ATTACHMENT 3: LABORATORY ANALYTICAL REPORTS (SUMMARY SHEETS)

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: *01-Dec-09*

David Conner
Battelle Memorial Institute
3990 Old Town Ave Suite C-205
San Diego, CA 92110
(818) 393-2808

CASE NARRATIVE

Job: G005862/JPL Groundwater Monitoring
Work Order: BMI09111704 **Cooler Temp:** 4 °C

Alpha's Sample ID	Client's Sample ID	Matrix
09111704-01A	MW-21-5	Aqueous
09111704-02A	MW-21-4	Aqueous
09111704-03A	MW-21-3	Aqueous
09111704-04A	MW-21-2	Aqueous
09111704-05A	MW-21-1	Aqueous
09111704-06A	EB-01-11/13/09	Aqueous
09111704-07A	TB-01-11/13/09	Aqueous
09111704-08A	MW-15	Aqueous
09111704-09A	MW-19-5	Aqueous
09111704-10A	MW-19-4	Aqueous
09111704-11A	MW-19-3	Aqueous
09111704-12A	MW-19-2	Aqueous
09111704-13A	MW-19-1	Aqueous
09111704-14A	EB-02-11/16/09	Aqueous
09111704-15A	TB-02-11/16/09	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
3990 Old Town Ave
San Diego, CA 92110

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 11/17/09

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 : BMI09111704-01A Perchlorate	3.75	1.00 µg/L	11/18/09 10:59	11/18/09 13:12
Date Sampled 11/13/09 08:26				
Client ID: **MW-21-4**				
Lab ID : BMI09111704-02A Perchlorate	2.82	1.00 µg/L	11/18/09 10:59	11/18/09 13:31
Date Sampled 11/13/09 08:54				
Client ID: **MW-21-3**				
Lab ID : BMI09111704-03A Perchlorate	2.86	1.00 µg/L	11/18/09 10:59	11/18/09 13:49
Date Sampled 11/13/09 09:21				
Client ID: **MW-21-2**				
Lab ID : BMI09111704-04A Perchlorate	1.79	1.00 µg/L	11/18/09 10:59	11/18/09 14:07
Date Sampled 11/13/09 09:47				
Client ID: **MW-21-1**				
Lab ID : BMI09111704-05A Perchlorate	2.42	1.00 µg/L	11/18/09 10:59	11/18/09 14:26
Date Sampled 11/13/09 10:33				
Client ID: **EB-01-11/13/09**				
Lab ID : BMI09111704-06A Perchlorate	ND	1.00 µg/L	11/18/09 10:59	11/18/09 15:21
Date Sampled 11/13/09 10:21				
Client ID: **MW-15**				
Lab ID : BMI09111704-08A Perchlorate	ND	1.00 µg/L	11/18/09 10:59	11/18/09 15:39
Date Sampled 11/16/09 09:05				
Client ID: **MW-19-5**				
Lab ID : BMI09111704-09A Perchlorate	3.04	1.00 µg/L	11/18/09 10:59	11/18/09 15:58
Date Sampled 11/16/09 09:00				
Client ID: **MW-19-4**				
Lab ID : BMI09111704-10A Perchlorate	2.58	1.00 µg/L	11/18/09 10:59	11/18/09 16:16
Date Sampled 11/16/09 09:24				
Client ID: **MW-19-3**				
Lab ID : BMI09111704-11A Perchlorate	2.93	1.00 µg/L	11/18/09 10:59	11/18/09 16:35
Date Sampled 11/16/09 10:01				
Client ID: **MW-19-2**				
Lab ID : BMI09111704-12A Perchlorate	5.45	1.00 µg/L	11/18/09 10:59	11/18/09 17:30
Date Sampled 11/16/09 10:24				

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Client ID: **MW-19-1**						
Lab ID : BMI09111704-13A	Perchlorate	7.05	1.00 µg/L	11/18/09 10:59	11/18/09 17:48	
Date Sampled 11/16/09 10:48						
Client ID: **EB-02-11/16/09**						
Lab ID : BMI09111704-14A	Perchlorate	ND	1.00 µg/L	11/18/09 10:59	11/18/09 18:07	
Date Sampled 11/16/09 10:40						

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 / 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.

12/1/09

Report Date

Alpha Analytical, Inc.

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ANALYTICAL REPORT

Battelle Memorial Institute
3990 Old Town Ave
San Diego, CA 92110

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 11/17/09

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 : BMI09111704-01A Chromium (Cr)	ND	0.0050 mg/L	11/18/09 10:04	11/19/09 02:43
Date Sampled 11/13/09 08:26				
Client ID: **MW-21-4**				
Lab ID : BMI09111704-02A Chromium (Cr)	ND	0.0050 mg/L	11/18/09 10:04	11/19/09 02:48
Date Sampled 11/13/09 08:54				
Client ID: **MW-21-3**				
Lab ID : BMI09111704-03A Chromium (Cr)	ND	0.0050 mg/L	11/18/09 10:04	11/19/09 02:54
Date Sampled 11/13/09 09:21				
Client ID: **MW-21-2**				
Lab ID : BMI09111704-04A Chromium (Cr)	ND	0.0050 mg/L	11/18/09 10:04	11/19/09 02:59
Date Sampled 11/13/09 09:47				
Client ID: **MW-21-1**				
Lab ID : BMI09111704-05A Chromium (Cr)	ND	0.0050 mg/L	11/18/09 10:04	11/19/09 02:26
Date Sampled 11/13/09 10:33				
Client ID: **EB-01-11/13/09**				
Lab ID : BMI09111704-06A Chromium (Cr)	ND	0.0050 mg/L	11/18/09 10:04	11/19/09 03:05
Date Sampled 11/13/09 10:21				
Client ID: **MW-15**				
Lab ID : BMI09111704-08A Chromium (Cr)	ND	0.0050 mg/L	11/18/09 10:04	11/19/09 03:11
Date Sampled 11/16/09 09:05				
Client ID: **MW-19-5**				
Lab ID : BMI09111704-09A Chromium (Cr)	ND	0.0050 mg/L	11/18/09 10:04	11/19/09 03:16
Date Sampled 11/16/09 09:00				
Client ID: **MW-19-4**				
Lab ID : BMI09111704-10A Chromium (Cr)	ND	0.0050 mg/L	11/18/09 10:04	11/19/09 03:22
Date Sampled 11/16/09 09:24				
Client ID: **MW-19-3**				
Lab ID : BMI09111704-11A Chromium (Cr)	ND	0.0050 mg/L	11/18/09 10:04	11/19/09 03:28
Date Sampled 11/16/09 10:01				
Client ID: **MW-19-2**				
Lab ID : BMI09111704-12A Chromium (Cr)	ND	0.0050 mg/L	11/18/09 10:04	11/19/09 04:08
Date Sampled 11/16/09 10:24				

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Client ID: **MW-19-1**						
Lab ID : BMI09111704-13A	Chromium (Cr)	ND	0.0050 mg/L	11/18/09 10:04	11/19/09 04:13
Date Sampled 11/16/09 10:48						
Client ID: **EB-02-11/16/09**						
Lab ID : BMI09111704-14A	Chromium (Cr)	ND	0.0050 mg/L	11/18/09 10:04	11/19/09 04:19
Date Sampled 11/16/09 10:40						

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
3990 Old Town Ave
San Diego, CA 92110
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-21-5**					
Lab ID : BMI09111704-01A	*** None Found ***	ND	2.0 µg/L	11/20/09 18:03	11/20/09 18:03
Date Received : 11/17/09					
Date Sampled : 11/13/09 08:26					
Client ID : **MW-21-4**					
Lab ID : BMI09111704-02A	*** None Found ***	ND	2.0 µg/L	11/20/09 18:25	11/20/09 18:25
Date Received : 11/17/09					
Date Sampled : 11/13/09 08:54					
Client ID : **MW-21-3**					
Lab ID : BMI09111704-03A	*** None Found ***	ND	2.0 µg/L	11/20/09 18:47	11/20/09 18:47
Date Received : 11/17/09					
Date Sampled : 11/13/09 09:21					
Client ID : **MW-21-2**					
Lab ID : BMI09111704-04A	*** None Found ***	ND	2.0 µg/L	11/20/09 19:09	11/20/09 19:09
Date Received : 11/17/09					
Date Sampled : 11/13/09 09:47					
Client ID : **MW-21-1**					
Lab ID : BMI09111704-05A	*** None Found ***	ND	2.0 µg/L	11/20/09 19:31	11/20/09 19:31
Date Received : 11/17/09					
Date Sampled : 11/13/09 10:33					
Client ID : **EB-01-11/13/09**					
Lab ID : BMI09111704-06A	Tertiary Butyl Alcohol (TBA)	68	10 µg/L	11/20/09 23:57	11/20/09 23:57
Date Received : 11/17/09					
Date Sampled : 11/13/09 10:21					
Client ID : **TB-01-11/13/09**					
Lab ID : BMI09111704-07A	*** None Found ***	ND	2.0 µg/L	11/21/09 00:19	11/21/09 00:19
Date Received : 11/17/09					
Date Sampled : 11/13/09 00:00					
Client ID : **MW-15**					
Lab ID : BMI09111704-08A	*** None Found ***	ND	2.0 µg/L	11/21/09 05:09	11/21/09 05:09
Date Received : 11/17/09					
Date Sampled : 11/16/09 09:05					
Client ID : **MW-19-5**					
Lab ID : BMI09111704-09A	*** None Found ***	ND	2.0 µg/L	11/21/09 05:32	11/21/09 05:32
Date Received : 11/17/09					
Date Sampled : 11/16/09 09:00					

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Client ID : **MW-19-4**						
Lab ID : BMI09111704-10A	*** None Found ***		ND	2.0 µg/L	11/21/09 05:54	11/21/09 05:54
Date Received : 11/17/09						
Date Sampled : 11/16/09 09:24						
Client ID : **MW-19-3**						
Lab ID : BMI09111704-11A	*** None Found ***		ND	2.0 µg/L	11/21/09 06:16	11/21/09 06:16
Date Received : 11/17/09						
Date Sampled : 11/16/09 10:01						
Client ID : **MW-19-2**						
Lab ID : BMI09111704-12A	*** None Found ***		ND	2.0 µg/L	11/21/09 06:38	11/21/09 06:38
Date Received : 11/17/09						
Date Sampled : 11/16/09 10:24						
Client ID : **MW-19-1**						
Lab ID : BMI09111704-13A	*** None Found ***		ND	2.0 µg/L	11/21/09 07:00	11/21/09 07:00
Date Received : 11/17/09						
Date Sampled : 11/16/09 10:48						
Client ID : **EB-02-11/16/09**						
Lab ID : BMI09111704-14A	Tertiary Butyl Alcohol (TBA)		65	10 µg/L	11/21/09 00:41	11/21/09 00:41
Date Received : 11/17/09	2-Methyl-1-propene		2.0	2.0 µg/L	11/21/09 00:41	11/21/09 00:41
Date Sampled : 11/16/09 10:40						
Client ID : **TB-02-11/16/09**						
Lab ID : BMI09111704-15A	*** None Found ***		ND	2.0 µg/L	11/21/09 01:03	11/21/09 01:03
Date Received : 11/17/09						
Date Sampled : 11/16/09 00:00						

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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12/1/09

Report Date

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ANALYTICAL REPORT

Battelle Memorial Institute
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09111704-01A
Client I.D. Number: MW-21-5

Sampled: 11/13/09 08:26
Received: 11/17/09
Extracted: 11/20/09 18:03
Analyzed: 11/20/09 18:03

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	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	4.0	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	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	102	(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	1.9	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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12/1/09
Report Date

Alpha Analytical, Inc.

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ANALYTICAL REPORT

Battelle Memorial Institute
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09111704-02A
Client I.D. Number: MW-21-4

Sampled: 11/13/09 08:54
Received: 11/17/09
Extracted: 11/20/09 18:25
Analyzed: 11/20/09 18:25

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L
2	Chloromethane	ND	2.0	µg/L
3	Vinyl chloride	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L
5	Bromomethane	ND	2.0	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L
8	Dichloromethane	ND	2.0	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	7.6	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	2.0	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	2.0	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	3.0	µg/L
60	1,2,4-Trichlorobenzene	ND	2.0	µg/L
61	Naphthalene	ND	2.0	µg/L
62	Hexachlorobutadiene	ND	2.0	µg/L
63	1,2,3-Trichlorobenzene	ND	2.0	µg/L
64	Surr: 1,2-Dichloroethane-d4	105	(70-130)	%REC
65	Surr: Toluene-d8	103	(70-130)	%REC
66	Surr: 4-Bromofluorobenzene	93	(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

Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / 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.

12/1/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09111704-03A
Client I.D. Number: MW-21-3

Sampled: 11/13/09 09:21
Received: 11/17/09
Extracted: 11/20/09 18:47
Analyzed: 11/20/09 18:47

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	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	1.2	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	3.0	µg/L
25	Trichloroethene	1.5	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	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	8.6	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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12/1/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09111704-04A
Client I.D. Number: MW-21-2

Sampled: 11/13/09 09:47
Received: 11/17/09
Extracted: 11/20/09 19:09
Analyzed: 11/20/09 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	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	1.8	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	2.4	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	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	0.80	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	14	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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12/1/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09111704-05A
Client I.D. Number: MW-21-1

Sampled: 11/13/09 10:33
Received: 11/17/09
Extracted: 11/20/09 19:31
Analyzed: 11/20/09 19:31

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	0.93	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	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	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 / info@alpha-analytical.com

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

12/1/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09111704-06A
Client I.D. Number: EB-01-11/13/09

Sampled: 11/13/09 10:21
Received: 11/17/09
Extracted: 11/20/09 23:57
Analyzed: 11/20/09 23:57

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	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	102	(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	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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12/1/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09111704-07A
Client I.D. Number: TB-01-11/13/09

Sampled: 11/13/09 00:00
Received: 11/17/09
Extracted: 11/21/09 00:19
Analyzed: 11/21/09 00:19

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	102	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	101	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	96	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

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 / info@alpha-analytical.com

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12/1/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09111704-08A
Client I.D. Number: MW-15

Sampled: 11/16/09 09:05
Received: 11/17/09
Extracted: 11/21/09 05:09
Analyzed: 11/21/09 05:09

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	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	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					

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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12/1/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09111704-09A
Client I.D. Number: MW-19-5

Sampled: 11/16/09 09:00
Received: 11/17/09
Extracted: 11/21/09 05:32
Analyzed: 11/21/09 05:32

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	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	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	2.1	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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12/1/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09111704-10A
Client I.D. Number: MW-19-4

Sampled: 11/16/09 09:24
Received: 11/17/09
Extracted: 11/21/09 05:54
Analyzed: 11/21/09 05:54

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	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	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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12/1/09
Report Date

Alpha Analytical, Inc.

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ANALYTICAL REPORT

Battelle Memorial Institute
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09111704-11A
Client I.D. Number: MW-19-3

Sampled: 11/16/09 10:01
Received: 11/17/09
Extracted: 11/21/09 06:16
Analyzed: 11/21/09 06:16

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	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	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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12/1/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09111704-12A
Client I.D. Number: MW-19-2

Sampled: 11/16/09 10:24
Received: 11/17/09
Extracted: 11/21/09 06:38
Analyzed: 11/21/09 06:38

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L
2	Chloromethane	ND	2.0	µg/L
3	Vinyl chloride	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L
5	Bromomethane	ND	2.0	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L
8	Dichloromethane	ND	2.0	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	1.2	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	0.53	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	2.0	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	3.0	µg/L
60	1,2,4-Trichlorobenzene	ND	2.0	µg/L
61	Naphthalene	ND	2.0	µg/L
62	Hexachlorobutadiene	ND	2.0	µg/L
63	1,2,3-Trichlorobenzene	ND	2.0	µg/L
64	Surr: 1,2-Dichloroethane-d4	107	(70-130)	%REC
65	Surr: Toluene-d8	100	(70-130)	%REC
66	Surr: 4-Bromofluorobenzene	94	(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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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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09111704-13A
Client I.D. Number: MW-19-1

Sampled: 11/16/09 10:48
Received: 11/17/09
Extracted: 11/21/09 07:00
Analyzed: 11/21/09 07:00

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit		
1	Dichlorodifluoromethane	ND	0.50	µg/L	
2	Chloromethane	ND	2.0	µg/L	
3	Vinyl chloride	ND	0.50	µg/L	
4	Chloroethane	ND	0.50	µg/L	
5	Bromomethane	ND	2.0	µg/L	
6	Trichlorofluoromethane	ND	0.50	µg/L	
7	1,1-Dichloroethene	ND	0.50	µg/L	
8	Dichloromethane	ND	2.0	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	2.0	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	3.0	µg/L	
60	1,2,4-Trichlorobenzene	ND	2.0	µg/L	
61	Naphthalene	ND	2.0	µg/L	
62	Hexachlorobutadiene	ND	2.0	µg/L	
63	1,2,3-Trichlorobenzene	ND	2.0	µg/L	
64	Surr: 1,2-Dichloroethane-d4	106	(70-130)	%REC	
65	Surr: Toluene-d8	100	(70-130)	%REC	
66	Surr: 4-Bromofluorobenzene	96	(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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12/1/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09111704-14A
Client I.D. Number: EB-02-11/16/09

Sampled: 11/16/09 10:40
Received: 11/17/09
Extracted: 11/21/09 00:41
Analyzed: 11/21/09 00:41

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	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	102	(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	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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12/1/09
Report Date

Alpha Analytical, Inc.

