ATTACHMENT 3: LABORATORY ANALYTICAL REPORTS

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

Alpha Analytical, Inc.

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

Date: *18-Aug-10*

David Conner
Battelle Memorial Institute
655 West Broadway Suite 1420
San Diego, CA 92101
(619) 726-7311

CASE NARRATIVE

Job: G005862 / JPL Groundwater Monitoring
Work Order: BMI10080641 **Cooler Temp:** 4 °C

Alpha's Sample ID	Client's Sample ID	Matrix
10080641-01A	MW-18-5	Aqueous
10080641-02A	MW-18-4	Aqueous
10080641-03A	MW-18-3	Aqueous
10080641-04A	MW-18-2	Aqueous
10080641-05A	MW-17-4	Aqueous
10080641-06A	MW-17-3	Aqueous
10080641-07A	MW-17-2	Aqueous
10080641-08A	EB-09-08/05/10	Aqueous
10080641-09A	TB-09-08/05/10	Aqueous

Manually Integrated Analytes

Alpha's Sample ID	Test Reference	Analyte
10080641-02A	EPA Method 314.0	Perchlorate
10080641-03A	EPA Method 314.0	Perchlorate

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

Alpha Analytical, Inc.

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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 : 08/06/10

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 : BMI10080641-01A Perchlorate	ND	1.00 µg/L	08/06/10 12:05	08/06/10 16:42
Date Sampled 08/05/10 10:31				
Client ID: **MW-18-4**				
Lab ID : BMI10080641-02A Perchlorate	54.5	1.00 µg/L	08/06/10 12:05	08/06/10 17:00
Date Sampled 08/05/10 11:00				
Client ID: **MW-18-3**				
Lab ID : BMI10080641-03A Perchlorate	65.1	1.00 µg/L	08/06/10 12:05	08/06/10 18:32
Date Sampled 08/05/10 11:22				
Client ID: **MW-18-2**				
Lab ID : BMI10080641-04A Perchlorate	2.16	1.00 µg/L	08/06/10 12:05	08/06/10 18:51
Date Sampled 08/05/10 11:41				
Client ID: **MW-17-4**				
Lab ID : BMI10080641-05A Perchlorate	ND	1.00 µg/L	08/06/10 12:05	08/06/10 19:09
Date Sampled 08/05/10 08:25				
Client ID: **MW-17-3**				
Lab ID : BMI10080641-06A Perchlorate	9.81	1.00 µg/L	08/06/10 12:05	08/06/10 19:28
Date Sampled 08/05/10 08:55				
Client ID: **MW-17-2**				
Lab ID : BMI10080641-07A Perchlorate	4.35	1.00 µg/L	08/06/10 12:05	08/06/10 19:46
Date Sampled 08/05/10 09:21				
Client ID: **EB-09-08/05/10**				
Lab ID : BMI10080641-08A Perchlorate	ND	1.00 µg/L	08/06/10 12:05	08/06/10 20:04
Date Sampled 08/05/10 09:11				

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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.

8/19/10
Report Date

Alpha Analytical, Inc.

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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 : 08/06/10

Job: G005862 / JPL Groundwater Monitoring

Metals by ICPMS
EPA Method 200.8

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-18-4**				
Lab ID : BMI10080641-02A Chromium (Cr)	ND	0.0050 mg/L	08/17/10 18:01	08/18/10 06:27
Date Sampled 08/05/10 11:00				
Client ID: **MW-18-3**				
Lab ID : BMI10080641-03A Chromium (Cr)	ND	0.0050 mg/L	08/17/10 18:01	08/18/10 06:50
Date Sampled 08/05/10 11:22				
Client ID: **MW-18-2**				
Lab ID : BMI10080641-04A Chromium (Cr)	ND	0.0050 mg/L	08/17/10 18:01	08/18/10 06:55
Date Sampled 08/05/10 11:41				
Client ID: **MW-17-4**				
Lab ID : BMI10080641-05A Chromium (Cr)	ND	0.0050 mg/L	08/17/10 18:01	08/18/10 07:01
Date Sampled 08/05/10 08:25				
Client ID: **MW-17-3**				
Lab ID : BMI10080641-06A Chromium (Cr)	ND	0.0050 mg/L	08/17/10 18:01	08/18/10 07:06
Date Sampled 08/05/10 08:55				
Client ID: **MW-17-2**				
Lab ID : BMI10080641-07A Chromium (Cr)	ND	0.0050 mg/L	08/17/10 18:01	08/18/10 07:12
Date Sampled 08/05/10 09:21				
Client ID: **EB-09-08/05/10**				
Lab ID : BMI10080641-08A Chromium (Cr)	ND	0.0050 mg/L	08/17/10 18:01	08/18/10 07:18
Date Sampled 08/05/10 09:11				

ND = Not Detected

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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 Extracted	Date Analyzed
Client ID : **MW-18-5** Lab ID : BMI10080641-01A Date Received : 08/06/10 Date Sampled : 08/05/10 10:31	* * * None Found * * *	ND	2.0 µg/L	08/11/10 22:24	08/11/10 22:24
Client ID : **MW-18-4** Lab ID : BMI10080641-02A Date Received : 08/06/10 Date Sampled : 08/05/10 11:00	* * * None Found * * *	ND	2.0 µg/L	08/11/10 22:48	08/11/10 22:48
Client ID : **MW-18-3** Lab ID : BMI10080641-03A Date Received : 08/06/10 Date Sampled : 08/05/10 11:22	* * * None Found * * *	ND	2.0 µg/L	08/11/10 23:12	08/11/10 23:12
Client ID : **MW-18-2** Lab ID : BMI10080641-04A Date Received : 08/06/10 Date Sampled : 08/05/10 11:41	* * * None Found * * *	ND	2.0 µg/L	08/11/10 23:35	08/11/10 23:35
Client ID : **MW-17-4** Lab ID : BMI10080641-05A Date Received : 08/06/10 Date Sampled : 08/05/10 08:25	* * * None Found * * *	ND	2.0 µg/L	08/11/10 23:59	08/11/10 23:59
Client ID : **MW-17-3** Lab ID : BMI10080641-06A Date Received : 08/06/10 Date Sampled : 08/05/10 08:55	* * * None Found * * *	ND	2.0 µg/L	08/12/10 00:23	08/12/10 00:23
Client ID : **MW-17-2** Lab ID : BMI10080641-07A Date Received : 08/06/10 Date Sampled : 08/05/10 09:21	* * * None Found * * *	ND	2.0 µg/L	08/12/10 00:46	08/12/10 00:46
Client ID : **EB-09-08/05/10** Lab ID : BMI10080641-08A Date Received : 08/06/10 Date Sampled : 08/05/10 09:11	* * * None Found * * *	ND	2.0 µg/L	08/12/10 01:10	08/12/10 01:10
Client ID : **TB-09-08/05/10** Lab ID : BMI10080641-09A Date Received : 08/06/10 Date Sampled : 08/05/10 07:00	* * * None Found * * *	ND	2.0 µg/L	08/12/10 01:33	08/12/10 01:33

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Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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

Alpha Analytical Number: BMI10080641-01A
Client I.D. Number: MW-18-5

Sampled: 08/05/10 10:31
Received: 08/06/10
Extracted: 08/11/10 22:24
Analyzed: 08/11/10 22:24

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND		0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	Q	2.0	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	Q	2.0	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		2.0	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	2.0	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	Q	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	3.0	µg/L
25	Trichloroethene	ND		0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	2.0	µg/L
26	Bromodichloromethane	ND		0.50	µg/L	61	Naphthalene	ND	2.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND		2.5	µg/L	62	Hexachlorobutadiene	ND	2.0	µg/L
28	cis-1,3-Dichloropropene	ND		0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	2.0	µg/L
29	trans-1,3-Dichloropropene	ND		0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	103	(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	89	(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 Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer

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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

Alpha Analytical Number: BMI10080641-02A
Client I.D. Number: MW-18-4

Sampled: 08/05/10 11:00
Received: 08/06/10
Extracted: 08/11/10 22:48
Analyzed: 08/11/10 22:48

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND		0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	Q	2.0	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	Q	2.0	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		2.0	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	2.0	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	2.1		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	9.1	Q	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	3.0	µg/L
25	Trichloroethene	1.1		0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	2.0	µg/L
26	Bromodichloromethane	ND		0.50	µg/L	61	Naphthalene	ND	2.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND		2.5	µg/L	62	Hexachlorobutadiene	ND	2.0	µg/L
28	cis-1,3-Dichloropropene	ND		0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	2.0	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	101	(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	91	(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 Randy Gardner Walter Hinchman

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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

Alpha Analytical Number: BMI10080641-03A
Client I.D. Number: MW-18-3

Sampled: 08/05/10 11:22
Received: 08/06/10
Extracted: 08/11/10 23:12
Analyzed: 08/11/10 23:12

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND		0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	Q	2.0	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	Q	2.0	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		2.0	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	2.0	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	2.2		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	22	Q	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	3.0	µg/L
25	Trichloroethene	1.4		0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	2.0	µg/L
26	Bromodichloromethane	ND		0.50	µg/L	61	Naphthalene	ND	2.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND		2.5	µg/L	62	Hexachlorobutadiene	ND	2.0	µg/L
28	cis-1,3-Dichloropropene	ND		0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	2.0	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	102	(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	91	(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 Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer

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.

8/19/10
Report Date

Alpha Analytical, Inc.

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

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

Alpha Analytical Number: BMI10080641-04A
Client I.D. Number: MW-18-2

Sampled: 08/05/10 11:41
Received: 08/06/10
Extracted: 08/11/10 23:35
Analyzed: 08/11/10 23:35

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND		0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	Q	2.0	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	Q	2.0	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		2.0	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	2.0	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	Q	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	3.0	µg/L
25	Trichloroethene	ND		0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	2.0	µg/L
26	Bromodichloromethane	ND		0.50	µg/L	61	Naphthalene	ND	2.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND		2.5	µg/L	62	Hexachlorobutadiene	ND	2.0	µg/L
28	cis-1,3-Dichloropropene	ND		0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	2.0	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	92	(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	91	(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 Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer

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8/19/10
Report Date

Alpha Analytical, Inc.

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

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

Alpha Analytical Number: BMI10080641-05A
Client I.D. Number: MW-17-4

Sampled: 08/05/10 08:25
Received: 08/06/10
Extracted: 08/11/10 23:59
Analyzed: 08/11/10 23:59

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND		0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	Q	2.0	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	Q	2.0	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		2.0	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	2.0	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	Q	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	3.0	µg/L
25	Trichloroethene	0.76		0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	2.0	µg/L
26	Bromodichloromethane	ND		0.50	µg/L	61	Naphthalene	ND	2.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND		2.5	µg/L	62	Hexachlorobutadiene	ND	2.0	µg/L
28	cis-1,3-Dichloropropene	ND		0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	2.0	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	100	(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	92	(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 Randy Gardner Walter Hinchman

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.

8/19/10
Report Date

Alpha Analytical, Inc.

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

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

Alpha Analytical Number: BMI10080641-06A
Client I.D. Number: MW-17-3

Sampled: 08/05/10 08:55
Received: 08/06/10
Extracted: 08/12/10 00:23
Analyzed: 08/12/10 00:23

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND		0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	Q	2.0	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	Q	2.0	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		2.0	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	2.0	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	0.50	Q	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	3.0	µg/L
25	Trichloroethene	ND		0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	2.0	µg/L
26	Bromodichloromethane	ND		0.50	µg/L	61	Naphthalene	ND	2.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND		2.5	µg/L	62	Hexachlorobutadiene	ND	2.0	µg/L
28	cis-1,3-Dichloropropene	ND		0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	2.0	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	101	(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	91	(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 Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer

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8/19/10
Report Date

Alpha Analytical, Inc.

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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

Alpha Analytical Number: BMI10080641-07A
Client I.D. Number: MW-17-2

Sampled: 08/05/10 09:21
Received: 08/06/10
Extracted: 08/12/10 00:46
Analyzed: 08/12/10 00:46

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND		0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	Q	2.0	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	Q	2.0	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		2.0	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	2.0	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	Q	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	3.0	µg/L
25	Trichloroethene	0.82		0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	2.0	µg/L
26	Bromodichloromethane	ND		0.50	µg/L	61	Naphthalene	ND	2.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND		2.5	µg/L	62	Hexachlorobutadiene	ND	2.0	µg/L
28	cis-1,3-Dichloropropene	ND		0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	2.0	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	92	(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	0.67		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 Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer

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8/19/10
Report Date

Alpha Analytical, Inc.

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

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

Alpha Analytical Number: BMI10080641-08A
Client I.D. Number: EB-09-08/05/10

Sampled: 08/05/10 09:11
Received: 08/06/10
Extracted: 08/12/10 01:10
Analyzed: 08/12/10 01:10

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND		0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	Q	2.0	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	Q	2.0	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		2.0	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	2.0	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	Q	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	3.0	µg/L
25	Trichloroethene	ND		0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	2.0	µg/L
26	Bromodichloromethane	ND		0.50	µg/L	61	Naphthalene	ND	2.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND		2.5	µg/L	62	Hexachlorobutadiene	ND	2.0	µg/L
28	cis-1,3-Dichloropropene	ND		0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	2.0	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	92	(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 Randy Gardner Walter Hinchman

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8/19/10
Report Date

Alpha Analytical, Inc.

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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

Alpha Analytical Number: BMI10080641-09A
Client I.D. Number: TB-09-08/05/10

Sampled: 08/05/10 07:00
Received: 08/06/10
Extracted: 08/12/10 01:33
Analyzed: 08/12/10 01:33

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND		0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	Q	2.0	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	Q	2.0	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		2.0	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	2.0	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	Q	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	3.0	µg/L
25	Trichloroethene	ND		0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	2.0	µg/L
26	Bromodichloromethane	ND		0.50	µg/L	61	Naphthalene	ND	2.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND		2.5	µg/L	62	Hexachlorobutadiene	ND	2.0	µg/L
28	cis-1,3-Dichloropropene	ND		0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	2.0	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	101	(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	92	(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 Randy Gardner Walter Hinchman

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

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8/19/10
Report Date

Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date: *18-Aug-10*

QC Summary Report

Work Order: 10080641

Method Blank

Type **MBLK** Test Code: **EPA Method 314.0**

File ID: **14** Batch ID: **24800** Analysis Date: **08/06/2010 13:01**

Sample ID: **MB-24800** Units : **µg/L** Run ID: **IC_3_100806A** Prep Date: **08/06/2010 12:05**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	ND	1								

Laboratory Fortified Blank

Type **LFB** Test Code: **EPA Method 314.0**

File ID: **15** Batch ID: **24800** Analysis Date: **08/06/2010 13:20**

Sample ID: **LFB-24800** Units : **µg/L** Run ID: **IC_3_100806A** Prep Date: **08/06/2010 12:05**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	24.4	2	25		98	85	115			

Sample Matrix Spike

Type **LFM** Test Code: **EPA Method 314.0**

File ID: **38** Batch ID: **24800** Analysis Date: **08/06/2010 20:23**

Sample ID: **10080641-02ALFM** Units : **µg/L** Run ID: **IC_3_100806A** Prep Date: **08/06/2010 12:05**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	103	4	50	54.49	97	80	120			

Sample Matrix Spike Duplicate

Type **LFMD** Test Code: **EPA Method 314.0**

File ID: **39** Batch ID: **24800** Analysis Date: **08/06/2010 20:41**

Sample ID: **10080641-02ALFMD** Units : **µg/L** Run ID: **IC_3_100806A** Prep Date: **08/06/2010 12:05**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	112	4	50	54.49	116	80	120	103.1	8.5(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: *18-Aug-10*

QC Summary Report

Work Order: 10080641

Method Blank

Type: **MBLK** Test Code: **EPA Method 200.8**

File ID: **081710.B\156_M.D** Batch ID: **24876K** Analysis Date: **08/18/2010 05:59**

Sample ID: **MB-24876** Units : **mg/L** Run ID: **ICP/MS_100817B** Prep Date: **08/17/2010 18:01**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	ND	0.005								

Laboratory Control Spike

Type: **LCS** Test Code: **EPA Method 200.8**

File ID: **081710.B\157_L.D** Batch ID: **24876K** Analysis Date: **08/18/2010 06:05**

Sample ID: **LCS-24876** Units : **mg/L** Run ID: **ICP/MS_100817B** Prep Date: **08/17/2010 18:01**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0539	0.005	0.05		108	80	120			

Sample Matrix Spike

Type: **MS** Test Code: **EPA Method 200.8**

File ID: **081710.B\162_SS.D** Batch ID: **24876K** Analysis Date: **08/18/2010 06:33**

Sample ID: **10080641-02AMS** Units : **mg/L** Run ID: **ICP/MS_100817B** Prep Date: **08/17/2010 18:01**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0542	0.005	0.05	0	108	80	120			

Sample Matrix Spike Duplicate

Type: **MSD** Test Code: **EPA Method 200.8**

File ID: **081710.B\163_SSS.D** Batch ID: **24876K** Analysis Date: **08/18/2010 06:39**

Sample ID: **10080641-02AMSD** Units : **mg/L** Run ID: **ICP/MS_100817B** Prep Date: **08/17/2010 18:01**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0499	0.005	0.05	0	99.8	80	120	0.05419	8.3(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.

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Date: *18-Aug-10*

QC Summary Report

Work Order: 10080641

Method Blank Type: **MBLK** Test Code: **EPA Method SW8260B**

File ID: **C:\HPCHEM\MS07\DATA\100811\10081106.D** Batch ID: **MS07W0811M** Analysis Date: **08/11/2010 18:29**

Sample ID: **MBLK MS07W0811M** Units : **µg/L** Run ID: **MSD_07_100811C** Prep Date: **08/11/2010 18:29**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	ND	0.5								
Chloromethane	ND	1								
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	ND	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)	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	ND	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)	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	ND	0.5								
Dibromochloromethane	ND	0.5								
1,2-Dibromoethane (EDB)	ND	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	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								
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	ND	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	ND	1								
1,2,3-Trichlorobenzene	ND	1								
Surr: 1,2-Dichloroethane-d4	10.9		10		109	70	130			
Surr: Toluene-d8	10		10		100	70	130			

Alpha Analytical, Inc.

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Date: *18-Aug-10*

QC Summary Report

Work Order: 10080641

Surr: 4-Bromofluorobenzene	9.28		10	93	70	130	

Laboratory Control Spike Type: **LCS** Test Code: **EPA Method SW8260B**

File ID: **C:\HPCHEM\MS07\DATA\100811\10081103.D** Batch ID: **MS07W0811M** Analysis Date: **08/11/2010 17:18**

Sample ID: **LCS MS07W0811M** Units : **µg/L** Run ID: **MSD_07_100811C** Prep Date: **08/11/2010 17:18**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	8.87	1	10		89	70	130			
Chloromethane	5.81	2	10		58	70(70)	130			L50
Vinyl chloride	8.14	1	10		81	70	130			
Chloroethane	8.46	1	10		85	70	130			
Bromomethane	4.64	2	10		46	70(70)	130			L50
Trichlorofluoromethane	9.41	1	10		94	70	130			
1,1-Dichloroethene	9.89	1	10		99	70	130			
Dichloromethane	9.54	2	10		95	70	130			
trans-1,2-Dichloroethene	9.11	1	10		91	70	130			
Methyl tert-butyl ether (MTBE)	10.9	0.5	10		109	70	130			
1,1-Dichloroethane	9.29	1	10		93	70	130			
cis-1,2-Dichloroethene	10.4	1	10		104	70	130			
Bromochloromethane	11.3	1	10		113	70	130			
Chloroform	10.2	1	10		102	70	130			
2,2-Dichloropropane	12.7	1	10		127	70	130			
1,2-Dichloroethane	11.5	1	10		115	70	130			
1,1,1-Trichloroethane	12.1	1	10		121	70	130			
1,1-Dichloropropene	11.6	1	10		116	70	130			
Carbon tetrachloride	12	1	10		120	70	130			
Benzene	11	0.5	10		110	70	130			
Dibromomethane	11	1	10		110	70	130			
1,2-Dichloropropane	11.3	1	10		113	70	130			
Trichloroethene	11.1	1	10		111	70	130			
Bromodichloromethane	11.4	1	10		114	70	130			
cis-1,3-Dichloropropene	9.92	1	10		99	70	130			
trans-1,3-Dichloropropene	12.1	1	10		121	70	130			
1,1,2-Trichloroethane	10.9	1	10		109	70	130			
Toluene	10.7	0.5	10		107	70	130			
1,3-Dichloropropane	10.4	1	10		104	70	130			
Dibromochloromethane	11.8	1	10		118	70	130			
1,2-Dibromoethane (EDB)	22.4	2	20		112	70	130			
Tetrachloroethene	11.6	1	10		116	70	130			
1,1,1,2-Tetrachloroethane	12.2	1	10		122	70	130			
Chlorobenzene	11.1	1	10		111	70	130			
Ethylbenzene	11.4	0.5	10		114	70	130			
m,p-Xylene	11.4	0.5	10		114	70	130			
Bromoform	12.9	1	10		129	70	130			
Styrene	10.3	1	10		103	70	130			
o-Xylene	11.4	0.5	10		114	70	130			
1,1,2,2-Tetrachloroethane	11.1	1	10		111	70	130			
1,2,3-Trichloropropane	23.6	2	20		118	70	130			
Isopropylbenzene	10.7	1	10		107	70	130			
Bromobenzene	10.8	1	10		108	70	130			
n-Propylbenzene	10.5	1	10		105	70	130			
4-Chlorotoluene	10.8	1	10		108	70	130			
2-Chlorotoluene	10.7	1	10		107	70	130			
1,3,5-Trimethylbenzene	11.1	1	10		111	70	130			
tert-Butylbenzene	10.8	1	10		108	70	130			
1,2,4-Trimethylbenzene	11.2	1	10		112	70	130			
sec-Butylbenzene	10.8	1	10		108	70	130			
1,3-Dichlorobenzene	10.8	1	10		108	70	130			
1,4-Dichlorobenzene	10.9	1	10		109	70	130			
4-Isopropyltoluene	11.1	1	10		111	70	130			
1,2-Dichlorobenzene	10.5	1	10		105	70	130			
n-Butylbenzene	10.8	1	10		108	70	130			
1,2-Dibromo-3-chloropropane (DBCP)	50.7	3	50		101	70	130			
1,2,4-Trichlorobenzene	9.62	2	10		96	70	130			
Naphthalene	9.26	2	10		93	70	130			
Hexachlorobutadiene	20.6	2	20		103	70	130			
1,2,3-Trichlorobenzene	9.56	2	10		96	70	130			
Surr: 1,2-Dichloroethane-d4	11.1		10		111	70	130			
Surr: Toluene-d8	9.98		10		99.8	70	130			
Surr: 4-Bromofluorobenzene	8.62		10		86	70	130			

Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date: *18-Aug-10*

QC Summary Report

Work Order: 10080641

Sample Matrix Spike Type: **MS** Test Code: **EPA Method SW8260B**

File ID: **C:\HPCHEM\MS07\DATA\100811\10081114.D** Batch ID: **MS07W0811M** Analysis Date: **08/11/2010 21:37**

Sample ID: **10080641-02AMS** Units : **µg/L** Run ID: **MSD_07_100811C** Prep Date: **08/11/2010 21:37**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	38.6	2.5	50	0	77	13	167			
Chloromethane	26.2	10	50	0	52	28	145			
Vinyl chloride	36.4	2.5	50	0	73	43	134			
Chloroethane	37.4	2.5	50	0	75	39	154			
Bromomethane	41.1	10	50	0	82	19	176			
Trichlorofluoromethane	40.1	2.5	50	0	80	34	160			
1,1-Dichloroethene	45.7	2.5	50	0	91	60	130			
Dichloromethane	40.6	10	50	0	81	68	130			
trans-1,2-Dichloroethene	39.2	2.5	50	0	78	63	130			
Methyl tert-butyl ether (MTBE)	45.5	1.3	50	0	91	56	141			
1,1-Dichloroethane	46.9	2.5	50	0	94	61	130			
cis-1,2-Dichloroethene	52.2	2.5	50	0	104	70	130			
Bromochloromethane	53.7	2.5	50	0	107	70	130			
Chloroform	48.2	2.5	50	2.07	92	67	130			
2,2-Dichloropropane	40	2.5	50	0	80	30	152			
1,2-Dichloroethane	48.2	2.5	50	0	96	60	135			
1,1,1-Trichloroethane	50.8	2.5	50	0	102	59	137			
1,1-Dichloropropene	51.5	2.5	50	0	103	63	130			
Carbon tetrachloride	57	2.5	50	9.07	96	50	147			
Benzene	52.3	1.3	50	0	105	67	130			
Dibromomethane	50.1	2.5	50	0	100	69	133			
1,2-Dichloropropane	49.5	2.5	50	0	99	69	130			
Trichloroethene	53.1	2.5	50	1.07	104	69	130			
Bromodichloromethane	49.4	2.5	50	0	99	66	134			
cis-1,3-Dichloropropene	38.9	2.5	50	0	78	63	130			
trans-1,3-Dichloropropene	46.7	2.5	50	0	93	66	131			
1,1,2-Trichloroethane	49	2.5	50	0	98	68	130			
Toluene	56.8	1.3	50	0	114	66	130			
1,3-Dichloropropane	48.4	2.5	50	0	97	70	130			
Dibromochloromethane	51.6	2.5	50	0	103	70	130			
1,2-Dibromoethane (EDB)	103	5	100	0	103	70	130			
Tetrachloroethene	54.9	2.5	50	0	110	61	134			
1,1,1,2-Tetrachloroethane	54.5	2.5	50	0	109	70	130			
Chlorobenzene	52.4	2.5	50	0	105	70	130			
Ethylbenzene	55.9	1.3	50	0	112	68	130			
m,p-Xylene	61.2	1.3	50	0	122	64	130			
Bromoform	55.4	2.5	50	0	111	64	138			
Styrene	48.1	2.5	50	0	96	69	130			
o-Xylene	57.6	1.3	50	0	115	70	130			
1,1,2,2-Tetrachloroethane	50.2	2.5	50	0	100	65	131			
1,2,3-Trichloropropane	104	10	100	0	104	70	130			
Isopropylbenzene	50.5	2.5	50	0	101	64	138			
Bromobenzene	51.4	2.5	50	0	103	70	130			
n-Propylbenzene	50.1	2.5	50	0	100	66	132			
4-Chlorotoluene	51.5	2.5	50	0	103	70	130			
2-Chlorotoluene	51.5	2.5	50	0	103	70	130			
1,3,5-Trimethylbenzene	52.9	2.5	50	0	106	66	136			
tert-Butylbenzene	50.9	2.5	50	0	102	65	137			
1,2,4-Trimethylbenzene	55.9	2.5	50	0	112	65	137			
sec-Butylbenzene	50.9	2.5	50	0	102	66	134			
1,3-Dichlorobenzene	50.7	2.5	50	0	101	70	130			
1,4-Dichlorobenzene	51	2.5	50	0	102	70	130			
4-Isopropyltoluene	51.4	2.5	50	0	103	66	137			
1,2-Dichlorobenzene	48.2	2.5	50	0	96	70	130			
n-Butylbenzene	49.7	2.5	50	0	99	60	142			
1,2-Dibromo-3-chloropropane (DBCP)	229	15	250	0	91	67	130			
1,2,4-Trichlorobenzene	45.7	10	50	0	91	61	137			
Naphthalene	46.7	10	50	0	93	40	167			
Hexachlorobutadiene	93.8	10	100	0	94	61	130			
1,2,3-Trichlorobenzene	45.9	10	50	0	92	51	144			
Surr: 1,2-Dichloroethane-d4	49.2		50		98	70	130			
Surr: Toluene-d8	50.6		50		101	70	130			
Surr: 4-Bromofluorobenzene	45.4		50		91	70	130			

Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date: *18-Aug-10*

QC Summary Report

Work Order: 10080641

Sample Matrix Spike Duplicate Type: **MSD** Test Code: **EPA Method SW8260B**

File ID: **C:\HPCHEM\MS07\DATA\100811\10081115.D** Batch ID: **MS07W0811M** Analysis Date: **08/11/2010 22:01**

Sample ID: **10080641-02AMSD** Units : **µg/L** Run ID: **MSD_07_100811C** Prep Date: **08/11/2010 22:01**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	40.4	2.5	50	0	81	13	167	38.61	4.6(20)	
Chloromethane	30.7	10	50	0	61	28	145	26.22	15.6(20)	
Vinyl chloride	41	2.5	50	0	82	43	134	36.36	11.9(20)	
Chloroethane	38.3	2.5	50	0	77	39	154	37.42	2.3(20)	
Bromomethane	48.1	10	50	0	96	19	176	41.13	15.7(20)	
Trichlorofluoromethane	40.1	2.5	50	0	80	34	160	40.12	0.1(20)	
1,1-Dichloroethene	43.9	2.5	50	0	88	60	130	45.69	4.0(20)	
Dichloromethane	42.6	10	50	0	85	68	130	40.59	4.9(20)	
trans-1,2-Dichloroethene	41.1	2.5	50	0	82	63	130	39.23	4.7(20)	
Methyl tert-butyl ether (MTBE)	51.1	1.3	50	0	102	56	141	45.51	11.6(20)	
1,1-Dichloroethane	49	2.5	50	0	98	61	130	46.88	4.3(20)	
cis-1,2-Dichloroethene	54.4	2.5	50	0	109	70	130	52.21	4.1(20)	
Bromochloromethane	57.3	2.5	50	0	115	70	130	53.74	6.4(20)	
Chloroform	50.3	2.5	50	2.07	96	67	130	48.22	4.2(20)	
2,2-Dichloropropane	41.6	2.5	50	0	83	30	152	40.04	3.7(20)	
1,2-Dichloroethane	51.3	2.5	50	0	103	60	135	48.24	6.2(20)	
1,1,1-Trichloroethane	52.9	2.5	50	0	106	59	137	50.77	4.1(20)	
1,1-Dichloropropene	54	2.5	50	0	108	63	130	51.51	4.7(20)	
Carbon tetrachloride	59.2	2.5	50	9.07	100	50	147	57.04	3.8(20)	
Benzene	54	1.3	50	0	108	67	130	52.3	3.1(20)	
Dibromomethane	52.8	2.5	50	0	106	69	133	50.07	5.3(20)	
1,2-Dichloropropane	51.6	2.5	50	0	103	69	130	49.47	4.3(20)	
Trichloroethene	54.6	2.5	50	1.07	107	69	130	53.13	2.6(20)	
Bromodichloromethane	52.6	2.5	50	0	105	66	134	49.37	6.4(20)	
cis-1,3-Dichloropropene	41.3	2.5	50	0	83	63	130	38.93	5.9(20)	
trans-1,3-Dichloropropene	50.3	2.5	50	0	101	66	131	46.73	7.4(20)	
1,1,2-Trichloroethane	51.8	2.5	50	0	104	68	130	49	5.6(20)	
Toluene	53.7	1.3	50	0	107	66	130	56.78	5.5(20)	
1,3-Dichloropropane	50.8	2.5	50	0	102	70	130	48.35	4.9(20)	
Dibromochloromethane	54.8	2.5	50	0	110	70	130	51.64	5.9(20)	
1,2-Dibromoethane (EDB)	108	5	100	0	108	70	130	103.2	4.9(20)	
Tetrachloroethene	56.3	2.5	50	0	113	61	134	54.92	2.5(20)	
1,1,1,2-Tetrachloroethane	57.1	2.5	50	0	114	70	130	54.47	4.6(20)	
Chlorobenzene	54.3	2.5	50	0	109	70	130	52.35	3.7(20)	
Ethylbenzene	56	1.3	50	0	112	68	130	55.94	0.0(20)	
m,p-Xylene	56.9	1.3	50	0	114	64	130	61.22	7.3(20)	
Bromoform	59.3	2.5	50	0	119	64	138	55.36	6.9(20)	
Styrene	50.4	2.5	50	0	101	69	130	48.12	4.5(20)	
o-Xylene	57.1	1.3	50	0	114	70	130	57.58	0.9(20)	
1,1,2,2-Tetrachloroethane	54	2.5	50	0	108	65	131	50.17	7.4(20)	
1,2,3-Trichloropropane	112	10	100	0	112	70	130	103.8	7.4(20)	
Isopropylbenzene	50.8	2.5	50	0	102	64	138	50.54	0.5(20)	
Bromobenzene	52.6	2.5	50	0	105	70	130	51.42	2.3(20)	
n-Propylbenzene	50.3	2.5	50	0	101	66	132	50.11	0.3(20)	
4-Chlorotoluene	51.9	2.5	50	0	104	70	130	51.46	0.8(20)	
2-Chlorotoluene	51.9	2.5	50	0	104	70	130	51.52	0.7(20)	
1,3,5-Trimethylbenzene	52.6	2.5	50	0	105	66	136	52.86	0.6(20)	
tert-Butylbenzene	51.4	2.5	50	0	103	65	137	50.93	0.8(20)	
1,2,4-Trimethylbenzene	54	2.5	50	0	108	65	137	55.88	3.5(20)	
sec-Butylbenzene	52	2.5	50	0	104	66	134	50.93	2.0(20)	
1,3-Dichlorobenzene	51.7	2.5	50	0	103	70	130	50.69	2.0(20)	
1,4-Dichlorobenzene	52.5	2.5	50	0	105	70	130	51.02	2.8(20)	
4-Isopropyltoluene	52.3	2.5	50	0	105	66	137	51.4	1.7(20)	
1,2-Dichlorobenzene	50.3	2.5	50	0	101	70	130	48.2	4.3(20)	
n-Butylbenzene	50	2.5	50	0	100	60	142	49.65	0.8(20)	
1,2-Dibromo-3-chloropropane (DBCP)	246	15	250	0	99	67	130	228.6	7.5(20)	
1,2,4-Trichlorobenzene	47.8	10	50	0	96	61	137	45.69	4.6(20)	
Naphthalene	48.7	10	50	0	97	40	167	46.71	4.2(20)	
Hexachlorobutadiene	97.1	10	100	0	97	61	130	93.83	3.5(20)	
1,2,3-Trichlorobenzene	48.7	10	50	0	97	51	144	45.91	5.8(20)	
Surr: 1,2-Dichloroethane-d4	51.1		50		102	70	130			
Surr: Toluene-d8	50.1		50		100	70	130			
Surr: 4-Bromofluorobenzene	44.5		50		89	70	130			

Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date: *18-Aug-10*

QC Summary Report

Work Order: 10080641

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 :

CHAIN-OF-CUSTODY RECORD

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

CA

WorkOrder : BMIS10080641

Report Due By : 5:00 PM On : 20-Aug-10

Client:
Battelle Memorial Institute
655 West Broadway
Suite 1420
San Diego, CA 92101

Report Attention	Phone Number	EMail Address
David Conner	(818) 393-2808 x	connerd@battelle.org
Shane Walton	(614) 424-4117 x	waltons@battelle.org
Betsy Cutie	(614) 424-4899 x	cutiee@batelle.org

EDD Required : **Yes**

Sampled by : Chase Brogdon

PO : 218013

Client's COC # : 25765, 25766 Job : G005862 / JPL Groundwater Monitoring

Cooler Temp	Samples Received	Date Printed
4 °C	06-Aug-10	**06-Aug-10**

QC Level : DS4 = DOD QC Required : Final Rpt, MBLK, InitCal/ConCal data, LCS, MS/MSD With Surrogates

Alpha Sample ID	Client Sample ID	Matrix	Collection Date	No. of Bottles Alpha	Sub	TAT	Requested Tests 314_W	METALS_DW	VOC_TIC_W	VOC_W				Sample Remarks
BMI10080641-01A	MW-18-5	AQ	08/05/10 10:31	4	0	10	Perchlorate		VOC by 524 Criteria	VOC by 524 Criteria				
BMI10080641-02A	MW-18-4	AQ	08/05/10 11:00	10	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				MS/MSD
BMI10080641-03A	MW-18-3	AQ	08/05/10 11:22	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				
BMI10080641-04A	MW-18-2	AQ	08/05/10 11:41	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				
BMI10080641-05A	MW-17-4	AQ	08/05/10 08:25	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				
BMI10080641-06A	MW-17-3	AQ	08/05/10 08:55	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				
BMI10080641-07A	MW-17-2	AQ	08/05/10 09:21	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				
BMI10080641-08A	EB-09-08/05/10	AQ	08/05/10 09:11	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				
BMI10080641-09A	TB-09-08/05/10	AQ	08/05/10 07:00	1	0	10			VOC by 524 Criteria	VOC by 524 Criteria				Reno TB, 6/29/10

Comments: Security seals intact. Frozen ice. Temp Blank #4980 received @ 4°C. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). :

	Signature	Print Name	Company	Date/Time
Logged in by:	Tara Dickinson	Tara Dickinson	**Alpha Analytical, Inc.**	8/6/10 1102

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 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.
Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

Billing Information:
Name GERALD TOMPKINS / BATTELLE
Address 505 KING AVE.
City, State, Zip COLUMBUS, OH 43201
Phone Number ____ Fax ____

Alpha Analytical, Inc.
255 Glendale Avenue, Suite 21
Sparks, Nevada 89431-5778
Phone (775) 355-1044
Fax (775) 355-0406

Samples Collected From Which State? AZ ___ CA X NV ___ WA ___ ID ___ OR ___ OTHER ___

25765

Page # 1 of 1

Client Name: BATTELLE / DAVID CONNER
Address: 3990 OLD TOWN AVE. C-205
City, State, Zip: SAN DIEGO, CA 92110
P.O. # 218013
Job # G005862
EMail Address
Phone # (619) 726-7311
Fax #
Sampled by: CHASE BROGDON
Report Attention

Required QC Level? I II (III) IV
EDD / EDF? YES ___ NO ___
Global ID # ___

Analyses Required

Time Sampled	Date Sampled	Matrix* See Key Below	Lab ID Number (Office Use Only)	Sample Description	TAT	Field Filtered	Total and type of containers ** See below	VOC (524.2)	TOTAL Cr (200.8)	ClO4 - (314.0)					REMARKS
1031	8/5/10	AQ	BMI10080641-01	MW-18-5	NORM		3V 1P	X		X					
1100	↓	↓	-02	MW-18-4	↓		6V 4P	X	X	X					MS/MSD
1122	↓	↓	-03	MW-18-3	↓		3V 2P	X	X	X					
1141	↓	↓	-04	MW-18-2	↓		3V 2P	X	X	X					

ADDITIONAL INSTRUCTIONS:

	Signature	Print Name	Company	Date	Time
Relinquished by	[signature]	CHASE BROGDON	INSIGHT ETC, INC	08/05/10	1330
Received by	Dave Dickinson	Dave Dickinson	Alpha	8/6/10	1050
Relinquished by					
Received by					
Relinquished by					
Received by					

*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

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 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.

Billing Information:

Name GERALD TOMPKINS / BATTELLE

Address 505 KING AVE.

City, State, Zip COLUMBUS, OH 43201

Phone Number ______ Fax ______

Alpha Analytical, Inc.
255 Glendale Avenue, Suite 21
Sparks, Nevada 89431-5778
Phone (775) 355-1044
Fax (775) 355-0406

Samples Collected From Which State? 25766

AZ ___ **CA** X **NV** ___ **WA** ___
ID ___ **OR** ___ **OTHER** ___

Page # 1 **of** 1

Client Name: BATTELLE / DAVID CONNER
Address: 3990 OLD TOWN AVE., C-205
City, State, Zip: SAN DIEGO, CA 92110

P.O. #: 28013
EMail Address:
Phone #: (619) 726-7311

Job #: G005862
Fax #:

Required QC Level? I II (III) IV

EDD / EDF? YES ___ NO ___

Global ID # ___

Sampled by: CHASE BROGDON

Report Attention:

Analyses Required: VOC (524.2), TOTAL Cr (200.8), Clo4- (314.0)

Time Sampled	Date Sampled	Matrix* See Key Below	Lab ID Number (Office Use Only)	Sample Description	TAT	Field Filtered	Total and type of containers ** See below	VOC (524.2)	TOTAL Cr (200.8)	Clo4- (314.0)					REMARKS
0825	8/5/10	AQ	BMI10081041-05	MW-17-4	NORM		3V 2P	X	X	X					
0855	↓	↓	-06	MW-17-3	↓		3V 2P	X	X	X					QC LEVEL IV
0921			-07	MW-17-2			3V 2P	X	X	X					
0911		↓	-08	EB-09-08/05/10			3V, 2P	X	X	X					EQUIPMENT BLANK
0700	↓	AQ	-09	TB-09-08/05/10	↓		1V	X							TRIP BLANK

ADDITIONAL INSTRUCTIONS:

	Signature	Print Name	Company	Date	Time
Relinquished by	[signature]	CHASE BROGDON	INSIGHT EEC, INC	08/05/10	1330
Received by	[signature]	Tara Dickinson	Alpha	8/6/10	1050
Relinquished by					
Received by					
Relinquished by					
Received by					

*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

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 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.

Alpha Analytical, Inc.

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

Date: *17-Aug-10*

David Conner
Battelle Memorial Institute
655 West Broadway Suite 1420
San Diego, CA 92101
(619) 726-7311

CASE NARRATIVE

Job: G005862 / JPL Groundwater Monitoring

Work Order: BMI10080501 **Cooler Temp:** 1 °C

Alpha's Sample ID	Client's Sample ID	Matrix
10080501-01A	MW-19-5	Aqueous
10080501-02A	MW-19-4	Aqueous
10080501-03A	MW-19-3	Aqueous
10080501-04A	MW-19-2	Aqueous
10080501-05A	MW-19-1	Aqueous
10080501-06A	EB-8-08/04/10	Aqueous
10080501-07A	TB-8-08/04/10	Aqueous

Manually Integrated Analytes

Alpha's Sample ID	Test Reference	Analyte
NONE		

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

Alpha Analytical, Inc.

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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 : 08/05/10

Job: G005862 / JPL Groundwater Monitoring

Perchlorate by Ion Chromatography
EPA Method 314.0

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-19-5**				
Lab ID : BMI10080501-01A Perchlorate	3.29	1.00 µg/L	08/06/10 12:05	08/06/10 14:52
Date Sampled 08/04/10 08:46				
Client ID: **MW-19-4**				
Lab ID : BMI10080501-02A Perchlorate	3.03	1.00 µg/L	08/06/10 12:05	08/06/10 15:10
Date Sampled 08/04/10 09:10				
Client ID: **MW-19-3**				
Lab ID : BMI10080501-03A Perchlorate	3.38	1.00 µg/L	08/06/10 12:05	08/06/10 15:28
Date Sampled 08/04/10 09:34				
Client ID: **MW-19-2**				
Lab ID : BMI10080501-04A Perchlorate	5.97	1.00 µg/L	08/06/10 12:05	08/06/10 15:47
Date Sampled 08/04/10 09:54				
Client ID: **MW-19-1**				
Lab ID : BMI10080501-05A Perchlorate	9.89	1.00 µg/L	08/06/10 12:05	08/06/10 16:05
Date Sampled 08/04/10 10:28				
Client ID: **EB-8-08/04/10**				
Lab ID : BMI10080501-06A Perchlorate	ND	1.00 µg/L	08/06/10 12:05	08/06/10 16:24
Date Sampled 08/04/10 10:10				

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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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8/18/10
Report Date

Alpha Analytical, Inc.

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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 Extracted	Date Analyzed
Client ID : **MW-19-5**					
Lab ID : BMI10080501-01A	* * * None Found * * *	ND	2.0 µg/L	08/10/10 21:51	08/10/10 21:51
Date Received : 08/05/10					
Date Sampled : 08/04/10 08:46					
Client ID : **MW-19-4**					
Lab ID : BMI10080501-02A	* * * None Found * * *	ND	2.0 µg/L	08/10/10 22:14	08/10/10 22:14
Date Received : 08/05/10					
Date Sampled : 08/04/10 09:10					
Client ID : **MW-19-3**					
Lab ID : BMI10080501-03A	* * * None Found * * *	ND	2.0 µg/L	08/10/10 22:38	08/10/10 22:38
Date Received : 08/05/10					
Date Sampled : 08/04/10 09:34					
Client ID : **MW-19-2**					
Lab ID : BMI10080501-04A	* * * None Found * * *	ND	2.0 µg/L	08/10/10 23:01	08/10/10 23:01
Date Received : 08/05/10					
Date Sampled : 08/04/10 09:54					
Client ID : **MW-19-1**					
Lab ID : BMI10080501-05A	* * * None Found * * *	ND	2.0 µg/L	08/10/10 23:25	08/10/10 23:25
Date Received : 08/05/10					
Date Sampled : 08/04/10 10:28					
Client ID : **EB-8-08/04/10**					
Lab ID : BMI10080501-06A	* * * None Found * * *	ND	2.0 µg/L	08/10/10 23:49	08/10/10 23:49
Date Received : 08/05/10					
Date Sampled : 08/04/10 10:10					
Client ID : **TB-8-08/04/10**					
Lab ID : BMI10080501-07A	* * * None Found * * *	ND	2.0 µg/L	08/10/10 19:29	08/10/10 19:29
Date Received : 08/05/10					
Date Sampled : 08/04/10 00:00					

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Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer

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8/18/10

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

Alpha Analytical Number: BMI10080501-01A
Client I.D. Number: MW-19-5

Sampled: 08/04/10 08:46
Received: 08/05/10
Extracted: 08/10/10 21:51
Analyzed: 08/10/10 21:51

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND		0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	Q	2.0	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	Q	2.0	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		2.0	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	2.0	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	3.0	µg/L
25	Trichloroethene	ND		0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	2.0	µg/L
26	Bromodichloromethane	ND		0.50	µg/L	61	Naphthalene	ND	2.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND		2.5	µg/L	62	Hexachlorobutadiene	ND	2.0	µg/L
28	cis-1,3-Dichloropropene	ND		0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	2.0	µg/L
29	trans-1,3-Dichloropropene	ND		0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	103	(70-130)	%REC
30	1,1,2-Trichloroethane	ND		0.50	µg/L	65	Surr: Toluene-d8	102	(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	92	(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	1.6		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 Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer

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8/18/10
Report Date

Alpha Analytical, Inc.

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(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

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

Alpha Analytical Number: BMI10080501-02A
Client I.D. Number: MW-19-4

Sampled: 08/04/10 09:10
Received: 08/05/10
Extracted: 08/10/10 22:14
Analyzed: 08/10/10 22:14

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND		0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	Q	2.0	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	Q	2.0	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		2.0	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	2.0	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	3.0	µg/L
25	Trichloroethene	ND		0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	2.0	µg/L
26	Bromodichloromethane	ND		0.50	µg/L	61	Naphthalene	ND	2.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND		2.5	µg/L	62	Hexachlorobutadiene	ND	2.0	µg/L
28	cis-1,3-Dichloropropene	ND		0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	2.0	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	101	(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	94	(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

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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

Alpha Analytical Number: BMI10080501-03A
Client I.D. Number: MW-19-3

Sampled: 08/04/10 09:34
Received: 08/05/10
Extracted: 08/10/10 22:38
Analyzed: 08/10/10 22:38

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND		0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	Q	2.0	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	Q	2.0	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		2.0	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	2.0	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	3.0	µg/L
25	Trichloroethene	ND		0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	2.0	µg/L
26	Bromodichloromethane	ND		0.50	µg/L	61	Naphthalene	ND	2.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND		2.5	µg/L	62	Hexachlorobutadiene	ND	2.0	µg/L
28	cis-1,3-Dichloropropene	ND		0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	2.0	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	99	(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	92	(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 Randy Gardner Walter Hinchman

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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8/18/10
Report Date

Alpha Analytical, Inc.

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

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

Alpha Analytical Number: BMI10080501-04A
Client I.D. Number: MW-19-2

Sampled: 08/04/10 09:54
Received: 08/05/10
Extracted: 08/10/10 23:01
Analyzed: 08/10/10 23:01

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND		0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	Q	2.0	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	Q	2.0	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		2.0	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	2.0	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	0.57		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	3.0	µg/L
25	Trichloroethene	1.9		0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	2.0	µg/L
26	Bromodichloromethane	ND		0.50	µg/L	61	Naphthalene	ND	2.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND		2.5	µg/L	62	Hexachlorobutadiene	ND	2.0	µg/L
28	cis-1,3-Dichloropropene	ND		0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	2.0	µg/L
29	trans-1,3-Dichloropropene	ND		0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	113	(70-130)	%REC
30	1,1,2-Trichloroethane	ND		0.50	µg/L	65	Surr: Toluene-d8	98	(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	91	(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	0.66		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

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8/18/10
Report Date

Alpha Analytical, Inc.

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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

Alpha Analytical Number: BMI10080501-05A
Client I.D. Number: MW-19-1

Sampled: 08/04/10 10:28
Received: 08/05/10
Extracted: 08/10/10 23:25
Analyzed: 08/10/10 23:25

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND		0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	Q	2.0	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	Q	2.0	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		2.0	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	2.0	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	3.0	µg/L
25	Trichloroethene	1.1		0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	2.0	µg/L
26	Bromodichloromethane	ND		0.50	µg/L	61	Naphthalene	ND	2.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND		2.5	µg/L	62	Hexachlorobutadiene	ND	2.0	µg/L
28	cis-1,3-Dichloropropene	ND		0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	2.0	µg/L
29	trans-1,3-Dichloropropene	ND		0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	113	(70-130)	%REC
30	1,1,2-Trichloroethane	ND		0.50	µg/L	65	Surr: Toluene-d8	99	(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	92	(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 Randy Gardner Walter Hinchman

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8/18/10
Report Date

Alpha Analytical, Inc.

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(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

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

Alpha Analytical Number: BMI10080501-06A
Client I.D. Number: EB-8-08/04/10

Sampled: 08/04/10 10:10
Received: 08/05/10
Extracted: 08/10/10 23:49
Analyzed: 08/10/10 23:49

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND		0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	Q	2.0	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	Q	2.0	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		2.0	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	2.0	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	3.0	µg/L
25	Trichloroethene	ND		0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	2.0	µg/L
26	Bromodichloromethane	ND		0.50	µg/L	61	Naphthalene	ND	2.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND		2.5	µg/L	62	Hexachlorobutadiene	ND	2.0	µg/L
28	cis-1,3-Dichloropropene	ND		0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	2.0	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	98	(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	94	(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 Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer
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8/18/10
Report Date

Alpha Analytical, Inc.

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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

Alpha Analytical Number: BMI10080501-07A
Client I.D. Number: TB-8-08/04/10

Sampled: 08/04/10 00:00
Received: 08/05/10
Extracted: 08/10/10 19:29
Analyzed: 08/10/10 19:29

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND		0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	Q	2.0	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	Q	2.0	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		2.0	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	2.0	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	3.0	µg/L
25	Trichloroethene	ND		0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	2.0	µg/L
26	Bromodichloromethane	ND		0.50	µg/L	61	Naphthalene	ND	2.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND		2.5	µg/L	62	Hexachlorobutadiene	ND	2.0	µg/L
28	cis-1,3-Dichloropropene	ND		0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	2.0	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	99	(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	93	(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 Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer

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8/18/10

Report Date

Alpha Analytical, Inc.

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: BMI10080501 **Job:** G005862 / JPL Groundwater Monitoring

Alpha's Sample ID	Client's Sample ID	Matrix	pH
10080501-01A	MW-19-5	Aqueous	2
10080501-02A	MW-19-4	Aqueous	2
10080501-03A	MW-19-3	Aqueous	2
10080501-04A	MW-19-2	Aqueous	2
10080501-05A	MW-19-1	Aqueous	2
10080501-06A	EB-8-08/04/10	Aqueous	2
10080501-07A	TB-8-08/04/10	Aqueous	2

8/18/10

Report Date

Alpha Analytical, Inc.

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(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date: *16-Aug-10*

QC Summary Report

Work Order: 10080501

Method Blank

Type **MBLK** Test Code: **EPA Method 314.0**

File ID: **14** Batch ID: **24800** Analysis Date: **08/06/2010 13:01**

Sample ID: **MB-24800** Units : **µg/L** Run ID: **IC_3_100806A** Prep Date: **08/06/2010 12:05**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	ND	1								

Laboratory Fortified Blank

Type **LFB** Test Code: **EPA Method 314.0**

File ID: **15** Batch ID: **24800** Analysis Date: **08/06/2010 13:20**

Sample ID: **LFB-24800** Units : **µg/L** Run ID: **IC_3_100806A** Prep Date: **08/06/2010 12:05**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	24.4	2	25		98	85	115			

Sample Matrix Spike

Type **LFM** Test Code: **EPA Method 314.0**

File ID: **38** Batch ID: **24800** Analysis Date: **08/06/2010 20:23**

Sample ID: **10080641-02ALFM** Units : **µg/L** Run ID: **IC_3_100806A** Prep Date: **08/06/2010 12:05**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	103	4	50	54.49	97	80	120			

Sample Matrix Spike Duplicate

Type **LFMD** Test Code: **EPA Method 314.0**

File ID: **39** Batch ID: **24800** Analysis Date: **08/06/2010 20:41**

Sample ID: **10080641-02ALFMD** Units : **µg/L** Run ID: **IC_3_100806A** Prep Date: **08/06/2010 12:05**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	112	4	50	54.49	116	80	120	103.1	8.5(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: *16-Aug-10*

QC Summary Report

Work Order: 10080501

Method Blank Type **MBLK** Test Code: **EPA Method SW8260B**

File ID: **C:\HPCHEM\MS07\DATA\100810\10081006.D** Batch ID: **MS07W0810M** Analysis Date: **08/10/2010 19:05**

Sample ID: **MBLK MS07W0810M** Units : **µg/L** Run ID: **MSD_07_100810B** Prep Date: **08/10/2010 19:05**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	ND	0.5								
Chloromethane	ND	1								
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	ND	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)	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	ND	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)	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	ND	0.5								
Dibromochloromethane	ND	0.5								
1,2-Dibromoethane (EDB)	ND	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	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								
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	ND	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	ND	1								
1,2,3-Trichlorobenzene	ND	1								
Surr: 1,2-Dichloroethane-d4	10.7		10		107	70	130			
Surr: Toluene-d8	10.1		10		101	70	130			

Alpha Analytical, Inc.

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Date: *16-Aug-10*

QC Summary Report

Work Order: 10080501

Surr: 4-Bromofluorobenzene	9.25		10	93	70	130			

Laboratory Control Spike Type **LCS** Test Code: **EPA Method SW8260B**

File ID: **C:\HPCHEM\MS07\DATA\100810\10081003.D** Batch ID: **MS07W0810M** Analysis Date: **08/10/2010 17:55**

Sample ID: **LCS MS07W0810M** Units : **µg/L** Run ID: **MSD_07_100810B** Prep Date: **08/10/2010 17:55**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	9.05	1	10		91	70	130			
Chloromethane	6.36	2	10		64	70(70)	130			L50
Vinyl chloride	8.39	1	10		84	70	130			
Chloroethane	9.28	1	10		93	70	130			
Bromomethane	3.96	2	10		40	70(70)	130			L50
Trichlorofluoromethane	10	1	10		100	70	130			
1,1-Dichloroethene	11	1	10		110	70	130			
Dichloromethane	9.97	2	10		99.7	70	130			
trans-1,2-Dichloroethene	9.83	1	10		98	70	130			
Methyl tert-butyl ether (MTBE)	12.2	0.5	10		122	70	130			
1,1-Dichloroethane	10.5	1	10		105	70	130			
cis-1,2-Dichloroethene	11.1	1	10		111	70	130			
Bromochloromethane	11.3	1	10		113	70	130			
Chloroform	10.7	1	10		107	70	130			
2,2-Dichloropropane	13.5	1	10		135	70	130(130)			L51
1,2-Dichloroethane	11.4	1	10		114	70	130			
1,1,1-Trichloroethane	12.1	1	10		121	70	130			
1,1-Dichloropropene	11.8	1	10		118	70	130			
Carbon tetrachloride	12.2	1	10		122	70	130			
Benzene	11	0.5	10		110	70	130			
Dibromomethane	10.8	1	10		108	70	130			
1,2-Dichloropropane	11.3	1	10		113	70	130			
Trichloroethene	11.1	1	10		111	70	130			
Bromodichloromethane	11.3	1	10		113	70	130			
cis-1,3-Dichloropropene	9.84	1	10		98	70	130			
trans-1,3-Dichloropropene	11.8	1	10		118	70	130			
1,1,2-Trichloroethane	10.7	1	10		107	70	130			
Toluene	11	0.5	10		110	70	130			
1,3-Dichloropropane	10.5	1	10		105	70	130			
Dibromochloromethane	11.7	1	10		117	70	130			
1,2-Dibromoethane (EDB)	22.2	2	20		111	70	130			
Tetrachloroethene	11.9	1	10		119	70	130			
1,1,1,2-Tetrachloroethane	12.2	1	10		122	70	130			
Chlorobenzene	11.3	1	10		113	70	130			
Ethylbenzene	11.7	0.5	10		117	70	130			
m,p-Xylene	11.7	0.5	10		117	70	130			
Bromoform	12.4	1	10		124	70	130			
Styrene	10.4	1	10		104	70	130			
o-Xylene	11.7	0.5	10		117	70	130			
1,1,2,2-Tetrachloroethane	10.9	1	10		109	70	130			
1,2,3-Trichloropropane	23.1	2	20		116	70	130			
Isopropylbenzene	11.2	1	10		112	70	130			
Bromobenzene	11.1	1	10		111	70	130			
n-Propylbenzene	11	1	10		110	70	130			
4-Chlorotoluene	11.2	1	10		112	70	130			
2-Chlorotoluene	11.1	1	10		111	70	130			
1,3,5-Trimethylbenzene	11.6	1	10		116	70	130			
tert-Butylbenzene	11.3	1	10		113	70	130			
1,2,4-Trimethylbenzene	11.9	1	10		119	70	130			
sec-Butylbenzene	11.4	1	10		114	70	130			
1,3-Dichlorobenzene	11.2	1	10		112	70	130			
1,4-Dichlorobenzene	11.2	1	10		112	70	130			
4-Isopropyltoluene	11.7	1	10		117	70	130			
1,2-Dichlorobenzene	10.7	1	10		107	70	130			
n-Butylbenzene	11.6	1	10		116	70	130			
1,2-Dibromo-3-chloropropane (DBCP)	48.8	3	50		98	70	130			
1,2,4-Trichlorobenzene	9.97	2	10		99.7	70	130			
Naphthalene	9.62	2	10		96	70	130			
Hexachlorobutadiene	21.6	2	20		108	70	130			
1,2,3-Trichlorobenzene	9.89	2	10		99	70	130			
Surr: 1,2-Dichloroethane-d4	10.8		10		108	70	130			
Surr: Toluene-d8	10.1		10		101	70	130			
Surr: 4-Bromofluorobenzene	8.87		10		89	70	130			

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Date: *16-Aug-10*

QC Summary Report

Work Order: 10080501

Sample Matrix Spike Type **MS** Test Code: **EPA Method SW8260B**

File ID: **C:\HPCHEM\MS07\DATA\100810\10081009.D** Batch ID: **MS07W0810M** Analysis Date: **08/10/2010 20:16**

Sample ID: **10080504-06AMS** Units : **µg/L** Run ID: **MSD_07_100810B** Prep Date: **08/10/2010 20:16**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	39.6	2.5	50	0	79	13	167			
Chloromethane	26.6	10	50	0	53	28	145			
Vinyl chloride	40.2	2.5	50	0	80	43	134			
Chloroethane	45.6	2.5	50	0	91	39	154			
Bromomethane	30.5	10	50	0	61	19	176			
Trichlorofluoromethane	46.7	2.5	50	0	93	34	160			
1,1-Dichloroethene	50.1	2.5	50	0	100	60	130			
Dichloromethane	48.1	10	50	0	96	68	130			
trans-1,2-Dichloroethene	49.1	2.5	50	0	98	63	130			
Methyl tert-butyl ether (MTBE)	90.6	1.3	50	34.17	113	56	141			
1,1-Dichloroethane	50	2.5	50	0	99.9	61	130			
cis-1,2-Dichloroethene	52.8	2.5	50	0	106	70	130			
Bromochloromethane	53	2.5	50	0	106	70	130			
Chloroform	50.2	2.5	50	0	100	67	130			
2,2-Dichloropropane	51.6	2.5	50	0	103	30	152			
1,2-Dichloroethane	54.6	2.5	50	0	109	60	135			
1,1,1-Trichloroethane	57.6	2.5	50	0	115	59	137			
1,1-Dichloropropene	54.8	2.5	50	0	110	63	130			
Carbon tetrachloride	57.4	2.5	50	0	115	50	147			
Benzene	53.2	1.3	50	0	106	67	130			
Dibromomethane	51.9	2.5	50	0	104	69	133			
1,2-Dichloropropane	54.8	2.5	50	0	110	69	130			
Trichloroethene	52.6	2.5	50	0	105	69	130			
Bromodichloromethane	54.9	2.5	50	0	110	66	134			
cis-1,3-Dichloropropene	41.7	2.5	50	0	83	63	130			
trans-1,3-Dichloropropene	55.3	2.5	50	0	111	66	131			
1,1,2-Trichloroethane	50.5	2.5	50	0	101	68	130			
Toluene	51	1.3	50	0	102	66	130			
1,3-Dichloropropane	48.7	2.5	50	0	97	70	130			
Dibromochloromethane	54.3	2.5	50	0	109	70	130			
1,2-Dibromoethane (EDB)	104	5	100	0	104	70	130			
Tetrachloroethene	53.3	2.5	50	0	107	61	134			
1,1,1,2-Tetrachloroethane	56.8	2.5	50	0	114	70	130			
Chlorobenzene	52.2	2.5	50	0	104	70	130			
Ethylbenzene	54.1	1.3	50	0	108	68	130			
m,p-Xylene	53.6	1.3	50	0	107	64	130			
Bromoform	58.7	2.5	50	0	117	64	138			
Styrene	47.8	2.5	50	0	96	69	130			
o-Xylene	54.4	1.3	50	0	109	70	130			
1,1,2,2-Tetrachloroethane	52.1	2.5	50	0	104	65	131			
1,2,3-Trichloropropane	110	10	100	0	110	70	130			
Isopropylbenzene	50.1	2.5	50	0	100	64	138			
Bromobenzene	51	2.5	50	0	102	70	130			
n-Propylbenzene	49.5	2.5	50	0	99	66	132			
4-Chlorotoluene	50.6	2.5	50	0	101	70	130			
2-Chlorotoluene	50.7	2.5	50	0	101	70	130			
1,3,5-Trimethylbenzene	52.4	2.5	50	0	105	66	136			
tert-Butylbenzene	50.7	2.5	50	0	101	65	137			
1,2,4-Trimethylbenzene	52.7	2.5	50	0	105	65	137			
sec-Butylbenzene	51	2.5	50	0	102	66	134			
1,3-Dichlorobenzene	50.8	2.5	50	0	102	70	130			
1,4-Dichlorobenzene	51.1	2.5	50	0	102	70	130			
4-Isopropyltoluene	51.6	2.5	50	0	103	66	137			
1,2-Dichlorobenzene	49.5	2.5	50	0	99	70	130			
n-Butylbenzene	50.3	2.5	50	0	101	60	142			
1,2-Dibromo-3-chloropropane (DBCP)	234	15	250	0	94	67	130			
1,2,4-Trichlorobenzene	44.7	10	50	0	89	61	137			
Naphthalene	45	10	50	0	90	40	167			
Hexachlorobutadiene	93.2	10	100	0	93	61	130			
1,2,3-Trichlorobenzene	45.3	10	50	0	91	51	144			
Surr: 1,2-Dichloroethane-d4	54.8		50		110	70	130			
Surr: Toluene-d8	48.5		50		97	70	130			
Surr: 4-Bromofluorobenzene	44.1		50		88	70	130			

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Date: 16-Aug-10

QC Summary Report

Work Order: 10080501

Sample Matrix Spike Duplicate Type **MSD** Test Code: **EPA Method SW8260B**

File ID: **C:\HPCHEM\MS07\DATA\100810\10081010.D** Batch ID: **MS07W0810M** Analysis Date: **08/10/2010 20:40**

Sample ID: **10080504-06AMSD** Units : **µg/L** Run ID: **MSD_07_100810B** Prep Date: **08/10/2010 20:40**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	38.6	2.5	50	0	77	13	167	39.55	2.5(20)	
Chloromethane	27	10	50	0	54	28	145	26.58	1.6(20)	
Vinyl chloride	39.8	2.5	50	0	80	43	134	40.24	1.2(20)	
Chloroethane	42.9	2.5	50	0	86	39	154	45.6	6.2(20)	
Bromomethane	34.4	10	50	0	69	19	176	30.5	12.1(20)	
Trichlorofluoromethane	45.8	2.5	50	0	92	34	160	46.66	2.0(20)	
1,1-Dichloroethene	51.1	2.5	50	0	102	60	130	50.12	1.9(20)	
Dichloromethane	46.8	10	50	0	94	68	130	48.05	2.7(20)	
trans-1,2-Dichloroethene	47.5	2.5	50	0	95	63	130	49.05	3.3(20)	
Methyl tert-butyl ether (MTBE)	88.2	1.3	50	34.17	108	56	141	90.62	2.7(20)	
1,1-Dichloroethane	48.3	2.5	50	0	97	61	130	49.95	3.3(20)	
cis-1,2-Dichloroethene	51.5	2.5	50	0	103	70	130	52.81	2.5(20)	
Bromochloromethane	52.5	2.5	50	0	105	70	130	52.98	0.9(20)	
Chloroform	48.2	2.5	50	0	96	67	130	50.21	4.2(20)	
2,2-Dichloropropane	50.1	2.5	50	0	100	30	152	51.58	2.9(20)	
1,2-Dichloroethane	51.9	2.5	50	0	104	60	135	54.56	5.0(20)	
1,1,1-Trichloroethane	55.3	2.5	50	0	111	59	137	57.58	4.0(20)	
1,1-Dichloropropene	53.4	2.5	50	0	107	63	130	54.79	2.5(20)	
Carbon tetrachloride	55.2	2.5	50	0	110	50	147	57.41	3.9(20)	
Benzene	51.6	1.3	50	0	103	67	130	53.23	3.1(20)	
Dibromomethane	48.9	2.5	50	0	98	69	133	51.93	6.0(20)	
1,2-Dichloropropane	51.7	2.5	50	0	103	69	130	54.79	5.9(20)	
Trichloroethene	51.2	2.5	50	0	102	69	130	52.63	2.8(20)	
Bromodichloromethane	51.9	2.5	50	0	104	66	134	54.88	5.6(20)	
cis-1,3-Dichloropropene	39.8	2.5	50	0	80	63	130	41.74	4.8(20)	
trans-1,3-Dichloropropene	52.2	2.5	50	0	104	66	131	55.26	5.8(20)	
1,1,2-Trichloroethane	47.9	2.5	50	0	96	68	130	50.54	5.4(20)	
Toluene	50.4	1.3	50	0	101	66	130	50.99	1.2(20)	
1,3-Dichloropropane	46.6	2.5	50	0	93	70	130	48.65	4.4(20)	
Dibromochloromethane	52.7	2.5	50	0	105	70	130	54.32	3.1(20)	
1,2-Dibromoethane (EDB)	100	5	100	0	100	70	130	104.3	4.2(20)	
Tetrachloroethene	53.1	2.5	50	0	106	61	134	53.28	0.3(20)	
1,1,1,2-Tetrachloroethane	55.5	2.5	50	0	111	70	130	56.79	2.4(20)	
Chlorobenzene	51.5	2.5	50	0	103	70	130	52.23	1.4(20)	
Ethylbenzene	53.5	1.3	50	0	107	68	130	54.09	1.2(20)	
m,p-Xylene	53.2	1.3	50	0	106	64	130	53.55	0.7(20)	
Bromoform	57.1	2.5	50	0	114	64	138	58.66	2.8(20)	
Styrene	47	2.5	50	0	94	69	130	47.8	1.7(20)	
o-Xylene	53.9	1.3	50	0	108	70	130	54.43	0.9(20)	
1,1,2,2-Tetrachloroethane	49.5	2.5	50	0	99	65	131	52.1	5.1(20)	
1,2,3-Trichloropropane	106	10	100	0	106	70	130	110.4	3.9(20)	
Isopropylbenzene	49.7	2.5	50	0	99	64	138	50.08	0.9(20)	
Bromobenzene	50.2	2.5	50	0	100	70	130	50.98	1.5(20)	
n-Propylbenzene	49.4	2.5	50	0	99	66	132	49.48	0.1(20)	
4-Chlorotoluene	49.8	2.5	50	0	99.6	70	130	50.63	1.7(20)	
2-Chlorotoluene	50.3	2.5	50	0	101	70	130	50.73	0.9(20)	
1,3,5-Trimethylbenzene	52.3	2.5	50	0	105	66	136	52.36	0.2(20)	
tert-Butylbenzene	50.8	2.5	50	0	102	65	137	50.65	0.4(20)	
1,2,4-Trimethylbenzene	52.5	2.5	50	0	105	65	137	52.74	0.5(20)	
sec-Butylbenzene	51.2	2.5	50	0	102	66	134	50.99	0.5(20)	
1,3-Dichlorobenzene	50.3	2.5	50	0	101	70	130	50.78	1.0(20)	
1,4-Dichlorobenzene	50.8	2.5	50	0	102	70	130	51.08	0.6(20)	
4-Isopropyltoluene	52.2	2.5	50	0	104	66	137	51.58	1.1(20)	
1,2-Dichlorobenzene	48.6	2.5	50	0	97	70	130	49.49	1.9(20)	
n-Butylbenzene	50.8	2.5	50	0	102	60	142	50.25	1.1(20)	
1,2-Dibromo-3-chloropropane (DBCP)	222	15	250	0	89	67	130	234.2	5.5(20)	
1,2,4-Trichlorobenzene	44.8	10	50	0	90	61	137	44.74	0.1(20)	
Naphthalene	43.3	10	50	0	87	40	167	44.96	3.7(20)	
Hexachlorobutadiene	94.6	10	100	0	95	61	130	93.23	1.5(20)	
1,2,3-Trichlorobenzene	45.7	10	50	0	91	51	144	45.33	0.7(20)	
Surr: 1,2-Dichloroethane-d4	52.8		50		106	70	130			
Surr: Toluene-d8	49.1		50		98	70	130			
Surr: 4-Bromofluorobenzene	44.5		50		89	70	130			

Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date: *16-Aug-10*

QC Summary Report

Work Order: 10080501

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.

