodifromethane       ND       0.5         Syrane       ND       0.5         Syrane       ND       0.5         Syrane       ND       0.5         Syr										
Carbon tetrachonice         ND         0.5           Berzene         ND         0.5           Dibromomethane         ND         0.5           Trichiorethene         ND         0.5           Bromodichioromethane         ND         0.5           Bromodichioromethane         ND         0.5           Bromodichioromethane         ND         0.5           Attentyl-2-pentanone (MIBK)         ND         0.5           Tira-13-Dichioropopene         ND         0.5           Tira-13-Dichioropopane         ND         0.5           Dibromochioromethane         ND         0.5           Chiorobenzene         ND         0.5           Styrene         ND         0.5           Styrene         ND         0.5           Styrene         ND         0.5           Allocobenzene         ND         0.5           Styrene         ND										
Benzene         ND         0.5           Dibromomthane         ND         0.5           1.2-Dichloropropane         ND         0.5           Findhoroethane         ND         0.5           Smondchhoropropene         ND         0.5           Sinthoropropene         ND         0.5           Itans-1.3-Dichloropropene         ND         0.5           Taluene         ND         0.5           Tolluene         ND         0.5           Dibromochloropropane         ND         0.5           Styrene         ND         0.5           Styrene         ND         0.5           Styrene         ND         0.5           Diroborobarcene         ND         0.5 </td <td></td>										
Dibromonthame         ND         0.5           1.2-Dichloropropane         ND         0.5           Trichloroctheme         ND         0.5           Bromodichloromethame         ND         0.5           Trichloroctheme         ND         0.5           Trans-1.3-Dichloropropene         ND         0.5           Trans-1.3-Dichloropropene         ND         0.5           1.1.2-Trichlorocthane         ND         0.5           1.3-Dichloropropane         ND         0.5           Chiorobenzene         ND         0.5           Ethylenzene         ND         0.5           Styrene         ND         0.5 <tr< td=""><td></td><td>hloride</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr<>		hloride								
12-Dichloropropane         ND         0.5           Trichloroethene         ND         0.5           Bromdchioromethane         ND         0.5           Stromdchioropropene         ND         0.5           Itams-1.3-Dichloropropene         ND         0.5           Tans-1.3-Dichloropropene         ND         0.5           Toluene         ND         0.5           Toluorobethane         ND         0.5           Dibromochioromethane         ND         0.5           1.2-Dichloropropane         ND         0.5           Dibromochioromethane         ND         0.5           1.1.2-Trichloropthene         ND         0.5           Chlorobenzene         ND         0.5           Ethylbenzene         ND         0.5           Ethylbenzene         ND         0.5           Styrene         ND         0.5           Styrene         ND         0.5           Styrene         ND         0.5           Bromodochioroptopane         ND         0.5           Styrene         ND         0.5           Styrene         ND         0.5           Prophylbenzene         ND         0.5		200								
Trichloroethane     ND     0.5       Bromodichloromethane     ND     0.5       4.Methyl-2-pentanone (MIBK)     ND     2.5       cis-1.3-Dichloropropene     ND     0.5       1.1.2-Trichloroethane     ND     0.5       1.3-Dichloropropane     ND     0.5       1.3-Dichloropropane     ND     0.5       1.3-Dichloropropane     ND     0.5       1.2-Diromoethane (EOB)     ND     1       Tetrachloroethane (EOB)     ND     0.5       1.1.1.2-Tetrachloroethane     ND     0.5       1.1.2-Tictachloroethane     ND     0.5       Diromochloroethane (EOB)     ND     0.5       Chiorobenzene     ND     0.5       Envisioname     ND     0.5       Styrene     ND     0.5       Bromobenzene     ND     0.5       Styrene     ND     0.5       Styrene     ND     0.5       Styrene     ND     0.5       Styrene     ND										
Bromodichloromethane         ND         0.5           Adhethyl-2-pentanone (MIBK)         ND         2.5           cis-1,3-Dichloropropene         ND         0.5           trans-1,3-Dichloropropene         ND         0.5           Toluene         ND         0.5           Toluropethane         ND         0.5           Dibromochloromethane         ND         0.5           Dibromochloromethane         ND         0.5           1,2-Dichropropane         ND         0.5           Chorobenzene         ND         0.5           Ethylbenzene         ND         0.5           Ethylbenzene         ND         0.5           Styrene         ND         0.5           Promobenzene         ND         0.5           Promobenzene         ND         0.5           n-Propylbenzene         ND         0.5           1.3.5-Trime								:		
cis-1.3-Dichloropropene         ND         0.5           1.1.2-Trichloropropene         ND         0.5           1.1.2-Trichloropropane         ND         0.5           Dibromochloropropane         ND         0.5           Dibromochloropropane         ND         0.5           Dibromochloromethane         ND         0.5           Jabichloropropane         ND         0.5           Lobromochloromethane (EDB)         ND         1           Tetrachloroethane (EDB)         ND         0.5           Lity Japane         ND         0.5           Ethylbenzene         ND         0.5           Bromoform         ND         0.5           Styrene         ND         0.5           Styrene         ND         0.5           Bromoform         ND         0.5           Styrene         ND         0.5           Bromobenzene         ND         0.5           Bromobenzene         ND         0.5           Bromobenzene         ND         0.5           Propylbenzene         ND         0.5           L2.3-Trichloropropane         ND         0.5           L3.5-Trintethylbenzene         ND         0.	Bromodichlor	omethane								
trans-13-Dichloropropene         ND         0.5           1,12-Trichloroethane         ND         0.5           1,3-Dichloropropane         ND         0.5           1,3-Dichloropropane         ND         0.5           1,2-Diromoethane (EDB)         ND         1           Tetrachloroethane         ND         0.5           1,1.1.2-Tetrachloroethane         ND         0.5           Chlorobenzene         ND         0.5           Ethylbenzene         ND         0.5           Styrene         ND         0.5           Styrenethylbenzene         ND										
1.1.2-Trichloroethane       ND       0.5         Toluene       ND       0.5         Dibromochloromethane       ND       0.5         Dibromochloromethane       ND       0.5         1.2-Dibromochloromethane       ND       0.5         1.1.1.2-Tetrachloroethane       ND       0.5         1.1.1.2-Tetrachloroethane       ND       0.5         Ethylbenzene       ND       0.5         Ethylbenzene       ND       0.5         Bromoform       ND       0.5         Styrene       ND       0.5         Styrene       ND       0.5         Styrene       ND       0.5         1.2.3-Trichloropropane       ND       0.5         Styrene       ND       0.5         Styrene       ND       0.5         Styrene       ND       0.5         Strochoropropane       ND       0.5         Bromobenzene       ND       0.5         Bromobenzene       ND       0.5         Strintehylbenzene       ND       0.5         2-Chlorotoluene       ND       0.5         sec-Butylbenzene       ND       0.5         Sec-Butylbenzene								1		
Toluene         ND         0.5           1,3-Dichloroprane         ND         0.5           1,3-Dichloromethane         ND         0.5           1,2-Dibromoethane (EDB)         ND         1           Tetrachloroethane         ND         0.5           1,1.1,2-Tetrachloroethane         ND         0.5           Chlorobenzene         ND         0.5           Ethylbenzene         ND         0.5           Bromoform         ND         0.5           Styrene         ND         0.5           Stopropylenzene         ND         0.5           Propylbenzene         ND         0.5           Stopropylopurene         ND         0.5           1,3.5-Trimethylbenzene         ND         0.5           1,3.5-Linotobenzene         ND         0.5           1,4.4-Dichorobenzene										
1.3-Dichloropropane         ND         0.5           Dibromochloromethane         ND         0.5           1.2-Dibromochlarne (EDB)         ND         1           Tetrachloroethane         ND         0.5           1.1.1.2-Tetrachloroethane         ND         0.5           Ohlorobenzene         ND         0.5           Ethylbenzene         ND         0.5           Bromoform         ND         0.5           Styrene         ND         0.5           Styrene         ND         0.5           1.1.2-Tetrachloroethane         ND         0.5           Styrene         ND         0.5           Styrene         ND         0.5           1.1.2.3-Trichtoroptopane         ND         0.5           Propylbenzene         ND         0.5           Bromobenzene         ND         0.5           Propylbenzene         ND         0.5           2-Chlorotoluene         ND         0.5           2-Chlorotoluene         ND         0.5           1.3-5-Trimethylbenzene         ND         0.5           1.3-Dichlorobenzene         ND         0.5           1.3-Dichlorobenzene         ND         0.5 <td></td> <td>Jeulane</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>		Jeulane								
Dibromochloromethane         ND         0.5           1,2-Dibromoethane (EDB)         ND         1           Tetrachloroethane         ND         0.5           Chlorobenzene         ND         0.5           Chlorobenzene         ND         0.5           Ethylbenzene         ND         0.5           Bromoform         ND         0.5           Styrene         ND         0.5           Styrene         ND         0.5           Styrene         ND         0.5           Styrene         ND         0.5           1,1,2,2-Tetrachloroethane         ND         0.5           1,2,3-Trichloropropane         ND         1           Isopropylbenzene         ND         0.5           Propylbenzene         ND         0.5           Propylbenzene         ND         0.5           Propylbenzene         ND         0.5           1,3,5-Trimethylbenzene         ND         0.5           1,4,2,4-Trimethylbenzene         ND         0.5           1,4-Dichorobenzene         ND         0.5           1,4-Dichorobenzene         ND         0.5           1,2-Dichrobenzene         ND         0.5 </td <td></td> <td>ropane</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>		ropane								
1.2-Dibromoethane (EDB)       ND       1         Tetrachloroethane       ND       0.5         1.1.1.2-Tetrachloroethane       ND       0.5         Ethylbenzene       ND       0.5         Ethylbenzene       ND       0.5         Bromoform       ND       0.5         Styrene       ND       0.5         Styrene       ND       0.5         1.2.2-Tetrachloroethane       ND       0.5         1.2.2-Tetrachloroethane       ND       0.5         1.2.3-Trichloropopane       ND       1         Isoporoylbenzene       ND       0.5         Bromobenzene       ND       0.5         Propylbenzene       ND       0.5         Propylbenzene       ND       0.5         Propylbenzene       ND       0.5         2-Chlorotoluene       ND       0.5         1.3.5-Trimethylbenzene       ND       0.5         1.3.4-Trimethylbenzene       ND       0.5         1.3-Dichlorobenzene       ND       0.5         1.2-A-Trimethylbenzene       ND       0.5         1.2-Dichlorobenzene       ND       0.5         1.3-Dichlorobenzene       ND       0.5 <td></td>										
1,1,2-Tetrachloroethane       ND       0.5         Chlorobenzene       ND       0.5         Ethylbenzene       ND       0.5         Bromoform       ND       0.5         Styrene       ND       0.5         o-Xylene       ND       0.5         o-Xylene       ND       0.5         o-Xylene       ND       0.5         1,1,2,2-Tetrachloroethane       ND       0.5         1,2,3-Trichloroptopane       ND       0.5         2,3-Trichloroptopane       ND       0.5         Bromobenzene       ND       0.5         Propylbenzene       ND       0.5         Propoylbenzene       ND       0.5         4-Chlorotoluene       ND       0.5         2-Chlorotoluene       ND       0.5         2-Chlorotoluene       ND       0.5         1,3-S-Tirnehylbenzene       ND       0.5         1,3-Linterhylbenzene       ND       0.5         1,3-Dichlorobenzene       ND       0.5         1,4-Dichlorobenzene       ND       0.5         1,4-Dichlorobenzene       ND       0.5         1,2-Dirbronobenzene       ND       0.5         1,2			ND	1						
Chlorobenzene         ND         0.5           Ethylbenzene         ND         0.5           m.p-Xylene         ND         0.5           Bromoform         ND         0.5           Styrene         ND         0.5           -Xylene         ND         0.5           1,1,2,2-Tetrachloroethane         ND         0.5           1,2,3-Trichloropropane         ND         0.5           Styrene         ND         0.5           Styrene         ND         0.5           1,2,3-Trichloropropane         ND         0.5           Bromobenzene         ND         0.5           Propylbenzene         ND         0.5           Propylbenzene         ND         0.5           1,3-S-Trimethylbenzene         ND         0.5           1,3-S-Trimethylbenzene         ND         0.5           1,3-Dichlorobenzene         ND         0.5           1,3-Dichlorobenzene         ND         0.5           1,3-Dichlorobenzene         ND         0.5           1,4-Dichlorobenzene         ND         0.5           1,2-Dichlorobenzene         ND         0.5           1,2-Dichlorobenzene         ND         0.5										
Ethylbenzene         ND         0.5           m,p-Xylene         ND         0.5           Bromoform         ND         0.5           Styrene         ND         0.5           o-Xylene         ND         0.5           1,12,2-Tetrachloropthane         ND         0.5           1,2,3-Trichloropropane         ND         0.5           Bromobenzene         ND         0.5           Bromobenzene         ND         0.5           Propylbenzene         ND         0.5           Propylbenzene         ND         0.5           Propylbenzene         ND         0.5           2-Chlorotoluene         ND         0.5           2-Chlorotoluene         ND         0.5           1,3.5-Trimethylbenzene         ND         0.5           1,2.4-Trimethylbenzene         ND         0.5           1,3-Dichlorobenzene         ND         0.5           1,4-Dichlorobenzene         ND         0.5           1,2-Dichlorobenzene         ND         0.5           1,2-Dichlorobenzene         ND         0.5           1,2-Dichlorobenzene         ND         0.5           1,2-Dichlorobenzene         ND         0.5<										
m.p-Xylene         ND         0.5           Bromoform         ND         0.5           Styrene         ND         0.5           o-Xylene         ND         0.5           1,1,2,2-Tetrachloroethane         ND         0.5           1,2,3-Trichloropopane         ND         1           Isopropylbenzene         ND         0.5           Bromobenzene         ND         0.5           Bromobenzene         ND         0.5           A-Chlorotoluene         ND         0.5           2-Chlorotoluene         ND         0.5           3-J.2-Litrimethylbenzene         ND         0.5           2-Chlorotoluene         ND         0.5           1,2-Dichlorobenzene         ND         0.5           1,2-Dichorobenzene         ND         0.5           1,2-Dichlorobenzene         ND         0.5     <										
Bromoform         ND         0.5           Styrene         ND         0.5           o-Xylene         ND         0.5           1,1,2,2-Tetrachloroethane         ND         0.5           1,2,3-Trichloropropane         ND         0.5           1,2,3-Trichloropropane         ND         0.5           Bromobenzene         ND         0.5           Propylbenzene         ND         0.5           4-Chlorotoluene         ND         0.5           2-Chlorotoluene         ND         0.5           2-Chlorotoluene         ND         0.5           2-Chlorotoluene         ND         0.5           2-Chlorotoluene         ND         0.5           1,3.5-Trimethylbenzene         ND         0.5           1,2.4-Trimethylbenzene         ND         0.5           1,2-Dichlorobenzene         ND         0.5           1,4-Dichlorobenzene         ND         0.5           1,2-Dichlorobenzene         ND         0.5           1,2-Dichlorobenzene         ND         0.5           1,2-Dichlorobenzene         ND         0.5           1,2-Dibromo-3-chloropropane (DBCP)         ND         2.5           1,2,4-Trichlorobenz										
o-Xylene         ND         0.5           1,1,2,2-Tetrachloroethane         ND         0.5           1,2,3-Trichloropropane         ND         1           Isopropylbenzene         ND         0.5           Bromobenzene         ND         0.5           Bromobenzene         ND         0.5          Propylbenzene         ND         0.5           2-Chlorotoluene         ND         0.5           1,3,5-Trimethylbenzene         ND         0.5           1,3,5-Trimethylbenzene         ND         0.5           1,3,5-Trimethylbenzene         ND         0.5           1,3,4-Trimethylbenzene         ND         0.5           1,3-Dichlorobenzene         ND         0.5           1,3-Dichlorobenzene         ND         0.5           1,4-Dichlorobenzene         ND         0.5           1,4-Dichlorobenzene         ND         0.5           1,2-Dichlorobenzene         ND         0.5           1,2	Bromoform									
1,1,2,2-TetrachloroethaneND0.51,2,3-TrichloropropaneND1Isoproy/benzeneND0.5BromobenzeneND0.5-PropylbenzeneND0.54-ChlorotolueneND0.52-ChlorotolueneND0.52-ChlorotolueneND0.51,3,5-TrimethylbenzeneND0.51,2,4-TrimethylbenzeneND0.5sec-ButylbenzeneND0.51,3-DichlorobenzeneND0.51,3-DichlorobenzeneND0.51,2-DichlorobenzeneND0.51,2-DichlorobenzeneND0.51,2-DichlorobenzeneND0.51,2-DichlorobenzeneND0.51,2-DichlorobenzeneND0.51,2-DichlorobenzeneND0.51,2-DichlorobenzeneND0.51,2-DichlorobenzeneND0.51,2-DichlorobenzeneND0.51,2-DichlorobenzeneND0.51,2-DichlorobenzeneND1ND11NaphthaleneND1HexachlorobutadieneND11,2,3-TrichlorobenzeneND1										
1,2,3-Trichloropropane       ND       1         Isopropylbenzene       ND       0.5         Bromobenzene       ND       0.5         n-Propylbenzene       ND       0.5         4-Chlorotoluene       ND       0.5         2-Chlorotoluene       ND       0.5         2-Chlorotoluene       ND       0.5         1,3,5-Trimethylbenzene       ND       0.5         1,2,4-Trimethylbenzene       ND       0.5         1,2,4-Trimethylbenzene       ND       0.5         1,3-Dichlorobenzene       ND       0.5         1,3-Dichlorobenzene       ND       0.5         1,3-Dichlorobenzene       ND       0.5         1,3-Dichlorobenzene       ND       0.5         1,2-Dichlorobenzene       ND       0.5         1,2-Jeithoro-3-chloropropane (DBCP)       ND       2.5         1,2,4-Trichlorobenzene       ND       1         Naphthalene<										
Isopropylbenzene         ND         0.5           Bromobenzene         ND         0.5           n-Propylbenzene         ND         0.5           4-Chlorotoluene         ND         0.5           2-Chlorotoluene         ND         0.5           1,3,5-Trimethylbenzene         ND         0.5           1,2,4-Trimethylbenzene         ND         0.5           1,2-Artrimethylbenzene         ND         0.5           1,3-Dichlorobenzene         ND         0.5           1,4-Dichlorobenzene         ND         0.5           1,2-Dichlorobenzene         ND         0.5           1,2-Dichlorobenzene         ND         0.5           1,2-Dibromo-3-chloropropane (DBCP)         ND         2.5           1,2,4-Trichlorobenzene         ND         1           Naphthalene         ND         1           Hexachlorobutadiene         ND         1           1,2,3-Trichlorobenzene         ND         1										
BromobenzeneND0.5n-PropylbenzeneND0.54-ChlorotolueneND0.52-ChlorotolueneND0.52-ChlorotolueneND0.51,3,5-TinethylbenzeneND0.51,2,4-TrimethylbenzeneND0.51,2,4-TrimethylbenzeneND0.51,3-DichlorobenzeneND0.51,3-DichlorobenzeneND0.51,2-DichlorobenzeneND0.51,2-DichlorobenzeneND0.51,2-DichlorobenzeneND0.51,2-DichlorobenzeneND0.51,2-DichlorobenzeneND0.51,2-DichlorobenzeneND0.51,2-DichlorobenzeneND0.51,2-DichlorobenzeneND0.51,2-DichlorobenzeneND0.51,2-DichlorobenzeneND0.51,2-DichlorobenzeneND0.51,2-Jibromo-3-chloropropane (DBCP)ND2.51,2,4-TrichlorobenzeneND1HexachlorobutadieneND1HexachlorobutadieneND1		• •								
4-ChlorotolueneND0.52-ChlorotolueneND0.51,3,5-TrimethylbenzeneND0.5tert-ButylbenzeneND0.51,2,4-TrimethylbenzeneND0.5sec-ButylbenzeneND0.51,3-DichlorobenzeneND0.51,4-DichlorobenzeneND0.51,4-DichlorobenzeneND0.51,2-DichlorobenzeneND0.51,2-DichlorobenzeneND0.51,2-DichlorobenzeneND0.51,2-DichlorobenzeneND0.51,2-DichlorobenzeneND0.51,2-DichlorobenzeneND0.51,2-DichlorobenzeneND0.51,2-DichlorobenzeneND0.51,2-DichlorobenzeneND1NaphthaleneND1HexachlorobutadieneND11,2,3-TrichlorobenzeneND1								:		
2-ChlorotolueneND0.51,3,5-TrimethylbenzeneND0.5tert-ButylbenzeneND0.51,2,4-TrimethylbenzeneND0.5sec-ButylbenzeneND0.51,3-DichlorobenzeneND0.51,4-DichlorobenzeneND0.51,2-DichlorobenzeneND0.51,2-DichlorobenzeneND0.51,2-DichlorobenzeneND0.51,2-DichlorobenzeneND0.51,2-DichlorobenzeneND0.51,2-DichlorobenzeneND0.51,2-DichlorobenzeneND0.51,2-DichlorobenzeneND0.51,2-DichlorobenzeneND0.51,2-DichlorobenzeneND0.51,2-DichlorobenzeneND1NaphthaleneND1HexachlorobutadieneND11,2,3-TrichlorobenzeneND1			ND							
1,3,5-TrimethylbenzeneND0.5tert-ButylbenzeneND0.51,2,4-TrimethylbenzeneND0.5sec-ButylbenzeneND0.51,3-DichlorobenzeneND0.51,4-DichlorobenzeneND0.51,4-DichlorobenzeneND0.51,2-DichlorobenzeneND0.51,2-DichlorobenzeneND0.51,2-DichlorobenzeneND0.51,2-DichlorobenzeneND0.51,2-Dibromo-3-chloropropane (DBCP)ND2.51,2,4-TrichlorobenzeneND1NaphthaleneND1HexachlorobutadieneND11,2,3-TrichlorobenzeneND1										
tert-ButylbenzeneND0.51,2,4-TrimethylbenzeneND0.5sec-ButylbenzeneND0.51,3-DichlorobenzeneND0.51,4-DichlorobenzeneND0.54-IsopropyltolueneND0.51,2-DichlorobenzeneND0.51,2-DichlorobenzeneND0.51,2-DichlorobenzeneND0.51,2-DichlorobenzeneND0.51,2-Dibromo-3-chloropropane (DBCP)ND2.51,2,4-TrichlorobenzeneND1NaphthaleneND1HexachlorobutadieneND11,2,3-TrichlorobenzeneND1										
1,2,4-TrimethylbenzeneND0.5sec-ButylbenzeneND0.51,3-DichlorobenzeneND0.51,4-DichlorobenzeneND0.54-IsopropyltolueneND0.51,2-DichlorobenzeneND0.5n-ButylbenzeneND0.51,2-Dibromo-3-chloropropane (DBCP)ND2.51,2,4-TrichlorobenzeneND1NaphthaleneND1HexachlorobutadieneND11,2,3-TrichlorobenzeneND1										
sec-ButylbenzeneND0.51,3-DichlorobenzeneND0.51,4-DichlorobenzeneND0.54-IsopropyltolueneND0.51,2-DichlorobenzeneND0.5n-ButylbenzeneND0.51,2-Dibromo-3-chloropropane (DBCP)ND2.51,2,4-TrichlorobenzeneND1NaphthaleneND1HexachlorobutadieneND11,2,3-TrichlorobenzeneND1										
1,3-DichlorobenzeneND0.51,4-DichlorobenzeneND0.54-IsopropyltolueneND0.51,2-DichlorobenzeneND0.5n-ButylbenzeneND0.51,2-Dibromo-3-chloropropane (DBCP)ND2.51,2,4-TrichlorobenzeneND1NaphthaleneND1HexachlorobutadieneND11,2,3-TrichlorobenzeneND1	sec-Butylbenz	zene								
4-IsopropyltolueneND0.51,2-DichlorobenzeneND0.5n-ButylbenzeneND0.51,2-Dibromo-3-chloropropane (DBCP)ND2.51,2,4-TrichlorobenzeneND1NaphthaleneND1HexachlorobutadieneND11,2,3-TrichlorobenzeneND1				0.5				-		
1,2-DichlorobenzeneND0.5n-ButylbenzeneND0.51,2-Dibromo-3-chloropropane (DBCP)ND2.51,2,4-TrichlorobenzeneND1NaphthaleneND1HexachlorobutadieneND11,2,3-TrichlorobenzeneND1	,									
n-ButylbenzeneND0.51,2-Dibromo-3-chloropropane (DBCP)ND2.51,2,4-TrichlorobenzeneND1NaphthaleneND1HexachlorobutadieneND11,2,3-TrichlorobenzeneND1										
1,2-Dibromo-3-chloropropane (DBCP)ND2.51,2,4-TrichlorobenzeneND1NaphthaleneND1HexachlorobutadieneND11,2,3-TrichlorobenzeneND1										
1,2,4-TrichlorobenzeneND1NaphthaleneND1HexachlorobutadieneND11,2,3-TrichlorobenzeneND1										
HexachlorobutadieneND11,2,3-TrichlorobenzeneND1	1,2,4-Trichlord		ND							
1,2,3-Trichlorobenzene ND 1		4						· .		
			ND 9.79	1	10	98	70	130		
Surr: Toluene-d8 10.5 10 105 70 130										



Date: 28-Feb-11	QC Su	mmary Re	port		Work Orde 11022305
urr: 4-Bromofluorobenzene	9.7	10		0 130	
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<b>Date:</b> 28-Feb-11	(	QC Si	ummary	/ Report			<b>Work Ord</b> 11022305	
Laboratory Control Spike File ID: 11022403.D		Type L		st Code: EPA Metho tch ID: MS15W0224		Analysis Date:	02/24/2011 08:29	
Sample ID: LCS MS15W0224M	Units : µg/L			SD_15_110224B		Prep Date:	02/24/2011 08:29	
Analyte	Result	PQL	SpkVal	SpkRefVal %REC L	_CL(ME)	UCL(ME) RPDRef	Val %RPD(Limit)	Qual
Dichlorodifluoromethane	8.48	1		85	70	130		
Chloromethane	10.5	2		105	70	130		
Vinyl chloride Chloroethane	10.4	1		104	70 70	130		
Bromomethane	10.5 9.59	1 2	10 10	105 96	70 70	130 130		
Trichlorofluoromethane	9.98	1	10	99.8	70	130		
1,1-Dichloroethene	10.3	1	10	103	70	130		
Dichloromethane	9.5	2	10	95	70	130		
Freon-113 trans-1.2-Dichloroethene	10.5	1	10	105	70	137		
Methyl tert-butyl ether (MTBE)	10.4 9.47	1 0.5	10 10	104 95	70 70	130 130		
1,1-Dichloroethane	10.3	0.5	10	103	70	130		
2-Butanone (MEK)	175	10	200	87	70	130		
cis-1,2-Dichloroethene	10.2	1	10	102	70	130		
Bromochloromethane	9.95	1	10	100	70	130		
Chloroform	9.37	1	10	94	70	130		
2,2-Dichloropropane 1,2-Dichloroethane	11 9.36	1	10	110	70 70	130		
1,1,1-Trichloroethane	9.36 10.3	1	10 10	94 103	70 70	130 130		
1,1-Dichloropropene	10.6	1	10	105	70	130		
Carbon tetrachloride	9.17	1	10	92	70	130		
Benzene	9.62	0.5	10	96	70	130		
Dibromomethane	9.51	1	10	95	70	130		
1,2-Dichloropropane Trichloroethene	9.86	1	10	99	70 70	130		
Bromodichloromethane	10.4 9.81	1	10 10	104 98	70 70	130 130		
4-Methyl-2-pentanone (MIBK)	20.6	2.5	25	82	20	182		
cis-1,3-Dichloropropene	9.2	1	10	92	70	130		
trans-1,3-Dichloropropene	8.12	1	10	81	70	130		
1,1,2-Trichloroethane	8.99	1	10	90	70	130		
Toluene 1,3-Dichloropropane	10.7 10	0.5 1	10 10	107	70 70	130 130		
Dibromochloromethane	9.7	1	10	100 97	70	130		
1,2-Dibromoethane (EDB)	20.5	2	20	102	70	130		
Tetrachloroethene	10.6	1	10	106	70	130		
1,1,1,2-Tetrachloroethane	10.6	1	10	106	70	130		
Chlorobenzene Ethylbenzene	10.2	1	10	102	70	130		
m,p-Xylene	10.2 10.4	0.5 0.5	10 10	102 104	70 70	130 130		
Bromoform	8.26	0.5	10	83	70	130		
Styrene	10.4	1	10	104	70	130		
o-Xylene	10.3	0.5	10	103	70	130		
1,1,2,2-Tetrachloroethane 1,2,3-Trichloropropane	8.94	1	10	89	70	130		
isopropylbenzene	17.9 10.3	2 1	20 10	90	70 70	130		
Bromobenzene	9.57	1	10	103 96	70	130 130		
n-Propylbenzene	10.4	1	10	104	70	130		
4-Chlorotoluene	10.5	1	10	105	70	130		
2-Chlorotoluene	10.2	1	10	102	70	130		
1,3,5-Trimethylbenzene	10.4	1	10	104	70	130		
tert-Butylbenzene 1,2,4-Trimethylbenzene	10.2 10.5	1	10	102	70 70	130		
sec-Butylbenzene	10.3	. 1	10 10	105 103	70 70	130 130		
1,3-Dichlorobenzene	10.4	1	10	103	70	130		
1,4-Dichlorobenzene	9.81	1	10	98	70	130		
4-Isopropyltoluene	10.4	1	10	104	70	130		
1,2-Dichlorobenzene	9.51	1	10	95	70	130		
n-Butylbenzene 1,2-Dibromo-3-chloropropane (DBCP)	10.8 42.2	1 3	10 50	108 84	70 67	130 130		
1,2,4-Trichlorobenzene	42.2	2	50 10	84 108	67 70	130		
Naphthalene	8.69	2	10	87	70	130		
Hexachlorobutadiene	18.4	2	20	92	70	130		
1,2,3-Trichlorobenzene	10.5	2	10	105	70	130		
Surr: 1,2-Dichloroethane-d4 Surr: Toluene-d8	9.7		10	97	70	130		
	10.5		10	105	70	130		



Date: 28-Feb-11	QC	Summary Re	port			Work Order 11022305
Surr: 4-Bromofluorobenzene	9.57	10	96	70 1	30	
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<b>Date:</b> 28-Feb-11	(	QC Su	immary	y Report				Work Orde 11022305	
Sample Matrix Spike		Type M	S Te	est Code: EP	A Met	hod SW82	60B		
File ID: 11022407.D			Ва	tch ID: MS1	5W022	24M	Analysis Date:	02/24/2011 10:04	
Sample ID: 11021705-19AMS	Units : µg/L	F	Run ID: MS	SD_15_1102	24B		Prep Date:	02/24/2011 10:04	
Analyte	Result	PQL	SpkVal	SpkRefVal %	%REC	LCL(ME)	UCL(ME) RPDRef	Val %RPD(Limit)	Qua
Dichlorodifluoromethane	35.9	2.5	50	0	72	21	138		
Chloromethane	50	10	50	0	100	23	144		
Vinyl chloride	50	2.5	50	0	100	49	136	۱	
Chloroethane Bromomethane	51.2	2.5	50	- 0	102	21	159		
Trichlorofluoromethane	47.5 50.5	10 2.5	50 50	0 0	95 101	10 32	174 154		
1,1-Dichloroethene	51.6	2.5	50 50	0	101	52 64	130		
Dichloromethane	46.2	10	50	ŏ	92	69	130		
Freon-113	53.5	2.5	50	0	107	55	141		
trans-1,2-Dichloroethene	51	2.5	50	0	102	63	130		
Methyl tert-butyl ether (MTBE)	50	1.3	50	0	100	47	150		
1,1-Dichloroethane 2-Butanone (MEK)	51.5	2.5	50	0	103	66	130		
cis-1,2-Dichloroethene	753 51.5	50 2.5	1000 50	0 0	75 103	23 70	182 130		
Bromochloromethane	51.6	2.5	50 50	0	103	70	132		
Chloroform	47.4	2.5	50	0	95	70	130		
2,2-Dichloropropane	55.2	2.5	50	Õ	110	38	154		
1,2-Dichloroethane	48.2	2.5	50	0	96	65	134		
1,1,1-Trichloroethane	51.7	2.5	50	0	103	65	136		
1,1-Dichloropropene Carbon tetrachloride	53.5	2.5	50	0	107	68	132		
Benzene	46.4 48.3	2.5 1.3	50	0 0	93 97	58 59	148 138		
Dibromomethane	48.3	2.5	50 50	0	97 98	59 70	130		
1,2-Dichloropropane	51.7	2.5	50 50	0	103	70	131		
Trichloroethene	51.6	2.5	50	õ	103	65	144		
Bromodichloromethane	50	2.5	50	0	100	50	157		
4-Methyl-2-pentanone (MIBK)	105	13	125	0	84	20	182		
cis-1,3-Dichloropropene	45.9	2.5	50	0	92	63	131		
trans-1,3-Dichloropropene 1,1,2-Trichloroethane	41.8	2.5	50	0	84 05	65 70	136		
Toluene	47.4 54.9	2.5 1.3	50 50	0 0	95 110	70 68	131 130		
1,3-Dichloropropane	54.4	2.5	50	0	109	70	130		
Dibromochloromethane	49.8	2.5	50	-	99.5	42	155		
1,2-Dibromoethane (EDB)	108	5	100	0	108	70	130		
Tetrachloroethene	55.3	2.5	50	0	111	65	130		
1,1,1,2-Tetrachloroethane Chlorobenzene	54.2	2.5	50	0	108	70	130		
Ethylbenzene	51.9 51.6	2.5 1.3	50 50	0	104 103	70 68	130 130		
m,p-Xylene	52.7	1.3	50	0	105	68	130		
Bromoform	42.9	2.5	50	ŏ	86	65	143		
Styrene	52	2.5	50	0	104	59	153		
o-Xylene	52.3	1.3	50	0	105	70	130		
1,1,2,2-Tetrachloroethane	48.3	2.5	50	0	97	67	130		
1,2,3-Trichloropropane Isopropylbenzene	93 51.9	10 2.5	100 50	0	93 104	70 55	130 138		
Bromobenzene	48.8	2.5	50 50	0 0	98	55 70	130		
n-Propylbenzene	52.6	2.5	50	0	105	67	133		
4-Chlorotoluene	52.9	2.5	50	õ	106	70	130		
2-Chlorotoluene	50.4	2.5	50		101	70	130		
1,3,5-Trimethylbenzene	52.1	2.5	50		104	67	134		
tert-Butylbenzene 1,2,4-Trimethylbenzene	51.3	2.5	50		103	55 65	147		
sec-Butylbenzene	52.4 52.6	2.5 2.5	50 50	0 0	105 105	65 68	135 135		
1,3-Dichlorobenzene	51.8	2.5	50 50	0	105	70	130		
1,4-Dichlorobenzene	50.3	2.5	50		101	70	130		
4-Isopropyltoluene	53.2	2.5	50		106	68	132		
1,2-Dichlorobenzene	48.9	2.5	50	0	98	70	130		
n-Butylbenzene	55.8	2.5	50		112	62	134		
1,2-Dibromo-3-chloropropane (DBCP) 1,2,4-Trichlorobenzene	213	15	250	0	85	64 62	130		
Naphthalene	55.7 44.4	10 10	50 50	0 0	111 89	62 32	133 166		
Hexachlorobutadiene	44.4 97.7	10	50 100	· 0	89 98	32 63	130		
1,2,3-Trichlorobenzene	56	10	50		112	55	138		
Surr: 1,2-Dichloroethane-d4	48.4		50	-	97	70	130		
Surr: Toluene-d8	54		50		108	70	130		



Date: 28-Feb-11	QC	Summary Re	port		<b>Work Ord</b> 1102230:
urr: 4-Bromofluorobenzene	48.6	50	97 70	130	
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Date: 28-Feb-11	(	QC S	ummar	y Repor	t				Work Orde 11022305	
Sample Matrix Spike Duplicate		Type N	ISD Te	est Code: EF	PA Met	hod SW82	260B			
File ID: 11022408.D				atch ID: MS1		24 <b>M</b>	-		02/24/2011 10:26	
Sample ID: 11021705-19AMSD	Units : µg/L			SD_15_1102			Prep D		02/24/2011 10:26	
Analyte	Result	PQL		· · · · · · · · · · · · · · · · · · ·					/al %RPD(Limit)	Qual
Dichlorodifluoromethane Chloromethane	34.7	2.5		0	69 07	21	138	35.85	· · ·	
Vinyl chloride	48.6 49	10 2.5		0	97 98	23 49	144 136	50.03 49.98		
Chloroethane	50.2	2.5		Ő	100	21	159	51.24		
Bromomethane	47.6	10	) 50	0	95	10	174	47.52	· · ·	
Trichlorofluoromethane 1,1-Dichloroethene	49.2	2.5		0	98	32	154	50.53		
Dichloromethane	49.8 46.2	2.5 10		0	99.6 92	64 69	130 130	51.56 46.19		
Freon-113	50.4	2.5		Ő	101	55	141	53.54	· · ·	
trans-1,2-Dichloroethene	49.9	2.5	5 50	0	99.7	63	130	50.98	· · ·	
Methyl tert-butyl ether (MTBE) 1.1-Dichloroethane	51.8	1.3		0	104	47	150	50.02	( )	
2-Butanone (MEK)	50.9 762	2.5 50		0	102 76	66 23	130 182	51.52 753.2		
cis-1,2-Dichloroethene	50.3	2.5		Ő	101	70	130	51.53		
Bromochloromethane	50.7	2.5	5 50	0	101	70	132	51.59	9 1.7(20)	
Chloroform	46.6	2.5		0	93	70	130	47.38	· · ·	
2,2-Dichloropropane 1,2-Dichloroethane	55.4 47.9	2.5 2.5		0	111 96	38 65	154 134	55.18 48.24	· · ·	
1,1,1-Trichloroethane	51.4	2.5		0	103	65	134	51.65		
1,1-Dichloropropene	52	2.5		Ő	104	68	132	53.47		
Carbon tetrachloride	46.7	2.5		0	93	58	148	46.39		
Benzene Dibromomethane	47.8 49.9	1.3 2.5		0	96 99.8	59 70	138 130	48.32 49.12		
1,2-Dichloropropane	49.9 51.1	2.5		0	99.8 102	70	130	49.12 51.71	· · ·	
Trichloroethene	50.6	2.5		ŏ	101	65	144	51.59		
Bromodichloromethane	50.7	2.5		0	101	50	157	50	1.4(20)	
4-Methyl-2-pentanone (MIBK) cis-1,3-Dichloropropene	111 47.3	13 2.5		0	89 05	20 63	182 131	105.3 45.85		
trans-1,3-Dichloropropene	47.3	2.5		0	95 86	65	136	45.60	· · ·	
1,1,2-Trichloroethane	47.2	2.5		Õ	94	70	131	47.43	· · ·	
Toluene	52.7	1.3		0	105	68	130	54.94	4.2(20)	
1,3-Dichloropropane Dibromochloromethane	54.2	2.5		0	108	70	130	54.4		
1,2-Dibromoethane (EDB)	51.1 107	2.5 5		0	102 107	42 70	155 130	49.77 108.1		
Tetrachloroethene	52.4	2.5		Ő	105	65	130	55.32		
1,1,1,2-Tetrachloroethane	52.4	2.5		0	105	70	130	54.15	3.3(20)	
Chlorobenzene Ethylbenzene	49.7	2.5		0	99	70	130	51.91	· · /	
m,p-Xylene	49.3 50.5	1.3 1.3		0	99 101	68 68	130 131	51.56 52.74	· · /	
Bromoform	43.9	2.5		0	88	65	143	42.89		
Styrene	50.5	2.5	50	0	101	59	153	51.98	3.0(37)	
o-Xylene 1,1,2,2-Tetrachloroethane	50.3	1.3		0	101	70	130	52.33		
1,2,3-Trichloropropane	47.6 94.6	2.5 10		0 0	95 95	67 70	130 130	48.33 93.03		
Isopropylbenzene	50.1	2.5		Ő	100	55	138	51.92		
Bromobenzene	48	2.5	50	0	96	70	130	48.84	1.8(20)	
n-Propylbenzene 4-Chlorotoluene	50.8	2.5		0	102	67	133	52.62		
2-Chlorotoluene	50.8 49.3	2.5 2.5		0	102 99	70 70	130 130	52.86 50.37		
1,3,5-Trimethylbenzene	50.1	2.5		0	100	67	130	52.12		
tert-Butylbenzene	49.6	2.5	50	Ő	99	55	147	51.25	3.3(20)	
1,2,4-Trimethylbenzene sec-Butylbenzene	50.8	2.5		0	102	65	135	52.36		
1,3-Dichlorobenzene	50.5 51	2.5 2.5		0 0	101 102	68 70	135 130	52.56 51.76	· · /	
1,4-Dichlorobenzene	49.1	2.5		0	98	70	130	50.27		
4-Isopropyltoluene	51.5	2.5	50	Ō	103	68	132	53.16	3.1(20)	
1,2-Dichlorobenzene	48.5	2.5		0	97	70	130	48.94		
n-Butylbenzene 1,2-Dibromo-3-chloropropane (DBCP)	54.1 232	2.5 15		0	108	62	134	55.81		
1,2,4-Trichlorobenzene	56.6	10		0	93 113	64 62	130 133	212.9 55.71		
Naphthalene	45	10		0	90	32	166	44.39		
Hexachlorobutadiene	99	10	100	0	99	63	130	97.66	1.3(21)	
1,2,3-Trichlorobenzene Surr: 1,2-Dichloroethane-d4	56.2 49.4	10		0	112	55 70	138	55.97	0.4(36)	
Surr: Toluene-d8	49.4 52.3		50 50		99 105	70 70	130 130			
	02.0		50		105	10	100	1		



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<b>Date:</b> 28-Feb-11	QC	Summary Re	port			 Work Order: 11022305
Surr: 4-Bromofluorobenzene	48.3	50	97	70	130	

#### Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.