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ANALYTICAL REPORT

Battelle Memorial Institute
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09111704-15A
Client I.D. Number: TB-02-11/16/09

Sampled: 11/16/09 00:00
Received: 11/17/09
Extracted: 11/21/09 01:03
Analyzed: 11/21/09 01:03

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	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	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	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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12/1/09
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: *30-Nov-09*

QC Summary Report

Work Order: 09111704

Method Blank

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

File ID: **14** Batch ID: **23098** Analysis Date: **11/18/2009 12:17**

Sample ID: **MB-23098** Units : **µg/L** Run ID: **IC_3_091118A** Prep Date: **11/18/2009 10:59**

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: **23098** Analysis Date: **11/18/2009 12:35**

Sample ID: **LFB-23098** Units : **µg/L** Run ID: **IC_3_091118A** Prep Date: **11/18/2009 10:59**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	24.5	2	25		98	85	115			

Sample Matrix Spike

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

File ID: **22** Batch ID: **23098** Analysis Date: **11/18/2009 14:44**

Sample ID: **09111704-05ALFM** Units : **µg/L** Run ID: **IC_3_091118A** Prep Date: **11/18/2009 10:59**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	26.1	2	25	2.42	95	80	120			

Sample Matrix Spike Duplicate

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

File ID: **23** Batch ID: **23098** Analysis Date: **11/18/2009 15:03**

Sample ID: **09111704-05ALFMD** Units : **µg/L** Run ID: **IC_3_091118A** Prep Date: **11/18/2009 10:59**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	26.3	2	25	2.42	95	80	120	26.12	0.5(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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QC Summary Report

Work Order: 09111704

Method Blank

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

File ID: **111809.B\102SMPL.D** Batch ID: **23097K** Analysis Date: **11/19/2009 02:03**

Sample ID: **MB-23097** Units : **mg/L** Run ID: **ICP/MS_091118D** Prep Date: **11/18/2009 10:04**

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: **111809.B\103_LCS.D** Batch ID: **23097K** Analysis Date: **11/19/2009 02:09**

Sample ID: **LCS-23097** Units : **mg/L** Run ID: **ICP/MS_091118D** Prep Date: **11/18/2009 10:04**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0517	0.005	0.05		103	80	120			

Sample Matrix Spike

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

File ID: **111809.B\107SMPL.D** Batch ID: **23097K** Analysis Date: **11/19/2009 02:31**

Sample ID: **09111704-05AMS** Units : **mg/L** Run ID: **ICP/MS_091118D** Prep Date: **11/18/2009 10:04**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0515	0.005	0.05	0	103	80	120			

Sample Matrix Spike Duplicate

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

File ID: **111809.B\108SMPL.D** Batch ID: **23097K** Analysis Date: **11/19/2009 02:37**

Sample ID: **9111704-05AMSD** Units : **mg/L** Run ID: **ICP/MS_091118D** Prep Date: **11/18/2009 10:04**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0524	0.005	0.05	0	105	80	120	0.05145	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: *01-Dec-09*

QC Summary Report

Work Order: 09111704

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

File ID: **09112007.D** Batch ID: **MS15W1120M** Analysis Date: **11/20/2009 10:35**

Sample ID: **MBLK MS15W1120M** Units : **µg/L** Run ID: **MSD_15_091120A** Prep Date: **11/20/2009 10:35**

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	10.4		10		104	70	130			

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Date: 01-Dec-09

QC Summary Report

Work Order: 09111704

Surr: 4-Bromofluorobenzene	9.37		10	94	70	130			

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

File ID: **09112004.D** Batch ID: **MS15W1120M** Analysis Date: **11/20/2009 09:29**

Sample ID: **LCS MS15W1120M** Units : **µg/L** Run ID: **MSD_15_091120A** Prep Date: **11/20/2009 09:29**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	8.38	1	10		84	70	130			
Chloromethane	7.46	2	10		75	70	130			
Vinyl chloride	9.41	1	10		94	70	130			
Chloroethane	10.2	1	10		102	70	130			
Bromomethane	8.18	2	10		82	70	130			
Trichlorofluoromethane	11.3	1	10		113	70	130			
1,1-Dichloroethene	11.2	1	10		112	70	130			
Dichloromethane	9.92	2	10		99	70	130			
trans-1,2-Dichloroethene	11	1	10		110	70	130			
Methyl tert-butyl ether (MTBE)	11	0.5	10		110	70	130			
1,1-Dichloroethane	10.3	1	10		103	70	130			
cis-1,2-Dichloroethene	11.1	1	10		111	70	130			
Bromochloromethane	11.4	1	10		114	70	130			
Chloroform	11.2	1	10		112	70	130			
2,2-Dichloropropane	12.2	1	10		122	70	130			
1,2-Dichloroethane	11	1	10		110	70	130			
1,1,1-Trichloroethane	11.9	1	10		119	70	130			
1,1-Dichloropropene	11.1	1	10		111	70	130			
Carbon tetrachloride	12.4	1	10		124	70	130			
Benzene	10.4	0.5	10		104	70	130			
Dibromomethane	10.9	1	10		109	70	130			
1,2-Dichloropropane	10.4	1	10		104	70	130			
Trichloroethene	11.2	1	10		112	70	130			
Bromodichloromethane	11.4	1	10		114	70	130			
cis-1,3-Dichloropropene	11	1	10		110	70	130			
trans-1,3-Dichloropropene	9.97	1	10		99.7	70	130			
1,1,2-Trichloroethane	10.4	1	10		104	70	130			
Toluene	10.1	0.5	10		101	70	130			
1,3-Dichloropropane	10.6	1	10		106	70	130			
Dibromochloromethane	10.8	1	10		108	70	130			
1,2-Dibromoethane (EDB)	21.9	2	20		110	70	130			
Tetrachloroethene	11.7	1	10		117	70	130			
1,1,1,2-Tetrachloroethane	11.2	1	10		112	70	130			
Chlorobenzene	10.3	1	10		103	70	130			
Ethylbenzene	10.5	0.5	10		105	70	130			
m,p-Xylene	10.7	0.5	10		107	70	130			
Bromoform	9.79	1	10		98	70	130			
Styrene	11.4	1	10		114	70	130			
o-Xylene	10.7	0.5	10		107	70	130			
1,1,2,2-Tetrachloroethane	9.67	1	10		97	70	130			
1,2,3-Trichloropropane	20.9	2	20		105	70	130			
Isopropylbenzene	10.5	1	10		105	70	130			
Bromobenzene	10.4	1	10		104	70	130			
n-Propylbenzene	10.4	1	10		104	70	130			
4-Chlorotoluene	10.6	1	10		106	70	130			
2-Chlorotoluene	10.4	1	10		104	70	130			
1,3,5-Trimethylbenzene	10.6	1	10		106	70	130			
tert-Butylbenzene	10.2	1	10		102	70	130			
1,2,4-Trimethylbenzene	10.4	1	10		104	70	130			
sec-Butylbenzene	10.3	1	10		103	70	130			
1,3-Dichlorobenzene	10.5	1	10		105	70	130			
1,4-Dichlorobenzene	9.77	1	10		98	70	130			
4-Isopropyltoluene	10.5	1	10		105	70	130			
1,2-Dichlorobenzene	9.91	1	10		99	70	130			
n-Butylbenzene	10.8	1	10		108	70	130			
1,2-Dibromo-3-chloropropane (DBCP)	49.8	3	50		99.6	70	130			
1,2,4-Trichlorobenzene	11.1	2	10		111	70	130			
Naphthalene	10.5	2	10		105	70	130			
Hexachlorobutadiene	21.3	2	20		107	70	130			
1,2,3-Trichlorobenzene	10.6	2	10		106	70	130			
Surr: 1,2-Dichloroethane-d4	10.2		10		102	70	130			
Surr: Toluene-d8	9.74		10		97	70	130			
Surr: 4-Bromofluorobenzene	9.77		10		98	70	130			

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Date: 01-Dec-09

QC Summary Report

Work Order: 09111704

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

File ID: **09112008.D** Batch ID: **MS15W1120M** Analysis Date: **11/20/2009 10:58**

Sample ID: **09111704-05AMS** Units : **µg/L** Run ID: **MSD_15_091120A** Prep Date: **11/20/2009 10:58**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	40.4	2.5	50	0	81	13	167			
Chloromethane	33.5	10	50	0	67	28	145			
Vinyl chloride	40.3	2.5	50	0	81	43	134			
Chloroethane	42.6	2.5	50	0	85	39	154			
Bromomethane	33.9	10	50	0	68	19	176			
Trichlorofluoromethane	48.3	2.5	50	0	97	34	160			
1,1-Dichloroethene	46.6	2.5	50	0	93	60	130			
Dichloromethane	42.8	10	50	0	86	68	130			
trans-1,2-Dichloroethene	45.9	2.5	50	0	92	63	130			
Methyl tert-butyl ether (MTBE)	49	1.3	50	0	98	56	141			
1,1-Dichloroethane	43.4	2.5	50	0	87	61	130			
cis-1,2-Dichloroethene	47	2.5	50	0	94	70	130			
Bromochloromethane	50.3	2.5	50	0	101	70	130			
Chloroform	47.6	2.5	50	0.93	93	67	130			
2,2-Dichloropropane	50.7	2.5	50	0	101	30	152			
1,2-Dichloroethane	48.3	2.5	50	0	97	60	135			
1,1,1-Trichloroethane	48.5	2.5	50	0	97	59	137			
1,1-Dichloropropene	45.8	2.5	50	0	92	63	130			
Carbon tetrachloride	50.3	2.5	50	0	101	50	147			
Benzene	43.3	1.3	50	0	87	67	130			
Dibromomethane	48.6	2.5	50	0	97	69	133			
1,2-Dichloropropane	44.2	2.5	50	0	88	69	130			
Trichloroethene	45.4	2.5	50	0	91	69	130			
Bromodichloromethane	48.3	2.5	50	0	97	66	134			
cis-1,3-Dichloropropene	45.1	2.5	50	0	90	63	130			
trans-1,3-Dichloropropene	42.2	2.5	50	0	84	66	131			
1,1,2-Trichloroethane	44.9	2.5	50	0	90	68	130			
Toluene	41.4	1.3	50	0	83	66	130			
1,3-Dichloropropane	44.6	2.5	50	0	89	70	130			
Dibromochloromethane	45.7	2.5	50	0	91	70	130			
1,2-Dibromoethane (EDB)	95.6	5	100	0	96	70	130			
Tetrachloroethene	47.1	2.5	50	0	94	61	134			
1,1,1,2-Tetrachloroethane	47.5	2.5	50	0	95	70	130			
Chlorobenzene	42.8	2.5	50	0	86	70	130			
Ethylbenzene	42.8	1.3	50	0	86	68	130			
m,p-Xylene	44.1	1.3	50	0	88	64	130			
Bromoform	43.3	2.5	50	0	87	64	138			
Styrene	48	2.5	50	0	96	69	130			
o-Xylene	44.4	1.3	50	0	89	70	130			
1,1,2,2-Tetrachloroethane	42.8	2.5	50	0	86	65	131			
1,2,3-Trichloropropane	93.3	10	100	0	93	70	130			
Isopropylbenzene	42.8	2.5	50	0	86	64	138			
Bromobenzene	43.6	2.5	50	0	87	70	130			
n-Propylbenzene	41.8	2.5	50	0	84	66	132			
4-Chlorotoluene	44.3	2.5	50	0	89	70	130			
2-Chlorotoluene	43.3	2.5	50	0	87	70	130			
1,3,5-Trimethylbenzene	42.7	2.5	50	0	85	66	136			
tert-Butylbenzene	41.7	2.5	50	0	83	65	137			
1,2,4-Trimethylbenzene	43	2.5	50	0	86	65	137			
sec-Butylbenzene	42.2	2.5	50	0	84	66	134			
1,3-Dichlorobenzene	43.7	2.5	50	0	87	70	130			
1,4-Dichlorobenzene	41.1	2.5	50	0	82	70	130			
4-Isopropyltoluene	42.8	2.5	50	0	86	66	137			
1,2-Dichlorobenzene	41.9	2.5	50	0	84	70	130			
n-Butylbenzene	43.8	2.5	50	0	88	60	142			
1,2-Dibromo-3-chloropropane (DBCP)	217	15	250	0	87	67	130			
1,2,4-Trichlorobenzene	47.5	10	50	0	95	61	137			
Naphthalene	44.4	10	50	0	89	40	167			
Hexachlorobutadiene	87.7	10	100	0	88	61	130			
1,2,3-Trichlorobenzene	44.9	10	50	0	90	51	144			
Surr: 1,2-Dichloroethane-d4	51.6		50		103	70	130			
Surr: Toluene-d8	48.4		50		97	70	130			
Surr: 4-Bromofluorobenzene	48.2		50		96	70	130			

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QC Summary Report

Work Order: 09111704

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

File ID: **09112009.D** Batch ID: **MS15W1120M** Analysis Date: **11/20/2009 11:20**

Sample ID: **09111704-05AMSD** Units : **µg/L** Run ID: **MSD_15_091120A** Prep Date: **11/20/2009 11:20**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	42.2	2.5	50	0	84	13	167	40.39	4.4(20)	
Chloromethane	36	10	50	0	72	28	145	33.54	7.0(20)	
Vinyl chloride	43.8	2.5	50	0	88	43	134	40.27	8.4(20)	
Chloroethane	44.2	2.5	50	0	88	39	154	42.56	3.8(20)	
Bromomethane	40.5	10	50	0	81	19	176	33.92	17.7(20)	
Trichlorofluoromethane	50.3	2.5	50	0	101	34	160	48.25	4.2(20)	
1,1-Dichloroethene	48.3	2.5	50	0	97	60	130	46.62	3.6(20)	
Dichloromethane	44.3	10	50	0	89	68	130	42.8	3.4(20)	
trans-1,2-Dichloroethene	48.6	2.5	50	0	97	63	130	45.88	5.8(20)	
Methyl tert-butyl ether (MTBE)	50	1.3	50	0	100	56	141	48.97	2.1(20)	
1,1-Dichloroethane	44.9	2.5	50	0	90	61	130	43.4	3.3(20)	
cis-1,2-Dichloroethene	48.5	2.5	50	0	97	70	130	46.98	3.3(20)	
Bromochloromethane	50.9	2.5	50	0	102	70	130	50.31	1.2(20)	
Chloroform	49.9	2.5	50	0.93	98	67	130	47.59	4.7(20)	
2,2-Dichloropropane	53.3	2.5	50	0	107	30	152	50.74	5.0(20)	
1,2-Dichloroethane	49.1	2.5	50	0	98	60	135	48.25	1.8(20)	
1,1,1-Trichloroethane	50.8	2.5	50	0	102	59	137	48.49	4.6(20)	
1,1-Dichloropropene	48.1	2.5	50	0	96	63	130	45.77	4.9(20)	
Carbon tetrachloride	52.9	2.5	50	0	106	50	147	50.28	5.1(20)	
Benzene	45.3	1.3	50	0	91	67	130	43.27	4.5(20)	
Dibromomethane	49.1	2.5	50	0	98	69	133	48.56	1.1(20)	
1,2-Dichloropropane	46.1	2.5	50	0	92	69	130	44.15	4.4(20)	
Trichloroethene	47.5	2.5	50	0	95	69	130	45.36	4.6(20)	
Bromodichloromethane	50	2.5	50	0	100	66	134	48.25	3.6(20)	
cis-1,3-Dichloropropene	46.4	2.5	50	0	93	63	130	45.06	2.8(20)	
trans-1,3-Dichloropropene	43.2	2.5	50	0	86	66	131	42.22	2.2(20)	
1,1,2-Trichloroethane	46.1	2.5	50	0	92	68	130	44.94	2.6(20)	
Toluene	43.5	1.3	50	0	87	66	130	41.36	5.1(20)	
1,3-Dichloropropane	46.7	2.5	50	0	93	70	130	44.61	4.6(20)	
Dibromochloromethane	47.4	2.5	50	0	95	70	130	45.66	3.8(20)	
1,2-Dibromoethane (EDB)	97.1	5	100	0	97	70	130	95.59	1.6(20)	
Tetrachloroethene	50.2	2.5	50	0	100	61	134	47.09	6.3(20)	
1,1,1,2-Tetrachloroethane	49.6	2.5	50	0	99	70	130	47.51	4.4(20)	
Chlorobenzene	45.2	2.5	50	0	90	70	130	42.82	5.5(20)	
Ethylbenzene	45	1.3	50	0	90	68	130	42.81	5.1(20)	
m,p-Xylene	45.7	1.3	50	0	91	64	130	44.05	3.7(20)	
Bromoform	44.2	2.5	50	0	88	64	138	43.27	2.2(20)	
Styrene	50	2.5	50	0	100	69	130	48	4.1(20)	
o-Xylene	47.1	1.3	50	0	94	70	130	44.39	5.9(20)	
1,1,2,2-Tetrachloroethane	44.2	2.5	50	0	88	65	131	42.76	3.4(20)	
1,2,3-Trichloropropane	96.9	10	100	0	97	70	130	93.31	3.8(20)	
Isopropylbenzene	45.6	2.5	50	0	91	64	138	42.77	6.4(20)	
Bromobenzene	46	2.5	50	0	92	70	130	43.58	5.4(20)	
n-Propylbenzene	45.6	2.5	50	0	91	66	132	41.78	8.8(20)	
4-Chlorotoluene	47.4	2.5	50	0	95	70	130	44.25	6.8(20)	
2-Chlorotoluene	45.6	2.5	50	0	91	70	130	43.28	5.1(20)	
1,3,5-Trimethylbenzene	45.6	2.5	50	0	91	66	136	42.73	6.6(20)	
tert-Butylbenzene	45	2.5	50	0	90	65	137	41.7	7.6(20)	
1,2,4-Trimethylbenzene	45.8	2.5	50	0	92	65	137	43.02	6.3(20)	
sec-Butylbenzene	45.4	2.5	50	0	91	66	134	42.23	7.2(20)	
1,3-Dichlorobenzene	47.1	2.5	50	0	94	70	130	43.74	7.3(20)	
1,4-Dichlorobenzene	43.8	2.5	50	0	88	70	130	41.06	6.4(20)	
4-Isopropyltoluene	46.2	2.5	50	0	92	66	137	42.83	7.6(20)	
1,2-Dichlorobenzene	44.2	2.5	50	0	88	70	130	41.85	5.5(20)	
n-Butylbenzene	47.5	2.5	50	0	95	60	142	43.8	8.0(20)	
1,2-Dibromo-3-chloropropane (DBCP)	225	15	250	0	90	67	130	216.7	3.8(20)	
1,2,4-Trichlorobenzene	51.1	10	50	0	102	61	137	47.53	7.3(20)	
Naphthalene	48.6	10	50	0	97	40	167	44.36	9.1(20)	
Hexachlorobutadiene	95.7	10	100	0	96	61	130	87.66	8.8(20)	
1,2,3-Trichlorobenzene	49.2	10	50	0	98	51	144	44.88	9.1(20)	
Surr: 1,2-Dichloroethane-d4	51.4		50		103	70	130			
Surr: Toluene-d8	48.5		50		97	70	130			
Surr: 4-Bromofluorobenzene	49.5		50		99	70	130			