L51 = Analyte recovery was above 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 :

CHAIN-OF-CUSTODY RECORD

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

CA

WorkOrder : BMIS10080501

Report Due By : 5:00 PM On : 19-Aug-2010

Client:
Battelle Memorial Institute
655 West Broadway
Suite 1420
San Diego, CA 92101

Report Attention	Phone Number	EMail Address
David Conner	(818) 393-2808 x	connerd@battelle.org
Shane Walton	(614) 424-4117 x	waltons@battelle.org
Betsy Cutie	(614) 424-4899 x	cutiee@batelle.org

EDD Required : **Yes**

Sampled by : Chase Brogdon

PO : 218013

Client's COC # : 25556 Job : G005862 / JPL Groundwater Monitoring

Cooler Temp	Samples Received	Date Printed
1 °C	05-Aug-2010	**05-Aug-2010**

QC Level : DS4 = DOD QC Required : Final Rpt, MBLK, InitCal/ConCal data, LCS, MS/MSD With Surrogates

Alpha Sample ID	Client Sample ID	Matrix	Collection Date	No. of Bottles Alpha	Sub	TAT	Requested Tests 314_W	VOC_TIC_W	VOC_W					Sample Remarks
BMI10080501-01A	MW-19-5	AQ	08/04/10 08:46	4	0	10	Perchlorate	VOC by 524 Criteria	VOC by 524 Criteria					
BMI10080501-02A	MW-19-4	AQ	08/04/10 09:10	4	0	10	Perchlorate	VOC by 524 Criteria	VOC by 524 Criteria					
BMI10080501-03A	MW-19-3	AQ	08/04/10 09:34	4	0	10	Perchlorate	VOC by 524 Criteria	VOC by 524 Criteria					
BMI10080501-04A	MW-19-2	AQ	08/04/10 09:54	4	0	10	Perchlorate	VOC by 524 Criteria	VOC by 524 Criteria					
BMI10080501-05A	MW-19-1	AQ	08/04/10 10:28	4	0	10	Perchlorate	VOC by 524 Criteria	VOC by 524 Criteria					
BMI10080501-06A	EB-8-08/04/10	AQ	08/04/10 10:10	4	0	10	Perchlorate	VOC by 524 Criteria	VOC by 524 Criteria					
BMI10080501-07A	TB-8-08/04/10	AQ	08/04/10 00:00	1	0	10		VOC by 524 Criteria	VOC by 524 Criteria					Reno Trip Blank 6/29/10

Comments: Security seals intact. Frozen ice. No Temp blank provided. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). :

	Signature	Print Name	Company	Date/Time
Logged in by:	Elizabeth Adcox	Elizabeth Adcox	**Alpha Analytical, Inc.**	8.5.10 9:24

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 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.

Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

Billing Information:
Name GERALD TOMPKINS / BATTELLE
Address 505 KING AVE.
City, State, Zip COLUMBUS, OH 43201
Phone Number ____ Fax ____

Alpha Analytical, Inc.
255 Glendale Avenue, Suite 21
Sparks, Nevada 89431-5778
Phone (775) 355-1044
Fax (775) 355-0406

Samples Collected From Which State? AZ ___ CA X NV ___ WA ___ ID ___ OR ___ OTHER ___

25556

Page # 1 of 1

Client Name: BATTELLE / DAVID CANNEN
Address: 3990 OLD TOWN AVE. C-205
City, State, Zip: SAN DIEGO, CA 92110
P.O. # 28013
Job # G005862
EMail Address:
Phone # (619) 726-7311
Fax #
Sampled by: CHRIST BROSDON
Report Attention:

Required QC Level? I II (III) IV
EDD / EDF? YES ___ NO ___
Global ID # ___

Time Sampled	Date Sampled	Matrix* See Key Below	Lab ID Number (Office Use Only)	Sample Description	TAT	Field Filtered	Total and type of containers ** See below	VOC (524.2)	~~TOTAL Cr (200.8)~~	ClO4- (314.0)					REMARKS
846	8/4/10	AQ	BMI10080501.01	MW-19-5	NORM		3v 1p	X		X					
910	|	|	.02	MW-19-4	|	|	3v 1p	X		X					
934	|	|	.03	MW-19-3	|	|	3v 1p	X		X					
954	|	|	.04	MW-19-2	|	|	3v 1p	X		X					
1028 ~~1010~~	|	|	.05	MW-19-1	|	|	3v 1p	X		X					
1010	|	|	.06	EB-8-08/04/10	|	|	3v/1p	X		X					EQUIP BLANK
—	|	|	.07	TB-8-08/04/10	|	|	1voa	X							TRIP BLANK

ADDITIONAL INSTRUCTIONS:

	Signature	Print Name	Company	Date	Time
Relinquished by	[signature]	MARCO MENDOZA	INSIGHT E2C	8/4/10	1140
Received by	[signature]	Anthony Stark	Alpha Analytical	8/4/10	1140
Relinquished by	[signature]	" "	"	"	1140
Received by	Elizabeth Adcox	Elizabeth Adcox	Alpha	8.5.10	9:24
Relinquished by					
Received by					

*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

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 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.

Alpha Analytical, Inc.

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

Date: *16-Aug-10*

David Conner
Battelle Memorial Institute
655 West Broadway Suite 1420
San Diego, CA 92101
(619) 726-7311

CASE NARRATIVE

Job: G005862 / JPL Groundwater Monitoring

Work Order: BMI10080402 **Cooler Temp:** 4 °C

Alpha's Sample ID	Client's Sample ID	Matrix
10080402-01A	MW-26-2	Aqueous
10080402-02A	MW-26-1	Aqueous
10080402-03A	MW-25-5	Aqueous
10080402-04A	MW-25-4	Aqueous
10080402-05A	MW-25-3	Aqueous
10080402-06A	MW-25-2	Aqueous
10080402-07A	MW-25-1	Aqueous
10080402-08A	EB-07-8/3/10	Aqueous
10080402-09A	TB-07-8/3/10	Aqueous

Manually Integrated Analytes

Alpha's Sample ID	Test Reference	Analyte
10080402-06A	EPA Method 314.0	Perchlorate

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

Alpha Analytical, Inc.

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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 : 08/04/10

Job: G005862 / JPL Groundwater Monitoring

Perchlorate by Ion Chromatography
EPA Method 314.0

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-26-2**				
Lab ID : BMI10080402-01A Perchlorate	ND	1.00 µg/L	08/04/10 12:37	08/04/10 14:29
Date Sampled 08/03/10 11:57				
Client ID: **MW-26-1**				
Lab ID : BMI10080402-02A Perchlorate	2.95	1.00 µg/L	08/04/10 12:37	08/04/10 14:47
Date Sampled 08/03/10 12:19				
Client ID: **MW-25-5**				
Lab ID : BMI10080402-03A Perchlorate	ND	1.00 µg/L	08/04/10 12:37	08/04/10 15:06
Date Sampled 08/03/10 08:45				
Client ID: **MW-25-4**				
Lab ID : BMI10080402-04A Perchlorate	8.04	1.00 µg/L	08/04/10 12:37	08/04/10 15:24
Date Sampled 08/03/10 09:10				
Client ID: **MW-25-3**				
Lab ID : BMI10080402-05A Perchlorate	10.5	1.00 µg/L	08/04/10 12:37	08/04/10 15:43
Date Sampled 08/03/10 09:54				
Client ID: **MW-25-2**				
Lab ID : BMI10080402-06A Perchlorate	14.1	1.00 µg/L	08/04/10 12:37	08/04/10 16:01
Date Sampled 08/03/10 10:20				
Client ID: **MW-25-1**				
Lab ID : BMI10080402-07A Perchlorate	10.6	1.00 µg/L	08/04/10 12:37	08/04/10 16:19
Date Sampled 08/03/10 10:54				
Client ID: **EB-07-8/3/10**				
Lab ID : BMI10080402-08A Perchlorate	ND	1.00 µg/L	08/04/10 12:37	08/04/10 16:38
Date Sampled 08/03/10 10:56				

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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.

8/17/10
Report Date

Alpha Analytical, Inc.

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

Attn: David Conner
Phone: (619) 726-7311
Fax: (614) 458-6641
Date Received : 08/04/10

Job: G005862 / JPL Groundwater Monitoring

Metals by ICPMS
EPA Method 200.8

Parameter		Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-26-2**					
Lab ID : BMI10080402-01A	Chromium (Cr)	0.0068	0.0050 mg/L	08/16/10 18:05	08/16/10 23:21
Date Sampled 08/03/10 11:57					
Client ID: **MW-26-1**					
Lab ID : BMI10080402-02A	Chromium (Cr)	ND	0.0050 mg/L	08/16/10 18:05	08/16/10 23:49
Date Sampled 08/03/10 12:19					
Client ID: **MW-25-5**					
Lab ID : BMI10080402-03A	Chromium (Cr)	ND	0.0050 mg/L	08/16/10 18:05	08/16/10 23:54
Date Sampled 08/03/10 08:45					
Client ID: **MW-25-4**					
Lab ID : BMI10080402-04A	Chromium (Cr)	ND	0.0050 mg/L	08/16/10 18:05	08/17/10 00:01
Date Sampled 08/03/10 09:10					
Client ID: **MW-25-3**					
Lab ID : BMI10080402-05A	Chromium (Cr)	0.0059	0.0050 mg/L	08/16/10 18:05	08/17/10 00:06
Date Sampled 08/03/10 09:54					
Client ID: **MW-25-2**					
Lab ID : BMI10080402-06A	Chromium (Cr)	0.0065	0.0050 mg/L	08/16/10 18:05	08/17/10 00:11
Date Sampled 08/03/10 10:20					
Client ID: **MW-25-1**					
Lab ID : BMI10080402-07A	Chromium (Cr)	0.0071	0.0050 mg/L	08/16/10 18:05	08/17/10 00:17
Date Sampled 08/03/10 10:54					
Client ID: **EB-07-8/3/10**					
Lab ID : BMI10080402-08A	Chromium (Cr)	ND	0.0050 mg/L	08/16/10 18:05	08/17/10 00:22
Date Sampled 08/03/10 10:56					

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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8/17/10
Report Date

Alpha Analytical, Inc.

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

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 Extracted	Date Analyzed
Client ID : **MW-26-2** Lab ID : BMI10080402-01A Date Received : 08/04/10 Date Sampled : 08/03/10 11:57	* * * None Found * * *	ND	2.0 µg/L	08/07/10 02:24	08/07/10 02:24
Client ID : **MW-26-1** Lab ID : BMI10080402-02A Date Received : 08/04/10 Date Sampled : 08/03/10 12:19	* * * None Found * * *	ND	2.0 µg/L	08/07/10 02:48	08/07/10 02:48
Client ID : **MW-25-5** Lab ID : BMI10080402-03A Date Received : 08/04/10 Date Sampled : 08/03/10 08:45	* * * None Found * * *	ND	2.0 µg/L	08/07/10 03:11	08/07/10 03:11
Client ID : **MW-25-4** Lab ID : BMI10080402-04A Date Received : 08/04/10 Date Sampled : 08/03/10 09:10	* * * None Found * * *	ND	2.0 µg/L	08/07/10 03:35	08/07/10 03:35
Client ID : **MW-25-3** Lab ID : BMI10080402-05A Date Received : 08/04/10 Date Sampled : 08/03/10 09:54	* * * None Found * * *	ND	2.0 µg/L	08/07/10 03:59	08/07/10 03:59
Client ID : **MW-25-2** Lab ID : BMI10080402-06A Date Received : 08/04/10 Date Sampled : 08/03/10 10:20	* * * None Found * * *	ND	2.0 µg/L	08/07/10 13:47	08/07/10 13:47
Client ID : **MW-25-1** Lab ID : BMI10080402-07A Date Received : 08/04/10 Date Sampled : 08/03/10 10:54	* * * None Found * * *	ND	2.0 µg/L	08/07/10 14:10	08/07/10 14:10
Client ID : **EB-07-8/3/10** Lab ID : BMI10080402-08A Date Received : 08/04/10 Date Sampled : 08/03/10 10:56	2-Methyl-1-propene	2.0	2.0 µg/L	08/07/10 14:34	08/07/10 14:34
Client ID : **TB-07-8/3/10** Lab ID : BMI10080402-09A Date Received : 08/04/10 Date Sampled : 08/03/10 07:00	* * * None Found * * *	ND	2.0 µg/L	08/07/10 07:52	08/07/10 07:52

Alpha Analytical, Inc.

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Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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8/17/10

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

Alpha Analytical Number: BMI10080402-01A
Client I.D. Number: MW-26-2

Sampled: 08/03/10 11:57
Received: 08/04/10
Extracted: 08/07/10 02:24
Analyzed: 08/07/10 02:24

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	2.0	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	2.0	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	2.0	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	2.0	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	3.0	µg/L
25	Trichloroethene	ND	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	2.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	2.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	2.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	2.0	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	99	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	94	(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 Randy Gardner Walter Hinchman

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

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8/17/10
Report Date

Alpha Analytical, Inc.

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

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

Alpha Analytical Number: BMI10080402-02A
Client I.D. Number: MW-26-1

Sampled: 08/03/10 12:19
Received: 08/04/10
Extracted: 08/07/10 02:48
Analyzed: 08/07/10 02:48

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	2.0	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	2.0	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	2.0	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	2.0	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	3.0	µg/L
25	Trichloroethene	ND	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	2.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	2.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	2.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	2.0	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	99	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	94	(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	0.69	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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.

8/17/10
Report Date

Alpha Analytical, Inc.

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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

Alpha Analytical Number: BMI10080402-03A
Client I.D. Number: MW-25-5

Sampled: 08/03/10 08:45
Received: 08/04/10
Extracted: 08/07/10 03:11
Analyzed: 08/07/10 03:11

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit		Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	2.0	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	2.0	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	2.0	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	2.0	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	3.0	µg/L
25	Trichloroethene	ND	0.50	µg/L	60 1,2,4-Trichlorobenzene	ND	2.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61 Naphthalene	ND	2.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62 Hexachlorobutadiene	ND	2.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63 1,2,3-Trichlorobenzene	ND	2.0	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	99	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66 Surr: 4-Bromofluorobenzene	93	(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 Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer

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8/17/10
Report Date

Alpha Analytical, Inc.

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

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

Alpha Analytical Number: BMI10080402-04A
Client I.D. Number: MW-25-4

Sampled: 08/03/10 09:10
Received: 08/04/10
Extracted: 08/07/10 03:35
Analyzed: 08/07/10 03:35

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	2.0	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	2.0	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	2.0	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	2.0	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	3.0	µg/L
25	Trichloroethene	ND	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	2.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	2.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	2.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	2.0	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	99	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	94	(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 Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer
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8/17/10
Report Date

Alpha Analytical, Inc.

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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

Alpha Analytical Number: BMI10080402-05A
Client I.D. Number: MW-25-3

Sampled: 08/03/10 09:54
Received: 08/04/10
Extracted: 08/07/10 03:59
Analyzed: 08/07/10 03:59

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	2.0	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	2.0	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	2.0	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	2.0	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	0.50	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	3.0	µg/L
25	Trichloroethene	ND	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	2.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	2.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	2.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	2.0	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	99	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	94	(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	0.53	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer
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8/17/10
Report Date

Alpha Analytical, Inc.

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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

Alpha Analytical Number: BMI10080402-06A
Client I.D. Number: MW-25-2

Sampled: 08/03/10 10:20
Received: 08/04/10
Extracted: 08/07/10 13:47
Analyzed: 08/07/10 13:47

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND		0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND		2.0	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	Q	2.0	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		2.0	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	2.0	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	3.0	µg/L
25	Trichloroethene	ND		0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	2.0	µg/L
26	Bromodichloromethane	ND		0.50	µg/L	61	Naphthalene	ND	2.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND		2.5	µg/L	62	Hexachlorobutadiene	ND	2.0	µg/L
28	cis-1,3-Dichloropropene	ND		0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	2.0	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	100	(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	94	(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 Randy Gardner Walter Hinchman

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.

8/17/10
Report Date

Alpha Analytical, Inc.

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

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

Alpha Analytical Number: BMI10080402-07A
Client I.D. Number: MW-25-1

Sampled: 08/03/10 10:54
Received: 08/04/10
Extracted: 08/07/10 14:10
Analyzed: 08/07/10 14:10

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND		0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND		2.0	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	Q	2.0	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		2.0	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	2.0	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	0.65		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	3.0	µg/L
25	Trichloroethene	3.6		0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	2.0	µg/L
26	Bromodichloromethane	ND		0.50	µg/L	61	Naphthalene	ND	2.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND		2.5	µg/L	62	Hexachlorobutadiene	ND	2.0	µg/L
28	cis-1,3-Dichloropropene	ND		0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	2.0	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	100	(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	93	(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 Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer

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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.

8/17/10
Report Date

Alpha Analytical, Inc.

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

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

Alpha Analytical Number: BMI10080402-08A
Client I.D. Number: EB-07-8/3/10

Sampled: 08/03/10 10:56
Received: 08/04/10
Extracted: 08/07/10 14:34
Analyzed: 08/07/10 14:34

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND		0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND		2.0	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	Q	2.0	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		2.0	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	2.0	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	3.0	µg/L
25	Trichloroethene	ND		0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	2.0	µg/L
26	Bromodichloromethane	ND		0.50	µg/L	61	Naphthalene	ND	2.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND		2.5	µg/L	62	Hexachlorobutadiene	ND	2.0	µg/L
28	cis-1,3-Dichloropropene	ND		0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	2.0	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	91	(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	94	(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 Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer

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Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

8/17/10
Report Date

Alpha Analytical, Inc.

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

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

Alpha Analytical Number: BMI10080402-09A
Client I.D. Number: TB-07-8/3/10

Sampled: 08/03/10 07:00
Received: 08/04/10
Extracted: 08/07/10 07:52
Analyzed: 08/07/10 07:52

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND		0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND		2.0	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	Q	2.0	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		2.0	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	2.0	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	3.0	µg/L
25	Trichloroethene	ND		0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	2.0	µg/L
26	Bromodichloromethane	ND		0.50	µg/L	61	Naphthalene	ND	2.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND		2.5	µg/L	62	Hexachlorobutadiene	ND	2.0	µg/L
28	cis-1,3-Dichloropropene	ND		0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	2.0	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	98	(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	93	(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 Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer

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8/17/10
Report Date

Alpha Analytical, Inc.

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: BMI10080402 **Job:** G005862 / JPL Groundwater Monitoring

Alpha's Sample ID	Client's Sample ID	Matrix	pH
10080402-01A	MW-26-2	Aqueous	2
10080402-02A	MW-26-1	Aqueous	2
10080402-03A	MW-25-5	Aqueous	2
10080402-04A	MW-25-4	Aqueous	2
10080402-05A	MW-25-3	Aqueous	2
10080402-06A	MW-25-2	Aqueous	2
10080402-07A	MW-25-1	Aqueous	2
10080402-08A	EB-07-8/3/10	Aqueous	2
10080402-09A	TB-07-8/3/10	Aqueous	2

8/17/10

Report Date

Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date: *16-Aug-10*

QC Summary Report

Work Order: 10080402

Method Blank

Type **MBLK** Test Code: **EPA Method 314.0**

File ID: **14** Batch ID: **24774** Analysis Date: **08/04/2010 13:34**

Sample ID: **MB-24774** Units : **µg/L** Run ID: **IC_3_100804A** Prep Date: **08/04/2010 12:37**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	ND	1								

Laboratory Fortified Blank

Type **LFB** Test Code: **EPA Method 314.0**

File ID: **15** Batch ID: **24774** Analysis Date: **08/04/2010 13:52**

Sample ID: **LFB-24774** Units : **µg/L** Run ID: **IC_3_100804A** Prep Date: **08/04/2010 12:37**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	24	2	25		96	85	115			

Sample Matrix Spike

Type **LFM** Test Code: **EPA Method 314.0**

File ID: **31** Batch ID: **24774** Analysis Date: **08/04/2010 18:47**

Sample ID: **10080401-04ALFM** Units : **µg/L** Run ID: **IC_3_100804A** Prep Date: **08/04/2010 12:37**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	31.4	2	25	5.509	104	80	120			

Sample Matrix Spike Duplicate

Type **LFMD** Test Code: **EPA Method 314.0**

File ID: **32** Batch ID: **24774** Analysis Date: **08/04/2010 19:05**

Sample ID: **10080401-04ALFMD** Units : **µg/L** Run ID: **IC_3_100804A** Prep Date: **08/04/2010 12:37**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	32.2	2	25	5.509	107	80	120	31.4	2.5(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.

Alpha Analytical, Inc.

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

Date: *17-Aug-10*

QC Summary Report

Work Order: 10080402

Method Blank

Type **MBLK** Test Code: **EPA Method 200.8**

File ID: **081610.B\114_M.D** Batch ID: **24868** Analysis Date: **08/16/2010 21:46**

Sample ID: **MB-24868** Units : **mg/L** Run ID: **ICP/MS_100816D** Prep Date: **08/16/2010 18:05**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	ND	0.005								

Laboratory Control Spike

Type **LCS** Test Code: **EPA Method 200.8**

File ID: **081610.B\115_L.D** Batch ID: **24868** Analysis Date: **08/16/2010 21:52**

Sample ID: **LCS-24868** Units : **mg/L** Run ID: **ICP/MS_100816D** Prep Date: **08/16/2010 18:05**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0551	0.005	0.05		110	85	115			

Sample Matrix Spike

Type **MS** Test Code: **EPA Method 200.8**

File ID: **081610.B\121_SS.D** Batch ID: **24868** Analysis Date: **08/16/2010 22:19**

Sample ID: **10080401-04AMS** Units : **mg/L** Run ID: **ICP/MS_100816D** Prep Date: **08/16/2010 18:05**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0579	0.005	0.05	0	116	70	130			

Sample Matrix Spike Duplicate

Type **MSD** Test Code: **EPA Method 200.8**

File ID: **081610.B\122_SSS.D** Batch ID: **24868** Analysis Date: **08/16/2010 22:25**

Sample ID: **10080401-04AMSD** Units : **mg/L** Run ID: **ICP/MS_100816D** Prep Date: **08/16/2010 18:05**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0622	0.005	0.05	0	124	70	130	0.05791	7.1(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.

Alpha Analytical, Inc.

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Date: *13-Aug-10*

QC Summary Report

Work Order: 10080402

Method Blank Type **MBLK** Test Code: **EPA Method SW8260B**

File ID: **C:\HPCHEM\MS07\DATA\100806\10080611.D** Batch ID: **MS07W0806M** Analysis Date: **08/06/2010 19:19**

Sample ID: **MBLK MS07W0806M** Units : **µg/L** Run ID: **MSD_07_100806C** Prep Date: **08/06/2010 19:19**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	ND	0.5								
Chloromethane	ND	1								
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	ND	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)	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	ND	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)	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	ND	0.5								
Dibromochloromethane	ND	0.5								
1,2-Dibromoethane (EDB)	ND	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	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								
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	ND	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	ND	1								
1,2,3-Trichlorobenzene	ND	1								
Surr: 1,2-Dichloroethane-d4	10.6		10		106	70	130			
Surr: Toluene-d8	9.84		10		98	70	130			

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Date: *13-Aug-10*

QC Summary Report

Work Order: 10080402

Surr: 4-Bromofluorobenzene	9.49			10	95	70	130		

Laboratory Control Spike Type **LCS** Test Code: **EPA Method SW8260B**

File ID: **C:\HPCHEM\MS07\DATA\100806\10080609.D** Batch ID: **MS07W0806M** Analysis Date: **08/06/2010 18:32**

Sample ID: **LCS MS07W0806M** Units : **µg/L** Run ID: **MSD_07_100806C** Prep Date: **08/06/2010 18:32**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	9.67	1	10		97	70	130			
Chloromethane	7.66	2	10		77	70	130			
Vinyl chloride	9.47	1	10		95	70	130			
Chloroethane	9.6	1	10		96	70	130			
Bromomethane	10.5	2	10		105	70	130			
Trichlorofluoromethane	10.4	1	10		104	70	130			
1,1-Dichloroethene	11.4	1	10		114	70	130			
Dichloromethane	10.9	2	10		109	70	130			
trans-1,2-Dichloroethene	10	1	10		100	70	130			
Methyl tert-butyl ether (MTBE)	12.1	0.5	10		121	70	130			
1,1-Dichloroethane	10.9	1	10		109	70	130			
cis-1,2-Dichloroethene	11.7	1	10		117	70	130			
Bromochloromethane	12.1	1	10		121	70	130			
Chloroform	11	1	10		110	70	130			
2,2-Dichloropropane	13	1	10		130	70	130			
1,2-Dichloroethane	11.9	1	10		119	70	130			
1,1,1-Trichloroethane	12.3	1	10		123	70	130			
1,1-Dichloropropene	12.1	1	10		121	70	130			
Carbon tetrachloride	12.3	1	10		123	70	130			
Benzene	11.4	0.5	10		114	70	130			
Dibromomethane	11.7	1	10		117	70	130			
1,2-Dichloropropane	11.8	1	10		118	70	130			
Trichloroethene	11.6	1	10		116	70	130			
Bromodichloromethane	11.8	1	10		118	70	130			
cis-1,3-Dichloropropene	10.3	1	10		103	70	130			
trans-1,3-Dichloropropene	12.3	1	10		123	70	130			
1,1,2-Trichloroethane	11.4	1	10		114	70	130			
Toluene	11.1	0.5	10		111	70	130			
1,3-Dichloropropane	11.1	1	10		111	70	130			
Dibromochloromethane	12.1	1	10		121	70	130			
1,2-Dibromoethane (EDB)	23.4	2	20		117	70	130			
Tetrachloroethene	11.8	1	10		118	70	130			
1,1,1,2-Tetrachloroethane	12.3	1	10		123	70	130			
Chlorobenzene	11.4	1	10		114	70	130			
Ethylbenzene	11.7	0.5	10		117	70	130			
m,p-Xylene	11.8	0.5	10		118	70	130			
Bromoform	12.8	1	10		128	70	130			
Styrene	10.5	1	10		105	70	130			
o-Xylene	11.8	0.5	10		118	70	130			
1,1,2,2-Tetrachloroethane	11.3	1	10		113	70	130			
1,2,3-Trichloropropane	24.3	2	20		121	70	130			
Isopropylbenzene	11.2	1	10		112	70	130			
Bromobenzene	11.2	1	10		112	70	130			
n-Propylbenzene	11	1	10		110	70	130			
4-Chlorotoluene	11.2	1	10		112	70	130			
2-Chlorotoluene	11.2	1	10		112	70	130			
1,3,5-Trimethylbenzene	11.6	1	10		116	70	130			
tert-Butylbenzene	11.3	1	10		113	70	130			
1,2,4-Trimethylbenzene	11.5	1	10		115	70	130			
sec-Butylbenzene	11.3	1	10		113	70	130			
1,3-Dichlorobenzene	11.3	1	10		113	70	130			
1,4-Dichlorobenzene	11.3	1	10		113	70	130			
4-Isopropyltoluene	11.4	1	10		114	70	130			
1,2-Dichlorobenzene	10.8	1	10		108	70	130			
n-Butylbenzene	10.9	1	10		109	70	130			
1,2-Dibromo-3-chloropropane (DBCP)	51.9	3	50		104	70	130			
1,2,4-Trichlorobenzene	9.62	2	10		96	70	130			
Naphthalene	9.38	2	10		94	70	130			
Hexachlorobutadiene	21.6	2	20		108	70	130			
1,2,3-Trichlorobenzene	9.66	2	10		97	70	130			
Surr: 1,2-Dichloroethane-d4	11		10		110	70	130			
Surr: Toluene-d8	9.86		10		99	70	130			
Surr: 4-Bromofluorobenzene	8.93		10		89	70	130			

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Date: *13-Aug-10*

QC Summary Report

Work Order: 10080402

Sample Matrix Spike Type **MS** Test Code: **EPA Method SW8260B**

File ID: **C:\HPCHEM\MS07\DATA\100806\10080614.D** Batch ID: **MS07W0806M** Analysis Date: **08/06/2010 20:30**

Sample ID: **10073004-02AMS** Units : **µg/L** Run ID: **MSD_07_100806C** Prep Date: **08/06/2010 20:30**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	34.8	2.5	50	0	70	13	167			
Chloromethane	34.6	10	50	0	69	28	145			
Vinyl chloride	77.2	2.5	50	39.84	75	43	134			
Chloroethane	44.9	2.5	50	0	90	39	154			
Bromomethane	51	10	50	0	102	19	176			
Trichlorofluoromethane	48.5	2.5	50	0	97	34	160			
1,1-Dichloroethene	49.6	2.5	50	0	99	60	130			
Dichloromethane	70.3	10	50	27.26	86	68	130			
trans-1,2-Dichloroethene	53.4	2.5	50	5.44	96	63	130			
Methyl tert-butyl ether (MTBE)	50.1	1.3	50	0	100	56	141			
1,1-Dichloroethane	50.2	2.5	50	0	100	61	130			
cis-1,2-Dichloroethene	189	2.5	50	139.6	98	70	130			
Bromochloromethane	53.1	2.5	50	0	106	70	130			
Chloroform	54.9	2.5	50	6.86	96	67	130			
2,2-Dichloropropane	48.3	2.5	50	0	97	30	152			
1,2-Dichloroethane	58.6	2.5	50	7.46	102	60	135			
1,1,1-Trichloroethane	55.9	2.5	50	0	112	59	137			
1,1-Dichloropropene	54.6	2.5	50	0	109	63	130			
Carbon tetrachloride	56	2.5	50	0	112	50	147			
Benzene	52.8	1.3	50	0	106	67	130			
Dibromomethane	49.7	2.5	50	0	99	69	133			
1,2-Dichloropropane	53	2.5	50	0	106	69	130			
Trichloroethene	105	2.5	50	58.23	94	69	130			
Bromodichloromethane	52.2	2.5	50	0	104	66	134			
cis-1,3-Dichloropropene	40.5	2.5	50	0	81	63	130			
trans-1,3-Dichloropropene	51	2.5	50	0	102	66	131			
1,1,2-Trichloroethane	53	2.5	50	4	98	68	130			
Toluene	50.7	1.3	50	0	101	66	130			
1,3-Dichloropropane	47.6	2.5	50	0	95	70	130			
Dibromochloromethane	51.5	2.5	50	0	103	70	130			
1,2-Dibromoethane (EDB)	100	5	100	0	100	70	130			
Tetrachloroethene	54.6	2.5	50	2.11	105	61	134			
1,1,1,2-Tetrachloroethane	54.8	2.5	50	0	110	70	130			
Chlorobenzene	51.5	2.5	50	0	103	70	130			
Ethylbenzene	53.2	1.3	50	0	106	68	130			
m,p-Xylene	53.5	1.3	50	0	107	64	130			
Bromoform	55	2.5	50	0	110	64	138			
Styrene	46.9	2.5	50	0	94	69	130			
o-Xylene	54	1.3	50	0	108	70	130			
1,1,2,2-Tetrachloroethane	49.7	2.5	50	0	99	65	131			
1,2,3-Trichloropropane	106	10	100	0	106	70	130			
Isopropylbenzene	51.1	2.5	50	0	102	64	138			
Bromobenzene	50.6	2.5	50	0	101	70	130			
n-Propylbenzene	50.3	2.5	50	0	101	66	132			
4-Chlorotoluene	50.8	2.5	50	0	102	70	130			
2-Chlorotoluene	51.2	2.5	50	0	102	70	130			
1,3,5-Trimethylbenzene	52.9	2.5	50	0	106	66	136			
tert-Butylbenzene	51.7	2.5	50	0	103	65	137			
1,2,4-Trimethylbenzene	53.3	2.5	50	0	107	65	137			
sec-Butylbenzene	51.3	2.5	50	0	103	66	134			
1,3-Dichlorobenzene	50.6	2.5	50	0	101	70	130			
1,4-Dichlorobenzene	50.6	2.5	50	0	101	70	130			
4-Isopropyltoluene	52.4	2.5	50	0	105	66	137			
1,2-Dichlorobenzene	48.3	2.5	50	0	97	70	130			
n-Butylbenzene	51.7	2.5	50	0	103	60	142			
1,2-Dibromo-3-chloropropane (DBCP)	220	15	250	0	88	67	130			
1,2,4-Trichlorobenzene	44.2	10	50	0	88	61	137			
Naphthalene	43.1	10	50	0	86	40	167			
Hexachlorobutadiene	93.4	10	100	0	93	61	130			
1,2,3-Trichlorobenzene	44.3	10	50	0	89	51	144			
Surr: 1,2-Dichloroethane-d4	53.9		50		108	70	130			
Surr: Toluene-d8	49.1		50		98	70	130			
Surr: 4-Bromofluorobenzene	44.9		50		90	70	130			

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Date: 13-Aug-10

QC Summary Report

Work Order: 10080402

Sample Matrix Spike Duplicate Type **MSD** Test Code: **EPA Method SW8260B**

File ID: **C:\HPCHEM\MS07\DATA\100806\10080615.D** Batch ID: **MS07W0806M** Analysis Date: **08/06/2010 20:54**

Sample ID: **10073004-02AMSD** Units : **µg/L** Run ID: **MSD_07_100806C** Prep Date: **08/06/2010 20:54**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	35.5	2.5	50	0	71	13	167	34.84	1.7(20)	
Chloromethane	36.2	10	50	0	72	28	145	34.61	4.6(20)	
Vinyl chloride	84.2	2.5	50	39.84	89	43	134	77.18	8.7(20)	
Chloroethane	47.3	2.5	50	0	95	39	154	44.9	5.1(20)	
Bromomethane	59.4	10	50	0	119	19	176	51.03	15.2(20)	
Trichlorofluoromethane	49	2.5	50	0	98	34	160	48.5	1.0(20)	
1,1-Dichloroethene	51.8	2.5	50	0	104	60	130	49.61	4.3(20)	
Dichloromethane	75.9	10	50	27.26	97	68	130	70.34	7.6(20)	
trans-1,2-Dichloroethene	51	2.5	50	5.44	91	63	130	53.42	4.7(20)	
Methyl tert-butyl ether (MTBE)	52.8	1.3	50	0	106	56	141	50.11	5.3(20)	
1,1-Dichloroethane	51.2	2.5	50	0	102	61	130	50.17	2.0(20)	
cis-1,2-Dichloroethene	203	2.5	50	139.6	126	70	130	188.6	7.2(20)	
Bromochloromethane	54.3	2.5	50	0	109	70	130	53.12	2.2(20)	
Chloroform	55.3	2.5	50	6.86	97	67	130	54.91	0.8(20)	
2,2-Dichloropropane	48	2.5	50	0	96	30	152	48.25	0.6(20)	
1,2-Dichloroethane	60.2	2.5	50	7.46	105	60	135	58.58	2.6(20)	
1,1,1-Trichloroethane	56.3	2.5	50	0	113	59	137	55.91	0.7(20)	
1,1-Dichloropropene	55	2.5	50	0	110	63	130	54.64	0.6(20)	
Carbon tetrachloride	56.6	2.5	50	0	113	50	147	55.97	1.1(20)	
Benzene	53.7	1.3	50	0	107	67	130	52.8	1.7(20)	
Dibromomethane	51.7	2.5	50	0	103	69	133	49.71	4.0(20)	
1,2-Dichloropropane	53.4	2.5	50	0	107	69	130	52.95	0.8(20)	
Trichloroethene	112	2.5	50	58.23	108	69	130	105.2	6.6(20)	
Bromodichloromethane	53.3	2.5	50	0	107	66	134	52.21	2.1(20)	
cis-1,3-Dichloropropene	41.9	2.5	50	0	84	63	130	40.45	3.5(20)	
trans-1,3-Dichloropropene	53	2.5	50	0	106	66	131	50.97	3.9(20)	
1,1,2-Trichloroethane	54.8	2.5	50	4	102	68	130	52.97	3.3(20)	
Toluene	51.2	1.3	50	0	102	66	130	50.66	1.1(20)	
1,3-Dichloropropane	49.2	2.5	50	0	98	70	130	47.63	3.3(20)	
Dibromochloromethane	53.6	2.5	50	0	107	70	130	51.52	4.0(20)	
1,2-Dibromoethane (EDB)	104	5	100	0	104	70	130	100.3	3.5(20)	
Tetrachloroethene	55.7	2.5	50	2.11	107	61	134	54.6	1.9(20)	
1,1,1,2-Tetrachloroethane	56	2.5	50	0	112	70	130	54.76	2.2(20)	
Chlorobenzene	52.5	2.5	50	0	105	70	130	51.45	2.1(20)	
Ethylbenzene	54.4	1.3	50	0	109	68	130	53.18	2.3(20)	
m,p-Xylene	54.2	1.3	50	0	108	64	130	53.54	1.2(20)	
Bromoform	56.4	2.5	50	0	113	64	138	55.02	2.5(20)	
Styrene	48	2.5	50	0	96	69	130	46.85	2.4(20)	
o-Xylene	54.7	1.3	50	0	109	70	130	53.98	1.3(20)	
1,1,2,2-Tetrachloroethane	51.4	2.5	50	0	103	65	131	49.7	3.4(20)	
1,2,3-Trichloropropane	109	10	100	0	109	70	130	105.7	3.2(20)	
Isopropylbenzene	51.6	2.5	50	0	103	64	138	51.14	0.9(20)	
Bromobenzene	51.3	2.5	50	0	103	70	130	50.57	1.5(20)	
n-Propylbenzene	50.7	2.5	50	0	101	66	132	50.32	0.8(20)	
4-Chlorotoluene	51.4	2.5	50	0	103	70	130	50.75	1.3(20)	
2-Chlorotoluene	51.7	2.5	50	0	103	70	130	51.22	1.0(20)	
1,3,5-Trimethylbenzene	53.3	2.5	50	0	107	66	136	52.87	0.9(20)	
tert-Butylbenzene	51.9	2.5	50	0	104	65	137	51.71	0.3(20)	
1,2,4-Trimethylbenzene	54	2.5	50	0	108	65	137	53.27	1.3(20)	
sec-Butylbenzene	51.9	2.5	50	0	104	66	134	51.26	1.3(20)	
1,3-Dichlorobenzene	51	2.5	50	0	102	70	130	50.57	0.9(20)	
1,4-Dichlorobenzene	51.5	2.5	50	0	103	70	130	50.62	1.7(20)	
4-Isopropyltoluene	53.2	2.5	50	0	106	66	137	52.41	1.5(20)	
1,2-Dichlorobenzene	49.4	2.5	50	0	99	70	130	48.26	2.3(20)	
n-Butylbenzene	52.5	2.5	50	0	105	60	142	51.72	1.4(20)	
1,2-Dibromo-3-chloropropane (DBCP)	234	15	250	0	94	67	130	220.2	6.0(20)	
1,2,4-Trichlorobenzene	46.3	10	50	0	93	61	137	44.15	4.7(20)	
Naphthalene	45.3	10	50	0	91	40	167	43.08	5.1(20)	
Hexachlorobutadiene	97.1	10	100	0	97	61	130	93.35	3.9(20)	
1,2,3-Trichlorobenzene	46.3	10	50	0	93	51	144	44.34	4.4(20)	
Surr: 1,2-Dichloroethane-d4	53.4		50		107	70	130			
Surr: Toluene-d8	48.9		50		98	70	130			
Surr: 4-Bromofluorobenzene	45.1		50		90	70	130			

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Date: *13-Aug-10*

QC Summary Report

Work Order: 10080402

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: *13-Aug-10*

QC Summary Report

Work Order: 10080402

Method Blank Type **MBLK** Test Code: **EPA Method SW8260B**

File ID: **C:\HPCHEM\MS07\DATA\100806\10080640.D** Batch ID: **MS07W0806N** Analysis Date: **08/07/2010 06:42**

Sample ID: **MBLK MS07W0806N** Units : **µg/L** Run ID: **MSD_07_100806A** Prep Date: **08/07/2010 06:42**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	ND	0.5								
Chloromethane	ND	1								
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	ND	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)	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	ND	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)	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	ND	0.5								
Dibromochloromethane	ND	0.5								
1,2-Dibromoethane (EDB)	ND	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	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								
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	ND	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	ND	1								
1,2,3-Trichlorobenzene	ND	1								
Surr: 1,2-Dichloroethane-d4	11.1		10		111	70	130			
Surr: Toluene-d8	9.87		10		99	70	130			

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Date: *13-Aug-10*

QC Summary Report

Work Order: 10080402

Surr: 4-Bromofluorobenzene	9.21		10	92	70	130			

Laboratory Control Spike Type **LCS** Test Code: **EPA Method SW8260B**

File ID: **C:\HPCHEM\MS07\DATA\100806\10080637.D** Batch ID: **MS07W0806N** Analysis Date: **08/07/2010 05:31**

Sample ID: **LCS MS07W0806N** Units : **µg/L** Run ID: **MSD_07_100806A** Prep Date: **08/07/2010 05:31**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	8.78	1	10		88	70	130			
Chloromethane	7.22	2	10		72	70	130			
Vinyl chloride	9.01	1	10		90	70	130			
Chloroethane	8.32	1	10		83	70	130			
Bromomethane	4.9	2	10		49	70(70)	130			L50
Trichlorofluoromethane	8.51	1	10		85	70	130			
1,1-Dichloroethene	9.46	1	10		95	70	130			
Dichloromethane	9.5	2	10		95	70	130			
trans-1,2-Dichloroethene	8.81	1	10		88	70	130			
Methyl tert-butyl ether (MTBE)	10.1	0.5	10		101	70	130			
1,1-Dichloroethane	9.32	1	10		93	70	130			
cis-1,2-Dichloroethene	9.81	1	10		98	70	130			
Bromochloromethane	10	1	10		100	70	130			
Chloroform	9.33	1	10		93	70	130			
2,2-Dichloropropane	8.91	1	10		89	70	130			
1,2-Dichloroethane	10.1	1	10		101	70	130			
1,1,1-Trichloroethane	10.6	1	10		106	70	130			
1,1-Dichloropropene	10.3	1	10		103	70	130			
Carbon tetrachloride	10.6	1	10		106	70	130			
Benzene	9.8	0.5	10		98	70	130			
Dibromomethane	9.86	1	10		99	70	130			
1,2-Dichloropropane	9.93	1	10		99	70	130			
Trichloroethene	10.4	1	10		104	70	130			
Bromodichloromethane	10	1	10		100	70	130			
cis-1,3-Dichloropropene	8.35	1	10		84	70	130			
trans-1,3-Dichloropropene	10.1	1	10		101	70	130			
1,1,2-Trichloroethane	9.62	1	10		96	70	130			
Toluene	9.52	0.5	10		95	70	130			
1,3-Dichloropropane	9.38	1	10		94	70	130			
Dibromochloromethane	10.4	1	10		104	70	130			
1,2-Dibromoethane (EDB)	19.8	2	20		99	70	130			
Tetrachloroethene	10.1	1	10		101	70	130			
1,1,1,2-Tetrachloroethane	10.5	1	10		105	70	130			
Chlorobenzene	9.79	1	10		98	70	130			
Ethylbenzene	10	0.5	10		100	70	130			
m,p-Xylene	10.1	0.5	10		101	70	130			
Bromoform	10.8	1	10		108	70	130			
Styrene	8.95	1	10		90	70	130			
o-Xylene	10.1	0.5	10		101	70	130			
1,1,2,2-Tetrachloroethane	9.1	1	10		91	70	130			
1,2,3-Trichloropropane	20.9	2	20		104	70	130			
Isopropylbenzene	9.53	1	10		95	70	130			
Bromobenzene	9.66	1	10		97	70	130			
n-Propylbenzene	9.42	1	10		94	70	130			
4-Chlorotoluene	9.54	1	10		95	70	130			
2-Chlorotoluene	9.58	1	10		96	70	130			
1,3,5-Trimethylbenzene	9.93	1	10		99	70	130			
tert-Butylbenzene	9.59	1	10		96	70	130			
1,2,4-Trimethylbenzene	10	1	10		100	70	130			
sec-Butylbenzene	9.63	1	10		96	70	130			
1,3-Dichlorobenzene	9.59	1	10		96	70	130			
1,4-Dichlorobenzene	9.62	1	10		96	70	130			
4-Isopropyltoluene	9.76	1	10		98	70	130			
1,2-Dichlorobenzene	9.26	1	10		93	70	130			
n-Butylbenzene	9.58	1	10		96	70	130			
1,2-Dibromo-3-chloropropane (DBCP)	44.4	3	50		89	70	130			
1,2,4-Trichlorobenzene	8.48	2	10		85	70	130			
Naphthalene	8.25	2	10		83	70	130			
Hexachlorobutadiene	17.7	2	20		88	70	130			
1,2,3-Trichlorobenzene	8.53	2	10		85	70	130			
Surr: 1,2-Dichloroethane-d4	10.9		10		109	70	130			
Surr: Toluene-d8	9.85		10		99	70	130			
Surr: 4-Bromofluorobenzene	8.94		10		89	70	130			

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Date: 13-Aug-10

QC Summary Report

Work Order: 10080402

Sample Matrix Spike Type **MS** Test Code: **EPA Method SW8260B**

File ID: **C:\HPCHEM\MS07\DATA\100806\10080644.D** Batch ID: **MS07W0806N** Analysis Date: **08/07/2010 08:16**

Sample ID: **10080401-04AMS** Units : **µg/L** Run ID: **MSD_07_100806A** Prep Date: **08/07/2010 08:16**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	33.6	2.5	50	0	67	13	167			
Chloromethane	31.3	10	50	0	63	28	145			
Vinyl chloride	40.5	2.5	50	0	81	43	134			
Chloroethane	39.7	2.5	50	0	79	39	154			
Bromomethane	27.8	10	50	0	56	19	176			
Trichlorofluoromethane	45.3	2.5	50	0	91	34	160			
1,1-Dichloroethene	46.5	2.5	50	0	93	60	130			
Dichloromethane	43.9	10	50	0	88	68	130			
trans-1,2-Dichloroethene	42.5	2.5	50	0	85	63	130			
Methyl tert-butyl ether (MTBE)	48.4	1.3	50	0	97	56	141			
1,1-Dichloroethane	43.4	2.5	50	0	87	61	130			
cis-1,2-Dichloroethene	47.3	2.5	50	0	95	70	130			
Bromochloromethane	49.9	2.5	50	0	99.8	70	130			
Chloroform	45.5	2.5	50	0	91	67	130			
2,2-Dichloropropane	33.8	2.5	50	0	68	30	152			
1,2-Dichloroethane	53.1	2.5	50	0	106	60	135			
1,1,1-Trichloroethane	54	2.5	50	0	108	59	137			
1,1-Dichloropropene	53	2.5	50	0	106	63	130			
Carbon tetrachloride	54	2.5	50	0	108	50	147			
Benzene	51.3	1.3	50	0	103	67	130			
Dibromomethane	50.8	2.5	50	0	102	69	133			
1,2-Dichloropropane	52.3	2.5	50	0	105	69	130			
Trichloroethene	50.8	2.5	50	0	102	69	130			
Bromodichloromethane	53	2.5	50	0	106	66	134			
cis-1,3-Dichloropropene	38.4	2.5	50	0	77	63	130			
trans-1,3-Dichloropropene	49.9	2.5	50	0	99.9	66	131			
1,1,2-Trichloroethane	49.1	2.5	50	0	98	68	130			
Toluene	49	1.3	50	0	98	66	130			
1,3-Dichloropropane	47.3	2.5	50	0	95	70	130			
Dibromochloromethane	52.7	2.5	50	0	105	70	130			
1,2-Dibromoethane (EDB)	101	5	100	0	101	70	130			
Tetrachloroethene	50.8	2.5	50	0	102	61	134			
1,1,1,2-Tetrachloroethane	54.5	2.5	50	0	109	70	130			
Chlorobenzene	50.3	2.5	50	0	101	70	130			
Ethylbenzene	51.9	1.3	50	0	104	68	130			
m,p-Xylene	51.6	1.3	50	0	103	64	130			
Bromoform	56.5	2.5	50	0	113	64	138			
Styrene	46	2.5	50	0	92	69	130			
o-Xylene	52.4	1.3	50	0	105	70	130			
1,1,2,2-Tetrachloroethane	50.3	2.5	50	0	101	65	131			
1,2,3-Trichloropropane	107	10	100	0	107	70	130			
Isopropylbenzene	48.1	2.5	50	0	96	64	138			
Bromobenzene	48.8	2.5	50	0	98	70	130			
n-Propylbenzene	47.3	2.5	50	0	95	66	132			
4-Chlorotoluene	48.1	2.5	50	0	96	70	130			
2-Chlorotoluene	48.3	2.5	50	0	97	70	130			
1,3,5-Trimethylbenzene	49.3	2.5	50	0	99	66	136			
tert-Butylbenzene	48.9	2.5	50	0	98	65	137			
1,2,4-Trimethylbenzene	48.6	2.5	50	0	97	65	137			
sec-Butylbenzene	48.4	2.5	50	0	97	66	134			
1,3-Dichlorobenzene	48.3	2.5	50	0	97	70	130			
1,4-Dichlorobenzene	48.7	2.5	50	0	97	70	130			
4-Isopropyltoluene	48.3	2.5	50	0	97	66	137			
1,2-Dichlorobenzene	47.6	2.5	50	0	95	70	130			
n-Butylbenzene	44.4	2.5	50	0	89	60	142			
1,2-Dibromo-3-chloropropane (DBCP)	230	15	250	0	92	67	130			
1,2,4-Trichlorobenzene	40.5	10	50	0	81	61	137			
Naphthalene	40.6	10	50	0	81	40	167			
Hexachlorobutadiene	86.5	10	100	0	87	61	130			
1,2,3-Trichlorobenzene	41.6	10	50	0	83	51	144			
Surr: 1,2-Dichloroethane-d4	55.7		50		111	70	130			
Surr: Toluene-d8	48.3		50		97	70	130			
Surr: 4-Bromofluorobenzene	44		50		88	70	130			

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Date: *13-Aug-10*

QC Summary Report

Work Order: 10080402

Sample Matrix Spike Duplicate Type **MSD** Test Code: **EPA Method SW8260B**

File ID: **C:\HPCHEM\MS07\DATA\100806\10080645.D** Batch ID: **MS07W0806N** Analysis Date: **08/07/2010 08:40**

Sample ID: **10080401-04AMSD** Units : **µg/L** Run ID: **MSD_07_100806A** Prep Date: **08/07/2010 08:40**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	34.1	2.5	50	0	68	13	167	33.62	1.3(20)	
Chloromethane	31.4	10	50	0	63	28	145	31.31	0.2(20)	
Vinyl chloride	39.7	2.5	50	0	79	43	134	40.53	2.1(20)	
Chloroethane	44.2	2.5	50	0	88	39	154	39.74	10.7(20)	
Bromomethane	45	10	50	0	90	19	176	27.76	47.3(20)	R58
Trichlorofluoromethane	48.4	2.5	50	0	97	34	160	45.27	6.8(20)	
1,1-Dichloroethene	49.4	2.5	50	0	99	60	130	46.51	6.1(20)	
Dichloromethane	48.9	10	50	0	98	68	130	43.91	10.8(20)	
trans-1,2-Dichloroethene	44.9	2.5	50	0	90	63	130	42.5	5.6(20)	
Methyl tert-butyl ether (MTBE)	54.1	1.3	50	0	108	56	141	48.41	11.2(20)	
1,1-Dichloroethane	48.7	2.5	50	0	97	61	130	43.39	11.4(20)	
cis-1,2-Dichloroethene	51.9	2.5	50	0	104	70	130	47.28	9.2(20)	
Bromochloromethane	54.6	2.5	50	0	109	70	130	49.9	9.0(20)	
Chloroform	48.9	2.5	50	0	98	67	130	45.53	7.2(20)	
2,2-Dichloropropane	36.2	2.5	50	0	72	30	152	33.77	6.9(20)	
1,2-Dichloroethane	53.4	2.5	50	0	107	60	135	53.14	0.5(20)	
1,1,1-Trichloroethane	54.9	2.5	50	0	110	59	137	54.01	1.7(20)	
1,1-Dichloropropene	53.2	2.5	50	0	106	63	130	53	0.3(20)	
Carbon tetrachloride	55.4	2.5	50	0	111	50	147	54.04	2.4(20)	
Benzene	51.5	1.3	50	0	103	67	130	51.3	0.4(20)	
Dibromomethane	52.3	2.5	50	0	105	69	133	50.84	2.8(20)	
1,2-Dichloropropane	52.7	2.5	50	0	105	69	130	52.33	0.7(20)	
Trichloroethene	51.3	2.5	50	0	103	69	130	50.8	1.0(20)	
Bromodichloromethane	53.1	2.5	50	0	106	66	134	53	0.2(20)	
cis-1,3-Dichloropropene	39	2.5	50	0	78	63	130	38.39	1.7(20)	
trans-1,3-Dichloropropene	51	2.5	50	0	102	66	131	49.93	2.0(20)	
1,1,2-Trichloroethane	50.9	2.5	50	0	102	68	130	49.14	3.6(20)	
Toluene	49.7	1.3	50	0	99	66	130	49.03	1.3(20)	
1,3-Dichloropropane	48.9	2.5	50	0	98	70	130	47.29	3.4(20)	
Dibromochloromethane	54.2	2.5	50	0	108	70	130	52.7	2.8(20)	
1,2-Dibromoethane (EDB)	105	5	100	0	105	70	130	100.9	4.0(20)	
Tetrachloroethene	51.4	2.5	50	0	103	61	134	50.75	1.4(20)	
1,1,1,2-Tetrachloroethane	55.2	2.5	50	0	110	70	130	54.52	1.3(20)	
Chlorobenzene	51	2.5	50	0	102	70	130	50.25	1.4(20)	
Ethylbenzene	52.3	1.3	50	0	105	68	130	51.92	0.7(20)	
m,p-Xylene	52.6	1.3	50	0	105	64	130	51.57	2.0(20)	
Bromoform	58.4	2.5	50	0	117	64	138	56.51	3.2(20)	
Styrene	46.5	2.5	50	0	93	69	130	46.04	1.0(20)	
o-Xylene	53.2	1.3	50	0	106	70	130	52.4	1.6(20)	
1,1,2,2-Tetrachloroethane	52.3	2.5	50	0	105	65	131	50.34	3.8(20)	
1,2,3-Trichloropropane	111	10	100	0	111	70	130	107.4	3.7(20)	
Isopropylbenzene	48.4	2.5	50	0	97	64	138	48.14	0.4(20)	
Bromobenzene	49.2	2.5	50	0	98	70	130	48.8	0.8(20)	
n-Propylbenzene	47.6	2.5	50	0	95	66	132	47.3	0.7(20)	
4-Chlorotoluene	48.5	2.5	50	0	97	70	130	48.09	0.9(20)	
2-Chlorotoluene	48.8	2.5	50	0	98	70	130	48.3	1.1(20)	
1,3,5-Trimethylbenzene	50.1	2.5	50	0	100	66	136	49.33	1.6(20)	
tert-Butylbenzene	49.2	2.5	50	0	98	65	137	48.85	0.7(20)	
1,2,4-Trimethylbenzene	50.6	2.5	50	0	101	65	137	48.58	4.1(20)	
sec-Butylbenzene	49.2	2.5	50	0	98	66	134	48.39	1.6(20)	
1,3-Dichlorobenzene	48.9	2.5	50	0	98	70	130	48.34	1.1(20)	
1,4-Dichlorobenzene	49.3	2.5	50	0	99	70	130	48.67	1.3(20)	
4-Isopropyltoluene	49.8	2.5	50	0	99.6	66	137	48.26	3.1(20)	
1,2-Dichlorobenzene	48.4	2.5	50	0	97	70	130	47.57	1.6(20)	
n-Butylbenzene	49	2.5	50	0	98	60	142	44.35	9.9(20)	
1,2-Dibromo-3-chloropropane (DBCP)	242	15	250	0	97	67	130	230.2	4.8(20)	
1,2,4-Trichlorobenzene	44.8	10	50	0	90	61	137	40.46	10.3(20)	
Naphthalene	45.5	10	50	0	91	40	167	40.62	11.2(20)	
Hexachlorobutadiene	92.1	10	100	0	92	61	130	86.54	6.2(20)	
1,2,3-Trichlorobenzene	46.3	10	50	0	93	51	144	41.61	10.7(20)	
Surr: 1,2-Dichloroethane-d4	54.9		50		110	70	130			
Surr: Toluene-d8	48.4		50		97	70	130			
Surr: 4-Bromofluorobenzene	43.8		50		88	70	130			

Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date: *13-Aug-10*

QC Summary Report

Work Order: 10080402

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.

R58 = MS/MSD RPD exceeded the laboratory control limit.

Billing Information :

CHAIN-OF-CUSTODY RECORD

CA

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

WorkOrder : BMIS10080402

Report Due By : 5:00 PM On : 18-Aug-2010

Client:
Battelle Memorial Institute
655 West Broadway
Suite 1420
San Diego, CA 92101

Report Attention	Phone Number	EMail Address
David Conner	(818) 393-2808 x	connerd@battelle.org
Shane Walton	(614) 424-4117 x	waltons@battelle.org
Betsy Cutie	(614) 424-4899 x	cutiee@batelle.org

EDD Required : **Yes**

Sampled by : Chase Brogdon

PO : 218013

Client's COC # : 25758, 25763 Job : G005862 / JPL Groundwater Monitoring

Cooler Temp	Samples Received	Date Printed
4 °C	04-Aug-2010	**04-Aug-2010**

QC Level : DS4 = DOD QC Required : Final Rpt, MBLK, InitCal/ConCal data, LCS, MS/MSD With Surrogates

Alpha Sample ID	Client Sample ID	Matrix	Collection Date	No. of Bottles Alpha	Sub	TAT	Requested Tests 314_W	METALS_DW	VOC_TIC_W	VOC_W					Sample Remarks
BMI10080402-01A	MW-26-2	AQ	08/03/10 11:57	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI10080402-02A	MW-26-1	AQ	08/03/10 12:19	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI10080402-03A	MW-25-5	AQ	08/03/10 08:45	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI10080402-04A	MW-25-4	AQ	08/03/10 09:10	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI10080402-05A	MW-25-3	AQ	08/03/10 09:54	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI10080402-06A	MW-25-2	AQ	08/03/10 10:20	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					Level IV QC
BMI10080402-07A	MW-25-1	AQ	08/03/10 10:54	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					Sample containers have sample time of 10:45 logged in per COC.
BMI10080402-08A	EB-07-8/3/10	AQ	08/03/10 10:56	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI10080402-09A	TB-07-8/3/10	AQ	08/03/10 07:00	1	0	10			VOC by 524 Criteria	VOC by 524 Criteria					Reno Trip Blank 6/29/10

Comments: Security seals intact. Frozen ice. Temp Blank #9025 received @ 4°C. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). :

	Signature	Print Name	Company	Date/Time
Logged in by:	Elizabeth Adcox	Elizabeth Adcox	**Alpha Analytical, Inc.**	8.4.10 1028

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 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.

Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

Billing Information:

Name GERALD TOMPKINS / BATTELLE
Address 3990 OLD TOWN AVE., C-205
City, State, Zip COLUMBUS, OH 43201
Phone Number _____ Fax _____

Alpha Analytical, Inc.
255 Glendale Avenue, Suite 21
Sparks, Nevada 89431-5778
Phone (775) 355-1044
Fax (775) 355-0406

Samples Collected From Which State? AZ ___ CA X NV ___ WA ___ ID ___ OR ___ OTHER ___

25758

Page # 1 of 1

Client Name	P.O. #	Job #
BATTELLE / DAVID CONNEN	218013	G005862
Address: 3990 OLD TOWN AVE, C-205	EMail Address	
City, State, Zip: SAN DIEGO, CA 92110	Phone # (619) 726-7311	Fax #

Sampled by: CHASE BROGDON

Time Sampled	Date Sampled	Matrix* See Key Below	Lab ID Number (Office Use Only)	Sample Description	TAT	Field Filtered	Total and type of containers ** See below	VOC (524.2)	TOTAL Cr (200.8)	Cl04 (314.0)					REMARKS
1157	8/3/10	AQ	BMI10080402-01	MW-26-2	NORM		3v 2p	X	X	X					
1219	↓	↓	-02	MW-26-1	↓		3v 2p	X	X	X					

Analyses Required

Required QC Level? I II III IV

EDD / EDF? YES ___ NO ___

Global ID # _____

ADDITIONAL INSTRUCTIONS:

	Signature	Print Name	Company	Date	Time
Relinquished by		CHASE BROGDON	INSIGHT	08/03/10	1330
Received by		Ashley Starks	Alpha Analytical	8/3/10	1330
Relinquished by		"	"	"	1730
Received by	Elizabeth Adcox	Elizabeth Adcox	Alpha	8.4.10	1028
Relinquished by					
Received by					

*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

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 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.

Billing Information:
Name GERALD TOMPKINS / BATTELLE
Address 505 KING AVE. C-205
City, State, Zip COLUMBUS, OH 43201
Phone Number _____ Fax _____

Alpha Analytical, Inc.
255 Glendale Avenue, Suite 21
Sparks, Nevada 89431-5778
Phone (775) 355-1044
Fax (775) 355-0406

Samples Collected From Which State? AZ ___ CA X NV ___ WA ___ ID ___ OR ___ OTHER ___

25763

Page # 1 of 1

Client Name	P.O. #	Job #
BATTELLE / DAVID CONNER	218013	G005862
Address	**EMail Address**	
3990 OLD TOWN AVE, C-205		
City, State, Zip	**Phone #**	**Fax #**
SAN DIEGO, CA 92110	(619) 726-7311	

Sampled by CHASE BRANDON

Analyses Required: VOC (524.2); TOTAL Cr (200.8); Cl04 - (314.0)

Required QC Level? I II III IV

EDD / EDF? YES ___ NO ___

Global ID # _____

Time Sampled	Date Sampled	Matrix* See Key Below	Lab ID Number (Office Use Only)	Sample Description	TAT	Field Filtered	Total and type of containers ** See below	VOC (524.2)	TOTAL Cr (200.8)	Cl04 - (314.0)	REMARKS
0845	8/3/10	AQ	-03	MW-25-5	NORM		3V, 2P	X	X	X	
0910			-04	MW-25-4				X	X	X	
0954			-05	MW-25-3				X	X	X	
1020			-06	MW-25-2				X	X	X	QC IV
1054			-07	MW-25-1			3V, 2P	X	X	X	
1056			-08	EB-07-8/3/10			3V, 2P	X	X	X	EQUIPMENT BLANK
0700	8/3/10	AQ	-09	TB-07-8/3/10			1V	X			TRIP BLANK

ADDITIONAL INSTRUCTIONS:

	Signature	Print Name	Company	Date	Time
Relinquished by		CHASE BRANDON	INSIGHT	08/03/10	1330
Received by		Kathy Starks	Alpha	8/3/10	1330
Relinquished by		"	"	"	1330
Received by	Elizabeth Adcox	Elizabeth Adcox	Alpha	8.4.10	1028
Relinquished by					
Received by					

*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

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 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.

Alpha Analytical, Inc.

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

Date: *16-Aug-10*

David Conner
Battelle Memorial Institute
655 West Broadway Suite 1420
San Diego, CA 92101
(619) 726-7311

CASE NARRATIVE

Job: G005862 / JPL Groundwater Monitoring

Work Order: BMI10080401 **Cooler Temp:** 2 °C

Alpha's Sample ID	Client's Sample ID	Matrix
10080401-01A	MW-12-5	Aqueous
10080401-02A	MW-12-4	Aqueous
10080401-03A	MW-12-3	Aqueous
10080401-04A	MW-12-2	Aqueous
10080401-05A	MW-12-1	Aqueous
10080401-06A	DUPE-06-3Q10	Aqueous
10080401-07A	EB-05-07/30/10	Aqueous
10080401-08A	TB-05-07/30/10	Aqueous
10080401-09A	MW-24-4	Aqueous
10080401-10A	MW-24-3	Aqueous
10080401-11A	MW-24-2	Aqueous
10080401-12A	MW-24-1	Aqueous
10080401-13A	DUPE-07-3Q10	Aqueous
10080401-14A	EB-06-08/2/10	Aqueous
10080401-15A	TB-06-08/02/10	Aqueous

Manually Integrated Analytes

Alpha's Sample ID	Test Reference	Analyte
NONE		

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

Alpha Analytical, Inc.

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

Attn: David Conner
Phone: (619) 726-7311
Fax: (614) 458-6641
Date Received : 08/04/10

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 : BMI10080401-12A	Chloride	75		40 mg/L	08/12/10 12:13	08/16/10 11:25
Date Sampled 08/02/10 10:02	Nitrite (NO2) - N	ND	*	0.25 mg/L	08/12/10 12:13	08/12/10 17:06
	Nitrate (NO3) - N	1.1	*	0.25 mg/L	08/12/10 12:13	08/12/10 17:06
	Phosphate, ortho - P	ND	**	0.50 mg/L	08/12/10 12:13	08/16/10 11:25
	Sulfate (SO4)	51		0.50 mg/L	08/12/10 12:13	08/16/10 11:25

**Sample was analyzed outside the 48-hour holding time.

*Nitrite and Nitrate are analyzed on a preserved sample. The accuracy of Nitrite may be biased low and the Nitrate biased high due to the possible oxidation of Nitrite to Nitrate.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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.

8/16/10
Report Date

Alpha Analytical, Inc.