2-23-11 1206	Alpha Analytical, Inc.	HdCox	buth	20	17		Cer	Lalc		abut	Cluf	Logged in by:
Date/Time	Company	<b>_</b>	Print Name		1				Signature	Sig	>	
<u>).</u>	Samples should be used as the control spike sample if possible (I.E.: MS/MSD). :	ed as the control spike :	s should be us	. Sample	Level IV OC.		Temp Blank #5596 received @ 0°C.	ınk #5596	Temp Bla	Frozen ice.	Security seals intact. Frozen ice.	Comments:
		VOC by 524 Criteria	VOC by 524 Criteria Criteria	 ?	Perchlorate	9	0	6 11 5	02/22/11 13:26	AQ	SB-01-02/22/11	BMI11022305-09A
Reno Trip Blank 12/14/10		VOC by 524 Criteria	VOC by 524 Criteria			9	0	111 0 1	02/22/11 07:00	AQ	TB-01-02/22/11	BMI11022305-08A
		VOC by 524 Criteria	VOC by 524 Criteria	ې د	Perchlorate	Q	0	11 5 2	02/22/11 13:22	AQ	EB-01-02/22/11	BMI11022305-07A
		VOC by 524 Criteria	VOC by 524 Criteria	<u></u> ନ	Perchlorate	9	0	11 0 5	02/22/11 00:00	AQ	DUPE-01-1Q11	BMI11022305-06A
		VOC by 524 Criteria	VOC by 524 Criteria	<u></u>	Perchlorate	g	0	7 11 5	02/22/11 13:37	AQ	MW-21-1	BMI11022305-05A
		VOC by 524 Criteria	VOC by 524 Criteria	Ω	Perchlorate	9	0	0 11 5	02/22/11 13:00	AQ	MW-21-2	BMI11022305-04A
		VOC by 524 Criteria	VOC by 524 Criteria	-	Perchlorate	g	0	5 11	02/22/11 12:35	AQ	MW-21-3	BMI11022305-03A
		VOC by 524 Criteria	VOC by 524 Criteria	<u>ନ</u>	Perchlorate	9	0	1 1 5	02/22/11 12:11	AQ	MW-21-4	BMI11022305-02A
		VOC by 524 Criteria	VOC by 524 VOC by 524 Criteria Criteria	្	Perchlorate	g	0	711 5	02/22/11 11:37	AQ	MW-21-5	BMI11022305-01A
Sample Remarks			W W	× N	0  4   4	<sup>25</sup> TAT	Alpha Sub	~	ix Date	Matrix	Sample ID	Aupna Sample ID
		Requested Tests	5						-			
			rrogates	With Su	, MS/MSD	ata, LCS	ConCal d	K, InitCal/	t, MBL	red : Final F	= DOD QC Required : Final Rpt, MBLK, InitCal/ConCal data, LCS, MS/MSD With Surrogates	QC Level: DS4
-2011 23-Feb-2011	0 °C 23-Feb-2011				ing	r Monitor	G005862/JPL Groundwater Monitoring	2/JPL Gr	G00586	Job :	60	PO: 218013 Client's COC #: 33409
	Cna		waltons@battelle.org	walton	117 x	(614) 424-4117	(6	Valton	Shane Walton		101	San Diego, CA 92101
	End by Cheen Droads		cutice@batelle.org	cutice	x 668	(614) 424-4899	6)	utie	Betsy Cutie	AND DESCRIPTION OF AN ADDRESS OF ADDRES	ay	Suite 1420
	D Demitted . Ver		connerd@battelle.org	conner	311 x	(619) 726-7311	6)	onner	David Conner		Institute	Battelle Memorial Institute
			EMail Address	EMai	nber	Phone Number	PŦ	Report Attention	Report			Client:
11022305 On: 08-Mar-20	WorkOrder: BMIS11022305 Report Due By: 5:00 PM On: 08-Mar-2011		Alpha Analytical, Inc. 255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778 TEL: (775) 355-1044 FAX: (775) 355-0406	lytical, Inc. Sparks, Nevada 8943 FAX: (775) 355-0406	Alpha Analytical, Inc. ale Avenue, Suite 21 Sparks, Nevada 89 2: (775) 355-1044 FAX: (775) 355-040	Alpha Ana andale Avenue, Suite 2 rEL: (775) 355-1044	Alj Jendale A TEL: (77	255 (				-
					a ne se							

		MANNER ALL'ALL DAVE
Billing Information:		Samples Collected From Which State?
Attn: CHARLES TOMPHINS	e, suite ∠i 31-5778 44	ag
City, State, Zip (alumbus, alf 4340)		Analyses Required
Consultant / Client Name Job #	2 Job Name	Data Validation
141 AV15- C-205	Report Attention / Proj	
92//0 Email: -4	DO D	W Wight / / EDP/EDP? YES NO
Matrix* P.O. # 218013	614-458-6614 Mobile: 619-726-7311	
Lab ID Number (Use Only)	Sample Description TAT Field # Containers**	A C A REMARKS
1137 1/22/ 10 20 1102230501 MW-21-5	5 3v 2p X	XX
1211 1 1 m ) w · O2 MW-21-4		××
1235 . 03 MW-21-3		××
1300	2 3v 2p ×	××
12-mm 30. 2 V	1 3v 2p ×	
Hard III	1-1011 3v2p×	XX Duplicate
- 10-B-01 -	02/22/11 312p ×	X X EON PHENT & ANY
- 10- 5TTBO 16- 51-	× 11 / 1× ×	trap BLANK
1526 10- 32 10- 10 58-01-0	orfer / 11 31 20 ×	XX Source BLANK
	· ·	
ADDITIONAL INSTRUCTIONS:		
I, (field sampler), attest to the validity and authenticity of this sample. I arraware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action (NAC 445.0636 (c) (2)). Sampled By:	eaware that tampering with or intentionally mislabeling the sample	e location, date or time of collection is considered fraud and may be
Relinquished by: (Signature/Affiliation)	A Received by: (Signature/Affiliation)	1.4/2 1 Date: 2/22/// Time:/ 500
Relinquished by: (Signature Attingion All Angletics 1/22/11	20 Received by: (Signature/Affiliation)	$\int \int \int \int date: \qquad \text{Time:} \qquad \\text{Time:} \qquad \Time$
Relinquished by: (Signature/Affiliation)	hatt	Date: Time:
0	AR - Air **: L-Liter V-Voa S-Soil Jar	O-Orbo T-Tedlar B-Brass P-Plastic OT-Other
NOTE. Samples are discarded 60 days after results are reported unless oth	the survey means and many many many second and the second	

of the above samples is applicable only to those samples received by the laboratory with this coc. The liability of the laboratory is limited to the amount paid for the report. inples are discarded by days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense. The report for the analysis



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**Date** 01-Mar-11

David Conner Battelle Memorial Institute 655 West Broadway San Diego, CA 92101 (619) 726-7311

Suite 1420

**CASE NARRATIVE** 

Job:	G005862/JPL Grou	ndwater Monitoring		
Work Order:	BMI11022404		<b>Cooler Temp:</b> 0 °C	
Alpha's	Sample ID	Client's Sample ID	Matrix	1 1 2
11022	2404-01A	MW-14-5	Aqueous	
11022	2404-02A	MW-14-4	Aqueous	
11022	2404-03A	MW-14-3	Aqueous	
11022	2404-04A	MW-14-2	Aqueous	
11022	2404-05A	MW-14-1	Aqueous	
11022	2404-06A	DUPE-02-1Q11	Aqueous	
11022	2404-07A	EB-02-02/23/11	Aqueous	
11022	2404-08A	TB-02-02/23/11	Aqueous	
		Manually Integrated	d Analytes	
Alpha's Sa	mple ID	Test Reference	Analy	<u>te</u>
NO	NE	· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·
NO				

Enclosed please find the analytical results of the samples received by Alpha Analytical, Inc. under the above mentioned Work Order/Chainof-Custody.

Alpha Analytical, Inc. has a formal Quality Assurance/Quality Control program, which is designed to meet or exceed the EPA requirements. All relevant QC met quality assurance objectives for this project unless otherwise stated in the footnotes.

If you have any questions with regards to this report, please contact Randy Gardner, Project Manager, at (800) 283-1183.

Walter Him Roger Scholl Kandg Santur

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.



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## ANALYTICAL REPORT

Battelle Memorial Institute 655 West Broadway San Diego, CA 92101

 Attn:
 David Conner

 Phone:
 (619) 726-7311

 Fax:
 (614) 458-6641

 Date Received : 02/24/11

## Job: G005862/JPL Groundwater Monitoring

		Perchlorate by Ion Chromatography EPA Method 314.0			
	Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: <b>MW-14-5</b> Lab ID : BMI11022404-01A Date Sampled 02/23/11 09:40	Perchlorate	ND	1.00 μg/L	02/25/11 10:30	02/25/11 12:22
Client ID: <b>MW-14-4</b> Lab ID : BMI11022404-02A Date Sampled 02/23/11 10:08	Perchlorate	4.03	1.00 µg/L	02/25/11 10:30	02/25/11 13:17
Client ID: MW-14-3 Lab ID : BMI11022404-03A Date Sampled 02/23/11 10:42	Perchlorate	5.61	1.00 μg/L	02/25/11 10:30	02/25/11 13:35
Client ID: MW-14-2 Lab ID : BMI11022404-04A Date Sampled 02/23/11 11:20	Perchlorate	3.61	1.00 μg/L	02/25/11 10:30	02/28/11 14:59
Client ID: <b>MW-14-1</b> Lab ID : BMII1022404-05A Date Sampled 02/23/11 12:05	Perchlorate	2.54	2.00 µg/L	02/25/11 10:30	02/25/11 14:12
Client ID: <b>DUPE-02-1Q11</b> Lab ID : BMI11022404-06A Date Sampled 02/23/11 00:00	Perchlorate	3.02	1.00 µg/L	02/25/11 10:30	02/25/11 14:30
Client ID: <b>EB-02-02/23/11</b> Lab ID : BMI11022404-07A Date Sampled 02/23/11 11:46	Perchlorate	ND	1.00 μ <b>g</b> /L	02/25/11 10:30	02/25/11 14:49

ND = Not Detected

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Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

*J/8/11* 

Report Date



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## **ANALYTICAL REPORT**

Battelle Memorial Institute 655 West Broadway San Diego, CA 92101 
 Attn:
 David Conner

 Phone:
 (619) 726-7311

 Fax:
 (614) 458-6641

 Date Received : 02/24/11

## Job: G005862/JPL Groundwater Monitoring

		Metals by ICPMS EPA Method 200.8			
	Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: <b>MW-14-3</b> Lab ID : <b>BMI</b> 11022404-03A Date Sampled 02/23/11 10:42	Chromium (Cr)	ND	0.0050 mg/L	02/28/11 09:47	03/02/11 14:39
Client ID: MW-14-2 Lab ID : BMI11022404-04A Date Sampled 02/23/11 11:20	Chromium (Cr)	ND	0.0050 mg/L	02/28/11 09:47	03/02/11 15:08
Client ID: MW-14-1 Lab ID : BMI11022404-05A Date Sampled 02/23/11 12:05	Chromium (Cr)	ND	0.0050 mg/L	02/28/11 09:47	03/02/11 15:13
Client ID: DUPE-02-1Q11 Lab ID : BMI11022404-06A Date Sampled 02/23/11 00:00	Chromium (Cr)	ND	0.0050 mg/L	02/28/11 09:47	03/02/11 15:19
Client ID: EB-02-02/23/11 Lab ID : BMI11022404-07A Date Sampled 02/23/11 11:46	Chromium (Cr)	ND	0.0050 mg/L	02/28/11 09:47	03/02/11 15:24

ND = Not Detected

Roger Scholl

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## **ANALYTICAL REPORT**

Battelle Memorial Institute 655 West Broadway San Diego, CA 92101 Job: G005862/JPL Groundwater Monitoring Attn: David Conner Phone: (619) 726-7311 Fax: (614) 458-6641

Tentatively Identified Compounds - Volatile Organics by GC/MS

			Estimated		
	Parameter	Estimated	Reporting	Date	Date
		Concentration	Limit	Extracted	Analyzed
Client ID :       MW-14-5         Lab ID :       BMI11022404-01A         Date Received :       02/24/11         Date Sampled :       02/23/11 09:40	Sulfur dioxide	2.8	2.0 µg/L	02/28/41 15:18	02/28/11 15:18
Client ID :       MW-14-4         Lab ID :       BMII1022404-02A         Date Received :       02/24/11         Date Sampled :       02/23/11 10:08	*** None Found ***	ND	2.0 µg/L	02/28/11 15:40	02/28/11 15:40
Client ID :       MW-14-3         Lab ID :       BMII 1022404-03A         Date Received :       02/24/11         Date Sampled :       02/23/11 10:42	* * * None Found * * *	ND	2.0 µg/L	02/28/11 16:01	02/28/11 16:01
Client ID :       MW-14-2         Lab ID :       BMI11022404-04A         Date Received :       02/24/11         Date Sampled :       02/23/11 11:20	*** None Found ***	ND	2.0 µg/L	02/28/11 16:23	02/28/11 16:23
Client ID :       MW-14-1         Lab ID :       BMI11022404-05A         Date Received :       02/24/11         Date Sampled :       02/23/11 12:05	*** None Found ***	ND	2.0 µg/L	02/28/11 16:44	02/28/11 16:44
Client ID :       DUPE-02-1Q11         Lab ID :       BMI11022404-06A         Date Received :       02/24/11         Date Sampled :       02/23/11 00:00	* * * None Found * * *	ND	2.0 µg/L	02/28/11 17:06	02/28/11 17:06
Client ID :       EB-02-02/23/11         Lab ID :       BMI11022404-07A         Date Received :       02/24/11         Date Sampled :       02/23/11 11:46	* * * None Found * * *	ND	2.0 µg/L	02/28/11 12:26	02/28/11 12:26
Client ID :       TB-02-02/23/11         Lab ID :       BMI11022404-08A         Date Received :       02/24/11         Date Sampled :       02/23/11 07:00	* * * None Found * * *	ND	2.0 µg/L	02/28/11 12:04	02/28/11 12:04



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Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

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Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.



Report Date



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### ANALYTICAL REPORT

Battelle Memorial Institute	Attn:	David Conner
655 West Broadway	Phone:	(619) 726-7311
San Diego, CA 92101	Fax:	(614) 458-6641
Job: G005862/JPL Groundwater Monitoring		

Alpha Analytical Number: BMI11022404-01A Client I.D. Number: MW-14-5

Sampled:	02/23/11 09:40
Received:	02/24/11
Extracted:	02/28/11 15:18
Analyzed:	02/28/11 15:18

#### Volatile Organics by GC/MS EPA Method SW8260B

	Compound	Concentration	Report	ing Li	imit		Compound	Concentration	R	eporting Li	mit
1	Dichlorodifluoromethane	ND	0	50	µg/L	36	1,1,1,2-Tetrachloroethane	ND		0.50	µg/L
2	Chloromethane	ND		1.0	µg/L	37	Chlorobenzene	ND		0.50	µg/L
3	Vinyl chloride	ND	0.	50	µg/L	38	Ethylbenzene	ND		0.50	µg/L
4	Chloroethane	ND	0.	50	µg/L	39	m,p-Xylene	ND		0.50	µg/L
5	Bromomethane	ND		1.0	µg/L	40	Bromoform	ND		0.50	µg/L
6	Trichlorofluoromethane	ND	0.	50	µg/L	41	Styrene	ND		0.50	µg/L
7	1,1-Dichloroethene	ND	0.	50	µg/L	42	o-Xylene	ND		0.50	μg/L
8	Dichloromethane	ND		1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND		0.50	µg/L
9	Freon-113	ND	0.	50	µg/L	44	1,2,3-Trichloropropane	ND		1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.		µg/L	45	Isopropylbenzene	ND		0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.		µg/L	46	Bromobenzene	ND		0.50	µg/L
12	1,1-Dichloroethane	ND	0.		µg/L	47	n-Propylbenzene	ND		0.50	µg/L
13	2-Butanone (MEK)	ND	Q		µg/L	48	4-Chlorotoluene	ND		0.50	µg/L
14	,	ND	0.	50	µg/L	49	2-Chlorotoluene	ND		0.50	µg/L
15	Bromochloromethane	ND	0.	50	µg/L	50	1,3,5-Trimethylbenzene	ND		0.50	µg/L
16	Chloroform	ND	0.	50	µg/L	51	tert-Butylbenzene	ND		0.50	µg/L
17	2,2-Dichloropropane	ND	0.		µg/L	52	1,2,4-Trimethylbenzene	ND		0.50	µg/L
18	1,2-Dichloroethane	ND	0.	50	µg/L	53	sec-Butylbenzene	ND		0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.	50	µg/L	54	1,3-Dichlorobenzene	ND		0.50	µg/L
20	1,1-Dichloropropene	ND	0.	50	µg/L	55	1,4-Dichlorobenzene	ND		0.50	µg/L
21	Carbon tetrachloride	ND	0.	50	µg/L	56	4-Isopropyltoluene	ND		0.50	µg/L
22	Benzene	ND	0.	50	µg/L	57	1,2-Dichlorobenzene	ND		0.50	µg/L
23	Dibromomethane	ND	0.	50	µg/L	58	n-Butylbenzene	ND		0.50	µg/L
24	1,2-Dichloropropane	ND	0.	50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCI	P) ND		2.5	µg/L
25	Trichloroethene	ND	0.	50	µg/L	60	1,2,4-Trichlorobenzene	ND		1.0	µg/L
26	Bromodichloromethane	ND	0.	50	µg/L	61	Naphthalene	ND	Q	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	:	2.5	µg/L	62	Hexachlorobutadiene	ND		1.0	µg/L
28		ND	0.	50	µg/L	63	1,2,3-Trichlorobenzene	ND		1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.	50	µg/L	64	Surr: 1,2-Dichloroethane-d4	107		(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.	50	µg/L	65	Surr: Toluene-d8	111		(70-130)	%REC
31	Toluene	ND	0.	50	µg/L	66	Surr: 4-Bromofluorobenzene	95		(70-130)	%REC
32	1,3-Dichloropropane	ND	0.	50	µg/L						
33	Dibromochloromethane	ND	0.	50	µg/L						
34	1,2-Dibromoethane (EDB)	ND		1.0	µg/L						
35	Tetrachloroethene	ND	0.	50	µg/L						

Data flags are DOD specified with criteria that may differ from EPA or inhouse statistical criteria.

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

Roger Scholl

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Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.

3/8/11

Report Date



255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

#### ANALYTICAL REPORT

Battelle Memorial Institute							
655 Wes	655 West Broadway						
San Die	San Diego, CA 92101						
Job:	G005862/JPL Groundwater Monitoring						

Alpha Analytical Number: BMI11022404-02A Client I.D. Number: MW-14-4

Attn:	David Conner
Phone:	(619) 726-7311
Fax:	(614) 458-6641

### Sampled: 02/23/11 10:08 Received: 02/24/11 Extracted: 02/28/11 15:40 Analyzed: 02/28/11 15:40

#### Volatile Organics by GC/MS EPA Method SW8260B

Compound		Concentration Reporting Lin		g Limit	Limit Compound C			R	Reporting Limit		
1	Dichlorodifluoromethane	ND	0.50	) µg/L	36	1,1,1,2-Tetrachloroethane	ND		0.50	µg/L	
2	Chloromethane	ND	1.(		37	Chlorobenzene	ND		0.50	μg/L	
3	Vinyl chloride	ND	0.50		38	Ethylbenzene	ND		0.50	µg/L	
4	Chloroethane	ND	0.50	) µg/L	39	m,p-Xylene	ND		0.50	µg/L	
5	Bromomethane	ND	1.(	) µg/L	40	Bromoform	ND		0.50	µg/L	
6	Trichlorofluoromethane	ND	0.50	) µg/L	41	Styrene	ND		0.50	µg/L	
7	1,1-Dichloroethene	ND	0.50	) µg/L	42	o-Xylene	ND		0.50	µg/L	
8	Dichloromethane	ND	1.(	) µg/L	43	1,1,2,2-Tetrachloroethane	ND		0.50	µg/L	
9	Freon-113	ND	0.50	) µg/L	44	1,2,3-Trichloropropane	ND		1.0	μg/L	
10	trans-1,2-Dichloroethene	ND	0.50	) µg/L	45	Isopropylbenzene	ND		0.50	µg/L	
11	Methyl tert-butyl ether (MTBE)	ND	0.50	) µg/L	46	Bromobenzene	ND		0.50	µg/L	
12	1,1-Dichloroethane	ND	0.50	) µg/L	47	n-Propylbenzene	ND		0.50	µg/L	
13	2-Butanone (MEK)	ND	Q 10	) µg/L	48	4-Chlorotoluene	ND		0.50	µg/L	
14	cis-1,2-Dichloroethene	ND	0.50	) µg/L	49	2-Chlorotoluene	ND		0.50	µg/L	
15	Bromochloromethane	ND	0.50	) µg/L	50	1,3,5-Trimethylbenzene	ND		0.50	µg/L	
16	Chloroform	ND	0.50	) µg/L	51	tert-Butylbenzene	ND		0.50	µg/L	
17	2,2-Dichloropropane	ND	0.50	) µg/L	52	1,2,4-Trimethylbenzene	ND		0.50	µg/L	
18	1,2-Dichloroethane	ND	0.50	) µg/L	53	sec-Butylbenzene	ND		0.50	µg/L	
19	1,1,1-Trichloroethane	ND	0.50	) µg/L	54	1,3-Dichlorobenzene	ND		0.50	µg/L	
20	1,1-Dichloropropene	ND	0.50	) µg/L	55	1,4-Dichlorobenzene	ND		0.50	µg/L	
21	Carbon tetrachloride	ND	0.50	) µg/L	56	4-Isopropyltoluene	ND		0.50	µg/L	
22	Benzene	ND	0.50	) µg/L	57	1,2-Dichlorobenzene	ND		0.50	µg/L	
23	Dibromomethane	ND	0.50	) µg/L	58	n-Butylbenzene	ND		0.50	µg/L	
24	1,2-Dichloropropane	ND	0.50	) µg/L	59	1,2-Dibromo-3-chloropropane (DBC	P) ND		2.5	μg/L	
25	Trichloroethene	ND	0.50	) µg/L	60	1,2,4-Trichlorobenzene	ND		1.0	µg/L	
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	Q	1.0	µg/L	
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	μg/L	62	Hexachlorobutadiene	ND		1.0	µg/L	
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND		1.0	µg/L	
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	108		(70-130)	%REC	
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	111		(70-130)	%REC	
31	Toluene	ND	0.50		66	Surr: 4-Bromofluorobenzene	99		(70-130)	%REC	
32	1,3-Dichloropropane	ND	0.50						. ,		
33	Dibromochloromethane	ND	0.50								
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L							
35	Tetrachloroethene	ND	0.50								

Data flags are DOD specified with criteria that may differ from EPA or inhouse statistical criteria.

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

Roger Scholl

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255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

#### **ANALYTICAL REPORT**

Battelle Memorial Institute								
655 Wes	655 West Broadway							
San Die	go, CA 92101							
Job:	G005862/JPL Groundwater Monitoring							

Alpha Analytical Number: BMI11022404-03A Client I.D. Number: MW-14-3

Attn:	David Conner
Phone:	(619) 726-7311
Fax:	(614) 458-6641

### Sampled: 02/23/11 10:42 Received: 02/24/11 Extracted: 02/28/11 16:01 Analyzed: 02/28/11 16:01

#### Volatile Organics by GC/MS EPA Method SW8260B

	EFA Method 5 w 8200B									
	Compound	Concentration	Reporting	Limit		Compound	Concentration	R	eporting Li	mit
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND		0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND		0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND		0.50	μg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND		0.50	μg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND		0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND		0.50	μg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND		0.50	μg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND		0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND		1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND		0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND		0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND		0.50	µg/L
13	2-Butanone (MEK)	ND	Q 10	µg/L	48	4-Chlorotoluene	ND		0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND		0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND		0.50	µg/L
16	Chloroform	0.59	0.50	µg/L	51	tert-Butylbenzene	ND		0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND		0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND		0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND		0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND		0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND		0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND		0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND		0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBC	P) ND		2.5	µg/L
25	Trichloroethene	2.3	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND		1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	Q	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND		1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND		1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	110		(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	113		(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	98		(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L						
33	Dibromochloromethane	ND	0.50	µg/L						
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L						
35	Tetrachloroethene	0.82	0.50	µg/L						

Data flags are DOD specified with criteria that may differ from EPA or inhouse statistical criteria.

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

Roger Scholl

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3/8/11

Report Date



255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

### ANALYTICAL REPORT

Battelle Memorial Institute	Attn:	David Conner		
655 West Broadway	Phone:	(619) 726-7311		
San Diego, CA 92101	Fax:	(614) 458-6641		
Job: G005862/JPL Groundwater Monitoring				
Alpha Applytical Number - <b>BMI</b> 11022404 04A			Sampled:	02/

Alpha Analytical Number: BMI11022404-04A Client I.D. Number: MW-14-2 Sampled: 02/23/11 11:20 Received: 02/24/11 Extracted: 02/28/11 16:23

Analyzed: 02/28/11 16:23

### Volatile Organics by GC/MS EPA Method SW8260B

	Compound	Concentration	Reportin	g Limit		Compound	Concentration	R	eporting Li	mit
1	Dichlorodifluoromethane	ND	0.50	) µg/L	36	1,1,1,2-Tetrachloroethane	ND		0.50	µg/L
2	Chloromethane	ND	1.(	) µg/L	37	Chlorobenzene	ND		0.50	µg/L
3	Vinyl chloride	ND	0.50		38	Ethylbenzene	ND		0.50	µg/L
4	Chloroethane	ND	0.50		39	m,p-Xylene	ND		0.50	µg/L
5	Bromomethane	ND	1.(	) µg/L	40	Bromoform	ND		0.50	µg/L
6	Trichlorofluoromethane	ND	0.50		41	Styrene	ND		0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	) µg/L	42	o-Xylene	ND		0.50	µg/L
8	Dichloromethane	ND	1.0		43	1,1,2,2-Tetrachloroethane	ND		0.50	µg/L
9	Freon-113	ND	0.50	) µg/L	44	1,2,3-Trichloropropane	ND		1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	) µg/L	45	Isopropylbenzene	ND		0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	) µg/L	46	Bromobenzene	ND		0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	) µg/L	47	n-Propylbenzene	ND		0.50	µg/L
13	2-Butanone (MEK)	ND	Q 10	) µg/L	48	4-Chlorotoluene	ND		0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	) µg/L	49	2-Chiorotoluene	ND		0.50	µg/L
15	Bromochloromethane	ND	0.50	) µg/L	50	1,3,5-Trimethylbenzene	ND		0.50	µg/L
16	Chloroform	0.59	0.50	) µg/L	51	tert-Butylbenzene	ND		0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	) µg/L	52	1,2,4-Trimethylbenzene	ND		0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	) µg/L	53	sec-Butylbenzene	ND		0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	) µg/L	54	1,3-Dichlorobenzene	ND		0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	) µg/L	55	1,4-Dichlorobenzene	ND		0.50	µg/L
21	Carbon tetrachloride	ND	0.50	) µg/L	56	4-Isopropyltoluene	ND		0.50	µg/L
22	Benzene	ND	0.50	) µg/L	57	1,2-Dichlorobenzene	ND		0.50	µg/L
23	Dibromomethane	ND	0.50	) µg/L	58	n-Butylbenzene	ND		0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	) µg/L	59	1,2-Dibromo-3-chloropropane (DBC			2.5	µg/L
25	Trichloroethene	7.3	0.50	) µg/L	60	1,2,4-Trichlorobenzene	ND		1.0	µg/L
26	Bromodichloromethane	ND	0.50		61	Naphthalene	ND	Q	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5		62	Hexachlorobutadiene	ND		1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50		63	1,2,3-Trichlorobenzene	ND		1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50		64	Surr: 1,2-Dichloroethane-d4	111		(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50		65	Surr: Toluene-d8	109		(70-130)	%REC
31	Toluene	ND	0.50	) µg/L	66	Surr: 4-Bromofluorobenzene	96		(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	) µg/L						
33	Dibromochloromethane	ND	0.50	) µg/L						
34	1,2-Dibromoethane (EDB)	ND	1.(	F Q						
35	Tetrachloroethene	0.62	0.50	) µg/L						

Data flags are DOD specified with criteria that may differ from EPA or inhouse statistical criteria.

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

Roger Scholl

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Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

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**Report Date** 



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### **ANALYTICAL REPORT**

Battelle Memorial Institute	Attn:	David Conner
655 West Broadway	Phone:	(619) 726-7311
San Diego, CA 92101	Fax:	(614) 458-6641
Job: G005862/JPL Groundwater Monitoring		

Alpha Analytical Number: BMI11022404-05A Client I.D. Number: MW-14-1

4) 458-6641

### Sampled: 02/23/11 12:05 Received: 02/24/11 Extracted: 02/28/11 16:44 Analyzed: 02/28/11 16:44

### Volatile Organics by GC/MS EPA Method SW8260B

	ELT A WOULD BY 0200D									
	Compound	Concentration	Reporting	Limit		Compound	Concentration	R	eporting Li	mit
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND		0.50	µg/L
2	Chioromethane	ND	1.0	µg/L	37	Chlorobenzene	ND		0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND		0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND		0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND		0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND		0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND		0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND		0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND		1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND		0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND		0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND		0.50	µg/L
13	2-Butanone (MEK)	ND	Q 10	µg/L	48	4-Chlorotoluene	ND		0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND		0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND		0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND		0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND		0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND		0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND		0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND		0.50	µg/L
21	Carbon tetrachloride	ND	0.50	μg/L	56	4-Isopropyltoluene	ND		0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND		0.50	µg/L
23	Dibromomethane	NÐ	0.50	μg/L	58	n-Butylbenzene	ND		0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBC	P) ND		2.5	µg/L
25	Trichloroethene	2.7	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND		1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	Q	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND		1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND		1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	109		(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	113		(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	99		(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L						
33	Dibromochloromethane	ND	0.50	µg/L						
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L						
35	Tetrachloroethene	ND	0.50	µg/L						

Data flags are DOD specified with criteria that may differ from EPA or inhouse statistical criteria.

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

Roger Scholl

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

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**Report Date** 



255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

### ANALYTICAL REPORT

Battelle Memorial Institute					
655 West Broadway					
San Diego, CA 92101					
Job: G005862/JPL Groundwater Monitoring					

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Alpha Analytical Number: BMI11022404-06A Client I.D. Number: DUPE-02-1Q11

Attn:	David Conner
Phone:	(619) 726-7311
Fax:	(614) 458-6641

Sampled: 02/23/11 00:00 Received: 02/24/11 Extracted: 02/28/11 17:06 Analyzed: 02/28/11 17:06

### Volatile Organics by GC/MS EPA Method SW8260B

	Compound	Concentration	Reporting	Limit		Compound	Concentration	R	eporting Li	mit
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND		0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND		0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND		0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND		0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND		0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND		0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND		0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND		0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND		1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND		0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND		0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND		0.50	µg/L
13	2-Butanone (MEK)	ND	Q 10	µg/L	48	4-Chlorotoluene	ND		0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chiorotoiuene	ND		0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND		0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND		0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND		0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND		0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND		0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND		0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND		0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND		0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND		0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCI	P) ND		2.5	µg/L
25	Trichloroethene	2.3	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND		1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	Q	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND		1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND		1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L.	64	Surr: 1,2-Dichloroethane-d4	108		(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	111		(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	101		(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L						
33	Dibromochloromethane	ND	0.50	µg/L						
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L						
35	Tetrachloroethene	ND	0.50	µg/L						

Data flags are DOD specified with criteria that may differ from EPA or inhouse statistical criteria.

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

Koger Scholl

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.

3/8/11 **Report Date** 



255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

### ANALYTICAL REPORT

Battelle Memorial Institute					
655 West Broadway					
San Die	go, CA 92101				
Job:	G005862/JPL Groundwater Monitoring				

Alpha Analytical Number: BMI11022404-07A Client I.D. Number: EB-02-02/23/11

Attn:	David Conner
Phone:	(619) 726-7311
Fax:	(614) 458-6641

Sampled:	02/23/11	11:46
Received:	02/24/11	
Extracted:	02/28/11	12:26
Analyzed:	02/28/11	12:26

### Volatile Organics by GC/MS EPA Method SW8260B

				LIF	1 IVICUI	ou s n	8200D				
	Compound	Concentration	R	eporting	Limit		Compound	Concentration	Re	eporting Li	mit
1	Dichlorodifluoromethane	ND		0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND		0.50	µg/L
2	Chloromethane	ND		1.0	µg/L	37	Chlorobenzene	ND		0.50	µg/L
3	Vinyl chloride	ND		0.50	µg/L	38	Ethylbenzene	ND		0.50	µg/L
4	Chloroethane	ND		0.50	µg/L	39	m,p-Xylene	ND		0.50	µg/L
5	Bromomethane	ND		1.0	µg/L	40	Bromoform	ND		0.50	µg/L
6	Trichlorofluoromethane	ND		0.50	µg/L	41	Styrene	ND		0.50	µg/L
7	1,1-Dichloroethene	ND		0.50	µg/L	42	o-Xylene	ND		0.50	µg/L
8	Dichloromethane	ND		1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND		0.50	µg/L
9	Freon-113	ND		0.50	µg/L	44	1,2,3-Trichloropropane	ND		1.0	µg/L
10	trans-1,2-Dichloroethene	ND		0.50	µg/L	45	Isopropylbenzene	ND		0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND		0.50	µg/L	46	Bromobenzene	ND		0.50	µg/L
12	1,1-Dichloroethane	· ND		0.50	µg/L	47	n-Propylbenzene	ND		0.50	µg/L
13	2-Butanone (MEK)	ND	Q	10	µg/L	48	4-Chlorotoluene	ND		0.50	µg/L
14	cis-1,2-Dichloroethene	ND		0.50	µg/L	49	2-Chlorotoluene	ND		0.50	µg/L
15	Bromochloromethane	ND		0.50	µg/L	50	1,3,5-Trimethylbenzene	ND		0.50	µg/L
16	Chloroform	ND		0.50	µg/L	51	tert-Butylbenzene	ND		0.50	µg/L
17	2,2-Dichloropropane	ND		0.50	µg/L	52	1,2,4-Trimethylbenzene	ND		0.50	µg/L
18	1,2-Dichloroethane	ND		0.50	µg/L	53	sec-Butylbenzene	ND		0.50	µg/L
19	1,1,1-Trichloroethane	ND		0.50	µg/L	54	1,3-Dichlorobenzene	ND		0.50	µg/L
20	1,1-Dichloropropene	ND		0.50	µg/L	55	1,4-Dichlorobenzene	ND		0.50	µg/L
21	Carbon tetrachloride	ND		0.50	µg/L	56	4-Isopropyltoluene	ND		0.50	µg/L
22	Benzene	ND		0.50	µg/L	57	1,2-Dichlorobenzene	ND		0.50	µg/L
23	Dibromomethane	ND		0.50	µg/L	58	n-Butylbenzene	ND		0.50	µg/L
24	1,2-Dichloropropane	ND		0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBC	P) ND		2.5	µg/L
25	Trichloroethene	ND		0.50	µg/L	60	1,2,4-Trichlorobenzene	ND		1.0	µg/L
26	Bromodichloromethane	ND		0.50	µg/L	61	Naphthalene	ND	Q	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND		2.5	µg/L	62	Hexachlorobutadiene	ND		1.0	µg/L
28	cis-1,3-Dichloropropene	ND		0.50	µg/L	63	1,2,3-Trichlorobenzene	ND		1.0	µg/L
29	trans-1,3-Dichloropropene	ND		0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	106		(70-130)	%REC
30	1,1,2-Trichloroethane	ND		0.50	µg/L	65	Surr: Toluene-d8	101		(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	96		(70-130)	%REC
32	1,3-Dichloropropane	ND		0.50	µg/L						
33	Dibromochloromethane	ND		0.50	µg/L						
34	1,2-Dibromoethane (EDB)	ND		1.0	µg/L						
35	Tetrachloroethene	ND		0.50	µg/L						

Data flags are DOD specified with criteria that may differ from EPA or inhouse statistical criteria.

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

Rogen Scholl

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.

3/8/11

**Report Date** 



255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

### ANALYTICAL REPORT

Battelle Memorial Institute					
655 West Broadway					
San Die	go, CA 92101				
Job:	G005862/JPL Groundwater Monitoring				

Alpha Analytical Number: BMI11022404-08A Client I.D. Number: TB-02-02/23/11

Attn:	David Conner
Phone:	(619) 726-7311
Fax:	(614) 458-6641

### Sampled: 02/23/11 07:00 Received: 02/24/11 Extracted: 02/28/11 12:04 Analyzed: 02/28/11 12:04

### Volatile Organics by GC/MS EPA Method SW8260B

					1 1/10/11		02000					
	Compound	Concentration	R	eporting	Limit		Compound	Conce	ntration	R	eporting Li	mit
1	Dichlorodifluoromethane	ND		0.50	µg/L	36	1,1,1,2-Tetrachloroethane		ND		0.50	µg/L
2	Chloromethane	ND		1.0	µg/L	37	Chlorobenzene		ND		0.50	µg/L
3	Vinyl chloride	ND 0.50 µg/L 38 Ethylbenzene			ND		0.50	µg/L				
4	Chloroethane			0.50	µg/L	39	m,p-Xylene		ND		0.50	µg/L
5	Bromomethane	ND		1.0	µg/L	40	Bromoform		NĎ		0.50	µg/L
6	Trichlorofluoromethane ND			0.50	µg/L	41	Styrene		ND		0.50	µg/L
7	1,1-Dichloroethene	ND		0.50	µg/L	42	o-Xylene		ND		0.50	µg/L
8	Dichloromethane	ND		1.0	µg/L	43	1,1,2,2-Tetrachioroethane		ND		0.50	µg/L
9	Freon-113	ND		0.50	µg/L	44	1,2,3-Trichloropropane		ND		1.0	µg/L
10	trans-1,2-Dichloroethene	ND		0.50	µg/L	45	Isopropylbenzene		ND		0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND		0.50	µg/L	46	Bromobenzene		ND		0.50	µg/L
12	1,1-Dichloroethane	ND		0.50	µg/L	47	n-Propylbenzene		ND		0.50	µg/L
13	2-Butanone (MEK)	ND	Q	10	µg/L	48	4-Chlorotoluene	-	ND		0.50	µg/L
14	cis-1,2-Dichloroethene	ND		0.50	µg/L	49	2-Chlorotoluene		ND		0.50	µg/L
15	Bromochloromethane	ND		0.50	µg/L	50	1,3,5-Trimethylbenzene		NĎ		0.50	µg/L
16	Chloroform	ND		0.50	µg/L	51	tert-Butylbenzene	1	ND		0.50	µg/L
17	2,2-Dichloropropane	ND		0.50	µg/L	52	1,2,4-Trimethylbenzene		ND		0.50	µg/L
18	1,2-Dichloroethane	ND		0.50	µg/L	53	sec-Butylbenzene		ND		0.50	µg/L
19	1,1,1-Trichloroethane	ND		0.50	µg/L	54	1,3-Dichlorobenzene		ND		0.50	µg/L
20	1,1-Dichloropropene	ND		0.50	µg/L	55	1,4-Dichlorobenzene		ND		0.50	µg/L
21	Carbon tetrachloride	ND		0.50	µg/L	56	4-Isopropyltoluene		ND		0.50	µg/L
22	Benzene	ND		0.50	µg/L	57	1,2-Dichlorobenzene		ND		0.50	µg/L
23	Dibromomethane	ND		0.50	µg/L	58	n-Butylbenzene	-	ND		0.50	µg/L
24	1,2-Dichloropropane	ND		0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBC	P) :	ND		2.5	µg/L
25	Trichloroethene	ND		0.50	µg/L	60	1,2,4-Trichlorobenzene	1	ND		1.0	µg/L
26	Bromodichloromethane	ND		0.50	µg/L	61	Naphthalene		ND	Q	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	i ND		2.5	µg/L	62	Hexachlorobutadiene		ND		1.0	µg/L
28	cis-1,3-Dichloropropene	ND		0.50	µg/L	63	1,2,3-Trichlorobenzene		ND		1.0	µg/L
29	trans-1,3-Dichloropropene	ND		0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4		104		(70-130)	%REC
30	1,1,2-Trichloroethane	ND		0.50	µg/L	65	Surr: Toluene-d8		103		(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene		95		(70-130)	%REC
32	1,3-Dichloropropane	ND		0.50	µg/L							
33	Dibromochloromethane	ND		0.50	µg/L							
34	1,2-Dibromoethane (EDB)	ND		1.0	µg/L							
35	Tetrachloroethene	ND		0.50	µg/L							

Data flags are DOD specified with criteria that may differ from EPA or inhouse statistical criteria.

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

Roger Scholl

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Report Date



255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

## VOC Sample Preservation Report

Work Order: BMI11022404	<b>Job:</b> G005862/JPL G	roundwater Monitoring		
Alpha's Sample ID	Client's Sample ID	Matrix	рН	
11022404-01A	MW-14-5	Aqueous	2	
11022404-02A	MW-14-4	Aqueous	2	
11022404-03A	MW-14-3	Aqueous	2	
11022404-04A	MW-14-2	Aqueous	2	
11022404-05A	MW-14-1	Aqueous	2	
11022404-06A	DUPE-02-1Q11	Aqueous	2	
11022404-07A	EB-02-02/23/11	Aqueous	2	
11022404-08A	TB-02-02/23/11	Aqueous	2	

3/8/11 Report Date



255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

<b>Date:</b> 01-Mar-11		(	QC S	Sum	mary	7 Repor	t				<b>Work Order:</b> 11022404		
Method Blan File ID: 14	nk		Туре	MBLK		st Code: El		hod 314.0		is Date:	02/25/2011 11:26		
Sample ID:	MB-26061	Units : µg/L		Run	ID: <b>IC</b> _	_3_110225A	۱		Prep D	ate:	02/25/2011 10:30		
Analyte		Result	PQL	S	pkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME) F	RPDRef	Val %RPD(Limit)	Qua	
Perchlorate		ND		1									
Laboratory File ID: 15	Fortified Blank		Туре	LFB		st Code: El		hod 314.0		is Date:	02/25/2011 11:45		
Sample ID:	LFB-26061	Units : µg/L		Run	ID: <b>IC</b> _	_3_1102254	۱		Prep D	ate:	02/25/2011 10:30		
Analyte		Result	PQL	S	pkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME) F	RPDRef	Val %RPD(Limit)	Qua	
Perchlorate		25.4		2	25		102	85	115				
Sample Mat	rix Spike		Туре	LFM		st Code: El		hod 314.0		is Date:	02/25/2011 12:40		
Sample ID:	11022404-01ALFM	Units : µg/L		Run	ID: IC	_3_110225/	۱		Prep D	ate:	02/25/2011 10:30		
Analyte		Result	PQL		-			LCL(ME)	UCL(ME) F	RPDRef	Val %RPD(Limit)	Qua	
Perchlorate		24.3		2	25	0	97	80	120				
Sample Mat	rix Spike Duplicate		Туре	LFMD		est Code: El		hod 314.0		is Date:	02/25/2011 12:58		
Sample ID:	11022404-01ALFMD	Units : µg/L		Run	ID: IC	_3_110225/	1		Prep D	ate:	02/25/2011 10:30		
Analyte		Result	PQL					LCL(ME)	UCL(ME) F	RPDRef	Val %RPD(Limit)	Qua	
Perchlorate		25		2	25		99.8	80	120	24.3			

#### **Comments:**

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.