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Date: *01-Dec-09*

QC Summary Report

Work Order: 09111704

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: 01-Dec-09

QC Summary Report

Work Order: 09111704

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

File ID: **09112038.D** Batch ID: **MS15W1120N** Analysis Date: **11/20/2009 22:28**

Sample ID: **MBLK MS15W1120N** Units : **µg/L** Run ID: **MSD_15_091120C** Prep Date: **11/20/2009 22:28**

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	10.3		10		103	70	130			
Surr: Toluene-d8	10.2		10		102	70	130			

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QC Summary Report

Work Order: 09111704

Surr: 4-Bromofluorobenzene	9.44		10	94	70	130			

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

File ID: **09112035.D** Batch ID: **MS15W1120N** Analysis Date: **11/20/2009 21:22**

Sample ID: **LCS MS15W1120N** Units : **µg/L** Run ID: **MSD_15_091120C** Prep Date: **11/20/2009 21:22**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	8.05	1	10		81	70	130			
Chloromethane	7.24	2	10		72	70	130			
Vinyl chloride	9.3	1	10		93	70	130			
Chloroethane	9.8	1	10		98	70	130			
Bromomethane	9.79	2	10		98	70	130			
Trichlorofluoromethane	11.2	1	10		112	70	130			
1,1-Dichloroethene	10.9	1	10		109	70	130			
Dichloromethane	9.7	2	10		97	70	130			
trans-1,2-Dichloroethene	10.9	1	10		109	70	130			
Methyl tert-butyl ether (MTBE)	10.6	0.5	10		106	70	130			
1,1-Dichloroethane	10.3	1	10		103	70	130			
cis-1,2-Dichloroethene	11	1	10		110	70	130			
Bromochloromethane	11.1	1	10		111	70	130			
Chloroform	11.1	1	10		111	70	130			
2,2-Dichloropropane	11.1	1	10		111	70	130			
1,2-Dichloroethane	10.8	1	10		108	70	130			
1,1,1-Trichloroethane	11.9	1	10		119	70	130			
1,1-Dichloropropene	11	1	10		110	70	130			
Carbon tetrachloride	12.3	1	10		123	70	130			
Benzene	10.3	0.5	10		103	70	130			
Dibromomethane	10.6	1	10		106	70	130			
1,2-Dichloropropane	10.3	1	10		103	70	130			
Trichloroethene	11.7	1	10		117	70	130			
Bromodichloromethane	11.2	1	10		112	70	130			
cis-1,3-Dichloropropene	10.5	1	10		105	70	130			
trans-1,3-Dichloropropene	9.58	1	10		96	70	130			
1,1,2-Trichloroethane	9.99	1	10		99.9	70	130			
Toluene	10.1	0.5	10		101	70	130			
1,3-Dichloropropane	10.3	1	10		103	70	130			
Dibromochloromethane	10.4	1	10		104	70	130			
1,2-Dibromoethane (EDB)	21.3	2	20		107	70	130			
Tetrachloroethene	11.7	1	10		117	70	130			
1,1,1,2-Tetrachloroethane	11.1	1	10		111	70	130			
Chlorobenzene	10.3	1	10		103	70	130			
Ethylbenzene	10.5	0.5	10		105	70	130			
m,p-Xylene	10.6	0.5	10		106	70	130			
Bromoform	9.44	1	10		94	70	130			
Styrene	11.1	1	10		111	70	130			
o-Xylene	10.7	0.5	10		107	70	130			
1,1,2,2-Tetrachloroethane	8.67	1	10		87	70	130			
1,2,3-Trichloropropane	20.1	2	20		101	70	130			
Isopropylbenzene	10.7	1	10		107	70	130			
Bromobenzene	10.4	1	10		104	70	130			
n-Propylbenzene	10.4	1	10		104	70	130			
4-Chlorotoluene	10.8	1	10		108	70	130			
2-Chlorotoluene	10.4	1	10		104	70	130			
1,3,5-Trimethylbenzene	10.5	1	10		105	70	130			
tert-Butylbenzene	10.3	1	10		103	70	130			
1,2,4-Trimethylbenzene	10.4	1	10		104	70	130			
sec-Butylbenzene	10.4	1	10		104	70	130			
1,3-Dichlorobenzene	10.6	1	10		106	70	130			
1,4-Dichlorobenzene	9.85	1	10		99	70	130			
4-Isopropyltoluene	10.5	1	10		105	70	130			
1,2-Dichlorobenzene	9.69	1	10		97	70	130			
n-Butylbenzene	10.8	1	10		108	70	130			
1,2-Dibromo-3-chloropropane (DBCP)	46.1	3	50		92	70	130			
1,2,4-Trichlorobenzene	11	2	10		110	70	130			
Naphthalene	10.1	2	10		101	70	130			
Hexachlorobutadiene	21.3	2	20		106	70	130			
1,2,3-Trichlorobenzene	10.4	2	10		104	70	130			
Surr: 1,2-Dichloroethane-d4	10		10		100	70	130			
Surr: Toluene-d8	9.77		10		98	70	130			
Surr: 4-Bromofluorobenzene	10		10		100	70	130			

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Date: 01-Dec-09

QC Summary Report

Work Order: 09111704

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

File ID: **09112039.D** Batch ID: **MS15W1120N** Analysis Date: **11/20/2009 22:50**

Sample ID: **09111801-05AMS** Units : **µg/L** Run ID: **MSD_15_091120C** Prep Date: **11/20/2009 22:50**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	40.3	2.5	50	0	81	13	167			
Chloromethane	40	10	50	0	80	28	145			
Vinyl chloride	45.2	2.5	50	0	90	43	134			
Chloroethane	50	2.5	50	0	100	39	154			
Bromomethane	41.2	10	50	0	82	19	176			
Trichlorofluoromethane	47.9	2.5	50	0	96	34	160			
1,1-Dichloroethene	50.6	2.5	50	0	101	60	130			
Dichloromethane	46.3	10	50	0	93	68	130			
trans-1,2-Dichloroethene	50.7	2.5	50	0	101	63	130			
Methyl tert-butyl ether (MTBE)	48.5	1.3	50	0	97	56	141			
1,1-Dichloroethane	47.6	2.5	50	0	95	61	130			
cis-1,2-Dichloroethene	51.2	2.5	50	0	102	70	130			
Bromochloromethane	50.9	2.5	50	0	102	70	130			
Chloroform	50.9	2.5	50	0	102	67	130			
2,2-Dichloropropane	46.9	2.5	50	0	94	30	152			
1,2-Dichloroethane	49.1	2.5	50	0	98	60	135			
1,1,1-Trichloroethane	53.7	2.5	50	0	107	59	137			
1,1-Dichloropropene	51.2	2.5	50	0	102	63	130			
Carbon tetrachloride	55.1	2.5	50	0	110	50	147			
Benzene	47.5	1.3	50	0	95	67	130			
Dibromomethane	48.4	2.5	50	0	97	69	133			
1,2-Dichloropropane	47.4	2.5	50	0	95	69	130			
Trichloroethene	50.5	2.5	50	0	101	69	130			
Bromodichloromethane	50.3	2.5	50	0	101	66	134			
cis-1,3-Dichloropropene	45	2.5	50	0	90	63	130			
trans-1,3-Dichloropropene	41.4	2.5	50	0	83	66	131			
1,1,2-Trichloroethane	45.3	2.5	50	0	91	68	130			
Toluene	45.1	1.3	50	0	90	66	130			
1,3-Dichloropropane	46.4	2.5	50	0	93	70	130			
Dibromochloromethane	45.2	2.5	50	0	90	70	130			
1,2-Dibromoethane (EDB)	94.9	5	100	0	95	70	130			
Tetrachloroethene	50.8	2.5	50	0	102	61	134			
1,1,1,2-Tetrachloroethane	49.1	2.5	50	0	98	70	130			
Chlorobenzene	45.7	2.5	50	0	91	70	130			
Ethylbenzene	46.4	1.3	50	0	93	68	130			
m,p-Xylene	47.8	1.3	50	0	96	64	130			
Bromoform	41.5	2.5	50	0	83	64	138			
Styrene	50.3	2.5	50	0	101	69	130			
o-Xylene	48.2	1.3	50	0	96	70	130			
1,1,2,2-Tetrachloroethane	41.3	2.5	50	0	83	65	131			
1,2,3-Trichloropropane	89.7	10	100	0	90	70	130			
Isopropylbenzene	48	2.5	50	0	96	64	138			
Bromobenzene	46.3	2.5	50	0	93	70	130			
n-Propylbenzene	47.6	2.5	50	0	95	66	132			
4-Chlorotoluene	48.6	2.5	50	0	97	70	130			
2-Chlorotoluene	47.7	2.5	50	0	95	70	130			
1,3,5-Trimethylbenzene	47.9	2.5	50	0	96	66	136			
tert-Butylbenzene	47.3	2.5	50	0	95	65	137			
1,2,4-Trimethylbenzene	47.6	2.5	50	0	95	65	137			
sec-Butylbenzene	47	2.5	50	0	94	66	134			
1,3-Dichlorobenzene	48	2.5	50	0	96	70	130			
1,4-Dichlorobenzene	44.3	2.5	50	0	89	70	130			
4-Isopropyltoluene	48.1	2.5	50	0	96	66	137			
1,2-Dichlorobenzene	44.2	2.5	50	0	88	70	130			
n-Butylbenzene	49.1	2.5	50	0	98	60	142			
1,2-Dibromo-3-chloropropane (DBCP)	210	15	250	0	84	67	130			
1,2,4-Trichlorobenzene	49	10	50	0	98	61	137			
Naphthalene	44.2	10	50	0	88	40	167			
Hexachlorobutadiene	95.1	10	100	0	95	61	130			
1,2,3-Trichlorobenzene	45.4	10	50	0	91	51	144			
Surr: 1,2-Dichloroethane-d4	51.3		50		103	70	130			
Surr: Toluene-d8	48.6		50		97	70	130			
Surr: 4-Bromofluorobenzene	50.1		50		100	70	130			

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Date: 01-Dec-09

QC Summary Report

Work Order: 09111704

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

File ID: **09112040.D** Batch ID: **MS15W1120N** Analysis Date: **11/20/2009 23:12**

Sample ID: **09111801-05AMSD** Units : **µg/L** Run ID: **MSD_15_091120C** Prep Date: **11/20/2009 23:12**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	43.4	2.5	50	0	87	13	167	40.33	7.3(20)	
Chloromethane	41.8	10	50	0	84	28	145	40	4.4(20)	
Vinyl chloride	49.1	2.5	50	0	98	43	134	45.19	8.3(20)	
Chloroethane	52.3	2.5	50	0	105	39	154	50	4.5(20)	
Bromomethane	42.6	10	50	0	85	19	176	41.17	3.3(20)	
Trichlorofluoromethane	55.1	2.5	50	0	110	34	160	47.91	13.9(20)	
1,1-Dichloroethene	54.8	2.5	50	0	110	60	130	50.55	8.1(20)	
Dichloromethane	47.3	10	50	0	95	68	130	46.29	2.2(20)	
trans-1,2-Dichloroethene	53.5	2.5	50	0	107	63	130	50.74	5.4(20)	
Methyl tert-butyl ether (MTBE)	51	1.3	50	0	102	56	141	48.5	5.1(20)	
1,1-Dichloroethane	49.8	2.5	50	0	99.7	61	130	47.64	4.5(20)	
cis-1,2-Dichloroethene	53.4	2.5	50	0	107	70	130	51.17	4.2(20)	
Bromochloromethane	54.5	2.5	50	0	109	70	130	50.93	6.8(20)	
Chloroform	52.7	2.5	50	0	105	67	130	50.92	3.4(20)	
2,2-Dichloropropane	50.4	2.5	50	0	101	30	152	46.85	7.3(20)	
1,2-Dichloroethane	51.3	2.5	50	0	103	60	135	49.14	4.3(20)	
1,1,1-Trichloroethane	57.1	2.5	50	0	114	59	137	53.73	6.0(20)	
1,1-Dichloropropene	54.5	2.5	50	0	109	63	130	51.17	6.3(20)	
Carbon tetrachloride	59.2	2.5	50	0	118	50	147	55.1	7.2(20)	
Benzene	49.8	1.3	50	0	100	67	130	47.45	4.7(20)	
Dibromomethane	51.1	2.5	50	0	102	69	133	48.43	5.3(20)	
1,2-Dichloropropane	49.9	2.5	50	0	99.8	69	130	47.4	5.1(20)	
Trichloroethene	52.6	2.5	50	0	105	69	130	50.45	4.1(20)	
Bromodichloromethane	53.2	2.5	50	0	106	66	134	50.25	5.7(20)	
cis-1,3-Dichloropropene	48	2.5	50	0	96	63	130	45	6.4(20)	
trans-1,3-Dichloropropene	44.2	2.5	50	0	88	66	131	41.36	6.6(20)	
1,1,2-Trichloroethane	47	2.5	50	0	94	68	130	45.29	3.6(20)	
Toluene	47.7	1.3	50	0	95	66	130	45.06	5.7(20)	
1,3-Dichloropropane	48.5	2.5	50	0	97	70	130	46.43	4.4(20)	
Dibromochloromethane	49.2	2.5	50	0	98	70	130	45.22	8.5(20)	
1,2-Dibromoethane (EDB)	99.4	5	100	0	99	70	130	94.87	4.7(20)	
Tetrachloroethene	54.9	2.5	50	0	110	61	134	50.83	7.7(20)	
1,1,1,2-Tetrachloroethane	52.7	2.5	50	0	105	70	130	49.14	6.9(20)	
Chlorobenzene	48.9	2.5	50	0	98	70	130	45.74	6.6(20)	
Ethylbenzene	49.5	1.3	50	0	99	68	130	46.44	6.5(20)	
m,p-Xylene	50.8	1.3	50	0	102	64	130	47.79	6.2(20)	
Bromoform	44.6	2.5	50	0	89	64	138	41.5	7.2(20)	
Styrene	53.7	2.5	50	0	107	69	130	50.27	6.6(20)	
o-Xylene	51	1.3	50	0	102	70	130	48.24	5.5(20)	
1,1,2,2-Tetrachloroethane	43.6	2.5	50	0	87	65	131	41.28	5.4(20)	
1,2,3-Trichloropropane	93	10	100	0	93	70	130	89.65	3.7(20)	
Isopropylbenzene	50.5	2.5	50	0	101	64	138	47.99	5.1(20)	
Bromobenzene	48.9	2.5	50	0	98	70	130	46.31	5.4(20)	
n-Propylbenzene	50.4	2.5	50	0	101	66	132	47.64	5.7(20)	
4-Chlorotoluene	51.4	2.5	50	0	103	70	130	48.6	5.6(20)	
2-Chlorotoluene	50.2	2.5	50	0	100	70	130	47.74	4.9(20)	
1,3,5-Trimethylbenzene	50.4	2.5	50	0	101	66	136	47.92	5.0(20)	
tert-Butylbenzene	49.3	2.5	50	0	99	65	137	47.34	4.1(20)	
1,2,4-Trimethylbenzene	49.8	2.5	50	0	99.5	65	137	47.56	4.5(20)	
sec-Butylbenzene	50	2.5	50	0	99.9	66	134	46.98	6.2(20)	
1,3-Dichlorobenzene	50.1	2.5	50	0	100	70	130	47.99	4.2(20)	
1,4-Dichlorobenzene	46.6	2.5	50	0	93	70	130	44.26	5.1(20)	
4-Isopropyltoluene	50.8	2.5	50	0	102	66	137	48.06	5.6(20)	
1,2-Dichlorobenzene	46.2	2.5	50	0	92	70	130	44.17	4.6(20)	
n-Butylbenzene	51.8	2.5	50	0	104	60	142	49.12	5.3(20)	
1,2-Dibromo-3-chloropropane (DBCP)	217	15	250	0	87	67	130	210.3	3.1(20)	
1,2,4-Trichlorobenzene	52.9	10	50	0	106	61	137	48.99	7.7(20)	
Naphthalene	48	10	50	0	96	40	167	44.23	8.1(20)	
Hexachlorobutadiene	104	10	100	0	104	61	130	95.09	8.9(20)	
1,2,3-Trichlorobenzene	49.9	10	50	0	99.8	51	144	45.39	9.5(20)	
Surr: 1,2-Dichloroethane-d4	50.3		50		101	70	130			
Surr: Toluene-d8	48.6		50		97	70	130			
Surr: 4-Bromofluorobenzene	49.5		50		99	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: *01-Dec-09*