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

Attn: David Conner
Phone: (619) 726-7311
Fax: (614) 458-6641
Date Received : 08/04/10

Job: G005862 / JPL Groundwater Monitoring

Perchlorate by Ion Chromatography
EPA Method 314.0

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-12-5**				
Lab ID : BMI10080401-01A Perchlorate	3.17	1.00 µg/L	08/04/10 12:37	08/04/10
Date Sampled 07/30/10 08:24				
Client ID: **MW-12-4**				
Lab ID : BMI10080401-02A Perchlorate	3.45	1.00 µg/L	08/04/10 12:37	08/04/10
Date Sampled 07/30/10 08:59				
Client ID: **MW-12-3**				
Lab ID : BMI10080401-03A Perchlorate	3.37	1.00 µg/L	08/04/10 12:37	08/04/10
Date Sampled 07/30/10 09:20				
Client ID: **MW-12-2**				
Lab ID : BMI10080401-04A Perchlorate	5.51	1.00 µg/L	08/04/10 12:37	08/04/10
Date Sampled 07/30/10 09:53				
Client ID: **MW-12-1**				
Lab ID : BMI10080401-05A Perchlorate	ND	1.00 µg/L	08/04/10 12:37	08/04/10
Date Sampled 07/30/10 10:25				
Client ID: **DUPE-06-3Q10**				
Lab ID : BMI10080401-06A Perchlorate	3.60	1.00 µg/L	08/04/10 12:37	08/04/10
Date Sampled 07/30/10 00:00				
Client ID: **EB-05-07/30/10**				
Lab ID : BMI10080401-07A Perchlorate	ND	1.00 µg/L	08/04/10 12:37	08/04/10
Date Sampled 07/30/10 10:08				
Client ID: **MW-24-3**				
Lab ID : BMI10080401-10A Perchlorate	ND	1.00 µg/L	08/04/10 12:37	08/04/10
Date Sampled 08/02/10 09:00				
Client ID: **MW-24-2**				
Lab ID : BMI10080401-11A Perchlorate	11.1	1.00 µg/L	08/04/10 12:37	08/04/10
Date Sampled 08/02/10 09:32				
Client ID: **MW-24-1**				
Lab ID : BMI10080401-12A Perchlorate	5.84	1.00 µg/L	08/04/10 12:37	08/04/10
Date Sampled 08/02/10 10:02				
Client ID: **DUPE-07-3Q10**				
Lab ID : BMI10080401-13A Perchlorate	10.5	1.00 µg/L	08/04/10 12:37	08/06/10
Date Sampled 08/02/10 00:00				

Alpha Analytical, Inc.

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Client ID: **EB-06-08/2/10**

Lab ID : BMI10080401-14A	Perchlorate	ND	1.00 µg/L	08/04/10 12:37	08/04/10
Date Sampled 08/02/10 09:50					

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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8/16/10

Report Date

Alpha Analytical, Inc.

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(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

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 : 08/04/10

Job: G005862 / JPL Groundwater Monitoring

Metals by ICPMS
EPA Method 200.8

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-12-3**				
Lab ID : BMI10080401-03A Chromium (Cr)	ND	0.0050 mg/L	08/16/10 18:05	08/16/10 22:36
Date Sampled 07/30/10 09:20				
Client ID: **MW-12-2**				
Lab ID : BMI10080401-04A Chromium (Cr)	ND	0.0050 mg/L	08/16/10 18:05	08/16/10 22:14
Date Sampled 07/30/10 09:53				
Client ID: **MW-12-1**				
Lab ID : BMI10080401-05A Chromium (Cr)	0.0065	0.0050 mg/L	08/16/10 18:05	08/16/10 22:42
Date Sampled 07/30/10 10:25				
Client ID: **EB-05-07/30/10**				
Lab ID : BMI10080401-07A Chromium (Cr)	ND	0.0050 mg/L	08/16/10 18:05	08/16/10 22:47
Date Sampled 07/30/10 10:08				
Client ID: **MW-24-4**				
Lab ID : BMI10080401-09A Chromium (Cr)	ND	0.0050 mg/L	08/11/10 15:51	08/16/10 19:26
Date Sampled 08/02/10 08:37				
Client ID: **MW-24-3**				
Lab ID : BMI10080401-10A Chromium (Cr)	ND	0.0050 mg/L	08/16/10 18:05	08/16/10 22:53
Date Sampled 08/02/10 09:00				
Client ID: **MW-24-2**				
Lab ID : BMI10080401-11A Chromium (Cr)	ND	0.0050 mg/L	08/16/10 18:05	08/16/10 22:58
Date Sampled 08/02/10 09:32				
Client ID: **MW-24-1**				
Lab ID : BMI10080401-12A Chromium (Cr)	0.0064	0.0050 mg/L	08/16/10 18:05	08/16/10 23:04
Date Sampled 08/02/10 10:02				
Client ID: **DUPE-07-3Q10**				
Lab ID : BMI10080401-13A Chromium (Cr)	ND	0.0050 mg/L	08/16/10 18:05	08/16/10 23:10
Date Sampled 08/02/10 00:00				
Client ID: **EB-06-08/2/10**				
Lab ID : BMI10080401-14A Chromium (Cr)	ND	0.0050 mg/L	08/16/10 18:05	08/16/10 23:15
Date Sampled 08/02/10 09:50				

Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

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ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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.

8/17/10

Report Date

Alpha Analytical, Inc.

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

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 Extracted	Date Analyzed
Client ID : **MW-12-5** Lab ID : BMI10080401-01A Date Received : 08/04/10 Date Sampled : 07/30/10 08:24	*** None Found ***	ND	2.0 µg/L	08/07/10 09:04	08/07/10 09:04
Client ID : **MW-12-4** Lab ID : BMI10080401-02A Date Received : 08/04/10 Date Sampled : 07/30/10 08:59	*** None Found ***	ND	2.0 µg/L	08/07/10 09:27	08/07/10 09:27
Client ID : **MW-12-3** Lab ID : BMI10080401-03A Date Received : 08/04/10 Date Sampled : 07/30/10 09:20	*** None Found ***	ND	2.0 µg/L	08/07/10 09:51	08/07/10 09:51
Client ID : **MW-12-2** Lab ID : BMI10080401-04A Date Received : 08/04/10 Date Sampled : 07/30/10 09:53	*** None Found ***	ND	2.0 µg/L	08/07/10 10:15	08/07/10 10:15
Client ID : **MW-12-1** Lab ID : BMI10080401-05A Date Received : 08/04/10 Date Sampled : 07/30/10 10:25	*** None Found ***	ND	2.0 µg/L	08/07/10 10:38	08/07/10 10:38
Client ID : **DUPE-06-3Q10** Lab ID : BMI10080401-06A Date Received : 08/04/10 Date Sampled : 07/30/10 00:00	*** None Found ***	ND	2.0 µg/L	08/07/10 11:02	08/07/10 11:02
Client ID : **EB-05-07/30/10** Lab ID : BMI10080401-07A Date Received : 08/04/10 Date Sampled : 07/30/10 10:08	*** None Found ***	ND	2.0 µg/L	08/07/10 11:25	08/07/10 11:25
Client ID : **TB-05-07/30/10** Lab ID : BMI10080401-08A Date Received : 08/04/10 Date Sampled : 07/30/10 07:00	*** None Found ***	ND	2.0 µg/L	08/07/10 07:05	08/07/10 07:05
Client ID : **MW-24-3** Lab ID : BMI10080401-10A Date Received : 08/04/10 Date Sampled : 08/02/10 09:00	*** None Found ***	ND	2.0 µg/L	08/07/10 11:49	08/07/10 11:49

Alpha Analytical, Inc.

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Client ID :	**MW-24-2**					
Lab ID :	BMI10080401-11A	*** None Found ***	ND	2.0 µg/L	08/07/10 12:13	08/07/10 12:13
Date Received :	08/04/10					
Date Sampled :	08/02/10 09:32					
Client ID :	**MW-24-1**					
Lab ID :	BMI10080401-12A	*** None Found ***	ND	2.0 µg/L	08/07/10 12:36	08/07/10 12:36
Date Received :	08/04/10					
Date Sampled :	08/02/10 10:02					
Client ID :	**DUPE-07-3Q10**					
Lab ID :	BMI10080401-13A	*** None Found ***	ND	2.0 µg/L	08/07/10 13:00	08/07/10 13:00
Date Received :	08/04/10					
Date Sampled :	08/02/10 00:00					
Client ID :	**EB-06-08/2/10**					
Lab ID :	BMI10080401-14A	*** None Found ***	ND	2.0 µg/L	08/07/10 13:23	08/07/10 13:23
Date Received :	08/04/10					
Date Sampled :	08/02/10 09:50					
Client ID :	**TB-06-08/02/10**					
Lab ID :	BMI10080401-15A	*** None Found ***	ND	2.0 µg/L	08/07/10 07:29	08/07/10 07:29
Date Received :	08/04/10					
Date Sampled :	08/02/10 07:00					

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

Roger Scholl Randy Gardner Walter Hinchman

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.

8/16/10
Report Date

Alpha Analytical, Inc.

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

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

Alpha Analytical Number: BMI10080401-01A
Client I.D. Number: MW-12-5

Sampled: 07/30/10 08:24
Received: 08/04/10
Extracted: 08/07/10 09:04
Analyzed: 08/07/10 09:04

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit		Compound	Concentration	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	Q	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	0.53		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	1.1		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	112	(70-130)	%REC
30	1,1,2-Trichloroethane	ND		0.50	µg/L	65 Surr: Toluene-d8	98	(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66 Surr: 4-Bromofluorobenzene	90	(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 Randy Gardner Walter Hinchman

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8/16/10
Report Date

Alpha Analytical, Inc.

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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

Alpha Analytical Number: BMI10080401-02A
Client I.D. Number: MW-12-4

Sampled: 07/30/10 08:59
Received: 08/04/10
Extracted: 08/07/10 09:27
Analyzed: 08/07/10 09:27

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration	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	Q	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	0.62		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	0.82		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	114	(70-130)	%REC
30	1,1,2-Trichloroethane	ND		0.50	µg/L	65	Surr: Toluene-d8	98	(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	91	(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 Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer
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8/16/10
Report Date

Alpha Analytical, Inc.

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

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

Alpha Analytical Number: BMI10080401-03A
Client I.D. Number: MW-12-3

Sampled: 07/30/10 09:20
Received: 08/04/10
Extracted: 08/07/10 09:51
Analyzed: 08/07/10 09:51

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration	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	Q	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	1.0		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	2.0		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	112	(70-130)	%REC
30	1,1,2-Trichloroethane	ND		0.50	µg/L	65	Surr: Toluene-d8	99	(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	93	(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 Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer

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8/16/10
Report Date

Alpha Analytical, Inc.

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(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

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

Alpha Analytical Number: BMI10080401-04A
Client I.D. Number: MW-12-2

Sampled: 07/30/10 09:53
Received: 08/04/10
Extracted: 08/07/10 10:15
Analyzed: 08/07/10 10:15

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration	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	Q	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	107	(70-130)	%REC
30	1,1,2-Trichloroethane	ND		0.50	µg/L	65	Surr: Toluene-d8	100	(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	94	(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 Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer
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8/16/10
Report Date

Alpha Analytical, Inc.

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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

Alpha Analytical Number: BMI10080401-05A
Client I.D. Number: MW-12-1

Sampled: 07/30/10 10:25
Received: 08/04/10
Extracted: 08/07/10 10:38
Analyzed: 08/07/10 10:38

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration	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	Q	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	0.60		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	107	(70-130)	%REC
30	1,1,2-Trichloroethane	ND		0.50	µg/L	65	Surr: Toluene-d8	99	(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	93	(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 Randy Gardner Walter Hinchman

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.

8/16/10
Report Date

Alpha Analytical, Inc.

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

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

Alpha Analytical Number: BMI10080401-06A
Client I.D. Number: DUPE-06-3Q10

Sampled: 07/30/10 00:00
Received: 08/04/10
Extracted: 08/07/10 11:02
Analyzed: 08/07/10 11:02

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration	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	Q	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	0.57		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	0.78		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	110	(70-130)	%REC
30	1,1,2-Trichloroethane	ND		0.50	µg/L	65	Surr: Toluene-d8	99	(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	93	(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 Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer
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Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

8/16/10
Report Date

Alpha Analytical, Inc.

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

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

Alpha Analytical Number: BMI10080401-07A
Client I.D. Number: EB-05-07/30/10

Sampled: 07/30/10 10:08
Received: 08/04/10
Extracted: 08/07/10 11:25
Analyzed: 08/07/10 11:25

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration	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	Q	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	111	(70-130)	%REC
30	1,1,2-Trichloroethane	ND		0.50	µg/L	65	Surr: Toluene-d8	98	(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	93	(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 Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer
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Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

8/16/10
Report Date

Alpha Analytical, Inc.

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

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

Alpha Analytical Number: BMI10080401-08A
Client I.D. Number: TB-05-07/30/10

Sampled: 07/30/10 07:00
Received: 08/04/10
Extracted: 08/07/10 07:05
Analyzed: 08/07/10 07:05

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration	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	Q	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	111	(70-130)	%REC
30	1,1,2-Trichloroethane	ND		0.50	µg/L	65	Surr: Toluene-d8	99	(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	93	(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 Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer

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Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

8/16/10
Report Date

Alpha Analytical, Inc.

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(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

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

Alpha Analytical Number: BMI10080401-10A
Client I.D. Number: MW-24-3

Sampled: 08/02/10 09:00
Received: 08/04/10
Extracted: 08/07/10 11:49
Analyzed: 08/07/10 11:49

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration	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	Q	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	112	(70-130)	%REC
30	1,1,2-Trichloroethane	ND		0.50	µg/L	65	Surr: Toluene-d8	98	(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	92	(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 Randy Gardner Walter Hinchman

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.

8/16/10
Report Date

Alpha Analytical, Inc.

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

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

Alpha Analytical Number: BMI10080401-11A
Client I.D. Number: MW-24-2

Sampled: 08/02/10 09:32
Received: 08/04/10
Extracted: 08/07/10 12:13
Analyzed: 08/07/10 12:13

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration	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	Q	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	110	(70-130)	%REC
30	1,1,2-Trichloroethane	ND		0.50	µg/L	65	Surr: Toluene-d8	99	(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	93	(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 Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer
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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.

8/16/10
Report Date

Alpha Analytical, Inc.

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(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

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

Alpha Analytical Number: BMI10080401-12A
Client I.D. Number: MW-24-1

Sampled: 08/02/10 10:02
Received: 08/04/10
Extracted: 08/07/10 12:36
Analyzed: 08/07/10 12:36

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration	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	Q	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	5.4		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	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	108	(70-130)	%REC
30	1,1,2-Trichloroethane	ND		0.50	µg/L	65	Surr: Toluene-d8	99	(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 Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer

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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.

8/16/10
Report Date

Alpha Analytical, Inc.

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

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

Alpha Analytical Number: BMI10080401-13A
Client I.D. Number: DUPE-07-3Q10

Sampled: 08/02/10 00:00
Received: 08/04/10
Extracted: 08/07/10 13:00
Analyzed: 08/07/10 13:00

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration	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	Q	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	107	(70-130)	%REC
30	1,1,2-Trichloroethane	ND		0.50	µg/L	65	Surr: Toluene-d8	100	(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	94	(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 Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer
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8/16/10
Report Date

Alpha Analytical, Inc.

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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

Alpha Analytical Number: BMI10080401-14A
Client I.D. Number: EB-06-08/2/10

Sampled: 08/02/10 09:50
Received: 08/04/10
Extracted: 08/07/10 13:23
Analyzed: 08/07/10 13:23

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration	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	Q	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	108	(70-130)	%REC
30	1,1,2-Trichloroethane	ND		0.50	µg/L	65	Surr: Toluene-d8	100	(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	94	(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 Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer

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Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

8/16/10
Report Date

Alpha Analytical, Inc.

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

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

Alpha Analytical Number: BMI10080401-15A
Client I.D. Number: TB-06-08/02/10

Sampled: 08/02/10 07:00
Received: 08/04/10
Extracted: 08/07/10 07:29
Analyzed: 08/07/10 07:29

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration	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	Q	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	108	(70-130)	%REC
30	1,1,2-Trichloroethane	ND		0.50	µg/L	65	Surr: Toluene-d8	99	(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	93	(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 Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer

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Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

8/16/10
Report Date

Alpha Analytical, Inc.

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VOC Sample Preservation Report

Work Order: BMI10080401 **Job:** G005862 / JPL Groundwater Monitoring

Alpha's Sample ID	Client's Sample ID	Matrix	pH
10080401-01A	MW-12-5	Aqueous	2
10080401-02A	MW-12-4	Aqueous	2
10080401-03A	MW-12-3	Aqueous	2
10080401-04A	MW-12-2	Aqueous	2
10080401-05A	MW-12-1	Aqueous	2
10080401-06A	DUPE-06-3Q10	Aqueous	2
10080401-07A	EB-05-07/30/10	Aqueous	2
10080401-08A	TB-05-07/30/10	Aqueous	2
10080401-10A	MW-24-3	Aqueous	2
10080401-11A	MW-24-2	Aqueous	2
10080401-12A	MW-24-1	Aqueous	2
10080401-13A	DUPE-07-3Q10	Aqueous	2
10080401-14A	EB-06-08/2/10	Aqueous	2
10080401-15A	TB-06-08/02/10	Aqueous	2

8/16/10
Report Date

Alpha Analytical, Inc.

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Date: *17-Aug-10*

QC Summary Report

Work Order: 10080401

Method Blank

Type **MBLK** Test Code: **EPA Method 300.0**

File ID: **20** Batch ID: **24848** Analysis Date: **08/12/2010 13:14**

Sample ID: **MB-24848** Units : **mg/L** Run ID: **IC_1_100812A** Prep Date: **08/12/2010 12:13**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
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 **LFB** Test Code: **EPA Method 300.0**

File ID: **21** Batch ID: **24848** Analysis Date: **08/12/2010 14:01**

Sample ID: **LFB-24848** Units : **mg/L** Run ID: **IC_1_100812A** Prep Date: **08/12/2010 12:13**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	47.8	0.5	50		96	90	110			
Nitrite (NO2) - N	5.26	0.25	5		105	90	110			
Nitrate (NO3) - N	5.22	0.25	5		104	90	110			
Phosphate, ortho - P	5.11	0.5	5		102	90	110			
Sulfate (SO4)	98.4	0.5	100		98	90	110			

Sample Matrix Spike

Type **LFM** Test Code: **EPA Method 300.0**

File ID: **24** Batch ID: **24848** Analysis Date: **08/12/2010 14:57**

Sample ID: **10081201-03ALFM** Units : **mg/L** Run ID: **IC_1_100812A** Prep Date: **08/12/2010 12:13**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	123	0.5	100	46.52	76	80	120			M2
Nitrite (NO2) - N	10.4	0.25	10	0	104	80	120			
Nitrate (NO3) - N	10.6	0.25	10	0.3107	103	80	120			
Phosphate, ortho - P	10.3	0.5	10	0	103	80	120			
Sulfate (SO4)	198	0.5	200	6.741	96	80	120			

Sample Matrix Spike Duplicate

Type **LFMD** Test Code: **EPA Method 300.0**

File ID: **25** Batch ID: **24848** Analysis Date: **08/12/2010 15:15**

Sample ID: **10081201-03ALFMD** Units : **mg/L** Run ID: **IC_1_100812A** Prep Date: **08/12/2010 12:13**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	127	0.5	100	46.52	80	80	120	122.5	3.5(15)	
Nitrite (NO2) - N	10.6	0.25	10	0	106	80	120	10.38	2.3(15)	
Nitrate (NO3) - N	10.8	0.25	10	0.3107	105	80	120	10.58	2.2(15)	
Phosphate, ortho - P	10.4	0.5	10	0	104	80	120	10.28	1.2(15)	
Sulfate (SO4)	203	0.5	200	6.741	98	80	120	198.4	2.1(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.

M2 = Matrix spike recovery was low, the method control sample recovery was acceptable.

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

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Date: *13-Aug-10*

QC Summary Report

Work Order: 10080401

Method Blank

Type **MBLK** Test Code: **EPA Method 314.0**

File ID: **14** Batch ID: **24774** Analysis Date: **08/04/2010 13:34**

Sample ID: **MB-24774** Units : **µg/L** Run ID: **IC_3_100804A** Prep Date: **08/04/2010 12:37**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	ND	1								

Laboratory Fortified Blank

Type **LFB** Test Code: **EPA Method 314.0**

File ID: **15** Batch ID: **24774** Analysis Date: **08/04/2010 13:52**

Sample ID: **LFB-24774** Units : **µg/L** Run ID: **IC_3_100804A** Prep Date: **08/04/2010 12:37**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	24	2	25		96	85	115			

Sample Matrix Spike

Type **LFM** Test Code: **EPA Method 314.0**

File ID: **31** Batch ID: **24774** Analysis Date: **08/04/2010 18:47**

Sample ID: **10080401-04ALFM** Units : **µg/L** Run ID: **IC_3_100804A** Prep Date: **08/04/2010 12:37**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	31.4	2	25	5.509	104	80	120			

Sample Matrix Spike Duplicate

Type **LFMD** Test Code: **EPA Method 314.0**

File ID: **32** Batch ID: **24774** Analysis Date: **08/04/2010 19:05**

Sample ID: **10080401-04ALFMD** Units : **µg/L** Run ID: **IC_3_100804A** Prep Date: **08/04/2010 12:37**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	32.2	2	25	5.509	107	80	120	31.4	2.5(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: *17-Aug-10*

QC Summary Report

Work Order: 10080401

Method Blank

Type **MBLK** Test Code: **EPA Method 200.8**

File ID: **081610.B\077_MB.D** Batch ID: **24842** Analysis Date: **08/16/2010 18:29**

Sample ID: **MB-24842** Units : **mg/L** Run ID: **ICP/MS_100816C** Prep Date: **08/11/2010 15:51**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	ND	0.005								

Laboratory Control Spike

Type **LCS** Test Code: **EPA Method 200.8**

File ID: **081610.B\078_LC.D** Batch ID: **24842** Analysis Date: **08/16/2010 18:34**

Sample ID: **LCS-24842** Units : **mg/L** Run ID: **ICP/MS_100816C** Prep Date: **08/11/2010 15:51**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0483	0.005	0.05		97	85	115			

Sample Matrix Spike

Type **MS** Test Code: **EPA Method 200.8**

File ID: **081610.B\084_MS.D** Batch ID: **24842** Analysis Date: **08/16/2010 19:08**

Sample ID: **10072901-04AMS** Units : **mg/L** Run ID: **ICP/MS_100816C** Prep Date: **08/11/2010 15:51**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0621	0.005	0.05	0	124	70	130			

Sample Matrix Spike Duplicate

Type **MSD** Test Code: **EPA Method 200.8**

File ID: **081610.B\085_MSD.D** Batch ID: **24842** Analysis Date: **08/16/2010 19:14**

Sample ID: **10072901-04AMSD** Units : **mg/L** Run ID: **ICP/MS_100816C** Prep Date: **08/11/2010 15:51**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0839	0.005	0.05	0	168	70	130	0.06213	29.9(20)	M1 R58

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.

M1 = Matrix spike recovery was high, the method control sample recovery was acceptable.

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

R58 = MS/MSD RPD exceeded the laboratory control limit.

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Date: *17-Aug-10*

QC Summary Report

Work Order: 10080401

Method Blank

Type **MBLK** Test Code: **EPA Method 200.8**

File ID: **081610.B\114_M.D** Batch ID: **24868** Analysis Date: **08/16/2010 21:46**

Sample ID: **MB-24868** Units : **mg/L** Run ID: **ICP/MS_100816D** Prep Date: **08/16/2010 18:05**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	ND	0.005								

Laboratory Control Spike

Type **LCS** Test Code: **EPA Method 200.8**

File ID: **081610.B\115_L.D** Batch ID: **24868** Analysis Date: **08/16/2010 21:52**

Sample ID: **LCS-24868** Units : **mg/L** Run ID: **ICP/MS_100816D** Prep Date: **08/16/2010 18:05**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0551	0.005	0.05		110	85	115			

Sample Matrix Spike

Type **MS** Test Code: **EPA Method 200.8**

File ID: **081610.B\121_SS.D** Batch ID: **24868** Analysis Date: **08/16/2010 22:19**

Sample ID: **10080401-04AMS** Units : **mg/L** Run ID: **ICP/MS_100816D** Prep Date: **08/16/2010 18:05**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0579	0.005	0.05	0	116	70	130			

Sample Matrix Spike Duplicate

Type **MSD** Test Code: **EPA Method 200.8**

File ID: **081610.B\122_SSS.D** Batch ID: **24868** Analysis Date: **08/16/2010 22:25**

Sample ID: **10080401-04AMSD** Units : **mg/L** Run ID: **ICP/MS_100816D** Prep Date: **08/16/2010 18:05**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0622	0.005	0.05	0	124	70	130	0.05791	7.1(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.

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Date: *13-Aug-2010*

QC Summary Report

Work Order: 10080401

Method Blank Type **MBLK** Test Code: **EPA Method SW8260B**

File ID: **C:\HPCHEM\MS07\DATA\100806\10080640.D** Batch ID: **MS07W0806N** Analysis Date: **08/07/2010 06:42**

Sample ID: **MBLK MS07W0806N** Units : **µg/L** Run ID: **MSD_07_100806A** Prep Date: **08/07/2010 06:42**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	ND	0.5								
Chloromethane	ND	1								
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	ND	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)	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	ND	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)	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	ND	0.5								
Dibromochloromethane	ND	0.5								
1,2-Dibromoethane (EDB)	ND	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	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								
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	ND	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	ND	1								
1,2,3-Trichlorobenzene	ND	1								
Surr: 1,2-Dichloroethane-d4	11.1		10		111	70	130			
Surr: Toluene-d8	9.87		10		99	70	130			

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Date: *13-Aug-2010*

QC Summary Report

Work Order: 10080401

Surr: 4-Bromofluorobenzene	9.21			10	92	70	130			

Laboratory Control Spike Type **LCS** Test Code: **EPA Method SW8260B**

File ID: **C:\HPCHEM\MS07\DATA\100806\10080637.D** Batch ID: **MS07W0806N** Analysis Date: **08/07/2010 05:31**

Sample ID: **LCS MS07W0806N** Units : **µg/L** Run ID: **MSD_07_100806A** Prep Date: **08/07/2010 05:31**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	8.78	1	10		88	70	130			
Chloromethane	7.22	2	10		72	70	130			
Vinyl chloride	9.01	1	10		90	70	130			
Chloroethane	8.32	1	10		83	70	130			
Bromomethane	4.9	2	10		49	70(70)	130			L50
Trichlorofluoromethane	8.51	1	10		85	70	130			
1,1-Dichloroethene	9.46	1	10		95	70	130			
Dichloromethane	9.5	2	10		95	70	130			
trans-1,2-Dichloroethene	8.81	1	10		88	70	130			
Methyl tert-butyl ether (MTBE)	10.1	0.5	10		101	70	130			
1,1-Dichloroethane	9.32	1	10		93	70	130			
cis-1,2-Dichloroethene	9.81	1	10		98	70	130			
Bromochloromethane	10	1	10		100	70	130			
Chloroform	9.33	1	10		93	70	130			
2,2-Dichloropropane	8.91	1	10		89	70	130			
1,2-Dichloroethane	10.1	1	10		101	70	130			
1,1,1-Trichloroethane	10.6	1	10		106	70	130			
1,1-Dichloropropene	10.3	1	10		103	70	130			
Carbon tetrachloride	10.6	1	10		106	70	130			
Benzene	9.8	0.5	10		98	70	130			
Dibromomethane	9.86	1	10		99	70	130			
1,2-Dichloropropane	9.93	1	10		99	70	130			
Trichloroethene	10.4	1	10		104	70	130			
Bromodichloromethane	10	1	10		100	70	130			
cis-1,3-Dichloropropene	8.35	1	10		84	70	130			
trans-1,3-Dichloropropene	10.1	1	10		101	70	130			
1,1,2-Trichloroethane	9.62	1	10		96	70	130			
Toluene	9.52	0.5	10		95	70	130			
1,3-Dichloropropane	9.38	1	10		94	70	130			
Dibromochloromethane	10.4	1	10		104	70	130			
1,2-Dibromoethane (EDB)	19.8	2	20		99	70	130			
Tetrachloroethene	10.1	1	10		101	70	130			
1,1,1,2-Tetrachloroethane	10.5	1	10		105	70	130			
Chlorobenzene	9.79	1	10		98	70	130			
Ethylbenzene	10	0.5	10		100	70	130			
m,p-Xylene	10.1	0.5	10		101	70	130			
Bromoform	10.8	1	10		108	70	130			
Styrene	8.95	1	10		90	70	130			
o-Xylene	10.1	0.5	10		101	70	130			
1,1,2,2-Tetrachloroethane	9.1	1	10		91	70	130			
1,2,3-Trichloropropane	20.9	2	20		104	70	130			
Isopropylbenzene	9.53	1	10		95	70	130			
Bromobenzene	9.66	1	10		97	70	130			
n-Propylbenzene	9.42	1	10		94	70	130			
4-Chlorotoluene	9.54	1	10		95	70	130			
2-Chlorotoluene	9.58	1	10		96	70	130			
1,3,5-Trimethylbenzene	9.93	1	10		99	70	130			
tert-Butylbenzene	9.59	1	10		96	70	130			
1,2,4-Trimethylbenzene	10	1	10		100	70	130			
sec-Butylbenzene	9.63	1	10		96	70	130			
1,3-Dichlorobenzene	9.59	1	10		96	70	130			
1,4-Dichlorobenzene	9.62	1	10		96	70	130			
4-Isopropyltoluene	9.76	1	10		98	70	130			
1,2-Dichlorobenzene	9.26	1	10		93	70	130			
n-Butylbenzene	9.58	1	10		96	70	130			
1,2-Dibromo-3-chloropropane (DBCP)	44.4	3	50		89	70	130			
1,2,4-Trichlorobenzene	8.48	2	10		85	70	130			
Naphthalene	8.25	2	10		83	70	130			
Hexachlorobutadiene	17.7	2	20		88	70	130			
1,2,3-Trichlorobenzene	8.53	2	10		85	70	130			
Surr: 1,2-Dichloroethane-d4	10.9		10		109	70	130			
Surr: Toluene-d8	9.85		10		99	70	130			
Surr: 4-Bromofluorobenzene	8.94		10		89	70	130			

Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date: *13-Aug-2010*

QC Summary Report

Work Order: 10080401

Sample Matrix Spike Type **MS** Test Code: **EPA Method SW8260B**

File ID: **C:\HPCHEM\MS07\DATA\100806\10080644.D** Batch ID: **MS07W0806N** Analysis Date: **08/07/2010 08:16**

Sample ID: **10080401-04AMS** Units : **µg/L** Run ID: **MSD_07_100806A** Prep Date: **08/07/2010 08:16**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	33.6	2.5	50	0	67	13	167			
Chloromethane	31.3	10	50	0	63	28	145			
Vinyl chloride	40.5	2.5	50	0	81	43	134			
Chloroethane	39.7	2.5	50	0	79	39	154			
Bromomethane	27.8	10	50	0	56	19	176			
Trichlorofluoromethane	45.3	2.5	50	0	91	34	160			
1,1-Dichloroethene	46.5	2.5	50	0	93	60	130			
Dichloromethane	43.9	10	50	0	88	68	130			
trans-1,2-Dichloroethene	42.5	2.5	50	0	85	63	130			
Methyl tert-butyl ether (MTBE)	48.4	1.3	50	0	97	56	141			
1,1-Dichloroethane	43.4	2.5	50	0	87	61	130			
cis-1,2-Dichloroethene	47.3	2.5	50	0	95	70	130			
Bromochloromethane	49.9	2.5	50	0	99.8	70	130			
Chloroform	45.5	2.5	50	0	91	67	130			
2,2-Dichloropropane	33.8	2.5	50	0	68	30	152			
1,2-Dichloroethane	53.1	2.5	50	0	106	60	135			
1,1,1-Trichloroethane	54	2.5	50	0	108	59	137			
1,1-Dichloropropene	53	2.5	50	0	106	63	130			
Carbon tetrachloride	54	2.5	50	0	108	50	147			
Benzene	51.3	1.3	50	0	103	67	130			
Dibromomethane	50.8	2.5	50	0	102	69	133			
1,2-Dichloropropane	52.3	2.5	50	0	105	69	130			
Trichloroethene	50.8	2.5	50	0	102	69	130			
Bromodichloromethane	53	2.5	50	0	106	66	134			
cis-1,3-Dichloropropene	38.4	2.5	50	0	77	63	130			
trans-1,3-Dichloropropene	49.9	2.5	50	0	99.9	66	131			
1,1,2-Trichloroethane	49.1	2.5	50	0	98	68	130			
Toluene	49	1.3	50	0	98	66	130			
1,3-Dichloropropane	47.3	2.5	50	0	95	70	130			
Dibromochloromethane	52.7	2.5	50	0	105	70	130			
1,2-Dibromoethane (EDB)	101	5	100	0	101	70	130			
Tetrachloroethene	50.8	2.5	50	0	102	61	134			
1,1,1,2-Tetrachloroethane	54.5	2.5	50	0	109	70	130			
Chlorobenzene	50.3	2.5	50	0	101	70	130			
Ethylbenzene	51.9	1.3	50	0	104	68	130			
m,p-Xylene	51.6	1.3	50	0	103	64	130			
Bromoform	56.5	2.5	50	0	113	64	138			
Styrene	46	2.5	50	0	92	69	130			
o-Xylene	52.4	1.3	50	0	105	70	130			
1,1,2,2-Tetrachloroethane	50.3	2.5	50	0	101	65	131			
1,2,3-Trichloropropane	107	10	100	0	107	70	130			
Isopropylbenzene	48.1	2.5	50	0	96	64	138			
Bromobenzene	48.8	2.5	50	0	98	70	130			
n-Propylbenzene	47.3	2.5	50	0	95	66	132			
4-Chlorotoluene	48.1	2.5	50	0	96	70	130			
2-Chlorotoluene	48.3	2.5	50	0	97	70	130			
1,3,5-Trimethylbenzene	49.3	2.5	50	0	99	66	136			
tert-Butylbenzene	48.9	2.5	50	0	98	65	137			
1,2,4-Trimethylbenzene	48.6	2.5	50	0	97	65	137			
sec-Butylbenzene	48.4	2.5	50	0	97	66	134			
1,3-Dichlorobenzene	48.3	2.5	50	0	97	70	130			
1,4-Dichlorobenzene	48.7	2.5	50	0	97	70	130			
4-Isopropyltoluene	48.3	2.5	50	0	97	66	137			
1,2-Dichlorobenzene	47.6	2.5	50	0	95	70	130			
n-Butylbenzene	44.4	2.5	50	0	89	60	142			
1,2-Dibromo-3-chloropropane (DBCP)	230	15	250	0	92	67	130			
1,2,4-Trichlorobenzene	40.5	10	50	0	81	61	137			
Naphthalene	40.6	10	50	0	81	40	167			
Hexachlorobutadiene	86.5	10	100	0	87	61	130			
1,2,3-Trichlorobenzene	41.6	10	50	0	83	51	144			
Surr: 1,2-Dichloroethane-d4	55.7		50		111	70	130			
Surr: Toluene-d8	48.3		50		97	70	130			
Surr: 4-Bromofluorobenzene	44		50		88	70	130			

Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date: 13-Aug-2010

QC Summary Report

Work Order: 10080401

Sample Matrix Spike Duplicate Type **MSD** Test Code: **EPA Method SW8260B**

File ID: **C:\HPCHEM\MS07\DATA\100806\10080645.D** Batch ID: **MS07W0806N** Analysis Date: **08/07/2010 08:40**

Sample ID: **10080401-04AMSD** Units : **µg/L** Run ID: **MSD_07_100806A** Prep Date: **08/07/2010 08:40**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	34.1	2.5	50	0	68	13	167	33.62	1.3(20)	
Chloromethane	31.4	10	50	0	63	28	145	31.31	0.2(20)	
Vinyl chloride	39.7	2.5	50	0	79	43	134	40.53	2.1(20)	
Chloroethane	44.2	2.5	50	0	88	39	154	39.74	10.7(20)	
Bromomethane	45	10	50	0	90	19	176	27.76	47.3(20)	R58
Trichlorofluoromethane	48.4	2.5	50	0	97	34	160	45.27	6.8(20)	
1,1-Dichloroethene	49.4	2.5	50	0	99	60	130	46.51	6.1(20)	
Dichloromethane	48.9	10	50	0	98	68	130	43.91	10.8(20)	
trans-1,2-Dichloroethene	44.9	2.5	50	0	90	63	130	42.5	5.6(20)	
Methyl tert-butyl ether (MTBE)	54.1	1.3	50	0	108	56	141	48.41	11.2(20)	
1,1-Dichloroethane	48.7	2.5	50	0	97	61	130	43.39	11.4(20)	
cis-1,2-Dichloroethene	51.9	2.5	50	0	104	70	130	47.28	9.2(20)	
Bromochloromethane	54.6	2.5	50	0	109	70	130	49.9	9.0(20)	
Chloroform	48.9	2.5	50	0	98	67	130	45.53	7.2(20)	
2,2-Dichloropropane	36.2	2.5	50	0	72	30	152	33.77	6.9(20)	
1,2-Dichloroethane	53.4	2.5	50	0	107	60	135	53.14	0.5(20)	
1,1,1-Trichloroethane	54.9	2.5	50	0	110	59	137	54.01	1.7(20)	
1,1-Dichloropropene	53.2	2.5	50	0	106	63	130	53	0.3(20)	
Carbon tetrachloride	55.4	2.5	50	0	111	50	147	54.04	2.4(20)	
Benzene	51.5	1.3	50	0	103	67	130	51.3	0.4(20)	
Dibromomethane	52.3	2.5	50	0	105	69	133	50.84	2.8(20)	
1,2-Dichloropropane	52.7	2.5	50	0	105	69	130	52.33	0.7(20)	
Trichloroethene	51.3	2.5	50	0	103	69	130	50.8	1.0(20)	
Bromodichloromethane	53.1	2.5	50	0	106	66	134	53	0.2(20)	
cis-1,3-Dichloropropene	39	2.5	50	0	78	63	130	38.39	1.7(20)	
trans-1,3-Dichloropropene	51	2.5	50	0	102	66	131	49.93	2.0(20)	
1,1,2-Trichloroethane	50.9	2.5	50	0	102	68	130	49.14	3.6(20)	
Toluene	49.7	1.3	50	0	99	66	130	49.03	1.3(20)	
1,3-Dichloropropane	48.9	2.5	50	0	98	70	130	47.29	3.4(20)	
Dibromochloromethane	54.2	2.5	50	0	108	70	130	52.7	2.8(20)	
1,2-Dibromoethane (EDB)	105	5	100	0	105	70	130	100.9	4.0(20)	
Tetrachloroethene	51.4	2.5	50	0	103	61	134	50.75	1.4(20)	
1,1,1,2-Tetrachloroethane	55.2	2.5	50	0	110	70	130	54.52	1.3(20)	
Chlorobenzene	51	2.5	50	0	102	70	130	50.25	1.4(20)	
Ethylbenzene	52.3	1.3	50	0	105	68	130	51.92	0.7(20)	
m,p-Xylene	52.6	1.3	50	0	105	64	130	51.57	2.0(20)	
Bromoform	58.4	2.5	50	0	117	64	138	56.51	3.2(20)	
Styrene	46.5	2.5	50	0	93	69	130	46.04	1.0(20)	
o-Xylene	53.2	1.3	50	0	106	70	130	52.4	1.6(20)	
1,1,2,2-Tetrachloroethane	52.3	2.5	50	0	105	65	131	50.34	3.8(20)	
1,2,3-Trichloropropane	111	10	100	0	111	70	130	107.4	3.7(20)	
Isopropylbenzene	48.4	2.5	50	0	97	64	138	48.14	0.4(20)	
Bromobenzene	49.2	2.5	50	0	98	70	130	48.8	0.8(20)	
n-Propylbenzene	47.6	2.5	50	0	95	66	132	47.3	0.7(20)	
4-Chlorotoluene	48.5	2.5	50	0	97	70	130	48.09	0.9(20)	
2-Chlorotoluene	48.8	2.5	50	0	98	70	130	48.3	1.1(20)	
1,3,5-Trimethylbenzene	50.1	2.5	50	0	100	66	136	49.33	1.6(20)	
tert-Butylbenzene	49.2	2.5	50	0	98	65	137	48.85	0.7(20)	
1,2,4-Trimethylbenzene	50.6	2.5	50	0	101	65	137	48.58	4.1(20)	
sec-Butylbenzene	49.2	2.5	50	0	98	66	134	48.39	1.6(20)	
1,3-Dichlorobenzene	48.9	2.5	50	0	98	70	130	48.34	1.1(20)	
1,4-Dichlorobenzene	49.3	2.5	50	0	99	70	130	48.67	1.3(20)	
4-Isopropyltoluene	49.8	2.5	50	0	99.6	66	137	48.26	3.1(20)	
1,2-Dichlorobenzene	48.4	2.5	50	0	97	70	130	47.57	1.6(20)	
n-Butylbenzene	49	2.5	50	0	98	60	142	44.35	9.9(20)	
1,2-Dibromo-3-chloropropane (DBCP)	242	15	250	0	97	67	130	230.2	4.8(20)	
1,2,4-Trichlorobenzene	44.8	10	50	0	90	61	137	40.46	10.3(20)	
Naphthalene	45.5	10	50	0	91	40	167	40.62	11.2(20)	
Hexachlorobutadiene	92.1	10	100	0	92	61	130	86.54	6.2(20)	
1,2,3-Trichlorobenzene	46.3	10	50	0	93	51	144	41.61	10.7(20)	
Surr: 1,2-Dichloroethane-d4	54.9		50		110	70	130			
Surr: Toluene-d8	48.4		50		97	70	130			
Surr: 4-Bromofluorobenzene	43.8		50		88	70	130			

Alpha Analytical, Inc.

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Date: *13-Aug-2010*

QC Summary Report

Work Order: 10080401

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.

R58 = MS/MSD RPD exceeded the laboratory control limit.

Billing Information :

CHAIN-OF-CUSTODY RECORD

CA

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

WorkOrder : BMIS10080401

Report Due By : 5:00 PM On : 17-Aug-2010

Client:
Battelle Memorial Institute
655 West Broadway
Suite 1420
San Diego, CA 92101

Report Attention	Phone Number	EMail Address
David Conner	(818) 393-2808 x	connerd@battelle.org
Shane Walton	(614) 424-4117 x	waltons@battelle.org
Betsy Cutie	(614) 424-4899 x	cutiee@batelle.org

EDD Required : **Yes**

Sampled by : Chase Brogdon

PO : 218013

Client's COC # : 25553, 25756 Job : G005862 / JPL Groundwater Monitoring

Cooler Temp	Samples Received	Date Printed
2 °C	04-Aug-2010	**04-Aug-2010**

QC Level : DS4 = DOD QC Required : Final Rpt, MBLK, InitCal/ConCal data, LCS, MS/MSD With Surrogates

Alpha Sample ID	Client Sample ID	Matrix	Collection Date	No. of Bottles Alpha	Sub	TAT	Requested Tests 300_0_W	314_W	METALS_DW	VOC_TIC_W	VOC_W				Sample Remarks
BMI10080401-01A	MW-12-5	AQ	07/30/10 08:24	4	0	9		Perchlorate		VOC by 524 Criteria	VOC by 524 Criteria				
BMI10080401-02A	MW-12-4	AQ	07/30/10 08:59	4	0	9		Perchlorate		VOC by 524 Criteria	VOC by 524 Criteria				
BMI10080401-03A	MW-12-3	AQ	07/30/10 09:20	5	0	9		Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				
BMI10080401-04A	MW-12-2	AQ	07/30/10 09:53	10	0	9		Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				MS/MSD
BMI10080401-05A	MW-12-1	AQ	07/30/10 10:25	5	0	9		Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				
BMI10080401-06A	DUPE-06-3Q10	AQ	07/30/10 00:00	4	0	9		Perchlorate		VOC by 524 Criteria	VOC by 524 Criteria				
BMI10080401-07A	EB-05-07/30/10	AQ	07/30/10 10:08	5	0	9		Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				
BMI10080401-08A	TB-05-07/30/10	AQ	07/30/10 07:00	1	0	9				VOC by 524 Criteria	VOC by 524 Criteria				Reno Trip Blank 6/29/10
BMI10080401-09A	MW-24-4	AQ	08/02/10 08:37	1	0	9			Cr						
BMI10080401-10A	MW-24-3	AQ	08/02/10 09:00	5	0	9		Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				

Comments: Security seals intact. Frozen ice. Temp Blank #9968 received @ 2°C. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). Cooler was suppose to be delivered 8/3/10 it was delayed during FedEx shipment : therefore logged in for 9 day TAT. Only one 500ml unpreserved poly was provided for anions analysis therefore lab took appropriate aliquot for H2SO4 split. Split occurred at 09:32 for sample -12A.

	Signature	Print Name	Company	Date/Time
Logged in by:	Elizabeth Adcox	Elizabeth Adcox	**Alpha Analytical, Inc.**	8.4.10 9:46

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 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.
Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

Billing Information :

CHAIN-OF-CUSTODY RECORD

CA

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

WorkOrder : BMIS10080401

Report Due By : 5:00 PM On : 17-Aug-2010

Client:
Battelle Memorial Institute
655 West Broadway
Suite 1420
San Diego, CA 92101

Report Attention	Phone Number	EMail Address
David Conner	(818) 393-2808 x	connerd@battelle.org
Shane Walton	(614) 424-4117 x	waltons@battelle.org
Betsy Cutie	(614) 424-4899 x	cutiee@batelle.org

EDD Required : **Yes**

Sampled by : Chase Brogdon

PO : 218013

Client's COC # : 25553, 25756 Job : G005862 / JPL Groundwater Monitoring

Cooler Temp	Samples Received	Date Printed
2 °C	04-Aug-2010	04-Aug-2010

QC Level : DS4 = DOD QC Required : Final Rpt, MBLK, InitCal/ConCal data, LCS, MS/MSD With Surrogates

Alpha Sample ID	Client Sample ID	Matrix	Collection Date	No. of Bottles Alpha	Sub	TAT	Requested Tests 300_0_W	314_W	METALS_DW	VOC_TIC_W	VOC_W				Sample Remarks
BMI10080401-11A	MW-24-2	AQ	08/02/10 09:32	5	0	9		Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				
BMI10080401-12A	MW-24-1	AQ	08/02/10 10:02	5	0	9	NO2, NO3, SO4, Cl, PO4	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				Level IV QC
BMI10080401-13A	DUPE-07-3Q10	AQ	08/02/10 00:00	5	0	9		Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				
BMI10080401-14A	EB-06-08/2/10	AQ	08/02/10 09:50	5	0	9		Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				
BMI10080401-15A	TB-06-08/02/10	AQ	08/02/10 07:00	1	0	9				VOC by 524 Criteria	VOC by 524 Criteria				Reno Trip Blank 6/29/10

Comments: Security seals intact. Frozen ice. Temp Blank #9968 received @ 2°C. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). Cooler was suppose to be delivered 8/3/10 it was delayed during FedEx shipment : therefore logged in for 9 day TAT. Only one 500ml unpreserved poly was provided for anions analysis therefore lab took appropriate aliquot for H2SO4 split. Split occurred at 09:32 for sample -12A.

	Signature	Print Name	Company	Date/Time
Logged in by:	Elizabeth Adcox	Elizabeth Adcox	Alpha Analytical, Inc.	8-4-10 9:46

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 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.
Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

Billing Information:

Name GERALD TOMPKINS / BATTELLE
Address 505 KING AVE.
City, State, Zip COLUMBUS, OH 43201
Phone Number ____________ Fax ____________

Alpha Analytical, Inc.
255 Glendale Avenue, Suite 21
Sparks, Nevada 89431-5778
Phone (775) 355-1044
Fax (775) 355-0406

Samples Collected From Which State? 25553

AZ ___ **CA** X **NV** ___ **WA** ___
ID ___ **OR** ___ **OTHER** ___

Page # 1 **of** 1

Client Name: BATTELLE / DAVID CONNER
Address: 3990 OLD TOWN AVE. C-205
City, State, Zip: SAN DIEGO, CA 92110
P.O. #: 218013
Job #: G005862
EMail Address:
Phone #: (619) 726-7311
Fax #:
Sampled by: CHASE BROGDON
Report Attention:

Required QC Level? I II (III) IV

EDD / EDF? YES ___ NO ___

Global ID # ____________

Analyses Required

Time Sampled	Date Sampled	Matrix* See Key Below	Lab ID Number (Office Use Only)	Sample Description	TAT	Field Filtered	Total and type of containers ** See below	VOC (524.2)	TOTAL Cr (200.8)	ClO4 (314.0)				REMARKS
0824	7/30/10	AQ	BMI10080401-01	MW-12-5	NORM		3v/1p	X		X				
0859	↓	↓	.02	MW-12-4	↓		3v/1p	X		X				
0920	↓	↓	.03	MW-12-3	↓		3v/2p	X	X	X				
0953	↓	↓	.04	MW-12-2	↓		6v/4p	X	X	X				MS/MSD
1025	↓	↓	.05	MW-12-1	↓		3v/2p	X	X	X				
—	↓	↓	.06	DUPE-06-3Q10	↓		3v/1p	X		X				DUPLICATE
1008	↓	↓	.07	EB-05-07/30/10	↓		3v/2p	X	X	X				EQUIPMENT BLANK
0700	↓	↓	.08	TB-05-07/30/10	↓		1v	X						TRIP BLANK

ADDITIONAL INSTRUCTIONS:

	Signature	Print Name	Company	Date	Time
Relinquished by	[signature]	CHASE BROGDON	INSIGHT EEC, INC	07/30/10	1200
Received by	[signature]	Anthy Sks	Alpha Analytical	8/2/10	1100
Relinquished by	[signature]	" "	" "	8/2/10	1100
Received by	Elizabeth Adcox	Elizabeth Adcox	Alpha	8.4.10	9:46
Relinquished by					
Received by					

*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

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 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.

Billing Information:

Name ~~[illegible]~~ GERALD TOMPKINS / BATTELLE

Address 505 KING AVE.

City, State, Zip COLUMBUS OH 43201

Phone Number _____ Fax _____

Alpha Analytical, Inc.
255 Glendale Avenue, Suite 21
Sparks, Nevada 89431-5778
Phone (775) 355-1044
Fax (775) 355-0406

Samples Collected From Which State? AZ ___ CA X NV ___ WA ___ ID ___ OR ___ OTHER ___

25756

Page # 1 of 1

Client Name: BATTELLE/DAVID CONNER
Address: 3990 OLD TOWN AVE, C-205
City, State, Zip: SAN DIEGO, CA 92110
P.O. #: 218013
Job #: G005862
EMail Address:
Phone #: (619) 726-7311
Fax #:

Required QC Level? I II III IV

EDD / EDF? YES ___ NO ___

Global ID # ___

Time Sampled	Date Sampled	Matrix* See Key Below	Sampled by: CHASE BRADDON / Lab ID Number (Office Use Only)	Report Attention / Sample Description	TAT	Field Filtered	Total and type of containers ** See below	VOC (524.2)	TOTAL CR (200.8)	CLO4 (314.0)	Cl, SO4, NO3, NO2, PO4 (300.0)				REMARKS
0837	8/2/10	AQ	-09	MW-24-4	NORM		1P		X						
0900			-10	MW-24-3			3V, 2P	X	X	X					
0932			-11	MW-24-2			3V, 2P	X	X	X					
1002			-12	MW-24-1			3V, 2P	X	X	X	X				QC IV
~~			-13	DUPE-07 -3Q10			3V, 2P	X	X	X					DUPLICATE
0950			-14	EB-06-08/02/10			3V, 2P	X	X	X					EQUIPMENT BLANK
0700	↓	↓	-15	TB-06-08/02/10	↓		1V	X							TRIP BLANK

ADDITIONAL INSTRUCTIONS:

	Signature	Print Name	Company	Date	Time
Relinquished by		CHASE BRADDON	INSIGHT ECC, INC	08/02/10	1100
Received by		Anthony Starks	Alpha Analytical	8/2/10	1100
Relinquished by		Anthony Starks	" "	8/2/10	1100
Received by	Elizabeth Adcox	Elizabeth Adcox	Alpha	8-4-10	9:46
Relinquished by					
Received by					

*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

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 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.

Alpha Analytical, Inc.

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

Date: *12-Aug-10*

David Conner
Battelle Memorial Institute
655 West Broadway Suite 1420
San Diego, CA 92101
(619) 726-7311

CASE NARRATIVE

Job: G005862 / JPL Groundwater Monitoring

Work Order: BMI10073001 **Cooler Temp:** 4 °C

Alpha's Sample ID	Client's Sample ID	Matrix
10073001-01A	MW-11-4	Aqueous
10073001-02A	MW-11-3	Aqueous
10073001-03A	MW-11-2	Aqueous
10073001-04A	MW-11-1	Aqueous
10073001-05A	DUPE-05-3Q10	Aqueous
10073001-06A	MW-22-3	Aqueous
10073001-07A	MW-22-2	Aqueous
10073001-08A	MW-22-1	Aqueous
10073001-09A	DUPE-04-3Q10	Aqueous
10073001-10A	EB-04-07/29/10	Aqueous
10073001-11A	TB-04-07/29/10	Aqueous

Manually Integrated Analytes

Alpha's Sample ID	Test Reference	Analyte
NONE		

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

Alpha Analytical, Inc.

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

Attn: David Conner
Phone: (619) 726-7311
Fax: (614) 458-6641
Date Received : 07/30/10

Job: G005862 / JPL Groundwater Monitoring

Anions by IC
EPA Method 300.0

Parameter		Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-11-1**					
Lab ID : BMI10073001-04A	Chloride	25	0.50 mg/L	07/30/10 11:00	07/30/10 14:07
Date Sampled 07/29/10 12:43	Nitrite (NO2) - N	ND	0.25 mg/L	07/30/10 11:00	07/30/10 14:07
	Nitrate (NO3) - N	0.91	0.25 mg/L	07/30/10 11:00	07/30/10 14:07
	Phosphate, ortho - P	ND	0.50 mg/L	07/30/10 11:00	07/30/10 14:07
	Sulfate (SO4)	57	0.50 mg/L	07/30/10 11:00	07/30/10 14:07

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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.

8/12/10
Report Date

Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778
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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 : 07/30/10

Job: G005862 / JPL Groundwater Monitoring

Perchlorate by Ion Chromatography
EPA Method 314.0

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-11-4**				
Lab ID : BMI10073001-01A Perchlorate	ND	1.00 µg/L	08/03/10 10:42	08/03/10 17:03
Date Sampled 07/29/10 11:10				
Client ID: **MW-11-3**				
Lab ID : BMI10073001-02A Perchlorate	ND	1.00 µg/L	08/03/10 10:42	08/03/10 17:21
Date Sampled 07/29/10 11:47				
Client ID: **MW-11-2**				
Lab ID : BMI10073001-03A Perchlorate	ND	1.00 µg/L	08/03/10 10:42	08/03/10 17:40
Date Sampled 07/29/10 12:15				
Client ID: **MW-11-1**				
Lab ID : BMI10073001-04A Perchlorate	ND	1.00 µg/L	08/03/10 10:42	08/03/10 17:58
Date Sampled 07/29/10 12:43				
Client ID: **DUPE-05-3Q10**				
Lab ID : BMI10073001-05A Perchlorate	ND	1.00 µg/L	08/03/10 10:42	08/03/10 18:53
Date Sampled 07/29/10 00:00				
Client ID: **MW-22-3**				
Lab ID : BMI10073001-06A Perchlorate	2.62	1.00 µg/L	08/03/10 10:42	08/03/10 19:12
Date Sampled 07/29/10 08:42				
Client ID: **MW-22-2**				
Lab ID : BMI10073001-07A Perchlorate	2.38	1.00 µg/L	08/03/10 10:42	08/03/10 19:30
Date Sampled 07/29/10 09:21				
Client ID: **MW-22-1**				
Lab ID : BMI10073001-08A Perchlorate	2.65	1.00 µg/L	08/03/10 10:42	08/03/10 19:48
Date Sampled 07/29/10 09:56				
Client ID: **DUPE-04-3Q10**				
Lab ID : BMI10073001-09A Perchlorate	2.27	1.00 µg/L	08/03/10 10:42	08/03/10 20:07
Date Sampled 07/29/10 00:00				
Client ID: **EB-04-07/29/10**				
Lab ID : BMI10073001-10A Perchlorate	ND	1.00 µg/L	08/03/10 10:42	08/03/10 20:25
Date Sampled 07/29/10 09:46				

Alpha Analytical, Inc.

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ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer

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8/12/10

Report Date

Alpha Analytical, Inc.

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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 : 07/30/10

Job: G005862 / JPL Groundwater Monitoring

Metals by ICPMS
EPA Method 200.8

Parameter		Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-11-3**					
Lab ID : BMI10073001-02A	Chromium (Cr)	ND	0.0050 mg/L	08/11/10 15:51	08/16/10 19:49
Date Sampled 07/29/10 11:47					
Client ID: **MW-11-2**					
Lab ID : BMI10073001-03A	Chromium (Cr)	ND	0.0050 mg/L	08/11/10 15:51	08/16/10 19:54
Date Sampled 07/29/10 12:15					
Client ID: **MW-11-1**					
Lab ID : BMI10073001-04A	Chromium (Cr)	ND	0.0050 mg/L	08/11/10 15:51	08/16/10 20:00
Date Sampled 07/29/10 12:43					
Client ID: **DUPE-05-3Q10**					
Lab ID : BMI10073001-05A	Chromium (Cr)	ND	0.0050 mg/L	08/11/10 15:51	08/16/10 20:06
Date Sampled 07/29/10 00:00					
Client ID: **MW-22-3**					
Lab ID : BMI10073001-06A	Chromium (Cr)	ND	0.0050 mg/L	08/11/10 15:51	08/16/10 20:34
Date Sampled 07/29/10 08:42					
Client ID: **MW-22-2**					
Lab ID : BMI10073001-07A	Chromium (Cr)	ND	0.0050 mg/L	08/11/10 15:51	08/16/10 20:39
Date Sampled 07/29/10 09:21					
Client ID: **MW-22-1**					
Lab ID : BMI10073001-08A	Chromium (Cr)	ND	0.0050 mg/L	08/11/10 15:51	08/16/10 20:45
Date Sampled 07/29/10 09:56					
Client ID: **DUPE-04-3Q10**					
Lab ID : BMI10073001-09A	Chromium (Cr)	ND	0.0050 mg/L	08/11/10 15:51	08/16/10 20:50
Date Sampled 07/29/10 00:00					
Client ID: **EB-04-07/29/10**					
Lab ID : BMI10073001-10A	Chromium (Cr)	ND	0.0050 mg/L	08/11/10 15:51	08/16/10 20:56
Date Sampled 07/29/10 09:46					

Alpha Analytical, Inc.

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ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer

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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.

8/17/10

Report Date

Alpha Analytical, Inc.

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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 Extracted	Date Analyzed
Client ID : **MW-11-4** Lab ID : BMI10073001-01A Date Received : 07/30/10 Date Sampled : 07/29/10 11:10	* * * None Found * * *	ND	2.0 µg/L	08/06/10 21:17	08/06/10 21:17
Client ID : **MW-11-3** Lab ID : BMI10073001-02A Date Received : 07/30/10 Date Sampled : 07/29/10 11:47	* * * None Found * * *	ND	2.0 µg/L	08/06/10 21:41	08/06/10 21:41
Client ID : **MW-11-2** Lab ID : BMI10073001-03A Date Received : 07/30/10 Date Sampled : 07/29/10 12:15	* * * None Found * * *	ND	2.0 µg/L	08/06/10 22:04	08/06/10 22:04
Client ID : **MW-11-1** Lab ID : BMI10073001-04A Date Received : 07/30/10 Date Sampled : 07/29/10 12:43	* * * None Found * * *	ND	2.0 µg/L	08/06/10 22:28	08/06/10 22:28
Client ID : **DUPE-05-3Q10** Lab ID : BMI10073001-05A Date Received : 07/30/10 Date Sampled : 07/29/10 00:00	* * * None Found * * *	ND	2.0 µg/L	08/06/10 22:52	08/06/10 22:52
Client ID : **MW-22-3** Lab ID : BMI10073001-06A Date Received : 07/30/10 Date Sampled : 07/29/10 08:42	* * * None Found * * *	ND	2.0 µg/L	08/06/10 23:15	08/06/10 23:15
Client ID : **MW-22-2** Lab ID : BMI10073001-07A Date Received : 07/30/10 Date Sampled : 07/29/10 09:21	* * * None Found * * *	ND	2.0 µg/L	08/06/10 23:39	08/06/10 23:39
Client ID : **MW-22-1** Lab ID : BMI10073001-08A Date Received : 07/30/10 Date Sampled : 07/29/10 09:56	* * * None Found * * *	ND	2.0 µg/L	08/07/10 00:03	08/07/10 00:03
Client ID : **DUPE-04-3Q10** Lab ID : BMI10073001-09A Date Received : 07/30/10 Date Sampled : 07/29/10 00:00	* * * None Found * * *	ND	2.0 µg/L	08/07/10 00:26	08/07/10 00:26

Alpha Analytical, Inc.

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Client ID :	**EB-04-07/29/10**					
Lab ID :	BMI10073001-10A	* * * None Found * * *	ND	2.0 µg/L	08/07/10 00:50	08/07/10 00:50
Date Received :	07/30/10					
Date Sampled :	07/29/10 09:46					
Client ID :	**TB-04-07/29/10**					
Lab ID :	BMI10073001-11A	* * * None Found * * *	ND	2.0 µg/L	08/06/10 19:43	08/06/10 19:43
Date Received :	07/30/10					
Date Sampled :	07/29/10 07:00					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer

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8/12/10

Report Date

Alpha Analytical, Inc.

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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

Alpha Analytical Number: BMI10073001-01A
Client I.D. Number: MW-11-4

Sampled: 07/29/10 11:10
Received: 07/30/10
Extracted: 08/06/10 21:17
Analyzed: 08/06/10 21:17

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	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 (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	110	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	98	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	92	(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 Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer

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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.

8/12/10
Report Date

Alpha Analytical, Inc.

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

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

Alpha Analytical Number: BMI10073001-02A
Client I.D. Number: MW-11-3

Sampled: 07/29/10 11:47
Received: 07/30/10
Extracted: 08/06/10 21:41
Analyzed: 08/06/10 21:41

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	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 (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	110	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	100	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	94	(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 Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer
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8/12/10
Report Date

Alpha Analytical, Inc.

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

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

Alpha Analytical Number: BMI10073001-03A
Client I.D. Number: MW-11-2

Sampled: 07/29/10 12:15
Received: 07/30/10
Extracted: 08/06/10 22:04
Analyzed: 08/06/10 22:04

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	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 (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	105	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	99	(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					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer

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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.

8/12/10
Report Date

Alpha Analytical, Inc.

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

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

Alpha Analytical Number: BMI10073001-04A
Client I.D. Number: MW-11-1

Sampled: 07/29/10 12:43
Received: 07/30/10
Extracted: 08/06/10 22:58
Analyzed: 08/06/10 22:58

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	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 (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	107	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	100	(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					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer

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8/12/10
Report Date

Alpha Analytical, Inc.

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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

Alpha Analytical Number: BMI10073001-05A
Client I.D. Number: DUPE-05-3Q10

Sampled: 07/29/10 00:00
Received: 07/30/10
Extracted: 08/06/10 22:52
Analyzed: 08/06/10 22:52

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	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 (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	109	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	100	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	93	(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 Randy Gardner Walter Hinchman

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.

8/12/10
Report Date

Alpha Analytical, Inc.

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

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

Alpha Analytical Number: BMI10073001-06A
Client I.D. Number: MW-22-3

Sampled: 07/29/10 08:42
Received: 07/30/10
Extracted: 08/06/10 23:15
Analyzed: 08/06/10 23:15

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	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 (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	112	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	98	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	93	(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 Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer

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8/12/10
Report Date

Alpha Analytical, Inc.

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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

Alpha Analytical Number: BMI10073001-07A
Client I.D. Number: MW-22-2

Sampled: 07/29/10 09:21
Received: 07/30/10
Extracted: 08/06/10 23:39
Analyzed: 08/06/10 23:39

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	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 (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	112	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	99	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	92	(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 Randy Gardner Walter Hinchman

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8/12/10
Report Date

Alpha Analytical, Inc.

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(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

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

Alpha Analytical Number: BMI10073001-08A
Client I.D. Number: MW-22-1

Sampled: 07/29/10 09:56
Received: 07/30/10
Extracted: 08/07/10 00:03
Analyzed: 08/07/10 00:03

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	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 (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	111	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	99	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	94	(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	2.2	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer

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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

Alpha Analytical Number: BMI10073001-09A
Client I.D. Number: DUPE-04-3Q10

Sampled: 07/29/10 00:00
Received: 07/30/10
Extracted: 08/07/10 00:26
Analyzed: 08/07/10 00:26

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	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 (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	109	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	100	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	94	(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 Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer

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8/12/10
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

Alpha Analytical Number: BMI10073001-10A
Client I.D. Number: EB-04-07/29/10

Sampled: 07/29/10 09:46
Received: 07/30/10
Extracted: 08/07/10 00:50
Analyzed: 08/07/10 00:50

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	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 (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	109	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	100	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	94	(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 Randy Gardner Walter Hinchman

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.

8/12/10
Report Date

Alpha Analytical, Inc.

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

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

Alpha Analytical Number: BMI10073001-11A
Client I.D. Number: TB-04-07/29/10

Sampled: 07/29/10 07:00
Received: 07/30/10
Extracted: 08/06/10 19:43
Analyzed: 08/06/10 19:43

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	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 (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	110	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	98	(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					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer

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8/12/10
Report Date

Alpha Analytical, Inc.

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: BMI10073001 **Job:** G005862 / JPL Groundwater Monitoring

Alpha's Sample ID	Client's Sample ID	Matrix	pH
10073001-01A	MW-11-4	Aqueous	2
10073001-02A	MW-11-3	Aqueous	2
10073001-03A	MW-11-2	Aqueous	2
10073001-04A	MW-11-1	Aqueous	2
10073001-05A	DUPE-05-3Q10	Aqueous	2
10073001-06A	MW-22-3	Aqueous	2
10073001-07A	MW-22-2	Aqueous	2
10073001-08A	MW-22-1	Aqueous	2
10073001-09A	DUPE-04-3Q10	Aqueous	2
10073001-10A	EB-04-07/29/10	Aqueous	2
10073001-11A	TB-04-07/29/10	Aqueous	2

8/12/10
Report Date

Alpha Analytical, Inc.

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Date: *11-Aug-10*

QC Summary Report

Work Order: 10073001

Method Blank

Type **MBLK** Test Code: **EPA Method 300.0**

File ID: **22** Batch ID: **24741** Analysis Date: **07/30/2010 11:20**

Sample ID: **MB-24741** Units : **mg/L** Run ID: **IC_1_100730A** Prep Date: **07/30/2010 11:00**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
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 **LFB** Test Code: **EPA Method 300.0**

File ID: **24** Batch ID: **24741** Analysis Date: **08/05/2010 13:04**

Sample ID: **LFB-24741** Units : **mg/L** Run ID: **IC_1_100730A** Prep Date: **07/30/2010 11:00**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	51.9	0.5	50		104	90	110			
Nitrite (NO2) - N	5	0.25	5		100	90	110			
Nitrate (NO3) - N	5.09	0.25	5		102	90	110			
Phosphate, ortho - P	5.45	0.5	5		109	90	110			
Sulfate (SO4)	104	0.5	100		104	90	110			

Sample Matrix Spike

Type **LFM** Test Code: **EPA Method 300.0**

File ID: **39** Batch ID: **24741** Analysis Date: **07/30/2010 16:35**

Sample ID: **10073004-02ALFM** Units : **mg/L** Run ID: **IC_1_100730A** Prep Date: **07/30/2010 11:00**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	7360	5	1000	6302	106	80	120			
Nitrite (NO2) - N	88.5	2.5	100	0	88	80	120			
Nitrate (NO3) - N	113	2.5	100	0	113	80	120			
Phosphate, ortho - P	135	5	100	0	135	80	120			M1
Sulfate (SO4)	5350	5	2000	3352	100	80	120			

Sample Matrix Spike Duplicate

Type **LFMD** Test Code: **EPA Method 300.0**

File ID: **40** Batch ID: **24741** Analysis Date: **07/30/2010 16:53**

Sample ID: **10073004-02ALFMD** Units : **mg/L** Run ID: **IC_1_100730A** Prep Date: **07/30/2010 11:00**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	7450	5	1000	6302	114	80	120	7359	1.2(15)	
Nitrite (NO2) - N	91.3	2.5	100	0	91	80	120	88.47	3.1(15)	
Nitrate (NO3) - N	115	2.5	100	0	115	80	120	113.1	1.5(15)	
Phosphate, ortho - P	106	5	100	0	106	80	120	134.5	23.6(15)	R58
Sulfate (SO4)	5400	5	2000	3352	102	80	120	5352	0.8(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.