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<b>Date:</b> 08-Mar-11	(	<b>Work Order:</b> 11022404							
Method Blank File ID: 030211.B\021_M.D\		Туре: М		est Code: El atch ID: 2600		thod 200.8	Analysis Date	: 03/02/2011 13:04	
Sample ID: MB-26067	Units : mg/L			P/MS_1103			Prep Date:	02/28/2011 09:47	
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	C LCL(ME)	UCL(ME) RPDRe	fVal %RPD(Limit)	Qual
Chromium (Cr)	ND	0.00	5						
Laboratory Control Spike File ID: 030211.B\022_M.D\		Type: L		est Code: El atch ID: 2600		thod 200.8	Analysis Date	: 03/02/2011 13:09	
Sample ID: LCS-26067	Units : mg/L		Run ID: IC	P/MS_1103	)2A		Prep Date:	02/28/2011 09:47	
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	C LCL(ME)	UCL(ME) RPDRe	fVal %RPD(Limit)	Qual
Chromium (Cr)	0.0472	0.00	5 0.05		94	85	115		
Sample Matrix Spike File ID: 030211.B\027_M.D\		Туре: М		est Code: EF atch ID: 2606		thod 200.8	Analysis Date	: 03/02/2011 13:37	
Sample ID: 11022504-01AMS	Units : mg/L		Run ID: IC	P/MS_1103	)2A		Prep Date:	02/28/2011 09:47	
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	C LCL(ME)	UCL(ME) RPDRe	fVal %RPD(Limit)	Qual
Chromium (Cr)	0.0541	0.005	5 0.05	0	108	70	130		
Sample Matrix Spike Duplicate File ID: 030211.B\028_M.D\		Туре: М		est Code: EF atch ID: 2606		thod 200.8	Analysis Date	: 03/02/2011 13:43	
Sample ID: 11022504-01AMSD	Units : mg/L		Run ID: IC	P/MS_1103	)2A		Prep Date:	02/28/2011 09:47	
Analyte	Result	PQL				CLCL(ME)	UCL(ME) RPDRe	fVal %RPD(Limit)	Qual
Chromium (Cr)	0.0522	0.00		0	104	70	130 0.05		

### Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.



<b>Date:</b> 01-Mar-11	(	QC Summ	ary Report		<b>Work Orde</b> 11022404	
Method Blank File ID: 11022807.D Sample ID: MBLK MS15W0228M	Units : µg/L	Type MBLK	Test Code: EPA Metho Batch ID: MS15W0228I D: MSD_15_110228B		02/28/2011 10:38 02/28/2011 10:38	<del>تر بر</del>
Analyte	Result			CL(ME) UCL(ME) RPDRef		Qual
Dichlorodifluoromethane	ND	0.5				
Chloromethane	ND	1				
Vinyl chloride Chloroethane	ND ND	0.5				
Bromomethane	ND	0.5 1				
Trichlorofluoromethane	ND	0.5				
1,1-Dichloroethene	ND	0.5				
Dichloromethane Freon-113	ND ND	1 0.5				
trans-1,2-Dichloroethene	ND	0.5				
Methyl tert-butyl ether (MTBE)	ND	0.5				
1,1-Dichloroethane 2-Butanone (MEK)	ND ND	0.5				
cis-1,2-Dichloroethene	ND	10 0.5				
Bromochloromethane	ND	0.5				
Chloroform	ND	0.5				
2,2-Dichloropropane 1,2-Dichloroethane	ND ND	0.5 0.5				
1,1,1-Trichloroethane	ND	0.5				
1,1-Dichloropropene	ND	0.5				
Carbon tetrachloride	ND	0.5				
Benzene Dibromomethane	ND ND	0.5 0.5				
1,2-Dichloropropane	ND	0.5				
Trichloroethene	ND	0.5				
Bromodichloromethane 4-Methyl-2-pentanone (MIBK)	ND	0.5		. :		
cis-1,3-Dichloropropene	ND ND	2.5 0.5				
trans-1,3-Dichloropropene	ND	0.5				
1,1,2-Trichloroethane	ND	0.5				
Toluene 1,3-Dichloropropane	ND ND	0.5 0.5				
Dibromochloromethane	ND	0.5				
1,2-Dibromoethane (EDB)	ND	1				
Tetrachloroethene	ND	0.5				
1,1,1,2-Tetrachloroethane Chlorobenzene	ND ND	0.5 0.5				
Ethylbenzene	ND	0.5		1		
m,p-Xylene	ND	0.5				
Bromoform Styrene	ND ND	0.5 0.5				
o-Xylene	ND	0.5				
1,1,2,2-Tetrachloroethane	ND	0.5				
1,2,3-Trichloropropane	ND	1				
Isopropylbenzene Bromobenzene	ND ND	0.5 0.5				
n-Propylbenzene	ND	0.5				
4-Chlorotoluene	ND	0.5				
2-Chlorotoluene 1,3,5-Trimethylbenzene	ND ND	0.5				
tert-Butylbenzene	ND	0.5 0.5				
1,2,4-Trimethylbenzene	ND	0.5				
sec-Butylbenzene	ND	0.5				
1,3-Dichlorobenzene 1,4-Dichlorobenzene	ND ND	0.5 0.5				
4-Isopropyltoluene	ND	0.5				
1,2-Dichlorobenzene	ND	0.5				
n-Butylbenzene 1,2-Dibromo-3-chloropropane (DBCP)	ND ND	0.5 2.5				
1,2,4-Trichlorobenzene	ND	2.5 1				
Naphthalene	ND	1				
Hexachlorobutadiene	ND	1				
1,2,3-Trichlorobenzene Surr: 1,2-Dichloroethane-d4	ND 10.5	1	10 105	70 130		
Surr: Toluene-d8	10.3		10 103	70 130		



<b>Date:</b> 01-Mar-11	QC	QC Summary Report							
Surr: 4-Bromofluorobenzene	9.52	10	95	70	130				



<b>Date:</b> 01-Mar-11		<b>Work Ord</b> 11022404							
Laboratory C File ID: 1102280	)3.D		Туре І	Ва	est Code: EPA Met atch ID: MS15W022		Analysis Date:	02/28/2011 09:01	
•	LCS MS15W0228M	Units : µg/L			SD_15_110228B		Prep Date:	02/28/2011 09:01	
Analyte		Result	PQL	SpkVal	SpkRefVal %REC	LCL(ME)	UCL(ME) RPDRef	Val %RPD(Limit)	Qual
Dichlorodifluoron	nethane	8.57		1 10	86	70	130		
Chloromethane		9.27		2 10	93	70	130		
Vinyl chloride Chloroethane		10.1 10.3			101 103	70 70	130 130		
Bromomethane		10.3		2 10	103	70	130		
Trichlorofluorom	ethane	10.8			108	70	130		
1,1-Dichloroethe	ene	10.3			103	70	130		
Dichloromethane	e	9.03		2 10	90	70	130		
Freon-113		10.9			109	70	137		
trans-1,2-Dichlor Methyl tert-butyl		10.1			101	70	130		
1.1-Dichloroetha		8.8 10.2	0.8		88 102	70 70	130 130		
2-Butanone (ME		156	1(		78	70	130		
cis-1,2-Dichloroe		9.98			99.8	70	130		
Bromochloromet	thane	9.59		1 10	96	70	130		
Chloroform		9.95			100	70	130		
2,2-Dichloroprop		10.2		• • •	102	70	130		
1,2-Dichloroetha 1,1,1-Trichloroet		9.99			99.9	70	130		
1,1-Dichloroprop		11.1 10.9	•		111 109	70 70	130 130		
Carbon tetrachlo		9.73			97	70	130		
Benzene		9.45	0.5		95	70	130		
Dibromomethane	e	9.77			98	70	130		
1,2-Dichloroprop	ane	9.59		1 10	96	70	130		
Trichloroethene		10.6	-		106	70	130		
Bromodichlorom		10.5			105	70	130		
4-Methyl-2-penta cis-1,3-Dichlorop		18.5	2.5		74	20	182		
trans-1,3-Dichlor	•	9.18 8.32		• • •	92 83	70 70	130 130		
1,1,2-Trichloroet		8.98			90	70	130		
Toluene		9.85	0.5		99	70	130		
1,3-Dichloroprop		9.03			90	70	130		
Dibromochlorom		9.45			95	70	130		
1,2-Dibromoetha		18.6		2 20	93	70	130		
Tetrachloroether 1,1,1,2-Tetrachlo		10.2			102	70 70	130		
Chlorobenzene	Jioeulane	10.5 9.84			105 98	70 70	130 130		
Ethylbenzene		10.2	0.5		102	70	130		
m,p-Xylene		10.2	0.5		102	70	130		
Bromoform		8.68			87	70	130		
Styrene		10.3			103	70	130		
o-Xylene 1,1,2,2-Tetrachlo	roothana	10.2	0.5		102	70	130		
1,2,3-Trichloropr		8.69 18.4	-		87 92	70 70	130 130		
Isopropylbenzen	-	10.4			103	70	130		
Bromobenzene		9.63			96	70	130		
n-Propylbenzene	e	10.3	-	I 10	103	70	130		
4-Chlorotoluene		10.5			105	70	130		
2-Chlorotoluene 1,3,5-Trimethylbo		10.2		10	102	70	130		
tert-Butylbenzen		10.7 10.2			107	70	130		
1,2,4-Trimethylbe		10.2	1		102 107	70 70	130 130		
sec-Butylbenzen		10.3	-		107	70	130		
1,3-Dichlorobenz	zene	10.5	1		105	70	130		
1,4-Dichlorobenz		9.83	1		98	70	130		
4-Isopropyltoluer		10.6	1		106	70	130		
1,2-Dichlorobenz n-Butylbenzene	tene	9.42	1		94	70	130		
	hloropropane (DBCP)	10.9 40.7	1		109	70 67	130		
1,2,4-Trichlorobe		40.7 10.1	3		81 101	67 70	130 130		
Naphthalene		7.88	2		79	70	130		
Hexachlorobutad		17.9	2		89	70	130		
1,2,3-Trichlorobe		9.7	2		97	70	130		
Surr: 1,2-Dichloro		10.6		10	106	70	130		
Surr: Toluene-d8	)	9.76		10	98	70	130		



	(····)···· (·				
<b>Date:</b> 01-Mar-11	QC S		<b>Work Orde</b> 11022404		
Surr: 4-Bromofluorobenzene	9.69	10	97 7	0 130	



<b>Date:</b> 01-Mar-11	(	<b>Work Orde</b> 11022404							
Sample Matrix Spike		Туре М		est Code: EP					
File ID: 11022808.D				atch ID: MS15		28M	•	02/28/2011 11:00	
Sample ID: 11022404-01AMS	Units : µg/L			SD_15_11022			Prep Date:	02/28/2011 11:00	
Analyte	Result	PQL	SpkVal	SpkRefVal %	%REC	LCL(ME)	UCL(ME) RPDRef	Val %RPD(Limit)	Qua
Dichlorodifluoromethane	36.1	2.5	50	0	72	21	138		
Chloromethane	44	10	50	0	88	23	144		
Vinyl chloride	47.5	2.5	50	0	95	49	136		
Chloroethane	49.8	2.5	50		99.6	21	159		
Bromomethane Trichlorofluoromethane	41.1	10	50	0	82	10	174		
1,1-Dichloroethene	52.9 47.7	2.5 2.5	50 50	0 0	106 95	32 64	154 130		
Dichloromethane	42.7	2.5	50 50	0	95 85	69	130		
Freon-113	49	2.5	50	ŏ	98	55	141		
trans-1,2-Dichloroethene	45.7	2.5	50	Õ	91	63	130		
Methyl tert-butyl ether (MTBE)	46.5	1.3	50	0	93	47	150		
1,1-Dichloroethane	47.3	2.5	50	0	95	66	130		
2-Butanone (MEK)	685	50	1000	0	69	23	182		
cis-1,2-Dichloroethene	47.7	2.5	50	0	95	70	130		
Bromochloromethane Chloroform	46.8 44.9	2.5	50 50	0 0	94 90	70 70	132 130		
2,2-Dichloropropane	44.9 48.6	2.5 2.5	50 50	0	90 97	70 38	130		
1,2-Dichloroethane	48.0	2.5	50 50	0	97 95	65	134		
1,1,1-Trichloroethane	49.9	2.5	50		99.7	65	136		
1,1-Dichloropropene	49.4	2.5	50	0	99	68	132		
Carbon tetrachloride	44.8	2.5	50	0	90	58	148		
Benzene	43.4	1.3	50	0	87	59	138		
Dibromomethane	45.9	2.5	50	0	92	70	130		
1,2-Dichloropropane	44.8	2.5	50	0	90	70	131		
Trichloroethene Bromodichloromethane	47.4 48.1	2.5 2.5	50 50	0 0	95 96	65 50	144 157		
4-Methyl-2-pentanone (MIBK)	94.3	2.5	125	0	90 75	20	182		
cis-1,3-Dichloropropene	41.7	2.5	50	0	83	63	131		
trans-1,3-Dichloropropene	38.1	2.5	50	õ	76	65	136		
1,1,2-Trichloroethane	42.9	2.5	50	0	86	70	131		
Toluene	47.5	1.3	50	0	95	68	130		
1,3-Dichloropropane	47.9	2.5	50	0	96	70	130		
Dibromochloromethane	46.9	2.5	50	0	94	42	155		
1,2-Dibromoethane (EDB) Tetrachloroethene	96.3 48.7	5 2.5	100 50	0 0	96 97	70 65	130 130		
1,1,1,2-Tetrachloroethane	48.8	2.5	50 50	0	97 98	70	130		
Chlorobenzene	46.2	2.5	50 50	0	92	70	130		
Ethylbenzene	45.9	1.3	50	õ	92	68	130		
m,p-Xylene	46.8	1.3	50	Ō	94	68	131		
Bromoform	41.7	2.5	50	0	83	65	143		
Styrene	47	2.5	50	0	94	59	153		
o-Xylene	46.8	1.3	50	0	94	70	130		
1,1,2,2-Tetrachloroethane 1,2,3-Trichloropropane	43.1	2.5	50	0	86	67	130		
Isopropylbenzene	89 47	10 2.5	100 50	0 0	89 94	70 55	130 138		
Bromobenzene	44.6	2.5	50	0	94 89	70	130		
n-Propylbenzene	47.3	2.5	50	Ő	95	67	133		
4-Chlorotoluene	48.6	2.5	50	0	97	70	130		
2-Chlorotoluene	46.1	2.5	50	0	92	70	130		
1,3,5-Trimethylbenzene	48	2.5	50	0	96	67	134		
tert-Butylbenzene	46.7	2.5	50	0	93	55	147		
1,2,4-Trimethylbenzene sec-Butylbenzene	48	2.5	50	0	96	65	135		
1,3-Dichlorobenzene	47.9	2.5	50 50	0	96 07	68	135		
1,4-Dichlorobenzene	48.5 45.7	2.5 2.5	50 50	0 0	97 91	70 70	130 130		
4-Isopropyltoluene	48.6	2.5	50 50	0	97 97	68	132		
1,2-Dichlorobenzene	44.5	2.5	50 50	0	89	70	130		
n-Butylbenzene	50.3	2.5	50	Ő	101	62	134		
1,2-Dibromo-3-chloropropane (DBCP)	207	15	250	0	83	64	130		
1,2,4-Trichlorobenzene	49.2	10	50	0	98	62	133		
Naphthalene	37.1	10	50	0	74	32	166		
Hexachlorobutadiene 1.2.3-Trichlorobenzene	86.2	10	100	0	86	63 55	130		
Surr: 1,2-Dichloroethane-d4	45 51.6	10	50 50	0	90 103	55 70	138 130		
Surr: Toluene-d8	51.6		50 50		103	70	130		
	51.7		50		105	10	100		



<b>Date:</b> 01-Mar-11	QC Su	mmary Rep	ort	<b>Work Order:</b> 11022404
urr: 4-Bromofluorobenzene	47.4	50	95 70 130	
				:
				•



<b>Date:</b> 01-Mar-11	(	QC Sı	ummar	y Repor	t				Work Ord 11022404	
Sample Matrix Spike Duplicate		Туре М	SD TO	est Code: EF	PA Met	hod SW82	260B			
File ID: 11022809.D			Ba	atch ID: MS1	5W02	28M	Analy	sis Date:	02/28/2011 11:21	
Sample ID: 11022404-01AMSD	Units : µg/L		Run ID: M	SD_15_1102	28B		Prep	Date:	02/28/2011 11:21	
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRef∨	/al %RPD(Limit)	Qual
Dichlorodifluoromethane	40.1	2.5	50	0	80	21	138	36.09	10.4(33)	
Chloromethane	47.9	10	50	0	96	23	144	44.04	· · ·	
Vinyl chloride Chloroethane	50.9 54.7	2.5 2.5	50 50	0	102 109	49 21	136 159	47.49 49.78	· · /	
Bromomethane	48.3	2.5	50 50	0	97	10	174	49.76	9.4(40) 16.2(40)	
Trichlorofluoromethane	56.4	2.5	50	Ō	113	32	154	52.93		
1,1-Dichloroethene	52.2	2.5	50	0	104	64	130	47.7		
Dichloromethane Freon-113	45.5 53.5	10 2.5	50 50	0	91 107	69 55	130 141	42.74 48.98	· · ·	
trans-1,2-Dichloroethene	50.1	2.5	50 50	0	107	55 63	141	40.90		
Methyl tert-butyl ether (MTBE)	51.1	1.3	50	Ő	102	47	150	46.48	· · /	
1,1-Dichloroethane	51.1	2.5	50	0	102	66	130	47.26		
2-Butanone (MEK)	726	50	1000	0	73	23	182	685.2		
cis-1,2-Dichloroethene Bromochloromethane	52.2 51	2.5 2.5	50 50	0	104 102	70 70	130 132	47.67 46.84	· · /	
Chloroform	48.6	2.5	50	0	97	70	132	44.86		
2,2-Dichloropropane	55.9	2.5	50	0	112	38	154	48.61		
1,2-Dichloroethane	51.2	2.5	50	0	102	65	134	47.62		
1,1,1-Trichloroethane 1,1-Dichloropropene	54.7 54.1	2.5 2.5	50 50	0	109 108	65 68	136 132	49.86 49.4		
Carbon tetrachloride	51	2.5	50	0	102	58	148	49.4	9.0(20) 13.1(20)	
Benzene	47.7	1.3	50	0	95	59	138	43.39		
Dibromomethane	50.4	2.5	50	0	101	70	130	45.9	9.3(20)	
1,2-Dichloropropane Trichloroethene	50.1	2.5	50	0	100	70	131	44.75		
Bromodichloromethane	51.5 53	2.5 2.5	50 50	0 0	103 106	65 50	144 157	47.37 48.05	· · ·	
4-Methyl-2-pentanone (MIBK)	106	13	125	0	85	20	182	94.33	· · ·	
cis-1,3-Dichloropropene	46.4	2.5	50	Ũ	93	63	131	41.7	10.7(20)	
trans-1,3-Dichloropropene	43.5	2.5	50	0	87	65	136	38.1	13.1(20)	
1,1,2-Trichloroethane Toluene	47	2.5	50	0	94	70	131	42.94	· · ·	
1,3-Dichloropropane	52.2 52.3	1.3 2.5	50 50	0 0	104 105	68 70	130 130	47.48 47.91	· · ·	
Dibromochloromethane	52.6	2.5	50	Ő	105	42	155	46.89	· · ·	
1,2-Dibromoethane (EDB)	104	5	100	0	104	70	130	96.32	7.8(20)	
Tetrachloroethene	52.4	2.5	50	0	105	65	130	48.67		
1,1,1,2-Tetrachloroethane Chlorobenzene	53.8 50	2.5 2.5	50 50	0 0	108 100	70 70	130 130	48.81 46.16	· · ·	
Ethylbenzene	49.4	1.3	50 50	0	99	68	130	45.93		
m,p-Xylene	51	1.3	50	Õ	102	68	131	46.76	8.6(20)	
Bromoform	46.6	2.5	50	0	93	65	143	41.71	11.1(20)	
Styrene o-Xylene	50.2 49.9	2.5	50	0	100	59 70	153	47.01		
1,1,2,2-Tetrachloroethane	49.9 47.8	1.3 2.5	50 50	0 0	99.8 96	70 67	130 130	46.8 43.11	6.4(20) 10.4(20)	
1,2,3-Trichloropropane	94.5	10	100	Ő	94	70	130	89.01		
Isopropylbenzene	50.7	2.5	50	0	101	55	138	47	7.6(20)	
Bromobenzene n-Propylbenzene	48.3	2.5	50	0	97	70	130	44.63		
4-Chlorotoluene	50.7 51.8	2.5 2.5	50 50	0	101 104	67 70	133 130	47.32 48.64		
2-Chlorotoluene	49.5	2.5	50	0	99	70	130	46.11		
1,3,5-Trimethylbenzene	51.3	2.5	50	Ō	103	67	134	48.03		
tert-Butylbenzene 1,2,4-Trimethylbenzene	50.5	2.5	50	0	101	55	147	46.68		
sec-Butylbenzene	51.5 51.3	2.5 2.5	50 50	0 0	103 103	65 68	135 135	47.98 47.93		
1,3-Dichlorobenzene	52	2.5	50	0	103	70	130	47.93	· · /	
1,4-Dichlorobenzene	49.3	2.5	50	Õ	99	70	130	45.69		
4-Isopropyltoluene	52.9	2.5	50	0	106	68	132	48.55	8.5(20)	
1,2-Dichlorobenzene n-Butylbenzene	49 55 4	2.5	50	0	98	70	130	44.51	9.5(20)	
1,2-Dibromo-3-chloropropane (DBCP)	55.4 235	2.5 15	50 250	0 0	111 94	62 64	134 130	50.31 207	9.7(21) 12 5(20)	
1,2,4-Trichlorobenzene	55.5	10	250 50	0	94 111	64 62	130	49.16	12.5(20) 12.1(29)	
Naphthalene	42.1	10	50	Õ	84	32	166	37.05	· · /	
Hexachlorobutadiene 1,2,3-Trichlorobenzene	99.6	10	100	0	99.6	63	130	86.2	14.4(21)	
Surr: 1,2-Dichloroethane-d4	51.8 51.8	10	50 50	0	104 104	55 70	138 130	45	14.1(36)	
Surr: Toluene-d8	51.6		50 50		104	70 70	130			
								· · ·		



255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

<b>Date:</b> 01-Mar-11	QC	Summary Re	port			<b>Work Order:</b> 11022404
Surr: 4-Bromofluorobenzene	47.4	50	95	70	130	

#### **Comments:**

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.

Matrix Type: AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense. Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

Logged in by:	
Cenpbeth (Idcon	Signature
C Elizabeth Adcox	Print Name
Alpha Analytical, Inc.	Company
2-24-11 1020	Date/Time

Security seals intact. Frozen ice. Temp Blank #9004 received @ 0°C. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD).:

**Comments:** 

Battelle Memorial Institute 655 West Broadway	al Institute way		David Conner Betsy Cutie	5	(61)	(619) 726-7311 (614) 424-4899	11 x 99 x	connerd@battelle.c cutiee@batelle.org	connerd@battelle.org cutiee@batelle.org		EDD Required : Yes		
San Diego. CA 92101	32101		Shane Walton	Ď	(6]	(614) 424-4117	17 x	waltons@	waltons@battelle.org		Sampled by : Chase Brogdon	ase Brogdon	
PO: 218013											Cooler Temp	Samples Received	Date Printed
Client's COC #: 33407	3407	Job :	G005862/JPL Groundwater Monitoring	L Grour	ıdwater	Monitori	рŋ				0°C	24-Feb-2011	24-Feb-2011
QC Level: DS4	= DOD QC Required : Final Rpt, MBLK, InitCal/ConCal data, LCS, MS/MSD With Surrogates	d : Final R	pt, MBLK, In	itCal/Co	nCal dat	ta, LCS,	MS/MSD \	With Surro	ogates				
										<b>Requested Tests</b>	Tests		
Alpha Sample ID	Client Sample ID	Matr	Collection No. of Bottles	No. of	Bottles	TAT	314_W	METALS_D VOC_TIC_		VOC_W		<b>2</b>	Samela Damarka
				•	,	>	-			1001 524			
BMI11022404-01A	MW-14-5	AQ	02/23/11 09:40	4	С	ç	Perchlorate		Criteria	Criteria			
BMI11022404-02A	MW-14-4	AQ	02/23/11 10:08	4	0	9	Perchlorate		VOC by 524 Criteria	VOC by 524 Criteria			
BMI11022404-03A	MW-14-3	AQ	02/23/11 10:42	Сл	0	Q	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria			
BMI11022404-04A	MW-14-2	AQ	02/23/11 11:20	თ	0	9	Perchlorate	ç	VOC by 524 Criteria	VOC by 524 Criteria			
BMI11022404-05A	MW-14-1	AQ	02/23/11 12:05	5	0	9	Perchlorate	Ç	VOC by 524 Criteria	VOC by 524 Criteria		· · · · · · · · · · · · · · · · · · ·	
BMI11022404-06A	DUPE-02-1Q11	AQ	02/23/11 00:00	თ	0	9	Perchlorate	Ç	VOC by 524 Criteria	VOC by 524 Criteria	·		
BMI11022404-07A	EB-02-02/23/11	AQ	02/23/11 11:46	σ	0	Q	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria			
BMI11022404-08A	TB-02-02/23/11	AQ	02/23/11 07:00	د	0	9			VOC by 524 Criteria	VOC by 524 Criteria		Reno Trip	Reno Trip Blank 12/14/10

Page: 1 of 1

**Billing Information :** 

CHAIN-OF-CUSTODY RECORD

255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778 TEL: (775) 355-1044 FAX: (775) 355-0406

Alpha Analytical, Inc.

Client:

Report Attention

Phone Number

EMail Address

Report Due By : 5:00 PM On : 09-Mar-2011

WorkOrder : BMIS11022404

CA A

			77277
Billing Information:		Samples Collected From Which State?	DOD Site
Address SOS MAY KING AVE.	e, Suite 21 31-5778 44	OR OTHER	Page # / of /
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ant Name	in the second se		Data Validation Level: (III or IV
O OLD TOWN AVE C-205 TONI IN	rt Attention / Project Manager		
DECO CA 92/10 Email.	BATTELLE ONLA		EDD EDF? YESX NO
Matrix* P.O. # 2	-664 Mobile: 54-726-7311	The second secon	
Lab ID Number (Use Only)	Sample Description TAT Filed # Containers**		REMARKS
040 /11/1 AQ BMITID2240401 MW-14-5	3v 1p	X X A A A A A A A A A A A A A A A A A A	LEVEL II
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	3120		
1/20 +			
106553/1/1 N D. 05 MW-14-1			
Braze 2 & Rund - 06 Dupe - 02 -	10,11,11 (B) (A)	X X X DUPLICATE	* <sup>*</sup>
114/ + + 07/28-02-02	- 123/11 3v 28	XXX Caup	EQUIP. BLANK
0700 /2/1 AQ	/25 / // / /V	X Trup.	BLANK
ADDITIONAL INSTRUCTIONS:			
grounds for legal action (NAC 445.0636 (c) (2)). Sampled By:	The BROWNON		a nuad und muy poo
Relinquished by: (Signature/Affiliation)	Received by: (Signature/Affiliation	10h. 4.6.12 Dates 2/23/11 1	Time: {2]0
Relinquished by: (Signature/Affiliation) 2/23/11 Alpha Architector 120	" Received by: (Signature/Affiliation)	Alpha Date: 7	Time:
	Received by: (Signature/	Date:	Time:
Key: AQ - Aqueous SO - Soil WA - Waste OT - Other	AR - Air **: L-Liter V-Voa S-Soil Jar	O-Orbo T-Tedlar B-Brass P-Plastic	OT-Other
<b>NU C:</b> Satibles are discalded of days after results are reported unless offer analysis and the made. Hazaroous samples will be returned to client of disposed of at client expense. The report for the analysis	arrandements are made. Hazardous samples will be retu	Inned to client of disposed of at client expense. The fe	renor for the analysis

of the above samples is applicable only to those samples received by the laboratory with this coc. The liability of the laboratory is limited to the amount paid for the report. -



255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date 01-Mar-11

David Conner Battelle Memorial Institute 655 West Broadway San Diego, CA 92101 (619) 726-7311

Suite 1420

**CASE NARRATIVE** 

Job:	G005862/JPL Gro	oundwater Monitoring		
Work Order:	BMI11022501		Cooler Temp: 1 °C	
Alpha's	Sample ID	Client's Sample ID	Matrix	
11022	501-01A	MW-18-5	Aqueous	
11022	501-02A	MW-18-4	Aqueous	
11022	501-03A	MW-18-3	Aqueous	
11022	501-04A	MW-18-2	Aqueous	
11022	501-05A	DUPE-03-1Q11	Aqueous	
11022	501-06A	EB-03-2/24/11	Aqueous	
11022	501-07A	TB-03-2/24/11	Aqueous	
	· · · · · · · · · · · · · · · · · · ·	Manually Integrated A	Analytes	
<u>Alpha's Sar</u>		Test Reference	Analyte	
NO	NE			

Enclosed please find the analytical results of the samples received by Alpha Analytical, Inc. under the above mentioned Work Order/Chainof-Custody.

Alpha Analytical, Inc. has a formal Quality Assurance/Quality Control program, which is designed to meet or exceed the EPA requirements. All relevant QC met quality assurance objectives for this project unless otherwise stated in the footnotes.

If you have any questions with regards to this report, please contact Randy Gardner, Project Manager, at (800) 283-1183.

Walter Ainihum Rogen Scholl Kandy Santur

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

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## ANALYTICAL REPORT

Battelle Memorial Institute 655 West Broadway San Diego, CA 92101 Attn:David ConnerPhone:(619) 726-7311Fax:(614) 458-6641Date Received : 02/25/11

### Job: G005862/JPL Groundwater Monitoring

		Perchlorate by Ion Chromatography EPA Method 314.0			
	Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: MW-18-5 Lab ID : BMI11022501-01A Date Sampled 02/24/11 10:08	Perchlorate	ND	1.00 µg/L	02/25/11 10:30	02/25/11 16:58
Client ID: MW-18-4 Lab ID : BMI11022501-02A Date Sampled 02/24/11 10:45	Perchlorate	46.8	1.00 µg/L	02/25/11 10:30	02/25/11 17:16
Client ID: <b>MW-18-3</b> Lab ID : BMI11022501-03A Date Sampled 02/24/11 11:26	Perchlorate	53.5	1.00 µg/L	02/25/11 10:30	02/25/11 17:34
Client ID: MW-18-2 Lab ID : BMI11022501-04A Date Sampled 02/24/11 12:04	Perchlorate	ND	1.00 µg/L	02/25/11 10:30	02/25/11 17:53
Client ID: DUPE-03-1Q11 Lab ID : BMI11022501-05A Date Sampled 02/24/11 00:00	Perchlorate	54.2	1.00 µg/L	02/25/11 10:30	02/25/11 18:11
Client ID: <b>EB-03-2/24/11</b> Lab ID : BMI11022501-06A Date Sampled 02/24/11 11:47	Perchlorate	ND	1.00 µg/L	02/25/11 10:30	02/25/11 18:30

ND = Not Detected

Roger Scholl

Kandy Saulmer

Walter Arihm

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise. Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.

3/9/11

**Report Date** 



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### **ANALYTICAL REPORT**

Battelle Memorial Institute 655 West Broadway San Diego, CA 92101 Attn:David ConnerPhone:(619) 726-7311Fax:(614) 458-6641Date Received : 02/25/11

### Job: G005862/JPL Groundwater Monitoring

		Metals by ICPMS EPA Method 200.8			
	Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: <b>MW-18-4</b> Lab ID : BMI11022501-02A Date Sampled 02/24/11 10:45	Chromium (Cr)	ND	0.0050 mg/L	02/28/11 09:47	03/02/11 15:30
Client ID: <b>MW-18-3</b> Lab ID : BM111022501-03A Date Sampled 02/24/11 11:26	Chromium (Cr)	ND	0.0050 mg/L	02/28/11 09:47	03/02/11 15:36
Client ID: <b>MW-18-2</b> Lab ID : BM111022501-04A Date Sampled 02/24/11 12:04	Chromium (Cr)	ND	0.0050 mg/L	02/28/11 09:47	03/02/11 15:42
Client ID: DUPE-03-1Q11 Lab ID : BMI11022501-05A Date Sampled 02/24/11 00:00	Chromium (Cr)	ND	0.0050 mg/L	02/28/11 09:47	03/02/11 15:47
Client ID: <b>EB-03-2/24/11</b> Lab ID : BMI11022501-06A Date Sampled 02/24/11 11:47	Chromium (Cr)	ND	0.0050 mg/L	02/28/11 09:47	03/02/11 15:53

ND = Not Detected

Roger Scholl

Kandy Santur

Walter Hindman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

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**Report Date** 



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## **ANALYTICAL REPORT**

Battelle Memorial Institute 655 West Broadway San Diego, CA 92101 Job: G005862/JPL Groundwater Monitoring Attn: David Conner Phone: (619) 726-7311 Fax: (614) 458-6641

Tentatively Identified Compounds - Volatile Organics by GC/MS

			Estimated		
	Parameter	Estimated	Reporting	Date	Date
		Concentration	Limit	Extracted	Analyzed
Client ID :       MW-18-5         Lab ID :       BMI11022501-01A         Date Received :       02/25/11         Date Sampled :       02/24/11 10:08	Sulfur dioxide	5.0	2.0 µg/L	02/28/11 17:28	02/28/11 17:28
Client ID :       MW-18-4         Lab ID :       BMI11022501-02A         Date Received :       02/25/11         Date Sampled :       02/24/11 10:45	Sulfur dioxide	4.5	2.0 µg/L	02/28/11 17:49	02/28/11 17:49
Client ID :       MW-18-3         Lab ID :       BMII1022501-03A         Date Received :       02/25/11         Date Sampled :       02/24/11 11:26	Sulfur dioxide	3.8	2.0 µg/L	02/28/11 18:11	02/28/11 18:11
Client ID :       MW-18-2         Lab ID :       BMI11022501-04A         Date Received :       02/25/11         Date Sampled :       02/24/11 12:04	* * * None Found * * *	ND	2.0 µg/L	02/28/11 18:32	02/28/11 18:32
Client ID :       DUPE-03-1Q11         Lab ID :       BMI11022501-05A         Date Received :       02/25/11         Date Sampled :       02/24/11 00:00	Sulfur dioxide	2.6	2.0 µg/L	02/28/11 18:54	02/28/11 18:54
Client ID :       EB-03-2/24/11         Lab ID :       BMII1022501-06A         Date Received :       02/25/11         Date Sampled :       02/24/11 11:47	* * * None Found * * *	ND	2.0 µg/L	02/28/11 13:09	02/28/11 13:09
Client ID :     TB-03-2/24/11       Lab ID :     BMI11022501-07A       Date Received :     02/25/11       Date Sampled :     02/24/11 07:00	* * * None Found * * *	ND	2.0 µg/L	02/28/11 12:47	02/28/11 12:47



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Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Dalter Arihm Kandy Sauluer

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3/9

**Report Date** 



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### ANALYTICAL REPORT

Battelle Memorial Institute	Attn:	David Conner
655 West Broadway	Phone:	(619) 726-7311
San Diego, CA 92101	Fax:	(614) 458-6641
Job: G005862/JPL Groundwater Monitoring		

Alpha Analytical Number: BMI11022501-01A Client I.D. Number: MW-18-5

Sampled:	02/24/11 10:08
Received:	02/25/11
Extracted:	02/28/11 17:28
Analyzed:	02/28/11 17:28

### Volatile Organics by GC/MS EPA Method SW8260B

	Compound	Concentration	Reporting	Limit		Compound	Concentration	R	eporting Li	imit
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND		0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND		0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND		0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND		0.50	μg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND		0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND		0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND		0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND		0.50	μg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND		1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND		0.50	μg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND		0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND		0.50	µg/L
13	2-Butanone (MEK)	ND	Q 10	µg/L	48	4-Chlorotoluene	ND		0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND		0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND		0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND		0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND		0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND		0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND		0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND		0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND		0.50	µg/L
22	Benzene	ND	0.50	μg/L	57	1,2-Dichlorobenzene	ND		0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND		0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCI	P) ND		2.5	µg/L
25	Trichloroethene	ND	0.50	μg/L	60	1,2,4-Trichlorobenzene	ND		1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	Q	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND		1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND		1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	109		(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	110		(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	98		(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L						
33	Dibromochloromethane	ND	0.50	µg/L						
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L						
35	Tetrachloroethene	ND	0.50	µg/L						

Data flags are DOD specified with criteria that may differ from EPA or inhouse statistical criteria.

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

Roger Scholl

Kandy Santur

Walter Acrim

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

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3/9/11

Report Date



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### **ANALYTICAL REPORT**

Battelle Memorial Institute	Attn:	David Conner
655 West Broadway	Phone:	(619) 726-7311
San Diego, CA 92101	Fax:	(614) 458-6641
Job: G005862/JPL Groundwater Monitoring		

Alpha Analytical Number: BMI11022501-02A Client I.D. Number: MW-18-4

Sampled:	02/24/11	10:45
Received:	02/25/11	
Extracted:	02/28/11	17:49

Analyzed: 02/28/11 17:49

### Volatile Organics by GC/MS EPA Method SW8260B

	Compound	Concentration	Reporting	Limit		Compound	Concentration	R	eporting Li	mit
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1.1.1.2-Tetrachloroethane	ND		0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND		0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND		0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND		0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND		0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND		0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND		0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND		0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND		1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND		0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND		0.50	µg/L
12	,	ND	0.50	µg/L	47	n-Propylbenzene	ND		0.50	µg/L
13	2-Butanone (MEK)	ND	Q 10	µg/L	48	4-Chlorotoluene	ND		0.50	µg/L
14		ND	0.50	µg/L	49	2-Chlorotoluene	ND		0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND		0.50	µg/L
16	Chloroform	2.4	0.50	µg/L	51	tert-Butylbenzene	ND		0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	. ND		0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND		0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND		0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND		0.50	µg/L
21	Carbon tetrachloride	12	0.50	µg/L	56	4-Isopropyltoluene	ND		0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND		0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND		0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCI	P) ND		2.5	µg/L
25	Trichloroethene	1.5	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND		1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	Q	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND		1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND		1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	111		(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	110		(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	99		(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L						
33	Dibromochloromethane	ND	0.50	µg/L						
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L						
35	Tetrachloroethene	0.64	0.50	µg/L						

Data flags are DOD specified with criteria that may differ from EPA or inhouse statistical criteria.

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

Roger Scholl

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Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

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3/9/11

Report Date



255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

### **ANALYTICAL REPORT**

Battelle Memorial Institute	Attn:	David Conner
655 West Broadway	Phone:	(619) 726-7311
San Diego, CA 92101	Fax:	(614) 458-6641
Job: G005862/JPL Groundwater Monitoring		. ,

Alpha Analytical Number: BMI11022501-03A Client I.D. Number: MW-18-3

Sampled:	02/24/11	11:26
Received:	02/25/11	
Extracted:	02/28/11	18:11
Analyzed:	02/28/11	18:11

### Volatile Organics by GC/MS EPA Method SW8260B

	Compound	Concentration	Reporting	Limit		Compound	Concentration	R	eporting Li	mit
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND		0.50	µg/L
2	Chloromethane	NÐ	1.0	µg/L	37	Chlorobenzene	ND		0.50	μg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND		0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND		0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND		0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND		0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND		0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND		0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND		1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND		0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND		0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND		0.50	µg/L
13	2-Butanone (MEK)	ND	Q 10	µg/L	48	4-Chlorotoluene	ND		0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND		0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND		0.50	µg/L
16	Chloroform	1.3	0.50	µg/L	51	tert-Butylbenzene	ND		0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND		0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND		0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND		0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND		0.50	µg/L
21	Carbon tetrachloride	6.6	0.50	µg/L	56	4-Isopropyltoluene	ND		0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND		0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND		0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCF	P) ND		2.5	µg/L
25	Trichloroethene	0.58	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND		1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	Q	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND		1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND		1.0	µg/L
29	trans-1,3-Dichloropropene	n ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	110		(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	112		(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	99		(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L						
33	Dibromochloromethane	ND	0.50	µg/L						
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L						
35	Tetrachloroethene	ND	0.50	µg/L						

Data flags are DOD specified with criteria that may differ from EPA or inhouse statistical criteria.