QC Summary Report

Work Order: 09111704

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 : BMIS09111704

Report Due By : 5:00 PM On : 02-Dec-2009

Client:
Battelle Memorial Institute
3990 Old Town Ave
Suite C-205
San Diego, CA 92110

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 : GH/ DBL

PO : 218013

Client's COC # : 28888, 023589, 24116 Job : G005862/JPL Groundwater Monitoring

Cooler Temp	Samples Received	Date Printed
4 °C	17-Nov-2009	17-Nov-2009

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
BMI09111704-01A	MW-21-5	AQ	11/13/09 08:26	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI09111704-02A	MW-21-4	AQ	11/13/09 08:54	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI09111704-03A	MW-21-3	AQ	11/13/09 09:21	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI09111704-04A	MW-21-2	AQ	11/13/09 09:47	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI09111704-05A	MW-21-1	AQ	11/13/09 10:33	10	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					MS/MSD
BMI09111704-06A	EB-01-11/13/09	AQ	11/13/09 10:21	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					Sample time on voas state 10:13 logged in per COC.
BMI09111704-07A	TB-01-11/13/09	AQ	11/13/09 00:00	1	0	10			VOC by 524 Criteria	VOC by 524 Criteria					Reno Trip Blank 6/22/09
BMI09111704-08A	MW-15	AQ	11/16/09 09:05	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI09111704-09A	MW-19-5	AQ	11/16/09 09:00	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI09111704-10A	MW-19-4	AQ	11/16/09 09:24	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					

Comments: No security seals. Frozen ice. Temp Blank #7706 received @ 4°C. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). Per Latricia's phone conversation w/ David Conner 11/17/09 all COC's can be combined : into one workorder and the sample date on sample -08A is 11/16/09 not 11/17/09 as stated on COC.

	Signature	Print Name	Company	Date/Time
Logged in by:	Elizabeth Adcox	Elizabeth Adcox	Alpha Analytical, Inc.	11-17-09 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 :

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 : BMIS09111704

Report Due By : 5:00 PM On : 02-Dec-2009

Client:
Battelle Memorial Institute
3990 Old Town Ave
Suite C-205
San Diego, CA 92110

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 : GH/ DBL

PO : 218013

Client's COC # : 28888, 023589, 24116 Job : G005862/JPL Groundwater Monitoring

Cooler Temp	Samples Received	Date Printed
4 °C	17-Nov-2009	**17-Nov-2009**

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
BMI09111704-11A	MW-19-3	AQ	11/16/09 10:01	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				
BMI09111704-12A	MW-19-2	AQ	11/16/09 10:24	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				
BMI09111704-13A	MW-19-1	AQ	11/16/09 10:48	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				Level IV QC
BMI09111704-14A	EB-02-11/16/09	AQ	11/16/09 10:40	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				
BMI09111704-15A	TB-02-11/16/09	AQ	11/16/09 00:00	1	0	10			VOC by 524 Criteria	VOC by 524 Criteria				Reno Trip Blank 6/22/09

Comments: No security seals. Frozen ice. Temp Blank #7706 received @ 4°C. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). Per Latricia's phone conversation w/ David Conner 11/17/09 all COC's can be combined : into one workorder and the sample date on sample -08A is 11/16/09 not 11/17/09 as stated on COC.

	Signature	Print Name	Company	Date/Time
Logged in by:	Elizabeth Adcox	Elizabeth Adcox	Alpha Analytical, Inc.	11-17-09 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 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 ___

28888

Page # 1 of 1

Client Name	P.O. #	Job #
BATTELLE/DAVID CONNER	218013	60058G2
Address: 399 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 / 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) Cl-, SO4, NO3, NO2, ALK-3 (300.0)				REMARKS
0826	11/13/09	AQ	-01	MW-21-5	NORM		V/P 5	X	X	X				
0854			-02	MW-21-4				X	X	X				
0921			-03	MW-21-3				X	X	X				
0947			-04	MW-21-2			↓	X	X	X				
1033	11/13/09		-05	MW-21-1			V/P 10	X	X	X				MS/MSD
1021	11/13/09		-06	EB-01-11/13/09			V/P 5	X	X	X				EQUIPMENT BLANK
—	11/13/09		-07	TB-01-11/13/09			V 1	X						TRIP BLANK

ADDITIONAL INSTRUCTIONS:

	Signature	Print Name	Company	Date	Time
Relinquished by		CHASE BROGDON	INSIGHT GEL, INC	11/13/09	1300
Received by	Elizabeth Adcox	Elizabeth Adcox	Alpha	11-17-09	1230
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
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 ___

023589
Page # 1 of 1

Client Name	P.O. #	Job #
BATTELLE	218013	JPL-GW-4Q09
Address	**EMail Address**	
505 KING AVE,	connerd@battelle.org	
City, State, Zip	**Phone #**	**Fax #**
COLUMBUS, OH, 43201	~~818-343-2808~~ 64	614 458-6644
Report Attention		
DAVID CONNER		

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 GH/DBL — 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)	Cl, SO4, NO3-NO2, PO4 (300.0)	REMARKS
0905	17NOV	AQ	-08	MW-15			5	X	X	X		

ADDITIONAL INSTRUCTIONS: D. CONNER PHONE # 619-726-7311

	Signature	Print Name	Company	Date	Time
Relinquished by		GREG HEADINGTON	BATTELLE	18NOV09	1300
Received by		MARCO MENDOZA	INSIGHT EEC	11/16/09	1310
Relinquished by		MARCO MENDOZA	INSIGHT EEC	11/16/09	1315
Received by	Elizabeth Adcox	Elizabeth Adcox	Alpha	11-17-09	1230
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 _____

24116

Page # 1 of 1

Client Name	P.O. #	Job #
BATTELLE / DAVID CONNER	218013	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 / 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)	O-, SO4, NO3, NO2, PO4-3 (300.0)				REMARKS
0900	11/16/09	AQ	-09	MW-19-5	NORM		4p 5	X	X	X					
0924			-10	MW-19-4				X	X	X					
1001			-11	MW-19-3				X	X	X					
1024			-12	MW-19-2				X	X	X					
1046			-13	MW-19-1				X	X	X					LEVEL III QC
1040	11/16/09		-14	EB-02-11/16/09			4p 5	X	X	X					EQUIPMENT BLANK
"	11/16/09		-15	TB-02-11/16/09			V 1	X							TRIP BLANK

ADDITIONAL INSTRUCTIONS:

	Signature	Print Name	Company	Date	Time
Relinquished by		CHASE BROGDON	INSIGHT ECC, INC	11/16/09	1830
Received by		MARCO MENDOZA	INSIGHT ECC	11/16/09	1840
Relinquished by		MARCO MENDOZA	INSIGHT ECC	11/16/09	1400
Received by	Elizabeth Adcox	Elizabeth Adcox	Alpha	11-17-09	1230
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: *02-Dec-09*

David Conner
Battelle Memorial Institute
3990 Old Town Ave Suite C-205
San Diego, CA 92110
(818) 393-2808

CASE NARRATIVE

Job: G005862/JPL Groundwater Monitoring
Work Order: BMI09111801 **Cooler Temp:** 4 °C

Alpha's Sample ID	Client's Sample ID	Matrix
09111801-01A	QCEB-16 NOV	Aqueous
09111801-02A	MW-5	Aqueous
09111801-03A	MW-6	Aqueous
09111801-04A	MW-20-5	Aqueous
09111801-05A	MW-20-4	Aqueous
09111801-06A	MW-20-3	Aqueous
09111801-07A	MW-20-2	Aqueous
09111801-08A	MW-20-1	Aqueous
09111801-09A	DUPE-01-4Q09	Aqueous
09111801-10A	EB-03-11/17/09	Aqueous
09111801-11A	TB-03-11/17/09	Aqueous

Manually Integrated Analytes

Alpha's Sample ID	Test Reference	Analyte
09111801-02A	EPA Method 314.0	Perchlorate
09111801-04A	EPA Method 314.0	Perchlorate
09111801-05A	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.

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
3990 Old Town Ave
San Diego, CA 92110

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 11/18/09

Job: G005862/JPL Groundwater Monitoring

Perchlorate by Ion Chromatography
EPA Method 314.0

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-5** Lab ID : BMI09111801-02A Perchlorate Date Sampled 11/17/09 09:30	17.0	1.00 µg/L	11/19/09 12:32	11/23/09 16:51
Client ID: **MW-6** Lab ID : BMI09111801-03A Perchlorate Date Sampled 11/17/09 12:00	2.51	1.00 µg/L	11/19/09 12:32	11/23/09 17:09
Client ID: **MW-20-5** Lab ID : BMI09111801-04A Perchlorate Date Sampled 11/17/09 08:15	22.6	1.00 µg/L	11/19/09 12:32	11/24/09 18:04
Client ID: **MW-20-4** Lab ID : BMI09111801-05A Perchlorate Date Sampled 11/17/09 08:59	76.0	1.00 µg/L	11/19/09 12:32	11/24/09 18:22
Client ID: **MW-20-3** Lab ID : BMI09111801-06A Perchlorate Date Sampled 11/17/09 09:32	ND	1.00 µg/L	11/19/09 12:32	11/23/09 18:41
Client ID: **MW-20-2** Lab ID : BMI09111801-07A Perchlorate Date Sampled 11/17/09 09:58	3.37	1.00 µg/L	11/19/09 12:32	11/23/09 19:00
Client ID: **MW-20-1** Lab ID : BMI09111801-08A Perchlorate Date Sampled 11/17/09 10:48	ND	1.00 µg/L	11/19/09 12:32	11/23/09 19:18
Client ID: **DUPE-01-4Q09** Lab ID : BMI09111801-09A Perchlorate Date Sampled 11/17/09 00:00	ND	1.00 µg/L	11/19/09 12:32	11/23/09 19:37
Client ID: **EB-03-11/17/09** Lab ID : BMI09111801-10A Perchlorate Date Sampled 11/17/09 10:20	ND	1.00 µg/L	11/19/09 12:32	11/23/09 19:55

Alpha Analytical, Inc.

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

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

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 / 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.

12/2/09

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
3990 Old Town Ave
San Diego, CA 92110

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 11/18/09

Job: G005862/JPL Groundwater Monitoring

Metals by ICPMS
EPA Method 200.8

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-5** Lab ID : BMI09111801-02A Chromium (Cr) Date Sampled 11/17/09 09:30	ND	0.0050 mg/L	11/18/09 11:25	11/19/09 05:27
Client ID: **MW-6** Lab ID : BMI09111801-03A Chromium (Cr) Date Sampled 11/17/09 12:00	ND	0.0050 mg/L	11/18/09 11:25	11/19/09 05:33
Client ID: **MW-20-5** Lab ID : BMI09111801-04A Chromium (Cr) Date Sampled 11/17/09 08:15	ND	0.0050 mg/L	11/18/09 11:25	11/19/09 05:38
Client ID: **MW-20-4** Lab ID : BMI09111801-05A Chromium (Cr) Date Sampled 11/17/09 08:59	ND	0.0050 mg/L	11/18/09 11:25	11/19/09 05:10
Client ID: **MW-20-3** Lab ID : BMI09111801-06A Chromium (Cr) Date Sampled 11/17/09 09:32	ND	0.0050 mg/L	11/18/09 11:25	11/19/09 05:44
Client ID: **MW-20-2** Lab ID : BMI09111801-07A Chromium (Cr) Date Sampled 11/17/09 09:58	ND	0.0050 mg/L	11/18/09 11:25	11/19/09 05:50
Client ID: **MW-20-1** Lab ID : BMI09111801-08A Chromium (Cr) Date Sampled 11/17/09 10:48	ND	0.0050 mg/L	11/18/09 11:25	11/19/09 05:55
Client ID: **DUPE-01-4Q09** Lab ID : BMI09111801-09A Chromium (Cr) Date Sampled 11/17/09 00:00	ND	0.0050 mg/L	11/18/09 11:25	11/19/09 06:01
Client ID: **EB-03-11/17/09** Lab ID : BMI09111801-10A Chromium (Cr) Date Sampled 11/17/09 10:20	ND	0.0050 mg/L	11/18/09 11:25	11/19/09 06:07

Alpha Analytical, Inc.

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

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

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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12/2/09

Report Date

Alpha Analytical, Inc.

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ANALYTICAL REPORT

Battelle Memorial Institute
3990 Old Town Ave
San Diego, CA 92110
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 : **QCEB-16 NOV**					
Lab ID : BMI09111801-01A	*** None Found ***	ND	2.0 µg/L	11/21/09	11/21/09
Date Received : 11/18/09					
Date Sampled : 11/16/09 14:15					
Client ID : **MW-5**					
Lab ID : BMI09111801-02A	*** None Found ***	ND	2.0 µg/L	11/21/09	11/21/09
Date Received : 11/18/09					
Date Sampled : 11/17/09 09:30					
Client ID : **MW-6**					
Lab ID : BMI09111801-03A	*** None Found ***	ND	2.0 µg/L	11/21/09	11/21/09
Date Received : 11/18/09					
Date Sampled : 11/17/09 12:00					
Client ID : **MW-20-5**					
Lab ID : BMI09111801-04A	Sulfur dioxide	11	2.0 µg/L	11/21/09	11/21/09
Date Received : 11/18/09					
Date Sampled : 11/17/09 08:15					
Client ID : **MW-20-4**					
Lab ID : BMI09111801-05A	Sulfur dioxide	15	2.0 µg/L	11/21/09	11/21/09
Date Received : 11/18/09					
Date Sampled : 11/17/09 08:59					
Client ID : **MW-20-3**					
Lab ID : BMI09111801-06A	Sulfur dioxide	8.6	2.0 µg/L	11/21/09	11/21/09
Date Received : 11/18/09					
Date Sampled : 11/17/09 09:32					
Client ID : **MW-20-2**					
Lab ID : BMI09111801-07A	Sulfur dioxide	3.1	2.0 µg/L	11/21/09	11/21/09
Date Received : 11/18/09					
Date Sampled : 11/17/09 09:58					
Client ID : **MW-20-1**					
Lab ID : BMI09111801-08A	Sulfur dioxide	4.6	2.0 µg/L	11/21/09	11/21/09
Date Received : 11/18/09					
Date Sampled : 11/17/09 10:48					
Client ID : **DUPE-01-4Q09**					
Lab ID : BMI09111801-09A	*** None Found ***	ND	2.0 µg/L	11/21/09	11/21/09
Date Received : 11/18/09					
Date Sampled : 11/17/09 00:00					

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Client ID :	**EB-03-11/17/09**					
Lab ID :	BMI09111801-10A	Tertiary Butyl Alcohol (TBA)	12	10 µg/L	11/21/09	11/21/09
Date Received :	11/18/09					
Date Sampled :	11/17/09 10:20					
Client ID :	**TB-03-11/17/09**					
Lab ID :	BMI09111801-11A	* * * None Found * * *	ND	2.0 µg/L	11/22/09	11/22/09
Date Received :	11/18/09					
Date Sampled :	11/17/09 00:00					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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12/2/09

Report Date

Alpha Analytical, Inc.

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ANALYTICAL REPORT

Battelle Memorial Institute
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09111801-01A
Client I.D. Number: QCEB-16 NOV

Sampled: 11/16/09 14:15
Received: 11/18/09
Extracted: 11/21/09
Analyzed: 11/21/09

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	1.0	0.50	µg/L
40	Bromoform	ND	0.50	µg/L
41	Styrene	1.9	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	104	(70-130)	%REC
65	Surr: Toluene-d8	99	(70-130)	%REC
66	Surr: 4-Bromofluorobenzene	96	(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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12/2/09

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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09111801-02A
Client I.D. Number: MW-5

Sampled: 11/17/09 09:30
Received: 11/18/09
Extracted: 11/21/09
Analyzed: 11/21/09

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	0.58	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	1.0	µg/L
44	1,2,3-Trichloropropane	ND	0.50	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	2.5	µg/L
59	1,2-Dibromo-3-chloropropane (DBCP)	ND	1.0	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		
64	Surr: 1,2-Dichloroethane-d4	104	(70-130)	%REC
65	Surr: Toluene-d8	101	(70-130)	%REC
66	Surr: 4-Bromofluorobenzene	94	(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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12/2/09
Report Date

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ANALYTICAL REPORT

Battelle Memorial Institute
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09111801-03A
Client I.D. Number: MW-6

Sampled: 11/17/09 12:00
Received: 11/18/09
Extracted: 11/21/09
Analyzed: 11/21/09

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	0.52	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	2.6	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	0.98	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	2.5	µg/L
59	1,2-Dibromo-3-chloropropane (DBCP)	ND	1.0	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		
64	Surr: 1,2-Dichloroethane-d4	106	(70-130)	%REC
65	Surr: Toluene-d8	99	(70-130)	%REC
66	Surr: 4-Bromofluorobenzene	96	(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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12/2/09
Report Date

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ANALYTICAL REPORT

Battelle Memorial Institute
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09111801-04A
Client I.D. Number: MW-20-5

Sampled: 11/17/09 08:15
Received: 11/18/09
Extracted: 11/21/09
Analyzed: 11/21/09

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	104	(70-130)	%REC
65	Surr: Toluene-d8	101	(70-130)	%REC
66	Surr: 4-Bromofluorobenzene	96	(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

Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / info@alpha-analytical.com

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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.