M1 = Matrix spike recovery was high, the method control sample recovery was acceptable.

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

R58 = MS/MSD RPD exceeded the laboratory control limit.

Alpha Analytical, Inc.

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Date: *11-Aug-10*

QC Summary Report

Work Order: 10073001

Method Blank

Type **MBLK** Test Code: **EPA Method 314.0**

File ID: **14** Batch ID: **24760** Analysis Date: **08/03/2010 11:50**

Sample ID: **MB-24760** Units : **µg/L** Run ID: **IC_3_100803A** Prep Date: **08/03/2010 10:42**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	ND	1								

Laboratory Fortified Blank

Type **LFB** Test Code: **EPA Method 314.0**

File ID: **15** Batch ID: **24760** Analysis Date: **08/03/2010 12:08**

Sample ID: **LFB-24760** Units : **µg/L** Run ID: **IC_3_100803A** Prep Date: **08/03/2010 10:42**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	23.5	2	25		94	85	115			

Sample Matrix Spike

Type **LFM** Test Code: **EPA Method 314.0**

File ID: **35** Batch ID: **24760** Analysis Date: **08/03/2010 18:16**

Sample ID: **10073001-04ALFM** Units : **µg/L** Run ID: **IC_3_100803A** Prep Date: **08/03/2010 10:42**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	23.9	2	25	0	95	80	120			

Sample Matrix Spike Duplicate

Type **LFMD** Test Code: **EPA Method 314.0**

File ID: **36** Batch ID: **24760** Analysis Date: **08/03/2010 18:35**

Sample ID: **10073001-04ALFMD** Units : **µg/L** Run ID: **IC_3_100803A** Prep Date: **08/03/2010 10:42**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	26.5	2	25	0	106	80	120	23.86	10.7(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: *17-Aug-10*

QC Summary Report

Work Order: 10073001

Method Blank

Type **MBLK** Test Code: **EPA Method 200.8**

File ID: **081610.B\077_MB.D** Batch ID: **24842** Analysis Date: **08/16/2010 18:29**

Sample ID: **MB-24842** Units : **mg/L** Run ID: **ICP/MS_100816C** Prep Date: **08/11/2010 15:51**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	ND	0.005								

Laboratory Control Spike

Type **LCS** Test Code: **EPA Method 200.8**

File ID: **081610.B\078_LC.D** Batch ID: **24842** Analysis Date: **08/16/2010 18:34**

Sample ID: **LCS-24842** Units : **mg/L** Run ID: **ICP/MS_100816C** Prep Date: **08/11/2010 15:51**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0483	0.005	0.05		97	85	115			

Sample Matrix Spike

Type **MS** Test Code: **EPA Method 200.8**

File ID: **081610.B\084_MS.D** Batch ID: **24842** Analysis Date: **08/16/2010 19:08**

Sample ID: **10072901-04AMS** Units : **mg/L** Run ID: **ICP/MS_100816C** Prep Date: **08/11/2010 15:51**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0621	0.005	0.05	0	124	70	130			

Sample Matrix Spike Duplicate

Type **MSD** Test Code: **EPA Method 200.8**

File ID: **081610.B\085_MSD.D** Batch ID: **24842** Analysis Date: **08/16/2010 19:14**

Sample ID: **10072901-04AMSD** Units : **mg/L** Run ID: **ICP/MS_100816C** Prep Date: **08/11/2010 15:51**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0839	0.005	0.05	0	168	70	130	0.06213	29.9(20)	M1 R58

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

R58 = MS/MSD RPD exceeded the laboratory control limit.

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Date: *17-Aug-10*

QC Summary Report

Work Order: 10073001

Method Blank Type **MBLK** Test Code: **EPA Method SW8260B**

File ID: **C:\HPCHEM\MS07\DATA\100806\10080611.D** Batch ID: **MS07W0806M** Analysis Date: **08/06/2010 19:19**

Sample ID: **MBLK MS07W0806M** Units : **µg/L** Run ID: **MSD_07_100806C** Prep Date: **08/06/2010 19:19**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	ND	0.5								
Chloromethane	ND	1								
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	ND	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)	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	ND	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)	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	ND	0.5								
Dibromochloromethane	ND	0.5								
1,2-Dibromoethane (EDB)	ND	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	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								
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	ND	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	ND	1								
1,2,3-Trichlorobenzene	ND	1								
Surr: 1,2-Dichloroethane-d4	10.6		10		106	70	130			
Surr: Toluene-d8	9.84		10		98	70	130			

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Date: *17-Aug-10*

QC Summary Report

Work Order: 10073001

Surr: 4-Bromofluorobenzene	9.49			10		95	70	130		

Laboratory Control Spike Type **LCS** Test Code: **EPA Method SW8260B**

File ID: **C:\HPCHEM\MS07\DATA\100806\10080609.D** Batch ID: **MS07W0806M** Analysis Date: **08/06/2010 18:32**

Sample ID: **LCS MS07W0806M** Units : **µg/L** Run ID: **MSD_07_100806C** Prep Date: **08/06/2010 18:32**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	9.67	1	10		97	70	130			
Chloromethane	7.66	2	10		77	70	130			
Vinyl chloride	9.47	1	10		95	70	130			
Chloroethane	9.6	1	10		96	70	130			
Bromomethane	10.5	2	10		105	70	130			
Trichlorofluoromethane	10.4	1	10		104	70	130			
1,1-Dichloroethene	11.4	1	10		114	70	130			
Dichloromethane	10.9	2	10		109	70	130			
trans-1,2-Dichloroethene	10	1	10		100	70	130			
Methyl tert-butyl ether (MTBE)	12.1	0.5	10		121	70	130			
1,1-Dichloroethane	10.9	1	10		109	70	130			
cis-1,2-Dichloroethene	11.7	1	10		117	70	130			
Bromochloromethane	12.1	1	10		121	70	130			
Chloroform	11	1	10		110	70	130			
2,2-Dichloropropane	13	1	10		130	70	130			
1,2-Dichloroethane	11.9	1	10		119	70	130			
1,1,1-Trichloroethane	12.3	1	10		123	70	130			
1,1-Dichloropropene	12.1	1	10		121	70	130			
Carbon tetrachloride	12.3	1	10		123	70	130			
Benzene	11.4	0.5	10		114	70	130			
Dibromomethane	11.7	1	10		117	70	130			
1,2-Dichloropropane	11.8	1	10		118	70	130			
Trichloroethene	11.6	1	10		116	70	130			
Bromodichloromethane	11.8	1	10		118	70	130			
cis-1,3-Dichloropropene	10.3	1	10		103	70	130			
trans-1,3-Dichloropropene	12.3	1	10		123	70	130			
1,1,2-Trichloroethane	11.4	1	10		114	70	130			
Toluene	11.1	0.5	10		111	70	130			
1,3-Dichloropropane	11.1	1	10		111	70	130			
Dibromochloromethane	12.1	1	10		121	70	130			
1,2-Dibromoethane (EDB)	23.4	2	20		117	70	130			
Tetrachloroethene	11.8	1	10		118	70	130			
1,1,1,2-Tetrachloroethane	12.3	1	10		123	70	130			
Chlorobenzene	11.4	1	10		114	70	130			
Ethylbenzene	11.7	0.5	10		117	70	130			
m,p-Xylene	11.8	0.5	10		118	70	130			
Bromoform	12.8	1	10		128	70	130			
Styrene	10.5	1	10		105	70	130			
o-Xylene	11.8	0.5	10		118	70	130			
1,1,2,2-Tetrachloroethane	11.3	1	10		113	70	130			
1,2,3-Trichloropropane	24.3	2	20		121	70	130			
Isopropylbenzene	11.2	1	10		112	70	130			
Bromobenzene	11.2	1	10		112	70	130			
n-Propylbenzene	11	1	10		110	70	130			
4-Chlorotoluene	11.2	1	10		112	70	130			
2-Chlorotoluene	11.2	1	10		112	70	130			
1,3,5-Trimethylbenzene	11.6	1	10		116	70	130			
tert-Butylbenzene	11.3	1	10		113	70	130			
1,2,4-Trimethylbenzene	11.5	1	10		115	70	130			
sec-Butylbenzene	11.3	1	10		113	70	130			
1,3-Dichlorobenzene	11.3	1	10		113	70	130			
1,4-Dichlorobenzene	11.3	1	10		113	70	130			
4-Isopropyltoluene	11.4	1	10		114	70	130			
1,2-Dichlorobenzene	10.8	1	10		108	70	130			
n-Butylbenzene	10.9	1	10		109	70	130			
1,2-Dibromo-3-chloropropane (DBCP)	51.9	3	50		104	70	130			
1,2,4-Trichlorobenzene	9.62	2	10		96	70	130			
Naphthalene	9.38	2	10		94	70	130			
Hexachlorobutadiene	21.6	2	20		108	70	130			
1,2,3-Trichlorobenzene	9.66	2	10		97	70	130			
Surr: 1,2-Dichloroethane-d4	11		10		110	70	130			
Surr: Toluene-d8	9.86		10		99	70	130			
Surr: 4-Bromofluorobenzene	8.93		10		89	70	130			

Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date: 17-Aug-10

QC Summary Report

Work Order: 10073001

Sample Matrix Spike Type **MS** Test Code: **EPA Method SW8260B**

File ID: **C:\HPCHEM\MS07\DATA\100806\10080614.D** Batch ID: **MS07W0806M** Analysis Date: **08/06/2010 20:30**

Sample ID: **10073004-02AMS** Units : **µg/L** Run ID: **MSD_07_100806C** Prep Date: **08/06/2010 20:30**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	34.8	2.5	50	0	70	13	167			
Chloromethane	34.6	10	50	0	69	28	145			
Vinyl chloride	77.2	2.5	50	39.84	75	43	134			
Chloroethane	44.9	2.5	50	0	90	39	154			
Bromomethane	51	10	50	0	102	19	176			
Trichlorofluoromethane	48.5	2.5	50	0	97	34	160			
1,1-Dichloroethene	49.6	2.5	50	0	99	60	130			
Dichloromethane	70.3	10	50	27.26	86	68	130			
trans-1,2-Dichloroethene	53.4	2.5	50	5.44	96	63	130			
Methyl tert-butyl ether (MTBE)	50.1	1.3	50	0	100	56	141			
1,1-Dichloroethane	50.2	2.5	50	0	100	61	130			
cis-1,2-Dichloroethene	189	2.5	50	139.6	98	70	130			
Bromochloromethane	53.1	2.5	50	0	106	70	130			
Chloroform	54.9	2.5	50	6.86	96	67	130			
2,2-Dichloropropane	48.3	2.5	50	0	97	30	152			
1,2-Dichloroethane	58.6	2.5	50	7.46	102	60	135			
1,1,1-Trichloroethane	55.9	2.5	50	0	112	59	137			
1,1-Dichloropropene	54.6	2.5	50	0	109	63	130			
Carbon tetrachloride	56	2.5	50	0	112	50	147			
Benzene	52.8	1.3	50	0	106	67	130			
Dibromomethane	49.7	2.5	50	0	99	69	133			
1,2-Dichloropropane	53	2.5	50	0	106	69	130			
Trichloroethene	105	2.5	50	58.23	94	69	130			
Bromodichloromethane	52.2	2.5	50	0	104	66	134			
cis-1,3-Dichloropropene	40.5	2.5	50	0	81	63	130			
trans-1,3-Dichloropropene	51	2.5	50	0	102	66	131			
1,1,2-Trichloroethane	53	2.5	50	4	98	68	130			
Toluene	50.7	1.3	50	0	101	66	130			
1,3-Dichloropropane	47.6	2.5	50	0	95	70	130			
Dibromochloromethane	51.5	2.5	50	0	103	70	130			
1,2-Dibromoethane (EDB)	100	5	100	0	100	70	130			
Tetrachloroethene	54.6	2.5	50	2.11	105	61	134			
1,1,1,2-Tetrachloroethane	54.8	2.5	50	0	110	70	130			
Chlorobenzene	51.5	2.5	50	0	103	70	130			
Ethylbenzene	53.2	1.3	50	0	106	68	130			
m,p-Xylene	53.5	1.3	50	0	107	64	130			
Bromoform	55	2.5	50	0	110	64	138			
Styrene	46.9	2.5	50	0	94	69	130			
o-Xylene	54	1.3	50	0	108	70	130			
1,1,2,2-Tetrachloroethane	49.7	2.5	50	0	99	65	131			
1,2,3-Trichloropropane	106	10	100	0	106	70	130			
Isopropylbenzene	51.1	2.5	50	0	102	64	138			
Bromobenzene	50.6	2.5	50	0	101	70	130			
n-Propylbenzene	50.3	2.5	50	0	101	66	132			
4-Chlorotoluene	50.8	2.5	50	0	102	70	130			
2-Chlorotoluene	51.2	2.5	50	0	102	70	130			
1,3,5-Trimethylbenzene	52.9	2.5	50	0	106	66	136			
tert-Butylbenzene	51.7	2.5	50	0	103	65	137			
1,2,4-Trimethylbenzene	53.3	2.5	50	0	107	65	137			
sec-Butylbenzene	51.3	2.5	50	0	103	66	134			
1,3-Dichlorobenzene	50.6	2.5	50	0	101	70	130			
1,4-Dichlorobenzene	50.6	2.5	50	0	101	70	130			
4-Isopropyltoluene	52.4	2.5	50	0	105	66	137			
1,2-Dichlorobenzene	48.3	2.5	50	0	97	70	130			
n-Butylbenzene	51.7	2.5	50	0	103	60	142			
1,2-Dibromo-3-chloropropane (DBCP)	220	15	250	0	88	67	130			
1,2,4-Trichlorobenzene	44.2	10	50	0	88	61	137			
Naphthalene	43.1	10	50	0	86	40	167			
Hexachlorobutadiene	93.4	10	100	0	93	61	130			
1,2,3-Trichlorobenzene	44.3	10	50	0	89	51	144			
Surr: 1,2-Dichloroethane-d4	53.9		50		108	70	130			
Surr: Toluene-d8	49.1		50		98	70	130			
Surr: 4-Bromofluorobenzene	44.9		50		90	70	130			

Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date: *17-Aug-10*

QC Summary Report

Work Order: 10073001

Sample Matrix Spike Duplicate Type **MSD** Test Code: **EPA Method SW8260B**

File ID: **C:\HPCHEM\MS07\DATA\100806\10080615.D** Batch ID: **MS07W0806M** Analysis Date: **08/06/2010 20:54**

Sample ID: **10073004-02AMSD** Units : **µg/L** Run ID: **MSD_07_100806C** Prep Date: **08/06/2010 20:54**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	35.5	2.5	50	0	71	13	167	34.84	1.7(20)	
Chloromethane	36.2	10	50	0	72	28	145	34.61	4.6(20)	
Vinyl chloride	84.2	2.5	50	39.84	89	43	134	77.18	8.7(20)	
Chloroethane	47.3	2.5	50	0	95	39	154	44.9	5.1(20)	
Bromomethane	59.4	10	50	0	119	19	176	51.03	15.2(20)	
Trichlorofluoromethane	49	2.5	50	0	98	34	160	48.5	1.0(20)	
1,1-Dichloroethene	51.8	2.5	50	0	104	60	130	49.61	4.3(20)	
Dichloromethane	75.9	10	50	27.26	97	68	130	70.34	7.6(20)	
trans-1,2-Dichloroethene	51	2.5	50	5.44	91	63	130	53.42	4.7(20)	
Methyl tert-butyl ether (MTBE)	52.8	1.3	50	0	106	56	141	50.11	5.3(20)	
1,1-Dichloroethane	51.2	2.5	50	0	102	61	130	50.17	2.0(20)	
cis-1,2-Dichloroethene	203	2.5	50	139.6	126	70	130	188.6	7.2(20)	
Bromochloromethane	54.3	2.5	50	0	109	70	130	53.12	2.2(20)	
Chloroform	55.3	2.5	50	6.86	97	67	130	54.91	0.8(20)	
2,2-Dichloropropane	48	2.5	50	0	96	30	152	48.25	0.6(20)	
1,2-Dichloroethane	60.2	2.5	50	7.46	105	60	135	58.58	2.6(20)	
1,1,1-Trichloroethane	56.3	2.5	50	0	113	59	137	55.91	0.7(20)	
1,1-Dichloropropene	55	2.5	50	0	110	63	130	54.64	0.6(20)	
Carbon tetrachloride	56.6	2.5	50	0	113	50	147	55.97	1.1(20)	
Benzene	53.7	1.3	50	0	107	67	130	52.8	1.7(20)	
Dibromomethane	51.7	2.5	50	0	103	69	133	49.71	4.0(20)	
1,2-Dichloropropane	53.4	2.5	50	0	107	69	130	52.95	0.8(20)	
Trichloroethene	112	2.5	50	58.23	108	69	130	105.2	6.6(20)	
Bromodichloromethane	53.3	2.5	50	0	107	66	134	52.21	2.1(20)	
cis-1,3-Dichloropropene	41.9	2.5	50	0	84	63	130	40.45	3.5(20)	
trans-1,3-Dichloropropene	53	2.5	50	0	106	66	131	50.97	3.9(20)	
1,1,2-Trichloroethane	54.8	2.5	50	4	102	68	130	52.97	3.3(20)	
Toluene	51.2	1.3	50	0	102	66	130	50.66	1.1(20)	
1,3-Dichloropropane	49.2	2.5	50	0	98	70	130	47.63	3.3(20)	
Dibromochloromethane	53.6	2.5	50	0	107	70	130	51.52	4.0(20)	
1,2-Dibromoethane (EDB)	104	5	100	0	104	70	130	100.3	3.5(20)	
Tetrachloroethene	55.7	2.5	50	2.11	107	61	134	54.6	1.9(20)	
1,1,1,2-Tetrachloroethane	56	2.5	50	0	112	70	130	54.76	2.2(20)	
Chlorobenzene	52.5	2.5	50	0	105	70	130	51.45	2.1(20)	
Ethylbenzene	54.4	1.3	50	0	109	68	130	53.18	2.3(20)	
m,p-Xylene	54.2	1.3	50	0	108	64	130	53.54	1.2(20)	
Bromoform	56.4	2.5	50	0	113	64	138	55.02	2.5(20)	
Styrene	48	2.5	50	0	96	69	130	46.85	2.4(20)	
o-Xylene	54.7	1.3	50	0	109	70	130	53.98	1.3(20)	
1,1,2,2-Tetrachloroethane	51.4	2.5	50	0	103	65	131	49.7	3.4(20)	
1,2,3-Trichloropropane	109	10	100	0	109	70	130	105.7	3.2(20)	
Isopropylbenzene	51.6	2.5	50	0	103	64	138	51.14	0.9(20)	
Bromobenzene	51.3	2.5	50	0	103	70	130	50.57	1.5(20)	
n-Propylbenzene	50.7	2.5	50	0	101	66	132	50.32	0.8(20)	
4-Chlorotoluene	51.4	2.5	50	0	103	70	130	50.75	1.3(20)	
2-Chlorotoluene	51.7	2.5	50	0	103	70	130	51.22	1.0(20)	
1,3,5-Trimethylbenzene	53.3	2.5	50	0	107	66	136	52.87	0.9(20)	
tert-Butylbenzene	51.9	2.5	50	0	104	65	137	51.71	0.3(20)	
1,2,4-Trimethylbenzene	54	2.5	50	0	108	65	137	53.27	1.3(20)	
sec-Butylbenzene	51.9	2.5	50	0	104	66	134	51.26	1.3(20)	
1,3-Dichlorobenzene	51	2.5	50	0	102	70	130	50.57	0.9(20)	
1,4-Dichlorobenzene	51.5	2.5	50	0	103	70	130	50.62	1.7(20)	
4-Isopropyltoluene	53.2	2.5	50	0	106	66	137	52.41	1.5(20)	
1,2-Dichlorobenzene	49.4	2.5	50	0	99	70	130	48.26	2.3(20)	
n-Butylbenzene	52.5	2.5	50	0	105	60	142	51.72	1.4(20)	
1,2-Dibromo-3-chloropropane (DBCP)	234	15	250	0	94	67	130	220.2	6.0(20)	
1,2,4-Trichlorobenzene	46.3	10	50	0	93	61	137	44.15	4.7(20)	
Naphthalene	45.3	10	50	0	91	40	167	43.08	5.1(20)	
Hexachlorobutadiene	97.1	10	100	0	97	61	130	93.35	3.9(20)	
1,2,3-Trichlorobenzene	46.3	10	50	0	93	51	144	44.34	4.4(20)	
Surr: 1,2-Dichloroethane-d4	53.4		50		107	70	130			
Surr: Toluene-d8	48.9		50		98	70	130			
Surr: 4-Bromofluorobenzene	45.1		50		90	70	130			

Alpha Analytical, Inc.

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(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date: *17-Aug-10*

QC Summary Report

Work Order: 10073001

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.

Billing Information :

CHAIN-OF-CUSTODY RECORD

CA

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

WorkOrder : BMIS10073001

Report Due By : 5:00 PM On : 13-Aug-2010

Client:
Battelle Memorial Institute
655 West Broadway
Suite 1420
San Diego, CA 92101

Report Attention	Phone Number	EMail Address
David Conner	(818) 393-2808 x	connerd@battelle.org
Shane Walton	(614) 424-4117 x	waltons@battelle.org
Betsy Cutie	(614) 424-4899 x	cutiee@batelle.org

EDD Required : **Yes**

Sampled by : Chase Brogdon

PO : 218013

Client's COC # : 25757, 25759 Job : G005862 / JPL Groundwater Monitoring

Cooler Temp	Samples Received	Date Printed
4 °C	30-Jul-2010	**30-Jul-2010**

QC Level : DS4 = DOD QC Required : Final Rpt, MBLK, InitCal/ConCal data, LCS, MS/MSD With Surrogates

Alpha Sample ID	Client Sample ID	Matrix	Collection Date	No. of Bottles Alpha	Sub	TAT	Requested Tests 300_0_W	314_W	METALS_D W	VOC_TIC_ W	VOC_W				Sample Remarks
BMI10073001-01A	MW-11-4	AQ	07/29/10 11:10	4	0	10		Perchlorate		VOC by 524 Criteria	VOC by 524 Criteria				
BMI10073001-02A	MW-11-3	AQ	07/29/10 11:47	5	0	10		Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				
BMI10073001-03A	MW-11-2	AQ	07/29/10 12:15	5	0	10		Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				
BMI10073001-04A	MW-11-1	AQ	07/29/10 12:43	5	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				Level IV QC
BMI10073001-05A	DUPE-05-3Q10	AQ	07/29/10 00:00	5	0	10		Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				
BMI10073001-06A	MW-22-3	AQ	07/29/10 08:42	5	0	10		Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				
BMI10073001-07A	MW-22-2	AQ	07/29/10 09:21	5	0	10		Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				
BMI10073001-08A	MW-22-1	AQ	07/29/10 09:56	5	0	10		Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				
BMI10073001-09A	DUPE-04-3Q10	AQ	07/29/10 00:00	5	0	10		Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				
BMI10073001-10A	EB-04-07/29/10	AQ	07/29/10 09:46	5	0	10		Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				

Comments: Security seals intact. Frozen ice. Temp Blank #8391 received @ 4°C. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). :

	Signature	Print Name	Company	Date/Time
Logged in by:	Elizabeth Adcox	Elizabeth Adcox	**Alpha Analytical, Inc.**	7-30-10 1155

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 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.
Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

Billing Information :

CHAIN-OF-CUSTODY RECORD

CA

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

WorkOrder : BMIS10073001

Report Due By : 5:00 PM On : 13-Aug-2010

Client:
Battelle Memorial Institute
655 West Broadway
Suite 1420
San Diego, CA 92101

Report Attention	Phone Number	EMail Address
David Conner	(818) 393-2808 x	connerd@battelle.org
Shane Walton	(614) 424-4117 x	waltons@battelle.org
Betsy Cutie	(614) 424-4899 x	cutiee@batelle.org

EDD Required : **Yes**

Sampled by : Chase Brogdon

PO : 218013

Client's COC # : 25757, 25759 Job : G005862 / JPL Groundwater Monitoring

Cooler Temp	Samples Received	Date Printed
4 °C	30-Jul-2010	**30-Jul-2010**

QC Level : DS4 = DOD QC Required : Final Rpt, MBLK, InitCal/ConCal data, LCS, MS/MSD With Surrogates

Alpha Sample ID	Client Sample ID	Matrix	Collection Date	No. of Bottles Alpha	Sub	TAT	Requested Tests 300_0_W	314_W	METALS_D W	VOC_TIC_ W	VOC_W				Sample Remarks
BMI10073001-11A	TB-04-07/29/10	AQ	07/29/10 07:00	1	0	10				VOC by 524 Criteria	VOC by 524 Criteria				Reno Trip Blank 6/29/10

Comments: Security seals intact. Frozen ice. Temp Blank #8391 received @ 4°C. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). :

	Signature	Print Name	Company	Date/Time
Logged in by:	Elizabeth Adcox	Elizabeth Adcox	**Alpha Analytical, Inc.**	7.30.10 1155

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 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.
Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

Billing Information:
Name GERALD TOMPKINS / BATTELLE
Address 505 KING AVE.
City, State, Zip COLUMBUS OH 43201
Phone Number _____ Fax _____

Alpha Analytical, Inc.
255 Glendale Avenue, Suite 21
Sparks, Nevada 89431-5778
Phone (775) 355-1044
Fax (775) 355-0406

Samples Collected From Which State? AZ ___ CA X NV ___ WA ___ ID ___ OR ___ OTHER ___

25757

Page # 1 of 1

Client Name BATTELLE / DAVID CONNER
Address 3990 OLD TOWN AVE, C-205
City, State, Zip SAN DIEGO, CA 92110
P.O. # 218013
Job # 4005862
EMail Address
Phone # (619) 726-7311
Fax #

Required QC Level? I II III IV
EDD / EDF? YES ___ NO ___
Global ID # ___

Time Sampled	Date Sampled	Matrix* See Key Below	Sampled by CHASE BUGDON / Lab ID Number (Office Use Only)	Sample Description	TAT	Field Filtered	Total and type of containers ** See below	VOC (524.2)	TOTAL Cr (200.8)	Cl04- (314.0)	Cl-, SO4-, NO3-, NO2- PO4-3 (300.0)				REMARKS
1110	7/29/10	AQ	BMI10073001-01	MW-11-4	NORM		3v/1p	X		X					QC LEVEL III
1147			-02	MW-11-3			3v/2p	X	X	X					
1215			-03	MW-11-2			3v/2p	X	X	X					
1243			-04	MW-11-1			3v/2p	X	X	X	X				
**			-05	DUPE-05 -3Q10			3v/2p	X	X	X					DUPLICATE

ADDITIONAL INSTRUCTIONS:

	Signature	Print Name	Company	Date	Time
Relinquished by		CHASE BUGDON	INSIGHT ENGINE	07/29/10	1400
Received by		Aaron Hall	Alpha Analytical	7/29/10	1400
Relinquished by		" "	" "	7/29/10	1400
Received by	Elizabeth Adcox	Elizabeth Adcox	Alpha	7-30-10	1155
Relinquished by					
Received by					

*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

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 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.

Billing Information:
Name GERALD TOMPKINS / BATTELLE
Address 505 KING AVE. C-205
City, State, Zip COLUMBUS OH 43201
Phone Number _____ Fax _____

Alpha Analytical, Inc.
255 Glendale Avenue, Suite 21
Sparks, Nevada 89431-5778
Phone (775) 355-1044
Fax (775) 355-0406

Samples Collected From Which State? AZ ___ CA X NV ___ WA ___ ID ___ OR ___ OTHER ___

25759

Page # 1 of 1

Client Name: BATTELLE / DAVID CONNER
P.O. # 218013
Job # 60058G2
Address: 3990 OLD TOWN AVE. C-205
EMail Address
City, State, Zip: SAN DIEGO CA 92110
Phone # (619) 726-7311
Fax #

Required QC Level? I II III IV

EDD / EDF? YES ___ NO ___

Global ID # ___

Time Sampled	Date Sampled	Matrix* See Key Below	Sampled by: CHASE BRADSON — Lab ID Number (Office Use Only)	Sample Description	TAT	Field Filtered	Total and type of containers ** See below	VOC (524.2)	Total Cr (200.8)	Cl04 (314.0)	REMARKS
0842	7/29/10	AQ	-06	MW-22-3	NORM		3v 2p	X	X	X	
0921			-07	MW-22-2			3v 2p	X	X	X	
0956			-08	MW-22-1			3v 2p	X	X	X	
"			-09	DUPE-04 -3Q10			3v 2p	X	X	X	DUPLICATE
0946			-10	EB-04-07/29/10			3v, 2p	X	X	X	EQUIPMENT BLANK
0700	7/29/10	AQ	-11	TB-04-07/29/10			1v	X			TRIP BLANK

ADDITIONAL INSTRUCTIONS:

	Signature	Print Name	Company	Date	Time
Relinquished by		CHASE BRADSON	INSIGHT ECO, INC	07/29/10	1406
Received by		Anthony Stark	Alpha Analytical	7/29/10	1400
Relinquished by		" "	" "	7/29/10	1400
Received by	Elizabeth Adcox	Elizabeth Adcox	Alpha	7-30-10	1155
Relinquished by					
Received by					

*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

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 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.

Alpha Analytical, Inc.

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

Date *05-Aug-10*

David Conner
Battelle Memorial Institute
655 West Broadway Suite 1420
San Diego, CA 92101
(818) 393-2808

CASE NARRATIVE

Job: G005862 / JPL Groundwater Monitoring
Work Order: BMI10072901 **Cooler Temp:** 4 °C

Alpha's Sample ID	Client's Sample ID	Matrix
10072901-01A	MW-23-4	Aqueous
10072901-02A	MW-23-3	Aqueous
10072901-03A	MW-23-2	Aqueous
10072901-04A	MW-23-1	Aqueous
10072901-05A	EB-03-07/28/10	Aqueous
10072901-06A	TB-03-07/28/10	Aqueous

Manually Integrated Analytes

Alpha's Sample ID	Test Reference	Analyte
NONE		

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

Alpha Analytical, Inc.

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

Attn: David Conner
Phone: (619) 726-7311
Fax: (614) 458-6641
Date Received : 07/29/10

Job: G005862 / JPL Groundwater Monitoring

Perchlorate by Ion Chromatography
EPA Method 314.0

Parameter		Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-23-3**					
Lab ID : BMI10072901-02A	Perchlorate	1.67	1.00 µg/L	08/02/10 12:13	08/02/10 15:00
Date Sampled 07/28/10 08:42					
Client ID: **MW-23-2**					
Lab ID : BMI10072901-03A	Perchlorate	4.87	1.00 µg/L	08/02/10 12:13	08/02/10 15:19
Date Sampled 07/28/10 09:09					
Client ID: **MW-23-1**					
Lab ID : BMI10072901-04A	Perchlorate	28.3	1.00 µg/L	08/02/10 12:13	08/03/10 13:04
Date Sampled 07/28/10 09:49					
Client ID: **EB-03-07/28/10**					
Lab ID : BMI10072901-05A	Perchlorate	ND	1.00 µg/L	08/02/10 12:13	08/02/10 16:32
Date Sampled 07/28/10 09:26					

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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.

8/11/10
Report Date

Alpha Analytical, Inc.

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

Attn: David Conner
Phone: (619) 726-7311
Fax: (614) 458-6641
Date Received : 07/29/10

Job: G005862 / JPL Groundwater Monitoring

Metals by ICPMS
EPA Method 200.8

Parameter		Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-23-4**					
Lab ID : BMI10072901-01A	Chromium (Cr)	ND	0.0050 mg/L	08/11/10 15:51	08/16/10 19:32
Date Sampled 07/28/10 08:22					
Client ID: **MW-23-3**					
Lab ID : BMI10072901-02A	Chromium (Cr)	0.0060	0.0050 mg/L	08/11/10 15:51	08/16/10 19:38
Date Sampled 07/28/10 08:42					
Client ID: **MW-23-2**					
Lab ID : BMI10072901-03A	Chromium (Cr)	0.0054	0.0050 mg/L	08/11/10 15:51	08/16/10 19:43
Date Sampled 07/28/10 09:09					
Client ID: **MW-23-1**					
Lab ID : BMI10072901-04A	Chromium (Cr)	ND	0.0050 mg/L	08/11/10 15:51	08/16/10 19:03
Date Sampled 07/28/10 09:49					
Client ID: **EB-03-07/28/10**					
Lab ID : BMI10072901-05A	Chromium (Cr)	ND	0.0050 mg/L	08/11/10 15:51	08/16/10 19:21
Date Sampled 07/28/10 09:26					

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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8/17/10
Report Date

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(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

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 Extracted	Date Analyzed
Client ID :	**MW-23-3**						
Lab ID :	BMI10072901-02A	* * * None Found * * *	ND		2.0 µg/L	08/02/10 17:58	08/02/10 17:58
Date Received :	07/29/10						
Date Sampled :	07/28/10 08:42						
Client ID :	**MW-23-2**						
Lab ID :	BMI10072901-03A	* * * None Found * * *	ND		2.0 µg/L	08/02/10 18:22	08/02/10 18:22
Date Received :	07/29/10						
Date Sampled :	07/28/10 09:09						
Client ID :	**MW-23-1**						
Lab ID :	BMI10072901-04A	* * * None Found * * *	ND		2.0 µg/L	08/02/10 18:46	08/02/10 18:46
Date Received :	07/29/10						
Date Sampled :	07/28/10 09:49						
Client ID :	**EB-03-07/28/10**						
Lab ID :	BMI10072901-05A	Tertiary Butyl Alcohol (TBA)	23	*	10 µg/L	08/02/10 19:09	08/02/10 19:09
Date Received :	07/29/10	Acetone	16	*	10 µg/L	08/02/10 19:09	08/02/10 19:09
Date Sampled :	07/28/10 09:26						
Client ID :	**TB-03-07/28/10**						
Lab ID :	BMI10072901-06A	* * * None Found * * *	ND		2.0 µg/L	08/02/10 19:33	08/02/10 19:33
Date Received :	07/29/10						
Date Sampled :	07/28/10 07:00						

* No other TICs were found at a reporting limit of 2.0 µg/L.
Note: Analysis conducted using EPA Method 524.2 criteria.
ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer
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8/11/10
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: (818) 393-2808
Fax: (614) 458-6641

Alpha Analytical Number: BMI10072901-02A
Client I.D. Number: MW-23-3

Sampled: 07/28/10 08:42
Received: 07/29/10
Extracted: 08/02/10 17:58
Analyzed: 08/02/10 17:58

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	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 (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	107	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	100	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	92	(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 Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer
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8/11/10
Report Date

Alpha Analytical, Inc.

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641

Alpha Analytical Number: BMI10072901-03A
Client I.D. Number: MW-23-2

Sampled: 07/28/10 09:09
Received: 07/29/10
Extracted: 08/02/10 18:22
Analyzed: 08/02/10 18:22

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	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	0.64	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	1.4	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	109	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	100	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	92	(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	0.52	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer

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8/11/10
Report Date

Alpha Analytical, Inc.

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641

Alpha Analytical Number: BMI10072901-04A
Client I.D. Number: MW-23-1

Sampled: 07/28/10 09:49
Received: 07/29/10
Extracted: 08/02/10 18:46
Analyzed: 08/02/10 18:46

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	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 (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	105	(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	93	(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	0.52	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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.

8/11/10
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: (818) 393-2808
Fax: (614) 458-6641

Alpha Analytical Number: BMI10072901-05A
Client I.D. Number: EB-03-07/28/10

Sampled: 07/28/10 09:26
Received: 07/29/10
Extracted: 08/02/10 19:09
Analyzed: 08/02/10 19:09

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit		Compound	Concentration	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 (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	105	(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	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				

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer
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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: (818) 393-2808
Fax: (614) 458-6641

Alpha Analytical Number: BMI10072901-06A
Client I.D. Number: TB-03-07/28/10

Sampled: 07/28/10 07:00
Received: 07/29/10
Extracted: 08/02/10 19:33
Analyzed: 08/02/10 19:33

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit		Compound	Concentration	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 (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	108	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65 Surr: Toluene-d8	99	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66 Surr: 4-Bromofluorobenzene	92	(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 Randy Gardner Walter Hinchman

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(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

VOC Sample Preservation Report

Work Order: BMI10072901 **Job:** G005862 / JPL Groundwater Monitoring

Alpha's Sample ID	Client's Sample ID	Matrix	pH
10072901-02A	MW-23-3	Aqueous	2
10072901-03A	MW-23-2	Aqueous	2
10072901-04A	MW-23-1	Aqueous	2
10072901-05A	EB-03-07/28/10	Aqueous	2
10072901-06A	TB-03-07/28/10	Aqueous	2

8/11/10

Report Date

Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date: *11-Aug-10*

QC Summary Report

Work Order: 10072901

Method Blank

Type **MBLK** Test Code: **EPA Method 314.0**

File ID: **14** Batch ID: **24753** Analysis Date: **08/02/2010 13:10**

Sample ID: **MB-24753** Units : **µg/L** Run ID: **IC_3_100802A** Prep Date: **08/02/2010 12:13**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	ND	1								

Laboratory Fortified Blank

Type **LFB** Test Code: **EPA Method 314.0**

File ID: **15** Batch ID: **24753** Analysis Date: **08/02/2010 13:28**

Sample ID: **LFB-24753** Units : **µg/L** Run ID: **IC_3_100802A** Prep Date: **08/02/2010 12:13**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	24.7	2	25		99	85	115			

Sample Matrix Spike

Type **LFM** Test Code: **EPA Method 314.0**

File ID: **19** Batch ID: **24753** Analysis Date: **08/03/2010 13:22**

Sample ID: **10072901-04ALFM** Units : **µg/L** Run ID: **IC_3_100802A** Prep Date: **08/02/2010 12:13**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	57.2	2	25	28.27	116	80	120			

Sample Matrix Spike Duplicate

Type **LFMD** Test Code: **EPA Method 314.0**

File ID: **20** Batch ID: **24753** Analysis Date: **08/03/2010 13:40**

Sample ID: **10072901-04ALFMD** Units : **µg/L** Run ID: **IC_3_100802A** Prep Date: **08/02/2010 12:13**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	58.1	2	25	28.27	119	80	120	57.23	1.6(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.

Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

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Date: *17-Aug-10*

QC Summary Report

Work Order: 10072901

Method Blank

Type **MBLK** Test Code: **EPA Method 200.8**

File ID: **081610.B\077_MB.D** Batch ID: **24842** Analysis Date: **08/16/2010 18:29**

Sample ID: **MB-24842** Units : **mg/L** Run ID: **ICP/MS_100816C** Prep Date: **08/11/2010 15:51**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	ND	0.005								

Laboratory Control Spike

Type **LCS** Test Code: **EPA Method 200.8**

File ID: **081610.B\078_LC.D** Batch ID: **24842** Analysis Date: **08/16/2010 18:34**

Sample ID: **LCS-24842** Units : **mg/L** Run ID: **ICP/MS_100816C** Prep Date: **08/11/2010 15:51**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0483	0.005	0.05		97	85	115			

Sample Matrix Spike

Type **MS** Test Code: **EPA Method 200.8**

File ID: **081610.B\084_MS.D** Batch ID: **24842** Analysis Date: **08/16/2010 19:08**

Sample ID: **10072901-04AMS** Units : **mg/L** Run ID: **ICP/MS_100816C** Prep Date: **08/11/2010 15:51**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0621	0.005	0.05	0	124	70	130			

Sample Matrix Spike Duplicate

Type **MSD** Test Code: **EPA Method 200.8**

File ID: **081610.B\085_MSD.D** Batch ID: **24842** Analysis Date: **08/16/2010 19:14**

Sample ID: **10072901-04AMSD** Units : **mg/L** Run ID: **ICP/MS_100816C** Prep Date: **08/11/2010 15:51**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0839	0.005	0.05	0	168	70	130	0.06213	29.9(20)	M1 R58

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.

M1 = Matrix spike recovery was high, the method control sample recovery was acceptable.

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

R58 = MS/MSD RPD exceeded the laboratory control limit.

Alpha Analytical, Inc.

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(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date: 05-Aug-10

QC Summary Report

Work Order: 10072901

Method Blank Type **MBLK** Test Code: **EPA Method SW8260B**

File ID: **C:\HPCHEM\MS07\DATA\100802\10080205.D** Batch ID: **MS07W0802M** Analysis Date: **08/02/2010 10:04**

Sample ID: **MBLK MS07W0802M** Units : **µg/L** Run ID: **MSD_07_100802B** Prep Date: **08/02/2010 10:04**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	ND	0.5								
Chloromethane	ND	1								
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	ND	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)	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	ND	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)	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	ND	0.5								
Dibromochloromethane	ND	0.5								
1,2-Dibromoethane (EDB)	ND	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	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								
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	ND	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	ND	1								
1,2,3-Trichlorobenzene	ND	1								
Surr: 1,2-Dichloroethane-d4	11		10		110	70	130			
Surr: Toluene-d8	10.1		10		101	70	130			

Alpha Analytical, Inc.

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Date: 05-Aug-10

QC Summary Report

Work Order: 10072901

Surr: 4-Bromofluorobenzene	9.33		10	93	70	130	

Laboratory Control Spike Type **LCS** Test Code: **EPA Method SW8260B**

File ID: **C:\HPCHEM\MS07\DATA\100802\10080203.D** Batch ID: **MS07W0802M** Analysis Date: **08/02/2010 09:18**

Sample ID: **LCS MS07W0802M** Units : **µg/L** Run ID: **MSD_07_100802B** Prep Date: **08/02/2010 09:18**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	8.25	1	10		83	70	130			
Chloromethane	6.6	2	10		66	70(70)	130			L50
Vinyl chloride	8.44	1	10		84	70	130			
Chloroethane	8.17	1	10		82	70	130			
Bromomethane	5.87	2	10		59	70(70)	130			L50
Trichlorofluoromethane	8.84	1	10		88	70	130			
1,1-Dichloroethene	9.42	1	10		94	70	130			
Dichloromethane	11.4	2	10		114	70	130			
trans-1,2-Dichloroethene	9.79	1	10		98	70	130			
Methyl tert-butyl ether (MTBE)	12.1	0.5	10		121	70	130			
1,1-Dichloroethane	9.22	1	10		92	70	130			
cis-1,2-Dichloroethene	9.76	1	10		98	70	130			
Bromochloromethane	10.2	1	10		102	70	130			
Chloroform	9.24	1	10		92	70	130			
2,2-Dichloropropane	11.7	1	10		117	70	130			
1,2-Dichloroethane	10.4	1	10		104	70	130			
1,1,1-Trichloroethane	10.3	1	10		103	70	130			
1,1-Dichloropropene	10.1	1	10		101	70	130			
Carbon tetrachloride	10.1	1	10		101	70	130			
Benzene	9.78	0.5	10		98	70	130			
Dibromomethane	10.2	1	10		102	70	130			
1,2-Dichloropropane	10.2	1	10		102	70	130			
Trichloroethene	9.59	1	10		96	70	130			
Bromodichloromethane	10.1	1	10		101	70	130			
cis-1,3-Dichloropropene	8.98	1	10		90	70	130			
trans-1,3-Dichloropropene	11.1	1	10		111	70	130			
1,1,2-Trichloroethane	10.2	1	10		102	70	130			
Toluene	9.54	0.5	10		95	70	130			
1,3-Dichloropropane	9.84	1	10		98	70	130			
Dibromochloromethane	10.6	1	10		106	70	130			
1,2-Dibromoethane (EDB)	20.8	2	20		104	70	130			
Tetrachloroethene	9.94	1	10		99	70	130			
1,1,1,2-Tetrachloroethane	10.6	1	10		106	70	130			
Chlorobenzene	9.75	1	10		98	70	130			
Ethylbenzene	9.93	0.5	10		99	70	130			
m,p-Xylene	10.1	0.5	10		101	70	130			
Bromoform	11.5	1	10		115	70	130			
Styrene	9.08	1	10		91	70	130			
o-Xylene	10.1	0.5	10		101	70	130			
1,1,2,2-Tetrachloroethane	10.4	1	10		104	70	130			
1,2,3-Trichloropropane	22	2	20		110	70	130			
Isopropylbenzene	9.61	1	10		96	70	130			
Bromobenzene	9.91	1	10		99	70	130			
n-Propylbenzene	9.44	1	10		94	70	130			
4-Chlorotoluene	9.79	1	10		98	70	130			
2-Chlorotoluene	9.69	1	10		97	70	130			
1,3,5-Trimethylbenzene	9.89	1	10		99	70	130			
tert-Butylbenzene	9.65	1	10		97	70	130			
1,2,4-Trimethylbenzene	9.93	1	10		99	70	130			
sec-Butylbenzene	9.78	1	10		98	70	130			
1,3-Dichlorobenzene	9.85	1	10		99	70	130			
1,4-Dichlorobenzene	9.87	1	10		99	70	130			
4-Isopropyltoluene	9.75	1	10		98	70	130			
1,2-Dichlorobenzene	9.52	1	10		95	70	130			
n-Butylbenzene	9.11	1	10		91	70	130			
1,2-Dibromo-3-chloropropane (DBCP)	50.5	3	50		101	70	130			
1,2,4-Trichlorobenzene	8.51	2	10		85	70	130			
Naphthalene	8.89	2	10		89	70	130			
Hexachlorobutadiene	18.8	2	20		94	70	130			
1,2,3-Trichlorobenzene	8.69	2	10		87	70	130			
Surr: 1,2-Dichloroethane-d4	11.1		10		111	70	130			
Surr: Toluene-d8	10		10		100	70	130			
Surr: 4-Bromofluorobenzene	9.19		10		92	70	130			

Alpha Analytical, Inc.

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Date: 05-Aug-10

QC Summary Report

Work Order: 10072901

Sample Matrix Spike Type **MS** Test Code: **EPA Method SW8260B**

File ID: **C:\HPCHEM\MS07\DATA\100802\10080208.D** Batch ID: **MS07W0802M** Analysis Date: **08/02/2010 11:17**

Sample ID: **10072901-04AMS** Units : **µg/L** Run ID: **MSD_07_100802B** Prep Date: **08/02/2010 11:17**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	33.8	2.5	50	0	68	13	167			
Chloromethane	31.9	10	50	0	64	28	145			
Vinyl chloride	42.9	2.5	50	0	86	43	134			
Chloroethane	43.3	2.5	50	0	87	39	154			
Bromomethane	48.7	10	50	0	97	19	176			
Trichlorofluoromethane	44.1	2.5	50	0	88	34	160			
1,1-Dichloroethene	44.4	2.5	50	0	89	60	130			
Dichloromethane	46.3	10	50	0	93	68	130			
trans-1,2-Dichloroethene	39.7	2.5	50	0	79	63	130			
Methyl tert-butyl ether (MTBE)	54.5	1.3	50	0	109	56	141			
1,1-Dichloroethane	48.1	2.5	50	0	96	61	130			
cis-1,2-Dichloroethene	50.6	2.5	50	0	101	70	130			
Bromochloromethane	52.9	2.5	50	0	106	70	130			
Chloroform	47.5	2.5	50	0	95	67	130			
2,2-Dichloropropane	60.7	2.5	50	0	121	30	152			
1,2-Dichloroethane	51.3	2.5	50	0	103	60	135			
1,1,1-Trichloroethane	54.1	2.5	50	0	108	59	137			
1,1-Dichloropropene	52.4	2.5	50	0	105	63	130			
Carbon tetrachloride	53	2.5	50	0	106	50	147			
Benzene	51.3	1.3	50	0	103	67	130			
Dibromomethane	49.9	2.5	50	0	99.8	69	133			
1,2-Dichloropropane	51.3	2.5	50	0	103	69	130			
Trichloroethene	50.9	2.5	50	0	102	69	130			
Bromodichloromethane	51.9	2.5	50	0	104	66	134			
cis-1,3-Dichloropropene	44.3	2.5	50	0	89	63	130			
trans-1,3-Dichloropropene	55.5	2.5	50	0	111	66	131			
1,1,2-Trichloroethane	49.7	2.5	50	0	99	68	130			
Toluene	49.9	1.3	50	0	99.9	66	130			
1,3-Dichloropropane	48.1	2.5	50	0	96	70	130			
Dibromochloromethane	52.3	2.5	50	0	105	70	130			
1,2-Dibromoethane (EDB)	102	5	100	0	102	70	130			
Tetrachloroethene	53.1	2.5	50	0.52	105	61	134			
1,1,1,2-Tetrachloroethane	54.8	2.5	50	0	110	70	130			
Chlorobenzene	50.4	2.5	50	0	101	70	130			
Ethylbenzene	51.7	1.3	50	0	103	68	130			
m,p-Xylene	53.3	1.3	50	0	107	64	130			
Bromoform	56.9	2.5	50	0	114	64	138			
Styrene	46.8	2.5	50	0	94	69	130			
o-Xylene	52.9	1.3	50	0	106	70	130			
1,1,2,2-Tetrachloroethane	51.2	2.5	50	0	102	65	131			
1,2,3-Trichloropropane	107	10	100	0	107	70	130			
Isopropylbenzene	48.5	2.5	50	0	97	64	138			
Bromobenzene	49.4	2.5	50	0	99	70	130			
n-Propylbenzene	48	2.5	50	0	96	66	132			
4-Chlorotoluene	49.4	2.5	50	0	99	70	130			
2-Chlorotoluene	49	2.5	50	0	98	70	130			
1,3,5-Trimethylbenzene	50.9	2.5	50	0	102	66	136			
tert-Butylbenzene	49.6	2.5	50	0	99	65	137			
1,2,4-Trimethylbenzene	52	2.5	50	0	104	65	137			
sec-Butylbenzene	50.3	2.5	50	0	101	66	134			
1,3-Dichlorobenzene	49.6	2.5	50	0	99	70	130			
1,4-Dichlorobenzene	50.2	2.5	50	0	100	70	130			
4-Isopropyltoluene	50.9	2.5	50	0	102	66	137			
1,2-Dichlorobenzene	48	2.5	50	0	96	70	130			
n-Butylbenzene	50.7	2.5	50	0	101	60	142			
1,2-Dibromo-3-chloropropane (DBCP)	240	15	250	0	96	67	130			
1,2,4-Trichlorobenzene	46.5	10	50	0	93	61	137			
Naphthalene	46.5	10	50	0	93	40	167			
Hexachlorobutadiene	98.6	10	100	0	99	61	130			
1,2,3-Trichlorobenzene	47.3	10	50	0	95	51	144			
Surr: 1,2-Dichloroethane-d4	53.8		50		108	70	130			
Surr: Toluene-d8	49.6		50		99	70	130			
Surr: 4-Bromofluorobenzene	45.4		50		91	70	130			

Alpha Analytical, Inc.

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Date: 05-Aug-10

QC Summary Report

Work Order: 10072901

Sample Matrix Spike Duplicate Type **MSD** Test Code: **EPA Method SW8260B**

File ID: **C:\HPCHEM\MS07\DATA\100802\10080209.D** Batch ID: **MS07W0802M** Analysis Date: **08/02/2010 11:41**

Sample ID: **10072901-04AMSD** Units : **µg/L** Run ID: **MSD_07_100802B** Prep Date: **08/02/2010 11:41**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	35.8	2.5	50	0	72	13	167	33.84	5.6(20)	
Chloromethane	33.1	10	50	0	66	28	145	31.89	3.7(20)	
Vinyl chloride	44.1	2.5	50	0	88	43	134	42.87	2.8(20)	
Chloroethane	43.7	2.5	50	0	87	39	154	43.33	0.9(20)	
Bromomethane	49.7	10	50	0	99	19	176	48.66	2.1(20)	
Trichlorofluoromethane	44.6	2.5	50	0	89	34	160	44.14	1.1(20)	
1,1-Dichloroethene	45.4	2.5	50	0	91	60	130	44.39	2.3(20)	
Dichloromethane	48.2	10	50	0	96	68	130	46.28	4.1(20)	
trans-1,2-Dichloroethene	44.3	2.5	50	0	89	63	130	39.65	11.1(20)	
Methyl tert-butyl ether (MTBE)	61.8	1.3	50	0	124	56	141	54.48	12.5(20)	
1,1-Dichloroethane	48.7	2.5	50	0	97	61	130	48.05	1.2(20)	
cis-1,2-Dichloroethene	51.5	2.5	50	0	103	70	130	50.58	1.8(20)	
Bromochloromethane	54.1	2.5	50	0	108	70	130	52.85	2.3(20)	
Chloroform	48.5	2.5	50	0	97	67	130	47.51	2.0(20)	
2,2-Dichloropropane	62.6	2.5	50	0	125	30	152	60.68	3.1(20)	
1,2-Dichloroethane	52.9	2.5	50	0	106	60	135	51.26	3.2(20)	
1,1,1-Trichloroethane	56.4	2.5	50	0	113	59	137	54.05	4.2(20)	
1,1-Dichloropropene	55.6	2.5	50	0	111	63	130	52.39	5.9(20)	
Carbon tetrachloride	55.6	2.5	50	0	111	50	147	52.98	4.8(20)	
Benzene	53.6	1.3	50	0	107	67	130	51.25	4.5(20)	
Dibromomethane	52.7	2.5	50	0	105	69	133	49.91	5.4(20)	
1,2-Dichloropropane	54.2	2.5	50	0	108	69	130	51.25	5.6(20)	
Trichloroethene	53.6	2.5	50	0	107	69	130	50.91	5.2(20)	
Bromodichloromethane	54.2	2.5	50	0	108	66	134	51.91	4.3(20)	
cis-1,3-Dichloropropene	45.7	2.5	50	0	91	63	130	44.25	3.3(20)	
trans-1,3-Dichloropropene	58.1	2.5	50	0	116	66	131	55.52	4.5(20)	
1,1,2-Trichloroethane	53	2.5	50	0	106	68	130	49.67	6.5(20)	
Toluene	52.2	1.3	50	0	104	66	130	49.94	4.5(20)	
1,3-Dichloropropane	50.7	2.5	50	0	101	70	130	48.12	5.2(20)	
Dibromochloromethane	55	2.5	50	0	110	70	130	52.34	4.9(20)	
1,2-Dibromoethane (EDB)	107	5	100	0	107	70	130	102.4	4.7(20)	
Tetrachloroethene	55.7	2.5	50	0.52	110	61	134	53.08	4.8(20)	
1,1,1,2-Tetrachloroethane	57.9	2.5	50	0	116	70	130	54.81	5.5(20)	
Chlorobenzene	53.5	2.5	50	0	107	70	130	50.36	6.0(20)	
Ethylbenzene	55.2	1.3	50	0	110	68	130	51.73	6.4(20)	
m,p-Xylene	55.6	1.3	50	0	111	64	130	53.28	4.3(20)	
Bromoform	60.4	2.5	50	0	121	64	138	56.85	6.1(20)	
Styrene	49.5	2.5	50	0	99	69	130	46.79	5.6(20)	
o-Xylene	56	1.3	50	0	112	70	130	52.88	5.8(20)	
1,1,2,2-Tetrachloroethane	54.5	2.5	50	0	109	65	131	51.17	6.3(20)	
1,2,3-Trichloropropane	115	10	100	0	115	70	130	107.2	7.3(20)	
Isopropylbenzene	52.1	2.5	50	0	104	64	138	48.5	7.2(20)	
Bromobenzene	52	2.5	50	0	104	70	130	49.4	5.2(20)	
n-Propylbenzene	51.3	2.5	50	0	103	66	132	47.99	6.7(20)	
4-Chlorotoluene	52.7	2.5	50	0	105	70	130	49.35	6.5(20)	
2-Chlorotoluene	52.6	2.5	50	0	105	70	130	49.04	7.0(20)	
1,3,5-Trimethylbenzene	54.3	2.5	50	0	109	66	136	50.89	6.5(20)	
tert-Butylbenzene	52.7	2.5	50	0	105	65	137	49.56	6.1(20)	
1,2,4-Trimethylbenzene	55.6	2.5	50	0	111	65	137	52.02	6.7(20)	
sec-Butylbenzene	54	2.5	50	0	108	66	134	50.25	7.1(20)	
1,3-Dichlorobenzene	53.4	2.5	50	0	107	70	130	49.64	7.3(20)	
1,4-Dichlorobenzene	53.4	2.5	50	0	107	70	130	50.15	6.2(20)	
4-Isopropyltoluene	55	2.5	50	0	110	66	137	50.89	7.8(20)	
1,2-Dichlorobenzene	50.7	2.5	50	0	101	70	130	47.98	5.5(20)	
n-Butylbenzene	55.1	2.5	50	0	110	60	142	50.66	8.4(20)	
1,2-Dibromo-3-chloropropane (DBCP)	258	15	250	0	103	67	130	239.9	7.2(20)	
1,2,4-Trichlorobenzene	50.5	10	50	0	101	61	137	46.52	8.2(20)	
Naphthalene	50.1	10	50	0	100	40	167	46.53	7.3(20)	
Hexachlorobutadiene	108	10	100	0	108	61	130	98.57	9.1(20)	
1,2,3-Trichlorobenzene	50.9	10	50	0	102	51	144	47.34	7.3(20)	
Surr: 1,2-Dichloroethane-d4	52.1		50		104	70	130			
Surr: Toluene-d8	49.3		50		99	70	130			
Surr: 4-Bromofluorobenzene	45.2		50		90	70	130			

Alpha Analytical, Inc.

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Date: *05-Aug-10*

QC Summary Report

Work Order: 10072901

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 :

CHAIN-OF-CUSTODY RECORD

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

CA

WorkOrder : BMIS10072901

Report Due By : 5:00 PM On : 12-Aug-2010

Client:
Battelle Memorial Institute
655 West Broadway
Suite 1420
San Diego, CA 92101

Report Attention	Phone Number	EMail Address
David Conner	(818) 393-2808 x	connerd@battelle.org
Shane Walton	(614) 424-4117 x	waltons@battelle.org
Betsy Cutie	(614) 424-4899 x	cutiee@batelle.org

EDD Required : **Yes**

Sampled by : Chase Brogdon

PO : 218013

Client's COC # : 25762 Job : G005862 / JPL Groundwater Monitoring

Cooler Temp	Samples Received	Date Printed
4 °C	29-Jul-2010	**29-Jul-2010**

QC Level : DS4 = DOD QC Required : Final Rpt, MBLK, InitCal/ConCal data, LCS, MS/MSD With Surrogates

Alpha Sample ID	Client Sample ID	Matrix	Collection Date	No. of Bottles Alpha	Sub	TAT	Requested Tests 314_W	METALS_DW	VOC_TIC_W	VOC_W					Sample Remarks
BMI10072901-01A	MW-23-4	AQ	07/28/10 08:22	1	0	10		Cr							
BMI10072901-02A	MW-23-3	AQ	07/28/10 08:42	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI10072901-03A	MW-23-2	AQ	07/28/10 09:09	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI10072901-04A	MW-23-1	AQ	07/28/10 09:49	10	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					MS/MSD
BMI10072901-05A	EB-03-07/28/10	AQ	07/28/10 09:26	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI10072901-06A	TB-03-07/28/10	AQ	07/28/10 07:00	1	0	10			VOC by 524 Criteria	VOC by 524 Criteria					Reno Trip Blank 6/29/10

Comments: Security seals intact. Frozen ice. Temp Blank #8743 received @ 4°C. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). :

	Signature	Print Name	Company	Date/Time
Logged in by:	Elizabeth Adcox	Elizabeth Adcox	**Alpha Analytical, Inc.**	7-29-10 1136

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 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.
Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

Billing Information:
Name GERALD TOMPKINS / BATTELLE
Address 505 KING AVE, C-205
City, State, Zip COLUMBUS, OH, 43201
Phone Number _____ Fax _____

Alpha Analytical, Inc.
255 Glendale Avenue, Suite 21
Sparks, Nevada 89431-5778
Phone (775) 355-1044
Fax (775) 355-0406

Samples Collected From Which State? AZ ___ CA ✓ NV ___ WA ___ ID ___ OR ___ OTHER ___

25762

Page # 1 of 1

Client Name: BATTELLE / DAVID CONNER
Address: 3990 OLD TOWN AVE, C-205
City, State, Zip: SAN DIEGO, CA 92110
P.O. #: 218013
Job #: G005862
EMail Address:
Phone #: (619) 726-7311
Fax #:

Required QC Level? I II III IV

EDD / EDF? YES ___ NO ___

Global ID # ___

Time Sampled	Date Sampled	Matrix* See Key Below	Sampled by: CHASE BRADDON / Lab ID Number (Office Use Only)	Report Attention / Sample Description	TAT	Field Filtered	Total and type of containers ** See below	VOC (524.2)	Total Cr (200.8)	Cl04 - (314.0)	REMARKS
0822	7/28/10	AQ	BMI10072901-01	MW-23-4	NORM		1 P		X		
0842			-02	MW-23-3			3V, 2P	X	X	X	
0909			-03	MW-23-2			3V, 2P	X	X	X	
0949			-04	MW-23-1			6V, 4P	X	X	X	MS/MSD
0926			-05	EB-03-07/28/10			3V, 2P	X	X	X	EQUIPMENT BLANK
0700			-06	TB-03-07/28/10			1V	X			TRIP BLANK

ADDITIONAL INSTRUCTIONS:

	Signature	Print Name	Company	Date	Time
Relinquished by		CHASE BRADDON	INSIGHT	07/28/10	1200
Received by		Anthony Stark	Alpha Analytical	7/28/10	1230
Relinquished by		" "	" "	7/28/10	1230
Received by	Elizabeth Adcox	Elizabeth Adcox	Alpha	7-29-10	1136
Relinquished by					
Received by					

*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

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 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.

Alpha Analytical, Inc.

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

Date: *10-Aug-10*

David Conner
Battelle Memorial Institute
655 West Broadway Suite 1420
San Diego, CA 92101
(619) 726-7311

CASE NARRATIVE

Job: G005862 / JPL Groundwater Monitoring

Work Order: BMI10072804 **Cooler Temp:** 4 °C

Alpha's Sample ID	Client's Sample ID	Matrix
10072804-01A	MW-3-4	Aqueous
10072804-02A	MW-3-3	Aqueous
10072804-03A	MW-3-2	Aqueous
10072804-04A	MW-4-3	Aqueous
10072804-05A	MW-4-2	Aqueous
10072804-06A	MW-4-1	Aqueous
10072804-07A	DUPE-03-3Q10	Aqueous
10072804-08A	EB-02-7/27/10	Aqueous
10072804-09A	TB-02-7/27/10	Aqueous
10072804-10A	MW-6	Aqueous
10072804-11A	MW-5	Aqueous

Manually Integrated Analytes

Alpha's Sample ID	Test Reference	Analyte
10072804-03A	EPA Method 314.0	Perchlorate

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

Alpha Analytical, Inc.

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(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

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 : 07/28/10

Job: G005862 / JPL Groundwater Monitoring

Perchlorate by Ion Chromatography
EPA Method 314.0

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-3-4**				
Lab ID : BMI10072804-01A Perchlorate	ND	1.00 µg/L	08/02/10 12:13	08/02/10 16:51
Date Sampled 07/26/10 11:35				
Client ID: **MW-3-3**				
Lab ID : BMI10072804-02A Perchlorate	ND	1.00 µg/L	08/02/10 12:13	08/02/10 17:09
Date Sampled 07/26/10 11:59				
Client ID: **MW-3-2**				
Lab ID : BMI10072804-03A Perchlorate	164	10.0 µg/L	08/02/10 12:13	08/03/10 13:59
Date Sampled 07/26/10 12:18				
Client ID: **MW-4-3**				
Lab ID : BMI10072804-04A Perchlorate	ND	1.00 µg/L	08/02/10 12:13	08/02/10 17:46
Date Sampled 07/27/10 08:11				
Client ID: **MW-4-2**				
Lab ID : BMI10072804-05A Perchlorate	3.79	1.00 µg/L	08/02/10 12:13	08/03/10 14:17
Date Sampled 07/27/10 08:32				
Client ID: **MW-4-1**				
Lab ID : BMI10072804-06A Perchlorate	ND	1.00 µg/L	08/02/10 12:13	08/03/10 14:36
Date Sampled 07/27/10 09:10				
Client ID: **DUPE-03-3Q10**				
Lab ID : BMI10072804-07A Perchlorate	ND	1.00 µg/L	08/02/10 12:13	08/03/10 14:54
Date Sampled 07/27/10 00:00				
Client ID: **EB-02-7/27/10**				
Lab ID : BMI10072804-08A Perchlorate	ND	1.00 µg/L	08/02/10 12:13	08/03/10 15:12
Date Sampled 07/27/10 08:52				
Client ID: **MW-6**				
Lab ID : BMI10072804-10A Perchlorate	3.00	1.00 µg/L	08/02/10 12:13	08/03/10 15:31
Date Sampled 07/27/10 11:21				
Client ID: **MW-5**				
Lab ID : BMI10072804-11A Perchlorate	ND	1.00 µg/L	08/02/10 12:13	08/03/10 15:49
Date Sampled 07/27/10 13:43				

Alpha Analytical, Inc.

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ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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.

8/10/10

Report Date

Alpha Analytical, Inc.

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

Attn: David Conner
Phone: (619) 726-7311
Fax: (614) 458-6641
Date Received : 07/28/10

Job: G005862 / JPL Groundwater Monitoring

Metals by ICPMS
EPA Method 200.8

Parameter		Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-3-4**					
Lab ID : BMI10072804-01A	Chromium (Cr)	ND	0.0050 mg/L	07/30/10 09:26	08/02/10 00:52
Date Sampled 07/26/10 11:35					
Client ID: **MW-3-3**					
Lab ID : BMI10072804-02A	Chromium (Cr)	ND	0.0050 mg/L	07/30/10 09:26	08/01/10 23:00
Date Sampled 07/26/10 11:59					
Client ID: **MW-3-2**					
Lab ID : BMI10072804-03A	Chromium (Cr)	ND	0.0050 mg/L	07/30/10 09:26	08/01/10 23:06
Date Sampled 07/26/10 12:18					
Client ID: **MW-4-3**					
Lab ID : BMI10072804-04A	Chromium (Cr)	ND	0.0050 mg/L	07/30/10 09:26	08/02/10 00:58
Date Sampled 07/27/10 08:11					
Client ID: **MW-4-2**					
Lab ID : BMI10072804-05A	Chromium (Cr)	ND	0.0050 mg/L	07/30/10 09:26	08/01/10 23:11
Date Sampled 07/27/10 08:32					
Client ID: **MW-4-1**					
Lab ID : BMI10072804-06A	Chromium (Cr)	ND	0.0050 mg/L	07/30/10 09:26	08/01/10 23:17
Date Sampled 07/27/10 09:10					
Client ID: **DUPE-03-3Q10**					
Lab ID : BMI10072804-07A	Chromium (Cr)	ND	0.0050 mg/L	07/30/10 09:26	08/01/10 23:22
Date Sampled 07/27/10 00:00					
Client ID: **EB-02-7/27/10**					
Lab ID : BMI10072804-08A	Chromium (Cr)	ND	0.0050 mg/L	07/30/10 09:26	08/01/10 23:28
Date Sampled 07/27/10 08:52					
Client ID: **MW-6**					
Lab ID : BMI10072804-10A	Chromium (Cr)	ND	0.0050 mg/L	07/30/10 09:26	08/01/10 22:32
Date Sampled 07/27/10 11:21					
Client ID: **MW-5**					
Lab ID : BMI10072804-11A	Chromium (Cr)	ND	0.0050 mg/L	07/30/10 09:26	08/01/10 23:34
Date Sampled 07/27/10 13:43					

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ND = Not Detected

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8/10/10

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 Concentration	Estimated Reporting Limit	Date Extracted	Date Analyzed
Client ID : **MW-3-4** Lab ID : BMI10072804-01A Date Received : 07/28/10 Date Sampled : 07/26/10 11:35	* * * None Found * * *	ND	2.0 µg/L	08/04/10 19:13	08/04/10 19:13
Client ID : **MW-3-3** Lab ID : BMI10072804-02A Date Received : 07/28/10 Date Sampled : 07/26/10 11:59	* * * None Found * * *	ND	2.0 µg/L	08/04/10 19:36	08/04/10 19:36
Client ID : **MW-3-2** Lab ID : BMI10072804-03A Date Received : 07/28/10 Date Sampled : 07/26/10 12:18	* * * None Found * * *	ND	2.0 µg/L	08/04/10 20:00	08/04/10 20:00
Client ID : **MW-4-3** Lab ID : BMI10072804-04A Date Received : 07/28/10 Date Sampled : 07/27/10 08:11	* * * None Found * * *	ND	2.0 µg/L	08/04/10 20:23	08/04/10 20:23
Client ID : **MW-4-2** Lab ID : BMI10072804-05A Date Received : 07/28/10 Date Sampled : 07/27/10 08:32	* * * None Found * * *	ND	2.0 µg/L	08/04/10 20:47	08/04/10 20:47
Client ID : **MW-4-1** Lab ID : BMI10072804-06A Date Received : 07/28/10 Date Sampled : 07/27/10 09:10	* * * None Found * * *	ND	2.0 µg/L	08/04/10 21:11	08/04/10 21:11
Client ID : **DUPE-03-3Q10** Lab ID : BMI10072804-07A Date Received : 07/28/10 Date Sampled : 07/27/10 00:00	* * * None Found * * *	ND	2.0 µg/L	08/04/10 21:34	08/04/10 21:34
Client ID : **EB-02-7/27/10** Lab ID : BMI10072804-08A Date Received : 07/28/10 Date Sampled : 07/27/10 08:52	* * * None Found * * *	ND	2.0 µg/L	08/04/10 21:58	08/04/10 21:58
Client ID : **TB-02-7/27/10** Lab ID : BMI10072804-09A Date Received : 07/28/10 Date Sampled : 07/27/10 07:00	* * * None Found * * *	ND	2.0 µg/L	08/04/10 17:38	08/04/10 17:38

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Client ID : **MW-6**						
Lab ID :	BMI10072804-10A	* * * None Found * * *	ND	2.0 µg/L	08/04/10 22:21	08/04/10 22:21
Date Received :	07/28/10					
Date Sampled :	07/27/10 11:21					
Client ID : **MW-5**						
Lab ID :	BMI10072804-11A	* * * None Found * * *	ND	2.0 µg/L	08/04/10 22:45	08/04/10 22:45
Date Received :	07/28/10					
Date Sampled :	07/27/10 13:43					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer

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8/10/10

Report Date

Alpha Analytical, Inc.