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

Roger Scholl

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Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

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3/9/11

Report Date



255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

### ANALYTICAL REPORT

Battelle Memorial Institute					
655 West Broadway					
San Dieg	go, CA 92101				
Job:	G005862/JPL Groundwater Monitoring				

Alpha Analytical Number: BMI11022501-04A Client I.D. Number: MW-18-2

Attn:	David Conner
Phone:	(619) 726-7311
Fax:	(614) 458-6641

### Sampled: 02/24/11 12:04 Received: 02/25/11 Extracted: 02/28/11 18:32 Analyzed: 02/28/11 18:32

#### Volatile Organics by GC/MS EPA Method SW8260B

				I IVIOUI		02000				
	Compound	Concentration	Reporting	Limit		Compound	Concentration	R	eporting Li	imit
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND		0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND		0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND		0.50	µg/L
4	Chioroethane	ND	0.50	µg/L	39	m,p-Xylene	ND		0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND		0.50	μg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND		0.50	μg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND		0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND		0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND		1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND		0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND		0.50	μg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND		0.50	μg/L
13	2-Butanone (MEK)	ND	Q 10	µg/L	48	4-Chlorotoluene	ND		0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND		0.50	μg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND		0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND		0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND		0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND		0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND		0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	μg/L	55	1,4-Dichlorobenzene	ND		0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	: ND		0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND		0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND		0.50	μg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCF	P) ND		2.5	µg/L
25	Trichloroethene	ND	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND		1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	Q	1.0	μg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND		1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	NĎ		1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	109		(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	110		(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	99		(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L						
33	Dibromochloromethane	ND	0.50	µg/L						
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L						
35	Tetrachloroethene	ND	0.50	µg/L						

Data flags are DOD specified with criteria that may differ from EPA or inhouse statistical criteria.

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

Rogen Scholl

Walter Hindren Kandy Sanlur

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.



**Report Date** 



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### ANALYTICAL REPORT

David Conner

Battelle I	Memorial Institute	Attn:	David Conner
655 Wes	t Broadway	Phone:	(619) 726-7311
San Dieg	30, CA 92101	Fax:	(614) 458-6641
Job:	G005862/JPL Groundwater Monitoring		

Alpha Analytical Number: BMI11022501-05A Client I.D. Number: DUPE-03-1Q11

	C
(614) 458-6641	

### Sampled: 02/24/11 00:00 Received: 02/25/11 Extracted: 02/28/11 18:54 Analyzed: 02/28/11 18:54

### Volatile Organics by GC/MS EPA Method SW8260B

	Compound	Concentration	Reportir	ig Limit	:	Compound	Concentration	R	eporting Li	imit
1	Dichlorodifluoromethane	ND	0.5	0 µg/	L 36	1.1.1.2-Tetrachloroethane	ND		0.50	µg/L
2	Chloromethane	ND	1.			Chlorobenzene	ND		0.50	µg/L
3	Vinyl chloride	ND	0.5	. 🗸		Ethylbenzene	ND		0.50	μg/L
4	Chloroethane	ND	0.5			m,p-Xylene	ND		0.50	μg/L
5	Bromomethane	ND	1.			Bromoform	ND		0.50	μg/L
6	Trichlorofluoromethane	ND	0.5			Styrene	ND		0.50	μg/L
7	1,1-Dichloroethene	ND	0.5			o-Xylene	ND		0.50	µg/L
8	Dichloromethane	ND	1.	0 µg/	L 43	1,1,2,2-Tetrachloroethane	ND		0.50	µg/L
9	Freon-113	ND	0.5	0 µg/	L 44	1,2,3-Trichloropropane	ND		1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.5	0 µg/	L 45	Isopropylbenzene	ND		0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.5	0 µg/	L 46	Bromobenzene	ND		0.50	µg/L
12	1,1-Dichloroethane	ND	0.5	0 µg/	L 47	n-Propylbenzene	ND		0.50	µg/L
13	2-Butanone (MEK)	ND	Q 1	0 µg/	L 48	4-Chlorotoluene	ND		0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.5			2-Chlorotoluene	ND		0.50	µg/L
15	Bromochloromethane	ND	0.5	0 µg/	L 50	1,3,5-Trimethylbenzene	ND		0.50	µg/L
16	Chloroform	1.4	0.5			tert-Butylbenzene	ND		0.50	µg/L
17	2,2-Dichloropropane	ND	0.5	0 μ <b>g</b> /l	L 52	1,2,4-Trimethylbenzene	ND		0.50	µg/L
18	1,2-Dichloroethane	ND	0.5		L 53	sec-Butylbenzene	ND		0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.5			1,3-Dichlorobenzene	ND		0.50	µg/L
20	1,1-Dichloropropene	ND	0.5	0 µg/l	L 55	1,4-Dichlorobenzene	ND		0.50	µg/L
21	Carbon tetrachloride	7.4	0.5	0 µg/l	L 56	4-Isopropyltoluene	ND		0.50	µg/L
22	Benzene	ND	0.5	0 µg/l	L 57	1,2-Dichlorobenzene	ND		0.50	µg/Ł
23	Dibromomethane	ND	0.5	0 µg/l	L 58	n-Butylbenzene	ND		0.50	µg/L
24	1,2-Dichloropropane	ND	0.5	0 µg/l	L 59	1,2-Dibromo-3-chloropropane (DBC	P) ND		2.5	µg/L
25	Trichloroethene	0.68	0.5	0 μ <b>g</b> /l	L 60	1,2,4-Trichlorobenzene	ND		1.0	µg/L
26	Bromodichloromethane	ND	0.5	0 µg/l	L 61	Naphthalene	ND	Q	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.	5 µg/l	L 62	Hexachlorobutadiene	ND		1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.5	0 µg/l	L 63	1,2,3-Trichlorobenzene	ND		1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.5	0 μ <b>g</b> /l	L 64	Surr: 1,2-Dichloroethane-d4	112		(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.5	0 µg/l	L 65	Surr: Toluene-d8	110		(70-130)	%REC
31	Toluene	ND	0.5	0 μ <b>g/l</b>	L 66	Surr: 4-Bromofluorobenzene	93		(70-130)	%REC
32	1,3-Dichloropropane	ND	0.5	0 µg/l	L					
33	Dibromochloromethane	ND	0.5							
34	1,2-Dibromoethane (EDB)	ND	1.							
35	Tetrachloroethene	ND	0.5							

Data flags are DOD specified with criteria that may differ from EPA or inhouse statistical criteria.

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

Roger Scholl

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Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise

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3/9/11

**Report Date** 



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### **ANALYTICAL REPORT**

Battelle Memorial Institute	Attn:	David Conner
555 West Broadway	Phone:	(619) 726-7311
San Diego, CA 92101	Fax:	(614) 458-6641
Job: G005862/JPL Groundwater Monitoring		

Alpha Analytical Number: BMI11022501-06A Client I.D. Number: EB-03-2/24/11

Sampled:	02/24/11
Received:	02/25/11
Extracted:	02/28/11

Analyzed: 02/28/11 13:09

11:47

13:09

### Volatile Organics by GC/MS EPA Method SW8260B

	Compound	Concentration	Reporting	Limit		Compound	Concentration	R	eporting Li	mit		
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND		0.50	µg/L		
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND		0.50	µg/L		
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND		0.50	µg/L		
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND		0.50	µg/L		
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND		0.50	µg/L		
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND		0.50	µg/L		
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND		0.50	µg/L		
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND		0.50	µg/L		
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND		1.0	µg/L		
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND		0.50	µg/L		
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND		0.50	µg/L		
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND		0.50	µg/L		
13	2-Butanone (MEK)	ND	Q 10	µg/L	48	4-Chlorotoluene	ND		0.50	µg/L		
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chiorotoluene	ND		0.50	µg/L		
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND		0.50	μg/L		
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND		0.50	µg/L		
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND		0.50	µg/L		
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND		0.50	µg/L		
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND		0.50	µg/L		
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND		0.50	µg/L		
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND		0.50	µg/L		
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND		0.50	µg/L		
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND		0.50	µg/L		
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCl	P) ND		2.5	µg/L		
25	Trichloroethene	ND	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND		1.0	µg/L		
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	Q	1.0	µg/L		
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND		1.0	µg/L		
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND		1.0	µg/L		
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	107		(70-130)	%REC		
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	103		(70-130)	%REC		
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	95		(70-130)	%REC		
32	1,3-Dichloropropane	ND	0.50	µg/L								
33	Dibromochloromethane	ND	0.50	µg/L								
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L								
35	Tetrachloroethene	ND	0.50	µg/L								

Data flags are DOD specified with criteria that may differ from EPA or inhouse statistical criteria.

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

Roger Scholl

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Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

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3/9/11

Report Date



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### ANALYTICAL REPORT

Battelle	Memorial Institute
655 Wes	at Broadway
San Dieg	go, CA 92101
Job:	G005862/JPL Groundwater Monitoring

Alpha Analytical Number: BMI11022501-07A Client I.D. Number: TB-03-2/24/11

Attn:	David Conner
Phone:	(619) 726-7311
Fax:	(614) 458-6641

### Sampled: 02/24/11 07:00 Received: 02/25/11 Extracted: 02/28/11 12:47 Analyzed: 02/28/11 12:47

### Volatile Organics by GC/MS EPA Method SW8260B

	Compound	Concentration	Reporting	Limit		Compound	Concentration	R	eporting L	mit		
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND		0.50	µg/L		
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND		0.50	µg/L		
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND		0.50	µg/L		
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND		0.50	µg/L		
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND		0.50	µg/L		
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND		0.50	µg/L		
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND		0.50	µg/L		
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachioroethane	ND		0.50	µg/L		
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND		1.0	µg/L		
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND		0.50	µg/L		
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND		0.50	µg/L		
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND		0.50	µg/L		
13	2-Butanone (MEK)	ND	Q 10	µg/L	48	4-Chlorotoluene	ND		0.50	µg/L		
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND		0.50	µg/L		
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND		0.50	µg/L		
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND		0.50	µg/L		
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND		0.50	µg/L		
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND		0.50	µg/L		
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND		0.50	µg/L		
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND		0.50	µg/L		
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND		0.50	µg/L		
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND		0.50	µg/L		
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND		0.50	µg/L		
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCF	P) ND		2.5	µg/L		
25	Trichloroethene	ND	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND		1.0	µg/L		
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	Q	1.0	µg/L		
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND		1.0	µg/L		
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND		1.0	µg/L		
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	108		(70-130)	%REC		
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	101		(70-130)	%REC		
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	96		(70-130)	%REC		
32	1,3-Dichloropropane	ND	0.50	µg/L								
33	Dibromochloromethane	ND	0.50	µg/L								
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L								
35	Tetrachloroethene	ND	0.50	μg/L		,						

Data flags are DOD specified with criteria that may differ from EPA or inhouse statistical criteria.

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

Roger Scholl

alter Air

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.

3/9/11

Report Date



255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

## **VOC Sample Preservation Report**

#### Work Order: BMI11022501 Job: G005862/JPL Groundwater Monitoring Alpha's Sample ID Client's Sample ID Matrix pН 11022501-01A MW-18-5 2 Aqueous 11022501-02A MW-18-4 2 Aqueous 11022501-03A MW-18-3 Aqueous 2 11022501-04A MW-18-2 2 Aqueous 11022501-05A DUPE-03-1Q11 2 Aqueous 11022501-06A EB-03-2/24/11 2 Aqueous 11022501-07A TB-03-2/24/11 2 Aqueous

3/9/11 Report Date



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<b>Date:</b> 08-Mar-11	QC Summary Report									er:
Method Blank File ID: 14		Гуре: <b>№</b>		est Code: EPA atch ID: 26061		nod 314.0	Analysis	Date:	02/25/2011 11:26	
Sample ID: MB-26061 Analyte	Units : <b>µg/L</b> Result	PQL	-	_ <b>3_110225A</b> SpkRefVal %	REC	LCL(ME)	Prep Dat UCL(ME) RF		02/25/2011 10:30 /al %RPD(Limit)	Qua
Perchlorate	ND	1	·	· · · · · · · · · · · · · · · · · · ·						
Laboratory Fortified Blank File ID: 15		Гуре: L		st Code: EPA		nod 314.0	Analysis	Date:	02/25/2011 11:45	
Sample ID: LFB-26061 Analyte	Units : <b>µg/L</b> Result	PQL	-	_ <b>3_110225A</b> SpkRefVal %	REC	LCL(ME)	Prep Dat UCL(ME) RF		02/25/2011 10:30 /al %RPD(Limit)	Qua
Perchlorate	25.4	2	25		102	85	115			
Sample Matrix Spike File ID: 18		Гуре: L		st Code: EPA tch ID: 26061		nod 314.0	Analysis	Date:	02/25/2011 12:40	
Sample ID: 11022404-01ALFM Analyte	Units : <b>µg/L</b> Result	PQL	-	_3_110225A SpkRefVal %	REC	LCL(ME)	Prep Dat UCL(ME) RF		02/25/2011 10:30 /al %RPD(Limit)	Qua
Perchlorate	24.3	2	25	0	97	80	120			
Sample Matrix Spike Duplicate File ID: 19		Гуре: L		st Code: EPA		nod 314.0	Analysis	Date:	02/25/2011 12:58	
Sample ID: 11022404-01ALFMD Analyte	Units : <b>µg/L</b> Result	PQL	-	_3_110225A SpkRefVal %	REC	LCL(ME)	Prep Dat UCL(ME) RF		02/25/2011 10:30 /al %RPD(Limit)	Qua
Perchlorate	25	2		0 9		80	120	24.34		

### Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.



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<b>Date:</b> 07-Mar-11	QC Summary Report							
<b>Method Blank</b> File ID: <b>030211.B\021_M.D\</b> Sample ID: <b>MB-26067</b>	Type MBLK Test Code: EPA Method 200.8 Batch ID: 26067 Analysis Date Units : mg/L Run ID: ICP/MS_110302A Prep Date:	: 03/02/2011 13:04 02/28/2011 09:47						
Analyte	Result PQL SpkVal SpkRefVal %REC LCL(ME) UCL(ME) RPDRe	fVal %RPD(Limit) Qua						
Chromium (Cr)	ND 0.005							
Laboratory Control Spike File ID: 030211.B\022_M.D\ Sample ID: LCS-26067 Analyte	Type       LCS       Test Code:       EPA Method 200.8         Batch ID:       26067       Analysis Date         Units :       mg/L       Run ID:       ICP/MS_110302A       Prep Date:         Result       PQL       SpkVal       SpkRefVal       %REC       LCL(ME)       UCL(ME)	: 03/02/2011 13:09 02/28/2011 09:47 fVal %RPD(Limit) Qua						
Chromium (Cr)	0.0472 0.005 0.05 94 85 115							
Sample Matrix Spike File ID: 030211.B\027_M.D\ Sample ID: 11022504-01AMS Analyte	Type MS Test Code: EPA Method 200.8 Batch ID: 26067 Analysis Date Units : mg/L Run ID: ICP/MS_110302A Prep Date: Result PQL SpkVal SpkRefVal %REC LCL(ME) UCL(ME) RPDRe	: 03/02/2011 13:37 02/28/2011 09:47 fVal %RPD(Limit) Qua						
Chromium (Cr)	0.0541 0.005 0.05 0 108 70 130							
Sample Matrix Spike Duplicate File ID: 030211.B\028_M.D\	Type MSD Test Code: EPA Method 200.8 Batch ID: 26067 Analysis Date	: 03/02/2011 13:43						
Sample ID: 11022504-01AMSD	Units : mg/L Run ID: ICP/MS_110302A Prep Date:	02/28/2011 09:47						
Analyte	Result PQL SpkVal SpkRefVal %REC LCL(ME) UCL(ME) RPDRe	fVal %RPD(Limit) Qua						
Chromium (Cr)	0.0522 0.005 0.05 0 104 70 130 0.054	408 3.6(20)						

**Comments:** 

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.



<b>Date:</b> 01-Mar-11	(	QC Summary Report							
Method Blank File ID: 11022807.D		Type <b>MBLK</b>	Test Code: EPA Method SW8 Batch ID: MS15W0228M	3260B Analysis Date: 0	2/28/2011 10:38				
Sample ID: MBLK MS15W0228M Analyte	Units : <b>µg/L</b> Result		): <b>MSD_15_110228B</b> Val_SpkRefVal_%REC_LCL(ME	•	<b>2/28/2011 10:38</b>   %RPD(Limit) Qua				
Dichlorodifluoromethane	ND	0.5		, , , , , , , , , , , , , , , , , , ,	,				
Chloromethane	ND	1							
Vinyl chloride	ND	0.5							
Chloroethane Bromomethane	ND	0.5							
Trichlorofluoromethane	ND ND	1 0.5							
1,1-Dichloroethene	ND	0.5							
Dichloromethane	ND	1							
Freon-113	ND	0.5							
trans-1,2-Dichloroethene	ND	0.5							
Methyl tert-butyl ether (MTBE)	ND	0.5							
1,1-Dichloroethane 2-Butanone (MEK)	ND ND	0.5 10							
cis-1.2-Dichloroethene	ND	0.5							
Bromochloromethane	ND	0.5							
Chloroform	ND	0.5							
2,2-Dichloropropane	ND	0.5							
1,2-Dichloroethane	ND	0.5							
1,1,1-Trichloroethane 1,1-Dichloropropene	ND	0.5							
Carbon tetrachloride	ND ND	0.5 0.5							
Benzene	ND	0.5							
Dibromomethane	ND	0.5							
1,2-Dichloropropane	ND	0.5							
Trichloroethene	ND	0.5							
Bromodichloromethane	ND	0.5							
4-Methyl-2-pentanone (MIBK) cis-1,3-Dichloropropene	ND ND	2.5							
trans-1,3-Dichloropropene	ND	0.5 0.5							
1,1,2-Trichloroethane	ND	0.5							
Toluene	ND	0.5							
1,3-Dichloropropane	ND	0.5							
Dibromochloromethane	ND	0.5							
1,2-Dibromoethane (EDB) Tetrachloroethene	ND	1							
1,1,1,2-Tetrachloroethane	ND ND	0.5 0.5							
Chlorobenzene	ND	0.5							
Ethylbenzene	ND	0.5							
m,p-Xylene	ND	0.5							
Bromoform	ND	0.5							
Styrene o-Xylene	ND ND	0.5							
1,1,2,2-Tetrachloroethane	ND	0.5 0.5							
1,2,3-Trichloropropane	ND	1							
Isopropylbenzene	ND	0.5							
Bromobenzene	ND	0.5							
n-Propylbenzene	ND	0.5							
4-Chlorotoluene 2-Chlorotoluene	ND ND	0.5							
1,3,5-Trimethylbenzene	ND	0.5 0.5							
tert-Butylbenzene	ND	0.5							
1,2,4-Trimethylbenzene	ND	0.5							
sec-Butylbenzene	ND	0.5							
1,3-Dichlorobenzene	ND	0.5							
1,4-Dichlorobenzene 4-Isopropyltoluene	ND ND	0.5							
1,2-Dichlorobenzene	ND	0.5 0.5							
n-Butylbenzene	ND	0.5							
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5							
1,2,4-Trichlorobenzene	ND	1							
Naphthalene	ND	1							
Hexachlorobutadiene 1,2,3-Trichlorobenzene	ND ND	1 1							
Surr: 1,2-Dichloroethane-d4	10.5	I	10 105 70	130					
Surr: Toluene-d8	10.3		10 103 70	130					
-			100 10						



<b>Date:</b> 01-Mar-11	QC Summary Report					
Surr: 4-Bromofluorobenzene	9.52	10	95	70	130	



<b>Date:</b> 01-Mar-11	QC Summary Report							<b>Work Order:</b> 11022501			
Laboratory Control Spike											
File ID: 11022803.D			Ba	atch ID: MS15W022	28M	Analysis	Date: (	02/28/2011 09:01			
Sample ID: LCS MS15W0228M	Units : µg/L		Run ID: MS	SD_15_110228B		Prep Date	e: (	02/28/2011 09:01			
Analyte	Result	PQL	SpkVal	SpkRefVal %REC	LCL(ME)	UCL(ME) RP	DRefVa	al %RPD(Limit)	Qual		
Dichlorodifluoromethane	8.57	1		86	70	130					
Chloromethane	9.27	2		93	70	130					
Vinyl chloride Chloroethane	10.1 10.3	1		101 103	70 70	130 130					
Bromomethane	10.3	2		103	70	130					
Trichlorofluoromethane	10.8	1		108	70	130					
1,1-Dichloroethene	10.3	1		103	70	130					
Dichloromethane	9.03	2		90	70	130					
Freon-113 trans-1,2-Dichloroethene	10.9	1		109	70	137					
Methyl tert-butyl ether (MTBE)	10.1 8.8	1 0.5		101 88	70 70	130 130					
1,1-Dichloroethane	10.2	1		102	70	130					
2-Butanone (MEK)	156	10		78	70	130					
cis-1,2-Dichloroethene	9.98	1		99.8	70	130					
Bromochloromethane	9.59	1	••	96	70	130					
Chloroform 2,2-Dichloropropane	9.95 10.2	1	10 10	100 102	70 70	130					
1,2-Dichloroethane	9.99	1		102 99.9	70 70	130 130					
1,1,1-Trichloroethane	11. <b>1</b>	1		111	70	130					
1,1-Dichloropropene	10.9	1		109	70	130					
Carbon tetrachloride	9.73	1		97	70	130					
Benzene	9.45	0.5		95	70	130					
Dibromomethane 1,2-Dichloropropane	9.77	1		98	70	130					
Trichloroethene	9.59 10.6	1		96 106	70 70	130 130					
Bromodichloromethane	10.5	1		100	70	130					
4-Methyl-2-pentanone (MIBK)	18.5	2.5		74	20	182					
cis-1,3-Dichloropropene	9.18	1		92	70	130					
trans-1,3-Dichloropropene	8.32	1		83	70	130					
1,1,2-Trichloroethane Toluene	8.98	1		90	70	130					
1,3-Dichloropropane	9.85 9.03	0.5 1		99 90	70 70	130 130					
Dibromochloromethane	9.45	1		90 95	70	130					
1,2-Dibromoethane (EDB)	18.6	2		93	70	130					
Tetrachloroethene	10.2	1		102	70	130					
1,1,1,2-Tetrachloroethane	10.5	- 1		105	70	130					
Chlorobenzene Ethylbenzene	9.84 10.2	1	10	98	70 70	130					
m,p-Xylene	10.2	0.5 0.5		102 102	70 70	130 130					
Bromoform	8.68	1	10	87	70	130					
Styrene	10.3	1	10	103	70	130					
	10.2	0.5		102	70	130					
1,1,2,2-Tetrachloroethane 1,2,3-Trichloropropane	8.69	1		87	70	130					
Isopropylbenzene	18.4 10.3	2		92 103	70 70	130 130					
Bromobenzene	9.63	1		96	70	130					
n-Propylbenzene	10.3	1		103	70	130					
4-Chlorotoluene	10.5	1		105	70	130					
2-Chlorotoluene	10.2	1		102	70	130					
1,3,5-Trimethylbenzene tert-Butylbenzene	10.7	1	10	107	70	130					
1.2.4-Trimethylbenzene	10.2 10.7	1	10 10	102 107	70 70	130 130					
sec-Butylbenzene	10.3	1	10	107	70	130					
1,3-Dichlorobenzene	10.5	1	10	105	70	130					
1,4-Dichlorobenzene	9.83	1	10	98	70	130					
4-Isopropyltoluene	10.6	1	10	106	70	130					
1,2-Dichlorobenzene n-Butylbenzene	9.42 10.9	1	10	94	70 70	130					
1,2-Dibromo-3-chloropropane (DBCP)	40.7	1	10 50	109 81	70 67	130 130					
1,2,4-Trichlorobenzene	10.1	2		101	70	130					
Naphthalene	7.88	2		79	70	130					
Hexachlorobutadiene	17.9	2		89	70	130					
1,2,3-Trichlorobenzene Surr: 1.2-Dichloroethane-d4	9.7	2		97	70	130					
Surr: Toluene-d8	10.6 9.76		10 10	106 98	70 70	`130 130					
	3.10		10	90	10	130					



<b>Date:</b> 01-Mar-11	QC	Summary Re	port			<b>Work Order:</b> 11022501
Surr: 4-Bromofluorobenzene	9.69	10	97	70	130	



<b>Date:</b> 01-Mar-11	(	QC Su	immary	y Report	-			Work Ord 1102250	
Sample Matrix Spike		Type M	S Te	est Code: EP	A Met	hod SW82	260B		
File ID: 11022808.D			Ba	atch ID: MS1	5W022	28M	Analysis Dat	e: 02/28/2011 11:00	
Sample ID: 11022404-01AMS	Units : µg/L	F		SD_15_1102			Prep Date:	02/28/2011 11:00	
Analyte	Result	PQL	SpkVal	SpkRefVal 9	%REC	LCL(ME)	UCL(ME) RPDR	efVal %RPD(Limit)	Qual
Dichlorodifluoromethane	36.1	2.5	50	0	72	21	138		
Chloromethane Vinyl chloride	44	10	50	0	88	23	144		
Chloroethane	47.5 49.8	2.5 2.5	50 50	0	95 99.6	49 21	136 159		
Bromomethane	41.1	10	50	0	82	10	174		
Trichlorofluoromethane	52.9	2.5	50	0	106	32	154		
1,1-Dichloroethene	47.7	2.5	50	0	95	64	130		
Dichloromethane Freon-113	42.7 49	10 2.5	50 50	0 0	85 98	69 55	130 141		
trans-1,2-Dichloroethene	45.7	2.5	50 50	0	90 91	63	130		
Methyl tert-butyl ether (MTBE)	46.5	1.3	50	Ő	93	47	150		
1,1-Dichloroethane	47.3	2.5	50	0	95	66	130		
2-Butanone (MEK) cis-1,2-Dichloroethene	685 47.7	50 2.5	1000	0	69 05	23	182		
Bromochloromethane	46.8	2.5 2.5	50 50	0	95 94	70 70	130 132		
Chloroform	44.9	2.5	50	0	90	70	130		
2,2-Dichloropropane	48.6	2.5	50	0	97	38	154		
1,2-Dichloroethane	47.6	2.5	50	0	95	65	134		
1,1,1-Trichloroethane 1,1-Dichloropropene	49.9 49.4	2.5 2.5	50		99.7 99	65 68	136 132		
Carbon tetrachloride	49.4 44.8	2.5 2.5	50 50	0 0	99 90	68 58	132		
Benzene	43.4	1.3	50	Ő	87	59	138		
Dibromomethane	45.9	2.5	50	0	92	70	130		
1,2-Dichloropropane	44.8	2.5	50	0	90	70	131		
Trichloroethene Bromodichloromethane	47.4	2.5	50	0	95 06	65 50	144		
4-Methyl-2-pentanone (MIBK)	48.1 94.3	2.5 13	50 125	. 0	96 75	50 20	157 182		
cis-1,3-Dichloropropene	41.7	2.5	50	. 0	83	63	131		
trans-1,3-Dichloropropene	38.1	2.5	50	0	76	65	136		
1,1,2-Trichloroethane	42.9	2.5	50	0	86	70	131		
Toluene 1,3-Dichloropropane	47.5 47.9	1.3 2.5	50 50	0 0	95 96	68 70	130 130		
Dibromochloromethane	46.9	2.5	50 50	0	90 94	42	155		
1,2-Dibromoethane (EDB)	96.3	5	100	Õ	96	70	130		
Tetrachloroethene	48.7	2.5	50	0	97	65	130		
1,1,1,2-Tetrachloroethane Chlorobenzene	48.8	2.5	50	0	98	70	130		
Ethylbenzene	46.2 45.9	2.5 1.3	50 50	0 0	92 92	70 68	130 130		
m,p-Xylene	46.8	1.3	50 50	0	92 94	68	131		
Bromoform	41.7	2.5	50	Õ	83	65	143		
Styrene	47	2.5	50	0	94	59	153		
o-Xylene 1,1,2,2-Tetrachloroethane	46.8 43.1	1.3 2.5	50	0	94 86	70 67	130		
1,2,3-Trichloropropane	43.1	2.5 10	50 100	0 0	80 89	67 70	130 130		
Isopropylbenzene	47	2.5	50	Õ	94	55	138		
Bromobenzene	44.6	2.5	50	0	89	70	130		
n-Propylbenzene 4-Chlorotoluene	47.3	2.5	50	0	95	67	133		
2-Chlorotoluene	48.6 46.1	2.5 2.5	50 50	0 0	97 92	70 70	130 130		
1,3,5-Trimethylbenzene	48	2.5	50 50	0	92 96	67	134		
tert-Butylbenzene	46.7	2.5	50	Õ	93	55	147		
1,2,4-Trimethylbenzene	48	2.5	50	0	96	65	135		
sec-Butylbenzene 1,3-Dichlorobenzene	47.9	2.5	50	0	96	68	135		
1,4-Dichlorobenzene	48.5 45.7	2.5 2.5	50 50	0 0	97 91	70 70	130 130		
4-Isopropyltoluene	48.6	2.5	50 50	0	97 97	68	132		
1,2-Dichlorobenzene	44.5	2.5	50	Ő	89	70	130		
n-Butylbenzene	50.3	2.5	50		101	62	134		
1,2-Dibromo-3-chloropropane (DBCP) 1,2,4-Trichlorobenzene	207	15	250	0	83	64	130		
Naphthalene	49.2 37.1	10 10	50 50	0 0	98 74	62 32	133 166		
Hexachlorobutadiene	86.2	10	100	0	86	63	130		
1,2,3-Trichlorobenzene	45	10	50	0	90	55	138		
Surr: 1,2-Dichloroethane-d4 Surr: Toluene-d8	51.6		50		103	70	130		
Sun Foldene-do	51.4		50		103	70	130		



<b>Date:</b> 01-Mar-11	QC	Summary Re	port			<b>Work Order:</b> 11022501
Surr: 4-Bromofluorobenzene	47.4	50	95	70	130	



<b>Date:</b> 01-Mar-11	(	QC Su	mmary	y Repor	t				Work Ord 1102250	
Sample Matrix Spike Duplicate		Туре М	SD Te	est Code: EF	PA Met	hod SW82				
File ID: 11022809.D			Ba	atch ID: MS1	5W02	28M	Analys	sis Date: 0	2/28/2011 11:21	
Sample ID: 11022404-01AMSD	Units : µg/L	F	Run ID: MS	SD_15_1102	28B		Prep [	Date: (	2/28/2011 11:21	
Analyte	Result	PQL				LCL(ME)	UCL(ME)	RPDRefVa	al %RPD(Limit)	Qua
Dichlorodifluoromethane	40.1	2.5	50	0	80	21	138	36.09	10.4(33)	
Chloromethane	40.1	2.5	50 50	0	96	23	144	44.04	8.3(27)	
Vinyl chloride	50.9	2.5	50	Ő	102	49	136	47.49	7.0(21)	
Chloroethane	54.7	2.5	50	õ	109	21	159	49.78	9.4(40)	
Bromomethane	48.3	10	50	0	97	10	174	41.1	16.2(40)	
Trichlorofluoromethane	56.4	2.5	50	0	113	32	154	52.93	6.3(37)	
1,1-Dichloroethene	52.2	2.5	50	0	104	64	130	47.7	8.9(21)	
Dichloromethane	45.5	10	50	0	91	69	130	42.74	6.2(20)	
Freon-113	53.5	2.5	50	0	107	55	141	48.98	8.8(40)	
trans-1,2-Dichloroethene	50.1	2.5	50	0	100	63	130	45.65	9.3(20)	
Methyl tert-butyl ether (MTBE)	51.1	1.3	50	0	102	47	150	46.48	9.4(40)	
1,1-Dichloroethane	51.1	2.5	50	0	102	66	130 182	47.26 685.2	7.8(20) 5.8(22)	
2-Butanone (MEK)	726	50	1000	0 0	73 104	23 70	130	47.67	9.1(20)	
cis-1,2-Dichloroethene Bromochloromethane	52.2 51	2.5 2.5	50 50	0	104	70	130	46.84	8.5(20)	
Chloroform	48.6	2.5	50 50	0	97	70	130	44.86	8.0(20)	
2,2-Dichloropropane	55.9	2.5	50	0	112	38	154	48.61	14.0(22)	
1,2-Dichloroethane	51.2	2.5	50	0	102	65	134	47.62	7.2(20)	
1,1,1-Trichloroethane	54.7	2.5	50	0	109	65	136	49.86	9.2(20)	
1,1-Dichloropropene	54.1	2.5	50	0	108	68	132	49.4	9.0(20)	
Carbon tetrachloride	51	2.5	50	0	102	58	148	44.75	13.1(20)	
Benzene	47.7	1.3	50	0	95	59	138	43.39	9.6(21)	
Dibromomethane	50.4	2.5	50	0	101	70	130	45.9	9.3(20)	
1,2-Dichloropropane	50.1	2.5	50	0	100	70	131	44.75	11.2(20)	
Trichloroethene	51.5	2.5	50	0	103	65	144	47.37	8.4(20)	
Bromodichloromethane	53	2.5	50	0	106	50	157	48.05 94.33	9.8(20) 11.8(20)	
4-Methyl-2-pentanone (MIBK)	106	13 2.5	125	0	85 93	20 63	182 131	94.33 41.7	10.7(20)	
cis-1,3-Dichloropropene trans-1,3-Dichloropropene	46.4 43.5	2.5	50 50	0	93 87	65	136	38.1	13.1(20)	
1,1,2-Trichloroethane	43.5	2.5	50 50	0	94	70	131	42.94	9.1(20)	
Toluene	52.2	1.3	50	ő	104	68	130	47.48	9.4(20)	
1,3-Dichloropropane	52.3	2.5	50	0	105	70	130	47.91	8.8(20)	
Dibromochloromethane	52.6	2.5	50	0	105	42	155	46.89	11.4(20)	
1,2-Dibromoethane (EDB)	104	5	100	0	104	70	130	96.32	7.8(20)	
Tetrachloroethene	52.4	2.5	50	0	105	65	130	48.67	7.3(20)	
1,1,1,2-Tetrachloroethane	53.8	2.5	50	0	108	70	130	48.81	9.8(20)	
Chlorobenzene	50	2.5	50	0	100	70	130	46.16	8.0(20)	
Ethylbenzene	49.4	1.3	50	0	99	68	130	45.93	7.3(20)	
m,p-Xylene	51	1.3	50	0	102	68 65	131 143	46.76 41.71	8.6(20) 11.1(20)	
Bromoform Styrene	46.6 50.2	2.5 2.5	50 50	0	93 100	59	143	47.01	6.6(37)	
o-Xylene	49.9	1.3	50 50	0	99.8	70	130	46.8	6.4(20)	
1,1,2,2-Tetrachloroethane	47.8	2.5	50	0	96	67	130	43.11	10.4(20)	
1,2,3-Trichloropropane	94.5	10	100	Ő	94	70	130	89.01	6.0(20)	
Isopropylbenzene	50.7	2.5	50	0	101	55	138	47	7.6(20)	
Bromobenzene	48.3	2.5	50	0	97	70	130	44.63	7.9(20)	
n-Propylbenzene	50.7	2.5	50	0	101	67	133	47.32		
4-Chlorotoluene	51.8	2.5	50	0	104	70	130	48.64	6.4(20)	
2-Chlorotoluene	49.5	2.5	50	0	99	70	130	46.11	7.1(20)	
1,3,5-Trimethylbenzene	51.3	2.5	50	0	103	67 55	134	48.03 46.68		
tert-Butylbenzene	50.5	2.5	50	0	101	55 65	147 135	46.68 47.98		
1,2,4-Trimethylbenzene sec-Butylbenzene	51.5 51.3	2.5 2.5	50 50	0	103 103	68	135	47.98		
1,3-Dichlorobenzene	51.3	2.5 2.5	50 50	0	103	70	130	48.51	6.9(20)	
1,4-Dichlorobenzene	49.3	2.5	50 50	0	99	70	130	45.69		
4-IsopropyItoluene	49.3 52.9	2.5	50 50	0	106	68	132	48.55		
1,2-Dichlorobenzene	49	2.5	50	0	98	70	130	44.51	9.5(20)	
n-Butylbenzene	55.4	2.5	50	0 0	111	62	134	50.31	9.7(21)	
1,2-Dibromo-3-chloropropane (DBCP)	235	15	250	Ő	94	64	130	207	12.5(20)	
1,2,4-Trichlorobenzene	55.5	10	50	Õ	111	62	133	49.16		
Naphthalene	42.1	10	50	0	84	32	166	37.05	12.8(40)	
Hexachlorobutadiene	99.6	10	100	0	99.6	63	130	86.2	14.4(21)	
1,2,3-Trichlorobenzene	51.8	10	50	0	104	55	138	45	14.1(36)	
Surr: 1,2-Dichloroethane-d4	51.8		50		104	70	130			
Surr: Toluene-d8	51.6		50		103	70	130			



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<b>Date:</b> 01-Mar-11	QC	Summary Re	port			<b>Work Order:</b> 11022501
Surr: 4-Bromofluorobenzene	47.4	50	95	70	130	

#### Comments:

Matrix Type: AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report. NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense. Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

Logged in by:	
Clinpbith (	Signat
(Idcox	ince
Elizabeth	Print Nar
FldCox	Name
Alpha Analytical, Inc.	Company
2.25-11 1214	Date/Time

Security seals intact. Frozen ice. Temp Blank #8648 received @ 1°C. Level IV QC. Samples should be used as the control spike sample if possible (LE: MS/MSD).:

**Comments:** 

San Diego, CA 92101	2101		Shane Walton	ä	(614	(614) 424-4117	17 x	waltons	waltons@battelle.org	00	Sampled by : Chase Brogdon	hase Brogdon	
PO: 218013											Cooler Temp	Samples Received	Date Printed
Client's COC #: 33406	406	Job :	G005862/JPL Groundwater Monitoring	<sup>2</sup> L Grour	ıdwater l	Monitori	рŋ				1 °C	25-Feb-2011	25-Feb-2011
QC Level: DS4	= DOD QC Required : Final Rpt, MBLK, InitCal/ConCal data, LCS, MS/MSD With Surrogates	d : Final R	pt, MBLK, Ir	itCal/Co	nCal dat	a, LCS,	MS/MSD \	With Surr	rogates				
										<b>Requested Tests</b>	ists		
Alpha	Client		Collection	No. of	No. of Bottles		314_W	METALS_D	METALS_D VOC_TIC_				
Sample ID	Sample ID	Matr	Matrix Date	Alpha Sub	Sub	TAT		٤	٤			Sam	Sample Remarks
BMI11022501-01A	MW-18-5	AQ	02/24/11 10:08	4	0	9	Perchlorate		VOC by 524 Criteria	VOC by 524 Criteria		Е	Level IV QC
BMI11022501-02A	MW-18-4	AQ	02/24/11 10:45	сл	0	9	Perchlorate	ß	VOC by 524 Criteria	VOC by 524 Criteria			
BMI11022501-03A	MW-18-3	Ą	02/24/11 11:26	G	0	9	Perchlorate	ŝ	VOC by 524 Criteria	VOC by 524 Criteria			
BMI11022501-04A	MW-18-2	Ą	02/24/11 12:04	თ	0	9	Perchlorate	Ŷ	VOC by 524 Criteria	VOC by 524 Criteria			
BMI11022501-05A	DUPE-03-1Q11	AQ	02/24/11 00:00	თ	0	9	Perchlorate	Ç	VOC by 524 Criteria	VOC by 524 Criteria			
BMI11022501-06A	EB-03-2/24/11	AQ	02/24/11 11:47	сл	0	9	Perchlorate	ç	VOC by 524 Criteria	VOC by 524 Criteria	·		
BMI11022501-07A	TB-03-2/24/11	AQ	02/24/11 07:00	-	0	9			VOC by 524 Criteria	VOC by 524 Criteria		Reno Tri	Reno Trip Blank 12/14/10

CHAIN-OF-CUSTODY RECORD Alpha Analytical, Inc. WorkOrder : BMIS11022501 C A

255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778 TEL: (775) 355-1044 FAX: (775) 355-0406

Report Due By: 5:00 PM On: 10-Mar-2011

Page: 1 of 1

Billing Information :

Client:

Report Attention

Phone Number

(614) 424-4899 x (619) 726-7311 x

cutiee@batelle.org connerd@battelle.org EMail Address

EDD Required : Yes

David Conner Betsy Cutie

655 West Broadway Battelle Memorial Institute

Suite 1420

Relinquished by: (Signature/Affiliation)	Relinquished by: (Signature/Affiliation)	I, (field sampler), attest to the validity and authenticity of this sample, grounds for legal action (NAC 445.0636 (c) (2)). Sampled By:			· 01		-+- 1		1204 Hu	<del>در</del>		AMT11022	Lab ID Number (Use Only)	NU 71/260 CM 92/10	MALL CYD	Client Name Job Job #	Fax	ess SOS KING	Company Name BATTELLE	Billing Information:
(305 2/24/4	NS/LANT R	sample Hain aware th			73-03-2 /24	03-2/	- 03 -	10 (00)	HW-18-2	MM-18-3	HM-18-4	$\propto$		14-45	DAUND	6005862				
AR - Air **: L-I iter V-Voa	Received by: (Signature/Affiliation)	Jam aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be			1/ //	24/11	10/1						4	DOBATTELLE.C	Report Attention / Project Manager	Job Name GW.		Phone (775) 355-1044 Fax (775) 355-0406	Alpha Analytical, Inc 255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778	
	Aph- An St	ally mislabeling the sample				3v2pX	3, 2p X		3v 20 ×		۹. I.	GA .	Field # Containers**	726-7311 /		N. HON. 1811		4	₽1 <b>Ç</b>	
/alpha	M	location, date or time o				×	X X		X X	X Y	× × `	X	2 Re 12 /		24 (24, 14, 14)	(N) (N) (N)	Analyses			mples Collected E
Date: 1 2.25.11 Date: 1	Date: ZZY//	of collection is consid			TPUP	EQ	R										Analyses Required		NV WA	rom Which Stat
Time:	Time:	lered fraud and may be			P BLANK	EQUIP. BLONK	Duplicate				N.			Global		Level: (II) or IV			Page # / of	3 504U6

of the above samples is applicable only to those samples received by the laboratory with this coc. The laboratory is limited to the amount paid for the report.



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Date 04-Mar-11

David Conner Battelle Memorial Institute 655 West Broadway San Diego, CA 92101 (619) 726-7311

Suite 1420

### **CASE NARRATIVE**

:	G005862/JPL Grou	indwater Monitoring	
rk Order:	BMI11030145		Cooler Temp: 1 °C
Alpha's S	Sample ID	Client's Sample ID	Matrix
110301	145-01A	MW-17-4	Aqueous
110301	145-02A	MW-17-3	Aqueous
110301	145-03A	MW-17-2	Aqueous
110301	145-04A	EB-04-02/25/11	Aqueous
110301	145-05A	TB-04-02/25/11	Aqueous
110301	145-06A	MW-24-4	Aqueous
110301	145-07A	MW-24-3	Aqueous
110301	145-08A	MW-24-2	Aqueous
110301	145-09A	MW-24-1	Aqueous
110301	145-10A	EB-05-02/28/11	Aqueous
110301	145-11A	TB-05-02/28/11	Aqueous
		Manually Integrate	ed Analytes
Alpha's Sam	nple ID	Test Reference	Analyte

Enclosed please find the analytical results of the samples received by Alpha Analytical, Inc. under the above mentioned Work Order/Chainof-Custody.