12/2/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09111801-05A
Client I.D. Number: MW-20-4

Sampled: 11/17/09 08:59
Received: 11/18/09
Extracted: 11/21/09
Analyzed: 11/21/09

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	1.0	µg/L
44	1,2,3-Trichloropropane	ND	0.50	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	2.5	µg/L
59	1,2-Dibromo-3-chloropropane (DBCP)	ND	1.0	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	106	(70-130) %REC
64	Surr: 1,2-Dichloroethane-d4	102	(70-130)	%REC
65	Surr: Toluene-d8	95	(70-130)	%REC
66	Surr: 4-Bromofluorobenzene			

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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12/2/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09111801-06A
Client I.D. Number: MW-20-3

Sampled: 11/17/09 09:32
Received: 11/18/09
Extracted: 11/21/09
Analyzed: 11/21/09

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	0.50	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	106	(70-130)	%REC
65	Surr: Toluene-d8	98	(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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12/2/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09111801-07A
Client I.D. Number: MW-20-2

Sampled: 11/17/09 09:58
Received: 11/18/09
Extracted: 11/21/09
Analyzed: 11/21/09

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	0.89	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	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
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / info@alpha-analytical.com

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12/2/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09111801-08A
Client I.D. Number: MW-20-1

Sampled: 11/17/09 10:48
Received: 11/18/09
Extracted: 11/21/09
Analyzed: 11/21/09

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	107	(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	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 / 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.

12/2/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09111801-09A
Client I.D. Number: DUPE-01-4Q09

Sampled: 11/17/09 00:00
Received: 11/18/09
Extracted: 11/21/09
Analyzed: 11/21/09

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	2.5	µg/L
59	1,2-Dibromo-3-chloropropane (DBCP)	ND	1.0	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	108	(70-130)	%REC
64	Surr: 1,2-Dichloroethane-d4	101	(70-130)	%REC
65	Surr: Toluene-d8	94	(70-130)	%REC
66	Surr: 4-Bromofluorobenzene			

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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12/2/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09111801-10A
Client I.D. Number: EB-03-11/17/09

Sampled: 11/17/09 10:20
Received: 11/18/09
Extracted: 11/21/09
Analyzed: 11/21/09

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	103	(70-130)	%REC
65	Surr: Toluene-d8	100	(70-130)	%REC
66	Surr: 4-Bromofluorobenzene	94	(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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12/2/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09111801-11A
Client I.D. Number: TB-03-11/17/09

Sampled: 11/17/09 00:00
Received: 11/18/09
Extracted: 11/22/09
Analyzed: 11/22/09

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	98	(70-130)	%REC
65	Surr: Toluene-d8	101	(70-130)	%REC
66	Surr: 4-Bromofluorobenzene	94	(70-130)	%REC

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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12/2/09
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: BMI09111801 **Job:** G005862/JPL Groundwater Monitoring

Alpha's Sample ID	Client's Sample ID	Matrix	pH
09111801-01A	QCEB-16 NOV	Aqueous	2
09111801-02A	MW-5	Aqueous	2
09111801-03A	MW-6	Aqueous	2
09111801-04A	MW-20-5	Aqueous	2
09111801-05A	MW-20-4	Aqueous	2
09111801-06A	MW-20-3	Aqueous	2
09111801-07A	MW-20-2	Aqueous	2
09111801-08A	MW-20-1	Aqueous	2
09111801-09A	DUPE-01-4Q09	Aqueous	2
09111801-10A	EB-03-11/17/09	Aqueous	2
09111801-11A	TB-03-11/17/09	Aqueous	2

12/2/09

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: *01-Dec-09*

QC Summary Report

Work Order: 09111801

Method Blank

Type **MBLK** Test Code: **EPA Method 314.0**
File ID: **19** Batch ID: **23119** Analysis Date: **11/23/2009 15:37**
Sample ID: **MB-23119** Units : **µg/L** Run ID: **IC_3_091123A** Prep Date: **11/19/2009 12:32**

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: **21** Batch ID: **23119** Analysis Date: **11/23/2009 16:14**
Sample ID: **LFB-23119** Units : **µg/L** Run ID: **IC_3_091123A** Prep Date: **11/19/2009 12:32**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	26.1	2	25		105	85	115			

Sample Matrix Spike

Type **LFM** Test Code: **EPA Method 314.0**
File ID: **15** Batch ID: **23119** Analysis Date: **11/24/2009 11:37**
Sample ID: **09111801-05ALFM** Units : **µg/L** Run ID: **IC_3_091123A** Prep Date: **11/19/2009 12:32**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	189	10	125	76.01	91	80	120			

Sample Matrix Spike Duplicate

Type **LFMD** Test Code: **EPA Method 314.0**
File ID: **16** Batch ID: **23119** Analysis Date: **11/24/2009 11:56**
Sample ID: **09111801-05ALFMD** Units : **µg/L** Run ID: **IC_3_091123A** Prep Date: **11/19/2009 12:32**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	193	10	125	76.01	94	80	120	189.4	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.

Alpha Analytical, Inc.

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

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

Date: *30-Nov-09*

QC Summary Report

Work Order: 09111801

Method Blank

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

File ID: **111809.B\131SMPL.D** Batch ID: **23103K** Analysis Date: **11/19/2009 04:47**

Sample ID: **MB-23103** Units : **mg/L** Run ID: **ICP/MS_091118E** Prep Date: **11/18/2009 11:25**

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: **111809.B\132_LCS.D** Batch ID: **23103K** Analysis Date: **11/19/2009 04:53**

Sample ID: **LCS-23103** Units : **mg/L** Run ID: **ICP/MS_091118E** Prep Date: **11/18/2009 11:25**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.052	0.005	0.05		104	80	120			

Sample Matrix Spike

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

File ID: **111809.B\136SMPL.D** Batch ID: **23103K** Analysis Date: **11/19/2009 05:16**

Sample ID: **09111801-05AMS** Units : **mg/L** Run ID: **ICP/MS_091118E** Prep Date: **11/18/2009 11:25**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0522	0.005	0.05	0	104	80	120			

Sample Matrix Spike Duplicate

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

File ID: **111809.B\137SMPL.D** Batch ID: **23103K** Analysis Date: **11/19/2009 05:21**

Sample ID: **09111801-05AMSD** Units : **mg/L** Run ID: **ICP/MS_091118E** Prep Date: **11/18/2009 11:25**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0508	0.005	0.05	0	102	80	120	0.05221	2.8(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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(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date: *01-Dec-09*

QC Summary Report

Work Order: 09111801

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

File ID: **09112038.D** Batch ID: **MS15W1120N** Analysis Date: **11/20/2009 22:28**

Sample ID: **MBLK MS15W1120N** Units : **µg/L** Run ID: **MSD_15_091120C** Prep Date: **11/20/2009 22:28**

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	10.3		10		103	70	130			
Surr: Toluene-d8	10.2		10		102	70	130			

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Date: *01-Dec-09*

QC Summary Report

Work Order: 09111801

Surr: 4-Bromofluorobenzene	9.44		10	94	70	130			

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

File ID: **09112035.D** Batch ID: **MS15W1120N** Analysis Date: **11/20/2009 21:22**

Sample ID: **LCS MS15W1120N** Units : **µg/L** Run ID: **MSD_15_091120C** Prep Date: **11/20/2009 21:22**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	8.05	1	10		81	70	130			
Chloromethane	7.24	2	10		72	70	130			
Vinyl chloride	9.3	1	10		93	70	130			
Chloroethane	9.8	1	10		98	70	130			
Bromomethane	9.79	2	10		98	70	130			
Trichlorofluoromethane	11.2	1	10		112	70	130			
1,1-Dichloroethene	10.9	1	10		109	70	130			
Dichloromethane	9.7	2	10		97	70	130			
trans-1,2-Dichloroethene	10.9	1	10		109	70	130			
Methyl tert-butyl ether (MTBE)	10.6	0.5	10		106	70	130			
1,1-Dichloroethane	10.3	1	10		103	70	130			
cis-1,2-Dichloroethene	11	1	10		110	70	130			
Bromochloromethane	11.1	1	10		111	70	130			
Chloroform	11.1	1	10		111	70	130			
2,2-Dichloropropane	11.1	1	10		111	70	130			
1,2-Dichloroethane	10.8	1	10		108	70	130			
1,1,1-Trichloroethane	11.9	1	10		119	70	130			
1,1-Dichloropropene	11	1	10		110	70	130			
Carbon tetrachloride	12.3	1	10		123	70	130			
Benzene	10.3	0.5	10		103	70	130			
Dibromomethane	10.6	1	10		106	70	130			
1,2-Dichloropropane	10.3	1	10		103	70	130			
Trichloroethene	11.7	1	10		117	70	130			
Bromodichloromethane	11.2	1	10		112	70	130			
cis-1,3-Dichloropropene	10.5	1	10		105	70	130			
trans-1,3-Dichloropropene	9.58	1	10		96	70	130			
1,1,2-Trichloroethane	9.99	1	10		99.9	70	130			
Toluene	10.1	0.5	10		101	70	130			
1,3-Dichloropropane	10.3	1	10		103	70	130			
Dibromochloromethane	10.4	1	10		104	70	130			
1,2-Dibromoethane (EDB)	21.3	2	20		107	70	130			
Tetrachloroethene	11.7	1	10		117	70	130			
1,1,1,2-Tetrachloroethane	11.1	1	10		111	70	130			
Chlorobenzene	10.3	1	10		103	70	130			
Ethylbenzene	10.5	0.5	10		105	70	130			
m,p-Xylene	10.6	0.5	10		106	70	130			
Bromoform	9.44	1	10		94	70	130			
Styrene	11.1	1	10		111	70	130			
o-Xylene	10.7	0.5	10		107	70	130			
1,1,2,2-Tetrachloroethane	8.67	1	10		87	70	130			
1,2,3-Trichloropropane	20.1	2	20		101	70	130			
Isopropylbenzene	10.7	1	10		107	70	130			
Bromobenzene	10.4	1	10		104	70	130			
n-Propylbenzene	10.4	1	10		104	70	130			
4-Chlorotoluene	10.8	1	10		108	70	130			
2-Chlorotoluene	10.4	1	10		104	70	130			
1,3,5-Trimethylbenzene	10.5	1	10		105	70	130			
tert-Butylbenzene	10.3	1	10		103	70	130			
1,2,4-Trimethylbenzene	10.4	1	10		104	70	130			
sec-Butylbenzene	10.4	1	10		104	70	130			
1,3-Dichlorobenzene	10.6	1	10		106	70	130			
1,4-Dichlorobenzene	9.85	1	10		99	70	130			
4-Isopropyltoluene	10.5	1	10		105	70	130			
1,2-Dichlorobenzene	9.69	1	10		97	70	130			
n-Butylbenzene	10.8	1	10		108	70	130			
1,2-Dibromo-3-chloropropane (DBCP)	46.1	3	50		92	70	130			
1,2,4-Trichlorobenzene	11	2	10		110	70	130			
Naphthalene	10.1	2	10		101	70	130			
Hexachlorobutadiene	21.3	2	20		106	70	130			
1,2,3-Trichlorobenzene	10.4	2	10		104	70	130			
Surr: 1,2-Dichloroethane-d4	10		10		100	70	130			
Surr: Toluene-d8	9.77		10		98	70	130			
Surr: 4-Bromofluorobenzene	10		10		100	70	130			

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QC Summary Report

Work Order: 09111801

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

File ID: **09112039.D** Batch ID: **MS15W1120N** Analysis Date: **11/20/2009 22:50**

Sample ID: **09111801-05AMS** Units : **µg/L** Run ID: **MSD_15_091120C** Prep Date: **11/20/2009 22:50**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	40.3	2.5	50	0	81	13	167			
Chloromethane	40	10	50	0	80	28	145			
Vinyl chloride	45.2	2.5	50	0	90	43	134			
Chloroethane	50	2.5	50	0	100	39	154			
Bromomethane	41.2	10	50	0	82	19	176			
Trichlorofluoromethane	47.9	2.5	50	0	96	34	160			
1,1-Dichloroethene	50.6	2.5	50	0	101	60	130			
Dichloromethane	46.3	10	50	0	93	68	130			
trans-1,2-Dichloroethene	50.7	2.5	50	0	101	63	130			
Methyl tert-butyl ether (MTBE)	48.5	1.3	50	0	97	56	141			
1,1-Dichloroethane	47.6	2.5	50	0	95	61	130			
cis-1,2-Dichloroethene	51.2	2.5	50	0	102	70	130			
Bromochloromethane	50.9	2.5	50	0	102	70	130			
Chloroform	50.9	2.5	50	0	102	67	130			
2,2-Dichloropropane	46.9	2.5	50	0	94	30	152			
1,2-Dichloroethane	49.1	2.5	50	0	98	60	135			
1,1,1-Trichloroethane	53.7	2.5	50	0	107	59	137			
1,1-Dichloropropene	51.2	2.5	50	0	102	63	130			
Carbon tetrachloride	55.1	2.5	50	0	110	50	147			
Benzene	47.5	1.3	50	0	95	67	130			
Dibromomethane	48.4	2.5	50	0	97	69	133			
1,2-Dichloropropane	47.4	2.5	50	0	95	69	130			
Trichloroethene	50.5	2.5	50	0	101	69	130			
Bromodichloromethane	50.3	2.5	50	0	101	66	134			
cis-1,3-Dichloropropene	45	2.5	50	0	90	63	130			
trans-1,3-Dichloropropene	41.4	2.5	50	0	83	66	131			
1,1,2-Trichloroethane	45.3	2.5	50	0	91	68	130			
Toluene	45.1	1.3	50	0	90	66	130			
1,3-Dichloropropane	46.4	2.5	50	0	93	70	130			
Dibromochloromethane	45.2	2.5	50	0	90	70	130			
1,2-Dibromoethane (EDB)	94.9	5	100	0	95	70	130			
Tetrachloroethene	50.8	2.5	50	0	102	61	134			
1,1,1,2-Tetrachloroethane	49.1	2.5	50	0	98	70	130			
Chlorobenzene	45.7	2.5	50	0	91	70	130			
Ethylbenzene	46.4	1.3	50	0	93	68	130			
m,p-Xylene	47.8	1.3	50	0	96	64	130			
Bromoform	41.5	2.5	50	0	83	64	138			
Styrene	50.3	2.5	50	0	101	69	130			
o-Xylene	48.2	1.3	50	0	96	70	130			
1,1,2,2-Tetrachloroethane	41.3	2.5	50	0	83	65	131			
1,2,3-Trichloropropane	89.7	10	100	0	90	70	130			
Isopropylbenzene	48	2.5	50	0	96	64	138			
Bromobenzene	46.3	2.5	50	0	93	70	130			
n-Propylbenzene	47.6	2.5	50	0	95	66	132			
4-Chlorotoluene	48.6	2.5	50	0	97	70	130			
2-Chlorotoluene	47.7	2.5	50	0	95	70	130			
1,3,5-Trimethylbenzene	47.9	2.5	50	0	96	66	136			
tert-Butylbenzene	47.3	2.5	50	0	95	65	137			
1,2,4-Trimethylbenzene	47.6	2.5	50	0	95	65	137			
sec-Butylbenzene	47	2.5	50	0	94	66	134			
1,3-Dichlorobenzene	48	2.5	50	0	96	70	130			
1,4-Dichlorobenzene	44.3	2.5	50	0	89	70	130			
4-Isopropyltoluene	48.1	2.5	50	0	96	66	137			
1,2-Dichlorobenzene	44.2	2.5	50	0	88	70	130			
n-Butylbenzene	49.1	2.5	50	0	98	60	142			
1,2-Dibromo-3-chloropropane (DBCP)	210	15	250	0	84	67	130			
1,2,4-Trichlorobenzene	49	10	50	0	98	61	137			
Naphthalene	44.2	10	50	0	88	40	167			
Hexachlorobutadiene	95.1	10	100	0	95	61	130			
1,2,3-Trichlorobenzene	45.4	10	50	0	91	51	144			
Surr: 1,2-Dichloroethane-d4	51.3		50		103	70	130			
Surr: Toluene-d8	48.6		50		97	70	130			
Surr: 4-Bromofluorobenzene	50.1		50		100	70	130			

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Date: *01-Dec-09*

QC Summary Report

Work Order: 09111801

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

File ID: **09112040.D** Batch ID: **MS15W1120N** Analysis Date: **11/20/2009 23:12**