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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

Alpha Analytical Number: BMI10072804-01A
Client I.D. Number: MW-3-4

Sampled: 07/26/10 11:35
Received: 07/28/10
Extracted: 08/04/10 19:13
Analyzed: 08/04/10 19:13

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	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 (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	107	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	100	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	89	(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 Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer

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8/10/10
Report Date

Alpha Analytical, Inc.

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(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

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

Alpha Analytical Number: BMI10072804-02A
Client I.D. Number: MW-3-3

Sampled: 07/26/10 11:59
Received: 07/28/10
Extracted: 08/04/10 19:36
Analyzed: 08/04/10 19:36

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit		Compound	Concentration	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 (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	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	92	(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 Randy Gardner Walter Hinchman

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.

8/10/10
Report Date

Alpha Analytical, Inc.

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

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

Alpha Analytical Number: BMI10072804-03A
Client I.D. Number: MW-3-2

Sampled: 07/26/10 12:18
Received: 07/28/10
Extracted: 08/04/10 20:00
Analyzed: 08/04/10 20:00

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	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	2.3	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 (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	0.99	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	102	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	93	(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 Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer

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8/10/10
Report Date

Alpha Analytical, Inc.

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

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

Alpha Analytical Number: BMI10072804-04A
Client I.D. Number: MW-4-3

Sampled: 07/27/10 08:11
Received: 07/28/10
Extracted: 08/04/10 20:23
Analyzed: 08/04/10 20:23

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	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	1.7	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	0.66	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	104	(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	91	(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 Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer
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8/10/10
Report Date

Alpha Analytical, Inc.

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

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

Alpha Analytical Number: BMI10072804-05A
Client I.D. Number: MW-4-2

Sampled: 07/27/10 08:32
Received: 07/28/10
Extracted: 08/04/10 20:47
Analyzed: 08/04/10 20:47

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	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 (DBCP)	ND	2.5	µg/L
25	Trichloroethene	0.74	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	101	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	92	(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	0.75	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer
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8/10/10
Report Date

Alpha Analytical, Inc.

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

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

Alpha Analytical Number: BMI10072804-06A
Client I.D. Number: MW-4-1

Sampled: 07/27/10 09:10
Received: 07/28/10
Extracted: 08/04/10 21:11
Analyzed: 08/04/10 21:11

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	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 (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	106	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	100	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	92	(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 Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer
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8/10/10
Report Date

Alpha Analytical, Inc.

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(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

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

Alpha Analytical Number: BMI10072804-07A
Client I.D. Number: DUPE-03-3Q10

Sampled: 07/27/10 00:00
Received: 07/28/10
Extracted: 08/04/10 21:34
Analyzed: 08/04/10 21:34

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	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 (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	106	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	102	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	92	(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 Randy Gardner Walter Hinchman

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.

8/10/10
Report Date

Alpha Analytical, Inc.

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

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

Alpha Analytical Number: BMI10072804-08A
Client I.D. Number: EB-02-7/27/10

Sampled: 07/27/10 08:52
Received: 07/28/10
Extracted: 08/04/10 21:58
Analyzed: 08/04/10 21:58

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	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 (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	105	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	102	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	93	(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 Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer
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8/10/10
Report Date

Alpha Analytical, Inc.

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

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

Alpha Analytical Number: BMI10072804-09A
Client I.D. Number: TB-02-7/27/10

Sampled: 07/27/10 07:00
Received: 07/28/10
Extracted: 08/04/10 17:38
Analyzed: 08/04/10 17:38

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	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 (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	105	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	100	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	92	(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 Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer
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8/10/10
Report Date

Alpha Analytical, Inc.

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

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

Alpha Analytical Number: BMI10072804-10A
Client I.D. Number: MW-6

Sampled: 07/27/10 11:21
Received: 07/28/10
Extracted: 08/04/10 22:21
Analyzed: 08/04/10 22:21

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	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	0.58	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	3.7	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	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	103	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	92	(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	0.99	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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8/10/10
Report Date

Alpha Analytical, Inc.

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

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

Alpha Analytical Number: BMI10072804-11A
Client I.D. Number: MW-5

Sampled: 07/27/10 13:43
Received: 07/28/10
Extracted: 08/04/10 22:45
Analyzed: 08/04/10 22:45

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	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 (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	109	(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	91	(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 Randy Gardner Walter Hinchman

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.

8/10/10
Report Date

Alpha Analytical, Inc.

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: BMI10072804 **Job:** G005862 / JPL Groundwater Monitoring

Alpha's Sample ID	Client's Sample ID	Matrix	pH
10072804-01A	MW-3-4	Aqueous	2
10072804-02A	MW-3-3	Aqueous	2
10072804-03A	MW-3-2	Aqueous	2
10072804-04A	MW-4-3	Aqueous	2
10072804-05A	MW-4-2	Aqueous	2
10072804-06A	MW-4-1	Aqueous	2
10072804-07A	DUPE-03-3Q10	Aqueous	2
10072804-08A	EB-02-7/27/10	Aqueous	2
10072804-09A	TB-02-7/27/10	Aqueous	2
10072804-10A	MW-6	Aqueous	2
10072804-11A	MW-5	Aqueous	2

8/10/10

Report Date

Alpha Analytical, Inc.

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Date: *10-Aug-10*

QC Summary Report

Work Order: 10072804

Method Blank

Type **MBLK** Test Code: **EPA Method 314.0**

File ID: **14** Batch ID: **24753** Analysis Date: **08/02/2010 13:10**

Sample ID: **MB-24753** Units : **µg/L** Run ID: **IC_3_100802A** Prep Date: **08/02/2010 12:13**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	ND	1								

Laboratory Fortified Blank

Type **LFB** Test Code: **EPA Method 314.0**

File ID: **15** Batch ID: **24753** Analysis Date: **08/02/2010 13:28**

Sample ID: **LFB-24753** Units : **µg/L** Run ID: **IC_3_100802A** Prep Date: **08/02/2010 12:13**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	24.7	2	25		99	85	115			

Sample Matrix Spike

Type **LFM** Test Code: **EPA Method 314.0**

File ID: **19** Batch ID: **24753** Analysis Date: **08/03/2010 13:22**

Sample ID: **10072901-04ALFM** Units : **µg/L** Run ID: **IC_3_100802A** Prep Date: **08/02/2010 12:13**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	57.2	2	25	28.27	116	80	120			

Sample Matrix Spike Duplicate

Type **LFMD** Test Code: **EPA Method 314.0**

File ID: **20** Batch ID: **24753** Analysis Date: **08/03/2010 13:40**

Sample ID: **10072901-04ALFMD** Units : **µg/L** Run ID: **IC_3_100802A** Prep Date: **08/02/2010 12:13**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	58.1	2	25	28.27	119	80	120	57.23	1.6(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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Date: *10-Aug-10*

QC Summary Report

Work Order: 10072804

Method Blank

Type **MBLK** Test Code: **EPA Method 200.8**

File ID: **073110.B\R173MB.D** Batch ID: **24732K** Analysis Date: **08/01/2010 22:09**

Sample ID: **MB-24732** Units : **mg/L** Run ID: **ICP/MS_100801F** Prep Date: **07/30/2010 09:26**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	ND	0.005								

Laboratory Control Spike

Type **LCS** Test Code: **EPA Method 200.8**

File ID: **073110.B\R174LC.D** Batch ID: **24732K** Analysis Date: **08/01/2010 22:15**

Sample ID: **LCS-24732** Units : **mg/L** Run ID: **ICP/MS_100801F** Prep Date: **07/30/2010 09:26**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0461	0.005	0.05		92	80	120			

Sample Matrix Spike

Type **MS** Test Code: **EPA Method 200.8**

File ID: **073110.B\R178MS.D** Batch ID: **24732K** Analysis Date: **08/01/2010 22:37**

Sample ID: **10072804-10AMS** Units : **mg/L** Run ID: **ICP/MS_100801F** Prep Date: **07/30/2010 09:26**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0465	0.005	0.05	0	93	80	120			

Sample Matrix Spike Duplicate

Type **MSD** Test Code: **EPA Method 200.8**

File ID: **073110.B\R179MD.D** Batch ID: **24732K** Analysis Date: **08/01/2010 22:43**

Sample ID: **10072804-10AMSD** Units : **mg/L** Run ID: **ICP/MS_100801F** Prep Date: **07/30/2010 09:26**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0458	0.005	0.05	0	92	80	120	0.04649	1.5(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.

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Date: *10-Aug-10*

QC Summary Report

Work Order: 10072804

Method Blank Type **MBLK** Test Code: **EPA Method SW8260B**

File ID: **C:\HPCHEM\MS07\DATA\100804\10080406.D** Batch ID: **MS07W0804M** Analysis Date: **08/04/2010 17:15**

Sample ID: **MBLK MS07W0804M** Units : **µg/L** Run ID: **MSD_07_100804B** Prep Date: **08/04/2010 17:15**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	ND	0.5								
Chloromethane	ND	1								
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	ND	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)	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	ND	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)	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	ND	0.5								
Dibromochloromethane	ND	0.5								
1,2-Dibromoethane (EDB)	ND	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	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								
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	ND	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	ND	1								
1,2,3-Trichlorobenzene	ND	1								
Surr: 1,2-Dichloroethane-d4	10.6		10		106	70	130			
Surr: Toluene-d8	10.2		10		102	70	130			

Alpha Analytical, Inc.

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Date: *10-Aug-10*

QC Summary Report

Work Order: 10072804

Surr: 4-Bromofluorobenzene	9.28			10		93	70	130		

Laboratory Control Spike Type **LCS** Test Code: **EPA Method SW8260B**

File ID: **C:\HPCHEM\MS07\DATA\100804\10080403.D** Batch ID: **MS07W0804M** Analysis Date: **08/04/2010 16:04**

Sample ID: **LCS MS07W0804M** Units : **µg/L** Run ID: **MSD_07_100804B** Prep Date: **08/04/2010 16:04**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	7.53	1	10		75	70	130			
Chloromethane	6.59	2	10		66	70(70)	130			L50
Vinyl chloride	9.08	1	10		91	70	130			
Chloroethane	9.13	1	10		91	70	130			
Bromomethane	7.85	2	10		79	70	130			
Trichlorofluoromethane	9.49	1	10		95	70	130			
1,1-Dichloroethene	10.8	1	10		108	70	130			
Dichloromethane	10.3	2	10		103	70	130			
trans-1,2-Dichloroethene	8.73	1	10		87	70	130			
Methyl tert-butyl ether (MTBE)	11.7	0.5	10		117	70	130			
1,1-Dichloroethane	10.2	1	10		102	70	130			
cis-1,2-Dichloroethene	10.9	1	10		109	70	130			
Bromochloromethane	11.4	1	10		114	70	130			
Chloroform	10.3	1	10		103	70	130			
2,2-Dichloropropane	12.9	1	10		129	70	130			
1,2-Dichloroethane	11.2	1	10		112	70	130			
1,1,1-Trichloroethane	11.6	1	10		116	70	130			
1,1-Dichloropropene	11.4	1	10		114	70	130			
Carbon tetrachloride	11.6	1	10		116	70	130			
Benzene	10.9	0.5	10		109	70	130			
Dibromomethane	10.8	1	10		108	70	130			
1,2-Dichloropropane	11.1	1	10		111	70	130			
Trichloroethene	10.9	1	10		109	70	130			
Bromodichloromethane	11.1	1	10		111	70	130			
cis-1,3-Dichloropropene	9.77	1	10		98	70	130			
trans-1,3-Dichloropropene	11.9	1	10		119	70	130			
1,1,2-Trichloroethane	10.9	1	10		109	70	130			
Toluene	10.9	0.5	10		109	70	130			
1,3-Dichloropropane	10.6	1	10		106	70	130			
Dibromochloromethane	11.7	1	10		117	70	130			
1,2-Dibromoethane (EDB)	22.4	2	20		112	70	130			
Tetrachloroethene	11.7	1	10		117	70	130			
1,1,1,2-Tetrachloroethane	12.2	1	10		122	70	130			
Chlorobenzene	11.2	1	10		112	70	130			
Ethylbenzene	11.5	0.5	10		115	70	130			
m,p-Xylene	11.6	0.5	10		116	70	130			
Bromoform	12.8	1	10		128	70	130			
Styrene	10.3	1	10		103	70	130			
o-Xylene	11.6	0.5	10		116	70	130			
1,1,2,2-Tetrachloroethane	11.2	1	10		112	70	130			
1,2,3-Trichloropropane	23.4	2	20		117	70	130			
Isopropylbenzene	10.7	1	10		107	70	130			
Bromobenzene	10.9	1	10		109	70	130			
n-Propylbenzene	10.5	1	10		105	70	130			
4-Chlorotoluene	10.9	1	10		109	70	130			
2-Chlorotoluene	10.9	1	10		109	70	130			
1,3,5-Trimethylbenzene	11.1	1	10		111	70	130			
tert-Butylbenzene	10.8	1	10		108	70	130			
1,2,4-Trimethylbenzene	11.4	1	10		114	70	130			
sec-Butylbenzene	11.1	1	10		111	70	130			
1,3-Dichlorobenzene	10.9	1	10		109	70	130			
1,4-Dichlorobenzene	11.1	1	10		111	70	130			
4-Isopropyltoluene	11.2	1	10		112	70	130			
1,2-Dichlorobenzene	10.5	1	10		105	70	130			
n-Butylbenzene	11.1	1	10		111	70	130			
1,2-Dibromo-3-chloropropane (DBCP)	51.4	3	50		103	70	130			
1,2,4-Trichlorobenzene	10.2	2	10		102	70	130			
Naphthalene	9.97	2	10		99.7	70	130			
Hexachlorobutadiene	21.3	2	20		107	70	130			
1,2,3-Trichlorobenzene	10.2	2	10		102	70	130			
Surr: 1,2-Dichloroethane-d4	11		10		110	70	130			
Surr: Toluene-d8	10.2		10		102	70	130			
Surr: 4-Bromofluorobenzene	8.93		10		89	70	130			

Alpha Analytical, Inc.

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Date: *10-Aug-10*

QC Summary Report

Work Order: 10072804

Sample Matrix Spike Type **MS** Test Code: **EPA Method SW8260B**

File ID: **C:\HPCHEM\MS07\DATA\100804\10080409.D** Batch ID: **MS07W0804M** Analysis Date: **08/04/2010 18:25**

Sample ID: **10072804-10AMS** Units : **µg/L** Run ID: **MSD_07_100804B** Prep Date: **08/04/2010 18:25**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	41	2.5	50	0	82	13	167			
Chloromethane	33.2	10	50	0	66	28	145			
Vinyl chloride	43.7	2.5	50	0	87	43	134			
Chloroethane	44.1	2.5	50	0	88	39	154			
Bromomethane	37.1	10	50	0	74	19	176			
Trichlorofluoromethane	49.7	2.5	50	0	99	34	160			
1,1-Dichloroethene	51.4	2.5	50	0	103	60	130			
Dichloromethane	48.6	10	50	0	97	68	130			
trans-1,2-Dichloroethene	52.7	2.5	50	0	105	63	130			
Methyl tert-butyl ether (MTBE)	55.6	1.3	50	0	111	56	141			
1,1-Dichloroethane	48.4	2.5	50	0	97	61	130			
cis-1,2-Dichloroethene	51.6	2.5	50	0	103	70	130			
Bromochloromethane	54.2	2.5	50	0	108	70	130			
Chloroform	49.4	2.5	50	0	98	67	130			
2,2-Dichloropropane	54	2.5	50	0	108	30	152			
1,2-Dichloroethane	53.1	2.5	50	0	106	60	135			
1,1,1-Trichloroethane	55.3	2.5	50	0	111	59	137			
1,1-Dichloropropene	53.6	2.5	50	0	107	63	130			
Carbon tetrachloride	55.2	2.5	50	0	110	50	147			
Benzene	52.1	1.3	50	0	104	67	130			
Dibromomethane	51.3	2.5	50	0	103	69	133			
1,2-Dichloropropane	53.9	2.5	50	0	108	69	130			
Trichloroethene	55.9	2.5	50	3.73	104	69	130			
Bromodichloromethane	53.3	2.5	50	0	107	66	134			
cis-1,3-Dichloropropene	40.9	2.5	50	0	82	63	130			
trans-1,3-Dichloropropene	54.3	2.5	50	0	109	66	131			
1,1,2-Trichloroethane	50.1	2.5	50	0	100	68	130			
Toluene	50.9	1.3	50	0	102	66	130			
1,3-Dichloropropane	48.6	2.5	50	0	97	70	130			
Dibromochloromethane	54	2.5	50	0	108	70	130			
1,2-Dibromoethane (EDB)	105	5	100	0	105	70	130			
Tetrachloroethene	55.3	2.5	50	0	109	61	134			
1,1,1,2-Tetrachloroethane	57.4	2.5	50	0	115	70	130			
Chlorobenzene	52.7	2.5	50	0	105	70	130			
Ethylbenzene	53.9	1.3	50	0	108	68	130			
m,p-Xylene	54	1.3	50	0	108	64	130			
Bromoform	60	2.5	50	0	120	64	138			
Styrene	48.2	2.5	50	0	96	69	130			
o-Xylene	54.7	1.3	50	0	109	70	130			
1,1,2,2-Tetrachloroethane	51.8	2.5	50	0	104	65	131			
1,2,3-Trichloropropane	110	10	100	0	110	70	130			
Isopropylbenzene	49.6	2.5	50	0	99	64	138			
Bromobenzene	50.6	2.5	50	0	101	70	130			
n-Propylbenzene	49.1	2.5	50	0	98	66	132			
4-Chlorotoluene	50.8	2.5	50	0	102	70	130			
2-Chlorotoluene	50.8	2.5	50	0	102	70	130			
1,3,5-Trimethylbenzene	51.4	2.5	50	0	103	66	136			
tert-Butylbenzene	50.4	2.5	50	0	101	65	137			
1,2,4-Trimethylbenzene	51.7	2.5	50	0	103	65	137			
sec-Butylbenzene	51	2.5	50	0	102	66	134			
1,3-Dichlorobenzene	51	2.5	50	0	102	70	130			
1,4-Dichlorobenzene	51.2	2.5	50	0	102	70	130			
4-Isopropyltoluene	51	2.5	50	0	102	66	137			
1,2-Dichlorobenzene	49.2	2.5	50	0	98	70	130			
n-Butylbenzene	48.2	2.5	50	0	96	60	142			
1,2-Dibromo-3-chloropropane (DBCP)	238	15	250	0	95	67	130			
1,2,4-Trichlorobenzene	44.2	10	50	0	88	61	137			
Naphthalene	41.1	10	50	0	82	40	167			
Hexachlorobutadiene	93.6	10	100	0	94	61	130			
1,2,3-Trichlorobenzene	44.7	10	50	0	89	51	144			
Surr: 1,2-Dichloroethane-d4	53.4		50		107	70	130			
Surr: Toluene-d8	49.4		50		99	70	130			
Surr: 4-Bromofluorobenzene	44.4		50		89	70	130			

Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date: *10-Aug-10*

QC Summary Report

Work Order: 10072804

Sample Matrix Spike Duplicate Type **MSD** Test Code: **EPA Method SW8260B**

File ID: **C:\HPCHEM\MS07\DATA\100804\10080410.D** Batch ID: **MS07W0804M** Analysis Date: **08/04/2010 18:49**

Sample ID: **10072804-10AMSD** Units : **µg/L** Run ID: **MSD_07_100804B** Prep Date: **08/04/2010 18:49**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	43.3	2.5	50	0	87	13	167	40.95	5.6(20)	
Chloromethane	36.5	10	50	0	73	28	145	33.22	9.5(20)	
Vinyl chloride	48.1	2.5	50	0	96	43	134	43.74	9.6(20)	
Chloroethane	47.7	2.5	50	0	95	39	154	44.05	7.9(20)	
Bromomethane	51.7	10	50	0	103	19	176	37.14	32.8(20)	R5
Trichlorofluoromethane	50.3	2.5	50	0	101	34	160	49.65	1.4(20)	
1,1-Dichloroethene	54.3	2.5	50	0	109	60	130	51.41	5.4(20)	
Dichloromethane	52	10	50	0	104	68	130	48.64	6.7(20)	
trans-1,2-Dichloroethene	48.2	2.5	50	0	96	63	130	52.66	8.9(20)	
Methyl tert-butyl ether (MTBE)	59.1	1.3	50	0	118	56	141	55.59	6.0(20)	
1,1-Dichloroethane	51.7	2.5	50	0	103	61	130	48.39	6.7(20)	
cis-1,2-Dichloroethene	55.1	2.5	50	0	110	70	130	51.56	6.7(20)	
Bromochloromethane	57.6	2.5	50	0	115	70	130	54.24	6.1(20)	
Chloroform	52	2.5	50	0	103	67	130	49.42	5.0(20)	
2,2-Dichloropropane	56.8	2.5	50	0	114	30	152	53.99	5.1(20)	
1,2-Dichloroethane	55.1	2.5	50	0	110	60	135	53.14	3.6(20)	
1,1,1-Trichloroethane	58.4	2.5	50	0	117	59	137	55.28	5.5(20)	
1,1-Dichloropropene	57	2.5	50	0	114	63	130	53.62	6.2(20)	
Carbon tetrachloride	59.2	2.5	50	0	118	50	147	55.23	7.0(20)	
Benzene	55.3	1.3	50	0	111	67	130	52.09	5.9(20)	
Dibromomethane	54.2	2.5	50	0	108	69	133	51.25	5.5(20)	
1,2-Dichloropropane	56.5	2.5	50	0	113	69	130	53.86	4.7(20)	
Trichloroethene	59.7	2.5	50	3.73	112	69	130	55.85	6.7(20)	
Bromodichloromethane	55.4	2.5	50	0	111	66	134	53.29	3.9(20)	
cis-1,3-Dichloropropene	43.1	2.5	50	0	86	63	130	40.94	5.2(20)	
trans-1,3-Dichloropropene	56.6	2.5	50	0	113	66	131	54.28	4.3(20)	
1,1,2-Trichloroethane	52.6	2.5	50	0	105	68	130	50.11	4.9(20)	
Toluene	54.6	1.3	50	0	109	66	130	50.86	7.2(20)	
1,3-Dichloropropane	51.4	2.5	50	0	103	70	130	48.63	5.5(20)	
Dibromochloromethane	57	2.5	50	0	114	70	130	54.04	5.4(20)	
1,2-Dibromoethane (EDB)	111	5	100	0	111	70	130	104.8	5.4(20)	
Tetrachloroethene	59.8	2.5	50	0	118	61	134	55.3	7.8(20)	
1,1,1,2-Tetrachloroethane	60.6	2.5	50	0	121	70	130	57.35	5.5(20)	
Chlorobenzene	56.3	2.5	50	0	113	70	130	52.66	6.7(20)	
Ethylbenzene	57.9	1.3	50	0	116	68	130	53.85	7.3(20)	
m,p-Xylene	58.4	1.3	50	0	117	64	130	54	7.9(20)	
Bromoform	63.1	2.5	50	0	126	64	138	60.04	4.9(20)	
Styrene	51.4	2.5	50	0	103	69	130	48.18	6.4(20)	
o-Xylene	58.5	1.3	50	0	117	70	130	54.72	6.7(20)	
1,1,2,2-Tetrachloroethane	54.8	2.5	50	0	110	65	131	51.75	5.8(20)	
1,2,3-Trichloropropane	117	10	100	0	117	70	130	110.1	6.1(20)	
Isopropylbenzene	53.1	2.5	50	0	106	64	138	49.55	7.0(20)	
Bromobenzene	54.3	2.5	50	0	109	70	130	50.56	7.2(20)	
n-Propylbenzene	52.8	2.5	50	0	106	66	132	49.07	7.3(20)	
4-Chlorotoluene	54.4	2.5	50	0	109	70	130	50.84	6.7(20)	
2-Chlorotoluene	54.2	2.5	50	0	108	70	130	50.77	6.6(20)	
1,3,5-Trimethylbenzene	55.8	2.5	50	0	112	66	136	51.43	8.1(20)	
tert-Butylbenzene	54.9	2.5	50	0	110	65	137	50.44	8.5(20)	
1,2,4-Trimethylbenzene	56.4	2.5	50	0	113	65	137	51.71	8.7(20)	
sec-Butylbenzene	55.4	2.5	50	0	111	66	134	51.01	8.3(20)	
1,3-Dichlorobenzene	54.7	2.5	50	0	109	70	130	50.99	7.1(20)	
1,4-Dichlorobenzene	55.3	2.5	50	0	111	70	130	51.22	7.6(20)	
4-Isopropyltoluene	55.6	2.5	50	0	111	66	137	51.03	8.6(20)	
1,2-Dichlorobenzene	52.2	2.5	50	0	104	70	130	49.21	5.9(20)	
n-Butylbenzene	53.7	2.5	50	0	107	60	142	48.18	10.8(20)	
1,2-Dibromo-3-chloropropane (DBCP)	247	15	250	0	99	67	130	238	3.6(20)	
1,2,4-Trichlorobenzene	49.5	10	50	0	99	61	137	44.15	11.5(20)	
Naphthalene	46.9	10	50	0	94	40	167	41.12	13.0(20)	
Hexachlorobutadiene	105	10	100	0	105	61	130	93.59	11.0(20)	
1,2,3-Trichlorobenzene	50.1	10	50	0	100	51	144	44.65	11.5(20)	
Surr: 1,2-Dichloroethane-d4	52.6		50		105	70	130			
Surr: Toluene-d8	50.1		50		100	70	130			
Surr: 4-Bromofluorobenzene	44.7		50		89	70	130			

Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date: *10-Aug-10*

QC Summary Report

Work Order: 10072804

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.

R5 = MS/MSD RPD exceeded the laboratory control limit. Recovery met acceptance criteria.

Billing Information :

CHAIN-OF-CUSTODY RECORD

CA

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

WorkOrder : BMIS10072804

Report Due By : 5:00 PM On : 11-Aug-2010

Client:
Battelle Memorial Institute
655 West Broadway
Suite 1420
San Diego, CA 92101

Report Attention	Phone Number	EMail Address
David Conner	(818) 393-2808 x	connerd@battelle.org
Shane Walton	(614) 424-4117 x	waltons@battelle.org
Betsy Cutie	(614) 424-4899 x	cutiee@batelle.org

EDD Required : **Yes**

Sampled by : Chase Brogdon, David Loera

PO : 218013

Client's COC # : 25555, 25554, 024307 Job : G005862 / JPL Groundwater Monitoring

Cooler Temp	Samples Received	Date Printed
4 °C	28-Jul-2010	**28-Jul-2010**

QC Level : DS4 = DOD QC Required : Final Rpt, MBLK, InitCal/ConCal data, LCS, MS/MSD With Surrogates

Alpha Sample ID	Client Sample ID	Matrix	Collection Date	No. of Bottles Alpha	Sub	TAT	Requested Tests 314_W	METALS_DW	VOC_TIC_W	VOC_W					Sample Remarks
BMI10072804-01A	MW-3-4	AQ	07/26/10 11:35	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI10072804-02A	MW-3-3	AQ	07/26/10 11:59	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI10072804-03A	MW-3-2	AQ	07/26/10 12:18	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					Level IV QC
BMI10072804-04A	MW-4-3	AQ	07/27/10 08:11	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI10072804-05A	MW-4-2	AQ	07/27/10 08:32	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI10072804-06A	MW-4-1	AQ	07/27/10 09:10	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI10072804-07A	DUPE-03-3Q10	AQ	07/27/10 00:00	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI10072804-08A	EB-02-7/27/10	AQ	07/27/10 08:52	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI10072804-09A	TB-02-7/27/10	AQ	07/27/10 07:00	1	0	10			VOC by 524 Criteria	VOC by 524 Criteria					Reno Trip Blank 6/29/10
BMI10072804-10A	MW-6	AQ	07/27/10 11:21	14	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					MS/MSD

Comments: Security seals intact. Frozen ice. Temp Blank #9068 received @ 4°C. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). :

	Signature	Print Name	Company	Date/Time
Logged in by:	Elizabeth Adcox	Elizabeth Adcox	**Alpha Analytical, Inc.**	7.28.10 1620

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 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.
Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

Billing Information :

CHAIN-OF-CUSTODY RECORD

CA

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

WorkOrder : BMIS10072804

Report Due By : 5:00 PM On : 11-Aug-2010

Client:
Battelle Memorial Institute
655 West Broadway
Suite 1420
San Diego, CA 92101

Report Attention	Phone Number	EMail Address
David Conner	(818) 393-2808 x	connerd@battelle.org
Shane Walton	(614) 424-4117 x	waltons@battelle.org
Betsy Cutie	(614) 424-4899 x	cutiee@batelle.org

EDD Required : **Yes**

Sampled by : Chase Brogdon, David Loera

PO : 218013

Client's COC # : 25555, 25554, 024307 Job : G005862 / JPL Groundwater Monitoring

Cooler Temp	Samples Received	Date Printed
4 °C	28-Jul-2010	**28-Jul-2010**

QC Level : DS4 = DOD QC Required : Final Rpt, MBLK, InitCal/ConCal data, LCS, MS/MSD With Surrogates

Alpha Sample ID	Client Sample ID	Matrix	Collection Date	No. of Bottles Alpha	Sub	TAT	Requested Tests 314_W	METALS_DW	VOC_TIC_W	VOC_W					Sample Remarks
BMI10072804-11A	MW-5	AQ	07/27/10 13:43	7	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					

Comments: Security seals intact. Frozen ice. Temp Blank #9068 received @ 4°C. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). :

	Signature	Print Name	Company	Date/Time
Logged in by:	Elizabath Adcox	Elizabath Adcox	**Alpha Analytical, Inc.**	7-28-10 1620

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 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.
Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

25555

Billing Information:

Name: GERALD TOMPKINS / BATTELLE
Address: 505 KING AVE.
City, State, Zip: COLUMBUS, OH 43201
Phone Number: ______ Fax: ______

Alpha Analytical, Inc.
255 Glendale Avenue, Suite 21
Sparks, Nevada 89431-5778
Phone (775) 355-1044
Fax (775) 355-0406

Samples Collected From Which State? AZ __ CA X NV __ WA __ ID __ OR __ OTHER __

Page # 1 of 1

Client Name: BATTELLE / DAVID CONNER	P.O. # 218013	Job # G005862
Address: 3990 OLD TOWN AVE. C-205	EMail Address	
City, State, Zip: SAN DIEGO, CA 92110	Phone # (619) 726-7311	Fax #
Sampled by: CHASE BROGDON	Report Attention	

Required QC Level? I II (III) IV

EDD / EDF? YES ___ NO ___

Global ID # ______

Time Sampled	Date Sampled	Matrix* See Key Below	Lab ID Number (Office Use Only)	Sample Description	TAT	Field Filtered	Total and type of containers ** See below	VOC (524.2)	TOTAL Cr (200.8)	Clay - (314.0)					REMARKS
1135	7/26/10	AQ	BMI10072804-01	MW-3-4	NORM		5 P/V	X	X	X					
1159	↓	↓	.02	MW-3-3	↓		5 P/V	X	X	X					
1218	↓	↓	.03	MW-3-2	↓		5 P/V	X	X	X					QC LEVEL IV

ADDITIONAL INSTRUCTIONS:

	Signature	Print Name	Company	Date	Time
Relinquished by	[signature]	CHASE BROGDON	INSIGHT E.E.C., INC.	07/27/10	1500
Received by	[signature]	Anthony Stehr	Alpha Analytical	7/27/10	1500
Relinquished by	[signature]	Anthony Stehr	" "	"	1500
Received by	Elizabeth Adcox	Elizabeth Adcox	Alpha	7·28·10	1620
Relinquished by					
Received by					

*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

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 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.

Billing Information:
Name GERALD TOMPKINS / BATTELLE
Address 505 KING AVE.
City, State, Zip COLUMBUS, OH 43201
Phone Number _____ Fax _____

Alpha Analytical, Inc.
255 Glendale Avenue, Suite 21
Sparks, Nevada 89431-5778
Phone (775) 355-1044
Fax (775) 355-0406

Samples Collected From Which State? AZ ___ CA X NV ___ WA ___ ID ___ OR ___ OTHER ___

25554

Page # 1 of 1

Client Name	P.O. #	Job #
BATTELLE / DAVID CONNOR	218013	6005862
Address: 3980 OLD TOWN AVE. C-205	EMail Address	
City, State, Zip: SAN DIEGO, CA 92110	Phone # (619) 726-7311	Fax #

Sampled by: CHASE BRADTON

Time Sampled	Date Sampled	Matrix* See Key Below	Lab ID Number (Office Use Only)	Sample Description	TAT	Field Filtered	Total and type of containers ** See below	VOC (524.2)	TOTAL CA (200.8)	Clay - (314.0)	REMARKS
0811	7/27/10	AQ	-04	MW-4-3	NORM		3V/2P	X	X	X	
0832			-05	MW-4-2			3V/2P	X	X	X	
0910			-06	MW-4-1			3V/2P	X	X	X	
"			-07	DUPE-03-3Q10			3V/2P	X	X	X	DUPLICATE
0852			-08	EB-02-7/27/10			3V/2P	X	X	X	EQUIPMENT BLANK
0700		AQ	-09	TB-02-7/27/10			1V	X			TRIP BLANK

Required QC Level? I II (III) IV

EDD / EDF? YES ___ NO ___

Global ID # _____

ADDITIONAL INSTRUCTIONS:

	Signature	Print Name	Company	Date	Time
Relinquished by		CHASE BRADTON	INSIGHT E.E.C., INC	07/27/10	1500
Received by		Anthony Stark	Alpha Analytical	7/27/10	1500
Relinquished by		"	"	"	1500
Received by	Elizabeth Adcox	Elizabeth Adcox	Alpha	7.28.10	1620
Relinquished by					
Received by					

*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

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 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.

Billing Information:
Name Battelle
Address 505 King Ave
City, State, Zip Columbus OH 43201
Phone Number _____ Fax _____

Alpha Analytical, Inc.
255 Glendale Avenue, Suite 21
Sparks, Nevada 89431-5778
Phone (775) 355-1044
Fax (775) 355-0406

Samples Collected From Which State?
AZ ___ CA X NV ___ WA ___
ID ___ OR ___ OTHER ___

024307
Page # 1 of 1

Client Name	P.O. #	Job #
David Conner	218013	600586 2/JPL GWM
Address	EMail Address	
	connerd@battelle.org	
City, State, Zip	Phone #	Fax #
	619-726-7311	614-458-6641

Time Sampled	Date Sampled	Matrix* See Key Below	Sampled by / Lab ID Number (Office Use Only)	Report Attention / Sample Description	TAT	Field Filtered	Total and type of containers ** See below	VOCs (524.2)	Total Cr (200.8)	Perchlorate (314.0)	300.0				REMARKS
			Sampled by: David Loera	Report Attention: David Conner											Required QC Level? I II III IV
															EDD / EDF? YES X NO ___
															Global ID # ___
1121	7/27	AQ	-10	MW-6	10		12V, 2P	X	X	X					MS/MSD
1343	7/27	AQ	-11	MW-5	10		6V, 1P	X	X	X					

ADDITIONAL INSTRUCTIONS:

	Signature	Print Name	Company	Date	Time
Relinquished by	David L	David Loera	Battelle	7-27-10	1400
Received by		CHASE BRADSON	INSIGHT	7-27-10	1401
Relinquished by		CHASE BRADSON	INSIGHT	7-27-10	1500
Received by		Anthony Aoltz	Alpha Analytical	7-27-10	1500
Relinquished by		"	"	"	1500
Received by	Elizabeth Adcox	Elizabeth Adcox	Alpha	7-28-10	1620

*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

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 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.

Alpha Analytical, Inc.

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

Date *03-Aug-10*

David Conner
Battelle Memorial Institute
655 West Broadway
San Diego, CA 92101
(818) 393-2808

Suite 1420

CASE NARRATIVE

Job: G005862 / JPL Groundwater Monitoring

Work Order: BMI10072744 **Cooler Temp:** 4 °C

Alpha's Sample ID	Client's Sample ID	Matrix
10072744-01A	MW-20-5	Aqueous
10072744-02A	MW-20-4	Aqueous
10072744-03A	MW-20-3	Aqueous
10072744-04A	MW-20-2	Aqueous
10072744-05A	MW-20-1	Aqueous
10072744-06A	DUPE-02-3Q10	Aqueous
10072744-07A	EB-01-07/26/10	Aqueous
10072744-08A	TB-01-07/26/10	Aqueous

Manually Integrated Analytes

Alpha's Sample ID	Test Reference	Analyte
NONE		

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

Alpha Analytical, Inc.

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 07/27/10

Job: G005862 / JPL Groundwater Monitoring

Perchlorate by Ion Chromatography
EPA Method 314.0

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-20-5**				
Lab ID : BMI10072744-01A Perchlorate	ND	1.00 µg/L	07/27/10 10:40	07/27/10 14:41
Date Sampled 07/26/10 08:52				
Client ID: **MW-20-4**				
Lab ID : BMI10072744-02A Perchlorate	ND	1.00 µg/L	07/27/10 10:40	07/27/10 14:59
Date Sampled 07/26/10 09:24				
Client ID: **MW-20-3**				
Lab ID : BMI10072744-03A Perchlorate	ND	1.00 µg/L	07/27/10 10:40	07/27/10 15:18
Date Sampled 07/26/10 10:03				
Client ID: **MW-20-2**				
Lab ID : BMI10072744-04A Perchlorate	2.45	1.00 µg/L	07/27/10 10:40	07/27/10 15:36
Date Sampled 07/26/10 10:29				
Client ID: **MW-20-1**				
Lab ID : BMI10072744-05A Perchlorate	ND	1.00 µg/L	07/27/10 10:40	07/27/10 15:55
Date Sampled 07/26/10 11:02				
Client ID: **DUPE-02-3Q10**				
Lab ID : BMI10072744-06A Perchlorate	ND	1.00 µg/L	07/27/10 10:40	07/27/10 16:50
Date Sampled 07/26/10 00:00				
Client ID: **EB-01-07/26/10**				
Lab ID : BMI10072744-07A Perchlorate	ND	1.00 µg/L	07/27/10 10:40	07/27/10 17:08
Date Sampled 07/26/10 10:45				

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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8/9/10
Report Date

Alpha Analytical, Inc.

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 07/27/10

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 : BMI10072744-01A Chromium (Cr)	ND	0.0050 mg/L	07/28/10 09:57	08/04/10 11:44
Date Sampled 07/26/10 08:52				
Client ID: **MW-20-4**				
Lab ID : BMI10072744-02A Chromium (Cr)	ND	0.0050 mg/L	07/28/10 09:57	08/04/10 11:49
Date Sampled 07/26/10 09:24				
Client ID: **MW-20-3**				
Lab ID : BMI10072744-03A Chromium (Cr)	ND	0.0050 mg/L	07/28/10 09:57	08/04/10 11:55
Date Sampled 07/26/10 10:03				
Client ID: **MW-20-2**				
Lab ID : BMI10072744-04A Chromium (Cr)	ND	0.0050 mg/L	07/28/10 09:57	08/04/10 12:02
Date Sampled 07/26/10 10:29				
Client ID: **MW-20-1**				
Lab ID : BMI10072744-05A Chromium (Cr)	ND	0.0050 mg/L	07/28/10 09:57	08/04/10 12:07
Date Sampled 07/26/10 11:02				
Client ID: **DUPE-02-3Q10**				
Lab ID : BMI10072744-06A Chromium (Cr)	ND	0.0050 mg/L	07/28/10 09:57	08/04/10 12:13
Date Sampled 07/26/10 00:00				
Client ID: **EB-01-07/26/10**				
Lab ID : BMI10072744-07A Chromium (Cr)	ND	0.0050 mg/L	07/28/10 09:57	08/04/10 12:19
Date Sampled 07/26/10 10:45				

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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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: (818) 393-2808
Fax: (614) 458-6641

Tentatively Identified Compounds - Volatile Organics by GC/MS

	Parameter	Estimated Concentration	Estimated Reporting Limit	Date Extracted	Date Analyzed
Client ID : **MW-20-5** Lab ID : BMI10072744-01A Date Received : 07/27/10 Date Sampled : 07/26/10 08:52	* * * None Found * * *	ND	2.0 µg/L	07/28/10 17:12	07/28/10 17:12
Client ID : **MW-20-4** Lab ID : BMI10072744-02A Date Received : 07/27/10 Date Sampled : 07/26/10 09:24	* * * None Found * * *	ND	2.0 µg/L	07/28/10 17:36	07/28/10 17:36
Client ID : **MW-20-3** Lab ID : BMI10072744-03A Date Received : 07/27/10 Date Sampled : 07/26/10 10:03	* * * None Found * * *	ND	2.0 µg/L	07/28/10 17:59	07/28/10 17:59
Client ID : **MW-20-2** Lab ID : BMI10072744-04A Date Received : 07/27/10 Date Sampled : 07/26/10 10:29	* * * None Found * * *	ND	2.0 µg/L	07/28/10 18:23	07/28/10 18:23
Client ID : **MW-20-1** Lab ID : BMI10072744-05A Date Received : 07/27/10 Date Sampled : 07/26/10 11:02	* * * None Found * * *	ND	2.0 µg/L	07/28/10 18:46	07/28/10 18:46
Client ID : **DUPE-02-3Q10** Lab ID : BMI10072744-06A Date Received : 07/27/10 Date Sampled : 07/26/10 00:00	* * * None Found * * *	ND	2.0 µg/L	07/28/10 19:10	07/28/10 19:10
Client ID : **EB-01-07/26/10** Lab ID : BMI10072744-07A Date Received : 07/27/10 Date Sampled : 07/26/10 10:45	* * * None Found * * *	ND	2.0 µg/L	07/28/10 19:34	07/28/10 19:34
Client ID : **TB-01-07/26/10** Lab ID : BMI10072744-08A Date Received : 07/27/10 Date Sampled : 07/26/10 07:00	* * * None Found * * *	ND	2.0 µg/L	07/28/10 19:57	07/28/10 19:57

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Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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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: (818) 393-2808
Fax: (614) 458-6641

Alpha Analytical Number: BMI10072744-01A
Client I.D. Number: MW-20-5

Sampled: 07/26/10 08:52
Received: 07/27/10
Extracted: 07/28/10 17:12
Analyzed: 07/28/10 17:12

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	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 (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	108	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	98	(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					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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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: (818) 393-2808
Fax: (614) 458-6641

Alpha Analytical Number: BMI10072744-02A
Client I.D. Number: MW-20-4

Sampled: 07/26/10 09:24
Received: 07/27/10
Extracted: 07/28/10 17:36
Analyzed: 07/28/10 17:36

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	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 (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	108	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	98	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	94	(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 Randy Gardner Walter Hinchman

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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: (818) 393-2808
Fax: (614) 458-6641

Alpha Analytical Number: BMI10072744-03A
Client I.D. Number: MW-20-3

Sampled: 07/26/10 10:03
Received: 07/27/10
Extracted: 07/28/10 17:59
Analyzed: 07/28/10 17:59

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	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 (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	104	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	99	(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					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer
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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: (818) 393-2808
Fax: (614) 458-6641

Alpha Analytical Number: BMI10072744-04A
Client I.D. Number: MW-20-2

Sampled: 07/26/10 10:29
Received: 07/27/10
Extracted: 07/28/10 18:23
Analyzed: 07/28/10 18:23

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	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 (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	106	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	99	(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					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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8/9/10
Report Date

Alpha Analytical, Inc.

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641

Alpha Analytical Number: BMI10072744-05A
Client I.D. Number: MW-20-1

Sampled: 07/26/10 11:02
Received: 07/27/10
Extracted: 07/28/10 18:46
Analyzed: 07/28/10 18:46

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	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 (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	108	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	98	(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					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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8/9/10
Report Date

Alpha Analytical, Inc.

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641

Alpha Analytical Number: BMI10072744-06A
Client I.D. Number: DUPE-02-3Q10

Sampled: 07/26/10 00:00
Received: 07/27/10
Extracted: 07/28/10 19:10
Analyzed: 07/28/10 19:10

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	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 (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	107	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	100	(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 Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer

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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.

8/9/10
Report Date

Alpha Analytical, Inc.

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641

Alpha Analytical Number: BMI10072744-07A
Client I.D. Number: EB-01-07/26/10

Sampled: 07/26/10 10:45
Received: 07/27/10
Extracted: 07/28/10 19:34
Analyzed: 07/28/10 19:34

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit		Compound	Concentration	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 (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	104	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65 Surr: Toluene-d8	98	(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				

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer
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8/9/10
Report Date

Alpha Analytical, Inc.

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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: (818) 393-2808
Fax: (614) 458-6641

Alpha Analytical Number: BMI10072744-08A
Client I.D. Number: TB-01-07/26/10

Sampled: 07/26/10 07:00
Received: 07/27/10
Extracted: 07/28/10 19:57
Analyzed: 07/28/10 19:57

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	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 (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	103	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	99	(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					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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.

8/9/10
Report Date

Alpha Analytical, Inc.

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: BMI10072744 **Job:** G005862 / JPL Groundwater Monitoring

Alpha's Sample ID	Client's Sample ID	Matrix	pH
10072744-01A	MW-20-5	Aqueous	2
10072744-02A	MW-20-4	Aqueous	2
10072744-03A	MW-20-3	Aqueous	2
10072744-04A	MW-20-2	Aqueous	2
10072744-05A	MW-20-1	Aqueous	2
10072744-06A	DUPE-02-3Q10	Aqueous	2
10072744-07A	EB-01-07/26/10	Aqueous	2
10072744-08A	TB-01-07/26/10	Aqueous	2

8/9/10
Report Date

Alpha Analytical, Inc.

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Date: *05-Aug-10*

QC Summary Report

Work Order: 10072744

Method Blank

Type **MBLK** Test Code: **EPA Method 314.0**

File ID: **14** Batch ID: **24702** Analysis Date: **07/27/2010 11:37**

Sample ID: **MB-24702** Units : **µg/L** Run ID: **IC_3_100727A** Prep Date: **07/27/2010 10:40**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	ND	1								

Laboratory Fortified Blank

Type **LFB** Test Code: **EPA Method 314.0**

File ID: **15** Batch ID: **24702** Analysis Date: **07/27/2010 11:55**

Sample ID: **LFB-24702** Units : **µg/L** Run ID: **IC_3_100727A** Prep Date: **07/27/2010 10:40**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	24.8	2	25		99	85	115			

Sample Matrix Spike

Type **LFM** Test Code: **EPA Method 314.0**

File ID: **21** Batch ID: **24702** Analysis Date: **07/27/2010 13:46**

Sample ID: **10072743-01ALFM** Units : **µg/L** Run ID: **IC_3_100727A** Prep Date: **07/27/2010 10:40**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	37	2	25	10.04	108	80	120			

Sample Matrix Spike Duplicate

Type **LFMD** Test Code: **EPA Method 314.0**

File ID: **22** Batch ID: **24702** Analysis Date: **07/27/2010 14:04**

Sample ID: **10072743-01ALFMD** Units : **µg/L** Run ID: **IC_3_100727A** Prep Date: **07/27/2010 10:40**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	37.7	2	25	10.04	111	80	120	36.97	2.0(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: *09-Aug-10*

QC Summary Report

Work Order: 10072744

Method Blank

Type: **MBLK** Test Code: **EPA Method 200.8**

File ID: **080310.B\127_MB.D** Batch ID: **24713** Analysis Date: **08/04/2010 09:10**

Sample ID: **MB-24713** Units : **mg/L** Run ID: **ICP/MS_100804D** Prep Date: **07/28/2010 09:57**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	ND	0.005								

Laboratory Control Spike

Type: **LCS** Test Code: **EPA Method 200.8**

File ID: **080310.B\128_L.D** Batch ID: **24713** Analysis Date: **08/04/2010 09:16**

Sample ID: **LCS-24713** Units : **mg/L** Run ID: **ICP/MS_100804D** Prep Date: **07/28/2010 09:57**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0508	0.005	0.05		102	85	115			

Sample Matrix Spike

Type: **MS** Test Code: **EPA Method 200.8**

File ID: **080310.B\133_SS.D** Batch ID: **24713** Analysis Date: **08/04/2010 09:44**

Sample ID: **10072002-01AMS** Units : **mg/L** Run ID: **ICP/MS_100804D** Prep Date: **07/28/2010 09:57**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0513	0.005	0.05	0	103	70	130			

Sample Matrix Spike Duplicate

Type: **MSD** Test Code: **EPA Method 200.8**

File ID: **080310.B\134_SSS.D** Batch ID: **24713** Analysis Date: **08/04/2010 09:49**

Sample ID: **10072002-01AMSD** Units : **mg/L** Run ID: **ICP/MS_100804D** Prep Date: **07/28/2010 09:57**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0523	0.005	0.05	0	105	70	130	0.05133	1.9(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.

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Date: *03-Aug-10*

QC Summary Report

Work Order: 10072744

Method Blank Type **MBLK** Test Code: **EPA Method SW8260B**

File ID: **C:\HPCHEM\MS07\DATA\100728\10072805.D** Batch ID: **MS07W0728M** Analysis Date: **07/28/2010 10:55**

Sample ID: **MBLK MS07W0728M** Units : **µg/L** Run ID: **MSD_07_100728C** Prep Date: **07/28/2010 10:55**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	ND	0.5								
Chloromethane	ND	1								
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	ND	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)	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	ND	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)	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	ND	0.5								
Dibromochloromethane	ND	0.5								
1,2-Dibromoethane (EDB)	ND	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	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								
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	ND	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	ND	1								
1,2,3-Trichlorobenzene	ND	1								
Surr: 1,2-Dichloroethane-d4	10.7		10		107	70	130			
Surr: Toluene-d8	9.76		10		98	70	130			

Alpha Analytical, Inc.

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Date: *03-Aug-10*

QC Summary Report

Work Order: 10072744

Surr: 4-Bromofluorobenzene	9.44		10	94	70	130			

Laboratory Control Spike Type **LCS** Test Code: **EPA Method SW8260B**

File ID: **C:\HPCHEM\MS07\DATA\100728\10072803.D** Batch ID: **MS07W0728M** Analysis Date: **07/28/2010 10:07**

Sample ID: **LCS MS07W0728M** Units : **µg/L** Run ID: **MSD_07_100728C** Prep Date: **07/28/2010 10:07**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	8.42	1	10		84	70	130			
Chloromethane	7.1	2	10		71	70	130			
Vinyl chloride	8.47	1	10		85	70	130			
Chloroethane	8.57	1	10		86	70	130			
Bromomethane	4.68	2	10		47	70(70)	130			L50
Trichlorofluoromethane	8.68	1	10		87	70	130			
1,1-Dichloroethene	9.17	1	10		92	70	130			
Dichloromethane	8.88	2	10		89	70	130			
trans-1,2-Dichloroethene	8.12	1	10		81	70	130			
Methyl tert-butyl ether (MTBE)	10.8	0.5	10		108	70	130			
1,1-Dichloroethane	8.92	1	10		89	70	130			
cis-1,2-Dichloroethene	9.19	1	10		92	70	130			
Bromochloromethane	9.5	1	10		95	70	130			
Chloroform	8.67	1	10		87	70	130			
2,2-Dichloropropane	10.9	1	10		109	70	130			
1,2-Dichloroethane	9.53	1	10		95	70	130			
1,1,1-Trichloroethane	9.7	1	10		97	70	130			
1,1-Dichloropropene	9.58	1	10		96	70	130			
Carbon tetrachloride	9.58	1	10		96	70	130			
Benzene	9.39	0.5	10		94	70	130			
Dibromomethane	9.4	1	10		94	70	130			
1,2-Dichloropropane	9.32	1	10		93	70	130			
Trichloroethene	8.96	1	10		90	70	130			
Bromodichloromethane	9.49	1	10		95	70	130			
cis-1,3-Dichloropropene	8.33	1	10		83	70	130			
trans-1,3-Dichloropropene	10.1	1	10		101	70	130			
1,1,2-Trichloroethane	9.47	1	10		95	70	130			
Toluene	9	0.5	10		90	70	130			
1,3-Dichloropropane	8.98	1	10		90	70	130			
Dibromochloromethane	9.51	1	10		95	70	130			
1,2-Dibromoethane (EDB)	18.7	2	20		94	70	130			
Tetrachloroethene	9.14	1	10		91	70	130			
1,1,1,2-Tetrachloroethane	9.67	1	10		97	70	130			
Chlorobenzene	9.1	1	10		91	70	130			
Ethylbenzene	9.37	0.5	10		94	70	130			
m,p-Xylene	9.44	0.5	10		94	70	130			
Bromoform	10.1	1	10		101	70	130			
Styrene	8.32	1	10		83	70	130			
o-Xylene	9.5	0.5	10		95	70	130			
1,1,2,2-Tetrachloroethane	9.53	1	10		95	70	130			
1,2,3-Trichloropropane	20.4	2	20		102	70	130			
Isopropylbenzene	9.47	1	10		95	70	130			
Bromobenzene	9.4	1	10		94	70	130			
n-Propylbenzene	9.29	1	10		93	70	130			
4-Chlorotoluene	9.4	1	10		94	70	130			
2-Chlorotoluene	9.47	1	10		95	70	130			
1,3,5-Trimethylbenzene	9.86	1	10		99	70	130			
tert-Butylbenzene	9.45	1	10		95	70	130			
1,2,4-Trimethylbenzene	9.97	1	10		99.7	70	130			
sec-Butylbenzene	9.37	1	10		94	70	130			
1,3-Dichlorobenzene	9.33	1	10		93	70	130			
1,4-Dichlorobenzene	9.4	1	10		94	70	130			
4-Isopropyltoluene	9.78	1	10		98	70	130			
1,2-Dichlorobenzene	9.08	1	10		91	70	130			
n-Butylbenzene	9.91	1	10		99	70	130			
1,2-Dibromo-3-chloropropane (DBCP)	45.7	3	50		91	70	130			
1,2,4-Trichlorobenzene	8.51	2	10		85	70	130			
Naphthalene	8.77	2	10		88	70	130			
Hexachlorobutadiene	17.5	2	20		87	70	130			
1,2,3-Trichlorobenzene	8.59	2	10		86	70	130			
Surr: 1,2-Dichloroethane-d4	10.4		10		104	70	130			
Surr: Toluene-d8	9.79		10		98	70	130			
Surr: 4-Bromofluorobenzene	9.35		10		94	70	130			

Alpha Analytical, Inc.

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Date: 03-Aug-10

QC Summary Report

Work Order: 10072744

Sample Matrix Spike Type **MS** Test Code: **EPA Method SW8260B**

File ID: **C:\HPCHEM\MS07\DATA\100728\10072806.D** Batch ID: **MS07W0728M** Analysis Date: **07/28/2010 11:18**

Sample ID: **10072743-01AMS** Units : **µg/L** Run ID: **MSD_07_100728C** Prep Date: **07/28/2010 11:18**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	36.6	2.5	50	0	73	13	167			
Chloromethane	35.3	10	50	0	71	28	145			
Vinyl chloride	43.8	2.5	50	0	88	43	134			
Chloroethane	45.7	2.5	50	0	91	39	154			
Bromomethane	31.6	10	50	0	63	19	176			
Trichlorofluoromethane	46.6	2.5	50	0	93	34	160			
1,1-Dichloroethene	50.5	2.5	50	0	101	60	130			
Dichloromethane	48.7	10	50	0	97	68	130			
trans-1,2-Dichloroethene	49.4	2.5	50	0	99	63	130			
Methyl tert-butyl ether (MTBE)	57.4	1.3	50	0	115	56	141			
1,1-Dichloroethane	49.6	2.5	50	0	99	61	130			
cis-1,2-Dichloroethene	51.4	2.5	50	0	103	70	130			
Bromochloromethane	51.6	2.5	50	0	103	70	130			
Chloroform	50.5	2.5	50	2.39	96	67	130			
2,2-Dichloropropane	61.2	2.5	50	0	122	30	152			
1,2-Dichloroethane	51.3	2.5	50	0	103	60	135			
1,1,1-Trichloroethane	54.2	2.5	50	0	108	59	137			
1,1-Dichloropropene	53.7	2.5	50	0	107	63	130			
Carbon tetrachloride	53.3	2.5	50	0	107	50	147			
Benzene	52.3	1.3	50	0	105	67	130			
Dibromomethane	49.9	2.5	50	0	99.8	69	133			
1,2-Dichloropropane	51.7	2.5	50	0	103	69	130			
Trichloroethene	50.4	2.5	50	0	101	69	130			
Bromodichloromethane	53.4	2.5	50	1.87	103	66	134			
cis-1,3-Dichloropropene	44.9	2.5	50	0	90	63	130			
trans-1,3-Dichloropropene	54.4	2.5	50	0	109	66	131			
1,1,2-Trichloroethane	49.7	2.5	50	0	99	68	130			
Toluene	49.8	1.3	50	0	99.6	66	130			
1,3-Dichloropropane	47.5	2.5	50	0	95	70	130			
Dibromochloromethane	50	2.5	50	0	100	70	130			
1,2-Dibromoethane (EDB)	98.4	5	100	0	98	70	130			
Tetrachloroethene	51	2.5	50	0	102	61	134			
1,1,1,2-Tetrachloroethane	53.2	2.5	50	0	106	70	130			
Chlorobenzene	49.7	2.5	50	0	99	70	130			
Ethylbenzene	52.1	1.3	50	0	104	68	130			
m,p-Xylene	52.4	1.3	50	0	105	64	130			
Bromoform	52.7	2.5	50	0	105	64	138			
Styrene	46	2.5	50	0	92	69	130			
o-Xylene	52.5	1.3	50	0	105	70	130			
1,1,2,2-Tetrachloroethane	49.3	2.5	50	0	99	65	131			
1,2,3-Trichloropropane	103	10	100	0	103	70	130			
Isopropylbenzene	50	2.5	50	0	99.9	64	138			
Bromobenzene	48.8	2.5	50	0	98	70	130			
n-Propylbenzene	49.4	2.5	50	0	99	66	132			
4-Chlorotoluene	49.6	2.5	50	0	99	70	130			
2-Chlorotoluene	49.7	2.5	50	0	99	70	130			
1,3,5-Trimethylbenzene	51.7	2.5	50	0	103	66	136			
tert-Butylbenzene	50.2	2.5	50	0	100	65	137			
1,2,4-Trimethylbenzene	52	2.5	50	0	104	65	137			
sec-Butylbenzene	50.6	2.5	50	0	101	66	134			
1,3-Dichlorobenzene	49.4	2.5	50	0	99	70	130			
1,4-Dichlorobenzene	49.5	2.5	50	0	99	70	130			
4-Isopropyltoluene	51.7	2.5	50	0	103	66	137			
1,2-Dichlorobenzene	47.4	2.5	50	0	95	70	130			
n-Butylbenzene	51.3	2.5	50	0	103	60	142			
1,2-Dibromo-3-chloropropane (DBCP)	226	15	250	0	90	67	130			
1,2,4-Trichlorobenzene	43.6	10	50	0	87	61	137			
Naphthalene	41.3	10	50	0	83	40	167			
Hexachlorobutadiene	93.8	10	100	0	94	61	130			
1,2,3-Trichlorobenzene	43.5	10	50	0	87	51	144			
Surr: 1,2-Dichloroethane-d4	53.5		50		107	70	130			
Surr: Toluene-d8	48.5		50		97	70	130			
Surr: 4-Bromofluorobenzene	45.7		50		91	70	130			

Alpha Analytical, Inc.

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Date: 03-Aug-10

QC Summary Report

Work Order: 10072744

Sample Matrix Spike Duplicate Type **MSD** Test Code: **EPA Method SW8260B**

File ID: **C:\HPCHEM\MS07\DATA\100728\10072807.D** Batch ID: **MS07W0728M** Analysis Date: **07/28/2010 11:42**

Sample ID: **10072743-01AMSD** Units : **µg/L** Run ID: **MSD_07_100728C** Prep Date: **07/28/2010 11:42**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	41	2.5	50	0	82	13	167	36.56	11.3(20)	
Chloromethane	39.6	10	50	0	79	28	145	35.32	11.5(20)	
Vinyl chloride	49.2	2.5	50	0	98	43	134	43.83	11.5(20)	
Chloroethane	51.1	2.5	50	0	102	39	154	45.71	11.0(20)	
Bromomethane	50.1	10	50	0	100	19	176	31.63	45.2(20)	R58
Trichlorofluoromethane	51.4	2.5	50	0	103	34	160	46.59	9.8(20)	
1,1-Dichloroethene	54.7	2.5	50	0	109	60	130	50.53	7.9(20)	
Dichloromethane	54.3	10	50	0	109	68	130	48.68	10.9(20)	
trans-1,2-Dichloroethene	46.6	2.5	50	0	93	63	130	49.36	5.8(20)	
Methyl tert-butyl ether (MTBE)	60.8	1.3	50	0	122	56	141	57.41	5.8(20)	
1,1-Dichloroethane	54.3	2.5	50	0	109	61	130	49.62	8.9(20)	
cis-1,2-Dichloroethene	56.2	2.5	50	0	112	70	130	51.36	9.0(20)	
Bromochloromethane	55.9	2.5	50	0	112	70	130	51.62	7.9(20)	
Chloroform	55.4	2.5	50	2.39	106	67	130	50.47	9.3(20)	
2,2-Dichloropropane	67	2.5	50	0	134	30	152	61.2	9.0(20)	
1,2-Dichloroethane	54.7	2.5	50	0	109	60	135	51.34	6.4(20)	
1,1,1-Trichloroethane	59.6	2.5	50	0	119	59	137	54.23	9.4(20)	
1,1-Dichloropropene	59.2	2.5	50	0	118	63	130	53.7	9.8(20)	
Carbon tetrachloride	58.1	2.5	50	0	116	50	147	53.27	8.6(20)	
Benzene	57.5	1.3	50	0	115	67	130	52.27	9.6(20)	
Dibromomethane	53	2.5	50	0	106	69	133	49.91	6.0(20)	
1,2-Dichloropropane	55.8	2.5	50	0	112	69	130	51.66	7.7(20)	
Trichloroethene	55.4	2.5	50	0	111	69	130	50.38	9.6(20)	
Bromodichloromethane	57.9	2.5	50	1.87	112	66	134	53.41	8.0(20)	
cis-1,3-Dichloropropene	47.6	2.5	50	0	95	63	130	44.89	5.8(20)	
trans-1,3-Dichloropropene	57.8	2.5	50	0	116	66	131	54.43	6.0(20)	
1,1,2-Trichloroethane	52.1	2.5	50	0	104	68	130	49.65	4.9(20)	
Toluene	55.6	1.3	50	0	111	66	130	49.79	11.1(20)	
1,3-Dichloropropane	51.5	2.5	50	0	103	70	130	47.47	8.1(20)	
Dibromochloromethane	55	2.5	50	0	110	70	130	50.01	9.5(20)	
1,2-Dibromoethane (EDB)	106	5	100	0	106	70	130	98.38	7.6(20)	
Tetrachloroethene	57.3	2.5	50	0	115	61	134	50.95	11.7(20)	
1,1,1,2-Tetrachloroethane	58.3	2.5	50	0	117	70	130	53.2	9.1(20)	
Chlorobenzene	55.2	2.5	50	0	110	70	130	49.71	10.5(20)	
Ethylbenzene	58.4	1.3	50	0	117	68	130	52.1	11.4(20)	
m,p-Xylene	58.6	1.3	50	0	117	64	130	52.39	11.1(20)	
Bromoform	57.7	2.5	50	0	115	64	138	52.69	9.1(20)	
Styrene	51.2	2.5	50	0	102	69	130	45.99	10.7(20)	
o-Xylene	58.8	1.3	50	0	118	70	130	52.52	11.4(20)	
1,1,2,2-Tetrachloroethane	53.3	2.5	50	0	107	65	131	49.31	7.7(20)	
1,2,3-Trichloropropane	113	10	100	0	113	70	130	103.3	9.2(20)	
Isopropylbenzene	57.9	2.5	50	0	116	64	138	49.95	14.7(20)	
Bromobenzene	55.4	2.5	50	0	111	70	130	48.77	12.8(20)	
n-Propylbenzene	57.6	2.5	50	0	115	66	132	49.36	15.4(20)	
4-Chlorotoluene	57.4	2.5	50	0	115	70	130	49.62	14.5(20)	
2-Chlorotoluene	57.7	2.5	50	0	115	70	130	49.71	14.8(20)	
1,3,5-Trimethylbenzene	59.9	2.5	50	0	120	66	136	51.73	14.7(20)	
tert-Butylbenzene	58.5	2.5	50	0	117	65	137	50.2	15.3(20)	
1,2,4-Trimethylbenzene	60.3	2.5	50	0	121	65	137	51.98	14.9(20)	
sec-Butylbenzene	59.1	2.5	50	0	118	66	134	50.57	15.5(20)	
1,3-Dichlorobenzene	57.2	2.5	50	0	114	70	130	49.4	14.7(20)	
1,4-Dichlorobenzene	57.1	2.5	50	0	114	70	130	49.48	14.2(20)	
4-Isopropyltoluene	60.6	2.5	50	0	121	66	137	51.73	15.8(20)	
1,2-Dichlorobenzene	53.7	2.5	50	0	107	70	130	47.37	12.6(20)	
n-Butylbenzene	61.3	2.5	50	0	123	60	142	51.27	17.9(20)	
1,2-Dibromo-3-chloropropane (DBCP)	243	15	250	0	97	67	130	225.6	7.6(20)	
1,2,4-Trichlorobenzene	50.6	10	50	0	101	61	137	43.55	15.0(20)	
Naphthalene	46.9	10	50	0	94	40	167	41.31	12.6(20)	
Hexachlorobutadiene	112	10	100	0	112	61	130	93.83	18.1(20)	
1,2,3-Trichlorobenzene	50.3	10	50	0	101	51	144	43.51	14.4(20)	
Surr: 1,2-Dichloroethane-d4	51.6		50		103	70	130			
Surr: Toluene-d8	49.1		50		98	70	130			
Surr: 4-Bromofluorobenzene	46.3		50		93	70	130			

Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date: *03-Aug-10*

QC Summary Report

Work Order: 10072744

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.

R58 = MS/MSD RPD exceeded the laboratory control limit.