Alpha Analytical, Inc. has a formal Quality Assurance/Quality Control program, which is designed to meet or exceed the EPA requirements. All relevant QC met quality assurance objectives for this project unless otherwise stated in the footnotes.

If you have any questions with regards to this report, please contact Randy Gardner, Project Manager, at (800) 283-1183.

Walter Airihum Roger Scholl Kandy Saulmer

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.



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### **ANALYTICAL REPORT**

Battelle Memorial Institute 655 West Broadway San Diego, CA 92101 Attn:David ConnerPhone:(619) 726-7311Fax:(614) 458-6641Date Received : 03/01/11

### Job: G005862/JPL Groundwater Monitoring

		Anions by IC EPA Method 300.0			
	Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: MW-24-1					
Lab ID : BMI11030145-09A	Chloride	74	50 mg/L	03/02/11 09:55	03/02/11 14:53
Date Sampled 02/28/11 10:44	Nitrite (NO2) - N	ND	0.25 mg/L	03/02/11 09:55	03/02/11 10:34
-	Nitrate (NO3) - N	1.3	0.25 mg/L	03/02/11 09:55	03/02/11 10:34
	Phosphate, ortho - P	ND	0.50 mg/L	03/02/11 09:55	03/02/11 10:34
	Sulfate (SO4)	51	0.50 mg/L	03/02/11 09:55	03/02/11 10:34

ND = Not Detected

Roger Scholl

Kandy Doulmen

Iter Arihm

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

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3K1/11 Report Date



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### ANALYTICAL REPORT

Battelle Memorial Institute 655 West Broadway San Diego, CA 92101 Attn:David ConnerPhone:(619) 726-7311Fax:(614) 458-6641Date Received : 03/01/11

### Job: G005862/JPL Groundwater Monitoring

		Perchlorate by Ion Chromatography EPA Method 314.0			
	Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: MW-17-4 Lab ID : BMI11030145-01A Date Sampled 02/25/11 09:15	Perchlorate	3.82	1.00 µg/L	03/02/11 12:21	03/02/11 12:34
Client ID: <b>MW-17-3</b> Lab ID : BMI11030145-02A Date Sampled 02/25/11 09:48	Perchlorate	8.48	1.00 μg/L	03/02/11 12:21	03/02/11 12:52
Client ID: <b>MW-17-2</b> Lab ID : BMI11030145-03A Date Sampled 02/25/11 10:34	Perchlorate	24.1	1.00 µg/L	03/02/11 12:21	03/02/11 13:11
Client ID: <b>EB-04-02/25/11</b> Lab ID : BMI11030145-04A Date Sampled 02/25/11 10:14	Perchlorate	ND	1.00 µg/L	03/02/11 12:21	03/02/11 14:06
Client ID: <b>MW-24-3</b> Lab ID : BMI11030145-07A Date Sampled 02/28/11 09:29	Perchlorate	ND	1.00 µg/L	03/02/11 12:21	03/02/11 14:25
Client ID: <b>MW-24-2</b> Lab ID : BMI11030145-08A Date Sampled 02/28/11 09:57	Perchlorate	14.0	1.00 µg/L	03/02/11 12:21	03/02/11 14:43
Client ID: <b>MW-24-1</b> Lab ID : BMI11030145-09A Date Sampled 02/28/11 10:44	Perchlorate	14.3	1.00 µg/L	03/02/11 12:21	03/02/11 15:01
Client ID: EB-05-02/28/11 Lab ID : BMI11030145-10A Date Sampled 02/28/11 10:29	Perchlorate	ND	1.00 µg/L	03/02/11 12:21	03/02/11 15:20

ND = Not Detected

Roger Scholl

Kandy Saulner

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

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3/11/11



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### **ANALYTICAL REPORT**

Battelle Memorial Institute 655 West Broadway San Diego, CA 92101 
 Attn:
 David Conner

 Phone:
 (619) 726-7311

 Fax:
 (614) 458-6641

 Date Received : 03/01/11

.

### Job: G005862/JPL Groundwater Monitoring

		Metals by ICPMS EPA Method 200.8			
	Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: MW-17-4 Lab ID : BMI11030145-01A Date Sampled 02/25/11 09:15	Chromium (Cr)	ND	0.0050 mg/L	03/02/11 09:08	03/16/11 16:52
Client ID: MW-17-3 Lab ID : BMI11030145-02A Date Sampled 02/25/11 09:48	Chromium (Cr)	ND	0.0050 mg/L	03/02/11 09:08	03/16/11 16:57
Client ID: MW-17-2 Lab ID : BM111030145-03A Date Sampled 02/25/11 10:34	Chromium (Cr)	ND	0.0050 mg/L	03/02/11 09:08	03/16/11 16:29
Client ID: <b>EB-04-02/25/11</b> Lab ID : BMI11030145-04A Date Sampled 02/25/11 10:14	Chromium (Cr)	ND	0.0050 mg/L	03/02/11 09:08	03/16/11 17:03
Client ID: <b>MW-24-4</b> Lab ID : BMI11030145-06A Date Sampled 02/28/11 08:56	Chromium (Cr)	ND	0.0050 mg/L	03/02/11 09:08	03/16/11 17:09
Client ID: <b>MW-24-3</b> Lab ID : BMI11030145-07A Date Sampled 02/28/11 09:29	Chromium (Cr)	ND	0.0050 mg/L	03/02/11 09:08	03/17/11 09:03
Client ID: <b>MW-24-2</b> Lab ID : BMI11030145-08A Date Sampled 02/28/11 09:57	Chromium (Cr)	ND	0.0050 mg/L	03/02/11 09:08	03/17/11 09:09
Client ID: MW-24-1 Lab ID : BMI11030145-09A Date Sampled 02/28/11 10:44	Chromium (Cr)	ND	0.0050 mg/L	03/02/11 09:08	03/17/11 09:15
Client ID: <b>EB-05-02/28/11</b> Lab ID : BMI11030145-10A Date Sampled 02/28/11 10:29	Chromium (Cr)	ND	0.0050 mg/L	03/02/11 09:08	03/17/11 09:21



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This replaces the report signed 3/11/11. Samples were re-analyzed, due to lab error.

ND = Not Detected

Roger Scholl

Kandy Santur

Walter Airidan

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise. Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.

3/18/11 Report Date



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### **ANALYTICAL REPORT**

Battelle Memorial Institute 655 West Broadway San Diego, CA 92101 Job: G005862/JPL Groundwater Monitoring

Attn: David Conner Phone: (619) 726-7311 Fax: (614) 458-6641

Tentatively Identified Compounds - Volatile Organics by GC/MS

-	Parameter	Estimated	Estimated Reporting	Date	Date
Client ID :       MW-17-4         Lab ID :       BMII1030145-01A         Date Received :       03/01/11         Date Sampled :       02/25/11 09:15	* * * None Found * * *	Concentration ND	Limit 2.0 µg/L	Extracted 03/03/11 14:31	Analyzed 03/03/11 14:31
Client ID :       MW-17-3         Lab ID :       BMI11030145-02A         Date Received :       03/01/11         Date Sampled :       02/25/11 09:48	* * * None Found * * *	ND	2.0 µg/L	03/03/11 14:52	03/03/11 14:52
Client ID :       MW-17-2         Lab ID :       BMII1030145-03A         Date Received :       03/01/11         Date Sampled :       02/25/11 10:34	* * * None Found * * *	ND	2.0 µg/L	03/03/11 15:14	03/03/11 15:14
Client ID :       EB-04-02/25/11         Lab ID :       BMI11030145-04A         Date Received :       03/01/11         Date Sampled :       02/25/11 10:14	*** None Found ***	ND	2.0 µg/L	03/03/11 13:26	03/03/11 13:26
Client ID :       TB-04-02/25/11         Lab ID :       BMI11030145-05A         Date Received :       03/01/11         Date Sampled :       02/25/11 07:00	* * * None Found * * *	ND	2.0 µg/L	03/03/11 13:04	03/03/11 13:04
Client ID :       MW-24-3         Lab ID :       BMI11030145-07A         Date Received :       03/01/11         Date Sampled :       02/28/11 09:29	Sulfur dioxide	3.7	2.0 µg/L	03/03/11 15:35	03/03/11 15:35
Client ID :       MW-24-2         Lab ID :       BMI11030145-08A         Date Received :       03/01/11         Date Sampled :       02/28/11 09:57	Sulfur dioxide	4.2	2.0 μg/L	03/03/11 15:57	03/03/11 15:57
Client ID :       MW-24-1         Lab ID :       BMI11030145-09A         Date Received :       03/01/11         Date Sampled :       02/28/11 10:44	Sulfur dioxide	5.7	2.0 µg/L	03/03/11 16:18	03/03/11 16:18
Client ID :       EB-05-02/28/11         Lab ID :       BMI11030145-10A         Date Received :       03/01/11         Date Sampled :       02/28/11 10:29	* * * None Found * * *	ND	2.0 µg/L	03/03/11 14:09	03/03/11 14:09



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ND

Client ID : TB-05-02/28/11 Lab ID : BMI11030145-11A \* \* \* None Found \* \* \* Date Received : 03/01/11 Date Sampled : 02/28/11 07:00

Note: Analysis conducted using EPA Method 524.2 criteria. ND = Not Detected

Roger Scholl

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 $2.0 \ \mu g/L$ 

Kandy Saulman Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise. Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.

03/03/11 13:48 03/03/11 13:48

3/11/11 **Report Date** 

Page 1 of 1



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#### ANALYTICAL REPORT

Battel	e Memorial Institute	Attn:
655 W	est Broadway	Phone
San D	iego, CA 92101	Fax:
Job:	G005862/JPL Groundwater Monitoring	

Alpha Analytical Number: BMI11030145-01A Client I.D. Number: MW-17-4

Attn:	David Conner
Phone:	(619) 726-7311
Fax:	(614) 458-6641

### Sampled: 02/25/11 09:15 Received: 03/01/11 Extracted: 03/03/11 14:31 Analyzed: 03/03/11 14:31

#### Volatile Organics by GC/MS EPA Method SW8260B

	Li A Mediod 5 W 5200D								
	Compound	Concentration	Reporting	Limit		Compound	Concentration	Reporting L	imit
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	μg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	, ND	0.50	μg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	μg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP	) ND	2.5	µg/L
25	Trichloroethene	ND	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	μg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	1.0	μg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	μg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	μg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	95	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	111	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	107	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L				,,	
33	Dibromochloromethane	ND	0.50	μg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl

Kandy Sandmer

Dalter Hiridmon

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

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Page 1 of 1



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#### ANALYTICAL REPORT

Battelle Memorial Institute			
655 West Broadway			
San Die	go, CA 92101		
Job:	G005862/JPL Groundwater Monitoring		

Alpha Analytical Number: BMI11030145-02A Client I.D. Number: MW-17-3

Attn:	David Conner
Phone:	(619) 726-7311
Fax:	(614) 458-6641

### Sampled: 02/25/11 09:48 Received: 03/01/11 Extracted: 03/03/11 14:52 Analyzed: 03/03/11 14:52

#### Volatile Organics by GC/MS EPA Method SW8260B

				1 WICHIN	Ju 5 V	0200B			
	Compound	Concentration	Reporting	Limit		Compound	Concentration	Reporting L	imit
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1.1.1.2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	μg/L
9	Freon-113	ND	0.50	μg/L	44	1,2,3-Trichloropropane	ND	1.0	μg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	·,· =······	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	·····	ND	10	µg/L	48	4-Chiorotoluene	ND	0.50	μg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	μg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	μg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCF		2.5	µg/L
25	Trichloroethene	ND	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	97	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	111	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	103	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L				· · · · · · · · · · · · · · · · · · ·	
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl

Kandy Saulmer

Walter Arishman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

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Page 1 of 1



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### **ANALYTICAL REPORT**

Battell	e Memorial Institute	Attn
655 W	est Broadway	Phor
San Di	ego, CA 92101	Fax:
Job:	G005862/JPL Groundwater Monitoring	

Alpha Analytical Number: BMI11030145-03A Client I.D. Number: MW-17-2

Attn:	David Conner
Phone:	(619) 726-7311
Fax:	(614) 458-6641

### Sampled: 02/25/11 10:34 Received: 03/01/11 Extracted: 03/03/11 15:14 Analyzed: 03/03/11 15:14

#### Volatile Organics by GC/MS EPA Method SW8260B

				1 IVICUN		02000			
	Compound	Concentration	Reporting	Limit		Compound	Concentration	Reporting L	imit 👘
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCF	P) ND	2.5	µg/L
25	Trichloroethene	ND	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	μg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	94	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	111	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	109	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl

Kandy Saulner

Dalter Hirihm

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

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Report Date

Page 1 of 1



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### ANALYTICAL REPORT

Battelle	Memorial Institute	Attn:
655 We	st Broadway	Phone:
San Die	go, CA 92101	Fax:
Job:	G005862/JPL Groundwater Monitoring	

Alpha Analytical Number: BMI11030145-04A Client I.D. Number: EB-04-02/25/11

Attn:	David Conner
Phone:	(619) 726-7311
Fax:	(614) 458-6641

### Sampled: 02/25/11 10:14 Received: 03/01/11 Extracted: 03/03/11 13:26 Analyzed: 03/03/11 13:26

#### Volatile Organics by GC/MS EPA Method SW8260B

CompoundConcentrationReporting LimitCompoundConcentrationReporting Limit1DichlorodiflucromethaneND0.50µg/L361.1.2-tertrachloroethaneND0.50µg/L3Vinyl chlorideND0.50µg/L37ChlorobenzaneND0.50µg/L4ChloromethaneND0.50µg/L37ChlorobenzaneND0.50µg/L5BrommethaneND0.50µg/L40BromoformND0.50µg/L6TrichloroflucromethaneND0.50µg/L41StyreneND0.50µg/L11.1-DichloroetheneND0.50µg/L42oxyleneND0.50µg/L11.1-DichloroetheneND0.50µg/L411.1.2.2-TetrachloroethaneND0.50µg/L1TrichloroflucromethaneND0.50µg/L42oxyleneND0.50µg/L1TrichloroetheneND0.50µg/L42oxyleneND0.50µg/L1TrichloroetheneND0.50µg/L441.2.2-TetrachloroethaneND0.50µg/L1trichloroethaneND0.50µg/L48ChloroethaneND0.50µg/L1trichloroethaneND0.50µg/L48ChloroethaneND0.50µg/L1trichloroethaneND0.50µg/L				1.11	1 IVICUI	ou b r	8200D			
2         Chloromethane         ND         0.50         µg/L         30         Chloroberane         ND         0.50         µg/L           3         Viny chloride         ND         0.50         µg/L         38         Chloroberane         ND         0.50         µg/L           4         Chloroberane         ND         0.50         µg/L         39         m.p.Xylene         ND         0.50         µg/L           5         Bromomethane         ND         0.50         µg/L         40         Bromoform         ND         0.50         µg/L           7         1.1-Dichloroethane         ND         0.50         µg/L         41         Strene         ND         0.50         µg/L           8         Dichloromethane         ND         0.50         µg/L         42         o-Xylene         ND         0.50         µg/L           9         Freon-113         ND         0.50         µg/L         44         1.2.2-Tretrachloroethane         ND         0.50         µg/L           10         trans-12-Dichloroethane         ND         0.50         µg/L         46         Isornoberazene         ND         0.50         µg/L           11-Dichloroethane         N		Compound	Concentration	Reporting	Limit		Compound	Concentration	Reporting L	.imit
2         Chloromethane         ND         1.0         µg/L         37         Chlorobenzene         ND         0.50         µg/L           4         Chloromethane         ND         0.50         µg/L         38         Ethylbenzene         ND         0.50         µg/L           5         Bromomethane         ND         0.50         µg/L         40         Bromoform         ND         0.50         µg/L           7         1.1-Dichloroethene         ND         0.50         µg/L         41         Styree         ND         0.50         µg/L           7         1.1-Dichloroethene         ND         0.50         µg/L         42         o-Xylene         ND         0.50         µg/L           6         Dichloroethene         ND         0.50         µg/L         43         1.2.2-Teirachloroethane         ND         0.50         µg/L           10         trans-1.2-Dichloroethene         ND         0.50         µg/L         44         1.2.3-Trichloropropane         ND         0.50         µg/L           11         Methyl tert-bulyl ether (MTBE)         ND         0.50         µg/L         47         n-Propylbenzene         ND         0.50         µg/L	1	Dichlorodifluoromethane	ND	0.50	µa/L	36	1.1.1.2-Tetrachloroethane	ND	0.50	ua/l
3         Vinyl chloride         ND         0.50         µg/L         38         Ethylbenzene         ND         0.50         µg/L           4         Chloroethane         ND         0.50         µg/L         38         Ethylbenzene         ND         0.50         µg/L           5         Bromomethane         ND         0.50         µg/L         40         Bromoform         ND         0.50         µg/L           6         Trichloroflucromethane         ND         0.50         µg/L         41         Styrene         ND         0.50         µg/L           7         1.1-0ichloroethene         ND         0.50         µg/L         43         1.1.2.2-Trichloropthane         ND         0.50         µg/L           9         Freon-113         ND         0.50         µg/L         45         Isopropybenzene         ND         0.50         µg/L           11.1-0ichloroethane         ND         0.50         µg/L         48         A-Chiorobluene         ND         0.50         µg/L           12.1-Dichloroethane         ND         0.50         µg/L         44         A-Chiorobluene         ND         0.50         µg/L           13.2-Ebtchloroethane         ND	2		ND	1.0		37				19
4         Chloroethane         ND         0.50         µg/L         39         mp-Xylene         ND         0.50         µg/L           5         Bromomethane         ND         1.0         µg/L         40         Bromoform         ND         0.50         µg/L           7         1.1-Dichloroethane         ND         0.50         µg/L         41         Styrene         ND         0.50         µg/L           8         Dichloroethane         ND         0.50         µg/L         43         1.2.2-Tetrachloroethane         ND         0.50         µg/L           9         Freon-113         ND         0.50         µg/L         44         1.2.3-Tirchloropenane         ND         0.50         µg/L           10         trans-1.2-Oichloroethane         ND         0.50         µg/L         46         Bromobenzene         ND         0.50         µg/L           11         Hothy tetr-buly ether (MTBE)         ND         0.50         µg/L         47         n-Propythenzene         ND         0.50         µg/L           12         1.1-Dichloroethane         ND         0.50         µg/L         48         4-Chlorofoluene         ND         0.50         µg/L <td< td=""><td>3</td><td></td><td>ND</td><td>0.50</td><td></td><td>38</td><td>Ethylbenzene</td><td></td><td></td><td></td></td<>	3		ND	0.50		38	Ethylbenzene			
5         Bromomethane         ND         1.0         µg/L         40         Bromoform         ND         0.50         µg/L           6         Trichloroduromethane         ND         0.50         µg/L         41         Styrene         ND         0.50         µg/L           8         Dichloromethane         ND         0.50         µg/L         43         1,12,2-Tetrachloroethane         ND         0.50         µg/L           10         trans-1,2-Dichloroethane         ND         0.50         µg/L         44         1,2,3-Trichloropropane         ND         0.50         µg/L           11         trans-1,2-Dichloroethane         ND         0.50         µg/L         44         Isopropylbenzene         ND         0.50         µg/L           11         Hothyl etri-buly ethrer (MTBE)         ND         0.50         µg/L         47         re-Propylbenzene         ND         0.50         µg/L           11         Strichoroethane         ND         0.50         µg/L         48         4-Chlorotoluene         ND         0.50         µg/L           12         Strichoroethane         ND         0.50         µg/L         51         tert-Bulybenzene         ND         0.50         µg/L	4		ND	0.50			•			
6         Trichlorofluoromethane         ND         0.50         µg/L         41         Styrene         ND         0.50         µg/L           8         Dichloromethane         ND         0.50         µg/L         41         Styrene         ND         0.50         µg/L           9         Freon-113         ND         0.50         µg/L         41         1,2,2-Tertachloroethane         ND         0.50         µg/L           10         trans-1_2-Dichloroethane         ND         0.50         µg/L         44         1,2,3-Trichloroppane         ND         0.50         µg/L           11         Methyl terl-bulyl ether (MTBE)         ND         0.50         µg/L         47         n-Propylbenzene         ND         0.50         µg/L           2         Butonone (MEK)         ND         10         µg/L         47         n-Propylbenzene         ND         0.50         µg/L           2         Butonone (MEK)         ND         10         µg/L         43         4-Chlorotoluene         ND         0.50         µg/L           12         1-1-Dichloroethane         ND         0.50         µg/L         50         1,3-5-Trimethylbenzene         ND         0.50         µg/L	5		ND	1.0						
7         1.1-Dichloroethene         ND         0.50         µg/L         42         o-Xylene         ND         0.50         µg/L           8         Dichloromethane         ND         1.0         µg/L         31,1.2,2-Terachloroethane         ND         0.50         µg/L           10         trans-1,2-Dichloroethene         ND         0.50         µg/L         41,1.2,3-Trichloropane         ND         1.0         µg/L           11         trans-1,2-Dichloroethene         ND         0.50         µg/L         45         isopropylenzene         ND         0.50         µg/L           11         1-Dichloroethane         ND         0.50         µg/L         47         n-Propylbenzene         ND         0.50         µg/L           12         1.1-Dichloroethane         ND         0.50         µg/L         48         4-Chlorotoluene         ND         0.50         µg/L           13         2-Butanone (MEK)         ND         0.50         µg/L         48         4-Chlorotoluene         ND         0.50         µg/L           14         cis1.2-Dichloroethane         ND         0.50         µg/L         51         1.3.5-Trimethylbenzene         ND         0.50         µg/L	6	Trichlorofluoromethane	ND	0.50		41	Styrene			
8         Dichloromethane         ND         1.0         µg/L         43         1,1,2,2-Tetrachloroethane         ND         0.50         µg/L           9         Freon-113         ND         0.50         µg/L         44         1,2,3-Trichloropropane         ND         1.0         µg/L           11         Methyl terl-bulyl ether (MTBE)         ND         0.50         µg/L         46         Bromobenzene         ND         0.50         µg/L           12         1.1-Dichloroethane         ND         0.50         µg/L         48         Bromobenzene         ND         0.50         µg/L           12         1.1-Dichloroethane         ND         0.50         µg/L         47         n-Propylbenzene         ND         0.50         µg/L           12         1.1-Dichloroethane         ND         0.50         µg/L         49         2-Chlorotoluene         ND         0.50         µg/L           13         Ermonchloromethane         ND         0.50         µg/L         50         1,3.5-Timethylbenzene         ND         0.50         µg/L           14         cis-1.2-Dichloroethane         ND         0.50         µg/L         53         sc-Butylbenzene         ND         0.50 <td< td=""><td>7</td><td></td><td>ND</td><td>0.50</td><td></td><td></td><td>-</td><td></td><td></td><td></td></td<>	7		ND	0.50			-			
9         Freen-113         ND         0.50         µg/L         44         1,2,3-Trichloropropane         ND         1,0         µg/L           10         trans-1,2-Dichloropthene         ND         0.50         µg/L         45         Isopropthenzene         ND         0.50         µg/L           11         Methyl ter-butyl ether (MTBE)         ND         0.50         µg/L         46         Bromobenzene         ND         0.50         µg/L           12         1.1-Dichloroethane         ND         0.50         µg/L         48         4-Chlorotoluene         ND         0.50         µg/L           13         2-Butanone (MEK)         ND         10         µg/L         48         4-Chlorotoluene         ND         0.50         µg/L           14         cis-1_2-Dichloroethane         ND         0.50         µg/L         51         tert-Butylbenzene         ND         0.50         µg/L           15         Bromochloromethane         ND         0.50         µg/L         51         tert-Butylbenzene         ND         0.50         µg/L           16         Chloroform         ND         0.50         µg/L         51         tert-Butylbenzene         ND         0.50         µg/L <td>-</td> <td></td> <td>ND</td> <td>1.0</td> <td></td> <td></td> <td>•</td> <td></td> <td></td> <td></td>	-		ND	1.0			•			
10         trans-1,2-bichloroethene         ND         0.50         µg/L         45         Isomobenzene         ND         0.50         µg/L           11         Methyl ethr-butyl ether (MTBE)         ND         0.50         µg/L         46         Bromobenzene         ND         0.50         µg/L           13         2-Butanone (MEK)         ND         0.50         µg/L         47         n-Propylbenzene         ND         0.50         µg/L           14         cis-1, 2-Dichloroethane         ND         0.50         µg/L         48         4-Chiorotoluene         ND         0.50         µg/L           15         Bromochloromethane         ND         0.50         µg/L         51         tert-Butylbenzene         ND         0.50         µg/L           16         Chioroform         ND         0.50         µg/L         52         1,2,4-Trimethylbenzene         ND         0.50         µg/L           17         2,2-Dichloroethane         ND         0.50         µg/L         53         sec-Butylbenzene         ND         0.50         µg/L           14         1,1-Dichloropropane         ND         0.50         µg/L         53         1,4-Dichlorobenzene         ND         0.50	9		ND	0.50						
11         Methyl terh-tuyl ether (MTBE)         ND         0.50         µg/L         46         Bromobenzene         ND         0.50         µg/L           12         1.1-Dichloroethane         ND         0.50         µg/L         47         n-Propylbenzene         ND         0.50         µg/L           12         2-Butanone (MEK)         ND         10         µg/L         47         n-Propylbenzene         ND         0.50         µg/L           14         cis-1,2-Dichloroethane         ND         0.50         µg/L         48         4-Chlorotoluene         ND         0.50         µg/L           15         Bromochloromethane         ND         0.50         µg/L         50         1,3,5-Trimethylbenzene         ND         0.50         µg/L           16         Chloroform         ND         0.50         µg/L         51         tert-Butylbenzene         ND         0.50         µg/L           12-Dichloropropane         ND         0.50         µg/L         53         see-Butylbenzene         ND         0.50         µg/L           13         1.1-Dichloropropane         ND         0.50         µg/L         54         1.4-Dichlorobenzene         ND         0.50         µg/L	10	trans-1,2-Dichloroethene	ND	0.50				1		• •
12       1,1-Dichloroethane       ND       0.50       µg/L       47       n-Propylbenzene       ND       0.50       µg/L         13       2-Butanone (MEK)       ND       10       µg/L       48       4-Chlorotoluene       ND       0.50       µg/L         14       cis-1,2-Dichloroethane       ND       0.50       µg/L       49       2-Chlorotoluene       ND       0.50       µg/L         15       Bromochloromethane       ND       0.50       µg/L       50       1,3,5-Trimethylbenzene       ND       0.50       µg/L         16       Chloroform       ND       0.50       µg/L       51       tert-Butylbenzene       ND       0.50       µg/L         17       2,2-Dichloroothane       ND       0.50       µg/L       52       1,2,4-Trimethylbenzene       ND       0.50       µg/L         18       1,2-Dichloroothane       ND       0.50       µg/L       53       sec-Butylbenzene       ND       0.50       µg/L         19       1,1-1-Trichloroethane       ND       0.50       µg/L       55       1,4-Dichlorobenzene       ND       0.50       µg/L         20       1,1-Dichloropropane       ND       0.50       µg/L	11		ND	0.50	· •					
13       2-Butanone (MEK)       ND       10       µg/L       48       4-Chlorotoluene       ND       0.50       µg/L         14       cis-1,2-Dichloroethene       ND       0.50       µg/L       49       2-Chlorotoluene       ND       0.50       µg/L         15       Bromochloromethane       ND       0.50       µg/L       50       1,3,5-Trimethylbenzene       ND       0.50       µg/L         16       Chloroform       ND       0.50       µg/L       51       tert-Butylbenzene       ND       0.50       µg/L         17       2,2-Dichloropropane       ND       0.50       µg/L       53       sec-Butylbenzene       ND       0.50       µg/L         18       1,2-Dichloroptopane       ND       0.50       µg/L       54       1,3-Dichlorobenzene       ND       0.50       µg/L         14       carbon tetrachloride       ND       0.50       µg/L       55       1,4-Dichlorobenzene       ND       0.50       µg/L         20       1,1-Dichloropropene       ND       0.50       µg/L       57       1,2-Dichlorobenzene       ND       0.50       µg/L         21       Carbon tetrachloride       ND       0.50       µg/L	. –	,	ND	0.50		47	n-Propylbenzene			
14       cis-1,2-Dichloroethene       ND       0.50       µg/L       49       2-Chlorotoluene       ND       0.50       µg/L         15       Bromochloromethane       ND       0.50       µg/L       50       1,3,5-Trimethylbenzene       ND       0.50       µg/L         16       Chloroform       ND       0.50       µg/L       51       tert-Butylbenzene       ND       0.50       µg/L         17       2,2-Dichloroptopane       ND       0.50       µg/L       51       tert-Butylbenzene       ND       0.50       µg/L         18       1,2-Dichloroptopane       ND       0.50       µg/L       53       sec-Butylbenzene       ND       0.50       µg/L         19       1,1,1-Trichloroethane       ND       0.50       µg/L       54       1,3-Dichlorobenzene       ND       0.50       µg/L         20       1,1-Dichloroptopene       ND       0.50       µg/L       56       4-Isopropyltoluene       ND       0.50       µg/L         21       Carbon tetrachloride       ND       0.50       µg/L       58       1,4-Dichlorobenzene       ND       0.50       µg/L         22       Benzene       ND       0.50       µg/L       5	13		ND	10	• =					
15         Bromochloromethane         ND         0.50         µg/L         50         1,3,5-Trimethylbenzene         ND         0.50         µg/L           16         Chloroform         ND         0.50         µg/L         51         tert-Butylbenzene         ND         0.50         µg/L           17         2,2-Dichloropropane         ND         0.50         µg/L         52         1,2,4-Trimethylbenzene         ND         0.50         µg/L           18         1,2-Dichloropthane         ND         0.50         µg/L         53         sec-Butylbenzene         ND         0.50         µg/L           19         1,1,1-Trichloropthane         ND         0.50         µg/L         53         sec-Butylbenzene         ND         0.50         µg/L           20         1,1-Dichloropropene         ND         0.50         µg/L         56         4-Isopropyltoluene         ND         0.50         µg/L           21         Carbon tetrachloride         ND         0.50         µg/L         56         4-Isopropyltoluene         ND         0.50         µg/L           23         Dibromomethane         ND         0.50         µg/L         58         n-Butylbenzene         ND         0.50 <t< td=""><td></td><td></td><td>ND</td><td>0.50</td><td></td><td></td><td></td><td></td><td></td><td></td></t<>			ND	0.50						
16         Chloroform         ND         0.50         µg/L         51         tert-Butylbenzene         ND         0.50         µg/L           17         2,2-Dichloropropane         ND         0.50         µg/L         52         1,2.4-Trimethylbenzene         ND         0.50         µg/L           18         1,2-Dichloropropane         ND         0.50         µg/L         53         sec-Butylbenzene         ND         0.50         µg/L           20         1,1-Trichloropropane         ND         0.50         µg/L         54         1,3-Dichlorobenzene         ND         0.50         µg/L           21         1,1-Dichloropropene         ND         0.50         µg/L         55         1,4-Dichlorobenzene         ND         0.50         µg/L           22         Benzene         ND         0.50         µg/L         56         4-Isopropytoluene         ND         0.50         µg/L           23         Dibromomethane         ND         0.50         µg/L         57         1,2-Dichlorobenzene         ND         0.50         µg/L           24         1,2-Dichloropropane         ND         0.50         µg/L         59         1,2-Dichloropropane (DBCP)         ND         2.5 <td< td=""><td>15</td><td></td><td>ND</td><td>0.50</td><td></td><td>50</td><td>1.3.5-Trimethylbenzene</td><td></td><td></td><td></td></td<>	15		ND	0.50		50	1.3.5-Trimethylbenzene			
17       2,2-Dichloropropane       ND       0.50       µg/L       52       1,2,4-Trimethylbenzene       ND       0.50       µg/L         18       1,2-Dichloroethane       ND       0.50       µg/L       53       sec-Butylbenzene       ND       0.50       µg/L         19       1,1,1-Trichloroethane       ND       0.50       µg/L       54       1,3-Dichlorobenzene       ND       0.50       µg/L         20       1,1-Dichloropropene       ND       0.50       µg/L       55       1,4-Dichlorobenzene       ND       0.50       µg/L         21       Carbon tetrachloride       ND       0.50       µg/L       56       4-Isopropytoluene       ND       0.50       µg/L         22       Benzene       ND       0.50       µg/L       57       1,2-Dichlorobenzene       ND       0.50       µg/L         23       Dibromomethane       ND       0.50       µg/L       58       n-Butylbenzene       ND       0.50       µg/L         24       1,2-Dichloropropane       ND       0.50       µg/L       58       n-Butylbenzene       ND       0.50       µg/L         25       Trichloroethene       ND       0.50       µg/L       60	16	Chloroform	ND	0.50						
18       1,2-Dichloroethane       ND       0.50       µg/L       53       sec-Butylbenzene       ND       0.50       µg/L         19       1,1,1-Trichloroethane       ND       0.50       µg/L       54       1,3-Dichlorobenzene       ND       0.50       µg/L         20       1,1-Dichloropropene       ND       0.50       µg/L       55       1,4-Dichlorobenzene       ND       0.50       µg/L         21       Carbon tetrachloride       ND       0.50       µg/L       56       4-Isopropytoluene       ND       0.50       µg/L         22       Benzene       ND       0.50       µg/L       57       1,2-Dichlorobenzene       ND       0.50       µg/L         23       Dibromomethane       ND       0.50       µg/L       58       n-Butylbenzene       ND       0.50       µg/L         24       1,2-Dichloropropane       ND       0.50       µg/L       59       1,2-Dibromo-3-chloropropane (DBCP)       ND       2.5       µg/L         25       Trichloroethane       ND       0.50       µg/L       60       1,2,4-Trichlorobenzene       ND       1.0       µg/L         26       Bromodichloromethane       ND       0.50       µg/L <td>17</td> <td>2,2-Dichloropropane</td> <td>ND</td> <td>0.50</td> <td></td> <td></td> <td>•</td> <td></td> <td></td> <td></td>	17	2,2-Dichloropropane	ND	0.50			•			
19       1,1,1-Trichloroethane       ND       0.50       µg/L       54       1,3-Dichlorobenzene       ND       0.50       µg/L         20       1,1-Dichloropropene       ND       0.50       µg/L       55       1,4-Dichlorobenzene       ND       0.50       µg/L         21       Carbon tetrachloride       ND       0.50       µg/L       56       4-Isopropytoluene       ND       0.50       µg/L         22       Benzene       ND       0.50       µg/L       57       1,2-Dichlorobenzene       ND       0.50       µg/L         23       Dibromomethane       ND       0.50       µg/L       58       n-Butylbenzene       ND       0.50       µg/L         24       1,2-Dichloropropane       ND       0.50       µg/L       59       1,2-Dibromo-3-chloropropane (DBCP)       ND       2.5       µg/L         25       Trichloroethene       ND       0.50       µg/L       60       1,2,4-Trichlorobenzene       ND       1.0       µg/L         26       Bromodichloromethane       ND       0.50       µg/L       61       Naphthalene       ND       1.0       µg/L         27       4-Methyl-2-pentanone (MIBK)       ND       2.5       µg/L </td <td>18</td> <td>,</td> <td>ND</td> <td>0.50</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	18	,	ND	0.50						
20         1,1-Dichloropropene         ND         0.50         µg/L         55         1,4-Dichlorobenzene         ND         0.50         µg/L           21         Carbon tetrachloride         ND         0.50         µg/L         56         4-Isopropyltoluene         ND         0.50         µg/L           22         Benzene         ND         0.50         µg/L         57         1,2-Dichlorobenzene         ND         0.50         µg/L           23         Dibromomethane         ND         0.50         µg/L         58         n-Butylbenzene         ND         0.50         µg/L           24         1,2-Dichloropropane         ND         0.50         µg/L         59         1,2-Dibromo-3-chloropropane (DBCP)         ND         2.5         µg/L           25         Trichloroethene         ND         0.50         µg/L         60         1,2,4-Trichlorobenzene         ND         1.0         µg/L           26         Bromodichloromethane         ND         0.50         µg/L         61         Naphthalene         ND         1.0         µg/L           26         Bromodichloropropene         ND         0.50         µg/L         62         Hexachlorobutadiene         ND         1.0	19		ND	0.50						
21         Carbon tetrachloride         ND         0.50         µg/L         56         4-Isopropyltoluene         ND         0.50         µg/L           22         Benzene         ND         0.50         µg/L         57         1,2-Dichlorobenzene         ND         0.50         µg/L           23         Dibromomethane         ND         0.50         µg/L         58         n-Butylbenzene         ND         0.50         µg/L           24         1,2-Dichloropropane         ND         0.50         µg/L         59         1,2-Dibromo-3-chloropropane (DBCP)         ND         2.5         µg/L           25         Trichloroethene         ND         0.50         µg/L         60         1,2,4-Trichlorobenzene         ND         1.0         µg/L           26         Bromodichloromethane         ND         0.50         µg/L         61         Naphthalene         ND         1.0         µg/L           26         Bromodichloropropene         ND         0.50         µg/L         62         Hexachlorobutadiene         ND         1.0         µg/L           26         Bromodichloropropene         ND         0.50         µg/L         63         1,2,3-Trichlorobutadiene         ND         1.0	20	1,1-Dichloropropene	ND	0.50		55				
22         Benzene         ND         0.50         µg/L         57         1,2-Dichlorobenzene         ND         0.50         µg/L           23         Dibromomethane         ND         0.50         µg/L         58         n-Butylbenzene         ND         0.50         µg/L           24         1,2-Dichloropropane         ND         0.50         µg/L         59         1,2-Dibromo-3-chloropropane (DBCP)         ND         2.5         µg/L           25         Trichloroethene         ND         0.50         µg/L         60         1,2,4-Trichlorobenzene         ND         1.0         µg/L           26         Bromodichloromethane         ND         0.50         µg/L         61         Naphthalene         ND         1.0         µg/L           27         4-Methyl-2-pentanone (MIBK)         ND         2.5         µg/L         62         Hexachlorobutadiene         ND         1.0         µg/L           28         cis-1,3-Dichloropropene         ND         0.50         µg/L         63         1,2,3-Trichlorobenzene         ND         1.0         µg/L           29         trans-1,3-Dichloropropene         ND         0.50         µg/L         64         Surr: 1,2-Dichloroethane-d4         94	21		ND	0.50		56	,			-
23         Dibromomethane         ND         0.50         µg/L         58         n-Butylbenzene         ND         0.50         µg/L           24         1,2-Dichloropropane         ND         0.50         µg/L         59         1,2-Dibromo-3-chloropropane (DBCP)         ND         2.5         µg/L           25         Trichloroethene         ND         0.50         µg/L         60         1,2,4-Trichlorobenzene         ND         1.0         µg/L           26         Bromodichloromethane         ND         0.50         µg/L         61         Naphthalene         ND         1.0         µg/L           27         4-Methyl-2-pentanone (MIBK)         ND         2.5         µg/L         62         Hexachlorobutadiene         ND         1.0         µg/L           28         cis-1,3-Dichloropropene         ND         0.50         µg/L         63         1,2,3-Trichlorobenzene         ND         1.0         µg/L           29         trans-1,3-Dichloropropene         ND         0.50         µg/L         64         Surr: 1,2-Dichloroethane-d4         94         (70-130)         %REC           30         1,1,2-Trichloroethane         ND         0.50         µg/L         65         Surr: Toluene-d8	22		ND	0.50	· +	57				
24         1,2-Dichloropropane         ND         0.50         µg/L         59         1,2-Dibromo-3-chloropropane (DBCP)         ND         2.5         µg/L           25         Trichloroethene         ND         0.50         µg/L         60         1,2,4-Trichlorobenzene         ND         1.0         µg/L           26         Bromodichloromethane         ND         0.50         µg/L         61         Naphthalene         ND         1.0         µg/L           27         4-Methyl-2-pentanone (MIBK)         ND         2.5         µg/L         62         Hexachlorobutadiene         ND         1.0         µg/L           28         cis-1,3-Dichloropropene         ND         0.50         µg/L         63         1,2,3-Trichlorobenzene         ND         1.0         µg/L           29         trans-1,3-Dichloropropene         ND         0.50         µg/L         64         Surr: 1,2-Dichlorobenzene         ND         1.0         µg/L           30         1,1,2-Trichloroethane         ND         0.50         µg/L         65         Surr: 1,2-Dichlorobenzene         94         (70-130)         %REC           31         Toluene         ND         0.50         µg/L         65         Surr: 4-Bromofluorobenzene </td <td>23</td> <td></td> <td>ND</td> <td>0.50</td> <td></td> <td></td> <td>-</td> <td></td> <td></td> <td></td>	23		ND	0.50			-			
25         Inchloroethene         ND         0.50         µg/L         60         1,2,4-Trichlorobenzene         ND         1.0         µg/L           26         Bromodichloromethane         ND         0.50         µg/L         61         Naphthalene         ND         1.0         µg/L           27         4-Methyl-2-pentanone (MIBK)         ND         2.5         µg/L         62         Hexachlorobutadiene         ND         1.0         µg/L           28         cis-1,3-Dichloropropene         ND         0.50         µg/L         63         1,2,3-Trichlorobenzene         ND         1.0         µg/L           29         trans-1,3-Dichloropropene         ND         0.50         µg/L         64         Surr: 1,2-Dichloroethane-d4         94         (70-130)         %REC           30         1,1,2-Trichloroethane         ND         0.50         µg/L         65         Surr: Toluene-d8         104         (70-130)         %REC           31         Toluene         ND         0.50         µg/L         66         Surr: 4-Bromofluorobenzene         98         (70-130)         %REC           32         1,3-Dichloropropane         ND         0.50         µg/L         66         Surr: 4-Bromofluorobenzene			ND	0.50		59				
26         Bromodichloromethane         ND         0.50         µg/L         61         Naphthalene         ND         1.0         µg/L           27         4-Methyl-2-pentanone (MIBK)         ND         2.5         µg/L         62         Hexachlorobutadiene         ND         1.0         µg/L           28         cis-1,3-Dichloropropene         ND         0.50         µg/L         63         1,2,3-Trichlorobenzene         ND         1.0         µg/L           29         trans-1,3-Dichloropropene         ND         0.50         µg/L         64         Surr: 1,2-Dichlorobenzene         ND         1.0         µg/L           30         1,1,2-Trichloroethane         ND         0.50         µg/L         65         Surr: 1,2-Dichlorobenzene         94         (70-130)         %REC           31         Toluene         ND         0.50         µg/L         65         Surr: 4-Bromofluorobenzene         98         (70-130)         %REC           32         1,3-Dichloropropane         ND         0.50         µg/L         66         Surr: 4-Bromofluorobenzene         98         (70-130)         %REC	-		ND	0.50		60				
27       4-Methyl-2-pentanone (MIBK)       ND       2.5       µg/L       62       Hexachlorobutadiene       ND       1.0       µg/L         28       cis-1,3-Dichloropropene       ND       0.50       µg/L       63       1,2,3-Trichlorobenzene       ND       1.0       µg/L         29       trans-1,3-Dichloropropene       ND       0.50       µg/L       64       Surr: 1,2-Dichlorobenzene       ND       1.0       µg/L         30       1,1,2-Trichloroethane       ND       0.50       µg/L       65       Surr: 1,2-Dichlorobenzene       94       (70-130)       %REC         31       Toluene       ND       0.50       µg/L       66       Surr: 4-Bromofluorobenzene       98       (70-130)       %REC         32       1,3-Dichloropropane       ND       0.50       µg/L       66       Surr: 4-Bromofluorobenzene       98       (70-130)       %REC	26		ND	0.50	· •	61	, ,			
28         cis-1,3-Dichloropropene         ND         0.50         µg/L         63         1,2,3-Trichlorobenzene         ND         1.0         µg/L           29         trans-1,3-Dichloropropene         ND         0.50         µg/L         64         Surr: 1,2-Dichlorobenzene         94         (70-130)         %REC           30         1,1,2-Trichloroethane         ND         0.50         µg/L         65         Surr: Toluene-d8         104         (70-130)         %REC           31         Toluene         ND         0.50         µg/L         66         Surr: 4-Bromofluorobenzene         98         (70-130)         %REC           32         1,3-Dichloropropane         ND         0.50         µg/L         66         Surr: 4-Bromofluorobenzene         98         (70-130)         %REC	27	4-Methyl-2-pentanone (MIBK)	ND	2.5		62	•			· <del>-</del>
29         trans-1,3-Dichloropropene         ND         0.50         µg/L         64         Surr: 1,2-Dichloroethane-d4         94         (70-130)         %REC           30         1,1,2-Trichloroethane         ND         0.50         µg/L         65         Surr: Toluene-d8         104         (70-130)         %REC           31         Toluene         ND         0.50         µg/L         66         Surr: 4-Bromofluorobenzene         98         (70-130)         %REC           32         1,3-Dichloropropane         ND         0.50         µg/L         66         Surr: 4-Bromofluorobenzene         98         (70-130)         %REC	28		ND	0.50		63	· · · · · · · · · · · · · · · · · · ·			
30         1,1,2-Trichloroethane         ND         0.50         µg/L         65         Surr: Toluene-d8         104         (70-130)         % REC           31         Toluene         ND         0.50         µg/L         66         Surr: 4-Bromofiluorobenzene         98         (70-130)         % REC           32         1,3-Dichloropropane         ND         0.50         µg/L         66         Surr: 4-Bromofiluorobenzene         98         (70-130)         % REC	29		ND	0.50		64				
31         Toluene         ND         0.50         μg/L         66         Surr: 4-Bromofluorobenzene         98         (70-130)         % REC           32         1,3-Dichloropropane         ND         0.50         μg/L         66         Surr: 4-Bromofluorobenzene         98         (70-130)         % REC	30		ND	0.50		65			• • •	
32 1,3-Dichloropropane ND 0.50 µg/L	31		ND	0.50		66	Surr: 4-Bromofluorobenzene		( )	
			ND	0.50	· +				(10 100)	,01 CEO
	33	Dibromochloromethane	ND	0.50						
34 1,2-Dibromoethane (EDB) ND 1.0 µg/L		· · ·	ND	1.0						
35 Tetrachloroethene ND 0.50 µg/L	35	Tetrachloroethene	ND	0.50						

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl

Kandy Sandmer

Walter Arishman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

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Page 1 of 1



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### **ANALYTICAL REPORT**

Battelle	Memorial Institute	Attn:	David C
655 We	st Broadway	Phone:	(619) 72
San Die	go, CA 92101		(614) 45
Job:	G005862/JPL Groundwater Monitoring		()

Alpha Analytical Number: BMI11030145-05A Client I.D. Number: TB-04-02/25/11

onner 6-7311 8-6641

### Sampled: 02/25/11 07:00 Received: 03/01/11 Extracted: 03/03/11 13:04 Analyzed: 03/03/11 13:04

#### Volatile Organics by GC/MS EPA Method SW8260B

	Compound	Concentration	Reporting	Limit		Compound	Concentration	Reporting L	.imit
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	10
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xviene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	μg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	μg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP	) ND	2.5	μg/L
25	Trichloroethene	ND ·	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	95	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	104	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	97	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L				<b>、</b> · · · ·	
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl

Kandy Santur

Dalter Hiridmon

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

Alpha Analytical. Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.