Sample ID: **09111801-05AMSD** Units : **µg/L** Run ID: **MSD_15_091120C** Prep Date: **11/20/2009 23:12**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	43.4	2.5	50	0	87	13	167	40.33	7.3(20)	
Chloromethane	41.8	10	50	0	84	28	145	40	4.4(20)	
Vinyl chloride	49.1	2.5	50	0	98	43	134	45.19	8.3(20)	
Chloroethane	52.3	2.5	50	0	105	39	154	50	4.5(20)	
Bromomethane	42.6	10	50	0	85	19	176	41.17	3.3(20)	
Trichlorofluoromethane	55.1	2.5	50	0	110	34	160	47.91	13.9(20)	
1,1-Dichloroethene	54.8	2.5	50	0	110	60	130	50.55	8.1(20)	
Dichloromethane	47.3	10	50	0	95	68	130	46.29	2.2(20)	
trans-1,2-Dichloroethene	53.5	2.5	50	0	107	63	130	50.74	5.4(20)	
Methyl tert-butyl ether (MTBE)	51	1.3	50	0	102	56	141	48.5	5.1(20)	
1,1-Dichloroethane	49.8	2.5	50	0	99.7	61	130	47.64	4.5(20)	
cis-1,2-Dichloroethene	53.4	2.5	50	0	107	70	130	51.17	4.2(20)	
Bromochloromethane	54.5	2.5	50	0	109	70	130	50.93	6.8(20)	
Chloroform	52.7	2.5	50	0	105	67	130	50.92	3.4(20)	
2,2-Dichloropropane	50.4	2.5	50	0	101	30	152	46.85	7.3(20)	
1,2-Dichloroethane	51.3	2.5	50	0	103	60	135	49.14	4.3(20)	
1,1,1-Trichloroethane	57.1	2.5	50	0	114	59	137	53.73	6.0(20)	
1,1-Dichloropropene	54.5	2.5	50	0	109	63	130	51.17	6.3(20)	
Carbon tetrachloride	59.2	2.5	50	0	118	50	147	55.1	7.2(20)	
Benzene	49.8	1.3	50	0	100	67	130	47.45	4.7(20)	
Dibromomethane	51.1	2.5	50	0	102	69	133	48.43	5.3(20)	
1,2-Dichloropropane	49.9	2.5	50	0	99.8	69	130	47.4	5.1(20)	
Trichloroethene	52.6	2.5	50	0	105	69	130	50.45	4.1(20)	
Bromodichloromethane	53.2	2.5	50	0	106	66	134	50.25	5.7(20)	
cis-1,3-Dichloropropene	48	2.5	50	0	96	63	130	45	6.4(20)	
trans-1,3-Dichloropropene	44.2	2.5	50	0	88	66	131	41.36	6.6(20)	
1,1,2-Trichloroethane	47	2.5	50	0	94	68	130	45.29	3.6(20)	
Toluene	47.7	1.3	50	0	95	66	130	45.06	5.7(20)	
1,3-Dichloropropane	48.5	2.5	50	0	97	70	130	46.43	4.4(20)	
Dibromochloromethane	49.2	2.5	50	0	98	70	130	45.22	8.5(20)	
1,2-Dibromoethane (EDB)	99.4	5	100	0	99	70	130	94.87	4.7(20)	
Tetrachloroethene	54.9	2.5	50	0	110	61	134	50.83	7.7(20)	
1,1,1,2-Tetrachloroethane	52.7	2.5	50	0	105	70	130	49.14	6.9(20)	
Chlorobenzene	48.9	2.5	50	0	98	70	130	45.74	6.6(20)	
Ethylbenzene	49.5	1.3	50	0	99	68	130	46.44	6.5(20)	
m,p-Xylene	50.8	1.3	50	0	102	64	130	47.79	6.2(20)	
Bromoform	44.6	2.5	50	0	89	64	138	41.5	7.2(20)	
Styrene	53.7	2.5	50	0	107	69	130	50.27	6.6(20)	
o-Xylene	51	1.3	50	0	102	70	130	48.24	5.5(20)	
1,1,2,2-Tetrachloroethane	43.6	2.5	50	0	87	65	131	41.28	5.4(20)	
1,2,3-Trichloropropane	93	10	100	0	93	70	130	89.65	3.7(20)	
Isopropylbenzene	50.5	2.5	50	0	101	64	138	47.99	5.1(20)	
Bromobenzene	48.9	2.5	50	0	98	70	130	46.31	5.4(20)	
n-Propylbenzene	50.4	2.5	50	0	101	66	132	47.64	5.7(20)	
4-Chlorotoluene	51.4	2.5	50	0	103	70	130	48.6	5.6(20)	
2-Chlorotoluene	50.2	2.5	50	0	100	70	130	47.74	4.9(20)	
1,3,5-Trimethylbenzene	50.4	2.5	50	0	101	66	136	47.92	5.0(20)	
tert-Butylbenzene	49.3	2.5	50	0	99	65	137	47.34	4.1(20)	
1,2,4-Trimethylbenzene	49.8	2.5	50	0	99.5	65	137	47.56	4.5(20)	
sec-Butylbenzene	50	2.5	50	0	99.9	66	134	46.98	6.2(20)	
1,3-Dichlorobenzene	50.1	2.5	50	0	100	70	130	47.99	4.2(20)	
1,4-Dichlorobenzene	46.6	2.5	50	0	93	70	130	44.26	5.1(20)	
4-Isopropyltoluene	50.8	2.5	50	0	102	66	137	48.06	5.6(20)	
1,2-Dichlorobenzene	46.2	2.5	50	0	92	70	130	44.17	4.6(20)	
n-Butylbenzene	51.8	2.5	50	0	104	60	142	49.12	5.3(20)	
1,2-Dibromo-3-chloropropane (DBCP)	217	15	250	0	87	67	130	210.3	3.1(20)	
1,2,4-Trichlorobenzene	52.9	10	50	0	106	61	137	48.99	7.7(20)	
Naphthalene	48	10	50	0	96	40	167	44.23	8.1(20)	
Hexachlorobutadiene	104	10	100	0	104	61	130	95.09	8.9(20)	
1,2,3-Trichlorobenzene	49.9	10	50	0	99.8	51	144	45.39	9.5(20)	
Surr: 1,2-Dichloroethane-d4	50.3		50		101	70	130			
Surr: Toluene-d8	48.6		50		97	70	130			
Surr: 4-Bromofluorobenzene	49.5		50		99	70	130			

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Date: *01-Dec-09*

QC Summary Report

Work Order: 09111801

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: *01-Dec-09*

QC Summary Report

Work Order: 09111801

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

File ID: **09112140.D** Batch ID: **MS15W1121M** Analysis Date: **11/21/2009 23:48**

Sample ID: **MBLK MS15W1121M** Units : **µg/L** Run ID: **MSD_15_091121C** Prep Date: **11/21/2009 23:48**

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	9.88		10		99	70	130			
Surr: Toluene-d8	10.2		10		102	70	130			

Alpha Analytical, Inc.

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Date: 01-Dec-09

QC Summary Report

Work Order: 09111801

Surr: 4-Bromofluorobenzene	9.62		10	96	70	130

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

File ID: **09112137.D** Batch ID: **MS15W1121M** Analysis Date: **11/21/2009 22:44**

Sample ID: **LCS MS15W1121M** Units : **µg/L** Run ID: **MSD_15_091121C** Prep Date: **11/21/2009 22:44**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	7.12	1	10		71	70	130			
Chloromethane	7.73	2	10		77	70	130			
Vinyl chloride	9.48	1	10		95	70	130			
Chloroethane	10.3	1	10		103	70	130			
Bromomethane	10.7	2	10		107	70	130			
Trichlorofluoromethane	10.2	1	10		102	70	130			
1,1-Dichloroethene	10.6	1	10		106	70	130			
Dichloromethane	9.5	2	10		95	70	130			
trans-1,2-Dichloroethene	10.7	1	10		107	70	130			
Methyl tert-butyl ether (MTBE)	10.4	0.5	10		104	70	130			
1,1-Dichloroethane	10.1	1	10		101	70	130			
cis-1,2-Dichloroethene	10.8	1	10		108	70	130			
Bromochloromethane	10.9	1	10		109	70	130			
Chloroform	10.6	1	10		106	70	130			
2,2-Dichloropropane	10.8	1	10		108	70	130			
1,2-Dichloroethane	10.1	1	10		101	70	130			
1,1,1-Trichloroethane	11.1	1	10		111	70	130			
1,1-Dichloropropene	10.7	1	10		107	70	130			
Carbon tetrachloride	11.5	1	10		115	70	130			
Benzene	10.3	0.5	10		103	70	130			
Dibromomethane	10.3	1	10		103	70	130			
1,2-Dichloropropane	10.5	1	10		105	70	130			
Trichloroethene	11.4	1	10		114	70	130			
Bromodichloromethane	10.6	1	10		106	70	130			
cis-1,3-Dichloropropene	10.4	1	10		104	70	130			
trans-1,3-Dichloropropene	9.33	1	10		93	70	130			
1,1,2-Trichloroethane	9.83	1	10		98	70	130			
Toluene	10	0.5	10		100	70	130			
1,3-Dichloropropane	10.1	1	10		101	70	130			
Dibromochloromethane	9.94	1	10		99	70	130			
1,2-Dibromoethane (EDB)	20.6	2	20		103	70	130			
Tetrachloroethene	11.4	1	10		114	70	130			
1,1,1,2-Tetrachloroethane	10.8	1	10		108	70	130			
Chlorobenzene	10.2	1	10		102	70	130			
Ethylbenzene	10.3	0.5	10		103	70	130			
m,p-Xylene	10.5	0.5	10		105	70	130			
Bromoform	8.95	1	10		90	70	130			
Styrene	11.2	1	10		112	70	130			
o-Xylene	10.6	0.5	10		106	70	130			
1,1,2,2-Tetrachloroethane	8.51	1	10		85	70	130			
1,2,3-Trichloropropane	19.3	2	20		97	70	130			
Isopropylbenzene	10.6	1	10		106	70	130			
Bromobenzene	10.2	1	10		102	70	130			
n-Propylbenzene	10.4	1	10		104	70	130			
4-Chlorotoluene	10.6	1	10		106	70	130			
2-Chlorotoluene	10.4	1	10		104	70	130			
1,3,5-Trimethylbenzene	10.5	1	10		105	70	130			
tert-Butylbenzene	10.2	1	10		102	70	130			
1,2,4-Trimethylbenzene	10.3	1	10		103	70	130			
sec-Butylbenzene	10.4	1	10		104	70	130			
1,3-Dichlorobenzene	10.5	1	10		105	70	130			
1,4-Dichlorobenzene	9.65	1	10		97	70	130			
4-Isopropyltoluene	10.6	1	10		106	70	130			
1,2-Dichlorobenzene	9.61	1	10		96	70	130			
n-Butylbenzene	10.7	1	10		107	70	130			
1,2-Dibromo-3-chloropropane (DBCP)	44.7	3	50		89	70	130			
1,2,4-Trichlorobenzene	11.1	2	10		111	70	130			
Naphthalene	10.2	2	10		102	70	130			
Hexachlorobutadiene	21.5	2	20		107	70	130			
1,2,3-Trichlorobenzene	10.5	2	10		105	70	130			
Surr: 1,2-Dichloroethane-d4	9.61		10		96	70	130			
Surr: Toluene-d8	9.82		10		98	70	130			
Surr: 4-Bromofluorobenzene	9.96		10		99.6	70	130			

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Date: *01-Dec-09*

QC Summary Report

Work Order: 09111801

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

File ID: **09112141.D** Batch ID: **MS15W1121M** Analysis Date: **11/22/2009 00:10**

Sample ID: **09111903-01AMS** Units : **µg/L** Run ID: **MSD_15_091121C** Prep Date: **11/22/2009 00:10**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	36.4	2.5	50	0	73	13	167			
Chloromethane	38.2	10	50	0	76	28	145			
Vinyl chloride	46.1	2.5	50	0	92	43	134			
Chloroethane	45.5	2.5	50	0	91	39	154			
Bromomethane	45.4	10	50	0	91	19	176			
Trichlorofluoromethane	45.9	2.5	50	0	92	34	160			
1,1-Dichloroethene	50	2.5	50	0	100	60	130			
Dichloromethane	45.1	10	50	0	90	68	130			
trans-1,2-Dichloroethene	50.3	2.5	50	0	101	63	130			
Methyl tert-butyl ether (MTBE)	48.4	1.3	50	0	97	56	141			
1,1-Dichloroethane	47.8	2.5	50	0.64	94	61	130			
cis-1,2-Dichloroethene	50.4	2.5	50	0	101	70	130			
Bromochloromethane	50	2.5	50	0	100	70	130			
Chloroform	49.5	2.5	50	0.5	98	67	130			
2,2-Dichloropropane	46.4	2.5	50	0	93	30	152			
1,2-Dichloroethane	46.7	2.5	50	0	93	60	135			
1,1,1-Trichloroethane	51.3	2.5	50	0	103	59	137			
1,1-Dichloropropene	50.3	2.5	50	0	101	63	130			
Carbon tetrachloride	52.6	2.5	50	0	105	50	147			
Benzene	47.9	1.3	50	0	96	67	130			
Dibromomethane	47.6	2.5	50	0	95	69	133			
1,2-Dichloropropane	48.1	2.5	50	0	96	69	130			
Trichloroethene	49.4	2.5	50	0	99	69	130			
Bromodichloromethane	48.7	2.5	50	0	97	66	134			
cis-1,3-Dichloropropene	45.4	2.5	50	0	91	63	130			
trans-1,3-Dichloropropene	41.5	2.5	50	0	83	66	131			
1,1,2-Trichloroethane	45.4	2.5	50	0	91	68	130			
Toluene	45.5	1.3	50	0	91	66	130			
1,3-Dichloropropane	46.2	2.5	50	0	92	70	130			
Dibromochloromethane	43.9	2.5	50	0	88	70	130			
1,2-Dibromoethane (EDB)	94.5	5	100	0	95	70	130			
Tetrachloroethene	52.2	2.5	50	1.02	102	61	134			
1,1,1,2-Tetrachloroethane	48	2.5	50	0	96	70	130			
Chlorobenzene	46.1	2.5	50	0	92	70	130			
Ethylbenzene	46.5	1.3	50	0	93	68	130			
m,p-Xylene	47.6	1.3	50	0	95	64	130			
Bromoform	40.1	2.5	50	0	80	64	138			
Styrene	51.4	2.5	50	0	103	69	130			
o-Xylene	48.2	1.3	50	0	96	70	130			
1,1,2,2-Tetrachloroethane	42.5	2.5	50	0	85	65	131			
1,2,3-Trichloropropane	87.8	10	100	0	88	70	130			
Isopropylbenzene	48.1	2.5	50	0	96	64	138			
Bromobenzene	47.2	2.5	50	0	94	70	130			
n-Propylbenzene	47.5	2.5	50	0	95	66	132			
4-Chlorotoluene	48.6	2.5	50	0	97	70	130			
2-Chlorotoluene	47.8	2.5	50	0	96	70	130			
1,3,5-Trimethylbenzene	47.4	2.5	50	0	95	66	136			
tert-Butylbenzene	46.9	2.5	50	0	94	65	137			
1,2,4-Trimethylbenzene	47	2.5	50	0	94	65	137			
sec-Butylbenzene	46.8	2.5	50	0	94	66	134			
1,3-Dichlorobenzene	47.4	2.5	50	0	95	70	130			
1,4-Dichlorobenzene	44.2	2.5	50	0	88	70	130			
4-Isopropyltoluene	47.4	2.5	50	0	95	66	137			
1,2-Dichlorobenzene	43.8	2.5	50	0	88	70	130			
n-Butylbenzene	48.3	2.5	50	0	97	60	142			
1,2-Dibromo-3-chloropropane (DBCP)	205	15	250	0	82	67	130			
1,2,4-Trichlorobenzene	48	10	50	0	96	61	137			
Naphthalene	44.8	10	50	0	90	40	167			
Hexachlorobutadiene	94.1	10	100	0	94	61	130			
1,2,3-Trichlorobenzene	45.5	10	50	0	91	51	144			
Surr: 1,2-Dichloroethane-d4	48.2		50		96	70	130			
Surr: Toluene-d8	49.1		50		98	70	130			
Surr: 4-Bromofluorobenzene	49.5		50		99	70	130			

Alpha Analytical, Inc.