Billing Information :

CHAIN-OF-CUSTODY RECORD

CA

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

WorkOrder : BMIS10072744

Report Due By : 5:00 PM On : 10-Aug-10

Client:
Battelle Memorial Institute
655 West Broadway
Suite 1420
San Diego, CA 92101

Report Attention	Phone Number	EMail Address
David Conner	(818) 393-2808 x	connerd@battelle.org
Betsy Cutie	(614) 424-4899 x	cutiee@batelle.org
Shane Walton	(614) 424-4117 x	waltons@battelle.org

EDD Required : **Yes**

Sampled by : Chase Bilogdon

PO : 218013

Client's COC # : 25761 Job : G005862/JPL Groundwater Monitoring

Cooler Temp	Samples Received	Date Printed
4 °C	27-Jul-10	27-Jul-10

QC Level : DS4 = DOD QC Required : Final Rpt, MBLK, InitCal/ConCal data, LCS, MS/MSD With Surrogates

Alpha Sample ID	Client Sample ID	Matrix	Collection Date	No. of Bottles Alpha	Sub	TAT	Requested Tests 314_W	METALS_DW	VOC_TIC_W	VOC_W				Sample Remarks
BMI10072744-01A	MW-20-5	AQ	07/26/10 08:52	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				
BMI10072744-02A	MW-20-4	AQ	07/26/10 09:24	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				Level IV QC
BMI10072744-03A	MW-20-3	AQ	07/26/10 10:03	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				
BMI10072744-04A	MW-20-2	AQ	07/26/10 10:29	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				
BMI10072744-05A	MW-20-1	AQ	07/26/10 11:02	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				
BMI10072744-06A	DUPE-02-3Q10	AQ	07/26/10 00:00	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				
BMI10072744-07A	EB-01-07/26/10	AQ	07/26/10 10:45	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				
BMI10072744-08A	TB-01-07/26/10	AQ	07/26/10 07:00	1	0	10			VOC by 524 Criteria	VOC by 524 Criteria				Reno TB, 6/29/10

Comments: Security seals intact. Frozen ice. Temp Blank #7280 rec'd @ 4°C. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). Perchlorate RL of 1.0 ug/L. ;

	Signature	Print Name	Company	Date/Time
Logged in by:	Dave Dickinson	Dave Dickinson	**Alpha Analytical, Inc.**	7/27/10 1112

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 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.
Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

Billing Information:

Name GERALD TOMPKINS / BATTELLE
Address 505 KING AVE. C-205
City, State, Zip COLUMBUS, OH 43201
Phone Number _____ Fax _____

Alpha Analytical, Inc.
255 Glendale Avenue, Suite 21
Sparks, Nevada 89431-5778
Phone (775) 355-1044
Fax (775) 355-0406

Samples Collected From Which State? AZ ___ CA X NV ___ WA ___ ID ___ OR ___ OTHER ___

25761

Page # 1 of 1

Client Name	P.O. #	Job #
BATTELLE / DAVID CONNER	218013	G005862
Address	EMail Address	
3990 OLD TOWN AVE, C-205		
City, State, Zip	Phone #	Fax #
SAN DIEGO, CA 92110	(619) 726-7311	

Time Sampled	Date Sampled	Matrix* See Key Below	Sampled by: CHASE BILOGDON / Lab ID Number (Office Use Only)	Sample Description	TAT	Field Filtered	Total and type of containers ** See below	VOC (524.2)	TOTAL CR (200.8)	CLO4 - (314.0)					REMARKS
0852	7/26/10	AQ	BMI1007244-01	MW-20-5	NORM		3v, 2p	X	X	X					
0924			-02	MW-20-4			3v, 2p	X	X	X					QC LEVEL IV
1003			-03	MW-20-3			3v, 2p	X	X	X					
1029			-04	MW-20-2			3v, 2p	X	X	X					
1102			-05	MW-20-1			3v, 2p	X	X	X					
—			-06	DUPE - 02 -3Q10			3v, 2p	X	X	X					DUPLICATE
1045			-07	EB-01-07/26/10			3v, 2p	X	X	X					EQUIPMENT BLANK
0700			-08	TB-01-07/26/10			1v	X							TRIP BLANK

ADDITIONAL INSTRUCTIONS:

	Signature	Print Name	Company	Date	Time
Relinquished by		CHASE BILOGDON	INSIGHT CEC, INC	07/26/10	1500
Received by		Anthony Stark	Alpha Analytical	7/26/10	1500
Relinquished by		"	"	7/26/10	1500
Received by		TARA JOHNSON	ALPHA	7/27/10	1107
Relinquished by					
Received by					

*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

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 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.

Alpha Analytical, Inc.

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

Date *03-Aug-10*

David Conner
Battelle Memorial Institute
655 West Broadway
San Diego, CA 92101
(818) 393-2808

Suite 1420

CASE NARRATIVE

Job: G005862 / JPL Groundwater Monitoring

Work Order: BMI10072743 **Cooler Temp:** 4 °C

Alpha's Sample ID	Client's Sample ID	Matrix
10072743-01A	MW-7	Aqueous
10072743-02A	MW-16	Aqueous

Manually Integrated Analytes

Alpha's Sample ID	Test Reference	Analyte
NONE		

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

Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778
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ANALYTICAL REPORT

Battelle Memorial Institute
655 West Broadway
San Diego, CA 92101

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 07/27/10

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 : BMI10072743-01A Chloride	68	40 mg/L	07/27/10 11:11	07/27/10 12:10
Date Sampled 07/26/10 09:30 Nitrite (NO2) - N	ND	0.25 mg/L	07/27/10 11:11	07/27/10 12:10
Nitrate (NO3) - N	1.3	0.25 mg/L	07/27/10 11:11	07/27/10 12:10
Phosphate, ortho - P	ND	0.50 mg/L	07/27/10 11:11	07/27/10 12:10
Sulfate (SO4)	52	0.50 mg/L	07/27/10 11:11	07/27/10 12:10
Client ID: **MW-16**				
Lab ID : BMI10072743-02A Chloride	67	40 mg/L	07/27/10 11:11	07/27/10 12:28
Date Sampled 07/26/10 12:50 Nitrite (NO2) - N	ND	0.25 mg/L	07/27/10 11:11	07/27/10 12:28
Nitrate (NO3) - N	1.4	0.25 mg/L	07/27/10 11:11	07/27/10 12:28
Phosphate, ortho - P	ND	0.50 mg/L	07/27/10 11:11	07/27/10 12:28
Sulfate (SO4)	51	0.50 mg/L	07/27/10 11:11	07/27/10 12:28

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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.

8/9/10
Report Date

Alpha Analytical, Inc.

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 07/27/10

Job: G005862 / JPL Groundwater Monitoring

Perchlorate by Ion Chromatography
EPA Method 314.0

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-7**				
Lab ID : BMI10072743-01A Perchlorate	10.0	1.00 µg/L	07/27/10 10:40	07/27/10 13:27
Date Sampled 07/26/10 09:30				
Client ID: **MW-16**				
Lab ID : BMI10072743-02A Perchlorate	ND	1.00 µg/L	07/27/10 10:40	07/27/10 14:23
Date Sampled 07/26/10 12:50				

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer
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ANALYTICAL REPORT

Battelle Memorial Institute
655 West Broadway
San Diego, CA 92101

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 07/27/10

Job: G005862 / JPL Groundwater Monitoring

Metals by ICPMS
EPA Method 200.8

Parameter		Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-7**					
Lab ID : BMI10072743-01A	Chromium (Cr)	0.0060	0.0050 mg/L	07/30/10 09:26	08/02/10 00:35
Date Sampled 07/26/10 09:30					
Client ID: **MW-16**					
Lab ID : BMI10072743-02A	Chromium (Cr)	ND	0.0050 mg/L	07/30/10 09:26	08/02/10 00:41
Date Sampled 07/26/10 12:50					

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer
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8/9/10
Report Date

Alpha Analytical, Inc.

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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: (818) 393-2808
Fax: (614) 458-6641

Tentatively Identified Compounds - Volatile Organics by GC/MS

		Parameter	Estimated Concentration	Estimated Reporting Limit	Date Extracted	Date Analyzed
Client ID :	**MW-7**					
Lab ID :	BMI10072743-01A	* * * None Found * * *	ND	2.0 µg/L	07/28/10 16:25	07/28/10 16:25
Date Received :	07/27/10					
Date Sampled :	07/26/10 09:30					
Client ID :	**MW-16**					
Lab ID :	BMI10072743-02A	* * * None Found * * *	ND	2.0 µg/L	07/28/10 16:48	07/28/10 16:48
Date Received :	07/27/10					
Date Sampled :	07/26/10 12:50					

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

Roger Scholl Randy Gardner Walter Hinchman

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.

8/9/10
Report Date

Alpha Analytical, Inc.

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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: (818) 393-2808
Fax: (614) 458-6641

Alpha Analytical Number: BMI10072743-01A
Client I.D. Number: MW-7

Sampled: 07/26/10 09:30
Received: 07/27/10
Extracted: 07/28/10 16:25
Analyzed: 07/28/10 16:25

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit		Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	45 Isopropylbenzene	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	46 Bromobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	47 n-Propylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	48 4-Chlorotoluene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	49 2-Chlorotoluene	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	50 1,3,5-Trimethylbenzene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	51 tert-Butylbenzene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	52 1,2,4-Trimethylbenzene	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	53 sec-Butylbenzene	ND	0.50	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	54 1,3-Dichlorobenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	55 1,4-Dichlorobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	56 4-Isopropyltoluene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	57 1,2-Dichlorobenzene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	58 n-Butylbenzene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5	µg/L
16	Chloroform	2.4	0.50	µg/L	60 1,2,4-Trichlorobenzene	ND	1.0	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	61 Naphthalene	ND	1.0	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	62 Hexachlorobutadiene	ND	1.0	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	63 1,2,3-Trichlorobenzene	ND	1.0	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	64 Surr: 1,2-Dichloroethane-d4	108	(70-130)	%REC
21	Carbon tetrachloride	ND	0.50	µg/L	65 Surr: Toluene-d8	98	(70-130)	%REC
22	Benzene	ND	0.50	µg/L	66 Surr: 4-Bromofluorobenzene	95	(70-130)	%REC
23	Dibromomethane	ND	0.50	µg/L				
24	1,2-Dichloropropane	ND	0.50	µg/L				
25	Trichloroethene	ND	0.50	µg/L				
26	Bromodichloromethane	1.9	0.50	µg/L				
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L				
28	cis-1,3-Dichloropropene	ND	0.50	µg/L				
29	trans-1,3-Dichloropropene	ND	0.50	µg/L				
30	1,1,2-Trichloroethane	ND	0.50	µg/L				
31	Toluene	ND	0.50	µg/L				
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				
36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L				
37	Chlorobenzene	ND	0.50	µg/L				
38	Ethylbenzene	ND	0.50	µg/L				
39	m,p-Xylene	ND	0.50	µg/L				
40	Bromoform	ND	0.50	µg/L				
41	Styrene	ND	0.50	µg/L				
42	o-Xylene	ND	0.50	µg/L				
43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L				
44	1,2,3-Trichloropropane	ND	1.0	µg/L				

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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.

8/9/10
Report Date

Alpha Analytical, Inc.

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(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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641

Alpha Analytical Number: BMI10072743-02A
Client I.D. Number: MW-16

Sampled: 07/26/10 12:50
Received: 07/27/10
Extracted: 07/28/10 16:48
Analyzed: 07/28/10 16:48

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L
3	Vinyl chloride	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L
9	Freon-113	ND	0.50	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L
25	Trichloroethene	ND	0.50	µg/L
26	Bromodichloromethane	ND	0.50	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L
30	1,1,2-Trichloroethane	ND	0.50	µg/L
31	Toluene	ND	0.50	µg/L
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
36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
37	Chlorobenzene	ND	0.50	µg/L
38	Ethylbenzene	ND	0.50	µg/L
39	m,p-Xylene	ND	0.50	µg/L
40	Bromoform	ND	0.50	µg/L
41	Styrene	ND	0.50	µg/L
42	o-Xylene	ND	0.50	µg/L
43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
44	1,2,3-Trichloropropane	ND	1.0	µg/L
45	Isopropylbenzene	ND	0.50	µg/L
46	Bromobenzene	ND	0.50	µg/L
47	n-Propylbenzene	ND	0.50	µg/L
48	4-Chlorotoluene	ND	0.50	µg/L
49	2-Chlorotoluene	ND	0.50	µg/L
50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
51	tert-Butylbenzene	ND	0.50	µg/L
52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
53	sec-Butylbenzene	ND	0.50	µg/L
54	1,3-Dichlorobenzene	ND	0.50	µg/L
55	1,4-Dichlorobenzene	ND	0.50	µg/L
56	4-Isopropyltoluene	ND	0.50	µg/L
57	1,2-Dichlorobenzene	ND	0.50	µg/L
58	n-Butylbenzene	ND	0.50	µg/L
59	1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5	µg/L
60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
61	Naphthalene	ND	1.0	µg/L
62	Hexachlorobutadiene	ND	1.0	µg/L
63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
64	Surr: 1,2-Dichloroethane-d4	105	(70-130)	%REC
65	Surr: Toluene-d8	99	(70-130)	%REC
66	Surr: 4-Bromofluorobenzene	95	(70-130)	%REC

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer
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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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Report Date

Alpha Analytical, Inc.

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VOC Sample Preservation Report

Work Order: BMI10072743 **Job:** G005862 / JPL Groundwater Monitoring

Alpha's Sample ID	Client's Sample ID	Matrix	pH
10072743-01A	MW-7	Aqueous	2
10072743-02A	MW-16	Aqueous	2

8/9/10

Report Date

Alpha Analytical, Inc.

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Date: 29-Jul-10

QC Summary Report

Work Order: 10072743

Method Blank

Type **MBLK** Test Code: **EPA Method 300.0**

File ID: **20** Batch ID: **24705** Analysis Date: **07/27/2010 11:14**

Sample ID: **MB-24705** Units : **mg/L** Run ID: **IC_1_100727A** Prep Date: **07/27/2010 11:11**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
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 **LFB** Test Code: **EPA Method 300.0**

File ID: **21** Batch ID: **24705** Analysis Date: **07/27/2010 11:33**

Sample ID: **LFB-24705** Units : **mg/L** Run ID: **IC_1_100727A** Prep Date: **07/27/2010 11:11**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	52.3	0.5	50		105	90	110			
Nitrite (NO2) - N	4.86	0.25	5		97	90	110			
Nitrate (NO3) - N	4.97	0.25	5		99	90	110			
Phosphate, ortho - P	5.22	0.5	5		104	90	110			
Sulfate (SO4)	106	0.5	100		106	90	110			

Sample Matrix Spike

Type **LFM** Test Code: **EPA Method 300.0**

File ID: **30** Batch ID: **24705** Analysis Date: **07/27/2010 14:19**

Sample ID: **10072743-01ALFM** Units : **mg/L** Run ID: **IC_1_100727A** Prep Date: **07/27/2010 11:11**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	157	0.5	100	67.79	89	80	120			
Nitrite (NO2) - N	9.93	0.25	10	0	99	80	120			
Nitrate (NO3) - N	11.7	0.25	10	1.349	103	80	120			
Phosphate, ortho - P	11.4	0.5	10	0	114	80	120			
Sulfate (SO4)	234	0.5	200	51.54	91	80	120			

Sample Matrix Spike Duplicate

Type **LFMD** Test Code: **EPA Method 300.0**

File ID: **31** Batch ID: **24705** Analysis Date: **07/27/2010 14:38**

Sample ID: **10072743-01ALFMD** Units : **mg/L** Run ID: **IC_1_100727A** Prep Date: **07/27/2010 11:11**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	160	0.5	100	67.79	92	80	120	157	1.8(15)	
Nitrite (NO2) - N	9.94	0.25	10	0	99	80	120	9.93	0.1(15)	
Nitrate (NO3) - N	11.8	0.25	10	1.349	105	80	120	11.67	1.5(15)	
Phosphate, ortho - P	10.9	0.5	10	0	109	80	120	11.44	4.6(15)	
Sulfate (SO4)	237	0.5	200	51.54	93	80	120	234.2	1.3(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: *06-Aug-10*

QC Summary Report

Work Order: 10072743

Method Blank

Type: **MBLK** Test Code: **EPA Method 314.0**

File ID: **14** Batch ID: **24702** Analysis Date: **07/27/2010 11:37**

Sample ID: **MB-24702** Units : **µg/L** Run ID: **IC_3_100727A** Prep Date: **07/27/2010 10:40**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	ND	1								

Laboratory Fortified Blank

Type: **LFB** Test Code: **EPA Method 314.0**

File ID: **15** Batch ID: **24702** Analysis Date: **07/27/2010 11:55**

Sample ID: **LFB-24702** Units : **µg/L** Run ID: **IC_3_100727A** Prep Date: **07/27/2010 10:40**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	24.8	2	25		99	85	115			

Sample Matrix Spike

Type: **LFM** Test Code: **EPA Method 314.0**

File ID: **21** Batch ID: **24702** Analysis Date: **07/27/2010 13:46**

Sample ID: **10072743-01ALFM** Units : **µg/L** Run ID: **IC_3_100727A** Prep Date: **07/27/2010 10:40**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	37	2	25	10.04	108	80	120			

Sample Matrix Spike Duplicate

Type: **LFMD** Test Code: **EPA Method 314.0**

File ID: **22** Batch ID: **24702** Analysis Date: **07/27/2010 14:04**

Sample ID: **10072743-01ALFMD** Units : **µg/L** Run ID: **IC_3_100727A** Prep Date: **07/27/2010 10:40**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	37.7	2	25	10.04	111	80	120	36.97	2.0(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: *04-Aug-10*

QC Summary Report

Work Order: 10072743

Method Blank

Type: **MBLK** Test Code: **EPA Method 200.8**
File ID: **073110.B\R173MB.D** Batch ID: **24732K** Analysis Date: **08/01/2010 22:09**
Sample ID: **MB-24732** Units : **mg/L** Run ID: **ICP/MS_100801F** Prep Date: **07/30/2010 09:26**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	ND	0.005								

Laboratory Control Spike

Type: **LCS** Test Code: **EPA Method 200.8**
File ID: **073110.B\R174LC.D** Batch ID: **24732K** Analysis Date: **08/01/2010 22:15**
Sample ID: **LCS-24732** Units : **mg/L** Run ID: **ICP/MS_100801F** Prep Date: **07/30/2010 09:26**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0461	0.005	0.05		92	80	120			

Sample Matrix Spike

Type: **MS** Test Code: **EPA Method 200.8**
File ID: **073110.B\R178MS.D** Batch ID: **24732K** Analysis Date: **08/01/2010 22:37**
Sample ID: **10072804-10AMS** Units : **mg/L** Run ID: **ICP/MS_100801F** Prep Date: **07/30/2010 09:26**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0465	0.005	0.05	0	93	80	120			

Sample Matrix Spike Duplicate

Type: **MSD** Test Code: **EPA Method 200.8**
File ID: **073110.B\R179MD.D** Batch ID: **24732K** Analysis Date: **08/01/2010 22:43**
Sample ID: **10072804-10AMSD** Units : **mg/L** Run ID: **ICP/MS_100801F** Prep Date: **07/30/2010 09:26**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0458	0.005	0.05	0	92	80	120	0.04649	1.5(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.

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Date: 03-Aug-10

QC Summary Report

Work Order: 10072743

Method Blank Type **MBLK** Test Code: **EPA Method SW8260B**

File ID: **C:\HPCHEM\MS07\DATA\100728\10072805.D** Batch ID: **MS07W0728M** Analysis Date: **07/28/2010 10:55**

Sample ID: **MBLK MS07W0728M** Units : **µg/L** Run ID: **MSD_07_100728C** Prep Date: **07/28/2010 10:55**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	ND	0.5								
Chloromethane	ND	1								
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	ND	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)	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	ND	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)	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	ND	0.5								
Dibromochloromethane	ND	0.5								
1,2-Dibromoethane (EDB)	ND	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	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								
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	ND	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	ND	1								
1,2,3-Trichlorobenzene	ND	1								
Surr: 1,2-Dichloroethane-d4	10.7		10		107	70	130			
Surr: Toluene-d8	9.76		10		98	70	130			

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Date: 03-Aug-10

QC Summary Report

Work Order: 10072743

Surr: 4-Bromofluorobenzene	9.44		10		94	70	130			

Laboratory Control Spike Type **LCS** Test Code: **EPA Method SW8260B**

File ID: **C:\HPCHEM\MS07\DATA\100728\10072803.D** Batch ID: **MS07W0728M** Analysis Date: **07/28/2010 10:07**

Sample ID: **LCS MS07W0728M** Units : **µg/L** Run ID: **MSD_07_100728C** Prep Date: **07/28/2010 10:07**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	8.42	1	10		84	70	130			
Chloromethane	7.1	2	10		71	70	130			
Vinyl chloride	8.47	1	10		85	70	130			
Chloroethane	8.57	1	10		86	70	130			
Bromomethane	4.68	2	10		47	70(70)	130			L50
Trichlorofluoromethane	8.68	1	10		87	70	130			
1,1-Dichloroethene	9.17	1	10		92	70	130			
Dichloromethane	8.88	2	10		89	70	130			
trans-1,2-Dichloroethene	8.12	1	10		81	70	130			
Methyl tert-butyl ether (MTBE)	10.8	0.5	10		108	70	130			
1,1-Dichloroethane	8.92	1	10		89	70	130			
cis-1,2-Dichloroethene	9.19	1	10		92	70	130			
Bromochloromethane	9.5	1	10		95	70	130			
Chloroform	8.67	1	10		87	70	130			
2,2-Dichloropropane	10.9	1	10		109	70	130			
1,2-Dichloroethane	9.53	1	10		95	70	130			
1,1,1-Trichloroethane	9.7	1	10		97	70	130			
1,1-Dichloropropene	9.58	1	10		96	70	130			
Carbon tetrachloride	9.58	1	10		96	70	130			
Benzene	9.39	0.5	10		94	70	130			
Dibromomethane	9.4	1	10		94	70	130			
1,2-Dichloropropane	9.32	1	10		93	70	130			
Trichloroethene	8.96	1	10		90	70	130			
Bromodichloromethane	9.49	1	10		95	70	130			
cis-1,3-Dichloropropene	8.33	1	10		83	70	130			
trans-1,3-Dichloropropene	10.1	1	10		101	70	130			
1,1,2-Trichloroethane	9.47	1	10		95	70	130			
Toluene	9	0.5	10		90	70	130			
1,3-Dichloropropane	8.98	1	10		90	70	130			
Dibromochloromethane	9.51	1	10		95	70	130			
1,2-Dibromoethane (EDB)	18.7	2	20		94	70	130			
Tetrachloroethene	9.14	1	10		91	70	130			
1,1,1,2-Tetrachloroethane	9.67	1	10		97	70	130			
Chlorobenzene	9.1	1	10		91	70	130			
Ethylbenzene	9.37	0.5	10		94	70	130			
m,p-Xylene	9.44	0.5	10		94	70	130			
Bromoform	10.1	1	10		101	70	130			
Styrene	8.32	1	10		83	70	130			
o-Xylene	9.5	0.5	10		95	70	130			
1,1,2,2-Tetrachloroethane	9.53	1	10		95	70	130			
1,2,3-Trichloropropane	20.4	2	20		102	70	130			
Isopropylbenzene	9.47	1	10		95	70	130			
Bromobenzene	9.4	1	10		94	70	130			
n-Propylbenzene	9.29	1	10		93	70	130			
4-Chlorotoluene	9.4	1	10		94	70	130			
2-Chlorotoluene	9.47	1	10		95	70	130			
1,3,5-Trimethylbenzene	9.86	1	10		99	70	130			
tert-Butylbenzene	9.45	1	10		95	70	130			
1,2,4-Trimethylbenzene	9.97	1	10		99.7	70	130			
sec-Butylbenzene	9.37	1	10		94	70	130			
1,3-Dichlorobenzene	9.33	1	10		93	70	130			
1,4-Dichlorobenzene	9.4	1	10		94	70	130			
4-Isopropyltoluene	9.78	1	10		98	70	130			
1,2-Dichlorobenzene	9.08	1	10		91	70	130			
n-Butylbenzene	9.91	1	10		99	70	130			
1,2-Dibromo-3-chloropropane (DBCP)	45.7	3	50		91	70	130			
1,2,4-Trichlorobenzene	8.51	2	10		85	70	130			
Naphthalene	8.77	2	10		88	70	130			
Hexachlorobutadiene	17.5	2	20		87	70	130			
1,2,3-Trichlorobenzene	8.59	2	10		86	70	130			
Surr: 1,2-Dichloroethane-d4	10.4		10		104	70	130			
Surr: Toluene-d8	9.79		10		98	70	130			
Surr: 4-Bromofluorobenzene	9.35		10		94	70	130			

Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date: 03-Aug-10

QC Summary Report

Work Order: 10072743

Sample Matrix Spike Type **MS** Test Code: **EPA Method SW8260B**

File ID: **C:\HPCHEM\MS07\DATA\100728\10072806.D** Batch ID: **MS07W0728M** Analysis Date: **07/28/2010 11:18**

Sample ID: **10072743-01AMS** Units : **µg/L** Run ID: **MSD_07_100728C** Prep Date: **07/28/2010 11:18**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	36.6	2.5	50	0	73	13	167			
Chloromethane	35.3	10	50	0	71	28	145			
Vinyl chloride	43.8	2.5	50	0	88	43	134			
Chloroethane	45.7	2.5	50	0	91	39	154			
Bromomethane	31.6	10	50	0	63	19	176			
Trichlorofluoromethane	46.6	2.5	50	0	93	34	160			
1,1-Dichloroethene	50.5	2.5	50	0	101	60	130			
Dichloromethane	48.7	10	50	0	97	68	130			
trans-1,2-Dichloroethene	49.4	2.5	50	0	99	63	130			
Methyl tert-butyl ether (MTBE)	57.4	1.3	50	0	115	56	141			
1,1-Dichloroethane	49.6	2.5	50	0	99	61	130			
cis-1,2-Dichloroethene	51.4	2.5	50	0	103	70	130			
Bromochloromethane	51.6	2.5	50	0	103	70	130			
Chloroform	50.5	2.5	50	2.39	96	67	130			
2,2-Dichloropropane	61.2	2.5	50	0	122	30	152			
1,2-Dichloroethane	51.3	2.5	50	0	103	60	135			
1,1,1-Trichloroethane	54.2	2.5	50	0	108	59	137			
1,1-Dichloropropene	53.7	2.5	50	0	107	63	130			
Carbon tetrachloride	53.3	2.5	50	0	107	50	147			
Benzene	52.3	1.3	50	0	105	67	130			
Dibromomethane	49.9	2.5	50	0	99.8	69	133			
1,2-Dichloropropane	51.7	2.5	50	0	103	69	130			
Trichloroethene	50.4	2.5	50	0	101	69	130			
Bromodichloromethane	53.4	2.5	50	1.87	103	66	134			
cis-1,3-Dichloropropene	44.9	2.5	50	0	90	63	130			
trans-1,3-Dichloropropene	54.4	2.5	50	0	109	66	131			
1,1,2-Trichloroethane	49.7	2.5	50	0	99	68	130			
Toluene	49.8	1.3	50	0	99.6	66	130			
1,3-Dichloropropane	47.5	2.5	50	0	95	70	130			
Dibromochloromethane	50	2.5	50	0	100	70	130			
1,2-Dibromoethane (EDB)	98.4	5	100	0	98	70	130			
Tetrachloroethene	51	2.5	50	0	102	61	134			
1,1,1,2-Tetrachloroethane	53.2	2.5	50	0	106	70	130			
Chlorobenzene	49.7	2.5	50	0	99	70	130			
Ethylbenzene	52.1	1.3	50	0	104	68	130			
m,p-Xylene	52.4	1.3	50	0	105	64	130			
Bromoform	52.7	2.5	50	0	105	64	138			
Styrene	46	2.5	50	0	92	69	130			
o-Xylene	52.5	1.3	50	0	105	70	130			
1,1,2,2-Tetrachloroethane	49.3	2.5	50	0	99	65	131			
1,2,3-Trichloropropane	103	10	100	0	103	70	130			
Isopropylbenzene	50	2.5	50	0	99.9	64	138			
Bromobenzene	48.8	2.5	50	0	98	70	130			
n-Propylbenzene	49.4	2.5	50	0	99	66	132			
4-Chlorotoluene	49.6	2.5	50	0	99	70	130			
2-Chlorotoluene	49.7	2.5	50	0	99	70	130			
1,3,5-Trimethylbenzene	51.7	2.5	50	0	103	66	136			
tert-Butylbenzene	50.2	2.5	50	0	100	65	137			
1,2,4-Trimethylbenzene	52	2.5	50	0	104	65	137			
sec-Butylbenzene	50.6	2.5	50	0	101	66	134			
1,3-Dichlorobenzene	49.4	2.5	50	0	99	70	130			
1,4-Dichlorobenzene	49.5	2.5	50	0	99	70	130			
4-Isopropyltoluene	51.7	2.5	50	0	103	66	137			
1,2-Dichlorobenzene	47.4	2.5	50	0	95	70	130			
n-Butylbenzene	51.3	2.5	50	0	103	60	142			
1,2-Dibromo-3-chloropropane (DBCP)	226	15	250	0	90	67	130			
1,2,4-Trichlorobenzene	43.6	10	50	0	87	61	137			
Naphthalene	41.3	10	50	0	83	40	167			
Hexachlorobutadiene	93.8	10	100	0	94	61	130			
1,2,3-Trichlorobenzene	43.5	10	50	0	87	51	144			
Surr: 1,2-Dichloroethane-d4	53.5		50		107	70	130			
Surr: Toluene-d8	48.5		50		97	70	130			
Surr: 4-Bromofluorobenzene	45.7		50		91	70	130			

Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date: 03-Aug-10

QC Summary Report

Work Order: 10072743

Sample Matrix Spike Duplicate Type **MSD** Test Code: **EPA Method SW8260B**

File ID: **C:\HPCHEM\MS07\DATA\100728\10072807.D** Batch ID: **MS07W0728M** Analysis Date: **07/28/2010 11:42**

Sample ID: **10072743-01AMSD** Units : **µg/L** Run ID: **MSD_07_100728C** Prep Date: **07/28/2010 11:42**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	41	2.5	50	0	82	13	167	36.56	11.3(20)	
Chloromethane	39.6	10	50	0	79	28	145	35.32	11.5(20)	
Vinyl chloride	49.2	2.5	50	0	98	43	134	43.83	11.5(20)	
Chloroethane	51.1	2.5	50	0	102	39	154	45.71	11.0(20)	
Bromomethane	50.1	10	50	0	100	19	176	31.63	45.2(20)	R58
Trichlorofluoromethane	51.4	2.5	50	0	103	34	160	46.59	9.8(20)	
1,1-Dichloroethene	54.7	2.5	50	0	109	60	130	50.53	7.9(20)	
Dichloromethane	54.3	10	50	0	109	68	130	48.68	10.9(20)	
trans-1,2-Dichloroethene	46.6	2.5	50	0	93	63	130	49.36	5.8(20)	
Methyl tert-butyl ether (MTBE)	60.8	1.3	50	0	122	56	141	57.41	5.8(20)	
1,1-Dichloroethane	54.3	2.5	50	0	109	61	130	49.62	8.9(20)	
cis-1,2-Dichloroethene	56.2	2.5	50	0	112	70	130	51.36	9.0(20)	
Bromochloromethane	55.9	2.5	50	0	112	70	130	51.62	7.9(20)	
Chloroform	55.4	2.5	50	2.39	106	67	130	50.47	9.3(20)	
2,2-Dichloropropane	67	2.5	50	0	134	30	152	61.2	9.0(20)	
1,2-Dichloroethane	54.7	2.5	50	0	109	60	135	51.34	6.4(20)	
1,1,1-Trichloroethane	59.6	2.5	50	0	119	59	137	54.23	9.4(20)	
1,1-Dichloropropene	59.2	2.5	50	0	118	63	130	53.7	9.8(20)	
Carbon tetrachloride	58.1	2.5	50	0	116	50	147	53.27	8.6(20)	
Benzene	57.5	1.3	50	0	115	67	130	52.27	9.6(20)	
Dibromomethane	53	2.5	50	0	106	69	133	49.91	6.0(20)	
1,2-Dichloropropane	55.8	2.5	50	0	112	69	130	51.66	7.7(20)	
Trichloroethene	55.4	2.5	50	0	111	69	130	50.38	9.6(20)	
Bromodichloromethane	57.9	2.5	50	1.87	112	66	134	53.41	8.0(20)	
cis-1,3-Dichloropropene	47.6	2.5	50	0	95	63	130	44.89	5.8(20)	
trans-1,3-Dichloropropene	57.8	2.5	50	0	116	66	131	54.43	6.0(20)	
1,1,2-Trichloroethane	52.1	2.5	50	0	104	68	130	49.65	4.9(20)	
Toluene	55.6	1.3	50	0	111	66	130	49.79	11.1(20)	
1,3-Dichloropropane	51.5	2.5	50	0	103	70	130	47.47	8.1(20)	
Dibromochloromethane	55	2.5	50	0	110	70	130	50.01	9.5(20)	
1,2-Dibromoethane (EDB)	106	5	100	0	106	70	130	98.38	7.6(20)	
Tetrachloroethene	57.3	2.5	50	0	115	61	134	50.95	11.7(20)	
1,1,1,2-Tetrachloroethane	58.3	2.5	50	0	117	70	130	53.2	9.1(20)	
Chlorobenzene	55.2	2.5	50	0	110	70	130	49.71	10.5(20)	
Ethylbenzene	58.4	1.3	50	0	117	68	130	52.1	11.4(20)	
m,p-Xylene	58.6	1.3	50	0	117	64	130	52.39	11.1(20)	
Bromoform	57.7	2.5	50	0	115	64	138	52.69	9.1(20)	
Styrene	51.2	2.5	50	0	102	69	130	45.99	10.7(20)	
o-Xylene	58.8	1.3	50	0	118	70	130	52.52	11.4(20)	
1,1,2,2-Tetrachloroethane	53.3	2.5	50	0	107	65	131	49.31	7.7(20)	
1,2,3-Trichloropropane	113	10	100	0	113	70	130	103.3	9.2(20)	
Isopropylbenzene	57.9	2.5	50	0	116	64	138	49.95	14.7(20)	
Bromobenzene	55.4	2.5	50	0	111	70	130	48.77	12.8(20)	
n-Propylbenzene	57.6	2.5	50	0	115	66	132	49.36	15.4(20)	
4-Chlorotoluene	57.4	2.5	50	0	115	70	130	49.62	14.5(20)	
2-Chlorotoluene	57.7	2.5	50	0	115	70	130	49.71	14.8(20)	
1,3,5-Trimethylbenzene	59.9	2.5	50	0	120	66	136	51.73	14.7(20)	
tert-Butylbenzene	58.5	2.5	50	0	117	65	137	50.2	15.3(20)	
1,2,4-Trimethylbenzene	60.3	2.5	50	0	121	65	137	51.98	14.9(20)	
sec-Butylbenzene	59.1	2.5	50	0	118	66	134	50.57	15.5(20)	
1,3-Dichlorobenzene	57.2	2.5	50	0	114	70	130	49.4	14.7(20)	
1,4-Dichlorobenzene	57.1	2.5	50	0	114	70	130	49.48	14.2(20)	
4-Isopropyltoluene	60.6	2.5	50	0	121	66	137	51.73	15.8(20)	
1,2-Dichlorobenzene	53.7	2.5	50	0	107	70	130	47.37	12.6(20)	
n-Butylbenzene	61.3	2.5	50	0	123	60	142	51.27	17.9(20)	
1,2-Dibromo-3-chloropropane (DBCP)	243	15	250	0	97	67	130	225.6	7.6(20)	
1,2,4-Trichlorobenzene	50.6	10	50	0	101	61	137	43.55	15.0(20)	
Naphthalene	46.9	10	50	0	94	40	167	41.31	12.6(20)	
Hexachlorobutadiene	112	10	100	0	112	61	130	93.83	18.1(20)	
1,2,3-Trichlorobenzene	50.3	10	50	0	101	51	144	43.51	14.4(20)	
Surr: 1,2-Dichloroethane-d4	51.6		50		103	70	130			
Surr: Toluene-d8	49.1		50		98	70	130			
Surr: 4-Bromofluorobenzene	46.3		50		93	70	130			

Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date: *03-Aug-10*

QC Summary Report

Work Order: 10072743

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.

R58 = MS/MSD RPD exceeded the laboratory control limit.

Billing Information :

CHAIN-OF-CUSTODY RECORD

CA

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

WorkOrder : BMIS10072743

Report Due By : 5:00 PM On : 10-Aug-10

Client:
Battelle Memorial Institute
655 West Broadway
Suite 1420
San Diego, CA 92101

Report Attention	Phone Number	EMail Address
David Conner	(818) 393-2808 x	connerd@battelle.org
Betsy Cutie	(614) 424-4899 x	cutiee@batelle.org
Shane Walton	(614) 424-4117 x	waltons@battelle.org

EDD Required : **Yes**

Sampled by : David Loera

PO : 218013

Client's COC # : 29484 Job : G005862/JPL Groundwater Monitoring

Cooler Temp	Samples Received	Date Printed
4 °C	27-Jul-10	27-Jul-10

QC Level : DS4 = DOD QC Required : Final Rpt, MBLK, InitCal/ConCal data, LCS, MS/MSD With Surrogates

Alpha Sample ID	Client Sample ID	Matrix	Collection Date	No. of Bottles Alpha	Sub	TAT	Requested Tests 300_0_W	314_W	METALS_DW	VOC_TIC_W	VOC_W				Sample Remarks
BMI10072743-01A	MW-7	AQ	07/26/10 09:30	16	0	10	Cl, NO2, NO3, SO4, PO4	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				MS/MSD
BMI10072743-02A	MW-16	AQ	07/26/10 12:50	8	0	10	Cl, NO2, NO3, SO4, PO4	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				

Comments: Security seals intact. Frozen ice. Temp Blank #7280 rec'd @ 4°C. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). Perchlorate RL of 1.0 ug/L. ;

	Signature	Print Name	Company	Date/Time
Logged in by:	Tara Jackson	Tara Jackson	Alpha Analytical, Inc.	7/27/10 955

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 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.
Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

Billing Information:
Name Battelle
Address 505 King Ave
City, State, Zip Columbus OH 43201
Phone Number _____ Fax _____

Alpha Analytical, Inc.
255 Glendale Avenue, Suite 21
Sparks, Nevada 89431-5778
Phone (775) 355-1044
Fax (775) 355-0406

Samples Collected From Which State? AZ ___ CA X NV ___ WA ___ ID ___ OR ___ OTHER ___

29484

Page # 1 of 1

Client Name	P.O. #	Job #
David Conner	218013	6005862/JPL GWM
Address	EMail Address	
	connerd@battelle.org	
City, State, Zip	Phone # 619-726-7311	Fax # 614-458-3484

Analyses Required

Required QC Level? I II III IV

EDD EDF? YES X NO ___

Global ID # ___

Time Sampled	Date Sampled	Matrix* See Key Below	Sampled by David Loera / Lab ID Number (Office Use Only)	Report Attention David Conner / Sample Description	TAT	Field Filtered	Total and type of containers ** See below	VOCs (524.2)	Total Cr (200.8)	Perchlorate (314.0)	300.0 *				REMARKS
0930	7/26	AQ	BMI1007-2743-01	MW-7	10		12V 4P	X	X	X	X				MS/MSD
1250	7/26	AQ	-02	MW-16	10		16V 2P	X	X	X	X				

ADDITIONAL INSTRUCTIONS: * Cl⁻, NO2, NO3, SO4, Ortho-P

	Signature	Print Name	Company	Date	Time
Relinquished by	David Loera	David Loera	Battelle	7-26-10	1330
Received by		Anthony Stark	Alpha Analytical	7-4-10	1500
Relinquished by		"	"	"	1500
Received by	Tara Dickinson	Tara Dickinson	Alpha	7/27/10	927
Relinquished by					
Received by					

*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

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 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.

Alpha Analytical, Inc.

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

Date: *16-Aug-10*

David Conner
Battelle Memorial Institute
655 West Broadway Suite 1420
San Diego, CA 92101
(619) 726-7311

CASE NARRATIVE

Job: G005862 / JPL Groundwater Monitoring

Work Order: BMI10072246 **Cooler Temp:** 4 °C

Alpha's Sample ID	Client's Sample ID	Matrix
10072246-01A	MW-10	Aqueous
10072246-02A	MW-15	Aqueous

Manually Integrated Analytes

Alpha's Sample ID	Test Reference	Analyte
NONE		

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

Alpha Analytical, Inc.

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 07/22/10

Job: G005862 / JPL Groundwater Monitoring

Perchlorate by Ion Chromatography
EPA Method 314.0

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-10**				
Lab ID : BMI10072246-01A Perchlorate	52.8	1.00 µg/L	07/23/10 12:00	07/23/10 14:29
Date Sampled 07/21/10 09:14				

Roger Scholl Randy Gardner Walter Hinchman

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.

8/4/10
Report Date

Alpha Analytical, Inc.

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 07/22/10

Job: G005862 / JPL Groundwater Monitoring

Metals by ICPMS
EPA Method 200.8

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-10**				
Lab ID : BMI10072246-01A Chromium (Cr)	0.0076	0.0050 mg/L	07/30/10 09:26	08/02/10 00:07
Date Sampled 07/21/10 09:14				
Client ID: **MW-15**				
Lab ID : BMI10072246-02A Chromium (Cr)	ND	0.0050 mg/L	07/30/10 09:26	08/02/10 00:13
Date Sampled 07/21/10 13:26				

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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.

8/4/10
Report Date

Alpha Analytical, Inc.

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641

Tentatively Identified Compounds - Volatile Organics by GC/MS

		Parameter	Estimated Concentration	Estimated Reporting Limit	Date Extracted	Date Analyzed
Client ID :	**MW-10**					
Lab ID :	BMI10072246-01A	* * * None Found * * *	ND	2.0 µg/L	07/23/10 18:49	07/23/10 18:49
Date Received :	07/22/10					
Date Sampled :	07/21/10 09:14					

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

Roger Scholl Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer
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Page 1 of 1

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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: (818) 393-2808
Fax: (614) 458-6641

Alpha Analytical Number: BMI10072246-01A
Client I.D. Number: MW-10

Sampled: 07/21/10 09:14
Received: 07/22/10
Extracted: 07/23/10 18:49
Analyzed: 07/23/10 18:49

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	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	0.91	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	2.4	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	106	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	98	(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 Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer

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8/4/10
Report Date

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VOC Sample Preservation Report

Work Order: BMI10072246 **Job:** G005862 / JPL Groundwater Monitoring

Alpha's Sample ID	Client's Sample ID	Matrix	pH
10072246-01A	MW-10	Aqueous	2

8/4/10
Report Date

Alpha Analytical, Inc.

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Date: *03-Aug-10*

QC Summary Report

Work Order: 10072246

Method Blank

Type: **MBLK** Test Code: **EPA Method 314.0**

File ID: **14** Batch ID: **24691** Analysis Date: **07/23/2010 12:57**

Sample ID: **MB-24691** Units : **µg/L** Run ID: **IC_3_100723A** Prep Date: **07/23/2010 12:00**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	ND	1								

Laboratory Fortified Blank

Type: **LFB** Test Code: **EPA Method 314.0**

File ID: **15** Batch ID: **24691** Analysis Date: **07/23/2010 13:16**

Sample ID: **LFB-24691** Units : **µg/L** Run ID: **IC_3_100723A** Prep Date: **07/23/2010 12:00**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	25.9	2	25		104	85	115			

Sample Matrix Spike

Type: **LFM** Test Code: **EPA Method 314.0**

File ID: **20** Batch ID: **24691** Analysis Date: **07/23/2010 14:48**

Sample ID: **10072246-01ALFM** Units : **µg/L** Run ID: **IC_3_100723A** Prep Date: **07/23/2010 12:00**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	86.2	2	25	52.82	134	80	120			M1

Sample Matrix Spike Duplicate

Type: **LFMD** Test Code: **EPA Method 314.0**

File ID: **21** Batch ID: **24691** Analysis Date: **07/23/2010 15:06**

Sample ID: **10072246-01ALFMD** Units : **µg/L** Run ID: **IC_3_100723A** Prep Date: **07/23/2010 12:00**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	86	2	25	52.82	133	80	120	86.24	0.3(15)	M1

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.

M1 = Matrix spike recovery was high, the method control sample recovery was acceptable.

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

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Date: *04-Aug-10*

QC Summary Report

Work Order: 10072246

Method Blank

Type **MBLK** Test Code: **EPA Method 200.8**

File ID: **073110.B\R173MB.D** Batch ID: **24732K** Analysis Date: **08/01/2010 22:09**

Sample ID: **MB-24732** Units : **mg/L** Run ID: **ICP/MS_100801F** Prep Date: **07/30/2010 09:26**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	ND	0.005								

Laboratory Control Spike

Type **LCS** Test Code: **EPA Method 200.8**

File ID: **073110.B\R174LC.D** Batch ID: **24732K** Analysis Date: **08/01/2010 22:15**

Sample ID: **LCS-24732** Units : **mg/L** Run ID: **ICP/MS_100801F** Prep Date: **07/30/2010 09:26**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0461	0.005	0.05		92	80	120			

Sample Matrix Spike

Type **MS** Test Code: **EPA Method 200.8**

File ID: **073110.B\R178MS.D** Batch ID: **24732K** Analysis Date: **08/01/2010 22:37**

Sample ID: **10072804-10AMS** Units : **mg/L** Run ID: **ICP/MS_100801F** Prep Date: **07/30/2010 09:26**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0465	0.005	0.05	0	93	80	120			

Sample Matrix Spike Duplicate

Type **MSD** Test Code: **EPA Method 200.8**

File ID: **073110.B\R179MD.D** Batch ID: **24732K** Analysis Date: **08/01/2010 22:43**

Sample ID: **10072804-10AMSD** Units : **mg/L** Run ID: **ICP/MS_100801F** Prep Date: **07/30/2010 09:26**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0458	0.005	0.05	0	92	80	120	0.04649	1.5(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.

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Date: *03-Aug-10*

QC Summary Report

Work Order: 10072246

Method Blank Type: **MBLK** Test Code: **EPA Method SW8260B**

File ID: **C:\HPCHEM\MS07\DATA\100723\10072305.D** Batch ID: **MS07W0723M** Analysis Date: **07/23/2010 10:33**

Sample ID: **MBLK MS07W0723M** Units : **µg/L** Run ID: **MSD_07_100723C** Prep Date: **07/23/2010 10:33**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	ND	0.5								
Chloromethane	ND	1								
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	ND	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)	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	ND	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)	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	ND	0.5								
Dibromochloromethane	ND	0.5								
1,2-Dibromoethane (EDB)	ND	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	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								
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	ND	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	ND	1								
1,2,3-Trichlorobenzene	ND	1								
Surr: 1,2-Dichloroethane-d4	10.3		10		103	70	130			
Surr: Toluene-d8	9.81		10		98	70	130			

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Date: 03-Aug-10

QC Summary Report

Work Order: 10072246

Surr: 4-Bromofluorobenzene	9.66		10	97	70	130			

Laboratory Control Spike Type: **LCS** Test Code: **EPA Method SW8260B**

File ID: **C:\HPCHEM\MS07\DATA\100723\10072303.D** Batch ID: **MS07W0723M** Analysis Date: **07/23/2010 09:46**

Sample ID: **LCS MS07W0723M** Units : **µg/L** Run ID: **MSD_07_100723C** Prep Date: **07/23/2010 09:46**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	7.39	1	10		74	70	130			
Chloromethane	7.05	2	10		71	70	130			
Vinyl chloride	8.67	1	10		87	70	130			
Chloroethane	8.17	1	10		82	70	130			
Bromomethane	7.63	2	10		76	70	130			
Trichlorofluoromethane	8.54	1	10		85	70	130			
1,1-Dichloroethene	9.36	1	10		94	70	130			
Dichloromethane	9.23	2	10		92	70	130			
trans-1,2-Dichloroethene	8.18	1	10		82	70	130			
Methyl tert-butyl ether (MTBE)	11.5	0.5	10		115	70	130			
1,1-Dichloroethane	9.24	1	10		92	70	130			
cis-1,2-Dichloroethene	9.57	1	10		96	70	130			
Bromochloromethane	9.79	1	10		98	70	130			
Chloroform	8.92	1	10		89	70	130			
2,2-Dichloropropane	10.8	1	10		108	70	130			
1,2-Dichloroethane	9.92	1	10		99	70	130			
1,1,1-Trichloroethane	9.73	1	10		97	70	130			
1,1-Dichloropropene	9.99	1	10		99.9	70	130			
Carbon tetrachloride	9.6	1	10		96	70	130			
Benzene	9.77	0.5	10		98	70	130			
Dibromomethane	10.1	1	10		101	70	130			
1,2-Dichloropropane	9.67	1	10		97	70	130			
Trichloroethene	9.21	1	10		92	70	130			
Bromodichloromethane	9.86	1	10		99	70	130			
cis-1,3-Dichloropropene	8.89	1	10		89	70	130			
trans-1,3-Dichloropropene	10.8	1	10		108	70	130			
1,1,2-Trichloroethane	10.3	1	10		103	70	130			
Toluene	9.3	0.5	10		93	70	130			
1,3-Dichloropropane	9.65	1	10		97	70	130			
Dibromochloromethane	9.97	1	10		99.7	70	130			
1,2-Dibromoethane (EDB)	19.9	2	20		99.6	70	130			
Tetrachloroethene	9.24	1	10		92	70	130			
1,1,1,2-Tetrachloroethane	9.81	1	10		98	70	130			
Chlorobenzene	9.36	1	10		94	70	130			
Ethylbenzene	9.72	0.5	10		97	70	130			
m,p-Xylene	9.74	0.5	10		97	70	130			
Bromoform	10.6	1	10		106	70	130			
Styrene	8.71	1	10		87	70	130			
o-Xylene	9.91	0.5	10		99	70	130			
1,1,2,2-Tetrachloroethane	10.3	1	10		103	70	130			
1,2,3-Trichloropropane	21.5	2	20		108	70	130			
Isopropylbenzene	9.66	1	10		97	70	130			
Bromobenzene	9.54	1	10		95	70	130			
n-Propylbenzene	9.42	1	10		94	70	130			
4-Chlorotoluene	9.56	1	10		96	70	130			
2-Chlorotoluene	9.55	1	10		96	70	130			
1,3,5-Trimethylbenzene	10.1	1	10		101	70	130			
tert-Butylbenzene	9.59	1	10		96	70	130			
1,2,4-Trimethylbenzene	10.3	1	10		103	70	130			
sec-Butylbenzene	9.63	1	10		96	70	130			
1,3-Dichlorobenzene	9.55	1	10		96	70	130			
1,4-Dichlorobenzene	9.65	1	10		97	70	130			
4-Isopropyltoluene	9.88	1	10		99	70	130			
1,2-Dichlorobenzene	9.33	1	10		93	70	130			
n-Butylbenzene	10.2	1	10		102	70	130			
1,2-Dibromo-3-chloropropane (DBCP)	49.3	3	50		99	70	130			
1,2,4-Trichlorobenzene	8.83	2	10		88	70	130			
Naphthalene	9.64	2	10		96	70	130			
Hexachlorobutadiene	17.9	2	20		89	70	130			
1,2,3-Trichlorobenzene	8.99	2	10		90	70	130			
Surr: 1,2-Dichloroethane-d4	10.7		10		107	70	130			
Surr: Toluene-d8	9.7		10		97	70	130			
Surr: 4-Bromofluorobenzene	9.45		10		95	70	130			

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Date: *03-Aug-10*

QC Summary Report

Work Order: 10072246

Sample Matrix Spike Type: **MS** Test Code: **EPA Method SW8260B**

File ID: **C:\HPCHEM\MS07\DATA\100723\10072308.D** Batch ID: **MS07W0723M** Analysis Date: **07/23/2010 11:44**

Sample ID: **10072246-01AMS** Units : **µg/L** Run ID: **MSD_07_100723C** Prep Date: **07/23/2010 11:44**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	39.7	2.5	50	0	79	13	167			
Chloromethane	38.3	10	50	0	77	28	145			
Vinyl chloride	45.9	2.5	50	0	92	43	134			
Chloroethane	44.3	2.5	50	0	89	39	154			
Bromomethane	40.3	10	50	0	81	19	176			
Trichlorofluoromethane	46.8	2.5	50	0	94	34	160			
1,1-Dichloroethene	51.5	2.5	50	0	103	60	130			
Dichloromethane	48.7	10	50	0	97	68	130			
trans-1,2-Dichloroethene	53.2	2.5	50	0	106	63	130			
Methyl tert-butyl ether (MTBE)	57.1	1.3	50	0	114	56	141			
1,1-Dichloroethane	50.7	2.5	50	0	101	61	130			
cis-1,2-Dichloroethene	52.8	2.5	50	0	106	70	130			
Bromochloromethane	52	2.5	50	0	104	70	130			
Chloroform	49.4	2.5	50	0.91	97	67	130			
2,2-Dichloropropane	58.2	2.5	50	0	116	30	152			
1,2-Dichloroethane	52.2	2.5	50	0	104	60	135			
1,1,1-Trichloroethane	53.9	2.5	50	0	108	59	137			
1,1-Dichloropropene	54.7	2.5	50	0	109	63	130			
Carbon tetrachloride	53.3	2.5	50	0	107	50	147			
Benzene	53.3	1.3	50	0	107	67	130			
Dibromomethane	51.6	2.5	50	0	103	69	133			
1,2-Dichloropropane	52.3	2.5	50	0	105	69	130			
Trichloroethene	52.5	2.5	50	2.42	100	69	130			
Bromodichloromethane	52.6	2.5	50	0	105	66	134			
cis-1,3-Dichloropropene	43.8	2.5	50	0	88	63	130			
trans-1,3-Dichloropropene	54.9	2.5	50	0	110	66	131			
1,1,2-Trichloroethane	50.6	2.5	50	0	101	68	130			
Toluene	50.6	1.3	50	0	101	66	130			
1,3-Dichloropropane	49.5	2.5	50	0	99	70	130			
Dibromochloromethane	50.6	2.5	50	0	101	70	130			
1,2-Dibromoethane (EDB)	101	5	100	0	101	70	130			
Tetrachloroethene	50.6	2.5	50	0	101	61	134			
1,1,1,2-Tetrachloroethane	52.3	2.5	50	0	105	70	130			
Chlorobenzene	50.3	2.5	50	0	101	70	130			
Ethylbenzene	52.7	1.3	50	0	105	68	130			
m,p-Xylene	53.2	1.3	50	0	106	64	130			
Bromoform	52.8	2.5	50	0	106	64	138			
Styrene	46.6	2.5	50	0	93	69	130			
o-Xylene	53.7	1.3	50	0	107	70	130			
1,1,2,2-Tetrachloroethane	51.3	2.5	50	0	103	65	131			
1,2,3-Trichloropropane	109	10	100	0	109	70	130			
Isopropylbenzene	52.2	2.5	50	0	104	64	138			
Bromobenzene	50.6	2.5	50	0	101	70	130			
n-Propylbenzene	51.9	2.5	50	0	104	66	132			
4-Chlorotoluene	51.5	2.5	50	0	103	70	130			
2-Chlorotoluene	51.9	2.5	50	0	104	70	130			
1,3,5-Trimethylbenzene	54	2.5	50	0	108	66	136			
tert-Butylbenzene	52.3	2.5	50	0	105	65	137			
1,2,4-Trimethylbenzene	53.7	2.5	50	0	107	65	137			
sec-Butylbenzene	52.6	2.5	50	0	105	66	134			
1,3-Dichlorobenzene	50.9	2.5	50	0	102	70	130			
1,4-Dichlorobenzene	51	2.5	50	0	102	70	130			
4-Isopropyltoluene	53.3	2.5	50	0	107	66	137			
1,2-Dichlorobenzene	49	2.5	50	0	98	70	130			
n-Butylbenzene	53.3	2.5	50	0	107	60	142			
1,2-Dibromo-3-chloropropane (DBCP)	232	15	250	0	93	67	130			
1,2,4-Trichlorobenzene	43.9	10	50	0	88	61	137			
Naphthalene	43.3	10	50	0	87	40	167			
Hexachlorobutadiene	95.3	10	100	0	95	61	130			
1,2,3-Trichlorobenzene	43.9	10	50	0	88	51	144			
Surr: 1,2-Dichloroethane-d4	52.9		50		106	70	130			
Surr: Toluene-d8	48.4		50		97	70	130			
Surr: 4-Bromofluorobenzene	46.7		50		93	70	130			

Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date: 03-Aug-10

QC Summary Report

Work Order: 10072246

Sample Matrix Spike Duplicate Type: **MSD** Test Code: **EPA Method SW8260B**

File ID: **C:\HPCHEM\MS07\DATA\100723\10072309.D** Batch ID: **MS07W0723M** Analysis Date: **07/23/2010 12:08**

Sample ID: **10072246-01AMSD** Units : **µg/L** Run ID: **MSD_07_100723C** Prep Date: **07/23/2010 12:08**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	40.1	2.5	50	0	80	13	167	39.74	0.9(20)	
Chloromethane	38.8	10	50	0	78	28	145	38.33	1.1(20)	
Vinyl chloride	47.7	2.5	50	0	95	43	134	45.87	4.0(20)	
Chloroethane	45.5	2.5	50	0	91	39	154	44.33	2.7(20)	
Bromomethane	55.4	10	50	0	111	19	176	40.34	31.4(20)	R5
Trichlorofluoromethane	46.9	2.5	50	0	94	34	160	46.77	0.3(20)	
1,1-Dichloroethene	52.2	2.5	50	0	104	60	130	51.52	1.3(20)	
Dichloromethane	49.4	10	50	0	99	68	130	48.69	1.4(20)	
trans-1,2-Dichloroethene	46.2	2.5	50	0	92	63	130	53.17	14.1(20)	
Methyl tert-butyl ether (MTBE)	57.4	1.3	50	0	115	56	141	57.1	0.5(20)	
1,1-Dichloroethane	50.8	2.5	50	0	102	61	130	50.74	0.2(20)	
cis-1,2-Dichloroethene	52.8	2.5	50	0	106	70	130	52.77	0.1(20)	
Bromochloromethane	52.4	2.5	50	0	105	70	130	52.02	0.8(20)	
Chloroform	49.4	2.5	50	0.91	97	67	130	49.44	0.2(20)	
2,2-Dichloropropane	58.5	2.5	50	0	117	30	152	58.22	0.5(20)	
1,2-Dichloroethane	51.6	2.5	50	0	103	60	135	52.18	1.1(20)	
1,1,1-Trichloroethane	54.7	2.5	50	0	109	59	137	53.94	1.5(20)	
1,1-Dichloropropene	55.6	2.5	50	0	111	63	130	54.7	1.6(20)	
Carbon tetrachloride	53.6	2.5	50	0	107	50	147	53.27	0.6(20)	
Benzene	54.2	1.3	50	0	108	67	130	53.33	1.6(20)	
Dibromomethane	51.2	2.5	50	0	102	69	133	51.62	0.9(20)	
1,2-Dichloropropane	52.7	2.5	50	0	105	69	130	52.3	0.7(20)	
Trichloroethene	53.8	2.5	50	2.42	103	69	130	52.45	2.5(20)	
Bromodichloromethane	52.8	2.5	50	0	106	66	134	52.58	0.3(20)	
cis-1,3-Dichloropropene	44	2.5	50	0	88	63	130	43.8	0.5(20)	
trans-1,3-Dichloropropene	55.3	2.5	50	0	111	66	131	54.91	0.6(20)	
1,1,2-Trichloroethane	51	2.5	50	0	102	68	130	50.59	0.9(20)	
Toluene	51.8	1.3	50	0	104	66	130	50.63	2.2(20)	
1,3-Dichloropropane	49.4	2.5	50	0	99	70	130	49.47	0.2(20)	
Dibromochloromethane	51.5	2.5	50	0	103	70	130	50.6	1.8(20)	
1,2-Dibromoethane (EDB)	102	5	100	0	102	70	130	100.6	1.3(20)	
Tetrachloroethene	52.5	2.5	50	0	105	61	134	50.55	3.8(20)	
1,1,1,2-Tetrachloroethane	53.1	2.5	50	0	106	70	130	52.25	1.6(20)	
Chlorobenzene	51.3	2.5	50	0	103	70	130	50.31	2.0(20)	
Ethylbenzene	54	1.3	50	0	108	68	130	52.69	2.4(20)	
m,p-Xylene	53.7	1.3	50	0	107	64	130	53.24	0.8(20)	
Bromoform	54	2.5	50	0	108	64	138	52.77	2.2(20)	
Styrene	47.2	2.5	50	0	94	69	130	46.64	1.1(20)	
o-Xylene	54.6	1.3	50	0	109	70	130	53.68	1.7(20)	
1,1,2,2-Tetrachloroethane	51.7	2.5	50	0	103	65	131	51.27	0.8(20)	
1,2,3-Trichloropropane	109	10	100	0	109	70	130	108.6	0.1(20)	
Isopropylbenzene	54	2.5	50	0	108	64	138	52.15	3.5(20)	
Bromobenzene	51.7	2.5	50	0	103	70	130	50.59	2.1(20)	
n-Propylbenzene	53.3	2.5	50	0	107	66	132	51.91	2.7(20)	
4-Chlorotoluene	53.6	2.5	50	0	107	70	130	51.46	4.0(20)	
2-Chlorotoluene	53.7	2.5	50	0	107	70	130	51.85	3.5(20)	
1,3,5-Trimethylbenzene	56.1	2.5	50	0	112	66	136	53.97	3.9(20)	
tert-Butylbenzene	54.2	2.5	50	0	108	65	137	52.25	3.7(20)	
1,2,4-Trimethylbenzene	56.5	2.5	50	0	113	65	137	53.69	5.1(20)	
sec-Butylbenzene	54.7	2.5	50	0	109	66	134	52.55	4.0(20)	
1,3-Dichlorobenzene	52.6	2.5	50	0	105	70	130	50.86	3.4(20)	
1,4-Dichlorobenzene	53	2.5	50	0	106	70	130	51.01	3.7(20)	
4-Isopropyltoluene	55.9	2.5	50	0	112	66	137	53.25	4.9(20)	
1,2-Dichlorobenzene	50.6	2.5	50	0	101	70	130	48.96	3.2(20)	
n-Butylbenzene	57.3	2.5	50	0	115	60	142	53.28	7.2(20)	
1,2-Dibromo-3-chloropropane (DBCP)	237	15	250	0	95	67	130	231.9	2.2(20)	
1,2,4-Trichlorobenzene	47.3	10	50	0	95	61	137	43.86	7.5(20)	
Naphthalene	46.5	10	50	0	93	40	167	43.27	7.2(20)	
Hexachlorobutadiene	102	10	100	0	102	61	130	95.3	6.6(20)	
1,2,3-Trichlorobenzene	47.4	10	50	0	95	51	144	43.88	7.7(20)	
Surr: 1,2-Dichloroethane-d4	51		50		102	70	130			
Surr: Toluene-d8	48.7		50		97	70	130			
Surr: 4-Bromofluorobenzene	47.1		50		94	70	130			

Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date: *03-Aug-10*

QC Summary Report

Work Order: 10072246

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.

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

R5 = MS/MSD RPD exceeded the laboratory control limit. Recovery met acceptance criteria.

AMENDED

Billing Information :

CHAIN-OF-CUSTODY RECORD

CA

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

WorkOrder : BMIS10072246

Report Due By : 5:00 PM On : 05-Aug-10

Client:
Battelle Memorial Institute
655 West Broadway
Suite 1420
San Diego, CA 92101

Report Attention	Phone Number	EMail Address
David Conner	(818) 393-2808 x	connerd@battelle.org
Betsy Cutie	(614) 424-4899 x	cutiee@batelle.org
Shane Walton	(614) 424-4117 x	waltons@battelle.org

EDD Required : **No**

Sampled by : David Loera

PO : 218013

Client's COC # : 29483 Job : G005862/JPL Groundwater Monitoring

Cooler Temp	Samples Received	Date Printed
4 °C	22-Jul-10	27-Jul-10

QC Level : DS4 = DOD QC Required : Final Rpt, MBLK, InitCal/ConCal data, LCS, MS/MSD With Surrogates

Alpha Sample ID	Client Sample ID	Matrix	Collection Date	No. of Bottles Alpha	Sub	TAT	Requested Tests 314_W	METALS_DW	VOC_TIC_W	VOC_W				Sample Remarks
BMI10072246-01A	MW-10	AQ	07/21/10 09:14	21	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				MS/MSD. Logged in using earliest sampling time
BMI10072246-02A	MW-15	AQ	07/21/10 13:26	1	0	10		Cr						Level IV QC

Comments: Security seals intact. Frozen ice. No Temp Blank received. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). Perchlorate RL of 1.0 ug/L. Amended 7/27/10 @ 10:30 to change metals test group from : Metals_AQ to Metals_DW, due to login error. TD.

	Signature	Print Name	Company	Date/Time
Logged in by:	Tara Dickinson	Tara Dickinson	Alpha Analytical, Inc.	7/27/10 1030

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 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.
Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

Billing Information :

CHAIN-OF-CUSTODY RECORD

CA

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

WorkOrder : BMIS10072246

Report Due By : 5:00 PM On : 05-Aug-10

Client:
Battelle Memorial Institute
655 West Broadway
Suite 1420
San Diego, CA 92101

Report Attention	Phone Number	EMail Address
David Conner	(818) 393-2808 x	connerd@battelle.org
Betsy Cutie	(614) 424-4899 x	cutiee@batelle.org
Shane Walton	(614) 424-4117 x	waltons@battelle.org

EDD Required : **Yes**

Sampled by : David Loera

PO : 218013

Client's COC # : 29483 Job : G005862/JPL Groundwater Monitoring

Cooler Temp	Samples Received	Date Printed
4 °C	22-Jul-10	22-Jul-10

QC Level : DS4 = DOD QC Required : Final Rpt, MBLK, InitCal/ConCal data, LCS, MS/MSD With Surrogates

Alpha Sample ID	Client Sample ID	Matrix	Collection Date	No. of Bottles Alpha	Sub	TAT	Requested Tests 314_W	METALS_AQ	VOC_TIC_W	VOC_W				Sample Remarks
BMI10072246-01A	MW-10	AQ	07/21/10 09:14	21	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				MS/MSD. Logged in using earliest sampling time
BMI10072246-02A	MW-15	AQ	07/21/10 13:26	1	0	10		Cr						Level IV QC

Comments: Security seals intact. Frozen ice. No Temp Blank received. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). Perchlorate RL of 1.0 ug/L. :

	Signature	Print Name	Company	Date/Time
Logged in by:	Tave Dickinson	Tave Dickinson	**Alpha Analytical, Inc.**	7/22/10 1230

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 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.

Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

Billing Information:
Name Battelle
Address 505 King Ave
City, State, Zip Columbus OH 43201
Phone Number 614-424-4849 Fax 614 424-3667

Alpha Analytical, Inc.
255 Glendale Avenue, Suite 21
Sparks, Nevada 89431-5778
Phone (775) 355-1044
Fax (775) 355-0406

Samples Collected From Which State? AZ ___ CA X NV ___ WA ___ ID ___ OR ___ OTHER ___

29483

Page # 1 of 1

Client Name	P.O. #	Job #
David Conner	218013	600586Z/SPLGWM
Address	EMail Address	
	connerd@battelle.org	
City, State, Zip	Phone #	Fax #
	619-726-7311	614-458-5489

Time Sampled	Date Sampled	Matrix* See Key Below	Sampled by David Loera Lab ID Number (Office Use Only)	Report Attention David Conner Sample Description	TAT	Field Filtered	Total and type of containers ** See below	VOCs (524.2)	Total Cr (200.8)	Perchlorate (314.0)					REMARKS
0914	7/21	AQ	BMI1007-2246-01	MW-10	10		6V 1P	X	X	X					
0920	7/21	AQ	-01 -02	MW-10-MS	10		6V 1P	X	X	X					
0925	7/21	AQ	-01 -03	MW-10-MSD	10		6V 1P	X	X	X					
1326	7/21	AQ	-02 -04	MW-15	10		1P		X						QC level IV for MW-15

Analyses Required

Required QC Level? I II III IV

EDD EDF? YES X NO

Global ID # ___

ADDITIONAL INSTRUCTIONS:

	Signature	Print Name	Company	Date	Time
Relinquished by	David Loera	David Loera	Battelle	7-21-10	1400
Received by		Anthony Stark	Alpha Analytical	7-21-10	1400
Relinquished by		Anthony Stark	Alpha Analytical	7-21-10	1400
Received by	Tara Dickinson	Tara Dickinson	Alpha	7/22/10	1232
Relinquished by					
Received by					

*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

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 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.