**Report Date** 

Page 1 of 1



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### **ANALYTICAL REPORT**

Battelle	Memorial Institute	Attn:	Dav
655 We	st Broadway	Phone:	(61
San Die	go, CA 92101	Fax:	(61
Job:	G005862/JPL Groundwater Monitoring		,

Alpha Analytical Number: BMI11030145-07A Client I.D. Number: MW-24-3

Attn:	David Conner
Phone:	(619) 726-7311
Fax:	(614) 458-6641

### Sampled: 02/28/11 09:29 Received: 03/01/11 Extracted: 03/03/11 15:35 Analyzed: 03/03/11 15:35

#### Volatile Organics by GC/MS EPA Method SW8260B

	Compound	Concentration	Reporting	Limit		Compound	Concentration	Reporting L	imit
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	μg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	μg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	μg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCI	P) ND	2.5	μg/L
25	Trichloroethene	ND	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	96	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	109	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	109	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl

Kandy Saulur

Walter Airihum

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

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Page 1 of 1



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### **ANALYTICAL REPORT**

Battelle Memorial Institute	Attn:	David Conner
655 West Broadway	Phone:	(619) 726-7311
San Diego, CA 92101	Fax:	(614) 458-6641
Job: G005862/JPL Groundwater Monitoring		

Alpha Analytical Number: BMI11030145-08A Client I.D. Number: MW-24-2

### Sampled: 02/28/11 09:57 Received: 03/01/11

#### Received: 03/01/11 Extracted: 03/03/11 15:57 Analyzed: 03/03/11 15:57

#### Volatile Organics by GC/MS EPA Method SW8260B

	Compound	Concentration	Reporting	Limit		Compound	Concentration	Reporting L	imit
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	: ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	μg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	μg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	μg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	μg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	μg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	μg/L
20	1,1-Dichloropropene	ND	0.50	μg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCF	P) ND	2.5	µg/L
25	Trichloroethene	ND	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	94	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	111	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	107	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L				,	
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl

Kandy Sandner

Dalter Hirihm

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

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Report Date

Page 1 of 1



255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

### ANALYTICAL REPORT

Battell	e Memorial Institute	Attn
655 W	est Broadway	Pho
San Di	iego, CA 92101	Fax:
Job:	G005862/JPL Groundwater Monitoring	

Alpha Analytical Number: BMI11030145-09A Client I.D. Number: MW-24-1

Attn:	David Conner
Phone:	(619) 726-7311
Fax:	(614) 458-6641

### Sampled: 02/28/11 10:44 Received: 03/01/11 Extracted: 03/03/11 16:18 Analyzed: 03/03/11 16:18

#### Volatile Organics by GC/MS EPA Method SW8260B

	Compound	Concentration	Reporting	Limit		Compound	Concentration	Reporting L	.imit
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	- 3 -
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	10
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	1-3
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	μg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	μg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	μg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	μg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/∟ µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	μg/L μg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	μg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	μg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	5.4	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/∟ µg/L
17	2,2-Dichloropropane	ND	0.50	μg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	μg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1.3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1.4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1.2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	μg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP		2.5	µg/∟ µg/L
25	Trichloroethene	ND	0.50	µg/L	60	1.2.4-Trichlorobenzene	ND	1.0	μg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1.2.3-Trichlorobenzene	ND	1.0	μg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	98	(70-130)	µg/∟ %REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	111	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	105	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L	20		100	(10-130)	MEG
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl

Kandy Danlaur

Walter Hirihum

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

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Report Date

Page 1 of 1



255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

#### ANALYTICAL REPORT

Battelle	Memorial Institute	Attı			
655 West Broadway					
San Diego, CA 92101					
Job:	G005862/JPL Groundwater Monitoring				

Alpha Analytical Number: BMI11030145-10A Client I.D. Number: EB-05-02/28/11

Attn:	David Conner
Phone:	(619) 726-7311
Fax:	(614) 458-6641

#### Sampled: 02/28/11 10:29 Received: 03/01/11 Extracted: 03/03/11 14:09 Analyzed: 03/03/11 14:09

### Volatile Organics by GC/MS EPA Method SW8260B

	LIA Method 5 w 8200B													
	Compound	Concentration	Reporting	Limit		Compound	Concentration	Reporting L	imit					
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L					
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L					
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L					
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L					
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L					
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	μg/L					
7	1,1-Dichloroethene	ND	0.50	μg/L	42	o-Xylene	ND	0.50	µg/L					
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	μg/L					
9	Freon-113	ND	0.50	μg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L					
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L					
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L					
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L					
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L					
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L					
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	μg/L					
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L					
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L					
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L					
19	1,1,1-Trichloroethane	ND	0.50	μg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L					
20	1,1-Dichloropropene	ND	0.50	μg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L					
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L					
22	Benzene	ND	0.50	μg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L					
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L					
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCI	P) ND	2.5	μg/L					
25	Trichloroethene	ND	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L					
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	1.0	µg/L					
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L					
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	μg/L					
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	96	(70-130)	%REC					
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	108	(70-130)	%REC					
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	96	(70-130)	%REC					
32	1,3-Dichloropropane	ND	0.50	µg/L										
33	Dibromochloromethane	ND	0.50	µg/L										
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L										
35	Tetrachloroethene	ND	0.50	µg/L										

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl

Kandy Santur

Walter Hirihm

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

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**Report Date** 

Page 1 of 1



255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

#### ANALYTICAL REPORT

Battelle Memorial Institute	Attn:	David Conner
655 West Broadway	Phone:	(619) 726-7311
San Diego, CA 92101	Fax:	(614) 458-6641
Job: G005862/JPL Groundwater Monitoring		

Alpha Analytical Number: BMI11030145-11A Client I.D. Number: TB-05-02/28/11

458-6641

### Sampled: 02/28/11 07:00 Received: 03/01/11 Extracted: 03/03/11 13:48 Analyzed: 03/03/11 13:48

#### Volatile Organics by GC/MS EPA Method SW8260B

	Compound	Concentration	Reporting	Limit		Compound	Concentration	Reporting L	imit					
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1.1.1.2-Tetrachloroethane	ND	0.50	µg/L					
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/≿					
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	μg/L					
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L					
5	Bromomethane	ND	1.0	μg/L	40	Bromoform	ND	0.50	µg/L					
6	Trichlorofluoromethane	ND	0.50	μg/L	41	Styrene	ND	0.50	µg/L					
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L					
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L					
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	μg/L					
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L					
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L					
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L					
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	μg/L					
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L					
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L					
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L					
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L					
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L					
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L					
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L					
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L					
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L					
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L					
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCI	P) ND	2.5	µg/L					
25	Trichloroethene	ND	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L					
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	1.0	µg/L					
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L					
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	· 1.0	µg/L					
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	95	(70-130)	%REC					
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	106	(70-130)	%REC					
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	99	(70-130)	%REC					
32	1,3-Dichloropropane	ND	0.50	µg/L				. ,						
33	Dibromochloromethane	ND	0.50	µg/L										
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L										
35	Tetrachloroethene	ND	0.50	µg/L										

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl

Kandy Sandmer

Dalter Aridina

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

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**Report Date** 

Page 1 of 1



255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

### **VOC Sample Preservation Report**

### Work Order: BMI11030145

### Job: G005862/JPL Groundwater Monitoring

Alpha's Sample ID	Client's Sample ID	Matrix	рН
11030145-01A	MW-17-4	Aqueous	2
11030145-02A	MW-17-3	Aqueous	2
11030145-03A	MW-17-2	Aqueous	2
11030145-04A	EB-04-02/25/11	Aqueous	2
11030145-05A	TB-04-02/25/11	Aqueous	2
11030145-07A	MW-24-3	Aqueous	2
11030145-08A	MW-24-2	Aqueous	2
11030145-09A	MW-24-1	Aqueous	2
11030145-10A	EB-05-02/28/11	Aqueous	2
11030145-11A	TB-05-02/28/11	Aqueous	2



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<b>Date:</b> 10-Mar-11	(	QC Si	ummar	y Report				<b>Work Ord</b> 1103014	
Method Blank File ID: 25		Туре: М		est Code: EPA atch ID: 26084			sis Date:	03/02/2011 12:25	
Sample ID: <b>MB-26084</b> Analyte	Units : <b>mg/L</b> Result	PQL		_ <mark>2_110302A</mark> SpkRefVal %	REC_LCL(M	Prep ( IE) UCL(ME)		03/02/2011 09:55 /al %RPD(Limit)	Qual
Chloride Nitrite (NO2) - N Nitrate (NO3) - N Phosphate, ortho - P Sulfate (SO4)	ND ND ND ND ND ND	0.5 0.25 0.25 0.5 0.5				<u>) 001(m2)</u>			
Laboratory Fortified Blank		Type: L	F <b>B</b> Te	est Code: EPA	Method 30	).0			
File ID: <b>26</b> Sample ID: LFB-26084	Units : mg/L			atch ID: 26084 _2_110302A		Analy Prep I		03/02/2011 12:44 03/02/2011 09:55	
Analyte	Result	PQL			REC LCL(M	E) UCL(ME)	RPDRef\	/al %RPD(Limit)	Qual
Chloride Nitrite (NO2) - N Nitrate (NO3) - N Phosphate, ortho - P Sulfate (SO4)	52.9 4.82 5.47 4.77 109	0.5 0.25 0.25 0.5 0.5	50 5 5 5 100	1	106       90         96       90         109       90         95       90         109       90	110 110 110 110 110 110			
Sample Matrix Spike File ID: 35		Type: LI	-M Te	est Code: EPA	Method 300	-			
Sample ID: 11030204-08ALFM	Lipito : ma/l			atch ID: 26084				03/02/2011 15:30	
Analyte	Units : <b>mg/L</b> Result	PQL		_ <b>2_110302A</b> SpkRefVal %I	REC LCL(M	Prep I UCL(ME)		03/02/2011 09:55 /al %RPD(Limit)	Qual
Chloride Nitrite (NO2) - N Nitrate (NO3) - N Phosphate, ortho - P Sulfate (SO4)	165 9.99 12.1 9.91 231	0.5 0.25 0.25 0.5 0.5	100 10 10 10 200	74.73 9 0 9 1.128 1 0 9	91 80 9.9 80 110 80 99 80 89 80	120 120 120 120 120 120 120			
Sample Matrix Spike Duplicate		Type: LI	MD Te	st Code: EPA	Method 300	).0			
File ID: 36				tch ID: 26084		-		03/02/2011 15:49	
Sample ID: 11030204-08ALFMD Analyte	Units : mg/L			_2_110302A		Prep [		03/02/2011 09:55	<b>.</b> .
Chloride Nitrite (NO2) - N Nitrate (NO3) - N Phosphate, ortho - P Sulfate (SO4)	Result 169 10 12.1 10.3 233	PQL 0.5 0.25 0.25 0.5 0.5	SpkVal 100 10 10 10 200	74.73 9 0 1 1.128 1 0 1	REC         LCL(M           94         80           100         80           110         80           103         80           90         80	E) UCL(ME) 120 120 120 120 120 120	RPDRefv 165.4 9.993 12.08 9.915 230.7	0.3(15) 0.2(15) 3.9(15)	Qual

#### **Comments:**



255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

<b>Date:</b> 07-Mar-11		QC Summary Report										
Method Bla File ID: 14	nk		Туре	MBLK		est Code: EF		hod 314.0		/sis Date:	03/02/2011 11:39	
Sample ID:	MB-26092	Units : µg/L			-	_3_110302A				Date:	03/02/2011 12:21	_
Analyte		Result	PQL	Spł	Val	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRef	Val %RPD(Limit)	Qua
Perchlorate		ND		1								
Laboratory File ID: 15	Fortified Blank		Туре	LFB		est Code: Ef atch ID: 2609		hod 314.0		/sis Date:	03/02/2011 11:57	
Sample ID:	LFB-26092	Units : µg/L		Run II	): <b>IC</b>	_3_110302A	1		Prep	Date:	03/02/2011 12:21	
Analyte		Result	PQL					LCL(ME)	UCL(ME)	RPDRef	Val %RPD(Limit)	Qua
Perchlorate		25.4		2	25		102	85	115			
Sample Mat File ID: 20	rix Spike		Туре	LFM		est Code: EF atch ID: 2609		hod 314.0		/sis Date:	03/02/2011 13:29	
Sample ID:	11030145-03ALFM	Units : µg/L		Run II	): <b>IC</b>	3 110302A	1		Prep	Date:	03/02/2011 12:21	
Analyte		Result	PQL	Spł	Val	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRef	Val %RPD(Limit)	Qua
Perchlorate		50.3		2	25	24.07	105	80	120			
Sample Mat	trix Spike Duplicate		Туре	LFMD	Te	est Code: Ef	PA Met	hod 314.0				
File ID: 21					Ba	atch ID: 2609	<del>)</del> 2		Analy	sis Date:	03/02/2011 13:48	
Sample ID:	11030145-03ALFMD	Units : µg/L		Run II	): <b>IC</b>	_3_1103024	•		Prep	Date:	03/02/2011 12:21	
Analyte		Result	PQL	Spl	Val	SpkRefVal	%REC	LCL(ME)	UCL(ME)	) RPDRef	Val %RPD(Limit)	Qua
Perchlorate		52.1		2	25	24.07	112	80	120	50.2	8 3.6(15)	<u>مىزىمىزىمۇر</u>

#### **Comments:**



255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

<b>Date:</b> 08-Mar-11	QC Summary Report									
Method Blank           File ID: 030211.B\059_M.D\           Sample ID:         MB-26081	Units : <b>mg/L</b>	Type I	Ba Run ID: <b>IC</b>	est Code: El atch ID: 2604 P/MS_11034	81 02B		Prep I	Date:	03/02/2011 16:41 03/02/2011 09:08	
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRef	Val %RPD(Limit)	Qual
Chromium (Cr)	ND	0.00	5							
Laboratory Control Spike File ID: 030211.B\060_M.D\ Sample ID: LCS-26081	Units : <b>mg/L</b>	Type I	Ba Run ID: <b>IC</b>	est Code: El atch ID: 260 P/MS_1103	81 02B		Prep I	Date:	03/02/2011 16:47 03/02/2011 09:08	
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRef	Val %RPD(Limit)	Qual
Chromium (Cr)	0.0542	0.00	5 0.05		108	85	115			
Sample Matrix Spike File ID: 030211.B\065_M.D\ Sample ID: 11030145-03AMS Analyte	Units : <b>mg/L</b> Result	Type I	Ba Run ID: <b>IC</b>	est Code: El atch ID: 260 P/MS_1103 SokRefVal	B1 02B		Prep I	Date:	03/02/2011 17:15 03/02/2011 09:08 √al %RPD(Limit)	Qual
Chromium (Cr)	0.0532	0.00	•	0	106	70	130			
Sample Matrix Spike Duplicate File ID: 030211.B\066_M.D\		Type	MSD T	est Code: El atch ID: 260	PA Met			sis Date:	03/02/2011 17:21	
Sample ID: 11030145-03AMSD	Units : mg/L		Run ID: IC	P/MS_1103	02B		Prep	Date:	03/02/2011 09:08	
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRef	Val %RPD(Limit)	Quai
Chromium (Cr)	0.0529	0.00	5 0.05	0	106	70	130	0.053	32 0.6(20)	

#### Comments:



<b>Date:</b> 04-Mar-11	(	QC S	umm	ary Repor	t_			Work Orde 11030145	
Method Blank File ID: 11030307.D		Туре М		Test Code: E Batch ID: MS	1 <b>5W</b> 0303		Analysis Date:	03/03/2011 10:34	
Sample ID: MBLK MS15W0303M	Units : µg/L			: MSD_15_110			Prep Date:	03/03/2011 10:34	
Analyte	Result	PQL		/al SpkRefVal	%REC	LCL(ME) U	ICL(ME) RPDRef	/al %RPD(Limit)	Qual
Dichlorodifluoromethane Chloromethane	ND	0.5							
Vinyl chloride	ND ND	1 0.5							
Chloroethane	ND	0.5							
Bromomethane	ND	1							
Trichlorofluoromethane	ND	0.5							
1,1-Dichloroethene Dichloromethane	ND	0.5							
Freon-113	ND ND	1 0.5							
trans-1,2-Dichloroethene	ND	0.5							
Methyl tert-butyl ether (MTBE)	ND	0.5							
1,1-Dichloroethane	ND	0.5							
2-Butanone (MEK) cis-1,2-Dichloroethene	ND	10							
Bromochloromethane	ND ND	0.5 0.5							
Chloroform	ND	0.5							
2,2-Dichloropropane	ND	0.5							
1,2-Dichloroethane	ND	0.5							
1,1,1-Trichloroethane 1,1-Dichloropropene	ND	0.5							
Carbon tetrachloride	ND ND	0.5 0.5							
Benzene	ND	0.5							
Dibromomethane	ND	0.5							
1,2-Dichloropropane	ND	0.5							
Trichloroethene Bromodichloromethane	ND	0.5							
4-Methyl-2-pentanone (MIBK)	ND ND	0.5							
cis-1,3-Dichloropropene	ND	0.5							
trans-1,3-Dichloropropene	ND	0.5							
1,1,2-Trichloroethane	ND	0.5							
Toluene 1,3-Dichloropropane	ND	0.5							
Dibromochloromethane	ND ND	0.5 0.5							
1,2-Dibromoethane (EDB)	ND	0.5							
Tetrachloroethene	ND	0.5							
1,1,1,2-Tetrachloroethane	ND	0.5							
Chlorobenzene Ethylbenzene	ND	0.5							
m,p-Xylene	ND ND	0.5 0.5							
Bromoform	ND	0.5							
Styrene	ND	0.5							
o-Xylene	ND	0.5							
1,1,2,2-Tetrachloroethane 1,2,3-Trichloropropane	ND ND	0.5							
Isopropylbenzene	ND	1 0.5							
Bromobenzene	ND	0.5							
n-Propylbenzene	ND	0.5							
4-Chlorotoluene 2-Chlorotoluene	ND	0.5							
1,3,5-Trimethylbenzene	ND ND	0.5 0.5							
tert-Butylbenzene	ND	0.5							
1,2,4-Trimethylbenzene	ND	0.5							
sec-Butylbenzene	ND	0.5							
1,3-Dichlorobenzene 1,4-Dichlorobenzene	ND	0.5							
4-Isopropyltoluene	ND ND	0.5 0.5							
1,2-Dichlorobenzene	ND	0.5							
n-Butylbenzene	ND	0.5							
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5							
1,2,4-Trichlorobenzene Naphthalene	ND	1							
Hexachlorobutadiene	ND ND	1 1							
1,2,3-Trichlorobenzene	ND	1							
Surr: 1,2-Dichloroethane-d4	9.5		1	0	95	70	130		
Surr: Toluene-d8	10.5		1	0	105	70	130		



<b>Date:</b> 04-Mar-11	QC	<b>Work Order:</b> 11030145				
Surr: 4-Bromofluorobenzene	9.7	10	97	70	130	



<b>Date:</b> 04-Mar-11	(	Work Ord 1103014						
Laboratory Control Spike File ID: 11030303.D		ate: 03/03/2011 08:59						
Sample ID: LCS MS15W0303M	Units : µg/L			atch ID: MS15W03 SD_15_110303B	0.5141	Prep Date:		
Analyte	Result	PQL				•	RefVal %RPD(Limit)	Qual
Dichlorodifluoromethane	·							
Chloromethane	7.18 9.97		1 10 2 10	72 99.7	70 70	130 130		
Vinyl chloride	9.54			95	70	130		
Chloroethane	9.97			99.7	70	130		
Bromomethane	7.97	2		80	70	130		
Trichlorofluoromethane	9.51		1 10	95	70	130		
1,1-Dichloroethene	10.2			102	70	130		
Dichloromethane	9.5	2		95	70	130		
Freon-113 trans-1,2-Dichloroethene	10.4			104	70	137		
Methyl tert-butyl ether (MTBE)	10.3 8.96	0		103	70	130		
1,1-Dichloroethane	10.4	0.5		90 104	70 70	130 130		
2-Butanone (MEK)	182	1(		91	70	130		
cis-1,2-Dichloroethene	10.7			107	70	130		
Bromochloromethane	9.76	1		98	70	130		
Chloroform	9.34	1		93	70	130		
2,2-Dichloropropane	10.4	1		104	70	130		
1,2-Dichloroethane	9.21	1		92	70	130		
1,1,1-Trichloroethane	10.3	1		103	70	130		
1,1-Dichloropropene Carbon tetrachloride	10.8	1		108	70	130		
Benzene	9.46	1		95	70	130		
Dibromomethane	10 9.9	0.5		100	70	130		
1,2-Dichloropropane	9.9 10.6	1		99 106	70 70	130 130		
Trichloroethene	10.6	1		106	70	130		
Bromodichloromethane	10.3	1		100	70	130		
4-Methyl-2-pentanone (MIBK)	22.1	Ź.5		88	20	182		
cis-1,3-Dichloropropene	9.75	1		98	70	130		
trans-1,3-Dichloropropene	8.57	1	10	86	70	130		
1,1,2-Trichloroethane	9.76	1		98	70	130		
Toluene	10.7	0.5		107	70	130		
1,3-Dichloropropane Dibromochloromethane	10	1		100	70	130		
1,2-Dibromoethane (EDB)	9.94 20.4	1		99	70	130		
Tetrachloroethene	20.4 10.5	2		102 105	70 70	130 130		
1,1,1,2-Tetrachloroethane	10.8	1		103	70	130		
Chlorobenzene	10.5	1		105	70	130		
Ethylbenzene	10.6	0.5		106	70	130		
m,p-Xylene	10.8	0.5		108	70	130		
Bromoform	9.14	1	10	91	70	130		
Styrene	11	1		110	70	130		
o-Xylene	11	0.5		110	70	130		
1,1,2,2-Tetrachloroethane 1,2,3-Trichloropropane	9.82	1		98	70	130		
Isopropylbenzene	18.6 10.9	2 1		93 109	70	130		
Bromobenzene	10.9	1	10	109	70 70	130 130		
n-Propylbenzene	11	1		104	70	130		
4-Chlorotoluene	11.4	1		114	70	130		
2-Chlorotoluene	11.1	1	10	111	70	130		
1,3,5-Trimethylbenzene	11.1	1	<sup>.</sup> 10	111	70	130		
tert-Butylbenzene	10.6	1	10	106	70	130		
1,2,4-Trimethylbenzene	11.1	1	10	111	70	130		
sec-Butylbenzene	10.9	1		109	70	130		
1,3-Dichlorobenzene 1,4-Dichlorobenzene	11.1	1	· -	111	70	130		
4-Isopropyitoluene	10.4	1	10	104	70	130		
1,2-Dichlorobenzene	11 9.94	1	10 10	110 99	70 70	130 130		
n-Butylbenzene	9.94 11.5	1	10	99 115	70	130		
1,2-Dibromo-3-chloropropane (DBCP)	43.2	3		86	70 67	130		
1,2,4-Trichlorobenzene	10.3	2		103	70	130		
Naphthalene	8.48	2		85	70	130		
Hexachlorobutadiene	18.4	2	20	92	70	130		
1,2,3-Trichlorobenzene	9.84	2		98	70	130		
Surr: 1,2-Dichloroethane-d4 Surr: Toluene-d8	9.23		10	92	70	130		
	10.1		10	101	70	130		



<b>Date:</b> 04-Mar-11	QC	Summary Re	port			<b>Work Order:</b> 11030145
Surr: 4-Bromofluorobenzene	10.3	10	103	70	130	



Date: 04-Mar-11	QC Summary Report						<b>Work Order:</b> 11030145		
Sample Matrix Spike	Type MS Test Code: EPA Method SW8260B								
File ID: 11030308.D							Analysis Date:	03/03/2011 10:55	
Sample ID: 11030145-03AMS	Units : µg/L		Run ID: M	SD_15_110	303B		Prep Date:	03/03/2011 10:55	
Analyte	Result	PQL				LCL(ME)	UCL(ME) RPDRef	Val %RPD(Limit)	Qua
Dichlorodifluoromethane	34.5	2.5		. 0		21	138		
Chloromethane	44	10		0	88	23	144		
Vinyl chloride	47.3	2.5		0	95	49	136		
Chloroethane	46.2	2.5		0	92	21	159		
Bromomethane	34.6	10		0	69	10	174		
Trichlorofluoromethane	44.6	2.5		0	89	32	154		
1,1-Dichloroethene Dichloromethane	47.2	2.5		0	94	64	130		
Freon-113	44.4 48.3	10		0	89	69	130		
trans-1,2-Dichloroethene	46.3	2.5 2.5		0 0	97 93	55 63	141 130		
Methyl tert-butyl ether (MTBE)	47.1	1.3		0	93 94	63 47	150		
1,1-Dichloroethane	48	2.5		0	96	66	130		
2-Butanone (MEK)	745	50		õ	75	23	182		
cis-1,2-Dichloroethene	47.1	2.5		Ō	94	70	130		
Bromochloromethane	46.6	2.5		0	93	70	132		
Chloroform	43.8	2.5		0	88	70	130		
2,2-Dichloropropane	47	2.5		0	94	38	154		
1,2-Dichloroethane 1,1,1-Trichloroethane	45	2.5		0	90	65	134		
1,1,1-1 nchloroethane	46.5 48.7	2.5	50	0	93	65 60	136		
Carbon tetrachloride	48.7 40.5	2.5 2.5		0	97	68 59	132		
Benzene	40.5	2.5 1.3	50 50	0	81 91	58 59	148 138		
Dibromomethane	47.3	2.5		0	95	59 70	130		
1,2-Dichloropropane	49.3	2.5	50	0	99	70	131		
Trichloroethene	47	2.5	50	Ő	94	65	144		
Bromodichloromethane	47.6	2.5	50	Ő	95	50	157		
4-Methyl-2-pentanone (MIBK)	110	13	125	0	88	20	182		
cis-1,3-Dichloropropene	44.8	2.5	50	0	90	63	131		
trans-1,3-Dichloropropene	40.2	2.5	50	0	80	65	136		
1,1,2-Trichloroethane Toluene	48.1	2.5	50	0	96	70	131		
1,3-Dichloropropane	48.9 51.2	1.3	50	0	98	68	130		
Dibromochloromethane	47.4	2.5 2.5	50 50	0 0	102 95	70 42	130 155		
1,2-Dibromoethane (EDB)	101	2.5	100	0	101	42 70	130		
Tetrachloroethene	48	2.5	50	0	96	65	130		
1,1,1,2-Tetrachloroethane	48.1	2.5	50	õ	96	70	130		
Chlorobenzene	46.7	2.5	50	Ō	93	70	130		
Ethylbenzene	46.6	1.3	50	0	93	68	130		
m,p-Xylene	47.1	1.3	50	0	94	68	131		
Bromoform	42.3	2.5	50	0	85	65	143		
Styrene o-Xylene	47.4	2.5	50	0	95	59	153		
1,1,2,2-Tetrachloroethane	47.1	1.3	50	0	94	70	130		
1,2,3-Trichloropropane	46.9 89.5	2.5	50 100	0	94	67 70	130		
Isopropylbenzene	89.5 48.9	10 2.5	100 50	0 0	89 98	70 55	130 138		
Bromobenzene	46.9	2.5	50 50	0	98 94	55 70	130		
n-Propylbenzene	48.9	2.5	50	ŏ	98	67	133		
4-Chlorotoluene	49.9	2.5	50	ŏ	99.7	70	130		
2-Chlorotoluene	48.1	2.5	50	0	96	70	130		
1,3,5-Trimethylbenzene	48.4	2.5	50	0	97	67	134		
tert-Butylbenzene	47.3	2.5	50	0	95	55	147		
1,2,4-Trimethylbenzene sec-Butylbenzene	48.9	2.5	50	0	98	65	135		
1,3-Dichlorobenzene	48.5	2.5	50	0	97	68	135		
1,4-Dichlorobenzene	49.1 47.5	2.5	50	0	98 05	70 70	130		
4-Isopropyltoluene	47.5	2.5 2.5	50 50	0 0	95 99	70 68	130 132		
1,2-Dichlorobenzene	49.3	2.5	50 50	0	99 93	68 70	132		
n-Butylbenzene	52.3	2.5	50 50	0	93 105	62	130		
1,2-Dibromo-3-chloropropane (DBCP)	219	15	250	0	88	64	130		
1,2,4-Trichlorobenzene	51	10	50	0	102	62	133		
Naphthalene	43.9	10	50	Ő	88	32	166		
Hexachlorobutadiene	88.1	10	100	0	88	63	130		
1,2,3-Trichlorobenzene	50.6	10	50	0	101	55	138		
Surr: 1,2-Dichloroethane-d4 Surr: Toluene-d8	47.9		50		96	70	130		
	51.3		50		103	70	130		



<b>Date:</b> 04-Mar-11	QC	Summary Re	eport		<b>Work Order:</b> 11030145	
Surr: 4-Bromofluorobenzene	49.9	50	99.7	70	130	



<b>Date:</b> 04-Mar-11	QC Summary Report						<b>Work Order:</b> 11030145		
Sample Matrix Spike		· · · · · ·							
File ID: 11030310.D	Batch ID: MS15W0303M Analysis Dat						Analysis Date:	03/03/2011 11:38	
Sample ID: 11030145-07AMS	Units : µg/L		Run ID: M	SD_15_1103	303B		Prep Date:	03/03/2011 11:38	
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME) RPDRef	Val %RPD(Limit)	Qual
Dichlorodifluoromethane	32.2	2.5	50	0	64	21	138		
Chloromethane	42.8	10		0	86	23	144		
Vinyl chloride Chloroethane	44.6	2.5		0	89	49	136		
Bromomethane	45.6 37.5	2.5 10		0	91 75	21 10	159 174		
Trichlorofluoromethane	42.5	2.5		0	85	32	154		
1,1-Dichloroethene	44.4	2.5		õ	89	64	130		
Dichloromethane	43.4	10	50	0	87	69	130		
Freon-113	45.7	2.5		0	91	55	141		
trans-1,2-Dichloroethene Methyl tert-butyl ether (MTBE)	44.6	2.5		0	89	63	130		
1,1-Dichloroethane	47.8 46.4	1.3 2.5		0	96 93	47 66	150 130		
2-Butanone (MEK)	765	2.0 50		0	93 77	23	182		
cis-1,2-Dichloroethene	47.8	2.5		Ō	96	70	130		
Bromochloromethane	48.1	2.5		0	96	70	132		
Chloroform	42.2	2.5		0	84	70	130		
2,2-Dichloropropane 1,2-Dichloroethane	47.9 44.5	2.5 2.5		0	96 80	38 65	154 134		
1,1,1-Trichloroethane	44.5	2.5 2.5		0	89 90	65 65	134		
1,1-Dichloropropene	47.1	2.5		Ő	94	68	132		
Carbon tetrachloride	41.4	2.5		Ō	83	58	148		
Benzene	44.4	1.3		0	89	59	138		
Dibromomethane	47.6	2.5		0	95	70	130		
1,2-Dichloropropane Trichloroethene	48.7	2.5		0	97	70	131		
Bromodichloromethane	45.3 47.3	2.5 2.5		0 0	91 95	65 50	144 157		
4-Methyl-2-pentanone (MIBK)	115	13		0	92	20	182		
cis-1,3-Dichloropropene	45.1	2.5		Õ	90	63	131		
trans-1,3-Dichloropropene	41.7	2.5		0	83	65	136		
1,1,2-Trichloroethane	47.9	2.5		0	96	70	131		
Toluene 1,3-Dichloropropane	48.2 51.7	1.3		0	96	68	130		
Dibromochloromethane	49.5	2.5 2.5		0	103 99	70 42	130 155		
1,2-Dibromoethane (EDB)	104	5		Ő	104	70	130		
Tetrachloroethene	46	2.5		Ő	92	65	130		
1,1,1,2-Tetrachloroethane	49.1	2.5		0	98	70	130		
Chlorobenzene Ethylbenzene	46.6	2.5	50	0	93	70	130		
m,p-Xylene	45.3 45.8	1.3 1.3	50 50	0 0	91 92	68 68	130 131		
Bromoform	44	2.5		0	88	65	143		
Styrene	47.1	2.5	50	õ	94	59	153		
o-Xylene	46.2	1.3	50	0	92	70	130		
1,1,2,2-Tetrachloroethane	47.7	2.5	50	0	95	67	130		
1,2,3-Trichloropropane Isopropylbenzene	91.1 47.2	10	100	0	91	70	130		
Bromobenzene	46.3	2.5 2.5	50 50	0 0	94 93	55 70	138 130		
n-Propylbenzene	47.8	2.5	50	0	96	67	133		
4-Chlorotoluene	49.5	2.5	50	Ō	99	70	130		
2-Chlorotoluene	46.9	2.5	50	0	94	70	130		
1,3,5-Trimethylbenzene tert-Butylbenzene	47.2	2.5	50	0	94	67	134		
1,2,4-Trimethylbenzene	45.7 47.4	2.5 2.5	50 50	0	91 95	55 65	147		
sec-Butylbenzene	46.9	2.5	50 50	0 0	95 94	65 68	135 135		
1,3-Dichlorobenzene	48.8	2.5	50	ŏ	98	70	130		
1,4-Dichlorobenzene	46.7	2.5	50	0	93	70	130		
4-Isopropyltoluene	47.3	2.5	50	0	95	68	132		
1,2-Dichlorobenzene n-Butylbenzene	46.5	2.5	50	0	93 102	70	130		
1,2-Dibromo-3-chloropropane (DBCP)	50.8 235	2.5 15	50 250	0 0	102 94	62 64	134 130		
1,2,4-Trichlorobenzene	52.6	10	250 50	0	94 105	64 62	133		
Naphthalene	46.6	10	50	Ő	93	32	166		
Hexachlorobutadiene	90.2	10	100	Õ	90	63	130		
1,2,3-Trichlorobenzene	52.2	10	50	0	104	55	138		
Surr: 1,2-Dichloroethane-d4 Surr: Toluene-d8	46.4 52.6		50		93 105	70 70	130		
	02.0		50		105	70	130		



Date: 04-Mar-11	QC S	Work Order: 11030145				
Surr: 4-Bromofluorobenzene	49.9	50	99.8	70	130	