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Date: 01-Dec-09

QC Summary Report

Work Order: 09111801

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

File ID: **09112142.D** Batch ID: **MS15W1121M** Analysis Date: **11/22/2009 00:32**

Sample ID: **09111903-01AMSD** Units : **µg/L** Run ID: **MSD_15_091121C** Prep Date: **11/22/2009 00:32**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	39.4	2.5	50	0	79	13	167	36.35	8.0(20)	
Chloromethane	39.8	10	50	0	80	28	145	38.21	4.1(20)	
Vinyl chloride	48.1	2.5	50	0	96	43	134	46.1	4.3(20)	
Chloroethane	50.1	2.5	50	0	100	39	154	45.52	9.6(20)	
Bromomethane	53.6	10	50	0	107	19	176	45.38	16.5(20)	
Trichlorofluoromethane	50.9	2.5	50	0	102	34	160	45.89	10.3(20)	
1,1-Dichloroethene	53	2.5	50	0	106	60	130	49.99	5.8(20)	
Dichloromethane	46.9	10	50	0	94	68	130	45.06	4.0(20)	
trans-1,2-Dichloroethene	52.4	2.5	50	0	105	63	130	50.29	4.1(20)	
Methyl tert-butyl ether (MTBE)	50.6	1.3	50	0	101	56	141	48.41	4.3(20)	
1,1-Dichloroethane	49.3	2.5	50	0.64	97	61	130	47.82	3.0(20)	
cis-1,2-Dichloroethene	52.5	2.5	50	0	105	70	130	50.37	4.1(20)	
Bromochloromethane	52.7	2.5	50	0	105	70	130	50.04	5.1(20)	
Chloroform	51	2.5	50	0.5	101	67	130	49.54	2.9(20)	
2,2-Dichloropropane	47.9	2.5	50	0	96	30	152	46.4	3.2(20)	
1,2-Dichloroethane	48.5	2.5	50	0	97	60	135	46.68	3.8(20)	
1,1,1-Trichloroethane	53.7	2.5	50	0	107	59	137	51.32	4.5(20)	
1,1-Dichloropropene	52.1	2.5	50	0	104	63	130	50.26	3.6(20)	
Carbon tetrachloride	55.2	2.5	50	0	110	50	147	52.62	4.8(20)	
Benzene	49.4	1.3	50	0	99	67	130	47.92	3.1(20)	
Dibromomethane	49.1	2.5	50	0	98	69	133	47.59	3.1(20)	
1,2-Dichloropropane	49.9	2.5	50	0	99.7	69	130	48.14	3.5(20)	
Trichloroethene	51.7	2.5	50	0	103	69	130	49.35	4.6(20)	
Bromodichloromethane	51.3	2.5	50	0	103	66	134	48.74	5.1(20)	
cis-1,3-Dichloropropene	47.1	2.5	50	0	94	63	130	45.42	3.6(20)	
trans-1,3-Dichloropropene	43.5	2.5	50	0	87	66	131	41.51	4.8(20)	
1,1,2-Trichloroethane	47.1	2.5	50	0	94	68	130	45.41	3.6(20)	
Toluene	47.2	1.3	50	0	94	66	130	45.51	3.6(20)	
1,3-Dichloropropane	47.7	2.5	50	0	95	70	130	46.17	3.3(20)	
Dibromochloromethane	46.7	2.5	50	0	93	70	130	43.93	6.1(20)	
1,2-Dibromoethane (EDB)	98.4	5	100	0	98	70	130	94.5	4.0(20)	
Tetrachloroethene	54.4	2.5	50	1.02	107	61	134	52.23	4.1(20)	
1,1,1,2-Tetrachloroethane	50.7	2.5	50	0	101	70	130	47.98	5.5(20)	
Chlorobenzene	47.8	2.5	50	0	96	70	130	46.07	3.6(20)	
Ethylbenzene	48.5	1.3	50	0	97	68	130	46.52	4.2(20)	
m,p-Xylene	49.2	1.3	50	0	98	64	130	47.59	3.4(20)	
Bromoform	42.3	2.5	50	0	85	64	138	40.11	5.2(20)	
Styrene	52.8	2.5	50	0	106	69	130	51.42	2.7(20)	
o-Xylene	50.3	1.3	50	0	101	70	130	48.2	4.2(20)	
1,1,2,2-Tetrachloroethane	43.7	2.5	50	0	87	65	131	42.46	3.0(20)	
1,2,3-Trichloropropane	91.8	10	100	0	92	70	130	87.76	4.5(20)	
Isopropylbenzene	49.6	2.5	50	0	99	64	138	48.1	3.1(20)	
Bromobenzene	47.7	2.5	50	0	95	70	130	47.16	1.2(20)	
n-Propylbenzene	48.8	2.5	50	0	98	66	132	47.47	2.8(20)	
4-Chlorotoluene	49.6	2.5	50	0	99	70	130	48.58	2.1(20)	
2-Chlorotoluene	48.1	2.5	50	0	96	70	130	47.8	0.6(20)	
1,3,5-Trimethylbenzene	48.5	2.5	50	0	97	66	136	47.36	2.5(20)	
tert-Butylbenzene	48.3	2.5	50	0	97	65	137	46.91	2.9(20)	
1,2,4-Trimethylbenzene	48.6	2.5	50	0	97	65	137	47.02	3.2(20)	
sec-Butylbenzene	49.2	2.5	50	0	98	66	134	46.83	5.0(20)	
1,3-Dichlorobenzene	48.4	2.5	50	0	97	70	130	47.38	2.1(20)	
1,4-Dichlorobenzene	45.4	2.5	50	0	91	70	130	44.24	2.7(20)	
4-Isopropyltoluene	49.5	2.5	50	0	99	66	137	47.44	4.2(20)	
1,2-Dichlorobenzene	45.8	2.5	50	0	92	70	130	43.84	4.3(20)	
n-Butylbenzene	50.2	2.5	50	0	100	60	142	48.28	3.9(20)	
1,2-Dibromo-3-chloropropane (DBCP)	211	15	250	0	84	67	130	205	2.9(20)	
1,2,4-Trichlorobenzene	51.9	10	50	0	104	61	137	48.02	7.7(20)	
Naphthalene	47.9	10	50	0	96	40	167	44.76	6.7(20)	
Hexachlorobutadiene	98.9	10	100	0	99	61	130	94.1	5.0(20)	
1,2,3-Trichlorobenzene	48.2	10	50	0	96	51	144	45.52	5.7(20)	
Surr: 1,2-Dichloroethane-d4	49		50		98	70	130			
Surr: Toluene-d8	49.1		50		98	70	130			
Surr: 4-Bromofluorobenzene	48.7		50		97	70	130			

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Date: *01-Dec-09*

QC Summary Report

Work Order: 09111801

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 : BMIS09111801

Report Due By : 5:00 PM On : 03-Dec-2009

Client:
Battelle Memorial Institute
3990 Old Town Ave
Suite C-205
San Diego, CA 92110

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 : GH/ DBL

PO : 218013

Client's COC # : 023590, 24117 Job : G005862/JPL Groundwater Monitoring

Cooler Temp	Samples Received	Date Printed
4 °C	18-Nov-2009	18-Nov-2009

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
BMI09111801-01A	QCEB-16 NOV	AQ	11/16/09 14:15	3	0	10			VOC by 524 Criteria	VOC by 524 Criteria					
BMI09111801-02A	MW-5	AQ	11/17/09 09:30	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI09111801-03A	MW-6	AQ	11/17/09 12:00	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI09111801-04A	MW-20-5	AQ	11/17/09 08:15	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI09111801-05A	MW-20-4	AQ	11/17/09 08:59	10	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					MS/MSD
BMI09111801-06A	MW-20-3	AQ	11/17/09 09:32	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI09111801-07A	MW-20-2	AQ	11/17/09 09:58	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					Level IV QC
BMI09111801-08A	MW-20-1	AQ	11/17/09 10:48	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI09111801-09A	DUPE-01-4Q09	AQ	11/17/09 00:00	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI09111801-10A	EB-03-11/17/09	AQ	11/17/09 10:20	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					

Comments: No security seals. Frozen ice. Temp Blank #8757 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.**	11.18.09 9:41

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 : BMIS09111801

Report Due By : 5:00 PM On : 03-Dec-2009

Client:
Battelle Memorial Institute
3990 Old Town Ave
Suite C-205
San Diego, CA 92110

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 : GH/ DBL

PO : 218013

Client's COC # : 023590, 24117 Job : G005862/JPL Groundwater Monitoring

Cooler Temp	Samples Received	Date Printed
4 °C	18-Nov-2009	**18-Nov-2009**

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
BMI09111801-11A	TB-03-11/17/09	AQ	11/17/09 00:00	1	0	10			VOC by 524 Criteria	VOC by 524 Criteria					Reno Trip Blank 6/22/09

Comments: No security seals. Frozen ice. Temp Blank #8757 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.**	11-18-09 9:41

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.
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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
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 ___

023590

Page # 1 of 1

Client Name	P.O. #	Job #
BATTELLE	218013	JPL-GW-4Q09
Address	**EMail Address**	
505 King Ave.	connerd@battelle.org	
City, State, Zip	**Phone #**	**Fax #**
Columbus, OH, 43201	~~818 393-2808~~ GH 614 458-6641	

Report Attention: DAVID CONNER

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 GH/DBL — Lab ID Number (Office Use Only)	Sample Description	TAT	Field Filtered	Total and type of containers ** See below	VOC (524.2)	Total Cr (6008)	ClO4- (314.0)	Cl-, SO4, NO3-N, NO3, PO4-3 (300.0)	REMARKS
1415	~~17NOV~~ 16NOV GH	AQ	BMI091118 01-01	QCEB-16 NOV			3 V	X				
0930	17NOV	AQ	-02	MW-5			GH 5	X	X	X		
1200	17NOV	AQ	-03	MW-6			GH 5	X	X	X		

ADDITIONAL INSTRUCTIONS: D. CONNER PHONE # 619-726-7311

	Signature	Print Name	Company	Date	Time
Relinquished by		GREG HEADINGTON	BATTELLE	17NOV09	1320
Received by		MARCO MENDOZA	INSIGHT	11/17/09	1404
Relinquished by		MARCO MENDOZA	INSIGHT	11/17/09	1430
Received by	Elizabeth Adcox	Elizabeth Adcox	Alpha	11-18-09	9:41
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 ___

24117

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 #	

Required QC Level? I II III IV

EDD / EDF? YES ___ NO ___

Global ID # _____

Time Sampled	Date Sampled	Matrix* See Key Below	Sampled by / 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, Br (300.0)				REMARKS
0815	11/17/09	AQ	-04	MW-20-5	NORM		V/P 5	X	X	X					
0859			-05	MW-20-4				X	X	X					MS/MSD
0932			-06	MW-20-3				X	X	X					
0958			-07	MW-20-2				X	X	X					LEVEL ~~IV~~ QC
1048	11/17/09		-08	MW-20-1				X	X	X					
—	11/17/09		-09	DUPE-01-4009			V/P 5	X	X	X					DUPLICATE
1020	11/17/09		-10	EB-03-11/17/09			V/P 5	X	X	X					EQUIPMENT BLANK
—	11/17/09		-11	TB-03-11/17/09			V 1	X							TRIP BLANK

ADDITIONAL INSTRUCTIONS:

	Signature	Print Name	Company	Date	Time
Relinquished by		CHASE BRADDOCK	INSIGHT GEO, INC.	11/17/09	1400
Received by		MARCO MENDOZA	INSIGHT EG	11/17/09	1404
Relinquished by		MARCO MENDOZA	INSIGHT	11/17/09	1421
Received by	Elizabeth Adcox	Elizabeth Adcox	Alpha	11-18-09	9:41
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 *01-Dec-09*

David Conner
Battelle Memorial Institute
3990 Old Town Ave Suite C-205
San Diego, CA 92110
(818) 393-2808

CASE NARRATIVE

Job: G005862/JPL Groundwater Monitoring
Work Order: BMI09111903 **Cooler Temp:** 4 °C

Alpha's Sample ID	Client's Sample ID	Matrix
09111903-01A	MW-13	Aqueous
09111903-02A	MW-8	Aqueous
09111903-03A	QCEB-17 NOV	Aqueous
09111903-04A	MW-1	Aqueous
09111903-05A	MW-3-5	Aqueous
09111903-06A	MW-3-4	Aqueous
09111903-07A	MW-3-3	Aqueous
09111903-08A	MW-3-2	Aqueous
09111903-09A	MW-3-1	Aqueous
09111903-10A	DUPE-02-4Q09	Aqueous
09111903-11A	EB-04-11/18/09	Aqueous
09111903-12A	TB-04-11/18/09	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
3990 Old Town Ave
San Diego, CA 92110

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 11/19/09

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 : BMI09111903-01A Chloride	61	2.5 mg/L	11/19/09 12:38	11/19/09 14:24
Date Sampled 11/18/09 08:36 Nitrite (NO2) - N	ND	0.25 mg/L	11/19/09 12:38	11/19/09 13:47
Nitrate (NO3) - N	6.5	0.25 mg/L	11/19/09 12:38	11/19/09 13:47
Sulfate (SO4)	69	0.50 mg/L	11/19/09 12:38	11/19/09 13:47
Phosphate, ortho - P	ND	0.25 mg/L	11/19/09 12:38	11/19/09 13:47
Client ID: **MW-8**				
Lab ID : BMI09111903-02A Chloride	46	2.5 mg/L	11/19/09 12:38	11/19/09 15:19
Date Sampled 11/18/09 10:45 Nitrite (NO2) - N	ND	0.25 mg/L	11/19/09 12:38	11/19/09 14:05
Nitrate (NO3) - N	2.6	0.25 mg/L	11/19/09 12:38	11/19/09 14:05
Sulfate (SO4)	58	0.50 mg/L	11/19/09 12:38	11/19/09 14:05
Phosphate, ortho - P	ND	0.25 mg/L	11/19/09 12:38	11/19/09 14:05

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 / 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.

12/3/09
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
3990 Old Town Ave
San Diego, CA 92110

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 11/19/09

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 : BMI09111903-01A Perchlorate	182	10.0 µg/L	11/19/09 12:32	11/24/09 12:14
Date Sampled 11/18/09 08:36				
Client ID: **MW-8**				
Lab ID : BMI09111903-02A Perchlorate	203	10.0 µg/L	11/19/09 12:32	11/24/09 12:32
Date Sampled 11/18/09 10:45				
Client ID: **MW-1**				
Lab ID : BMI09111903-04A Perchlorate	ND	1.00 µg/L	11/19/09 12:32	11/23/09 21:27
Date Sampled 11/18/09 13:00				
Client ID: **MW-3-5**				
Lab ID : BMI09111903-05A Perchlorate	ND	1.00 µg/L	11/19/09 12:32	11/23/09 21:45
Date Sampled 11/18/09 08:34				
Client ID: **MW-3-4**				
Lab ID : BMI09111903-06A Perchlorate	ND	1.00 µg/L	11/19/09 12:32	11/23/09 22:04
Date Sampled 11/18/09 09:02				
Client ID: **MW-3-3**				
Lab ID : BMI09111903-07A Perchlorate	ND	1.00 µg/L	11/19/09 12:32	11/23/09 22:22
Date Sampled 11/18/09 09:29				
Client ID: **MW-3-2**				
Lab ID : BMI09111903-08A Perchlorate	109	5.00 µg/L	11/19/09 12:32	11/24/09 12:51
Date Sampled 11/18/09 10:13				
Client ID: **MW-3-1**				
Lab ID : BMI09111903-09A Perchlorate	ND	1.00 µg/L	11/19/09 12:32	11/23/09 22:59
Date Sampled 11/18/09 11:10				
Client ID: **DUPE-02-4Q09**				
Lab ID : BMI09111903-10A Perchlorate	ND	1.00 µg/L	11/19/09 12:32	11/23/09 23:17
Date Sampled 11/18/09 00:00				
Client ID: **EB-04-11/18/09**				
Lab ID : BMI09111903-11A Perchlorate	ND	1.00 µg/L	11/19/09 12:32	11/23/09 23:36
Date Sampled 11/18/09 10:50				

Alpha Analytical, Inc.

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

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

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 / info@alpha-analytical.com

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

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12/3/09

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
3990 Old Town Ave
San Diego, CA 92110

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 11/19/09

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 : BMI09111903-01A Chromium (Cr)	0.012	0.0050 mg/L	11/18/09 11:25	11/19/09 14:13
Date Sampled 11/18/09 08:36				
Client ID: **MW-8**				
Lab ID : BMI09111903-02A Chromium (Cr)	ND	0.0050 mg/L	11/18/09 11:25	11/19/09 14:19
Date Sampled 11/18/09 10:45				
Client ID: **MW-1**				
Lab ID : BMI09111903-04A Chromium (Cr)	ND	0.0050 mg/L	11/18/09 11:25	11/19/09 14:25
Date Sampled 11/18/09 13:00				
Client ID: **MW-3-5**				
Lab ID : BMI09111903-05A Chromium (Cr)	ND	0.0050 mg/L	11/18/09 11:25	11/19/09 14:30
Date Sampled 11/18/09 08:34				
Client ID: **MW-3-4**				
Lab ID : BMI09111903-06A Chromium (Cr)	ND	0.0050 mg/L	11/18/09 11:25	11/19/09 14:36
Date Sampled 11/18/09 09:02				
Client ID: **MW-3-3**				
Lab ID : BMI09111903-07A Chromium (Cr)	ND	0.0050 mg/L	11/18/09 11:25	11/19/09 14:42
Date Sampled 11/18/09 09:29				
Client ID: **MW-3-2**				
Lab ID : BMI09111903-08A Chromium (Cr)	ND	0.0050 mg/L	11/18/09 11:25	11/19/09 14:47
Date Sampled 11/18/09 10:13				
Client ID: **MW-3-1**				
Lab ID : BMI09111903-09A Chromium (Cr)	ND	0.0050 mg/L	11/18/09 11:25	11/19/09 14:53
Date Sampled 11/18/09 11:10				
Client ID: **DUPE-02-4Q09**				
Lab ID : BMI09111903-10A Chromium (Cr)	ND	0.0050 mg/L	11/18/09 11:25	11/19/09 14:59
Date Sampled 11/18/09 00:00				
Client ID: **EB-04-11/18/09**				
Lab ID : BMI09111903-11A Chromium (Cr)	ND	0.0050 mg/L	11/18/09 11:25	11/19/09 15:05
Date Sampled 11/18/09 10:50				

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 / info@alpha-analytical.com

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12/3/09

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
3990 Old Town Ave
San Diego, CA 92110
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 : BMI09111903-01A	*** None Found ***	ND	2.0 µg/L	11/22/09 03:52	11/22/09 03:52
Date Received : 11/19/09					
Date Sampled : 11/18/09 08:36					
Client ID : **MW-8**					
Lab ID : BMI09111903-02A	*** None Found ***	ND	2.0 µg/L	11/22/09 04:14	11/22/09 04:14
Date Received : 11/19/09					
Date Sampled : 11/18/09 10:45					
Client ID : **QCEB-17 NOV**					
Lab ID : BMI09111903-03A	*** None Found ***	ND	2.0 µg/L	11/22/09 02:23	11/22/09 02:23
Date Received : 11/19/09					
Date Sampled : 11/17/09 14:30					
Client ID : **MW-1**					
Lab ID : BMI09111903-04A	*** None Found ***	ND	2.0 µg/L	11/22/09 04:36	11/22/09 04:36
Date Received : 11/19/09					
Date Sampled : 11/18/09 13:00					
Client ID : **MW-3-5**					
Lab ID : BMI09111903-05A	*** None Found ***	ND	2.0 µg/L	11/22/09 04:59	11/22/09 04:59
Date Received : 11/19/09					
Date Sampled : 11/18/09 08:34					
Client ID : **MW-3-4**					
Lab ID : BMI09111903-06A	Sulfur dioxide	14	2.0 µg/L	11/22/09 05:21	11/22/09 05:21
Date Received : 11/19/09					
Date Sampled : 11/18/09 09:02					
Client ID : **MW-3-3**					
Lab ID : BMI09111903-07A	*** None Found ***	ND	2.0 µg/L	11/22/09 05:44	11/22/09 05:44
Date Received : 11/19/09					
Date Sampled : 11/18/09 09:29					
Client ID : **MW-3-2**					
Lab ID : BMI09111903-08A	*** None Found ***	ND	2.0 µg/L	11/22/09 06:06	11/22/09 06:06
Date Received : 11/19/09					
Date Sampled : 11/18/09 10:13					
Client ID : **MW-3-1**					
Lab ID : BMI09111903-09A	*** None Found ***	ND	2.0 µg/L	11/22/09 06:28	11/22/09 06:28
Date Received : 11/19/09					
Date Sampled : 11/18/09 11:10					

Alpha Analytical, Inc.