Alpha Analytical, Inc.

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

Date: *11-Aug-10*

David Conner
Battelle Memorial Institute
655 West Broadway Suite 1420
San Diego, CA 92101
(619) 726-7311

CASE NARRATIVE

Job: G005862 / JPL Groundwater Monitoring

Work Order: BMI10072121 **Cooler Temp:** 4 °C

Alpha's Sample ID	Client's Sample ID	Matrix
10072121-01A	MW-13	Aqueous
10072121-02A	MW-8	Aqueous
10072121-03A	DUPE-1-3Q10	Aqueous

Manually Integrated Analytes

Alpha's Sample ID	Test Reference	Analyte
NONE		

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

Alpha Analytical, Inc.

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 07/21/10

Job: G005862/JPL Groundwater Monitoring

Anions by IC
EPA Method 300.0

	Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-13**					
Lab ID : BMI10072121-01A	Chloride	54	50 mg/L	07/22/10 09:47	07/22/10 10:08
Date Sampled 07/20/10 10:26	Nitrite (NO2) - N	ND	0.25 mg/L	07/22/10 09:47	07/22/10 10:08
	Nitrate (NO3) - N	6.7	0.25 mg/L	07/22/10 09:47	07/22/10 10:08
	Phosphate, ortho - P	ND	0.50 mg/L	07/22/10 09:47	07/22/10 10:08
	Sulfate (SO4)	66	0.50 mg/L	07/22/10 09:47	07/22/10 10:08
Client ID: **MW-8**					
Lab ID : BMI10072121-02A	Chloride	6.8	0.50 mg/L	07/22/10 09:47	07/22/10 11:22
Date Sampled 07/20/10 14:11	Nitrite (NO2) - N	ND	0.25 mg/L	07/22/10 09:47	07/22/10 11:22
	Nitrate (NO3) - N	0.80	0.25 mg/L	07/22/10 09:47	07/22/10 11:22
	Phosphate, ortho - P	ND	0.50 mg/L	07/22/10 09:47	07/22/10 11:22
	Sulfate (SO4)	24	0.50 mg/L	07/22/10 09:47	07/22/10 11:22
Client ID: **DUPE-1-3Q10**					
Lab ID : BMI10072121-03A	Chloride	6.1	0.50 mg/L	07/22/10 09:47	07/22/10 12:17
Date Sampled 07/20/10 14:15	Nitrite (NO2) - N	ND	0.25 mg/L	07/22/10 09:47	07/22/10 12:17
	Nitrate (NO3) - N	0.70	0.25 mg/L	07/22/10 09:47	07/22/10 12:17
	Phosphate, ortho - P	ND	0.50 mg/L	07/22/10 09:47	07/22/10 12:17
	Sulfate (SO4)	24	0.50 mg/L	07/22/10 09:47	07/22/10 12:17

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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.

8/3/10
Report Date

Alpha Analytical, Inc.

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 07/21/10

Job: G005862/JPL Groundwater Monitoring

Perchlorate by Ion Chromatography
EPA Method 314.0

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-13**				
Lab ID : BMI10072121-01A Perchlorate	1,040	100 µg/L	07/23/10 12:00	07/23/10 17:15
Date Sampled 07/20/10 10:26				
Client ID: **MW-8**				
Lab ID : BMI10072121-02A Perchlorate	ND	1.00 µg/L	07/23/10 12:00	07/23/10 16:01
Date Sampled 07/20/10 14:11				
Client ID: **DUPE-1-3Q10**				
Lab ID : BMI10072121-03A Perchlorate	ND	1.00 µg/L	07/23/10 12:00	07/23/10 16:38
Date Sampled 07/20/10 14:15				

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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.

8/3/10
Report Date

Alpha Analytical, Inc.

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 07/21/10

Job: G005862 / JPL Groundwater Monitoring

Metals by ICPMS
EPA Method 200.8

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-13**				
Lab ID : BMI10072121-01A Chromium (Cr)	0.012	0.0050 mg/L	07/30/10 09:26	08/02/10 12:18
Date Sampled 07/20/10 10:26				
Client ID: **MW-8**				
Lab ID : BMI10072121-02A Chromium (Cr)	ND	0.0050 mg/L	07/30/10 09:26	08/02/10 12:24
Date Sampled 07/20/10 14:11				
Client ID: **DUPE-1-3Q10**				
Lab ID : BMI10072121-03A Chromium (Cr)	ND	0.0050 mg/L	07/30/10 09:26	08/02/10 12:30
Date Sampled 07/20/10 14:15				

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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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: (818) 393-2808
Fax: (614) 458-6641

Tentatively Identified Compounds - Volatile Organics by GC/MS

	Parameter	Estimated Concentration	Estimated Reporting Limit	Date Extracted	Date Analyzed
Client ID : **MW-13**					
Lab ID : BMI10072121-01A	*** None Found ***	ND	2.0 µg/L	07/23/10 17:38	07/23/10 17:38
Date Received : 07/21/10					
Date Sampled : 07/20/10 10:26					
Client ID : **MW-8**					
Lab ID : BMI10072121-02A	*** None Found ***	ND	2.0 µg/L	07/23/10 18:02	07/23/10 18:02
Date Received : 07/21/10					
Date Sampled : 07/20/10 14:11					
Client ID : **DUPE-1-3Q10**					
Lab ID : BMI10072121-03A	*** None Found ***	ND	2.0 µg/L	07/23/10 18:25	07/23/10 18:25
Date Received : 07/21/10					
Date Sampled : 07/20/10 14:15					

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

Roger Scholl Randy Gardner Walter Hinchman

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Page 1 of 1

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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: (818) 393-2808
Fax: (614) 458-6641

Alpha Analytical Number: BMI10072121-01A
Client I.D. Number: MW-13

Sampled: 07/20/10 10:26
Received: 07/21/10
Extracted: 07/23/10 17:38
Analyzed: 07/23/10 17:38

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	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	5.6	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	1.0	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	1.3	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	0.86	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	108	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	97	(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	0.78	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 Randy Gardner Walter Hinchman

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Report Date

Alpha Analytical, Inc.

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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: (818) 393-2808
Fax: (614) 458-6641

Alpha Analytical Number: BMI10072121-02A
Client I.D. Number: MW-8

Sampled: 07/20/10 14:11
Received: 07/21/10
Extracted: 07/23/10 18:02
Analyzed: 07/23/10 18:02

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit		Compound	Concentration	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 (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	108	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65 Surr: Toluene-d8	97	(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 Randy Gardner Walter Hinchman

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8/3/10
Report Date

Alpha Analytical, Inc.

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(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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641

Alpha Analytical Number: BMI10072121-03A
Client I.D. Number: DUPE-1-3Q10

Sampled: 07/20/10 14:15
Received: 07/21/10
Extracted: 07/23/10 18:25
Analyzed: 07/23/10 18:25

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	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 (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	104	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	97	(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 Randy Gardner Walter Hinchman

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8/3/10
Report Date

Alpha Analytical, Inc.

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: BMI10072121 **Job:** G005862 / JPL Groundwater Monitoring

Alpha's Sample ID	Client's Sample ID	Matrix	pH
10072121-01A	MW-13	Aqueous	2
10072121-02A	MW-8	Aqueous	2
10072121-03A	DUPE-1-3Q10	Aqueous	2

8/3/10

Report Date

Alpha Analytical, Inc.

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

Date: *04-Aug-10*

QC Summary Report

Work Order: 10072121

Method Blank

Type: **MBLK** Test Code: **EPA Method 200.8**
File ID: **073110.B\R173MB.D** Batch ID: **24732K** Analysis Date: **08/01/2010 22:09**
Sample ID: **MB-24732** Units : **mg/L** Run ID: **ICP/MS_100801F** Prep Date: **07/30/2010 09:26**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	ND	0.005								

Laboratory Control Spike

Type: **LCS** Test Code: **EPA Method 200.8**
File ID: **073110.B\R174LC.D** Batch ID: **24732K** Analysis Date: **08/01/2010 22:15**
Sample ID: **LCS-24732** Units : **mg/L** Run ID: **ICP/MS_100801F** Prep Date: **07/30/2010 09:26**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0461	0.005	0.05		92	80	120			

Sample Matrix Spike

Type: **MS** Test Code: **EPA Method 200.8**
File ID: **073110.B\R178MS.D** Batch ID: **24732K** Analysis Date: **08/01/2010 22:37**
Sample ID: **10072804-10AMS** Units : **mg/L** Run ID: **ICP/MS_100801F** Prep Date: **07/30/2010 09:26**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0465	0.005	0.05	0	93	80	120			

Sample Matrix Spike Duplicate

Type: **MSD** Test Code: **EPA Method 200.8**
File ID: **073110.B\R179MD.D** Batch ID: **24732K** Analysis Date: **08/01/2010 22:43**
Sample ID: **10072804-10AMSD** Units : **mg/L** Run ID: **ICP/MS_100801F** Prep Date: **07/30/2010 09:26**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0458	0.005	0.05	0	92	80	120	0.04649	1.5(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.

Alpha Analytical, Inc.

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

Date: *02-Aug-10*

QC Summary Report

Work Order: 10072121

Method Blank

Type: **MBLK** Test Code: **EPA Method 314.0**
File ID: **14** Batch ID: **24691** Analysis Date: **07/23/2010 12:57**
Sample ID: **MB-24691** Units : **µg/L** Run ID: **IC_3_100723A** Prep Date: **07/23/2010 12:00**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	ND	1								

Laboratory Fortified Blank

Type: **LFB** Test Code: **EPA Method 314.0**
File ID: **15** Batch ID: **24691** Analysis Date: **07/23/2010 13:16**
Sample ID: **LFB-24691** Units : **µg/L** Run ID: **IC_3_100723A** Prep Date: **07/23/2010 12:00**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	25.9	2	25		104	85	115			

Sample Matrix Spike

Type: **LFM** Test Code: **EPA Method 314.0**
File ID: **20** Batch ID: **24691** Analysis Date: **07/23/2010 14:48**
Sample ID: **10072246-01ALFM** Units : **µg/L** Run ID: **IC_3_100723A** Prep Date: **07/23/2010 12:00**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	86.2	2	25	52.82	134	80	120			M1

Sample Matrix Spike Duplicate

Type: **LFMD** Test Code: **EPA Method 314.0**
File ID: **21** Batch ID: **24691** Analysis Date: **07/23/2010 15:06**
Sample ID: **10072246-01ALFMD** Units : **µg/L** Run ID: **IC_3_100723A** Prep Date: **07/23/2010 12:00**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	86	2	25	52.82	133	80	120	86.24	0.3(15)	M1

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.

M1 = Matrix spike recovery was high, the method control sample recovery was acceptable.

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

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Date: *02-Aug-10*

QC Summary Report

Work Order: 10072121

Method Blank

Type: **MBLK** Test Code: **EPA Method 300.0**

File ID: **21** Batch ID: **24676** Analysis Date: **07/22/2010 10:26**

Sample ID: **MB-24676** Units : **mg/L** Run ID: **IC_1_100722A** Prep Date: **07/22/2010 09:47**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
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: **LFB** Test Code: **EPA Method 300.0**

File ID: **22** Batch ID: **24676** Analysis Date: **07/22/2010 10:45**

Sample ID: **LFB-24676** Units : **mg/L** Run ID: **IC_1_100722A** Prep Date: **07/22/2010 09:47**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	53.6	0.5	50		107	90	110			
Nitrite (NO2) - N	5.43	0.25	5		109	90	110			
Nitrate (NO3) - N	5.09	0.25	5		102	90	110			
Phosphate, ortho - P	5.32	0.5	5		106	90	110			
Sulfate (SO4)	108	0.5	100		108	90	110			

Sample Matrix Spike

Type: **LFM** Test Code: **EPA Method 300.0**

File ID: **44** Batch ID: **24676** Analysis Date: **07/22/2010 17:32**

Sample ID: **10072243-01ALFM** Units : **mg/L** Run ID: **IC_1_100722A** Prep Date: **07/22/2010 09:47**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	561	0.5	100	494.3	66	80	120			M2
Nitrite (NO2) - N	10.2	0.25	10	0	102	80	120			
Nitrate (NO3) - N	10.4	0.25	10	0	104	80	120			
Phosphate, ortho - P	8.68	0.5	10	0	87	80	120			
Sulfate (SO4)	202	0.5	200	0	101	80	120			

Sample Matrix Spike Duplicate

Type: **LFMD** Test Code: **EPA Method 300.0**

File ID: **45** Batch ID: **24676** Analysis Date: **07/22/2010 17:50**

Sample ID: **10072243-01ALFMD** Units : **mg/L** Run ID: **IC_1_100722A** Prep Date: **07/22/2010 09:47**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	581	0.5	100	494.3	86	80	120	560.7	3.5(15)	
Nitrite (NO2) - N	12.2	0.25	10	0	122	80	120	10.18	17.9(15)	M1 R58
Nitrate (NO3) - N	10.5	0.25	10	0	105	80	120	10.4	0.6(15)	
Phosphate, ortho - P	9.59	0.5	10	0	96	80	120	8.677	10.0(15)	
Sulfate (SO4)	203	0.5	200	0	102	80	120	201.9	0.7(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.

M1 = Matrix spike recovery was high, the method control sample recovery was acceptable.

M2 = Matrix spike recovery was low, the method control sample recovery was acceptable.

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

R58 = MS/MSD RPD exceeded the laboratory control limit.

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Date: *02-Aug-10*

QC Summary Report

Work Order: 10072121

Method Blank Type: **MBLK** Test Code: **EPA Method SW8260B**

File ID: **C:\HPCHEM\MS07\DATA\100723\10072305.D** Batch ID: **MS07W0723M** Analysis Date: **07/23/2010 10:33**

Sample ID: **MBLK MS07W0723M** Units : **µg/L** Run ID: **MSD_07_100723C** Prep Date: **07/23/2010 10:33**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	ND	0.5								
Chloromethane	ND	1								
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	ND	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)	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	ND	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)	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	ND	0.5								
Dibromochloromethane	ND	0.5								
1,2-Dibromoethane (EDB)	ND	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	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								
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	ND	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	ND	1								
1,2,3-Trichlorobenzene	ND	1								
Surr: 1,2-Dichloroethane-d4	10.3		10		103	70	130			
Surr: Toluene-d8	9.81		10		98	70	130			

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QC Summary Report

Work Order: 10072121

Surr: 4-Bromofluorobenzene	9.66		10	97	70	130			

Laboratory Control Spike Type: **LCS** Test Code: **EPA Method SW8260B**

File ID: **C:\HPCHEM\MS07\DATA\100723\10072303.D** Batch ID: **MS07W0723M** Analysis Date: **07/23/2010 09:46**

Sample ID: **LCS MS07W0723M** Units : **µg/L** Run ID: **MSD_07_100723C** Prep Date: **07/23/2010 09:46**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	7.39	1	10		74	70	130			
Chloromethane	7.05	2	10		71	70	130			
Vinyl chloride	8.67	1	10		87	70	130			
Chloroethane	8.17	1	10		82	70	130			
Bromomethane	7.63	2	10		76	70	130			
Trichlorofluoromethane	8.54	1	10		85	70	130			
1,1-Dichloroethene	9.36	1	10		94	70	130			
Dichloromethane	9.23	2	10		92	70	130			
trans-1,2-Dichloroethene	8.18	1	10		82	70	130			
Methyl tert-butyl ether (MTBE)	11.5	0.5	10		115	70	130			
1,1-Dichloroethane	9.24	1	10		92	70	130			
cis-1,2-Dichloroethene	9.57	1	10		96	70	130			
Bromochloromethane	9.79	1	10		98	70	130			
Chloroform	8.92	1	10		89	70	130			
2,2-Dichloropropane	10.8	1	10		108	70	130			
1,2-Dichloroethane	9.92	1	10		99	70	130			
1,1,1-Trichloroethane	9.73	1	10		97	70	130			
1,1-Dichloropropene	9.99	1	10		99.9	70	130			
Carbon tetrachloride	9.6	1	10		96	70	130			
Benzene	9.77	0.5	10		98	70	130			
Dibromomethane	10.1	1	10		101	70	130			
1,2-Dichloropropane	9.67	1	10		97	70	130			
Trichloroethene	9.21	1	10		92	70	130			
Bromodichloromethane	9.86	1	10		99	70	130			
cis-1,3-Dichloropropene	8.89	1	10		89	70	130			
trans-1,3-Dichloropropene	10.8	1	10		108	70	130			
1,1,2-Trichloroethane	10.3	1	10		103	70	130			
Toluene	9.3	0.5	10		93	70	130			
1,3-Dichloropropane	9.65	1	10		97	70	130			
Dibromochloromethane	9.97	1	10		99.7	70	130			
1,2-Dibromoethane (EDB)	19.9	2	20		99.6	70	130			
Tetrachloroethene	9.24	1	10		92	70	130			
1,1,1,2-Tetrachloroethane	9.81	1	10		98	70	130			
Chlorobenzene	9.36	1	10		94	70	130			
Ethylbenzene	9.72	0.5	10		97	70	130			
m,p-Xylene	9.74	0.5	10		97	70	130			
Bromoform	10.6	1	10		106	70	130			
Styrene	8.71	1	10		87	70	130			
o-Xylene	9.91	0.5	10		99	70	130			
1,1,2,2-Tetrachloroethane	10.3	1	10		103	70	130			
1,2,3-Trichloropropane	21.5	2	20		108	70	130			
Isopropylbenzene	9.66	1	10		97	70	130			
Bromobenzene	9.54	1	10		95	70	130			
n-Propylbenzene	9.42	1	10		94	70	130			
4-Chlorotoluene	9.56	1	10		96	70	130			
2-Chlorotoluene	9.55	1	10		96	70	130			
1,3,5-Trimethylbenzene	10.1	1	10		101	70	130			
tert-Butylbenzene	9.59	1	10		96	70	130			
1,2,4-Trimethylbenzene	10.3	1	10		103	70	130			
sec-Butylbenzene	9.63	1	10		96	70	130			
1,3-Dichlorobenzene	9.55	1	10		96	70	130			
1,4-Dichlorobenzene	9.65	1	10		97	70	130			
4-Isopropyltoluene	9.88	1	10		99	70	130			
1,2-Dichlorobenzene	9.33	1	10		93	70	130			
n-Butylbenzene	10.2	1	10		102	70	130			
1,2-Dibromo-3-chloropropane (DBCP)	49.3	3	50		99	70	130			
1,2,4-Trichlorobenzene	8.83	2	10		88	70	130			
Naphthalene	9.64	2	10		96	70	130			
Hexachlorobutadiene	17.9	2	20		89	70	130			
1,2,3-Trichlorobenzene	8.99	2	10		90	70	130			
Surr: 1,2-Dichloroethane-d4	10.7		10		107	70	130			
Surr: Toluene-d8	9.7		10		97	70	130			
Surr: 4-Bromofluorobenzene	9.45		10		95	70	130			

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Date: *02-Aug-10*

QC Summary Report

Work Order: 10072121

Sample Matrix Spike Type: **MS** Test Code: **EPA Method SW8260B**

File ID: **C:\HPCHEM\MS07\DATA\100723\10072308.D** Batch ID: **MS07W0723M** Analysis Date: **07/23/2010 11:44**

Sample ID: **10072246-01AMS** Units : **µg/L** Run ID: **MSD_07_100723C** Prep Date: **07/23/2010 11:44**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	39.7	2.5	50	0	79	13	167			
Chloromethane	38.3	10	50	0	77	28	145			
Vinyl chloride	45.9	2.5	50	0	92	43	134			
Chloroethane	44.3	2.5	50	0	89	39	154			
Bromomethane	40.3	10	50	0	81	19	176			
Trichlorofluoromethane	46.8	2.5	50	0	94	34	160			
1,1-Dichloroethene	51.5	2.5	50	0	103	60	130			
Dichloromethane	48.7	10	50	0	97	68	130			
trans-1,2-Dichloroethene	53.2	2.5	50	0	106	63	130			
Methyl tert-butyl ether (MTBE)	57.1	1.3	50	0	114	56	141			
1,1-Dichloroethane	50.7	2.5	50	0	101	61	130			
cis-1,2-Dichloroethene	52.8	2.5	50	0	106	70	130			
Bromochloromethane	52	2.5	50	0	104	70	130			
Chloroform	49.4	2.5	50	0.91	97	67	130			
2,2-Dichloropropane	58.2	2.5	50	0	116	30	152			
1,2-Dichloroethane	52.2	2.5	50	0	104	60	135			
1,1,1-Trichloroethane	53.9	2.5	50	0	108	59	137			
1,1-Dichloropropene	54.7	2.5	50	0	109	63	130			
Carbon tetrachloride	53.3	2.5	50	0	107	50	147			
Benzene	53.3	1.3	50	0	107	67	130			
Dibromomethane	51.6	2.5	50	0	103	69	133			
1,2-Dichloropropane	52.3	2.5	50	0	105	69	130			
Trichloroethene	52.5	2.5	50	2.42	100	69	130			
Bromodichloromethane	52.6	2.5	50	0	105	66	134			
cis-1,3-Dichloropropene	43.8	2.5	50	0	88	63	130			
trans-1,3-Dichloropropene	54.9	2.5	50	0	110	66	131			
1,1,2-Trichloroethane	50.6	2.5	50	0	101	68	130			
Toluene	50.6	1.3	50	0	101	66	130			
1,3-Dichloropropane	49.5	2.5	50	0	99	70	130			
Dibromochloromethane	50.6	2.5	50	0	101	70	130			
1,2-Dibromoethane (EDB)	101	5	100	0	101	70	130			
Tetrachloroethene	50.6	2.5	50	0	101	61	134			
1,1,1,2-Tetrachloroethane	52.3	2.5	50	0	105	70	130			
Chlorobenzene	50.3	2.5	50	0	101	70	130			
Ethylbenzene	52.7	1.3	50	0	105	68	130			
m,p-Xylene	53.2	1.3	50	0	106	64	130			
Bromoform	52.8	2.5	50	0	106	64	138			
Styrene	46.6	2.5	50	0	93	69	130			
o-Xylene	53.7	1.3	50	0	107	70	130			
1,1,2,2-Tetrachloroethane	51.3	2.5	50	0	103	65	131			
1,2,3-Trichloropropane	109	10	100	0	109	70	130			
Isopropylbenzene	52.2	2.5	50	0	104	64	138			
Bromobenzene	50.6	2.5	50	0	101	70	130			
n-Propylbenzene	51.9	2.5	50	0	104	66	132			
4-Chlorotoluene	51.5	2.5	50	0	103	70	130			
2-Chlorotoluene	51.9	2.5	50	0	104	70	130			
1,3,5-Trimethylbenzene	54	2.5	50	0	108	66	136			
tert-Butylbenzene	52.3	2.5	50	0	105	65	137			
1,2,4-Trimethylbenzene	53.7	2.5	50	0	107	65	137			
sec-Butylbenzene	52.6	2.5	50	0	105	66	134			
1,3-Dichlorobenzene	50.9	2.5	50	0	102	70	130			
1,4-Dichlorobenzene	51	2.5	50	0	102	70	130			
4-Isopropyltoluene	53.3	2.5	50	0	107	66	137			
1,2-Dichlorobenzene	49	2.5	50	0	98	70	130			
n-Butylbenzene	53.3	2.5	50	0	107	60	142			
1,2-Dibromo-3-chloropropane (DBCP)	232	15	250	0	93	67	130			
1,2,4-Trichlorobenzene	43.9	10	50	0	88	61	137			
Naphthalene	43.3	10	50	0	87	40	167			
Hexachlorobutadiene	95.3	10	100	0	95	61	130			
1,2,3-Trichlorobenzene	43.9	10	50	0	88	51	144			
Surr: 1,2-Dichloroethane-d4	52.9		50		106	70	130			
Surr: Toluene-d8	48.4		50		97	70	130			
Surr: 4-Bromofluorobenzene	46.7		50		93	70	130			

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Date: 02-Aug-10

QC Summary Report

Work Order: 10072121

Sample Matrix Spike Duplicate Type: **MSD** Test Code: **EPA Method SW8260B**

File ID: **C:\HPCHEM\MS07\DATA\100723\10072309.D** Batch ID: **MS07W0723M** Analysis Date: **07/23/2010 12:08**

Sample ID: **10072246-01AMSD** Units : **µg/L** Run ID: **MSD_07_100723C** Prep Date: **07/23/2010 12:08**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	40.1	2.5	50	0	80	13	167	39.74	0.9(20)	
Chloromethane	38.8	10	50	0	78	28	145	38.33	1.1(20)	
Vinyl chloride	47.7	2.5	50	0	95	43	134	45.87	4.0(20)	
Chloroethane	45.5	2.5	50	0	91	39	154	44.33	2.7(20)	
Bromomethane	55.4	10	50	0	111	19	176	40.34	31.4(20)	R5
Trichlorofluoromethane	46.9	2.5	50	0	94	34	160	46.77	0.3(20)	
1,1-Dichloroethene	52.2	2.5	50	0	104	60	130	51.52	1.3(20)	
Dichloromethane	49.4	10	50	0	99	68	130	48.69	1.4(20)	
trans-1,2-Dichloroethene	46.2	2.5	50	0	92	63	130	53.17	14.1(20)	
Methyl tert-butyl ether (MTBE)	57.4	1.3	50	0	115	56	141	57.1	0.5(20)	
1,1-Dichloroethane	50.8	2.5	50	0	102	61	130	50.74	0.2(20)	
cis-1,2-Dichloroethene	52.8	2.5	50	0	106	70	130	52.77	0.1(20)	
Bromochloromethane	52.4	2.5	50	0	105	70	130	52.02	0.8(20)	
Chloroform	49.4	2.5	50	0.91	97	67	130	49.44	0.2(20)	
2,2-Dichloropropane	58.5	2.5	50	0	117	30	152	58.22	0.5(20)	
1,2-Dichloroethane	51.6	2.5	50	0	103	60	135	52.18	1.1(20)	
1,1,1-Trichloroethane	54.7	2.5	50	0	109	59	137	53.94	1.5(20)	
1,1-Dichloropropene	55.6	2.5	50	0	111	63	130	54.7	1.6(20)	
Carbon tetrachloride	53.6	2.5	50	0	107	50	147	53.27	0.6(20)	
Benzene	54.2	1.3	50	0	108	67	130	53.33	1.6(20)	
Dibromomethane	51.2	2.5	50	0	102	69	133	51.62	0.9(20)	
1,2-Dichloropropane	52.7	2.5	50	0	105	69	130	52.3	0.7(20)	
Trichloroethene	53.8	2.5	50	2.42	103	69	130	52.45	2.5(20)	
Bromodichloromethane	52.8	2.5	50	0	106	66	134	52.58	0.3(20)	
cis-1,3-Dichloropropene	44	2.5	50	0	88	63	130	43.8	0.5(20)	
trans-1,3-Dichloropropene	55.3	2.5	50	0	111	66	131	54.91	0.6(20)	
1,1,2-Trichloroethane	51	2.5	50	0	102	68	130	50.59	0.9(20)	
Toluene	51.8	1.3	50	0	104	66	130	50.63	2.2(20)	
1,3-Dichloropropane	49.4	2.5	50	0	99	70	130	49.47	0.2(20)	
Dibromochloromethane	51.5	2.5	50	0	103	70	130	50.6	1.8(20)	
1,2-Dibromoethane (EDB)	102	5	100	0	102	70	130	100.6	1.3(20)	
Tetrachloroethene	52.5	2.5	50	0	105	61	134	50.55	3.8(20)	
1,1,1,2-Tetrachloroethane	53.1	2.5	50	0	106	70	130	52.25	1.6(20)	
Chlorobenzene	51.3	2.5	50	0	103	70	130	50.31	2.0(20)	
Ethylbenzene	54	1.3	50	0	108	68	130	52.69	2.4(20)	
m,p-Xylene	53.7	1.3	50	0	107	64	130	53.24	0.8(20)	
Bromoform	54	2.5	50	0	108	64	138	52.77	2.2(20)	
Styrene	47.2	2.5	50	0	94	69	130	46.64	1.1(20)	
o-Xylene	54.6	1.3	50	0	109	70	130	53.68	1.7(20)	
1,1,2,2-Tetrachloroethane	51.7	2.5	50	0	103	65	131	51.27	0.8(20)	
1,2,3-Trichloropropane	109	10	100	0	109	70	130	108.6	0.1(20)	
Isopropylbenzene	54	2.5	50	0	108	64	138	52.15	3.5(20)	
Bromobenzene	51.7	2.5	50	0	103	70	130	50.59	2.1(20)	
n-Propylbenzene	53.3	2.5	50	0	107	66	132	51.91	2.7(20)	
4-Chlorotoluene	53.6	2.5	50	0	107	70	130	51.46	4.0(20)	
2-Chlorotoluene	53.7	2.5	50	0	107	70	130	51.85	3.5(20)	
1,3,5-Trimethylbenzene	56.1	2.5	50	0	112	66	136	53.97	3.9(20)	
tert-Butylbenzene	54.2	2.5	50	0	108	65	137	52.25	3.7(20)	
1,2,4-Trimethylbenzene	56.5	2.5	50	0	113	65	137	53.69	5.1(20)	
sec-Butylbenzene	54.7	2.5	50	0	109	66	134	52.55	4.0(20)	
1,3-Dichlorobenzene	52.6	2.5	50	0	105	70	130	50.86	3.4(20)	
1,4-Dichlorobenzene	53	2.5	50	0	106	70	130	51.01	3.7(20)	
4-Isopropyltoluene	55.9	2.5	50	0	112	66	137	53.25	4.9(20)	
1,2-Dichlorobenzene	50.6	2.5	50	0	101	70	130	48.96	3.2(20)	
n-Butylbenzene	57.3	2.5	50	0	115	60	142	53.28	7.2(20)	
1,2-Dibromo-3-chloropropane (DBCP)	237	15	250	0	95	67	130	231.9	2.2(20)	
1,2,4-Trichlorobenzene	47.3	10	50	0	95	61	137	43.86	7.5(20)	
Naphthalene	46.5	10	50	0	93	40	167	43.27	7.2(20)	
Hexachlorobutadiene	102	10	100	0	102	61	130	95.3	6.6(20)	
1,2,3-Trichlorobenzene	47.4	10	50	0	95	51	144	43.88	7.7(20)	
Surr: 1,2-Dichloroethane-d4	51		50		102	70	130			
Surr: Toluene-d8	48.7		50		97	70	130			
Surr: 4-Bromofluorobenzene	47.1		50		94	70	130			

Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date: *02-Aug-10*

QC Summary Report

Work Order: 10072121

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.

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

R5 = MS/MSD RPD exceeded the laboratory control limit. Recovery met acceptance criteria.

Billing Information :

CHAIN-OF-CUSTODY RECORD

CA

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

WorkOrder : BMIS10072121

Report Due By : 5:00 PM On : 04-Aug-10

Client:
Battelle Memorial Institute
655 West Broadway
Suite 1420
San Diego, CA 92101

Report Attention	Phone Number	EMail Address
David Conner	(818) 393-2808 x	connerd@battelle.org
Betsy Cutie	(614) 424-4899 x	cutiee@batelle.org
Shane Walton	(614) 424-4117 x	waltons@battelle.org

EDD Required : **Yes**

Sampled by : David Loera

PO : 218013

Client's COC # : 29485 Job : G005862/JPL Groundwater Monitoring

Cooler Temp	Samples Received	Date Printed
4 °C	21-Jul-10	21-Jul-10

QC Level : DS4 = DOD QC Required : Final Rpt, MBLK, InitCal/ConCal data, LCS, MS/MSD With Surrogates

Alpha Sample ID	Client Sample ID	Matrix	Collection Date	No. of Bottles Alpha	Sub	TAT	Requested Tests 300_0_W	314_W	HOLD	METALS_DW	VOC_TIC_W	VOC_W			Sample Remarks
BMI10072121-01A	MW-13	AQ	07/20/10 10:26	8	0	10	Cl, NO2, NO3, SO4, PO4	Perchlorate		Cr	VOC by 524 Criteria	VOC by 524 Criteria			
BMI10072121-02A	MW-8	AQ	07/20/10 14:11	8	0	10	Cl, NO2, NO3, SO4, PO4	Perchlorate		Cr	VOC by 524 Criteria	VOC by 524 Criteria			
BMI10072121-03A	DUPE-1-3Q10	AQ	07/20/10 14:15	8	0	10	Cl, NO2, NO3, SO4, PO4	Perchlorate		Cr	VOC by 524 Criteria	VOC by 524 Criteria			
BMI10072121-04A	TB	AQ	07/20/10 00:00	1	0	10			Hold						Reno Trip Blank 6/29/10

Comments: Security seals intact. Frozen ice. Temp Blank #8648 received @ 4°C. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). Trip Blank added to chain and placed on hold by lab. :

	Signature	Print Name	Company	Date/Time
Logged in by:	K Murray	K Murray	Alpha Analytical, Inc.	7/21/10 1005

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 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.
Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

Billing Information:
Name Battelle
Address 505 King Ave
City, State, Zip Columbus OH 43201
Phone Number 614-424-4849 Fax 614-424-3667

Alpha Analytical, Inc.
255 Glendale Avenue, Suite 21
Sparks, Nevada 89431-5778
Phone (775) 355-1044
Fax (775) 355-0406

Samples Collected From Which State? AZ ___ CA X NV ___ WA ___ ID ___ OR ___ OTHER ___

29485

Page # 1 of 1

Client Name	P.O. #	Job #
David Conner	218013	6005862/JPL GWM
Address	EMail Address	
	connerd@battelle.org	
City, State, Zip	Phone #	Fax #
	614-726-7311	614-458-6641

Required QC Level? I II (III) IV

EDD / EDF? YES X NO ___

Global ID # ___

Time Sampled	Date Sampled	Matrix* See Key Below	Sampled by David Loera / Lab ID Number (Office Use Only)	Report Attention David Conner / Sample Description	TAT	Field Filtered	Total and type of containers ** See below	VOCs (524.2)	Perchlorate (314.0)	Total (Cr 200.8)	* (300.0)	REMARKS
1026	7/20	AQ	BM1100721 21-01	MW-13	10		6V 2P	X	X	X	X	
1411	7/20	AQ	02	MW-8	10		6V 2P	X	X	X	X	
1415	7/20	AQ	03	DUPE-1-3Q10	10		6V 2P	X	X	X	X	
			04	TB								HOLD

ADDITIONAL INSTRUCTIONS: * Cl^-, NO_2, NO_3, SO_4, Ortho-P

	Signature	Print Name	Company	Date	Time
Relinquished by		David Loera	Battelle	7-20-10	1500
Received by		CHASE BRADDON	INSIGHT	7-20-10	1500
Relinquished by		CHASE BRADDON	INSIGHT	7-20-10	1500
Received by		Anthony Stark	Alpha	7.20.10	1500
Relinquished by		Anthony Stark	Alpha	7.20.10	1500
Received by		K Murray	ASI	7/21/10	0950

*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

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 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.

Alpha Analytical, Inc.

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(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date *17-Aug-10*

David Conner
Battelle Memorial Institute
655 West Broadway Suite 1420
San Diego, CA 92101
(619) 726-7311

CASE NARRATIVE

Job: G005862 / JPL Groundwater Monitoring

Work Order: BMI10081041 **Cooler Temp:** 4 °C

Alpha's Sample ID	Client's Sample ID	Matrix
10081041-01A	MW-21-5	Aqueous
10081041-02A	MW-21-4	Aqueous
10081041-03A	MW-21-3	Aqueous
10081041-04A	MW-21-2	Aqueous
10081041-05A	MW-21-1	Aqueous
10081041-06A	EB-10-08/06/10	Aqueous
10081041-07A	TB-10-08/06/10	Aqueous
10081041-08A	MW-14-5	Aqueous
10081041-09A	MW-14-4	Aqueous
10081041-10A	MW-14-3	Aqueous
10081041-11A	MW-14-2	Aqueous
10081041-12A	MW-14-1	Aqueous
10081041-13A	EB-11-08/09/10	Aqueous
10081041-14A	TB-11-08/09/10	Aqueous

Manually Integrated Analytes

Alpha's Sample ID	Test Reference	Analyte
NONE		

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

Alpha Analytical, Inc.

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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 : 08/10/10

Job: G005862 / JPL Groundwater Monitoring

Perchlorate by Ion Chromatography
EPA Method 314.0

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-21-5**				
Lab ID : BMI10081041-01A Perchlorate	3.61	1.00 µg/L	08/10/10 09:55	08/10/10 13:01
Date Sampled 08/06/10 08:40				
Client ID: **MW-21-4**				
Lab ID : BMI10081041-02A Perchlorate	2.68	1.00 µg/L	08/10/10 09:55	08/10/10 13:19
Date Sampled 08/06/10 09:01				
Client ID: **MW-21-3**				
Lab ID : BMI10081041-03A Perchlorate	3.50	1.00 µg/L	08/10/10 09:55	08/10/10 13:38
Date Sampled 08/06/10 09:30				
Client ID: **MW-21-2**				
Lab ID : BMI10081041-04A Perchlorate	2.58	1.00 µg/L	08/10/10 09:55	08/10/10 14:33
Date Sampled 08/06/10 09:55				
Client ID: **MW-21-1**				
Lab ID : BMI10081041-05A Perchlorate	3.31	1.00 µg/L	08/10/10 09:55	08/10/10 17:55
Date Sampled 08/06/10 10:21				
Client ID: **EB-10-08/06/10**				
Lab ID : BMI10081041-06A Perchlorate	ND	1.00 µg/L	08/10/10 09:55	08/10/10 15:10
Date Sampled 08/06/10 10:11				
Client ID: **MW-14-5**				
Lab ID : BMI10081041-08A Perchlorate	ND	1.00 µg/L	08/10/10 09:55	08/10/10 15:28
Date Sampled 08/09/10 08:49				
Client ID: **MW-14-4**				
Lab ID : BMI10081041-09A Perchlorate	4.21	1.00 µg/L	08/10/10 09:55	08/10/10 16:23
Date Sampled 08/09/10 09:09				
Client ID: **MW-14-3**				
Lab ID : BMI10081041-10A Perchlorate	5.61	1.00 µg/L	08/10/10 09:55	08/10/10 16:42
Date Sampled 08/09/10 09:33				
Client ID: **MW-14-2**				
Lab ID : BMI10081041-11A Perchlorate	3.80	1.00 µg/L	08/10/10 09:55	08/10/10 17:00
Date Sampled 08/09/10 09:55				
Client ID: **MW-14-1**				
Lab ID : BMI10081041-12A Perchlorate	3.06	1.00 µg/L	08/10/10 09:55	08/10/10 17:19
Date Sampled 08/09/10 10:15				

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Client ID: **EB-11-08/09/10**

Lab ID : BMI10081041-13A	Perchlorate	ND	1.00 µg/L	08/10/10 09:55	08/10/10 17:37
Date Sampled 08/09/10 10:06					

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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.

8/23/10

Report Date

Alpha Analytical, Inc.

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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 : 08/10/10

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 : BMI10081041-01A Chromium (Cr)	ND	0.0050 mg/L	08/17/10 18:01	08/18/10 07:23
Date Sampled 08/06/10 08:40				
Client ID: **MW-21-4**				
Lab ID : BMI10081041-02A Chromium (Cr)	ND	0.0050 mg/L	08/17/10 18:01	08/18/10 07:29
Date Sampled 08/06/10 09:01				
Client ID: **MW-21-3**				
Lab ID : BMI10081041-03A Chromium (Cr)	ND	0.0050 mg/L	08/17/10 18:01	08/18/10 07:34
Date Sampled 08/06/10 09:30				
Client ID: **MW-21-2**				
Lab ID : BMI10081041-04A Chromium (Cr)	ND	0.0050 mg/L	08/17/10 18:01	08/18/10 08:02
Date Sampled 08/06/10 09:55				
Client ID: **MW-21-1**				
Lab ID : BMI10081041-05A Chromium (Cr)	ND	0.0050 mg/L	08/17/10 18:01	08/18/10 08:08
Date Sampled 08/06/10 10:21				
Client ID: **EB-10-08/06/10**				
Lab ID : BMI10081041-06A Chromium (Cr)	ND	0.0050 mg/L	08/17/10 18:01	08/18/10 08:13
Date Sampled 08/06/10 10:11				
Client ID: **MW-14-3**				
Lab ID : BMI10081041-10A Chromium (Cr)	ND	0.0050 mg/L	08/17/10 18:01	08/18/10 08:19
Date Sampled 08/09/10 09:33				
Client ID: **MW-14-2**				
Lab ID : BMI10081041-11A Chromium (Cr)	ND	0.0050 mg/L	08/17/10 18:01	08/18/10 08:25
Date Sampled 08/09/10 09:55				
Client ID: **MW-14-1**				
Lab ID : BMI10081041-12A Chromium (Cr)	ND	0.0050 mg/L	08/17/10 18:01	08/18/10 08:30
Date Sampled 08/09/10 10:15				
Client ID: **EB-11-08/09/10**				
Lab ID : BMI10081041-13A Chromium (Cr)	ND	0.0050 mg/L	08/17/10 18:01	08/18/10 08:36
Date Sampled 08/09/10 10:06				

Alpha Analytical, Inc.

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ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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.

8/23/10

Report Date

Alpha Analytical, Inc.

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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 Extracted	Date Analyzed
Client ID : **MW-21-5**						
Lab ID : BMI10081041-01A	* * * None Found * * *	ND		2.0 µg/L	08/13/10 14:51	08/13/10 14:51
Date Received : 08/10/10						
Date Sampled : 08/06/10 08:40						
Client ID : **MW-21-4**						
Lab ID : BMI10081041-02A	* * * None Found * * *	ND		2.0 µg/L	08/13/10 15:13	08/13/10 15:13
Date Received : 08/10/10						
Date Sampled : 08/06/10 09:01						
Client ID : **MW-21-3**						
Lab ID : BMI10081041-03A	* * * None Found * * *	ND		2.0 µg/L	08/13/10 15:35	08/13/10 15:35
Date Received : 08/10/10						
Date Sampled : 08/06/10 09:30						
Client ID : **MW-21-2**						
Lab ID : BMI10081041-04A	* * * None Found * * *	ND		2.0 µg/L	08/13/10 15:56	08/13/10 15:56
Date Received : 08/10/10						
Date Sampled : 08/06/10 09:55						
Client ID : **MW-21-1**						
Lab ID : BMI10081041-05A	* * * None Found * * *	ND		2.0 µg/L	08/13/10 16:18	08/13/10 16:18
Date Received : 08/10/10						
Date Sampled : 08/06/10 10:21						
Client ID : **EB-10-08/06/10**						
Lab ID : BMI10081041-06A	* * * None Found * * *	ND		2.0 µg/L	08/13/10 13:23	08/13/10 13:23
Date Received : 08/10/10						
Date Sampled : 08/06/10 10:11						
Client ID : **TB-10-08/06/10**						
Lab ID : BMI10081041-07A	* * * None Found * * *	ND		2.0 µg/L	08/13/10 12:39	08/13/10 12:39
Date Received : 08/10/10						
Date Sampled : 08/06/10 07:00						
Client ID : **MW-14-5**						
Lab ID : BMI10081041-08A	Acetone	13	*	10 µg/L	08/13/10 16:40	08/13/10 16:40
Date Received : 08/10/10						
Date Sampled : 08/09/10 08:49						
Client ID : **MW-14-4**						
Lab ID : BMI10081041-09A	* * * None Found * * *	ND		2.0 µg/L	08/13/10 17:02	08/13/10 17:02
Date Received : 08/10/10						
Date Sampled : 08/09/10 09:09						

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Client ID : **MW-14-3**						
Lab ID : BMI10081041-10A	* * * None Found * * *		ND	2.0 µg/L	08/13/10 17:23	08/13/10 17:23
Date Received : 08/10/10						
Date Sampled : 08/09/10 09:33						
Client ID : **MW-14-2**						
Lab ID : BMI10081041-11A	* * * None Found * * *		ND	2.0 µg/L	08/13/10 17:45	08/13/10 17:45
Date Received : 08/10/10						
Date Sampled : 08/09/10 09:55						
Client ID : **MW-14-1**						
Lab ID : BMI10081041-12A	* * * None Found * * *		ND	2.0 µg/L	08/13/10 18:07	08/13/10 18:07
Date Received : 08/10/10						
Date Sampled : 08/09/10 10:15						
Client ID : **EB-11-08/09/10**						
Lab ID : BMI10081041-13A	Acetone		32	10 µg/L	08/13/10 13:45	08/13/10 13:45
Date Received : 08/10/10	2-Methyl-1-propene		3.8	2.0 µg/L	08/13/10 13:45	08/13/10 13:45
Date Sampled : 08/09/10 10:06						
Client ID : **TB-11-08/09/10**						
Lab ID : BMI10081041-14A	* * * None Found * * *		ND	2.0 µg/L	08/13/10 13:01	08/13/10 13:01
Date Received : 08/10/10						
Date Sampled : 08/09/10 07:00						

* No other TICs were found at a reporting limit of 2.0 µg/L.
Note: Analysis conducted using EPA Method 524.2 criteria.
ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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.

8/23/10
Report Date

Page 1 of 1

Alpha Analytical, Inc.

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

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

Alpha Analytical Number: BMI10081041-01A
Client I.D. Number: MW-21-5

Sampled: 08/06/10 08:40
Received: 08/10/10
Extracted: 08/13/10 14:51
Analyzed: 08/13/10 14:51

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND		0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	Q	2.0	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	Q	2.0	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		2.0	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	2.0	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	3.7		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	3.0	µg/L
25	Trichloroethene	ND		0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	2.0	µg/L
26	Bromodichloromethane	ND		0.50	µg/L	61	Naphthalene	ND	2.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND		2.5	µg/L	62	Hexachlorobutadiene	ND	2.0	µg/L
28	cis-1,3-Dichloropropene	ND		0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	2.0	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	103	(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	111	(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	1.7		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 Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer

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Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

8/23/10
Report Date

Alpha Analytical, Inc.

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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

Alpha Analytical Number: BMI10081041-02A
Client I.D. Number: MW-21-4

Sampled: 08/06/10 09:01
Received: 08/10/10
Extracted: 08/13/10 15:13
Analyzed: 08/13/10 15:13

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND		0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	Q	2.0	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	Q	2.0	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		2.0	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	2.0	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	6.8		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	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	3.0	µg/L
25	Trichloroethene	ND		0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	2.0	µg/L
26	Bromodichloromethane	ND		0.50	µg/L	61	Naphthalene	ND	2.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND		2.5	µg/L	62	Hexachlorobutadiene	ND	2.0	µg/L
28	cis-1,3-Dichloropropene	ND		0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	2.0	µg/L
29	trans-1,3-Dichloropropene	ND		0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	103	(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	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	1.7		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 Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer

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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.

8/23/10
Report Date

Alpha Analytical, Inc.

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

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

Alpha Analytical Number: BMI10081041-03A
Client I.D. Number: MW-21-3

Sampled: 08/06/10 09:30
Received: 08/10/10
Extracted: 08/13/10 15:35
Analyzed: 08/13/10 15:35

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND		0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	Q	2.0	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	Q	2.0	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		2.0	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	2.0	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	2.2		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	3.0	µg/L
25	Trichloroethene	0.58		0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	2.0	µg/L
26	Bromodichloromethane	ND		0.50	µg/L	61	Naphthalene	ND	2.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND		2.5	µg/L	62	Hexachlorobutadiene	ND	2.0	µg/L
28	cis-1,3-Dichloropropene	ND		0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	2.0	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	100	(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	110	(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	2.1		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 Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer

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Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

8/23/10
Report Date

Alpha Analytical, Inc.

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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

Alpha Analytical Number: BMI10081041-04A
Client I.D. Number: MW-21-2

Sampled: 08/06/10 09:55
Received: 08/10/10
Extracted: 08/13/10 15:56
Analyzed: 08/13/10 15:56

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND		0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	Q	2.0	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	Q	2.0	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		2.0	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	2.0	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	0.67		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	3.5		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	3.0	µg/L
25	Trichloroethene	ND		0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	2.0	µg/L
26	Bromodichloromethane	ND		0.50	µg/L	61	Naphthalene	ND	2.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND		2.5	µg/L	62	Hexachlorobutadiene	ND	2.0	µg/L
28	cis-1,3-Dichloropropene	ND		0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	2.0	µg/L
29	trans-1,3-Dichloropropene	ND		0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	102	(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	108	(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	6.9		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 Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer

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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.

8/23/10
Report Date

Alpha Analytical, Inc.

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(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

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

Alpha Analytical Number: BMI10081041-05A
Client I.D. Number: MW-21-1

Sampled: 08/06/10 10:21
Received: 08/10/10
Extracted: 08/13/10 16:18
Analyzed: 08/13/10 16:18

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND		0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	Q	2.0	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	Q	2.0	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		2.0	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	2.0	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	1.2		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	3.0	µg/L
25	Trichloroethene	ND		0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	2.0	µg/L
26	Bromodichloromethane	ND		0.50	µg/L	61	Naphthalene	ND	2.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND		2.5	µg/L	62	Hexachlorobutadiene	ND	2.0	µg/L
28	cis-1,3-Dichloropropene	ND		0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	2.0	µg/L
29	trans-1,3-Dichloropropene	ND		0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	103	(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	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	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 Randy Gardner Walter Hinchman

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.

8/23/10
Report Date

Alpha Analytical, Inc.

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

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

Alpha Analytical Number: BMI10081041-06A
Client I.D. Number: EB-10-08/06/10

Sampled: 08/06/10 10:11
Received: 08/10/10
Extracted: 08/13/10 13:23
Analyzed: 08/13/10 13:23

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND		0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	Q	2.0	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	Q	2.0	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		2.0	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	2.0	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	3.0	µg/L
25	Trichloroethene	ND		0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	2.0	µg/L
26	Bromodichloromethane	ND		0.50	µg/L	61	Naphthalene	ND	2.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND		2.5	µg/L	62	Hexachlorobutadiene	ND	2.0	µg/L
28	cis-1,3-Dichloropropene	ND		0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	2.0	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	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					

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 Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer

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Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

8/23/10
Report Date

Alpha Analytical, Inc.

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

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

Alpha Analytical Number: BMI10081041-07A
Client I.D. Number: TB-10-08/06/10

Sampled: 08/06/10 07:00
Received: 08/10/10
Extracted: 08/13/10 12:39
Analyzed: 08/13/10 12:39

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND		0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	Q	2.0	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	Q	2.0	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		2.0	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	2.0	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	3.0	µg/L
25	Trichloroethene	ND		0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	2.0	µg/L
26	Bromodichloromethane	ND		0.50	µg/L	61	Naphthalene	ND	2.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND		2.5	µg/L	62	Hexachlorobutadiene	ND	2.0	µg/L
28	cis-1,3-Dichloropropene	ND		0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	2.0	µg/L
29	trans-1,3-Dichloropropene	ND		0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	103	(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	112	(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 Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer

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8/23/10
Report Date

Alpha Analytical, Inc.

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

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

Alpha Analytical Number: BMI10081041-08A
Client I.D. Number: MW-14-5

Sampled: 08/09/10 08:49
Received: 08/10/10
Extracted: 08/13/10 16:40
Analyzed: 08/13/10 16:40

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND		0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	Q	2.0	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	Q	2.0	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		2.0	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	2.0	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	3.0	µg/L
25	Trichloroethene	ND		0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	2.0	µg/L
26	Bromodichloromethane	ND		0.50	µg/L	61	Naphthalene	ND	2.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND		2.5	µg/L	62	Hexachlorobutadiene	ND	2.0	µg/L
28	cis-1,3-Dichloropropene	ND		0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	2.0	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	111	(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 Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer

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8/23/10
Report Date

Alpha Analytical, Inc.

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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

Alpha Analytical Number: BMI10081041-09A
Client I.D. Number: MW-14-4

Sampled: 08/09/10 09:09
Received: 08/10/10
Extracted: 08/13/10 17:02
Analyzed: 08/13/10 17:02

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND		0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	Q	2.0	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	Q	2.0	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		2.0	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	2.0	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	3.0	µg/L
25	Trichloroethene	ND		0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	2.0	µg/L
26	Bromodichloromethane	ND		0.50	µg/L	61	Naphthalene	ND	2.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND		2.5	µg/L	62	Hexachlorobutadiene	ND	2.0	µg/L
28	cis-1,3-Dichloropropene	ND		0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	2.0	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	104	(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	108	(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 Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer

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.

8/23/10
Report Date

Alpha Analytical, Inc.

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

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

Alpha Analytical Number: BMI10081041-10A
Client I.D. Number: MW-14-3

Sampled: 08/09/10 09:33
Received: 08/10/10
Extracted: 08/13/10 17:23
Analyzed: 08/13/10 17:23

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND		0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	Q	2.0	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	Q	2.0	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		2.0	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	2.0	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	0.50		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	3.0	µg/L
25	Trichloroethene	2.1		0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	2.0	µg/L
26	Bromodichloromethane	ND		0.50	µg/L	61	Naphthalene	ND	2.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND		2.5	µg/L	62	Hexachlorobutadiene	ND	2.0	µg/L
28	cis-1,3-Dichloropropene	ND		0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	2.0	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	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	0.72		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 Randy Gardner Walter Hinchman

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.

8/23/10
Report Date

Alpha Analytical, Inc.

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

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

Alpha Analytical Number: BMI10081041-11A
Client I.D. Number: MW-14-2

Sampled: 08/09/10 09:55
Received: 08/10/10
Extracted: 08/13/10 17:45
Analyzed: 08/13/10 17:45

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND		0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	Q	2.0	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	Q	2.0	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		2.0	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	2.0	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	0.58		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	3.0	µg/L
25	Trichloroethene	9.7		0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	2.0	µg/L
26	Bromodichloromethane	ND		0.50	µg/L	61	Naphthalene	ND	2.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND		2.5	µg/L	62	Hexachlorobutadiene	ND	2.0	µg/L
28	cis-1,3-Dichloropropene	ND		0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	2.0	µg/L
29	trans-1,3-Dichloropropene	ND		0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	102	(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	110	(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	0.61		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 Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer

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8/23/10
Report Date

Alpha Analytical, Inc.

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

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

Alpha Analytical Number: BMI10081041-12A
Client I.D. Number: MW-14-1

Sampled: 08/09/10 10:15
Received: 08/10/10
Extracted: 08/13/10 18:07
Analyzed: 08/13/10 18:07

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND		0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	Q	2.0	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	Q	2.0	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		2.0	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	2.0	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	3.0	µg/L
25	Trichloroethene	3.7		0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	2.0	µg/L
26	Bromodichloromethane	ND		0.50	µg/L	61	Naphthalene	ND	2.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND		2.5	µg/L	62	Hexachlorobutadiene	ND	2.0	µg/L
28	cis-1,3-Dichloropropene	ND		0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	2.0	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	108	(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 Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer

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8/23/10
Report Date

Alpha Analytical, Inc.

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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

Alpha Analytical Number: BMI10081041-13A
Client I.D. Number: EB-11-08/09/10

Sampled: 08/09/10 10:06
Received: 08/10/10
Extracted: 08/13/10 13:45
Analyzed: 08/13/10 13:45

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND		0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	Q	2.0	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	Q	2.0	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		2.0	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	2.0	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	3.0	µg/L
25	Trichloroethene	ND		0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	2.0	µg/L
26	Bromodichloromethane	ND		0.50	µg/L	61	Naphthalene	ND	2.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND		2.5	µg/L	62	Hexachlorobutadiene	ND	2.0	µg/L
28	cis-1,3-Dichloropropene	ND		0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	2.0	µg/L
29	trans-1,3-Dichloropropene	ND		0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	103	(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	105	(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 Randy Gardner Walter Hinchman

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.

8/23/10
Report Date

Alpha Analytical, Inc.

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

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

Alpha Analytical Number: BMI10081041-14A
Client I.D. Number: TB-11-08/09/10

Sampled: 08/09/10 07:00
Received: 08/10/10
Extracted: 08/13/10 13:01
Analyzed: 08/13/10 13:01

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND		0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	Q	2.0	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	Q	2.0	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		2.0	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	2.0	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	3.0	µg/L
25	Trichloroethene	ND		0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	2.0	µg/L
26	Bromodichloromethane	ND		0.50	µg/L	61	Naphthalene	ND	2.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND		2.5	µg/L	62	Hexachlorobutadiene	ND	2.0	µg/L
28	cis-1,3-Dichloropropene	ND		0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	2.0	µg/L
29	trans-1,3-Dichloropropene	ND		0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	102	(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	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					

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 Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer

Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

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8/23/10
Report Date

Alpha Analytical, Inc.

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(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

VOC Sample Preservation Report

Work Order: BMI10081041 **Job:** G005862 / JPL Groundwater Monitoring

Alpha's Sample ID	Client's Sample ID	Matrix	pH
10081041-01A	MW-21-5	Aqueous	2
10081041-02A	MW-21-4	Aqueous	2
10081041-03A	MW-21-3	Aqueous	2
10081041-04A	MW-21-2	Aqueous	2
10081041-05A	MW-21-1	Aqueous	2
10081041-06A	EB-10-08/06/10	Aqueous	2
10081041-07A	TB-10-08/06/10	Aqueous	2
10081041-08A	MW-14-5	Aqueous	2
10081041-09A	MW-14-4	Aqueous	2
10081041-10A	MW-14-3	Aqueous	2
10081041-11A	MW-14-2	Aqueous	2
10081041-12A	MW-14-1	Aqueous	2
10081041-13A	EB-11-08/09/10	Aqueous	2
10081041-14A	TB-11-08/09/10	Aqueous	2

8/23/10

Report Date

Alpha Analytical, Inc.

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Date: *20-Aug-10*

QC Summary Report

Work Order: 10081041

Method Blank

Type **MBLK** Test Code: **EPA Method 314.0**

File ID: **14** Batch ID: **24823** Analysis Date: **08/10/2010 10:52**

Sample ID: **MB-24823** Units : **µg/L** Run ID: **IC_3_100810A** Prep Date: **08/10/2010 09:55**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	ND	1								

Laboratory Fortified Blank

Type **LFB** Test Code: **EPA Method 314.0**

File ID: **15** Batch ID: **24823** Analysis Date: **08/10/2010 11:11**

Sample ID: **LFB-24823** Units : **µg/L** Run ID: **IC_3_100810A** Prep Date: **08/10/2010 09:55**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	25.3	2	25		101	85	115			

Sample Matrix Spike

Type **LFM** Test Code: **EPA Method 314.0**

File ID: **24** Batch ID: **24823** Analysis Date: **08/10/2010 13:56**

Sample ID: **10081041-03ALFM** Units : **µg/L** Run ID: **IC_3_100810A** Prep Date: **08/10/2010 09:55**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	29.6	2	25	3.497	104	80	120			

Sample Matrix Spike Duplicate

Type **LFMD** Test Code: **EPA Method 314.0**

File ID: **25** Batch ID: **24823** Analysis Date: **08/10/2010 14:15**

Sample ID: **10081041-03ALFMD** Units : **µg/L** Run ID: **IC_3_100810A** Prep Date: **08/10/2010 09:55**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	28.8	2	25	3.497	101	80	120	29.57	2.6(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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Date: *24-Aug-10*

QC Summary Report

Work Order: 10081041

Method Blank

Type: **MBLK** Test Code: **EPA Method 200.8**

File ID: **081710.B\156_M.D** Batch ID: **24876** Analysis Date: **08/18/2010 05:59**

Sample ID: **MB-24876** Units : **mg/L** Run ID: **ICP/MS_100817B** Prep Date: **08/17/2010 18:01**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	ND	0.005								

Laboratory Control Spike

Type: **LCS** Test Code: **EPA Method 200.8**

File ID: **081710.B\157_L.D** Batch ID: **24876** Analysis Date: **08/18/2010 06:05**

Sample ID: **LCS-24876** Units : **mg/L** Run ID: **ICP/MS_100817B** Prep Date: **08/17/2010 18:01**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0539	0.005	0.05		108	85	115			

Sample Matrix Spike

Type: **MS** Test Code: **EPA Method 200.8**

File ID: **081710.B\162_SS.D** Batch ID: **24876** Analysis Date: **08/18/2010 06:33**

Sample ID: **10080641-02AMS** Units : **mg/L** Run ID: **ICP/MS_100817B** Prep Date: **08/17/2010 18:01**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0542	0.005	0.05	0	108	70	130			

Sample Matrix Spike Duplicate

Type: **MSD** Test Code: **EPA Method 200.8**

File ID: **081710.B\163_SSS.D** Batch ID: **24876** Analysis Date: **08/18/2010 06:39**

Sample ID: **10080641-02AMSD** Units : **mg/L** Run ID: **ICP/MS_100817B** Prep Date: **08/17/2010 18:01**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0499	0.005	0.05	0	99.8	70	130	0.05419	8.3(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.

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Date: *17-Aug-10*

QC Summary Report

Work Order: 10081041

Method Blank Type **MBLK** Test Code: **EPA Method SW8260B**

File ID: **10081307.D** Batch ID: **MS15W0813M** Analysis Date: **08/13/2010 10:28**

Sample ID: **MBLK MS15W0813M** Units : **µg/L** Run ID: **MSD_15_100813C** Prep Date: **08/13/2010 10:28**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	ND	0.5								
Chloromethane	ND	1								
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	ND	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)	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	ND	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)	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	ND	0.5								
Dibromochloromethane	ND	0.5								
1,2-Dibromoethane (EDB)	ND	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	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								
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	ND	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	ND	1								
1,2,3-Trichlorobenzene	ND	1								
Surr: 1,2-Dichloroethane-d4	9.98		10		99.8	70	130			
Surr: Toluene-d8	10.3		10		103	70	130			

Alpha Analytical, Inc.

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Date: *17-Aug-10*

QC Summary Report

Work Order: 10081041

Surr: 4-Bromofluorobenzene	10.8		10	108	70	130			

Laboratory Control Spike Type **LCS** Test Code: **EPA Method SW8260B**

File ID: **10081303.D** Batch ID: **MS15W0813M** Analysis Date: **08/13/2010 08:50**

Sample ID: **LCS MS15W0813M** Units : **µg/L** Run ID: **MSD_15_100813C** Prep Date: **08/13/2010 08:50**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	7.25	1	10		73	70	130			
Chloromethane	4.99	2	10		50	70(70)	130			L50
Vinyl chloride	10.9	1	10		109	70	130			
Chloroethane	9.66	1	10		97	70	130			
Bromomethane	4.33	2	10		43	70(70)	130			L50
Trichlorofluoromethane	11.1	1	10		111	70	130			
1,1-Dichloroethene	11.2	1	10		112	70	130			
Dichloromethane	10.2	2	10		102	70	130			
trans-1,2-Dichloroethene	11.2	1	10		112	70	130			
Methyl tert-butyl ether (MTBE)	9.41	0.5	10		94	70	130			
1,1-Dichloroethane	11.2	1	10		112	70	130			
cis-1,2-Dichloroethene	11.1	1	10		111	70	130			
Bromochloromethane	10.2	1	10		102	70	130			
Chloroform	9.8	1	10		98	70	130			
2,2-Dichloropropane	11.3	1	10		113	70	130			
1,2-Dichloroethane	10	1	10		100	70	130			
1,1,1-Trichloroethane	11.2	1	10		112	70	130			
1,1-Dichloropropene	12	1	10		120	70	130			
Carbon tetrachloride	10.5	1	10		105	70	130			
Benzene	11.5	0.5	10		115	70	130			
Dibromomethane	10.1	1	10		101	70	130			
1,2-Dichloropropane	11.2	1	10		112	70	130			
Trichloroethene	10.6	1	10		106	70	130			
Bromodichloromethane	10.5	1	10		105	70	130			
cis-1,3-Dichloropropene	9.66	1	10		97	70	130			
trans-1,3-Dichloropropene	10.3	1	10		103	70	130			
1,1,2-Trichloroethane	11.1	1	10		111	70	130			
Toluene	10	0.5	10		100	70	130			
1,3-Dichloropropane	9.98	1	10		99.8	70	130			
Dibromochloromethane	9.6	1	10		96	70	130			
1,2-Dibromoethane (EDB)	18.4	2	20		92	70	130			
Tetrachloroethene	9.58	1	10		96	70	130			
1,1,1,2-Tetrachloroethane	9.84	1	10		98	70	130			
Chlorobenzene	10.1	1	10		101	70	130			
Ethylbenzene	10.9	0.5	10		109	70	130			
m,p-Xylene	11.1	0.5	10		111	70	130			
Bromoform	10.5	1	10		105	70	130			
Styrene	10.1	1	10		101	70	130			
o-Xylene	11.3	0.5	10		113	70	130			
1,1,2,2-Tetrachloroethane	10.2	1	10		102	70	130			
1,2,3-Trichloropropane	19.7	2	20		99	70	130			
Isopropylbenzene	12.2	1	10		122	70	130			
Bromobenzene	11.2	1	10		112	70	130			
n-Propylbenzene	12.5	1	10		125	70	130			
4-Chlorotoluene	11.8	1	10		118	70	130			
2-Chlorotoluene	11.9	1	10		119	70	130			
1,3,5-Trimethylbenzene	12.4	1	10		124	70	130			
tert-Butylbenzene	12	1	10		120	70	130			
1,2,4-Trimethylbenzene	12.1	1	10		121	70	130			
sec-Butylbenzene	11.6	1	10		116	70	130			
1,3-Dichlorobenzene	10.8	1	10		108	70	130			
1,4-Dichlorobenzene	10.6	1	10		106	70	130			
4-Isopropyltoluene	11.8	1	10		118	70	130			
1,2-Dichlorobenzene	10.1	1	10		101	70	130			
n-Butylbenzene	12.3	1	10		123	70	130			
1,2-Dibromo-3-chloropropane (DBCP)	49.4	3	50		99	70	130			
1,2,4-Trichlorobenzene	9.3	2	10		93	70	130			
Naphthalene	7.41	2	10		74	70	130			
Hexachlorobutadiene	17	2	20		85	70	130			
1,2,3-Trichlorobenzene	9.07	2	10		91	70	130			
Surr: 1,2-Dichloroethane-d4	9.65		10		97	70	130			
Surr: Toluene-d8	9.23		10		92	70	130			
Surr: 4-Bromofluorobenzene	10.1		10		101	70	130			

Alpha Analytical, Inc.