<b>Date:</b> 04-Mar-11	(	QC Si	ummar	y Repor	t				<b>Work Ord</b> 11030145	
Sample Matrix Spike Duplicate		Туре М	SD Te	est Code: El	PA Met	hod SW82	260B			
File ID: 11030309.D			Ba	atch ID: MS <sup>*</sup>	15W030	)3M	Analy	sis Date: 0	3/03/2011 11:17	
Sample ID: 11030145-03AMSD	Units : µg/L		Run ID: M	SD_15_110	303B		Prep	Date: 0	3/03/2011 11:17	
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVa	I %RPD(Limit)	Qual
Dichlorodifluoromethane	34.5	2.5	50	0	69	21	138	34.46	0.2(33)	
Chloromethane	45.3	10	50	0	91	23	144	43.96	3.0(27)	
Vinyl chloride Chloroethane	47.9 47.9	2.5 2.5	50 50	0	96 96	49 21	136	47.29	1.3(21)	
Bromomethane	38.9	2.5 10	50 50	0	96 78	10	159 174	46.16 34.6	3.6(40) 11.6(40)	
Trichlorofluoromethane	47.5	2.5	50	õ	95	32	154	44.57	6.3(37)	
1,1-Dichloroethene	48.1	2.5	50	Ō	96	64	130	47.23	1.9(21)	
Dichloromethane	44.5	10	50	0	89	69	130	44.39	0.3(20)	
Freon-113 trans-1,2-Dichloroethene	49.6	2.5	50	0	99	55	141	48.26	2.8(40)	
Methyl tert-butyl ether (MTBE)	47.1 47.5	2.5 1.3	50 50	0 0	94 95	63 47	130 150	46.26 47.1	1.9(20) 0.7(40)	
1,1-Dichloroethane	48.9	2.5	50	0	93 98	66	130	47.1	1.8(20)	
2-Butanone (MEK)	751	50	1000	ŏ	75	23	182	745.1	0.7(22)	
cis-1,2-Dichloroethene	49.7	2.5	50	0	99	70	130	47.09	5.4(20)	
Bromochloromethane Chloroform	47.9	2.5	50	0	96	70	132	46.58	2.8(20)	
2,2-Dichloropropane	43.9 50.2	2.5 2.5	50 50	0	88 100	70 38	130 154	43.84 47.03	0.2(20)	
1,2-Dichloroethane	44.8	2.5	50 50	0	90	38 65	134	47.03 44.99	6.5(22) 0.4(20)	
1,1,1-Trichloroethane	47.6	2.5	50 50	0	95	65	134	44.99	2.3(20)	
1,1-Dichloropropene	50.3	2.5	50	Ō	101	68	132	48.66	3.3(20)	
Carbon tetrachloride	44.4	2.5	50	0	89	58	148	40.47	9.3(20)	
Benzene Dibromomethane	46.4	1.3	50	0	93	59	138	45.47	2.0(21)	
1,2-Dichloropropane	47.6 50.6	2.5 2.5	50 50	0	95 101	70 70	130 131	47.25	0.8(20)	
Trichloroethene	48.7	2.5	50	0	97	65	144	49.25 47.02	2.7(20) 3.6(20)	
Bromodichloromethane	49.5	2.5	50	Ő	99	50	157	47.58	3.9(20)	
4-Methyl-2-pentanone (MIBK)	110	13	125	0	88	20	182	110.1	0.1(20)	
cis-1,3-Dichloropropene trans-1,3-Dichloropropene	46.9	2.5	50	0	94	63	131	44.77	4.7(20)	
1,1,2-Trichloroethane	42.5 48.7	2.5 2.5	50 50	0	85 97	65 70	136 131	40.16 48.05	5.6(20)	
Toluene	51	1.3	50	0	102	68	131	48.05	1.2(20) 4.2(20)	
1,3-Dichloropropane	51.9	2.5	50	Õ	104	70	130	51.19	1.4(20)	
Dibromochloromethane	49.2	2.5	50	0	98	42	155	47.41	3.6(20)	
1,2-Dibromoethane (EDB) Tetrachloroethene	102	5	100	0	102	70	130	100.9	1.0(20)	
1,1,1,2-Tetrachloroethane	49.7 50.7	2.5 2.5	50 50	0 0	99 101	65 70	130 130	48.04	3.4(20)	
Chlorobenzene	48.9	2.5	50 50	0	98	70	130	48.1 46.73	5.3(20) 4.5(20)	
Ethylbenzene	48.3	1.3	50	Ő	97	68	130	46.59	3.7(20)	
m,p-Xylene	49	1.3	50	0	98	68	131	47.07	4.1(20)	
Bromoform Styrene	43.9	2.5	50	0	88	65	143	42.34	3.5(20)	
o-Xylene	48.9 48.9	2.5 1.3	50	0	98	59 70	153	47.44	3.1(37)	
1,1,2,2-Tetrachloroethane	46.1	2.5	50 50	0 0	98 92	70 67	130 130	47.13 46.86	3.7(20) 1.7(20)	
1,2,3-Trichloropropane	86.1	10	100	ŏ	86	70	130	89.46	3.8(20)	
Isopropylbenzene	51.4	2.5	50	Ó	103	55	138	48.86	5.0(20)	
Bromobenzene p. Bronylbanzona	48.9	2.5	50	0	98	70	130	46.87	4.3(20)	
n-Propylbenzene 4-Chlorotoluene	52.4 52.3	2.5	50	0	105	67	133	48.85	7.1(30)	
2-Chlorotoluene	52.3 50.8	2.5 2.5	50 50	0 0	105 102	70 70	130 130	49.87 48.11	4.7(20) 5.3(20)	
1,3,5-Trimethylbenzene	50.8	2.5	50	Ő	102	67	134	48.44	4.7(21)	
tert-Butylbenzene	49.6	2.5	50	Ō	99	55	147	47.32	4.7(20)	
1,2,4-Trimethylbenzene	50.7	2.5	50	0	101	65	135	48.94	3.6(25)	
sec-Butylbenzene 1,3-Dichlorobenzene	50.8	2.5	50	0	102	68	135	48.54	4.5(20)	
1,4-Dichlorobenzene	50.8 48.6	2.5 2.5	50 50	0	102 97	70 70	130	49.12	3.3(20)	
4-Isopropyltoluene	50.9	2.5	50 50	0	97 102	70 68	130 132	47.49 49.29	2.4(20) 3.3(20)	
1,2-Dichlorobenzene	48	2.5	50	Ő	96	70	130	46.72	2.7(20)	
n-Butylbenzene	54.8	2.5	50	Ō	110	62	134	52.31	4.6(21)	
1,2-Dibromo-3-chloropropane (DBCP) 1,2,4-Trichlorobenzene	227	15	250	• 0	91	64	130	219.1	3.5(20)	
Naphthalene	53.4 44	10	50	0	107	62	133	51	4.5(29)	
Hexachlorobutadiene	44 94.9	10 10	50 100	0 0	88 95	32 63	166 130	43.88 88.11	0.2(40) 7.4(21)	
1,2,3-Trichlorobenzene	50.3	10	50	0	95 101	55	130	50.59	0.5(36)	
Surr: 1,2-Dichloroethane-d4	45.4		50	5	91	70	130		(00)	
Surr: Toluene-d8	52.3		50		105	70	130			



<b>Date:</b> 04-Mar-11	QC	Summary Re	eport			Work Order: 11030145
Surr: 4-Bromofluorobenzene	51	50	102	70	130	



<b>Date:</b> 04-Mar-11	(	QC S	ummar	y Repor	t				<b>Work Ord</b> 11030145	
Sample Matrix Spike Duplicate		Туре М	ISD Te	est Code: EF	PA Met	hod SW82				
File ID: 11030311.D				atch ID: MS1		03 <b>M</b>	Analys	is Date:	03/03/2011 12:00	
Sample ID: 11030145-07AMSD	Units : µg/L			SD_15_1103			Prep D		03/03/2011 12:00	
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME) F	RPDRefV	al %RPD(Limit)	Qual
Dichlorodifluoromethane	30.9	2.5		0	62	21	138	32.18		
Chloromethane Vinyl chloride	41.7	10		0	83	23	144	42.76		
Chloroethane	44 43.7	2.5 2.5		0	88 87	49 21	136 159	44.64 45.59	· · ·	
Bromomethane	39.3	10		0	79	10	174	37.54		
Trichlorofluoromethane	41.5	2.5		Ō	83	32	154	42.48		
1,1-Dichloroethene	43.2	2.5		0	86	64	130	44.38		
Dichloromethane Freon-113	42.4	10		0	85	69 55	130	43.43	· · ·	
trans-1,2-Dichloroethene	44.6 43.7	2.5 2.5		0 0	89 87	55 63	141 130	45.67 44.6	2.3(40) 2.0(20)	
Methyl tert-butyl ether (MTBE)	48.7	1.3		0	97	47	150	47.81		
1,1-Dichloroethane	45.5	2.5		Õ	91	66	130	46.41		
2-Butanone (MEK)	773	50		0	77	23	182	765.4	1.1(22)	
cis-1,2-Dichloroethene Bromochloromethane	46.5	2.5		0	93	70	130	47.76		
Chloroform	46.8 40.7	2.5 2.5		0	94 81	70 70	132 130	48.1 42.15	2.7(20) 3.5(20)	
2,2-Dichloropropane	46.7	2.5		0	93	38	150	42.15	2.6(22)	
1,2-Dichloroethane	43.8	2.5		Ő	88	65	134	44.49		
1,1,1-Trichloroethane	44.2	2.5	50	0	88	65	136	45.16		
1,1-Dichloropropene	45.3	2.5		0	91	68	132	47.13	· · ·	
Carbon tetrachloride Benzene	41.5	2.5		0	83	58	148	41.42	· · ·	
Dibromomethane	43.4 47.1	1.3 2.5		0 0	87 94	59 70	138 130	44.35 47.59		
1,2-Dichloropropane	48.2	2.5		0	94 96	70	130	47.59		
Trichloroethene	44.6	2.5		Ő	89	65	144	45.34		
Bromodichloromethane	46.9	2.5	50	0	94	50	157	47.29		
4-Methyl-2-pentanone (MIBK)	115	13		0	92	20	182	114.7		
cis-1,3-Dichloropropene trans-1,3-Dichloropropene	44.3 41.8	2.5		0	89	63 65	131	45.14	( )	
1,1,2-Trichloroethane	47.9	2.5 2.5		0 0	84 96	65 70	136 131	41.66 47.94	· · ·	
Toluene	48.2	1.3		Ő	96	68	130	48.2	0.0(20)	
1,3-Dichloropropane	52.2	2.5		0	104	70	130	51.71	0.9(20)	
Dibromochloromethane	49.3	2.5		0	99	42	155	49.54	· · /	
1,2-Dibromoethane (EDB) Tetrachloroethene	105	5		0	105	70	130	103.8		
1,1,1,2-Tetrachloroethane	45.8 49.2	2.5 2.5		0 0	92 98	65 70	130 130	46.02 49.11	0.6(20) 0.2(20)	
Chlorobenzene	46.5	2.5		0	93	70	130	46.63		
Ethylbenzene	45.1	1.3		Ō	90	68	130	45.33		
m,p-Xylene	45.7	1.3		0	91	68	131	45.83		
Bromoform Styrene	44	2.5		0	88	65 50	143	43.97		
o-Xylene	46.6 46.1	2.5 1.3		0 0	93 92	59 70	153 130	47.07 46.2	0.9(37) 0.3(20)	
1,1,2,2-Tetrachloroethane	48.4	2.5		Ő	97	67	130	47.68		
1,2,3-Trichloropropane	91.5	10		Ō	92	70	130	91.11	0.4(20)	
Isopropylbenzene	46.8	2.5		0	94	55	138	47.17		
Bromobenzene n-Propylbenzene	46.3	2.5		0	93	70	130	46.34	0.0(20)	
4-Chlorotoluene	47.6 48.8	2.5 2.5		0 0	95 98	67 70	133 130	47.78 49.52	0.4(30) 1.4(20)	
2-Chlorotoluene	40.0	2.5		0	90 94	70	130	49.52	0.3(20)	
1,3,5-Trimethylbenzene	46.4	2.5		Ő	93	67	134	47.2	1.8(21)	
tert-Butylbenzene	45.2	2.5	50	0	90	55	147	45.74	1.2(20)	
1,2,4-Trimethylbenzene	47.6	2.5		0	95	65	135	47.44	0.3(25)	
sec-Butylbenzene 1,3-Dichlorobenzene	46.3 48.7	2.5 2.5		0	93	68 70	135	46.9	1.2(20)	
1,4-Dichlorobenzene	46.7	2.5 2.5	50 50	0 0	97 93	70 70	130 130	48.81 46.68	0.2(20) 0.0(20)	
4-isopropyltoluene	47.4	2.5	50	Ő	95	68	132	47.34	0.1(20)	
1,2-Dichlorobenzene	46.3	2.5	50	Ō	93	70	130	46.51	0.6(20)	
n-Butylbenzene	50.9	2.5	50	0	102	62	134	50.78	0.1(21)	
1,2-Dibromo-3-chloropropane (DBCP) 1,2,4-Trichlorobenzene	236	15	250	0	94	64	130	234.8	0.3(20)	
Naphthalene	53.7 46.1	10 10	50 50	0	107 92	62 32	133 166	52.6 46.56	2.0(29)	
Hexachlorobutadiene	91.7	10	100	U . 0	92 92	32 63	130	46.56 90.2	1.1(40) 1.6(21)	
1,2,3-Trichlorobenzene	51.8	10	50	0	104	55	138	52.18	0.8(36)	
Surr: 1,2-Dichloroethane-d4	46.6		50		93	70	130		× ·/	
Surr: Toluene-d8	53		50		106	70	130			



255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

<b>Date:</b> 04-Mar-11	QC	Summary Re	port			<b>Work Order:</b> 11030145
Surr: 4-Bromofluorobenzene	50.6	50	101	70	130	

#### Comments:

**Billing Information :** 

# CHAIN\_DE\_CIICTONV RECORD

Page: 1 of 2

piling monitoria.	CHAIN	CHAIN-OF-CUSTODY RECORD	RECORD		Page:	Page: 1 of 2
	255 Glen	Alpha Analytical, Inc. 255 Glendale Avenue Suite 21 Sparks Nevada 89431-577	<b>nc.</b> 4a 89431-5778	WorkOrder :	WorkOrder : BMIS11030145	<b>t</b> 5
-	II	TEL: (775) 355-1044 FAX: (775) 355-0406		Report Due By : 5:00 PM On : 14-Mar-11	5:00 PM On : 14	4-Mar-11
Client:	<b>Report Attention</b>	Phone Number EMail	EMail Address			
Battelle Memorial Institute	David Conner	(619) 726-7311 x connero	connerd@battelle.org			
555 West Broadway Suite 1420	Betsy Cutie	(614) 424-4899 x cutice@	cutiee@batelle.org	EDD Required : Yes	č	
San Diego, CA 92101	Shane Walton	(614) 424-4117 x waltons	waltons@battelle.org	Sampled by : Chase Brogdon	ase Brogdon	
PO: 218013				<u>Cooler Temp</u>	Samples Received	Date Printed
Client's COC #: 33408, 33399 Jo	Job : G005862/JPL Groundwater Monitoring	dwater Monitoring		1 °C	01-Mar-11	01-Mar-11
QC Level : DS4 = DOD QC Required : Fi	nal Rpt, MBLK, InitCal/Cor	= DOD QC Required : Final Rpt, MBLK, InitCal/ConCal data, LCS, MS/MSD With Surrogates	rogates			
			Requested Tests	ests		
Alpha Client	Collection No. of Bottles	300_0_W	314_W METALS_D VOC_TIC_ VOC_W	×		

≥ **Comments:** BMI11030145-10A BMI11030145-09A MW-24-1 BMI11030145-08A MW-24-2 BMI11030145-07A Sample ID BMI11030145-06A MW-24-4 BMI11030145-05A BMI11030145-04A BMI11030145-03A MW-17-2 BMI11030145-02A BMI11030145-01A MW-17-4 EB-05-02/28/11 EB-04-02/25/11 MW-24-3 MW-17-3 Security seals intact. Frozen ice. Temp Blank #8391 received @ 1°C. Level IV QC. Samples should be used as the control spike sample if possible (LE:: MS/MSD) : TB-04-02/25/11 Sample ID Ą Ą ð Ą ð ð ð ð ð ð Matrix Date 02/28/11 10:29 02/28/11 10:44 02/28/11 09:57 02/28/11 09:29 02/28/11 08:56 02/25/11 10:14 02/25/11 09:48 02/25/11 07:00 02/25/11 02/25/11 09:15 10:34 Alpha S G 10 10 ບາ -----J S S Sub 0 0 0 0 0 0 0 0 0 0 TAT 9 ဖ ശ ဖ ം ശ ശ 9 ဖ 9 CI, SO4, NO3, NO2, PO4 ļ Perchlorate Perchlorate Perchlorate Perchlorate Perchlorate Perchlorate Perchlorate Perchlorate Ľ Ω Ω Ç Ω Q Ω ç Ω ç ٤ Ľ VOC by 524 VOC by 524 Criteria Criteria VOC by 524 Criteria Criteria VOC by 524 VOC by 524 Criteria Criteria Criteria ₹į I ľ Reno TB, 12/14/10 Sample Remarks MS/MSD MS/MSD

Matrix Type: AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense. Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

Logged in by:

Auro

rep-mary

and

MUMMSor

Alpha Analytical, Inc. Company

3/1/11/2

Date/Time

Print Name

Signature

Sparks, Nevada 89431-5778 Phone (775) 355-1044 Fax (775) 355-0406 Report Attention / Project Manager D. Canver B. Canver D. Canver Mobile: $SP - 72 - 7314$ Mobile: $SP - 72 - 7314$ De Description TAT Filtered 3. 2	Analyses Required
	× × × ×
-2 -2 -25/11 -2V	X X X MS/MSD
-02/25/11	X TOUP BLANK
I, (field sampler), attest to the validity and authenticity of this sample, an aware that tempering with or intentionally mislabeling the sa grounds for legal action (WAC 445-0636 (c) (2)). Sampled By:	ample location, date or time of collection is considered frau Are Grant Date: 1/28/// Time:
The Received by: (Signatura/Affiliation)	CUMU Date: Time:
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Sparks, Nevada 89431-5778       Report Attention / Project Manager       D. Conv. Can       Bar (775) 355-0406       Bar (775) 355-0406       Bar (775) 355-0406       D. Conv. Can       Bar (775) 355-0406       <

Billing Information;	Alpha Analytical Inc	nples Collected From Which State?
Company Name DAI/ELLC	255 Glendale Avenue, Suite 21	ID OR OTHER Pare # / of
スこし	Phone (775) 355-1044	
City, State, Zip Columbus off, 43201		Analyses Required
HOL Job #	GOOSTOL	No N.
TOWN AHE C-205 Name -	Report Attention / Project Manager	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Email:	CONNELLS @ BATTCLLE, ONLY	_ / V V V V V V V V V V V V V V V V V V
See Kev P.O. # 2/8 2/3	14 - 458 -6641 Mobile: 619 - 726 - 7311	Giobal
	Sample Description TAT Filed # Containers**	7 4 R VI 2 1 / F
1855 45/1 AR BONTE 110747145-06 MW-24-4	24-4 18	
	6~	· X X X I MS/MSD
057 1 -08 MW-24-2	4-2 3v2p	XXX
1044 -05 MW-24-	4-1 3v 2p	0 X X X X
20-23 01-21 V 1 1 1 2201	05-02/28/11 3120	> X X X Camp Blank
20-521 11- mar 1 mar 204 1/20/0000	15-02/28/11 11	X Trip Burnk
ADDITIONAL INSTRUCTIONS:		
I, (field sampler), attest to the validity and authenticity of this samp grounds for legal action (NAC 445.0636 (c) (2)). Sampled By:	ble. I ampaware that tampering with or intentionally mislabeling the second s	I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action (NAC 445.0636.(c) (2)). Sampled By:
Relinquished by: (Signature) (This is a transformed by The	NS/647 Received by: (Signet Statisticion)	Aulitical Date: Time: Date: 1500
Relinquished by: (Sunancertamation)	Received by: (Signature/Affiliation)	Olana Date Time:
Relinquished by: (Signature/Affiliation)	Reseived by: (Signature/Affiliation)	Date: Time:
'Kev: AQ - Aqueous SO - Soil WA - Waste OT	OT - Other AR - Air **: L-Liter V-Voa S-Soil Jar	ar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

of the above samples is applicable only to those samples received by the laboratory with this coc. The liability of the laboratory is limited to the amount paid for the report.

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense. The report for the analysis



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#### Date: 07-Mar-2011 David Conner **Battelle Memorial Institute CASE NARRATIVE** Suite 1420 655 West Broadway San Diego, CA 92101 (619) 726-7311 G005862/JPL Groundwater Monitoring Job: 2°C **Cooler Temp:** BMI11030203 Work Order: Matrix Alpha's Sample ID Client's Sample ID Aqueous MW-16 11030203-01A Aqueous 11030203-02A Trip Blank **Manually Integrated Analytes** Analyte Alpha's Sample ID Test Reference NONE

Enclosed please find the analytical results of the samples received by Alpha Analytical, Inc. under the above mentioned Work Order/Chainof-Custody.

Alpha Analytical, Inc. has a formal Quality Assurance/Quality Control program, which is designed to meet or exceed the EPA requirements. All relevant QC met quality assurance objectives for this project unless otherwise stated in the footnotes.

If you have any questions with regards to this report, please contact Randy Gardner, Project Manager, at (800) 283-1183.

Walter Arihm Roger Scholl Kandy Daulmer

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.



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#### **ANALYTICAL REPORT**

Battelle Memorial Institute 655 West Broadway San Diego, CA 92101 Attn:David ConnerPhone:(619) 726-7311Fax:(614) 458-6641Date Received : 03/02/11

#### Job: G005862/JPL Groundwater Monitoring

		Anions by IC EPA Method 300.0			
	Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: MW-16					
Lab ID : BMI11030203-01A	Chloride	69	50 mg/L	03/02/11 09:55	03/02/11 13:21
Date Sampled 03/01/11 17:15	Nitrite (NO2) - N	ND	0.25 mg/L	03/02/11 09:55	03/02/11 13:21
•	Nitrate (NO3) - N	0.99	0.25 mg/L	03/02/11 09:55	03/02/11 13:21
	Phosphate, ortho - P	ND	0.50 mg/L	03/02/11 09:55	03/02/11 13:21
	Sulfate (SO4)	53	0.50 mg/L	03/02/11 09:55	03/02/11 13:21

ND = Not Detected

Roger Scholl

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e⁄ 3/15/11 Report Date



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#### ANALYTICAL REPORT

Battelle Memorial Institute 655 West Broadway San Diego, CA 92101 Attn:David ConnerPhone:(619) 726-7311Fax:(614) 458-6641Date Received : 03/02/11

#### Job: G005862/JPL Groundwater Monitoring

· · · · · · · · · · · · · · · · · · ·		Perchlorate by Ion Chromatography EPA Method 314.0			
	Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: MW-16 Lab ID : BMI11030203-01A Date Sampled 03/01/11 17:15	Perchlorate	ND	1.00 µg/L	03/02/11 12:21	03/02/11 18:24

ND = Not Detected

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**Report Date** 



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#### ANALYTICAL REPORT

Battelle Memorial Institute 655 West Broadway San Diego, CA 92101 
 Attn:
 David Conner

 Phone:
 (619) 726-7311

 Fax:
 (614) 458-6641

 Date Received : 03/02/11

#### Job: G005862/JPL Groundwater Monitoring

		Metals by ICPMS EPA Method 200.8			
	Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: <b>MW-16</b> Lab ID : BMI11030203-01A Date Sampled 03/01/11 17:15	Chromium (Cr)	0.029	0.0050 mg/L	03/02/11 09:08	03/15/11 10:28

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#### ANALYTICAL REPORT

Battelle Memorial Institute 655 West Broadway San Diego, CA 92101 Job: G005862/JPL Groundwater Monitoring Attn: David Conner Phone: (619) 726-7311 Fax: (614) 458-6641

Tentatively Identified Compounds - Volatile Organics by GC/MS

	Parameter	Estimated Concentration	Estimated Reporting Limit	Date Date Extracted Analyzed
Client ID :       MW-16         Lab ID :       BMI11030203-01A         Date Received :       03/02/11         Date Sampled :       03/01/11 17:15	*** None Found ***	ND	2.0 μg/L	03/04/11 14:21 03/04/11 14:21
Client ID :Trip BlankLab ID :BMI11030203-02ADate Received :03/02/11Date Sampled :03/01/11 00:00	* * * None Found * * *	ND	2.0 µg/L	03/04/11 12:55 03/04/11 12:55

Note: Analysis conducted using EPA Method 524.2 criteria. ND = Not Detected

Roger Scholl

Kandy Soulmer

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3/15/11 **Report Date** 

Page 1 of 1



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> Attn: Phone:

Fax:

#### ANALYTICAL REPORT

David Conner

(619) 726-7311 (614) 458-6641

Battelle Memorial Institute	
655 West Broadway	
San Diego, CA 92101	
Job: G005862/JPL Groundwater Monitoring	

Alpha Analytical Number: BMI11030203-01A Client I.D. Number: MW-16

Sampled:	03/01/11 17:15
Received:	03/02/11
Extracted:	03/04/11 14:21
Analyzed:	03/04/11 14:21

#### Volatile Organics by GC/MS EPA Method SW8260B

	Compound	Concentration	Reporting	Limit		Compound	Concentration	Reporting Li	mit
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	5.0	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	10	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBC		2.5	µg/L
25	Trichloroethene	ND	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	16	0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	98	(70-130)	%REC
30	1,1,2-Trichloroethane	• ND	0.50	µg/L	65	Surr: Toluene-d8	111	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	98	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	17	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl

Kandy Saulmen

Walter Arihm

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Page 1 of 1



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#### ANALYTICAL REPORT

Battelle	Memorial Institute	Attn:	David Conner
655 Wes	st Broadway	Phone:	(619) 726-7311
San Dieg	go, CA 92101	Fax:	(614) 458-6641
Job:	G005862/JPL Groundwater Monitoring		

Alpha Analytical Number: BMI11030203-02A Client I.D. Number: Trip Blank

Sampled:	03/01/11 00:00
Received:	03/02/11
Extracted:	03/04/11 12:55
Analyzed:	03/04/11 12:55

#### Volatile Organics by GC/MS EPA Method SW8260B

	Compound	Concentration	Reporting	Limit		Compound	Concentration	Reporting Li	imit
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBC	P) ND	2.5	µg/L
25	Trichloroethene	ND	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	μg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	94	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	103	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	98	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L			,		
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl

Kandy Danlmer

Walter Airian

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#### VOC Sample Preservation Report

Work Order: BMI11030203	Job: G005862/JPL G	roundwater Monitoring		
Alpha's Sample ID	Client's Sample ID	Matrix	рН	
11030203-01A	MW-16	Aqueous	2	
11030203-02A	Trip Blank	Aqueous	2	

3/15/11 Report Date



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Date: 15-Mar-11	(	QC Si	ummar	y Repor	t				<b>Work Order:</b> 11030203		
Method Blank File ID: 25		Туре: М		est Code: El		hod 300.0	Analysis Da	te: 03/02/2011 12	2:25		
Sample ID: MB-26084	Units : mg/L		Run ID: IC	_2_110302A	۱.		Prep Date:	03/02/2011 09	9:55		
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME) RPDR	efVal %RPD(Lim	it) Qua		
Chloride	ND	0.5									
Nitrite (NO2) - N	ND	0.25									
Nitrate (NO3) - N	ND	0.25									
Phosphate, ortho - P	ND	0.5									
Sulfate (SO4)	ND	0.5	·								
Laboratory Fortified Blank		Type: L	FB Te	est Code: EF	PA Met	hod 300.0					
File ID: <b>26</b>			Ba	atch ID: 2608	34		Analysis Da	te: 03/02/2011 12	2:44		
Sample ID: LFB-26084	Units : mg/L		Run ID: IC	_2_110302A	1		Prep Date:	03/02/2011 09	9:55		
Analyte	Result	PQL				LCL(ME)	UCL(ME) RPDR	efVal %RPD(Lim	it) Qua		
Chloride	52.9	0.5		· ·	106	90	110		<u>.</u>		
Nitrite (NO2) - N	4.82	0.25			96	90	110				
Nitrate (NO3) - N	5.47	0.25			109	90	110				
Phosphate, ortho - P	4.77	0.5	5		95	90	110				
Sulfate (SO4)	109	0.5	100		109	90	110				
Sample Matrix Spike		Type: L	FM Te	est Code: EF	PA Met	hod 300.0					
File ID: 35			Ba	atch ID: 2608	34		Analysis Dat	te: 03/02/2011 15	5:30		
Sample ID: 11030204-08ALFM	Units : mg/L		Run ID: IC	_2_110302A	1		Prep Date:	03/02/2011 09	9:55		
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME) RPDR	efVal %RPD(Lim	it) Qua		
Chloride	165	0.5	100	74.73	91	80	120				
Nitrite (NO2) - N	9.99	0.25	10	0	99.9	80	120				
Nitrate (NO3) - N	12.1	0.25	10	1.128	110	80	120				
Phosphate, ortho - P	9.91	0.5		0	99	80	120				
Sulfate (SO4)	231	0.5	200	52.63	89	80	120				
Sample Matrix Spike Duplicate		Type: Ll	FMD Te	est Code: EF	PA Met	hod 300.0					
File ID: 36			Ba	atch ID: 2608	34		Analysis Dat	te: 03/02/2011 15	5:49		
Sample ID: 11030204-08ALFMD	Units : mg/L		Run ID: IC	_2_110302A	ι		Prep Date:	03/02/2011 09	9:55		
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME) RPDR	efVal %RPD(Lim	it) Qua		
Chloride	169	0.5		74.73	94	80	·· · ·	5.4 2.1(15)			
Nitrite (NO2) - N	10	0.25		0	100	80		993 0.3(15)			
Nitrate (NO3) - N	12.1	0.25		1.128	110	80	120 12	2.08 0.2(15)			
Phosphate, ortho - P	10.3	0.5		0	103	80		915 3.9(15)			
Sulfate (SO4)	233	0.5	200	52.63	90	80	120 23	80.7 1.1(15)	1		

#### Comments:



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<b>Date:</b> 07-Mar-11	QC Summary Report										
Method Blank File ID: 14	<u>, , , , , , , , , , , , , , , , , , , </u>	Туре	MBLK		st Code: EF		hod 314.0		sis Date:	03/02/2011 11:39	
Sample ID: MB-26092	Units : µg/L		Run IE	): <b>IC_</b>	_3_110302A	•		Prep	Date:	03/02/2011 12:21	
Analyte	Result	PQL	Spk	Val	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRef\	/al %RPD(Limit)	Qua
Perchlorate	ND		1				-				
Laboratory Fortified Blank File ID: 15		Туре	LFB		st Code: EF		hod 314.0		sis Date:	03/02/2011 11:57	
Sample ID: LFB-26092	Units : µg/L		Run ID	): <b>IC</b> _	3_110302	۱.		Prep	Date:	03/02/2011 12:21	
Analyte	Result	PQL					LCL(ME)	UCL(ME)	RPDRef\	/al %RPD(Limit)	Qua
Perchlorate	25.4		2	25		102	85	115			
Sample Matrix Spike File ID: 20		Туре	LFM		st Code: EF		hod 314.0		sis Date:	03/02/2011 13:29	
Sample ID: 11030145-03AL	-M Units : μg/L		Run IE	): <b>IC</b>	_3_110302A	1		Prep	Date:	03/02/2011 12:21	
Analyte	Result	PQL					LCL(ME)	UCL(ME)	RPDRef\	/al %RPD(Limit)	Qua
Perchlorate	50.3		2	25	24.07	105	80	120		· · · · · ·	
Sample Matrix Spike Dupli	cate	Туре	LFMD		st Code: EF		hod 314.0				
File ID: 21					tch ID: 2609					03/02/2011 13:48	
Sample ID: 11030145-03AL	FMD Units : µg/L		Run IC	): <b>IC</b> _	_3_110302A	1		Prep	Date:	03/02/2011 12:21	
Analyte	Result	PQL	Spk	Val	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRef\	/al %RPD(Limit)	Qua
Perchlorate	52.1		2	25	24.07	112	80	120	50.28	3 3.6(15)	

#### Comments:

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<b>Date:</b> 07-Mar-11	QC Summary Report									<b>der:</b> )3
Method Blank File ID: 030211.B\059_M.D\		Туре М		est Code: El atch ID: 260		hod 200.8		is Date:	03/02/2011 16:4 <sup>.</sup>	1
Sample ID: MB-26081	Units : mg/L		Run ID: IC	P/MS_1103	02B		Prep D	Date:	03/02/2011 09:08	В
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRef	Val %RPD(Limit)	Qua
Chromium (Cr)	ND	0.005	5							
Laboratory Control Spike		Туре L	CS Te	est Code: El	PA Met	hod 200.8				
File ID: 030211.B\060_M.D\			Ba	atch ID: 260	81		Analys	sis Date:	03/02/2011 16:4	7
Sample ID: LCS-26081	Units : mg/L		Run ID: IC	P/MS_1103	02B		Prep D	Date:	03/02/2011 09:08	B
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRef	Val %RPD(Limit)	Qua
Chromium (Cr)	0.0542	0.005	5 0.05		108	85	115			
Sample Matrix Spike		Туре М	NS TO	est Code: El	PA Met	hod 200.8				
File ID: 030211.B\065_M.D\			Ba	atch ID: 260	81		Analys	sis Date:	03/02/2011 17:1	5
Sample ID: 11030145-03AMS	Units : mg/L		Run ID: IC	P/MS_1103	02B		Prep D	Date:	03/02/2011 09:0	8
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRef	Val %RPD(Limit)	Qua
Chromium (Cr)	0.0532	0.00	5 0.05	0	106	70	130			
Sample Matrix Spike Duplicate		Туре М	NSD T	est Code: El	PA Met	hod 200.8				
File ID: 030211.B\066_M.D\			Ba	atch ID: 260	81		Analys	sis Date:	03/02/2011 17:2	1
Sample ID: 11030145-03AMSD	Units : mg/L		Run ID: IC	P/MS_1103	02B		Prep D	Date:	03/02/2011 09:0	8
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRef	Val %RPD(Limit)	Qua
Chromium (Cr)	0.0529	0.00	5 0.05	0	106	70	130	0.053	32 0.6(20)	

**Comments:** 



<b>Date:</b> 08-Mar-2011		(	<b>Work Order:</b> 11030203						
Method Blan File ID: 110304			Type ME		e: EPA Methe MS15W0304			03/04/2011 10:46	
Sample ID: Analyte	MBLK MS15W0304M	Units : <b>µg/L</b> Result	F PQL	Run ID: <b>MSD_15_</b> SpkVal_SpkRe		LCL(ME) L	Prep Date: ICL(ME) RPDRef\	03/04/2011 10:46 /al %RPD(Limit)	Qua
Dichlorodifluoro	methane	ND	0.5	<u></u>		<u></u>			
Chloromethane Vinyl chloride		ND ND	1 0.5						
Chloroethane		ND	0.5						
Bromomethane		ND	1						
Trichlorofluorom		ND	0.5						
Dichloromethan		ND ND	0.5 1						
Freon-113	•	ND	0.5						
trans-1,2-Dichlo		ND	0.5						
Methyl tert-butyl		ND	0.5						
1,1-Dichloroetha 2-Butanone (ME		ND ND	0.5 10						
cis-1,2-Dichloro		ND	0.5						
Bromochlorome	thane	ND	0.5						
Chloroform		ND	0.5						
2,2-Dichloroprop 1,2-Dichloroetha		ND ND	0.5 0.5						
1,1,1-Trichloroe		ND	0.5						
1,1-Dichloropro		ND	0.5						
Carbon tetrachle	oride	ND	0.5						
Benzene Dibromomethan		ND ND	0.5 0.5						
1,2-Dichloropro		ND	0.5						
Trichloroethene		ND	0.5						
Bromodichlorom		ND	0.5						
4-Methyl-2-pent cis-1,3-Dichloro		ND ND	2.5 0.5						
trans-1,3-Dichio		ND	0.5						
1,1,2-Trichloroe		ND	0.5						
Toluene		ND	0.5						
1,3-Dichloroprop Dibromochloron		ND ND	0.5 0.5						
1,2-Dibromoeth		ND	0.5						
Tetrachloroethe	ne	ND	0.5						
1,1,1,2-Tetrachl	oroethane	ND	0.5						
Chlorobenzene Ethvlbenzene		ND ND	0.5						
m,p-Xylene		ND	0.5 0.5						
Bromoform		ND	0.5						
Styrene		ND	0.5						
o-Xylene		ND	0.5						
1,1,2,2-Tetrachl 1,2,3-Trichlorop		ND ND	0.5 1						
Isopropylbenzer	-	ND	0.5						
Bromobenzene		ND	0.5						
n-Propylbenzen 4-Chlorotoluene		ND ND	0.5 0.5						
2-Chlorotoluene		ND	0.5						
1,3,5-Trimethylt	penzene	ND	0.5						
tert-Butylbenzer		ND	0.5						
1,2,4-Trimethylt sec-Butylbenze		ND ND	0.5 0.5						
1,3-Dichloroben		ND	0.5						
1,4-Dichloroben	zene	ND	0.5						
4-Isopropyltolue		ND	0.5						
1,2-Dichloroben n-Butylbenzene		ND ND	0.5 0.5						
	chloropropane (DBCP)	ND	2.5						
1,2,4-Trichlorob		ND	1						
Naphthalene	diana	ND	1						
Hexachiorobuta 1,2,3-Trichlorob		ND ND	1						
Surr: 1,2-Dichlo		9.72	I	10	97	70	130		
Surr: Toluene-d		10.6		10	106	70	130		



<b>Date:</b> 08-Mar-2011	QC	<b>Work Order:</b> 11030203				
Surr: 4-Bromofluorobenzene	10.1	10	101	70	130	



Date: 08-Mar-2011	(	2C S	ummar	y Report			Work Ord 1103020	
Laboratory Control Spike		Type L	CS Te	est Code: EPA Meth	od SW82			
File ID: 11030403.D			Ba	atch ID: MS15W030	4M	Analysis Date:	03/04/2011 09:31	
Sample ID: LCS MS15W0304M	Units : µg/L		Run ID: M	SD_15_110304B		Prep Date:	03/04/2011 09:31	
Analyte	Result	PQL		SpkRefVal %REC	LCL(ME)	UCL(ME) RPDRef	Val %RPD(Limit)	Qua
Dichlorodifluoromethane	6.7	1		67	70(70)	130		L50
Chloromethane	9	2		90	70	130		
Vinyl chloride	9.16	1		92	70	130		
Chloroethane	9.57	1		96	70	130		
Bromomethane	7.02	2		70	70	130		
Trichlorofluoromethane	9.16	1		92	70	130		
1,1-Dichloroethene Dichloromethane	10.3 9.45	1		103 95	70 70	130 130		
Freon-113	9.45 10.1	2		95 101	70	130		
trans-1,2-Dichloroethene	10.1	1		103	70	130		
Methyl tert-butyl ether (MTBE)	8.87	0.5		89	70	130		
1,1-Dichloroethane	10.4	1	10	104	70	130		
2-Butanone (MEK)	176	10		88	70	130		
cis-1,2-Dichloroethene	10.4	1		104	70	130		
Bromochloromethane Chloroform	9.74 9.37	1	10 10	97 94	.70 70	130 130		
2,2-Dichloropropane	9.37	1	10	94 102	70 70	130		
1,2-Dichloroethane	9.03	1		90	70	130		
1,1,1-Trichloroethane	10.2	1		102	70	130		
1,1-Dichloropropene	10.6	1		106	70	130		
Carbon tetrachloride	9.05	1		91	70	130		
Benzene	9.88	0.5		99	70	130		
Dibromomethane 1,2-Dichloropropane	9.56	1		96 106	70 70	130 130		
Trichloroethene	10.6 10.5	1		106 105	70 70	130		
Bromodichloromethane	10.5	1		103	70	130		
4-Methyl-2-pentanone (MIBK)	22.2	2.5		89	20	182		
cis-1,3-Dichloropropene	9.61	1		96	70	130		
trans-1,3-Dichloropropene	8.36	1		84	70	130		
1,1,2-Trichloroethane	9.55	1		96	70	130		
Toluene 1,3-Dichloropropane	10.7	0.5		107	70 70	130 130		
Dibromochloromethane	10 9.83	1		100 98	70	130		
1,2-Dibromoethane (EDB)	20.2	2		101	70	130		
Tetrachloroethene	10.5	1		105	70	130		
1,1,1,2-Tetrachloroethane	10.7	1	10	107	70	130		
Chlorobenzene	10.5	1		105	70	130		
Ethylbenzene	10.6	0.5		106	70	130		
m,p-Xylene Bromoform	10.8 9.01	0.5		108 90	70 70	130 130		
Styrene	10.9	1		90 109	70	130		
o-Xylene	10.9	0.5		109	70	130		
1,1,2,2-Tetrachloroethane	9.58	1		96	70	130		
1,2,3-Trichloropropane	18.4	2	2 20	92	70	130		
Isopropylbenzene	11	1		110	70	130		
Bromobenzene n-Propylbenzene	10.3	1		103	70	130		
4-Chlorotoluene	11.3 11.4	1		113 114	70 70	130 130		
2-Chlorotoluene	10.9	1	10 10	109	70	130		
1,3,5-Trimethylbenzene	11	-		110	70	130		
tert-Butylbenzene	10.7	1		107	70	130		
1,2,4-Trimethylbenzene	11.1	1	10	111	70	130		
sec-Butylbenzene	10.8	1		108	70	130		
1,3-Dichlorobenzene	10.9	1	10	109	70	130		
1,4-Dichlorobenzene 4-Isopropyltoluene	10.3 10.9	1		103 109	70 70	130 130		
1,2-Dichlorobenzene	9.91	1		99	70	130		
n-Butylbenzene	11.5	1		115	70	130		
1,2-Dibromo-3-chloropropane (DBCP)	43.3	3		87	67	130		
1,2,4-Trichlorobenzene	10.7	2	2 10	107	70	130		
Naphthalene	9.22	2		92	70	130		
Hexachlorobutadiene	18.7	2		93	70	130		
1,2,3-Trichlorobenzene Surr: 1,2-Dichloroethane-d4	10.5	2		105	70 70	130		
Surr: Toluene-d8	9.26 10.1		10 10	93 101	70 70	130 130		



<b>Date:</b> 08-Mar-2011	QC	Summary Re	port			<b>Work Order:</b> 11030203
Surr: 4-Bromofluorobenzene	10.2	10	102	70	130	



<b>Date:</b> 08-Mar-2011	(	QC S	ummary	Report	t				rk Orde 1030203	
Sample Matrix Spike		Туре М	IS Te	st Code: EP	A Met	hod SW8				
File ID: 11030409.D			Ba	tch ID: MS1	5W030	04M	Analysis	Date: 03/04/2011	11:50	
Sample ID: 11030203-01AMS	Units : µg/L		Run ID: MS	SD_15_1103	04B		Prep Date	e: 03/04/2011	11:50	
Analyte	Result	PQL				LCL(ME)	UCL(ME) RP	DRefVal %RPD(L	.imit)	Qu
Dichlorodifluoromethane	40.6	2.5		0	81	21	138			
Chloromethane	50.9	2.0		0	102	23	144			
Vinyl chloride	51.5	2.5		Ő	103	49	136			
Chloroethane	52.4	2.5		Ō	105	21	159			
Bromomethane	33.6	10		0	67	10	174			
Trichlorofluoromethane	50.2	2.5	50	0	100	. 32	154			
1,1-Dichloroethene	53.1	2.5		0	106	64	130			
Dichloromethane	48.5	10		0	97	69	130			
Freon-113	54	2.5		0	108	55	141			
trans-1,2-Dichloroethene	52.5	2.5		0	105 103	63 47	130 150			
Methyl tert-butyl ether (MTBE) 1,1-Dichloroethane	51.5 52.7	1.3 2.5		0	105	66	130			
2-Butanone (MEK)	814	50		0	81	23	182			
cis-1,2-Dichloroethene	53.4	2.5		ŏ	107	70	130			
Bromochloromethane	51.7	2.5		ŏ	103	70	132			
Chloroform	58.6	2.5		10.36	96	70	130			
2,2-Dichloropropane	52.4	2.5	5 50	0	105	38	154			
1,2-Dichloroethane	49	2.5		0	98	65	134	,		
1,1,1-Trichloroethane	51.3	2.5		0	103	65	136			
1,1-Dichloropropene	53.9	2.5		0	108	68	132			
Carbon tetrachloride	46.7	2.5		0	93	58	148 138			
Benzene Dibromomethane	50.3 53	1.3 2.5		0	101 106	59 70	130			
1,2-Dichloropropane	55.8	2.5		0	112	70	131			
Trichloroethene	52.4	2.5		0	105	65	144			
Bromodichloromethane	69	2.5		15.75	106	50	157			
4-Methyl-2-pentanone (MIBK)	124	13		0	99	20	182			
cis-1,3-Dichloropropene	47.7	2.5		0	95	63	131			
trans-1,3-Dichloropropene	42.6	2.5	5 50	0	85	65	136			
1,1,2-Trichloroethane	52.6	2.5		0	105	70	131			
Toluene	54.9	1.3		0	110	68	130			
1,3-Dichloropropane	57.1	2.5		0	114	70	130			
Dibromochloromethane 1.2-Dibromoethane (EDB)	69.2 112	2.5		16.65 0	105 112	42 70	155 130			
Tetrachloroethene	53.5	5 2.5		0	107	65	130			
1,1,1,2-Tetrachloroethane	54.3	2.5		0	109	70	130			
Chlorobenzene	52.6	2.5		ŏ	105	70	130			
Ethylbenzene	52.3	1.3		Ō	105	68	130			
m,p-Xylene	52.6	1.3	3 50	0	105	68	131			
Bromoform	51.6	2.5		5.01	93	65	143			
Styrene	48.2	2.5		0	96	59	153			
o-Xylene	52.9	1.3		0	106	70	130			
1,1,2,2-Tetrachloroethane	53.4	2.5		0	107	67	130			
1,2,3-Trichloropropane	99	10		0	99	70	130			
Isopropylbenzene Bromobenzene	52.7 50.4	2.5 2.5		0	105 101	55 70	138 130			
n-Propylbenzene	53.5	2.5		0	107	67	133			
4-Chlorotoluene	54.1	2.5		0	108	70	130			
2-Chlorotoluene	53.1	2.5		õ	106	70	130			
1,3,5-Trimethylbenzene	53.2	2.5		0	106	67	134			
tert-Butylbenzene	51.6	2.5	5 50	0	103	55	147			
1,2,4-Trimethylbenzene	53.5	2.5		0	107	65	135			
sec-Butylbenzene	53.2	2.5		0	106	68	135			
1,3-Dichlorobenzene	53.5	2.5		0	107	70	130			
1,4-Dichlorobenzene	51.3	2.5		0	103	70	130			
4-Isopropyltoluene 1,2-Dichlorobenzene	53.5	2.5		0	107	68 70	132 130			
n-Butylbenzene	50.4 56.6	2.5 2.5		0	101 113	70 62	130			
1,2-Dibromo-3-chloropropane (DBCP)	247	2.0		0	99	64	134			
1,2,4-Trichlorobenzene	58.8	1(		0	118	62	133			
Naphthalene	50.2	10		0	100	32	166			
Hexachlorobutadiene	98.7	10		° Õ	99	63	130			
1,2,3-Trichlorobenzene	58.3	10		Ō	117	55	138			
Surr: 1,2-Dichloroethane-d4	47.6		50		95	70	130			
Surr: Toluene-d8	51.9		50		104	70	130			



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i,

<b>Date:</b> 08-Mar-2011	QC	Summary Re	port			<b>Work Order:</b> 11030203
Surr: 4-Bromofluorobenzene	49.1	50	98	70	130	



<b>Date:</b> 08-Mar-2011		(	QC Su	mmary	y Repor	t				Work Orde 11030203	
	Spike Duplicate	· · · · · · · · · · · · · · · · · · ·	Type MS	SD Te	est Code: E	PA Met	hod SW8	260B			
File ID: 11030410.			,		tch ID: MS				sis Date: (	03/04/2011 12:12	
Sample ID: 11	030203-01AMSD	Units : µg/L	F	Run ID: MS	SD_15_110	304B		Prep I	Date: (	03/04/2011 12:12	
Analyte		Result	PQL				LCL(ME)	UCL(ME)	RPDRefVa	al %RPD(Limit)	Qua
Dichlorodifluorome	athana	39.3	2.5	50	0		21	138	40.63	3.3(33)	
Chloromethane		49	10	50	ő		23	144	50.86	3.8(27)	
Vinyl chloride		49.5	2.5	50	Ō		49	136	51.46	3.8(21)	
Chloroethane		50.3	2.5	50	0		21	159	52.44	4.3(40)	
Bromomethane		37	10	50	0		10	174	33.64	9.6(40)	
Trichlorofluoromet		48.9	2.5	50	0		32	154	50.18	2.6(37)	
1,1-Dichloroethene	e	50.7	2.5	50	0 0		64 69	130 130	53.11 48.5	4.7(21) 4.2(20)	
Dichloromethane Freon-113		46.5 51.5	10 2.5	50 50	0		55	141	54.01	4.7(40)	
trans-1,2-Dichloroe	ethene	50.2	2.5	50	0		63	130	52.51	4.5(20)	
Methyl tert-butyl et		49.2	1.3	50	Ő		47	150	51.49	4.5(40)	
1,1-Dichloroethane	• •	51.3	2.5	50	0	103	66	130	52.73	2.8(20)	
2-Butanone (MEK)		764	50	1000	0		23	182	814.1	6.3(22)	
cis-1,2-Dichloroeth		51.8	2.5	50	0		70	130	53.42	3.1(20)	
Bromochlorometha	ane	49	2.5	50	0		70	132	51.73	5.4(20)	
Chloroform		57.3	2.5	50	10.36		70 28	130 154	58.56 52.39	2.2(20) 0.5(22)	
2,2-Dichloropropar 1,2-Dichloroethane		52.1 46.5	2.5 2.5	50 50	0		38 65	154	52.39 49.02	5.4(20)	
1,1,1-Trichloroetha		46.5 50 <i>.</i> 1	2.5	50 50	0		65	134	51.27	2.4(20)	
1,1-Dichloroproper		52.1	2.5	50	Ő		68	132	53.91	3.5(20)	
Carbon tetrachlori		46.9	2.5	50	0		58	148	46.65	0.5(20)	
Benzene		48.7	1.3	50	0		59	138	50.26	3.2(21)	
Dibromomethane		49.9	2.5	50	0		70	130	52.96	6.0(20)	
1,2-Dichloropropa	ne	53.3	2.5	50	0		70	131	55.8	4.6(20)	
Trichloroethene	a .	50	2.5	50	0		65 50	144 157	52.42 68.95	4.7(20) 1.8(20)	
Bromodichloromet		67.7 115	2.5	50 125	15.75 0		50 20	182	123.7	7.7(20)	
4-Methyl-2-pentan cis-1,3-Dichloropro		46.1	13 2.5	50	0		63	131	47.73	3.5(20)	
trans-1,3-Dichloro		41.9	2.5	50	ŭ		65	136	42.55	1.5(20)	
1,1,2-Trichloroetha		48.8	2.5	50	Õ		70	131	52.58	7.5(20)	
Toluene		53.7	1.3	50	0	) 107	68	130	54.94	2.2(20)	
1,3-Dichloropropa		54.3	2.5	50	0		70	130	57.09		
Dibromochlorome		68.1	2.5	50	16.65		42	155	69.21	1.6(20)	
1,2-Dibromoethan		107	5	100	C		70	130	112.1	4.5(20) 3.0(20)	
Tetrachloroethene		51.9	2.5	50	C		65 70	130 130	53.5 54.25		
1,1,1,2-Tetrachlor Chlorobenzene	oetnane	53.9 51.2	2.5 2.5	50 50	C		70	130	52.57		
Ethylbenzene		50.7	2.5	50	C		68	130	52.27		
m,p-Xylene		51.8	1.3	50	C		68	131	52.63		
Bromoform		51.6	2.5	50	5.01		65	143	51.56	0.1(20)	
Styrene		48.7	2.5	50	C	97	59	153	48.24		
o-Xylene		51	1.3	50	C		70	130	52.94		
1,1,2,2-Tetrachlor		49.2	2.5	50	C		67	130	53.42		
1,2,3-Trichloropro	-	93.2	10	100	C		70 55	130 138	98.96 52.74		
Isopropylbenzene Bromobenzene		52.6 49.9	2.5 2.5	50 50	C C		55 70	130	50.36		
n-Propylbenzene		49.9 54.2	2.5	50	0		67	133	53.48		
4-Chlorotoluene		53.9	2.5	50	Ċ		70	130	54.05		
2-Chlorotoluene		51.4	2.5	50	Ċ		70	130	53.11	3.2(20)	
1,3,5-Trimethylber	nzene	52.9	2.5	50	C	) 106	67	134	53.17		
tert-Butylbenzene		51.9	2.5	50	C		55	147	51.55		
1,2,4-Trimethylber		52.9	2.5	50	C		65	135	53.48		
sec-Butylbenzene		53.2	2.5	50	0		68 70	135	53.21		
1,3-Dichlorobenze		54	2.5	50	C C		70 70	130 130	53.51 51.26		
1,4-Dichlorobenze 4-Isopropyltoluene		51.1 53.8	2.5 2.5	50 50			68	130	53.53		
1,2-Dichlorobenze		50.4	2.5	50 50			70	130	50.35		
n-Butylbenzene		58.1	2.5	50	0		62	134	56.6	2.6(21)	
	loropropane (DBCP)	241	15	250	Ċ		64	130	246.6	2.3(20)	
1,2,4-Trichloroben		57.4	10	50	Ċ		62	133	58.81	2.4(29)	
Naphthalene		48.7	10	50	(		32	166	50.18		
Hexachlorobutadi		104	10	100	(		63	130	98.71		
1,2,3-Trichloroben		56	10	50	(		55	138	58.26	3.9(36)	
Surr: 1,2-Dichloro	einane-04	46.8 52.2		50 50		94 104	70 70	130 130			



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<b>Date:</b> 08-Mar-2011	QC	Summary Re	port			<b>Work Order:</b> 11030203
Surr: 4-Bromofluorobenzene	50.2	50	100	70	130	

#### **Comments:**

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.

L50 = Analyte recovery was below acceptance limits for the LCS, but was acceptable in the MS/MSD.

Alpha uses descriptive data qualifier flags, which could be replaced with either a DOD Q or J flag.

Billing Information :		CHA	CHAIN-OF-CUSTODY REC	F-CU	JSTO	DY F	RECO	ORD		CA	Page:	Page: 1 of 1
-		255	Alpha Analytical, Inc. 255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778 TEL: (775) 355-1044 FAX: (775) 355-0406	pha Ai lvenue, Suii 15) 355-104	nalytic te 21 Spar t4 FAX: (	Alpha Analytical, Inc. endale Avenue, Suite 21 Sparks, Nevada 894 TEL: (775) 355-1044 FAX: (775) 355-0406	<b>2.</b> 89431-577 406	œ	Wo	orkOrder : rt Due By : :	WorkOrder : BMIS11030203 Report Due By : 5:00 PM On : 16-Mar-2011	203 16-Mar-2011
Client:	Re	Report Attention	_	Phone Number	iber	EMail Address	ddress		-	•		
Battelle Memorial Institute	Da	David Conner	(6	(619) 726-7311 x	11 x	connerd@	connerd@battelle.org			- - -		
655 West Broadway	Be	Betsy Cutie	(6	(614) 424-4899	x 66	cutiee@batelle.org	ttelle.org		ED	EDD Required : Yes	es	
Sulle 1420 San Diego. CA 92101	Sh	Shane Walton	(6	(614) 424-4117	17 x	waltons@1	waltons@battelle.org			Sampled by : David Loera	avid Loera	
PO: 218013										Cooler Temp	Samples Received	Date Printed
Client's COC #: 53567	Job: G0	Job : G005862/JPL Groundwater Monitoring	Groundwate	er Monitorii	ng					2 °C	UZ-IMar-ZUTT	02-Mar-2011
QC Level : DS4 = DOD QC Required : Final Rpt, MBLK, InitCal/ConCal data, LCS, MS/MSD With Surrogates	ed : Final Rpt, I	MBLK, InitCa	al/ConCal o	data, LCS,	MS/MSD	With Surro	gates					
			1					<b>Requested Tests</b>	ed Tests			
Alpha Client	Co	Collection No. of Bottles	lo. of Bottl	es	300_0_W	314_W	a_s		VOC_W			
Sample ID Sample ID	Matrix Date		Alpha Sub	TAT			8		-		Sam	Sample Remarks
BMI11030203-01A MW-16	AQ 03	03/01/11 17:15	9	10	NO2, NO3, SO4, CI, PO4	Perchlorate	Ŷ	VOC by 524 VOC by 524 Criteria Criteria	VOC by 524 Criteria			
BMI11030203-02A Trip Blank	AQ 03	03/01/11 00:00	1 0	10				VOC by 524 VOC by 524 Criteria Criteria	VOC by 524 Criteria		Reno Ti	Reno Trip Blank 1/19/11

Logged in by: NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense. Inporth Xer Elizabeth Adcox Alpha Analytical, Inc. 32.11 1029

No security seals. Frozen ice. Temp Blank #6908 received @ 2°C. Level IV OC. Samples should be used as the control spike sample if possible (LE.: MS/MSD). Trip blank unmarked for analysis per client notes added VOCs. :

Print Name

Company

Date/Time

**Comments:** 

Signature

Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report. Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

Level: III or IV
- D - EDD /
Itake
beling the sample location, date or time of collection is considered fraud and may be
Date: Time:
C/QUMA Date: Time: 3.2.11 Time:
Date: Time:
$\frac{-1811}{10}$



255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

David Conner Battelle Memorial Institute 655 West Broadway San Diego, CA 92101 (619) 726-7311

Suite 1420

**CASE NARRATIVE** 

b:	G005862/JPL Grou	indwater Monitoring		
ork Order:	BMI11030204	(	Cooler Temp: 0 °C	
Alpha's	Sample ID	Client's Sample ID	Matrix	
11030	)204-01A	MW-20-5	Aqueous	
11030	)204-02A	MW-20-4	Aqueous	
11030	)204-03A	MW-20-3	Aqueous	
11030	)204-04A	MW-20-2	Aqueous	
11030	)204-05A	MW-20-1	Aqueous	
11030	)204-06A	EB-06-03/01/11	Aqueous	
11030	)204-07A	TB-06-03/01/11	Aqueous	
11030	0204-08A	MW-7	Aqueous	
	- F MAR	Manually Integrated An	alytes	
Alpha's Sat	mple ID	Test Reference	Analyte	
		· · · · · · · · · · · · · · · · · · ·		
NO	NE			

Enclosed please find the analytical results of the samples received by Alpha Analytical, Inc. under the above mentioned Work Order/Chainof-Custody.

Alpha Analytical, Inc. has a formal Quality Assurance/Quality Control program, which is designed to meet or exceed the EPA requirements. All relevant QC met quality assurance objectives for this project unless otherwise stated in the footnotes.

If you have any questions with regards to this report, please contact Randy Gardner, Project Manager, at (800) 283-1183.

Walter Airihum Roger Scholl Kandy Saulmer

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.



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#### **ANALYTICAL REPORT**

Battelle Memorial Institute 655 West Broadway San Diego, CA 92101 
 Attn:
 David Conner

 Phone:
 (619) 726-7311

 Fax:
 (614) 458-6641

 Date Received : 03/02/11

#### Job: G005862/JPL Groundwater Monitoring

		Anions by IC EPA Method 300.0			
	Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: MW-7					
Lab ID : BMI11030204-08A	Chloride	75	50 mg/L	03/02/11 09:55	03/02/11 13:39
Date Sampled 03/01/11 14:40	Nitrite (NO2) - N	ND	0.25 mg/L	03/02/11 09:55	03/02/11 13:39
· · · · · · · · · · · · · · · · ·	Nitrate (NO3) - N	1.1	0.25 mg/L	03/02/11 09:55	03/02/11 13:39
	Phosphate, ortho - P	ND	0.50 mg/L	03/02/11 09:55	03/02/11 13:39
	Sulfate (SO4)	53	0.50 mg/L	03/02/11 09:55	03/02/11 13:39

ND = Not Detected

Roger Scholl

Kandy Sandmer

lter Amilian

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

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**Report Date** 



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#### **ANALYTICAL REPORT**

Battelle Memorial Institute 655 West Broadway San Diego, CA 92101 
 Attn:
 David Conner

 Phone:
 (619) 726-7311

 Fax:
 (614) 458-6641

 Date Received : 03/02/11

#### Job: G005862/JPL Groundwater Monitoring

		Perchlorate by Ion Chromatography EPA Method 314.0			
	Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: <b>MW-20-5</b> Lab ID : BMI11030204-01A Date Sampled 03/01/11 08:29	Perchlorate	ND	1.00 µg/L	03/02/11 12:21	03/02/11 15:38
Client ID: MW-20-4 Lab ID : BMI11030204-02A Date Sampled 03/01/11 09:00	Perchlorate	ND	1.00 µg/L	03/02/11 12:21	03/08/11 14:05
Client ID: <b>MW-20-3</b> Lab ID : BMI11030204-03A Date Sampled 03/01/11 09:25	Perchlorate	ND	1.00 µg/L	03/02/11 12:21	03/08/11 14:48
Client ID: MW-20-2 Lab ID : BMI11030204-04A Date Sampled 03/01/11 09:49	Perchlorate	3.82	1.00 µg/L	03/02/11 12:21	03/02/11 17:10
Client ID: MW-20-1 Lab ID : BMI11030204-05A Date Sampled 03/01/11 10:23	Perchlorate	ND	1.00 µg/L	03/02/11 12:21	03/02/11 17:29
Client ID: <b>EB-06-03/01/11</b> Lab ID : BMI11030204-06A Date Sampled 03/01/11 10:03	Perchlorate	ND	1.00 µg/L	03/02/11 12:21	03/02/11 17:47
Client ID: <b>MW-7</b> Lab ID : BMI11030204-08A Date Sampled 03/01/11 14:40	Perchlorate	3.11	1.00 µg/L	03/02/11 12:21	03/02/11 18:05

ND = Not Detected

Roger Scholl

Kandy Saul

alter Am

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3/14/11 Report Date

Page 1 of 1



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#### **ANALYTICAL REPORT**

Battelle Memorial Institute 655 West Broadway San Diego, CA 92101 
 Attn:
 David Conner

 Phone:
 (619) 726-7311

 Fax:
 (614) 458-6641

 Date Received : 03/02/11

#### Job: G005862/JPL Groundwater Monitoring

		Metals by ICPMS EPA Method 200.8			
	Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: MW-20-5 Lab ID : BMI11030204-01A Date Sampled 03/01/11 08:29	Chromium (Cr)	0.028	0.0050 mg/L	03/02/11 09:08	03/02/11 18:18
Client ID: MW-20-4 Lab ID : BMI11030204-02A Date Sampled 03/01/11 09:00	Chromium (Cr)	ND	0.0050 mg/L	03/02/11 09:08	03/02/11 18:46
Client ID: <b>MW-20-3</b> Lab ID : BMI11030204-03A Date Sampled 03/01/11 09:25	Chromium (Cr)	ND	0.0050 mg/L	03/02/11 09:08	03/02/11 18:52
Client ID: <b>MW-20-2</b> Lab ID : BMI11030204-04A Date Sampled 03/01/11 09:49	Chromium (Cr)	ND	0.0050 mg/L	03/02/11 09:08	03/02/11 18:57
Client ID: <b>MW-20-1</b> Lab ID : BMI11030204-05A Date Sampled 03/01/11 10:23	Chromium (Cr)	ND	0.0050 mg/L	03/02/11 09:08	03/02/11 19:03
Client ID: EB-06-03/01/11 Lab ID : BMI11030204-06A Date Sampled 03/01/11 10:03	Chromium (Cr)	ND	0.0050 mg/L	03/02/11 09:08	03/02/11 19:09
Client ID: MW-7 Lab ID : BMI11030204-08A Date Sampled 03/01/11 14:40	Chromium (Cr)	0.015	0.0050 mg/L	03/02/11 09:08	03/02/11 19:15

ND = Not Detected

Koger Scholl

Kandy Sandmer

Walter Ain

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

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**V** 3/14/11

**Report Date** 



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#### **ANALYTICAL REPORT**

Battelle Memorial Institute 655 West Broadway San Diego, CA 92101 Job: G005862/JPL Groundwater Monitoring Attn: David Conner Phone: (619) 726-7311 Fax: (614) 458-6641

Tentatively Identified Compounds - Volatile Organics by GC/MS

<i>μμα τ</i>	Parameter	Estimated	Estimated Reporting	Date	Date
		Concentration	Limit	Extracted	Analyzed
Client ID :       MW-20-5         Lab ID :       BMII1030204-01A         Date Received :       03/02/11         Date Sampled :       03/01/11 08:29	Sulfur dioxide	10	2.0 µg/L	03/04/11 14:43	03/04/11 14:43
Client ID :       MW-20-4         Lab ID :       BMI11030204-02A         Date Received :       03/02/11         Date Sampled :       03/01/11 09:00	Sulfur dioxide	14	2.0 µg/L	03/04/11 15:04	03/04/11 15:04
Client ID :       MW-20-3         Lab ID :       BMI11030204-03A         Date Received :       03/02/11         Date Sampled :       03/01/11 09:25	Sulfur dioxide	9.1	2.0 μg/L	03/04/11 15:26	03/04/11 15:26
Client ID :       MW-20-2         Lab ID :       BMI11030204-04A         Date Received :       03/02/11         Date Sampled :       03/01/11 09:49	Sulfur dioxide	3.8	2.0 μg/L	03/04/11 15:48	03/04/11 15:48
Client ID :       MW-20-1         Lab ID :       BMI11030204-05A         Date Received :       03/02/11         Date Sampled :       03/01/11	Sulfur dioxide	3.5	2.0 µg/L	03/04/11 16:09	03/04/11 16:09
Client ID :     EB-06-03/01/11       Lab ID :     BMI11030204-06A       Date Received :     03/02/11       Date Sampled :     03/01/11 10:03	*** None Found ***	ND	2.0 µg/L	03/04/11 13:38	03/04/11 13:38
Client ID: <b>TB-06-03/01/11</b> Lab ID:     BMI11030204-07A       Date Received:     03/02/11       Date Sampled:     03/01/11 07:00	* * * None Found * * *	ND	2.0 μg/L	03/04/11 13:17	03/04/11 13:17
Client ID:     MW-7       Lab ID:     BMI11030204-08A       Date Received:     03/02/11       Date Sampled:     03/01/11 14:40	* * * None Found * * *	ND	2.0 µg/L	03/04/11 16:31	03/04/11 16:31



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Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Walter Hindren Rogen Scholl Kandy Saulmer

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

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Report Date

Page 1 of 1

G005862/JPL Groundwater Monitoring



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#### ANALYTICAL REPORT

David Conner

(619) 726-7311 (614) 458-6641

Battel	Attn:	
655 W	est Broadway	Phone:
San Diego, CA 92101		Fax:
Job:	G005862/JPL Groundwater Monitoring	

Alpha Analytical Number: BMI11030204-01A Client I.D. Number: MW-20-5

Sampled:	03/01/11 08:29
Received:	03/02/11
Extracted:	03/04/11 14:43
Analyzed:	03/04/11 14:43

#### Volatile Organics by GC/MS EPA Method SW8260B

Compound		ompound Concentration Repo		g Limit Compound		Compound	Concentration	Reporting Li	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L	
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L	
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L	
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L	
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L	
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L	
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L	
8	Dichloromethane	ND	1.0	μg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L	
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L	
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L	
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L	
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L	
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L	
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L	
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L	
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L	
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L	
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	μg/L	
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	μg/L	
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	μg/L	
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L	
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L	
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBC	P) ND	2.5	µg/L	
25		ND	0.50	µg/L	60	1.2.4-Trichlorobenzene	ND	1.0	µg/L	
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	1.0	µg/L	
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L	
28		ND	0.50	µg/L	63	1.2.3-Trichlorobenzene	ND	1.0	μg/L	
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	97	(70-130)	%REC	
30	•••	ND	0.50	µg/L	65	Surr: Toluene-d8	109	(70-130)	%REC	
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	102	(70-130)	%REC	
32	1,3-Dichloropropane	ND	0.50	µg/L						
33		ND	0.50	µg/L						
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L						
35		ND	0.50	µg/L						

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl

Kandy Saulan

Walter Hirihum

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

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**Report Date** 

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## ANALYTICAL REPORT

Battelle Memorial Institute	Attn:	David Conner
655 West Broadway	Phone:	(619) 726-7311
San Diego, CA 92101	Fax:	(614) 458-6641
Job: G005862/JPL Groundwater Monitoring		

Alpha Analytical Number: BMI11030204-02A Client I.D. Number: MW-20-4

Sampled:	03/01/11 09:00
Received:	03/02/11
Extracted:	03/04/11 15:04

Analyzed: 03/04/11 15:04

#### Volatile Organics by GC/MS EPA Method SW8260B

	Compound	Concentration	Reporting	Limit		Compound	Concentration	Reporting Li	mit
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	μg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	NĎ	0.50	µg/L	56	4-Isopropyitoluene	ND	0.50	µg/L
22	Benzene	NÐ	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBC	P) ND	2.5	µg/L
25	Trichloroethene	ND	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28		ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	98	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	111	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	96	(70-130)	%REC
32		ND	0.50	µg/L					
33	<i>i</i> =	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	, , ,	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl

Kandy Santur

Walter Hindren

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

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Report Date

Page 1 of 1



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### **ANALYTICAL REPORT**

Battelle	Memorial Institute	Attn:	David Conner
655 Wes	st Broadway	Phone:	(619) 726-7311
San Dieg	go, CA 92101	Fax:	(614) 458-6641
Job:	G005862/JPL Groundwater Monitoring		

Alpha Analytical Number: BMI11030204-03A Client I.D. Number: MW-20-3

Sampled:	03/01/11 09:25
Received:	03/02/11
Extracted:	03/04/11 15:26
Analyzed:	03/04/11 15:26

#### Volatile Organics by GC/MS EPA Method SW8260B

	Compound	Concentration	Reporting	Limit		Compound	Concentration	Reporting Li	mit
1 C	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2 0	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
з 🗸	/inyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4 (	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5 E	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6 1	Frichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
71	,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8 C	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/l
9 F	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/l
10 t	rans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11 M	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12 1	,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/l
13 2	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14 c	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/l
15 E	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/l
16 (	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/l
17 2	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/l
18 1	,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/l
19 1	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/l
20 1	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/l
21 (	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/l
22 E	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/l
23 I	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/l
24 1	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCI	P) ND	2.5	µg/l
25 1	Frichloroethene	0.55	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/l
26 E	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	1.0	µg/l
27 4	1-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/l
28 d	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/l
29 t	rans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	100	(70-130)	%RE
<b>30</b> 1	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	111	(70-130)	
31 1	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	105	(70-130)	%RE
32 1	1,3-Dichloropropane	ND	0.50	µg/L					
33 <b>I</b>	Dibromochloromethane	ND	0.50	µg/L					
34 1	1,2-Dibromoethane (EDB)	ND	1.0	μg/L					
35 T	Tetrachloroethene	ND	0.50	μg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl

Kandy Sandmer

Walter Hindren

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

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**Report Date** 



255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

### **ANALYTICAL REPORT**

Battelle Memorial Institute	Attn:	David Conner
655 West Broadway	Phone:	(619) 726-7311
San Diego, CA 92101	Fax:	(614) 458-6641
Job: G005862/JPL Groundwater Monitoring		

Alpha Analytical Number: BMI11030204-04A Client I.D. Number: MW-20-2

Sampled:	03/01/11 09:49
Received:	03/02/11
Extracted:	03/04/11 15:48
Analyzed:	03/04/11 15:48

#### Volatile Organics by GC/MS EPA Method SW8260B

	Compound	Concentration	Reporting	Limit		Compound	Concentration	Reporting Li	mit
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	μg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBC		2.5	µg/L
25	Trichloroethene	0.91	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	NĎ	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	99	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	111	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	106	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl

Kandy Saulur

Walter Ainihum

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

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**Report Date** 



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### ANALYTICAL REPORT

Battelle Memorial Institute	Attn:	David Conner
655 West Broadway	Phone:	(619) 726-7311
San Diego, CA 92101	Fax:	(614) 458-6641
Job: G005862/JPL Groundwater Monitoring		

Alpha Analytical Number: BMI11030204-05A Client I.D. Number: MW-20-1

Sampled:	03/01/11 10:23
Received:	03/02/11
Extracted:	03/04/11 16:09
Analyzed:	03/04/11 16:09

#### Volatile Organics by GC/MS EPA Method SW8260B

	Compound	Concentration	Reporting	Limit		Compound	Concentration	Reporting Li	mit
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L.
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	μg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	μg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBC	P) ND	2.5	µg/L
25	Trichloroethene	ND	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	μg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	97	(70-130)	%RE(
30		ND	0.50	µg/L	65	Surr: Toluene-d8	110	(70-130)	%RE(
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	107	(70-130)	%RE0
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl

Kandy Saulmer

Walter Amilian

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

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**Report Date** 



255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Attn:

## ANALYTICAL REPORT

Phone: (619) 726-7311

David Conner

(614) 458-6641

Battell	e Memorial Institute	
655 W	est Broadway	
San Di	iego, CA 92101	
Job:	G005862/JPL Groundwater Monitoring	

Fax:

Alpha Analytical Number: BMI11030204-06A Client I.D. Number: EB-06-03/01/11

Sampled:	03/01/11 10:03
Received:	03/02/11
Extracted:	03/04/11 13:38
Analyzed:	03/04/11 13:38

#### Volatile Organics by GC/MS EPA Method SW8260B

	Compound	Concentration	Reporting	Limit		Compound	Concentration	Reporting Li	mit
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBC		2.5	µg/L
25	Trichloroethene	ND	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	μg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	99	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	103	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	97	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33		. ND	0.50	μg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35		ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl

Kandy Saulmer

Walter Ainihum

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

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Page 1 of 1



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## ANALYTICAL REPORT

Phone: (619) 726-7311

Attn:

Fax:

David Conner

(614) 458-6641

Battelle Memorial Institute								
655 We	est Broadway							
San Die	ego, CA 92101							
Job:	G005862/JPL Groundwater Monitoring							

Alpha Analytical Number: BMI11030204-07A Client I.D. Number: TB-06-03/01/11

Sampled:	03/01/11 07:00
Received:	03/02/11
Extracted:	03/04/11 13:17

Analyzed: 03/04/11 13:17

#### Volatile Organics by GC/MS EPA Method SW8260B

	Compound	Concentration	Reporting	1 insit			Concentration	Reporting Li	mit
			Reporting	<b>C</b> HUIL	-,	Compound		······	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	μg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBC	P) ND	2.5	µg/L
25	Trichloroethene	ND	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	95	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	105	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	97	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl

Kandy Saulun

Walter Airihum

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.



**Report Date** 



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### ANALYTICAL REPORT

Battelle Memorial Institute	Attn:	David Conner
655 West Broadway	Phone:	(619) 726-7311
San Diego, CA 92101	Fax:	(614) 458-6641
Job: G005862/JPL Groundwater Monitoring		

Alpha Analytical Number: BMI11030204-08A Client I.D. Number: MW-7

Sampled:	03/01/11 14:40
Received:	
	03/04/11 16:31
	03/04/11 16:31

#### Volatile Organics by GC/MS EPA Method SW8260B

	Compound	Concentration	Reporting	Limit		Compound	Concentration	Reporting Li	mit
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	· µg/L
16	Chloroform	15	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBC		2.5	µg/L
25	Trichloroethene	ND	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	8.7	0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	98	(70-130)	%REC
30	1.1.2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	111	(70-130)	%REC
31		ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	100	(70-130)	%RE0
32	1,3-Dichloropropane	ND	0.50	µg/L					
33		ND	0.50	μg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	μg/L					
35		ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl

Kandy Saulan

Walter Hindow

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.



**Report Date** 



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## VOC Sample Preservation Report

#### Work Order: BMI11030204

## Job: G005862/JPL Groundwater Monitoring

Alpha's Sample ID	Client's Sample ID	Matrix	pH	
			<b>F</b>	A.M. 19
11030204-01A	MW-20-5	Aqueous	2	
11030204-02A	MW-20-4	Aqueous	2	
11030204-03A	MW-20-3	Aqueous	2	
11030204-04A	MW-20-2	Aqueous	2	
11030204-05A	MW-20-1	Aqueous	2	
11030204-06A	EB-06-03/01/11	Aqueous	2	
11030204-07A	TB-06-03/01/11	Aqueous	2	
11030204-08A	MW-7	Aqueous	2	



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Date: 14-Mar-11	QC Summary Report							<b>Work Ord</b> 11030204	
Method Blank File ID: 25 Sample ID: MB-26084 Analyte	Units : <b>mg/L</b> Result	Type: ME F PQL	Ba Run ID: <b>IC</b> _	est Code: EPA atch ID: 26084 _2_110302A SpkRefVal %	4		Prep Date:	: 03/02/2011 12:25 03/02/2011 09:55 fVal %RPD(Limit)	Qual
Chloride Nitrite (NO2) - N Nitrate (NO3) - N Phosphate, ortho - P Sulfate (SO4)	ND ND ND ND ND	0.5 0.25 0.25 0.5 0.5							
Laboratory Fortified Blank		Type: LF		est Code: EP		hod 300.0			
File ID: <b>26</b> Sample ID: <b>LFB-26084</b>	Units : mg/L	4		itch ID: 26084 _2_110302A	4		Analysis Date Prep Date:	: 03/02/2011 12:44 03/02/2011 09:55	
Analyte	Result	PQL			6REC	LCL(ME)		fVal %RPD(Limit)	Qual
Chloride Nitrite (NO2) - N Nitrate (NO3) - N Phosphate, ortho - P Sulfate (SO4)	52.9 4.82 5.47 4.77 109	0.5 0.25 0.25 0.5 0.5	50 5 5 5 5 100		106 96 109 95 109	90 90 90 90 90 90	110 110 110 110 110 110		
Sample Matrix Spike		Type: LF	M Te	est Code: EP	A Met	hod 300.0			
File ID: 35				tch ID: 26084	4		•	: 03/02/2011 15:30	
Sample ID: 11030204-08ALFM	Units : mg/L			_2_110302A			Prep Date:	03/02/2011 09:55	Qual
Analyte	Result	PQL						fVal %RPD(Limit)	Qual
Chloride Nitrite (NO2) - N Nitrate (NO3) - N Phosphate, ortho - P Sulfate (SO4)	165 9.99 12.1 9.91 231	0.5 0.25 0.25 0.5 0.5	100 10 10 10 200	74.73 0 1.128 0 52.63	91 99.9 110 99 89	80 80 80 80 80	120 120 120 120 120 120		
Sample Matrix Spike Duplicate		Type: LF	MD Te	est Code: EP	A Met	hod 300.0			
File ID: 36			Ba	itch ID: 26084	4		•	: 03/02/2011 15:49	
Sample ID: 11030204-08ALFMD	Units : <b>mg/L</b>		-	_2_110302A			Prep Date:	03/02/2011 09:55	
Analyte	Result	PQL						fVal %RPD(Limit)	Qual
Chloride Nitrite (NO2) - N Nitrate (NO3) - N Phosphate, ortho - P Sulfate (SO4)	169 10 12.1 10.3 233	0.5 0.25 0.25 0.5 0.5	100 10 10 10 200	74.73 0 1.128 0 52.63	94 100 110 103 90	80 80 80 80 80	120         165           120         9.99           120         12.0           120         9.9           120         2.0           120         2.30	93 0.3(15) 08 0.2(15) 15 3.9(15)	

#### **Comments:**

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.



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<b>Date:</b> 09-Mar-11	QC Summary Report									
Method Blank File ID: 14		Туре		est Code: El atch ID: 260		hod 314.0	•		03/02/2011 11:39	
Sample ID: MB-26092	Units : µg/L			2_3_110302			Prep Dat		03/02/2011 12:21	_
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME) RP	DRef	/al %RPD(Limit)	Qua
Perchlorate	ND		1							
Laboratory Fortified Blank File ID: 15		Туре		est Code: El atch ID: 260		hod 314.0	Analysis	Date:	03/02/2011 11:57	
Sample ID: LFB-26092	Units : µa/L		Run ID: IC	C_3_110302/	4		Prep Dat	e:	03/02/2011 12:21	
Analyte	Result	PQL				LCL(ME)	UCL(ME) RP	DRef∖	/al %RPD(Limit)	Qua
Perchlorate	25.4		2 25		102	85	115			
Sample Matrix Spike File ID: 20		Туре		est Code: El atch ID: 260		thod 314.0		Date:	03/02/2011 13:29	
Sample ID: 11030145-03ALFM	Units : µg/L		Run ID: I	C_3_110302/	4		Prep Dat	e:	03/02/2011 12:21	
Analyte	Result	PQL				LCL(ME)	UCL(ME) RF	DRef\	/al %RPD(Limit)	Qua
Perchlorate	50.3		2 25	24.07	105	80	120			
Sample Matrix Spike Duplicate		Туре	LFMD 1	Fest Code: E	PA Met	thod 314.0				
File ID: 21			E	Batch ID: 260	92		Analysis	Date:	03/02/2011 13:48	
Sample ID: 11030145-03ALFMD	Units : µg/L		Run ID: I	C_3_110302/	4	·	Prep Dat	e:	03/02/2011 12:21	
Analyte	Result	PQL				LCL(ME)	UCL(ME) RF	DRef	/al %RPD(Limit)	Qua
Perchlorate	52.1		2 25	24.07	112	80	120	50.28	3 3.6(15)	

#### **Comments:**

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.



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<b>Date:</b> 07-Mar-11	QC Summary Report									
Method Blank File ID: 030211.B\059_M.D\		Type N		est Code: E atch ID: 260		hod 200.8		sis Date:	03/02/2011 16:41	
Sample ID: MB-26081	Units : mg/L		Run ID: IC	P/MS_1103	02B		Prep	Date:	03/02/2011 09:08	
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRef	Val %RPD(Limit)	Qua
Chromium (Cr)	ND	0.005	5							
Laboratory Control Spike File ID: 030211.B\060_M.D\		Type L		est Code: E atch ID: 260		hod 200.8		sis Date:	03/02/2011 16:47	
Sample ID: LCS-26081	Units : ma/L		Run ID: IC	P/MS_1103	02B		Prep	Date:	03/02/2011 09:08	
Analyte	Result	PQL		_		LCL(ME)	UCL(ME)	RPDRef	Val %RPD(Limit)	Qua
Chromium (Cr)	0.0542	0.005	5 0.05		108	85	115			
Sample Matrix Spike File ID: 030211.B\065_M.D\		Туре 🛛		est Code: E atch ID: 260		hod 200.8		sis Date:	03/02/2011 17:15	
Sample ID: 11030145-03AMS	Units : mg/L		Run ID: IC	P/MS_1103	02B		Prep	Date:	03/02/2011 09:08	
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRef	Val %RPD(Limit)	Qua
Chromium (Cr)	0.0532	0.00	5 0.05	0	106	70	130			
Sample Matrix Spike Duplicate		Туре М	NSD T	est Code: E	PA Met	hod 200.8	1			
File ID: 030211.B\066_M.D\			B	atch ID: 260	81		Analy	sis Date:	03/02/2011 17:21	
Sample ID: 11030145-03AMSD	Units : mg/L	i	Run ID: IC	P/MS_1103	02B		Prep	Date:	03/02/2011 09:08	
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRef	Val %RPD(Limit)	Qua
Chromium (Cr)	0.0529	0.00	5 0.05	0	106	70	130	0.053	32 0.6(20)	

**Comments:** 

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Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.



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Date: 08-Mar-2011	(		<b>Work Order:</b> 11030204			
Method Blank	······································					
File ID: <b>11030406.D</b>			Batch ID: MS15W0304N	Analysis Da	te: 03/04/2011 10:46	
Sample ID: MBLK MS15W0304M	Units : µg/L	Run I	D: MSD_15_110304B	Prep Date:	03/04/2011 10:46	
Analyte	Result		kVal SpkRefVal %REC L	CL(ME) UCL(ME) RPDF	RefVal %RPD(Limit)	Qua
Dichlorodifluoromethane	ND	0.5				
Chloromethane	ND	0.5				
Vinyl chloride	ND	0.5				
Chloroethane	ND	0.5				
Bromomethane	ND	1				
Trichlorofluoromethane	ND	0.5				
1,1-Dichloroethene	ND	0.5				
Dichloromethane	ND	1				
Freon-113 trans-1,2-Dichloroethene	ND	0.5				
Methyl tert-butyl ether (MTBE)	ND ND	0.5 0.5				
1,1-Dichloroethane	ND	0.5				
2-Butanone (MEK)	ND	10				
cis-1,2-Dichloroethene	ND	0.5				
Bromochloromethane	ND	0.5				
Chloroform	ND	0.5				
2,2-Dichloropropane	ND	0.5				
1,2-Dichloroethane	ND	0.5				
1,1,1-Trichloroethane	ND	0.5				
1,1-Dichloropropene	ND	0.5				
Carbon tetrachloride Benzene	ND ND	0.5 0.5				
Dibromomethane	ND	0.5				
1,2-Dichloropropane	ND	0.5				
Trichloroethene	ND	0.5				
Bromodichloromethane	ND	0.5				
4-Methyl-2-pentanone (MIBK)	ND	2.5				
cis-1,3-Dichloropropene	ND	0.5				
trans-1,3-Dichloropropene	ND	0.5				
1,1,2-Trichloroethane	ND	0.5				
Toluene	ND	0.5				
1,3-Dichloropropane Dibromochloromethane	ND	0.5				
1,2-Dibromoethane (EDB)	ND ND	0.5 1				
Tetrachloroethene	ND	0.5				
1,1,1,2-Tetrachloroethane	ND	0.5				
Chlorobenzene	ND	0.5				
Ethylbenzene	ND	0.5				
m,p-Xylene	ND	0.5				
Bromoform	ND	0.5				
Styrene	ND	0.5				
o-Xylene	ND	0.5				
1,1,2,2-Tetrachloroethane	ND	0.5				
1,2,3-Trichloropropane	ND	1				
Isopropylbenzene Bromobenzene	ND ND	0.5 0.5				
n-Propylbenzene	ND	0.5 0.5				
4-Chlorotoluene	ND	0.5				
2-Chiorotoluene	ND	0.5				
1,3,5-Trimethylbenzene	ND	0.5				
tert-Butylbenzene	ND	0.5				
1,2,4-Trimethylbenzene	ND	0.5				
sec-Butylbenzene	ND	0.5				
1,3-Dichlorobenzene	ND	0.5				
1,4-Dichlorobenzene	ND	0.5				
4-Isopropyltoluene	ND	0.5				
1,2-Dichlorobenzene n-Butylbenzene	ND ND	0.5 0.5				
1,2-Dibromo-3-chloropropane (DBCP)	ND ND	0.5 2.5				
1,2,4-Trichlorobenzene	ND	2.5				
Naphthalene	ND	1				
Hexachlorobutadiene	ND	1				
1,2,3-Trichlorobenzene	ND	1				
Surr: 1,2-Dichloroethane-d4	9.72		10 97	70 130		
Surr: Toluene-d8	10.6		10 106	70 130		