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Date: *17-Aug-10*

QC Summary Report

Work Order: 10081041

Sample Matrix Spike Type **MS** Test Code: **EPA Method SW8260B**

File ID: **10081308.D** Batch ID: **MS15W0813M** Analysis Date: **08/13/2010 10:49**

Sample ID: **10081041-03AMS** Units : **µg/L** Run ID: **MSD_15_100813C** Prep Date: **08/13/2010 10:49**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	41.8	2.5	50	0	84	13	167			
Chloromethane	30.5	10	50	0	61	28	145			
Vinyl chloride	59.2	2.5	50	0	118	43	134			
Chloroethane	47.5	2.5	50	0	95	39	154			
Bromomethane	23.5	10	50	0	47	19	176			
Trichlorofluoromethane	54.9	2.5	50	0	110	34	160			
1,1-Dichloroethene	54.8	2.5	50	0	110	60	130			
Dichloromethane	48.1	10	50	0	96	68	130			
trans-1,2-Dichloroethene	53	2.5	50	0	106	63	130			
Methyl tert-butyl ether (MTBE)	49.3	1.3	50	0	99	56	141			
1,1-Dichloroethane	54	2.5	50	0	108	61	130			
cis-1,2-Dichloroethene	51.8	2.5	50	0	104	70	130			
Bromochloromethane	49.4	2.5	50	0	99	70	130			
Chloroform	49.6	2.5	50	2.15	95	67	130			
2,2-Dichloropropane	54.8	2.5	50	0	110	30	152			
1,2-Dichloroethane	51.3	2.5	50	0	103	60	135			
1,1,1-Trichloroethane	54.2	2.5	50	0	108	59	137			
1,1-Dichloropropene	57.9	2.5	50	0	116	63	130			
Carbon tetrachloride	50.1	2.5	50	0	100	50	147			
Benzene	54.8	1.3	50	0	110	67	130			
Dibromomethane	50	2.5	50	0	99.9	69	133			
1,2-Dichloropropane	53.8	2.5	50	0	108	69	130			
Trichloroethene	51.7	2.5	50	0.58	102	69	130			
Bromodichloromethane	51.1	2.5	50	0	102	66	134			
cis-1,3-Dichloropropene	45	2.5	50	0	90	63	130			
trans-1,3-Dichloropropene	50.1	2.5	50	0	100	66	131			
1,1,2-Trichloroethane	55.1	2.5	50	0	110	68	130			
Toluene	47.5	1.3	50	0	95	66	130			
1,3-Dichloropropane	48.8	2.5	50	0	98	70	130			
Dibromochloromethane	45.3	2.5	50	0	91	70	130			
1,2-Dibromoethane (EDB)	91.6	5	100	0	92	70	130			
Tetrachloroethene	48.3	2.5	50	2.13	92	61	134			
1,1,1,2-Tetrachloroethane	46.3	2.5	50	0	93	70	130			
Chlorobenzene	48.1	2.5	50	0	96	70	130			
Ethylbenzene	51.6	1.3	50	0	103	68	130			
m,p-Xylene	53.2	1.3	50	0	106	64	130			
Bromoform	49	2.5	50	0	98	64	138			
Styrene	48.2	2.5	50	0	96	69	130			
o-Xylene	53.8	1.3	50	0	108	70	130			
1,1,2,2-Tetrachloroethane	50.1	2.5	50	0	100	65	131			
1,2,3-Trichloropropane	94.1	10	100	0	94	70	130			
Isopropylbenzene	57.2	2.5	50	0	114	64	138			
Bromobenzene	53.6	2.5	50	0	107	70	130			
n-Propylbenzene	57.2	2.5	50	0	114	66	132			
4-Chlorotoluene	54.9	2.5	50	0	110	70	130			
2-Chlorotoluene	54.8	2.5	50	0	110	70	130			
1,3,5-Trimethylbenzene	57.6	2.5	50	0	115	66	136			
tert-Butylbenzene	55.6	2.5	50	0	111	65	137			
1,2,4-Trimethylbenzene	56.8	2.5	50	0	114	65	137			
sec-Butylbenzene	54.5	2.5	50	0	109	66	134			
1,3-Dichlorobenzene	50.6	2.5	50	0	101	70	130			
1,4-Dichlorobenzene	49.3	2.5	50	0	99	70	130			
4-Isopropyltoluene	55.1	2.5	50	0	110	66	137			
1,2-Dichlorobenzene	47.5	2.5	50	0	95	70	130			
n-Butylbenzene	57.3	2.5	50	0	115	60	142			
1,2-Dibromo-3-chloropropane (DBCP)	227	15	250	0	91	67	130			
1,2,4-Trichlorobenzene	43.6	10	50	0	87	61	137			
Naphthalene	32.8	10	50	0	66	40	167			
Hexachlorobutadiene	84.7	10	100	0	85	61	130			
1,2,3-Trichlorobenzene	42.7	10	50	0	85	51	144			
Surr: 1,2-Dichloroethane-d4	48.5		50		97	70	130			
Surr: Toluene-d8	45.2		50		90	70	130			
Surr: 4-Bromofluorobenzene	50.3		50		101	70	130			

Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date: 17-Aug-10

QC Summary Report

Work Order: 10081041

Sample Matrix Spike Duplicate Type **MSD** Test Code: **EPA Method SW8260B**

File ID: **10081309.D** Batch ID: **MS15W0813M** Analysis Date: **08/13/2010 11:11**

Sample ID: **10081041-03AMSD** Units : **µg/L** Run ID: **MSD_15_100813C** Prep Date: **08/13/2010 11:11**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	42	2.5	50	0	84	13	167	41.78	0.6(20)	
Chloromethane	30	10	50	0	60	28	145	30.45	1.4(20)	
Vinyl chloride	55.8	2.5	50	0	112	43	134	59.24	6.0(20)	
Chloroethane	46.3	2.5	50	0	93	39	154	47.5	2.6(20)	
Bromomethane	27.2	10	50	0	54	19	176	23.48	14.8(20)	
Trichlorofluoromethane	53.1	2.5	50	0	106	34	160	54.88	3.4(20)	
1,1-Dichloroethene	54.4	2.5	50	0	109	60	130	54.77	0.7(20)	
Dichloromethane	48.4	10	50	0	97	68	130	48.12	0.5(20)	
trans-1,2-Dichloroethene	53.4	2.5	50	0	107	63	130	53.04	0.6(20)	
Methyl tert-butyl ether (MTBE)	51.5	1.3	50	0	103	56	141	49.3	4.4(20)	
1,1-Dichloroethane	53.4	2.5	50	0	107	61	130	53.98	1.1(20)	
cis-1,2-Dichloroethene	53.2	2.5	50	0	106	70	130	51.76	2.7(20)	
Bromochloromethane	48.4	2.5	50	0	97	70	130	49.37	1.9(20)	
Chloroform	49.1	2.5	50	2.15	94	67	130	49.62	1.1(20)	
2,2-Dichloropropane	56.5	2.5	50	0	113	30	152	54.77	3.1(20)	
1,2-Dichloroethane	52.1	2.5	50	0	104	60	135	51.33	1.5(20)	
1,1,1-Trichloroethane	54.5	2.5	50	0	109	59	137	54.23	0.6(20)	
1,1-Dichloropropene	56.7	2.5	50	0	113	63	130	57.89	2.1(20)	
Carbon tetrachloride	52.4	2.5	50	0	105	50	147	50.1	4.6(20)	
Benzene	54.8	1.3	50	0	110	67	130	54.84	0.1(20)	
Dibromomethane	51.2	2.5	50	0	102	69	133	49.97	2.4(20)	
1,2-Dichloropropane	53.9	2.5	50	0	108	69	130	53.77	0.2(20)	
Trichloroethene	51.4	2.5	50	0.58	102	69	130	51.72	0.6(20)	
Bromodichloromethane	51.9	2.5	50	0	104	66	134	51.07	1.6(20)	
cis-1,3-Dichloropropene	46.4	2.5	50	0	93	63	130	45.04	2.9(20)	
trans-1,3-Dichloropropene	52.4	2.5	50	0	105	66	131	50.09	4.6(20)	
1,1,2-Trichloroethane	55.5	2.5	50	0	111	68	130	55.13	0.6(20)	
Toluene	48.1	1.3	50	0	96	66	130	47.46	1.3(20)	
1,3-Dichloropropane	50.7	2.5	50	0	101	70	130	48.84	3.7(20)	
Dibromochloromethane	47.5	2.5	50	0	95	70	130	45.28	4.7(20)	
1,2-Dibromoethane (EDB)	94.6	5	100	0	95	70	130	91.64	3.2(20)	
Tetrachloroethene	47.5	2.5	50	2.13	91	61	134	48.34	1.8(20)	
1,1,1,2-Tetrachloroethane	47.3	2.5	50	0	95	70	130	46.29	2.1(20)	
Chlorobenzene	48.8	2.5	50	0	98	70	130	48.08	1.4(20)	
Ethylbenzene	51.7	1.3	50	0	103	68	130	51.55	0.2(20)	
m,p-Xylene	52.8	1.3	50	0	106	64	130	53.22	0.8(20)	
Bromoform	51.8	2.5	50	0	104	64	138	49	5.5(20)	
Styrene	49.1	2.5	50	0	98	69	130	48.2	1.8(20)	
o-Xylene	54.1	1.3	50	0	108	70	130	53.84	0.5(20)	
1,1,2,2-Tetrachloroethane	51.1	2.5	50	0	102	65	131	50.09	2.0(20)	
1,2,3-Trichloropropane	97.1	10	100	0	97	70	130	94.06	3.2(20)	
Isopropylbenzene	57	2.5	50	0	114	64	138	57.21	0.3(20)	
Bromobenzene	54.2	2.5	50	0	108	70	130	53.58	1.1(20)	
n-Propylbenzene	58.1	2.5	50	0	116	66	132	57.15	1.6(20)	
4-Chlorotoluene	55.5	2.5	50	0	111	70	130	54.86	1.2(20)	
2-Chlorotoluene	55	2.5	50	0	110	70	130	54.84	0.3(20)	
1,3,5-Trimethylbenzene	58	2.5	50	0	116	66	136	57.58	0.7(20)	
tert-Butylbenzene	56	2.5	50	0	112	65	137	55.57	0.8(20)	
1,2,4-Trimethylbenzene	56.9	2.5	50	0	114	65	137	56.83	0.2(20)	
sec-Butylbenzene	53.8	2.5	50	0	108	66	134	54.48	1.3(20)	
1,3-Dichlorobenzene	51.2	2.5	50	0	102	70	130	50.59	1.2(20)	
1,4-Dichlorobenzene	50.5	2.5	50	0	101	70	130	49.31	2.4(20)	
4-Isopropyltoluene	55.4	2.5	50	0	111	66	137	55.14	0.4(20)	
1,2-Dichlorobenzene	49.6	2.5	50	0	99	70	130	47.47	4.3(20)	
n-Butylbenzene	58.7	2.5	50	0	117	60	142	57.26	2.6(20)	
1,2-Dibromo-3-chloropropane (DBCP)	254	15	250	0	102	67	130	226.9	11.2(20)	
1,2,4-Trichlorobenzene	47.7	10	50	0	95	61	137	43.64	8.9(20)	
Naphthalene	41.4	10	50	0	83	40	167	32.81	23.1(20)	R5
Hexachlorobutadiene	89.8	10	100	0	90	61	130	84.65	5.9(20)	
1,2,3-Trichlorobenzene	48.9	10	50	0	98	51	144	42.65	13.7(20)	
Surr: 1,2-Dichloroethane-d4	50.3		50		101	70	130			
Surr: Toluene-d8	46		50		92	70	130			
Surr: 4-Bromofluorobenzene	51.8		50		104	70	130			

Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date: *17-Aug-10*

QC Summary Report

Work Order: 10081041

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.

R5 = MS/MSD RPD exceeded the laboratory control limit. Recovery met acceptance criteria.

Billing Information :

CHAIN-OF-CUSTODY RECORD

CA

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

WorkOrder : BMIS10081041

Report Due By : 5:00 PM On : 24-Aug-10

Client:
Battelle Memorial Institute
655 West Broadway
Suite 1420
San Diego, CA 92101

Report Attention	Phone Number	EMail Address
David Conner	(619) 726-7311 x	connerd@battelle.org
Shane Walton	(614) 424-4117 x	waltons@battelle.org
Betsy Cutie	(614) 424-4899 x	cutiee@batelle.org

EDD Required : **Yes**

Sampled by : Chase Brogdon

PO : 218013

Client's COC # : 24760, 25767 Job : G005862 / JPL Groundwater Monitoring

Cooler Temp	Samples Received	Date Printed
4 °C	10-Aug-10	**10-Aug-10**

QC Level : DS4 = DOD QC Required : Final Rpt, MBLK, InitCal/ConCal data, LCS, MS/MSD With Surrogates

Alpha Sample ID	Client Sample ID	Matrix	Collection Date	No. of Bottles Alpha	Sub	TAT	Requested Tests 314_W	METALS_DW	VOC_TIC_W	VOC_W					Sample Remarks
BMI10081041-01A	MW-21-5	AQ	08/06/10 08:40	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI10081041-02A	MW-21-4	AQ	08/06/10 09:01	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI10081041-03A	MW-21-3	AQ	08/06/10 09:30	10	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					MS/MSD
BMI10081041-04A	MW-21-2	AQ	08/06/10 09:55	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI10081041-05A	MW-21-1	AQ	08/06/10 10:21	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI10081041-06A	EB-10-08/06/10	AQ	08/06/10 10:11	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI10081041-07A	TB-10-08/06/10	AQ	08/06/10 07:00	1	0	10			VOC by 524 Criteria	VOC by 524 Criteria					Reno TB, 6/29/10
BMI10081041-08A	MW-14-5	AQ	08/09/10 08:49	4	0	10	Perchlorate		VOC by 524 Criteria	VOC by 524 Criteria					
BMI10081041-09A	MW-14-4	AQ	08/09/10 09:09	4	0	10	Perchlorate		VOC by 524 Criteria	VOC by 524 Criteria					
BMI10081041-10A	MW-14-3	AQ	08/09/10 09:33	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					

Comments: Security seals intact. Frozen ice. Temp Blank #7686 received @ 4°C. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). :

	Signature	Print Name	Company	Date/Time
Logged in by:	Tara Jickinson	Tara Jickinson	**Alpha Analytical, Inc.**	8/10/10 1038

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 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.
Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

Billing Information :

CHAIN-OF-CUSTODY RECORD

CA

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

WorkOrder : BMIS10081041

Report Due By : 5:00 PM On : 24-Aug-10

Client:
Battelle Memorial Institute
655 West Broadway
Suite 1420
San Diego, CA 92101

Report Attention	Phone Number	EMail Address
David Conner	(619) 726-7311 x	connerd@battelle.org
Shane Walton	(614) 424-4117 x	waltons@battelle.org
Betsy Cutie	(614) 424-4899 x	cutiee@batelle.org

EDD Required : **Yes**

Sampled by : Chase Brogdon

PO : 218013

Client's COC # : 24760, 25767 Job : G005862 / JPL Groundwater Monitoring

Cooler Temp	Samples Received	Date Printed
4 °C	10-Aug-10	**10-Aug-10**

QC Level : DS4 = DOD QC Required : Final Rpt, MBLK, InitCal/ConCal data, LCS, MS/MSD With Surrogates

Alpha Sample ID	Client Sample ID	Matrix	Collection Date	No. of Bottles Alpha	Sub	TAT	Requested Tests 314_W	METALS_DW	VOC_TIC_W	VOC_W					Sample Remarks
BMI10081041-11A	MW-14-2	AQ	08/09/10 09:55	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI10081041-12A	MW-14-1	AQ	08/09/10 10:15	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI10081041-13A	EB-11-08/09/10	AQ	08/09/10 10:06	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI10081041-14A	TB-11-08/09/10	AQ	08/09/10 07:00	1	0	10			VOC by 524 Criteria	VOC by 524 Criteria					Reno TB, 6/29/10

Comments: Security seals intact. Frozen ice. Temp Blank #7686 received @ 4°C. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). :

	Signature	Print Name	Company	Date/Time
Logged in by:	Tave Dickinson	Tave Dickinson	**Alpha Analytical, Inc.**	8/10/10 1035

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 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.
Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

Billing Information:

Name GERALD TOMPKINS / BATTELLE
Address 505 KING AVE, C-205
City, State, Zip COLUMBUS, OH 43201
Phone Number _____ Fax _____

Alpha Analytical, Inc.
255 Glendale Avenue, Suite 21
Sparks, Nevada 89431-5778
Phone (775) 355-1044
Fax (775) 355-0406

Samples Collected From Which State? AZ ___ CA X NV ___ WA ___ ID ___ OR ___ OTHER ___

25760

Page # 1 of 1

Client Name	P.O. #	Job #
BATTELLE / DAVID CONNER	218013	G005862
Address: 3990 OLD TOWN AVE, C-205	EMail Address:	
City, State, Zip: SAN DIEGO, CA 92110	Phone #: (619) 726-7311	Fax #:

Report Attention: CHASE BINGDON

Time Sampled	Date Sampled	Matrix* See Key Below	Lab ID Number (Office Use Only)	Sample Description	TAT	Field Filtered	Total and type of containers ** See below	VOC (524.2)	TOTAL Cr (200.8)	Cl04 - (314.0)	REMARKS
0840	8/6/10	AQ	BMI1008104I-01	MW-21-5	NORM		3v 2p	X	X	X	
0901			-02	MW-21-4			3v 2p	X	X	X	
0930			-03	MW-21-3			6v 4p	X	X	X	MS/MSD
0955			-04	MW-21-2			3v 2p	X	X	X	
1021			-05	MW-21-1			3v 2p	X	X	X	
1011			-06	EB-10-08/06/10			3v, 2p	X	X	X	EQUIPMENT BLANK
0700	8/6/10	AQ	-07	TB-10-08/06/10			1V	X			TRIP BLANK

ADDITIONAL INSTRUCTIONS:

	Signature	Print Name	Company	Date	Time
Relinquished by		CHASE BINGDON	INSIGHT ECC, INC	08/06/10	1300
Received by		Anthony Stark	Alpha Analytical	8/9/10	1130
Relinquished by		"	"	8/9/10	1130
Received by		Tara Dickinson	Alpha	8/10/10	1025
Relinquished by					
Received by					

*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

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 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.

Billing Information:

Name GERALD TOMPKINS / BATTELLE
Address 505 KING AVE.
City, State, Zip COLUMBUS, OH 43201
Phone Number ______ Fax ______

Alpha Analytical, Inc.
255 Glendale Avenue, Suite 21
Sparks, Nevada 89431-5778
Phone (775) 355-1044
Fax (775) 355-0406

Samples Collected From Which State? AZ ___ CA X NV ___ WA ___ ID ___ OR ___ OTHER ___

25767

Page # 1 of 1

Client Name: BATTELLE / DAVID CONNER
Address: 3990 OLD TOWN AVE. C-205
City, State, Zip: SAN DIEGO, CA 92110
P.O. # 218013
Job # G005862
EMail Address:
Phone # (619) 726-7311
Fax #:
Sampled by: CHASE BROGDON
Report Attention:

Required QC Level? I II (III) IV
EDD / EDF? YES ___ NO ___
Global ID # ___

Time Sampled	Date Sampled	Matrix* See Key Below	Lab ID Number (Office Use Only)	Sample Description	TAT	Field Filtered	Total and type of containers ** See below	VOC (524.2)	TOTAL Cr (200.8)	Chromium (314.0)					REMARKS
0849	8/9/10	AQ	BMI10081041-08	MW-14-5	NORM		3V 1P	X		X					
0909	↓	↓	-09	MW-14-4	↓		3V 1P	X		X					
0933	↓	↓	-10	MW-14-3	↓		3V 2P	X	X	X					
0955	↓	↓	-11	MW-14-2	↓		3V 2P	X	X	X					
1015	↓	↓	-12	MW-14-1	↓		3V 2P	X	X	X					
1006	↓	↓	-13	EB-11-08/09/10	↓		3V, 2P	X	X	X					EQUIPMENT BLANK
0700	8/9/10	AQ	-14	TB-11-08/09/10	↓		1V	X							TRIP BLANK.

ADDITIONAL INSTRUCTIONS:

	Signature	Print Name	Company	Date	Time
Relinquished by	[signature]	CHASE BROGDON	INSIGHT EEC, INC	08/09/10	1130
Received by	[signature]	Anthony Stahl	~~Insight~~ Alpha Analytical	8/9/10	1130
Relinquished by	[signature]	" "	" "	"	1130
Received by	Tara Dickinson	Tara Dickinson	Alpha	8/10/10	1025
Relinquished by					
Received by					

*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

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 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.

CAS SR #P1002504

Table of Contents

Columbia Analytical Services™ 2655 Park Center Drive, Suite A | Simi Valley, CA 93065 | 805.526.7161 | 805.526.7270 fax | www.caslab.com

LABORATORY REPORT

July 23, 2010

David Conner
Battelle
4800 Oak Grove Dr. M/S 180-801
Pasadena, CA 91109

RE: JPL-GW-3Q10 / G005862 / JPL GWM

Dear David:

Enclosed are the results of the samples submitted to our laboratory on July 21, 2010. For your reference, these analyses have been assigned our service request number P1002504.

All analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.caslab.com. Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein. Your report contains 24 pages.

Columbia Analytical Services, Inc. is certified by the California Department of Health Services, NELAP Laboratory Certificate No. 02115CA; Arizona Department of Health Services, Certificate No. AZ0694; Florida Department of Health, NELAP Certification E871020; New Jersey Department of Environmental Protection, NELAP Laboratory Certification ID #CA009; New York State Department of Health, NELAP NY Lab ID No: 11221; Oregon Environmental Laboratory Accreditation Program, NELAP ID: CA20007; The American Industrial Hygiene Association, Laboratory #101661; United States Department of Defense Environmental Laboratory Accreditation Program (DoD-ELAP), Certificate No. L10-3; Pennsylvania Registration No. 68-03307; TX Commission of Environmental Quality, NELAP ID T104704413-09-TX; Minnesota Department of Health, Certificate No. 11495AA; Washington State Department of Ecology, ELAP Lab ID: C946. Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact me for information corresponding to a particular certification.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

Columbia Analytical Services, Inc.

Sue Anderson
Project Manager

Client: Battelle
Project: JPL-GW-3Q10 / G005862 / JPL GWM

CAS Project No: P1002504

CASE NARRATIVE

The samples were received intact under chain of custody on July 21, 2010 and were stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the samples at the time of sample receipt.

Hexavalent Chromium by EPA Method 7196A

No anomalies were encountered during this analysis.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for utilization of less than the complete report.

Acronyms

CA LUFT	California DHS LUFT Method
ASTM	American Society for Testing and Materials
BTEX	Benzene/Toluene/Ethylbenzene/Xylenes
CAS Number	Chemical Abstract Service Registry Number
CFC	Chlorofluorocarbon
CRDL	Contract Required Detection Limit
DLCS	Duplicate Laboratory Control Sample
DMS	Duplicate Matrix Spike
DOH or DHS	Department of Health Services
EPA	U.S. Environmental Protection Agency
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
IC	Ion Chromatography
ICB	Initial Calibration Blank
ICV	Initial Calibration Verification
LCS	Laboratory Control Sample
LUFT	Leaking Underground Fuel Tank
M	Modified Method
MDL	Method Detection Limit
MRL	Method Reporting Limit
MS	Matrix Spike
MTBE	Methyl *tert* -Butyl Ether
NA	Not Applicable
NC	Not Calculated
ND	None Detected at or above the Method Reporting/Detection Limit (MRL/MDL)
NTU	Nephelometric Turbidity Units
ppb	Parts Per Billion
ppm	Parts Per Million
PQL	Practical Quantitation Limit
QA/QC	Quality Assurance/Quality Control
RCRA	Resource Conservation and Recovery Act
RPD	Relative Percent Difference
SIM	Selected Ion Monitoring
SM	*Standard Methods for the Examination of Water and Wastewater* , 19th Ed., 1995.
SW	*Test Methods for Evaluating Solid Waste, Physical/Chemical Methods* , SW-846, Third Edition, 1986 and as amended by Updates I, II, IIA, and IIB.
TDS	Total Dissolved Solids
TPH	Total Petroleum Hydrocarbons
TSS	Total Suspended Solids
TTLC	Total Threshold Limit Concentration
VOA	Volatile Organic Analyte(s)
VOC	Volatile Organic Compound(s)

Qualifiers

U	The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
J	The result is an estimated concentration that is less than the MRL (PQL), but greater than or equal to the MDL.
B	Analyte detected in the method blank above MRL (PQL).
E	Estimated; result based on response which exceeded the instrument calibration range.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
D	The reported result is from a dilution.
X	See case narrative.

Client: Battelle
Project: JPL-GW-3Q10/G005862 / JPL GWM

Service Request: P1002504

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
P1002504-001	MW-10	7/21/10	09:14
P1002504-002	MW-10-MS/MSD	7/21/10	09:20
P1002504-003	MW-15	7/21/10	13:26

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Water & Soil - Chain of Custody Record & Analytical Service Request

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Columbia Analytical Services INC.
An Employee - Owned Company

2655 Park Center Drive, Suite A
Simi Valley, California 93065
Phone (805) 526-7161
Fax (805) 526-7270

Requested Turnaround Time in Business Days (Surcharges) please circle
1 Day (100%) 2 Day (75%) 3 Day (50%) 4 Day (35%) 5 Day (25%) (10 Day - Standard)

CAS Project No: 1002501

CAS Contact:

Company Name & Address (Reporting Information)	Project Name	Project Number
Battelle 505 King Ave Columbus OH 43201	SPL-GW-3010	60058621SPL GWM

Project Manager	P.O. # / Billing Information
David Conner	214375 / Battelle 505 King Ave Columbus OH 43201

Phone	Fax
619 726-7311	614 458-6641

Email Address for Result Reporting	Sampler (Print & Sign)
connerd@battelle.org	David Loera / DavidL

Analysis Method and/or Analytes

Preservative Code

Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Matrix	Number of Containers	Volatile Organics GC/MS 624 ☐ 8260B ☐ Oxygenates ☐ TPH Gas ☐	TPH Gas 8015B ☐ BTEX 8021B ☐ MTBE 8021B ☐	TPH Diesel 8015B ☐ (Subcontracted)	TPH Diesel Low Level 8015B ☐ (Subcontracted)	TPH FC ☐ 8015M (Subcontracted)	Semi-Volatile Organics GC/MS 625 ☐ 8270C ☐ (Subcontracted)	0 Hexavalent Cr (7196)	Remarks
MW-10	1	7/21/10	0914	AQ	1P							X	
MW-10-MS/MSD	2	7/21/10	0920	AQ	1P							X	
MW-15	3	7/21/10	1326	AQ	1P							X	QC Tier IV

Preservative Key

0	None
1	HCL
2	HNO3
3	H2SO4
4	NaOH
5	Zn Acetate
6	Asc Acid
7	Other

Report Tier Levels - please select

Tier I - (Results/Default if not specified) ____
Tier II - (Results + QC) ____
Tier III - (Data Validation Package) 10% Surcharge X
Tier IV - (client specified) MW-15 only

MRL required Yes / No
MDL / PQL / J required Yes / No

EDD required Yes / No
Type: _____

Project Requirements (MRLs, QAPP)

Relinquished by: (Signature) David L	Date: 7/21/10	Time: 1400	Received by: (Signature)	Date: 7/22/10	Time: 1500	Cooler / Blank / Ice / No Ice	
Relinquished by: (Signature)	Date: 7/21/10	Time: 1655	Received by: (Signature)	Date: 7/22/10	Time: 1655		
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:	Temperature 3 °C	

Columbia Analytical Services, Inc.
Chain of Custody Report

Client: Battelle
Project: JPL-GW-3Q10/G005862 / JPL GWM

Service Request: P1002504

Bottle ID	Tests	Date	Time	Sample Location / User	Disposed On
P1002504-001.01					
	7196A				
		7/21/10	1700	SMO / SSTAPLES	
		7/21/10	1700	P-37 / SSTAPLES	
		7/21/10	1711	In Lab / SANDERSON	
		7/21/10	1816	P-37 / SANDERSON	
P1002504-002.01					
	7196A				
		7/21/10	1700	SMO / SSTAPLES	
		7/21/10	1700	P-37 / SSTAPLES	
		7/21/10	1711	In Lab / SANDERSON	
		7/21/10	1816	P-37 / SANDERSON	
P1002504-003.01					
	7196A				
		7/21/10	1700	SMO / SSTAPLES	
		7/21/10	1700	P-37 / SSTAPLES	
		7/21/10	1711	In Lab / SANDERSON	
		7/21/10	1816	P-37 / SANDERSON	

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Columbia Analytical Services, Inc.
Sample Acceptance Check Form

Client: Battelle Work order: P1002504

Project: JPL GW 3Q10 / G005862 / JPL GW4

Sample(s) received on: 7/21/2010 Date opened: 7/21/2010 by: SSTAPLES

Note: This form is used for all samples received by CAS. The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity. Thermal preservation and pH will only be evaluated either at the request of the client and/or as required by the method/SOP.

		Yes	No	N/A
1	Were **sample containers** properly marked with client sample ID?	☒	☐	☐
2	Container(s) **supplied by CAS**?	☒	☐	☐
3	Did **sample containers** arrive in good condition?	☒	☐	☐
4	Was a **chain-of-custody** provided?	☒	☐	☐
5	Was the **chain-of-custody** properly completed?	☒	☐	☐
6	Did **sample container labels** and/or tags agree with custody papers?	☒	☐	☐
7	Was **sample volume** received adequate for analysis?	☒	☐	☐
8	Are samples within specified holding times?	☒	☐	☐
9	Was proper **temperature** (thermal preservation) of cooler at receipt adhered to?	☒	☐	☐
	Cooler Temperature _____ °C Blank Temperature 3 °C			
10	Was a **trip blank** received?	☐	☐	☒
	Trip blank supplied by CAS: _____			
11	Were **custody seals** on outside of cooler/Box?	☐	☒	☐
	Location of seal(s)? _____ Sealing Lid?	☐	☐	☒
	Were signature and date included?	☐	☐	☒
	Were seals intact?	☐	☐	☒
	Were custody seals on outside of sample container?	☐	☒	☐
	Location of seal(s)? _____ Sealing Lid?	☐	☐	☒
	Were signature and date included?	☐	☐	☒
	Were seals intact?	☐	☐	☒
12	Do containers have appropriate **preservation**, according to method/SOP or Client specified information?	☒	☐	☐
	Is there a client indication that the submitted samples are **pH** preserved?	☐	☐	☒
	Were **VOA vials** checked for presence/absence of air bubbles?	☐	☐	☒
	Does the client/method/SOP require that the analyst check the sample pH and if necessary alter it?	☐	☐	☒
13	**Tubes:** Are the tubes capped and intact?	☐	☐	☒
	Do they contain moisture?	☐	☐	☒
14	**Badges:** Are the badges properly capped and intact?	☐	☐	☒
	Are dual bed badges separated and individually capped and intact?	☐	☐	☒

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P1002504-001.01	125mL Plastic NP					
P1002504-002.01	125mL Plastic NP					Extra Bottle for QC if needed
P1002504-003.01	125mL Plastic NP					

Explain any discrepancies: (include lab sample ID numbers): _____

*Required pH: Phenols/COD/NH3/TOC/TOX/NO3+NO2/TKN/T.PHOS, H2SO4 (pH<2); Metals, HNO3 (pH<2); CN (NaOH or NaOH/Asc Acid) (pH>12); Diss. Sulfide, NaOH (pH>12); T. Sulfide, NaOH/ZnAc (pH>12) RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH 5-8); Sulfur (pH>4)

DIVIDER SHEET

ANALYTICAL DATA FOR

Hexavalent Chromium

ANALYSIS

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : Battelle
Project Name : JPL-GW-3Q10
Project Number : G005862 / JPL GWM
Sample Matrix : WATER

Service Request : P1002504
Date Collected : 07/21/10
Date Received : 07/21/10

Chromium, Hexavalent

Prep Method : None
Analysis Method : 7196A
Test Notes :

Units : mg/L (ppm)
Basis : NA

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Extracted	Date/Time Analyzed	Result	Result Notes
MW-10	P1002504-001	0.010	0.004	1	NA	07/21/10 17:50	0.013	
MW-15	P1002504-003	0.010	0.004	1	NA	07/21/10 17:50	ND	
Method Blank	P1002504-MB	0.010	0.004	1	NA	07/21/10 17:50	ND	

Approved By K. Ryan Date : 7/23/10

Report By:SAnderson

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Battelle	**Service Request:**	P1002504
Project:	JPL-GW-3Q10 / G005862 / JPL GWM	**Date Analyzed:**	07/21/10

Title: Initial and Continuing Calibration Blank (ICB and CCB) Summary
Analyte: Chromium, Hexavalent
Method: 7196A
Units: mg/L (ppm)

Sample Name	PQL	MDL	Result
ICB	0.010	0.004	ND
CCB1	0.010	0.004	ND

Approved By: K. Ryan Date: 7/23/10

ICCBMDL/120594

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Battelle
Project: JPL-GW-3Q10 / G005862 / JPL GWM

Service Request: P1002504
Date Analyzed: 07/21/10

Title: Initial and Continuing Calibration Verification (ICV and CCV) Summary
Analyte: Chromium, Hexavalent
Method: 7196A
Units: mg/L (ppm)

Sample Name	True Value	Result	Percent Recovery	Acceptance Criteria
ICV	0.0579	0.0608	105	90-109
CCV1	0.0579	0.0617	107	90-109

Approved By: K. Ryan Date: 7/23/10

CCV1A/120594

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client :	Battelle	**Service Request :**	P1002504
Project Name :	JPL-GW-3Q10	**Date Collected :**	NA
Project Number :	G005862 / JPL GWM	**Date Received :**	NA
Sample Matrix :	WATER	**Date Extracted :**	NA
		Date Analyzed :	07/21/10

Laboratory Control Sample Summary
Inorganic Parameters

Sample Name :	Laboratory Control Sample	Units :	mg/L (ppm)
Lab Code :	P1002504-LCS	Basis :	NA
Test Notes :			

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Chromium, Hexavalent	None	7196A	0.0400	0.0414	104	90-109	

Approved By K. Ryan Date : 7/23/10

Report By:SAnderson

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : Battelle
Project Name : JPL-GW-3Q10
Project Number : G005862 / JPL GWM
Sample Matrix : WATER

Service Request : P1002504
Date Collected : 07/21/10
Date Received : 07/21/10
Date Extracted : NA
Date Analyzed : 07/21/10

Matrix Spike/Duplicate Matrix Spike Summary

Sample Name : MW-10
Lab Code : P1002504-001MS P1002504-001DMS
Test Notes :

Units : mg/L (ppm)
Basis : NA

Analyte	Prep Method	Analysis Method	MRL	Spike Level MS	Spike Level DMS	Sample Result	Spike Result MS	Spike Result DMS	Spike Recovery MS	Spike Recovery DMS	CAS Acceptance Limits	Relative Percent Difference	Result Notes
Chromium, Hexavalent	None	7196A	0.010	0.0500	0.0500	0.0127	0.0580	0.0590	91	93	78-112	2	

Approved By K. Ryan Date : 7/23/10

Report By:SAnderson

CAS SR #P1002488

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Columbia Analytical Services™ 2655 Park Center Drive, Suite A | Simi Valley, CA 93065 | 805.526.7161 | 805.526.7270 fax | www.caslab.com

LABORATORY REPORT

July 21, 2010

David Conner
Battelle
4800 Oak Grove Dr. M/S 180-801
Pasadena, CA 91109

RE: JPL-GW-3Q10 / G005862 / JPL GWM

Dear David:

Enclosed are the results of the samples submitted to our laboratory on July 20, 2010. For your reference, these analyses have been assigned our service request number P1002488.

All analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.caslab.com. Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein. Your report contains 24 pages.

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If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

Columbia Analytical Services, Inc.

Sue Anderson
Project Manager

Client: Battelle
Project: JPL-GW-3Q10 / G005862 / JPL GWM

CAS Project No: P1002488

CASE NARRATIVE

The samples were received intact under chain of custody on July 20, 2010 and were stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the samples at the time of sample receipt.

Hexavalent Chromium by EPA Method 7196A

No anomalies were encountered during this analysis.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for utilization of less than the complete report.

Columbia Analytical Services, Inc.

Acronyms

CA LUFT	California DHS LUFT Method
ASTM	American Society for Testing and Materials
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ICV	Initial Calibration Verification
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ppm	Parts Per Million
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RPD	Relative Percent Difference
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TDS	Total Dissolved Solids
TPH	Total Petroleum Hydrocarbons
TSS	Total Suspended Solids
TTLC	Total Threshold Limit Concentration
VOA	Volatile Organic Analyte(s)
VOC	Volatile Organic Compound(s)

Qualifiers

U	The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
J	The result is an estimated concentration that is less than the MRL (PQL), but greater than or equal to the MDL.
B	Analyte detected in the method blank above MRL (PQL).
E	Estimated; result based on response which exceeded the instrument calibration range.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
D	The reported result is from a dilution.
X	See case narrative.

Client: Battelle
Project: JPL-GW-3Q10/G005862 / JPL GWM

Service Request: P1002488

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
P1002488-001	MW-13	7/20/10	10:26
P1002488-002	MW-8	7/20/10	14:11
P1002488-003	DUPE-1-3Q10	7/20/10	14:15

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Water & Soil - Chain of Custody Record & Analytical Service Request

Page 1 of 1

Columbia Analytical Services INC.
An Employee - Owned Company

2655 Park Center Drive, Suite A
Simi Valley, California 93065
Phone (805) 526-7161
Fax (805) 526-7270

Requested Turnaround Time in Business Days (Surcharges) please circle
1 Day (100%) 2 Day (75%) 3 Day (50%) 4 Day (35%) 5 Day (25%) (10 Day - Standard)

CAS Project No. P10D2488

CAS Contact:

Company Name & Address (Reporting Information)	Project Name
Battelle 505 King Ave Columbus OH 43201	JPL-GW-3Q10
	Project Number: 600586 2/JPL GWM
Project Manager: David Conner	P.O. # / Billing Information: 214375 / Battelle ATTN: Jerry Tompkins 505 King Ave Columbus OH 43201
Phone: 619-726-7311 / Fax: 614-458-6641	
Email Address for Result Reporting: connerd@battelle.org	Sampler (Print & Sign): David Loera / David L

Analysis Method and/or Analytes

Preservative Code

Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Matrix	Number of Containers	Volatile Organics GC/MS 624 ☐ 8260B ☐ Oxygenates ☐ TPH Gas ☐	TPH Gas 8015B ☐ BTEX 8021B ☐ MTBE 8021B ☐	TPH Diesel 8015B ☐ (Subcontracted)	TPH Diesel Low Level 8015B ☐ (Subcontracted)	TPH FC ☐ 8015M (Subcontracted)	Semi-Volatile Organics GC/MS 625 ☐ 8270C ☐ (Subcontracted)	0 Hexavalent Cr (7196)	Remarks
MW-13	1	3/20/10	1026	AQ	1P							X	
MW-8	2	3/20/10	1411	AQ	1P							X	
DUPE-1-3Q10	3	3/20/10	1415	AQ	1P							X	

Preservative Key

0	None
1	HCL
2	HNO3
3	H2SO4
4	NaOH
5	Zn Acetate
6	Asc Acid
7	Other

Report Tier Levels - please select

Tier I - (Results/Default if not specified) ____
Tier II - (Results + QC) ____
Tier III - (Data Validation Package) 10% Surcharge X
Tier V - (client specified) ____

MRL required Yes / No
MDL / PQL / J required Yes / No

EDD required Yes / No
Type: _____

Project Requirements (MRLs, QAPP)

Relinquished by: (Signature) David L	Date: 3/20/10	Time: 1500	Received by: (Signature)	Date: 3/20/10	Time: 1500		
Relinquished by: (Signature)	Date: 3/20/10	Time: 1510	Received by: (Signature)	Date: 3/21/10	Time: 0710	Cooler / Blank / Ice / No Ice	
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:	Temperature 3°C	°C

Columbia Analytical Services, Inc.
Chain of Custody Report

Client: Battelle
Project: JPL-GW-3Q10/G005862 / JPL GWM

Service Request: P1002488

Bottle ID	Tests	Date	Time	Sample Location / User	Disposed On
P1002488-001.01					
	7196A				
		7/20/10	1607	SMO / MZAMORA	
		7/20/10	1607	P-37 / MZAMORA	
		7/20/10	1629	In Lab / SANDERSON	
		7/20/10	1702	P-37 / SANDERSON	
P1002488-002.01					
	7196A				
		7/20/10	1607	SMO / MZAMORA	
		7/20/10	1607	P-37 / MZAMORA	
		7/20/10	1629	In Lab / SANDERSON	
		7/20/10	1702	P-37 / SANDERSON	
P1002488-003.01					
	7196A				
		7/20/10	1607	SMO / MZAMORA	
		7/20/10	1607	P-37 / MZAMORA	
		7/20/10	1629	In Lab / SANDERSON	
		7/20/10	1702	P-37 / SANDERSON	

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Columbia Analytical Services, Inc.
Sample Acceptance Check Form

Client: Battelle Work order: P1002488

Project: JPL-GW-3Q10 / G005862 / JPL GWM

Sample(s) received on: 7/20/2010 Date opened: 7/20/2010 by: MZAMORA

Note: This form is used for all samples received by CAS. The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity. Thermal preservation and pH will only be evaluated either at the request of the client and/or as required by the method/SOP.

		Yes	No	N/A
1	Were **sample containers** properly marked with client sample ID?	☒	☐	☐
2	Container(s) **supplied by CAS**?	☒	☐	☐
3	Did **sample containers** arrive in good condition?	☒	☐	☐
4	Was a **chain-of-custody** provided?	☒	☐	☐
5	Was the **chain-of-custody** properly completed?	☒	☐	☐
6	Did **sample container labels** and/or tags agree with custody papers?	☒	☐	☐
7	Was **sample volume** received adequate for analysis?	☒	☐	☐
8	Are samples within specified holding times?	☒	☐	☐
9	Was proper **temperature** (thermal preservation) of cooler at receipt adhered to?	☒	☐	☐
	Cooler Temperature _____ °C Blank Temperature 3 °C			
10	Was a **trip blank** received?	☐	☐	☒
	Trip blank supplied by CAS: _____			
11	Were **custody seals** on outside of cooler/Box?	☐	☒	☐
	Location of seal(s)? _____ Sealing Lid?	☐	☐	☒
	Were signature and date included?	☐	☐	☒
	Were seals intact?	☐	☐	☒
	Were custody seals on outside of sample container?	☐	☒	☐
	Location of seal(s)? _____ Sealing Lid?	☐	☐	☒
	Were signature and date included?	☐	☐	☒
	Were seals intact?	☐	☐	☒
12	Do containers have appropriate **preservation**, according to method/SOP or Client specified information?	☒	☐	☐
	Is there a client indication that the submitted samples are **pH** preserved?	☐	☐	☒
	Were **VOA vials** checked for presence/absence of air bubbles?	☐	☐	☒
	Does the client/method/SOP require that the analyst check the sample pH and if necessary alter it?	☐	☐	☒
13	**Tubes:** Are the tubes capped and intact?	☐	☐	☒
	Do they contain moisture?	☐	☐	☒
14	**Badges:** Are the badges properly capped and intact?	☐	☐	☒
	Are dual bed badges separated and individually capped and intact?	☐	☐	☒

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P1002488-001.01	125mL Plastic NP					
P1002488-002.01	125mL Plastic NP					
P1002488-003.01	125mL Plastic NP					

Explain any discrepancies: (include lab sample ID numbers): _____

*Required pH: Phenols/COD/NH3/TOC/TOX/NO3+NO2/TKN/T.PHOS, H2SO4 (pH<2); Metals, HNO3 (pH<2); CN (NaOH or NaOH/Asc Acid) (pH>12); Diss. Sulfide, NaOH (pH>12); T. Sulfide, NaOH/ZnAc (pH>12) RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH 5-8); Sulfur (pH>4)

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DIVIDER SHEET

ANALYTICAL DATA FOR

Hexavalent Chromium

ANALYSIS

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : Battelle
Project Name : JPL-GW-3Q10
Project Number : G005862 / JPL GWM
Sample Matrix : WATER

Service Request : P1002488
Date Collected : 07/20/10
Date Received : 07/20/10

Chromium, Hexavalent

Prep Method : None
Analysis Method : 7196A
Test Notes :

Units : mg/L (ppm)
Basis : NA

Sample Name	Lab Code	PQL	MDL	Dilution Factor	Date Extracted	Date/Time Analyzed	Result	Result Notes
MW-13	P1002488-001	0.010	0.004	1	NA	07/20/10 16:55	0.015	
MW-8	P1002488-002	0.010	0.004	1	NA	07/20/10 16:55	ND	
DUPE-1-3Q10	P1002488-003	0.010	0.004	1	NA	07/20/10 16:55	ND	
Method Blank	P1002488-MB	0.010	0.004	1	NA	07/20/10 16:55	ND	

Approved By _____ Date : 7/21/10

Report By:SAnderson

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Battelle	**Service Request:**	P1002488
Project:	JPL-GW-3Q10 / G005862 / JPL GWM	**Date Analyzed:**	07/20/10

Title: Initial and Continuing Calibration Blank (ICB and CCB) Summary
Analyte: Chromium, Hexavalent
Method: 7196A
Units: mg/L (ppm)

Sample Name	PQL	MDL	Result
ICB	0.010	0.004	ND
CCB1	0.010	0.004	ND

Approved By: KKya Date: 7/21/10

ICCBMDL/120594

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Battelle	**Service Request:**	P1002488
Project:	JPL-GW-3Q10 / G005862 / JPL GWM	**Date Analyzed:**	07/20/10

Title: Initial and Continuing Calibration Verification (ICV and CCV) Summary
Analyte: Chromium, Hexavalent
Method: 7196A
Units: mg/L (ppm)

Sample Name	True Value	Result	Percent Recovery	Acceptance Criteria
ICV	0.0579	0.0588	102	90-109
CCV1	0.0579	0.0579	100	90-109

Approved By: _____ Date: 7/21/10

CCV1A/120594

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client :	Battelle	**Service Request :**	P1002488
Project Name :	JPL-GW-3Q10	**Date Collected :**	NA
Project Number :	G005862 / JPL GWM	**Date Received :**	NA
Sample Matrix :	WATER	**Date Extracted :**	NA
		Date Analyzed :	07/20/10

Laboratory Control Sample Summary
Inorganic Parameters

Sample Name :	Laboratory Control Sample	Units :	mg/L (ppm)
Lab Code :	P1002488-LCS	Basis :	NA
Test Notes :			

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Chromium, Hexavalent	None	7196A	0.0400	0.0391	98	90-109	

Approved By KRyan Date : 7/21/10

Report By:SAnderson

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client :	Battelle	**Service Request :**	P1002488
Project Name :	JPL-GW-3Q10	**Date Collected :**	07/20/10
Project Number :	G005862 / JPL GWM	**Date Received :**	07/20/10
Sample Matrix :	WATER	**Date Extracted :**	NA
		Date Analyzed :	07/20/10

Matrix Spike/Duplicate Matrix Spike Summary

Sample Name :	MW-13		Units :	mg/L (ppm)
Lab Code :	P1002488-001MS	P1002488-001DMS	Basis :	NA
Test Notes :				

Analyte	Prep Method	Analysis Method	PQL	Spike Level MS	Spike Level DMS	Sample Result	Spike Result MS	Spike Result DMS	Spike Recovery MS	Spike Recovery DMS	CAS Acceptance Limits	Relative Percent Difference	Result Notes
Chromium, Hexavalent	None	7196A	0.010	0.0500	0.0500	0.0149	0.0624	0.0642	95	99	78-112	3	

Approved By KRyan Date : 7/21/10

Report By:SAnderson

CAS SR #P1002561

Table of Contents

Columbia Analytical Services™ 2655 Park Center Drive, Suite A | Simi Valley, CA 93065 | 805.526.7161 | 805.526.7270 fax | www.caslab.com

LABORATORY REPORT

August 2, 2010

David Conner
Battelle
4800 Oak Grove Dr. M/S 180-801
Pasadena, CA 91109

RE: JPL GW Mon. 3Q10 / G486090

Dear David:

Enclosed are the results of the samples submitted to our laboratory on July 26, 2010. For your reference, these analyses have been assigned our service request number P1002561.

All analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.caslab.com. Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein. Your report contains 27 pages.

Columbia Analytical Services, Inc. is certified by the California Department of Health Services, NELAP Laboratory Certificate No. 02115CA; Arizona Department of Health Services, Certificate No. AZ0694; Florida Department of Health, NELAP Certification E871020; New Jersey Department of Environmental Protection, NELAP Laboratory Certification ID #CA009; New York State Department of Health, NELAP NY Lab ID No: 11221; Oregon Environmental Laboratory Accreditation Program, NELAP ID: CA20007; The American Industrial Hygiene Association, Laboratory #101661; United States Department of Defense Environmental Laboratory Accreditation Program (DoD-ELAP), Certificate No. L10-3; Pennsylvania Registration No. 68-03307; TX Commission of Environmental Quality, NELAP ID T104704413-09-TX; Minnesota Department of Health, Certificate No. 11495AA; Washington State Department of Ecology, ELAP Lab ID: C946. Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact me for information corresponding to a particular certification.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

Columbia Analytical Services, Inc.

Sue Anderson
Project Manager

Client: Battelle
Project: JPL GW Mon. 3Q10 / G486090

CAS Project No: P1002561

CASE NARRATIVE

The samples were received intact under chain of custody on July 26, 2010 and were stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the samples at the time of sample receipt.

Hexavalent Chromium by EPA Method 7196A

No anomalies were encountered during this analysis.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for utilization of less than the complete report.

Acronyms

CA LUFT	California DHS LUFT Method
ASTM	American Society for Testing and Materials
BTEX	Benzene/Toluene/Ethylbenzene/Xylenes
CAS Number	Chemical Abstract Service Registry Number
CFC	Chlorofluorocarbon
CRDL	Contract Required Detection Limit
DLCS	Duplicate Laboratory Control Sample
DMS	Duplicate Matrix Spike
DOH or DHS	Department of Health Services
EPA	U.S. Environmental Protection Agency
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
IC	Ion Chromatography
ICB	Initial Calibration Blank
ICV	Initial Calibration Verification
LCS	Laboratory Control Sample
LUFT	Leaking Underground Fuel Tank
M	Modified Method
MDL	Method Detection Limit
MRL	Method Reporting Limit
MS	Matrix Spike
MTBE	Methyl *tert* -Butyl Ether
NA	Not Applicable
NC	Not Calculated
ND	None Detected at or above the Method Reporting/Detection Limit (MRL/MDL)
NTU	Nephelometric Turbidity Units
ppb	Parts Per Billion
ppm	Parts Per Million
PQL	Practical Quantitation Limit
QA/QC	Quality Assurance/Quality Control
RCRA	Resource Conservation and Recovery Act
RPD	Relative Percent Difference
SIM	Selected Ion Monitoring
SM	*Standard Methods for the Examination of Water and Wastewater*, 19th Ed., 1995.
SW	*Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, SW-846, Third Edition, 1986 and as amended by Updates I, II, IIA, and IIB.
TDS	Total Dissolved Solids
TPH	Total Petroleum Hydrocarbons
TSS	Total Suspended Solids
TTLC	Total Threshold Limit Concentration
VOA	Volatile Organic Analyte(s)
VOC	Volatile Organic Compound(s)

Qualifiers

U	The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
J	The result is an estimated concentration that is less than the MRL (PQL), but greater than or equal to the MDL.
B	Analyte detected in the method blank above MRL (PQL).
E	Estimated; result based on response which exceeded the instrument calibration range.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
D	The reported result is from a dilution.
X	See case narrative.

Client: Battelle
Project: JPL GW Mon. 3Q10/G486090

Service Request: P1002561

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
P1002561-001	MW-20-5	7/26/10	08:52
P1002561-002	MW-20-4	7/26/10	09:24
P1002561-003	MW-20-3	7/26/10	10:03
P1002561-004	MW-20-2	7/26/10	10:29
P1002561-005	MW-20-1	7/26/10	11:02
P1002561-006	DUPE-02-3Q10	7/26/10	00:00
P1002561-007	EB-01-7/26/10	7/26/10	10:45

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Water & Soil - Chain of Custody Record & Analytical Service Request

Columbia Analytical Services INC.
An Employee - Owned Company

2655 Park Center Drive, Suite A
Simi Valley, California 93065
Phone (805) 526-7161
Fax (805) 526-7270

Requested Turnaround Time in Business Days (Surcharges) please circle
1 Day (100%) 2 Day (75%) 3 Day (50%) 4 Day (35%) 5 Day (25%) 10 Day - Standard

CAS Project No. P1002561

CAS Contact:

Company Name & Address (Reporting Information)
BATTELLE
3990 OLD TOWN AVE. C-205
SAN DIEGO, CA 92110

Project Name: JPL GW MON. 3Q10

Project Number: G486090

Project Manager: DAVID CONNER

P.O. # / Billing Information: 244319/BATTELLE ATTN: GERALD TOMPKINS 505 KING AVE. COLUMBUS, OH 43201

Phone: (619) 726-7311

Fax:

Email Address for Result Reporting:

Sampler (Print & Sign): CHASE BRADDON

Analysis Method and/or Analytes

Preservative Code

Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Matrix	Number of Containers	Volatile Organics GC/MS 624 ☐ 8260B ☐ Oxygenates ☐ TPH Gas ☐	TPH Gas 8015B ☐ BTEX 8021B ☐ MTBE 8021B ☐	TPH Diesel 8015B ☐ (Subcontracted) TPH Diesel Low Level 8015B ☐ (Subcontracted)	TPH FC ☐ 8015M (Subcontracted)	Semi-Volatile Organics GC/MS 625 ☐ 8270C ☐ (Subcontracted)	0	Cr VI (7196)	Remarks
MW-20-5	1	7/26/10	0852	GW	1						X	X	
MW-20-4	2		0924		1						X	X	QC LEVEL III
MW-20-3	3		1003		1						X	X	
MW-20-2	4		1029		1						X	X	
MW-20-1	5		1102		1						X	X	
DUPE-02-3Q10	6		—		1						X	X	DUPLICATE
EB-01-7/26/10	7		1045		1						X	X	EQUIPMENT BLANK.
~~EB-01-7/26/10~~ (VOA)													

Preservative Key

0	None
1	HCL
2	HNO3
3	H2SO4
4	NaOH
5	Zn Acetate
6	Asc Acid
7	Other

Report Tier Levels - please select

Tier I - (Results/Default if not specified) ____
Tier II - (Results + QC) ____
Tier III - (Data Validation Package) 10% Surcharge ____
Tier V - (client specified) ____

MRL required Yes / No
MDL / PQL / J required Yes / No

EDD required Yes / No
Type: _____

Project Requirements (MRLs, QAPP)

	Date	Time		Date	Time
Relinquished by: (Signature)	7/26/10	1500	Received by: (Signature)	7/26/10	1800
Relinquished by: (Signature)	7/27/10	1545	Received by: (Signature)	7/28/10	540
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:

Cooler / Blank / Ice / No Ice

Temperature 3.0 °C

Columbia Analytical Services, Inc.
Chain of Custody Report

Client: Battelle
Project: JPL GW Mon. 3Q10/G486090

Service Request: P1002561

Bottle ID	Tests	Date	Time	Sample Location / User	Disposed On
P1002561-001.01					
	7196A				
		7/26/10	1610	SMO / MZAMORA	
		7/26/10	1611	P-37 / MZAMORA	
		7/26/10	1629	In Lab / SANDERSON	
		7/27/10	1710	P-37 / SANDERSON	
P1002561-002.01					
	7196A				
		7/26/10	1610	SMO / MZAMORA	
		7/26/10	1611	P-37 / MZAMORA	
		7/26/10	1629	In Lab / SANDERSON	
		7/27/10	1710	P-37 / SANDERSON	
P1002561-003.01					
	7196A				
		7/26/10	1610	SMO / MZAMORA	
		7/26/10	1611	P-37 / MZAMORA	
		7/26/10	1628	In Lab / SANDERSON	
		7/27/10	1710	P-37 / SANDERSON	
P1002561-004.01					
	7196A				
		7/26/10	1610	SMO / MZAMORA	
		7/26/10	1611	P-37 / MZAMORA	
		7/26/10	1629	In Lab / SANDERSON	
		7/27/10	1710	P-37 / SANDERSON	
P1002561-005.01					
	7196A				
		7/26/10	1610	SMO / MZAMORA	
		7/26/10	1611	P-37 / MZAMORA	
		7/26/10	1629	In Lab / SANDERSON	
		7/27/10	1710	P-37 / SANDERSON	
P1002561-006.01					
	7196A				
		7/26/10	1610	SMO / MZAMORA	
		7/26/10	1611	P-37 / MZAMORA	
		7/26/10	1629	In Lab / SANDERSON	
		7/27/10	1710	P-37 / SANDERSON	
P1002561-007.01					
	7196A				
		7/26/10	1610	SMO / MZAMORA	
		7/26/10	1611	P-37 / MZAMORA	
		7/26/10	1629	In Lab / SANDERSON	
		7/27/10	1710	P-37 / SANDERSON	

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Columbia Analytical Services, Inc.
Sample Acceptance Check Form

Client: Battelle Work order: P1002561

Project: JPL GW Mon. 3Q10 / G486090

Sample(s) received on: 7/26/2010 Date opened: 7/26/2010 by: MZAMORA

Note: This form is used for all samples received by CAS. The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity. Thermal preservation and pH will only be evaluated either at the request of the client and/or as required by the method/SOP.

		Yes	No	N/A
1	Were **sample containers** properly marked with client sample ID?	☒	☐	☐
2	Container(s) **supplied by CAS**?	☒	☐	☐
3	Did **sample containers** arrive in good condition?	☒	☐	☐
4	Was a **chain-of-custody** provided?	☒	☐	☐
5	Was the **chain-of-custody** properly completed?	☒	☐	☐
6	Did **sample container labels** and/or tags agree with custody papers?	☒	☐	☐
7	Was **sample volume** received adequate for analysis?	☒	☐	☐
8	Are samples within specified holding times?	☒	☐	☐
9	Was proper **temperature** (thermal preservation) of cooler at receipt adhered to?	☒	☐	☐
	Cooler Temperature _____ °C Blank Temperature 3 °C			
10	Was a **trip blank** received?	☐	☐	☒
	Trip blank supplied by CAS: _____			
11	Were **custody seals** on outside of cooler/Box?	☐	☒	☐
	Location of seal(s)? _____ Sealing Lid?	☐	☐	☒
	Were signature and date included?	☐	☐	☒
	Were seals intact?	☐	☐	☒
	Were custody seals on outside of sample container?	☐	☒	☐
	Location of seal(s)? _____ Sealing Lid?	☐	☐	☒
	Were signature and date included?	☐	☐	☒
	Were seals intact?	☐	☐	☒
12	Do containers have appropriate **preservation**, according to method/SOP or Client specified information?	☒	☐	☐
	Is there a client indication that the submitted samples are **pH** preserved?	☐	☐	☒
	Were **VOA vials** checked for presence/absence of air bubbles?	☐	☐	☒
	Does the client/method/SOP require that the analyst check the sample pH and if necessary alter it?	☐	☐	☒
13	**Tubes:** Are the tubes capped and intact?	☐	☐	☒
	Do they contain moisture?	☐	☐	☒
14	**Badges:** Are the badges properly capped and intact?	☐	☐	☒
	Are dual bed badges separated and individually capped and intact?	☐	☐	☒

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P1002561-001.01	125mL Plastic NP					
P1002561-002.01	125mL Plastic NP					
P1002561-003.01	125mL Plastic NP					
P1002561-004.01	125mL Plastic NP					
P1002561-005.01	125mL Plastic NP					

Explain any discrepancies: (include lab sample ID numbers): _____

*Required pH: Phenols/COD/NH3/TOC/TOX/NO3+NO2/TKN/T.PHOS, H2SO4 (pH<2); Metals, HNO3 (pH<2); CN (NaOH or NaOH/Asc Acid) (pH>12); Diss. Sulfide, NaOH (pH>12); T. Sulfide, NaOH/ZnAc (pH>12) RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH 5-8); Sulfur (pH>4)

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Columbia Analytical Services, Inc.
Sample Acceptance Check Form

Client: Battelle Work order: P1002561

Project: JPL GW Mon. 3Q10 / G486090

Sample(s) received on: 7/26/2010 Date opened: 7/26/2010 by: MZAMORA

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P1002561-006.01	125mL Plastic NP					
P1002561-007.01	125mL Plastic NP					

Explain any discrepancies: (include lab sample ID numbers):

*Required pH: Phenols/COD/NH3/TOC/TOX/NO3+NO2/TKN/T.PHOS, H2SO4 (pH<2); Metals, HNO3 (pH<2); CN (NaOH or NaOH/Asc Acid) (pH>12); Diss. Sulfide, NaOH (pH>12); T. Sulfide, NaOH/ZnAc (pH>12) RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH 5-8); Sulfur (pH>4)

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DIVIDER SHEET

ANALYTICAL DATA FOR

Hexavalent Chromium

ANALYSIS

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : Battelle
Project Name : JPL GW Mon. 3Q10
Project Number : G486090
Sample Matrix : WATER

Service Request : P1002561
Date Collected : 07/26/10
Date Received : 07/26/10

Chromium, Hexavalent

Prep Method : None
Analysis Method : 7196A
Test Notes :

Units : mg/L (ppm)
Basis : NA

Sample Name	Lab Code	PQL	MDL	Dilution Factor	Date Extracted	Date/Time Analyzed	Result	Result Notes
MW-20-5	P1002561-001	0.010	0.004	1	NA	07/26/10 17:05	ND	
MW-20-4	P1002561-002	0.010	0.004	1	NA	07/26/10 17:05	ND	
MW-20-3	P1002561-003	0.010	0.004	1	NA	07/26/10 17:05	ND	
MW-20-2	P1002561-004	0.010	0.004	1	NA	07/26/10 17:05	ND	
MW-20-1	P1002561-005	0.010	0.004	1	NA	07/26/10 17:05	ND	
DUPE-02-3Q10	P1002561-006	0.010	0.004	1	NA	07/26/10 17:05	ND	
EB-01-7/26/10	P1002561-007	0.010	0.004	1	NA	07/26/10 17:05	ND	
Method Blank	P1002561-MB	0.010	0.004	1	NA	07/26/10 17:05	ND	

Approved By K. Ryan Date : 7/27/10

Report By:SAnderson

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Battelle
Project: JPL GW Mon. 3Q10 / G486090

Service Request: P1002561
Date Analyzed: 07/26/10

Title: Initial and Continuing Calibration Blank (ICB and CCB) Summary
Analyte: Chromium, Hexavalent
Method: 7196A
Units: mg/L (ppm)

Sample Name	PQL	MDL	Result
ICB	0.010	0.004	ND
CCB1	0.010	0.004	ND
CCB2	0.010	0.004	ND

Approved By: K. Ryan Date: 7/29/10

ICCBMDL/120594

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Battelle
Project: JPL GW Mon. 3Q10 / G486090

Service Request: P1002561
Date Analyzed: 07/26/10

Title: Initial and Continuing Calibration Verification (ICV and CCV) Summary
Analyte: Chromium, Hexavalent
Method: 7196A
Units: mg/L (ppm)

Sample Name	True Value	Result	Percent Recovery	Acceptance Criteria
ICV	0.0579	0.0599	103	90-109
CCV1	0.0579	0.0590	102	90-109
CCV2	0.0579	0.0590	102	90-109

Approved By: K. Rya Date: 7/29/10

CCV1A/120594

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client :	Battelle	**Service Request :**	P1002561
Project Name :	JPL GW Mon. 3Q10	**Date Collected :**	NA
Project Number :	G486090	**Date Received :**	NA
Sample Matrix :	WATER	**Date Extracted :**	NA
		Date Analyzed :	07/26/10

Laboratory Control Sample Summary
Inorganic Parameters

Sample Name :	Laboratory Control Sample	Units :	mg/L (ppm)
Lab Code :	P1002561-LCS	Basis :	NA
Test Notes :			

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Chromium, Hexavalent	None	7196A	0.0400	0.0416	104	90-109	

Approved By K. Ryan Date : 7/27/10

Report By:SAnderson

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client :	Battelle	**Service Request :**	P1002561
Project Name :	JPL GW Mon. 3Q10	**Date Collected :**	07/26/10
Project Number :	G486090	**Date Received :**	07/26/10
Sample Matrix :	WATER	**Date Extracted :**	NA
		Date Analyzed :	07/26/10

Matrix Spike/Duplicate Matrix Spike Summary

Sample Name : MW-20-5
Lab Code : P1002561-001MS P1002561-001DMS
Test Notes :

Units : mg/L (ppm)
Basis : NA

Analyte	Prep Method	Analysis Method	PQL	Spike Level MS	Spike Level DMS	Sample Result	Spike Result MS	Spike Result DMS	Spike Recovery MS	Spike Recovery DMS	CAS Acceptance Limits	Relative Percent Difference	Result Notes
Chromium, Hexavalent	None	7196A	0.010	0.0500	0.0500	ND	0.0434	0.0434	87	87	78-112	<1	

Approved By K. Ryan Date : 7/27/10

Report By:SAnderson

CAS SR #P1002594

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LABORATORY REPORT

August 2, 2010

David Conner
Battelle
4800 Oak Grove Dr. M/S 180-801
Pasadena, CA 91109

RE: JPL GW Mon 3Q10 / G486090

Dear David:

Enclosed are the results of the samples submitted to our laboratory on July 27, 2010. For your reference, these analyses have been assigned our service request number P1002594.

All analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.caslab.com. Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein. Your report contains 29 pages.

Columbia Analytical Services, Inc. is certified by the California Department of Health Services, NELAP Laboratory Certificate No. 02115CA; Arizona Department of Health Services, Certificate No. AZ0694; Florida Department of Health, NELAP Certification E871020; New Jersey Department of Environmental Protection, NELAP Laboratory Certification ID #CA009; New York State Department of Health, NELAP NY Lab ID No: 11221; Oregon Environmental Laboratory Accreditation Program, NELAP ID: CA20007; The American Industrial Hygiene Association, Laboratory #101661; United States Department of Defense Environmental Laboratory Accreditation Program (DoD-ELAP), Certificate No. L10-3; Pennsylvania Registration No. 68-03307; TX Commission of Environmental Quality, NELAP ID T104704413-09-TX; Minnesota Department of Health, Certificate No. 11495AA; Washington State Department of Ecology, ELAP Lab ID: C946. Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact me for information corresponding to a particular certification.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

Columbia Analytical Services, Inc.

Sue Anderson
Project Manager

Client: Battelle
Project: JPL GW Mon 3Q10 / G486090

CAS Project No: P1002594

CASE NARRATIVE

The samples were received intact under chain of custody on July 27, 2010 and were stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the samples at the time of sample receipt.

Hexavalent Chromium by EPA Method 7196A

No anomalies were encountered during this analysis.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for utilization of less than the complete report.

Acronyms

CA LUFT	California DHS LUFT Method
ASTM	American Society for Testing and Materials
BTEX	Benzene/Toluene/Ethylbenzene/Xylenes
CAS Number	Chemical Abstract Service Registry Number
CFC	Chlorofluorocarbon
CRDL	Contract Required Detection Limit
DLCS	Duplicate Laboratory Control Sample
DMS	Duplicate Matrix Spike
DOH or DHS	Department of Health Services
EPA	U.S. Environmental Protection Agency
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
IC	Ion Chromatography
ICB	Initial Calibration Blank
ICV	Initial Calibration Verification
LCS	Laboratory Control Sample
LUFT	Leaking Underground Fuel Tank
M	Modified Method
MDL	Method Detection Limit
MRL	Method Reporting Limit
MS	Matrix Spike
MTBE	Methyl *tert*-Butyl Ether
NA	Not Applicable
NC	Not Calculated
ND	None Detected at or above the Method Reporting/Detection Limit (MRL/MDL)
NTU	Nephelometric Turbidity Units
ppb	Parts Per Billion
ppm	Parts Per Million
PQL	Practical Quantitation Limit
QA/QC	Quality Assurance/Quality Control
RCRA	Resource Conservation and Recovery Act
RPD	Relative Percent Difference
SIM	Selected Ion Monitoring
SM	*Standard Methods for the Examination of Water and Wastewater*, 19th Ed., 1995.
SW	*Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, SW-846, Third Edition, 1986 and as amended by Updates I, II, IIA, and IIB.
TDS	Total Dissolved Solids
TPH	Total Petroleum Hydrocarbons
TSS	Total Suspended Solids
TTLC	Total Threshold Limit Concentration
VOA	Volatile Organic Analyte(s)
VOC	Volatile Organic Compound(s)

Qualifiers

U	The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
J	The result is an estimated concentration that is less than the MRL (PQL), but greater than or equal to the MDL.
B	Analyte detected in the method blank above MRL (PQL).
E	Estimated; result based on response which exceeded the instrument calibration range.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
D	The reported result is from a dilution.
X	See case narrative.

Client: Battelle
Project: JPL GW Mon 3Q10/G486090

Service Request: P1002594

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
P1002594-001	MW-4-3	7/27/10	08:11
P1002594-002	MW-4-2	7/27/10	08:32
P1002594-003	MW-4-1	7/27/10	09:10
P1002594-004	DUPE-03-3Q10	7/27/10	00:00
P1002594-005	EB-02-7/27/10	7/27/10	08:52
P1002594-006	MW-3-4	7/27/10	11:35
P1002594-007	MW-3-3	7/27/10	11:59
P1002594-008	MW-3-2	7/27/10	12:18

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