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Client ID :	**DUPE-02-4Q09**					
Lab ID :	BMI09111903-10A	*** None Found ***	ND	2.0 µg/L	11/22/09 06:50	11/22/09 06:50
Date Received :	11/19/09					
Date Sampled :	11/18/09 00:00					
Client ID :	**EB-04-11/18/09**					
Lab ID :	BMI09111903-11A	2-Methyl-1-propene	2.6	2.0 µg/L	11/22/09 02:45	11/22/09 02:45
Date Received :	11/19/09	Tertiary Butyl Alcohol (TBA)	12	10 µg/L	11/22/09 02:45	11/22/09 02:45
Date Sampled :	11/18/09 10:50					
Client ID :	**TB-04-11/18/09**					
Lab ID :	BMI09111903-12A	*** None Found ***	ND	2.0 µg/L	11/22/09 03:08	11/22/09 03:08
Date Received :	11/19/09					
Date Sampled :	11/18/09 00:00					

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 / info@alpha-analytical.com

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12/3/09

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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09111903-01A
Client I.D. Number: MW-13

Sampled: 11/18/09 08:36
Received: 11/19/09
Extracted: 11/22/09 03:52
Analyzed: 11/22/09 03:52

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	0.64	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	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	98	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	103	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	95	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	1.0	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 / info@alpha-analytical.com

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12/3/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09111903-02A
Client I.D. Number: MW-8

Sampled: 11/18/09 10:45
Received: 11/19/09
Extracted: 11/22/09 04:14
Analyzed: 11/22/09 04:14

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	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	0.66	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	2.7	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	2.5	µg/L
25	Trichloroethene	ND	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	2.5	0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	99	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	103	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	95	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	0.95	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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12/3/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09111903-03A
Client I.D. Number: QCEB-17 NOV

Sampled: 11/17/09 14:30
Received: 11/19/09
Extracted: 11/22/09 02:23
Analyzed: 11/22/09 02:23

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	0.51	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	1.7	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	2.7	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	1.4	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	100	(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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12/3/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09111903-04A
Client I.D. Number: MW-1

Sampled: 11/18/09 13:00
Received: 11/19/09
Extracted: 11/22/09 04:36
Analyzed: 11/22/09 04:36

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	100	(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	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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12/3/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09111903-05A
Client I.D. Number: MW-3-5

Sampled: 11/18/09 08:34
Received: 11/19/09
Extracted: 11/22/09 04:59
Analyzed: 11/22/09 04:59

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	0.64	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	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	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
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / info@alpha-analytical.com

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12/3/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09111903-06A
Client I.D. Number: MW-3-4

Sampled: 11/18/09 09:02
Received: 11/19/09
Extracted: 11/22/09 05:21
Analyzed: 11/22/09 05:21

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	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	99	(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	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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12/3/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09111903-07A
Client I.D. Number: MW-3-3

Sampled: 11/18/09 09:29
Received: 11/19/09
Extracted: 11/22/09 05:44
Analyzed: 11/22/09 05:44

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	99	(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	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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12/3/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09111903-08A
Client I.D. Number: MW-3-2

Sampled: 11/18/09 10:13
Received: 11/19/09
Extracted: 11/22/09 06:06
Analyzed: 11/22/09 06:06

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	1.5	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	4.4	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	2.0	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	99	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	103	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	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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12/3/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09111903-09A
Client I.D. Number: MW-3-1

Sampled: 11/18/09 11:10
Received: 11/19/09
Extracted: 11/22/09 06:28
Analyzed: 11/22/09 06:28

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	100	(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	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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12/3/09
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ANALYTICAL REPORT

Battelle Memorial Institute
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Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09111903-10A
Client I.D. Number: DUPE-02-4Q09

Sampled: 11/18/09 00:00
Received: 11/19/09
Extracted: 11/22/09 06:50
Analyzed: 11/22/09 06:50

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	100	(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

Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / 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.

12/3/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09111903-11A
Client I.D. Number: EB-04-11/18/09

Sampled: 11/18/09 10:50
Received: 11/19/09
Extracted: 11/22/09 02:45
Analyzed: 11/22/09 02:45

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	99	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	103	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	97	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	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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12/3/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09111903-12A
Client I.D. Number: TB-04-11/18/09

Sampled: 11/18/09 00:00
Received: 11/19/09
Extracted: 11/22/09 03:08
Analyzed: 11/22/09 03:08

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	98	(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	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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12/3/09
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: BMI09111903 **Job:** G005862/JPL Groundwater Monitoring

Alpha's Sample ID	Client's Sample ID	Matrix	pH
09111903-01A	MW-13	Aqueous	2
09111903-02A	MW-8	Aqueous	2
09111903-03A	QCEB-17 NOV	Aqueous	2
09111903-04A	MW-1	Aqueous	2
09111903-05A	MW-3-5	Aqueous	2
09111903-06A	MW-3-4	Aqueous	2
09111903-07A	MW-3-3	Aqueous	2
09111903-08A	MW-3-2	Aqueous	2
09111903-09A	MW-3-1	Aqueous	2
09111903-10A	DUPE-02-4Q09	Aqueous	2
09111903-11A	EB-04-11/18/09	Aqueous	2
09111903-12A	TB-04-11/18/09	Aqueous	2

12/3/09

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: *03-Dec-09*

QC Summary Report

Work Order: 09111903

Method Blank

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

File ID: **17** Batch ID: **23120A** Analysis Date: **11/19/2009 12:14**

Sample ID: **MB-23120** Units : **mg/L** Run ID: **IC_1_091119A** Prep Date: **11/19/2009 12:38**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Nitrite (NO2) - N	ND	0.25								
Nitrate (NO3) - N	ND	0.25								
Phosphate, ortho - P	ND	0.25								

Laboratory Fortified Blank

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

File ID: **18** Batch ID: **23120A** Analysis Date: **11/19/2009 12:33**

Sample ID: **LFB-23120** Units : **mg/L** Run ID: **IC_1_091119A** Prep Date: **11/19/2009 12:38**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Nitrite (NO2) - N	1.2	0.25	1.25		96	90	110			
Nitrate (NO3) - N	1.23	0.25	1.25		98	90	110			
Phosphate, ortho - P	1.26	0.25	1.25		101	90	110			

Sample Matrix Spike

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

File ID: **25** Batch ID: **23120A** Analysis Date: **11/19/2009 14:42**

Sample ID: **09111903-01ALFM** Units : **mg/L** Run ID: **IC_1_091119A** Prep Date: **11/19/2009 12:38**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Nitrite (NO2) - N	5.93	0.25	6.25	0	95	80	120			
Nitrate (NO3) - N	12.4	0.25	6.25	6.501	94	80	120			
Phosphate, ortho - P	6.88	0.25	6.25	0	110	80	120			

Sample Matrix Spike Duplicate

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

File ID: **26** Batch ID: **23120A** Analysis Date: **11/19/2009 15:01**

Sample ID: **09111903-01ALFMD** Units : **mg/L** Run ID: **IC_1_091119A** Prep Date: **11/19/2009 12:38**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Nitrite (NO2) - N	6.12	0.25	6.25	0	98	80	120	5.929	3.2(10)	
Nitrate (NO3) - N	12.4	0.25	6.25	6.501	95	80	120	12.36	0.6(10)	
Phosphate, ortho - P	7.91	0.25	6.25	0	127	80	120	6.884	13.9(10)	M1 R5

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.

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

R5 = MS/MSD RPD exceeded the laboratory control limit. Recovery met acceptance criteria.

Alpha Analytical, Inc.

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Date: *03-Dec-09*

QC Summary Report

Work Order: 09111903

Method Blank

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

File ID: **17** Batch ID: **23120B** Analysis Date: **11/19/2009 12:14**

Sample ID: **MB-23120** Units : **mg/L** Run ID: **IC_1_091119A** Prep Date: **11/19/2009 12:38**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sulfate (SO4)	ND	0.5								

Laboratory Fortified Blank

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

File ID: **18** Batch ID: **23120B** Analysis Date: **11/19/2009 12:33**

Sample ID: **LFB-23120** Units : **mg/L** Run ID: **IC_1_091119A** Prep Date: **11/19/2009 12:38**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sulfate (SO4)	9.64	0.5	10		96	90	110			

Sample Matrix Spike

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

File ID: **25** Batch ID: **23120B** Analysis Date: **11/19/2009 14:42**

Sample ID: **09111903-01ALFM** Units : **mg/L** Run ID: **IC_1_091119A** Prep Date: **11/19/2009 12:38**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sulfate (SO4)	114	0.5	50	69.24	90	80	120			

Sample Matrix Spike Duplicate

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

File ID: **26** Batch ID: **23120B** Analysis Date: **11/19/2009 15:01**

Sample ID: **09111903-01ALFMD** Units : **mg/L** Run ID: **IC_1_091119A** Prep Date: **11/19/2009 12:38**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sulfate (SO4)	114	0.5	50	69.24	90	80	120	114.1	0.0(10)	

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: *03-Dec-09*

QC Summary Report

Work Order: 09111903

Method Blank

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

File ID: **17** Batch ID: **23120C** Analysis Date: **11/19/2009 12:14**

Sample ID: **MB-23120** Units : **mg/L** Run ID: **IC_1_091119B** Prep Date: **11/19/2009 12:14**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	ND	0.5								

Laboratory Fortified Blank

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

File ID: **18** Batch ID: **23120C** Analysis Date: **11/19/2009 12:33**

Sample ID: **LFB-23120** Units : **mg/L** Run ID: **IC_1_091119B** Prep Date: **11/19/2009 12:33**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	4.71	0.5	5		94	90	110			

Sample Matrix Spike

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

File ID: **25** Batch ID: **23120C** Analysis Date: **11/19/2009 14:42**

Sample ID: **09111903-01ALFM** Units : **mg/L** Run ID: **IC_1_091119B** Prep Date: **11/19/2009 14:42**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	87.7	0.5	25	61.38	105	80	120			

Sample Matrix Spike Duplicate

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

File ID: **26** Batch ID: **23120C** Analysis Date: **11/19/2009 15:01**

Sample ID: **09111903-01ALFMD** Units : **mg/L** Run ID: **IC_1_091119B** Prep Date: **11/19/2009 15:01**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	88	0.5	25	61.38	106	80	120	87.69	0.3(10)	

Comments:

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QC Summary Report

Work Order: 09111903

Method Blank

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

File ID: **19** Batch ID: **23119** Analysis Date: **11/23/2009 15:37**

Sample ID: **MB-23119** Units : **µg/L** Run ID: **IC_3_091123A** Prep Date: **11/19/2009 12:32**

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: **21** Batch ID: **23119** Analysis Date: **11/23/2009 16:14**

Sample ID: **LFB-23119** Units : **µg/L** Run ID: **IC_3_091123A** Prep Date: **11/19/2009 12:32**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	26.1	2	25		105	85	115			

Sample Matrix Spike

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

File ID: **15** Batch ID: **23119** Analysis Date: **11/24/2009 11:37**

Sample ID: **09111801-05ALFM** Units : **µg/L** Run ID: **IC_3_091123A** Prep Date: **11/19/2009 12:32**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	189	10	125	76.01	91	80	120			

Sample Matrix Spike Duplicate

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

File ID: **16** Batch ID: **23119** Analysis Date: **11/24/2009 11:56**

Sample ID: **09111801-05ALFMD** Units : **µg/L** Run ID: **IC_3_091123A** Prep Date: **11/19/2009 12:32**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	193	10	125	76.01	94	80	120	189.4	2.0(15)	

Comments:

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Work Order: 09111903

Method Blank

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

File ID: **111809.B\131SMPL.D** Batch ID: **23103K** Analysis Date: **11/19/2009 04:47**

Sample ID: **MB-23103** Units : **mg/L** Run ID: **ICP/MS_091118E** Prep Date: **11/18/2009 11:25**

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: **111809.B\132_LCS.D** Batch ID: **23103K** Analysis Date: **11/19/2009 04:53**

Sample ID: **LCS-23103** Units : **mg/L** Run ID: **ICP/MS_091118E** Prep Date: **11/18/2009 11:25**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.052	0.005	0.05		104	80	120			

Sample Matrix Spike

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

File ID: **111809.B\136SMPL.D** Batch ID: **23103K** Analysis Date: **11/19/2009 05:16**

Sample ID: **09111801-05AMS** Units : **mg/L** Run ID: **ICP/MS_091118E** Prep Date: **11/18/2009 11:25**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0522	0.005	0.05	0	104	80	120			

Sample Matrix Spike Duplicate

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

File ID: **111809.B\137SMPL.D** Batch ID: **23103K** Analysis Date: **11/19/2009 05:21**

Sample ID: **09111801-05AMSD** Units : **mg/L** Run ID: **ICP/MS_091118E** Prep Date: **11/18/2009 11:25**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0508	0.005	0.05	0	102	80	120	0.05221	2.8(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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QC Summary Report

Work Order: 09111903

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

File ID: **09112140.D** Batch ID: **MS15W1121M** Analysis Date: **11/21/2009 23:48**

Sample ID: **MBLK MS15W1121M** Units : **µg/L** Run ID: **MSD_15_091121C** Prep Date: **11/21/2009 23:48**

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	9.88		10		99	70	130			
Surr: Toluene-d8	10.2		10		102	70	130			

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Work Order: 09111903

Surr: 4-Bromofluorobenzene	9.62		10		96	70	130			

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

File ID: **09112137.D** Batch ID: **MS15W1121M** Analysis Date: **11/21/2009 22:44**

Sample ID: **LCS MS15W1121M** Units : **µg/L** Run ID: **MSD_15_091121C** Prep Date: **11/21/2009 22:44**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	7.12	1	10		71	70	130			
Chloromethane	7.73	2	10		77	70	130			
Vinyl chloride	9.48	1	10		95	70	130			
Chloroethane	10.3	1	10		103	70	130			
Bromomethane	10.7	2	10		107	70	130			
Trichlorofluoromethane	10.2	1	10		102	70	130			
1,1-Dichloroethene	10.6	1	10		106	70	130			
Dichloromethane	9.5	2	10		95	70	130			
trans-1,2-Dichloroethene	10.7	1	10		107	70	130			
Methyl tert-butyl ether (MTBE)	10.4	0.5	10		104	70	130			
1,1-Dichloroethane	10.1	1	10		101	70	130			
cis-1,2-Dichloroethene	10.8	1	10		108	70	130			
Bromochloromethane	10.9	1	10		109	70	130			
Chloroform	10.6	1	10		106	70	130			
2,2-Dichloropropane	10.8	1	10		108	70	130			
1,2-Dichloroethane	10.1	1	10		101	70	130			
1,1,1-Trichloroethane	11.1	1	10		111	70	130			
1,1-Dichloropropene	10.7	1	10		107	70	130			
Carbon tetrachloride	11.5	1	10		115	70	130			
Benzene	10.3	0.5	10		103	70	130			
Dibromomethane	10.3	1	10		103	70	130			
1,2-Dichloropropane	10.5	1	10		105	70	130			
Trichloroethene	11.4	1	10		114	70	130			
Bromodichloromethane	10.6	1	10		106	70	130			
cis-1,3-Dichloropropene	10.4	1	10		104	70	130			
trans-1,3-Dichloropropene	9.33	1	10		93	70	130			
1,1,2-Trichloroethane	9.83	1	10		98	70	130			
Toluene	10	0.5	10		100	70	130			
1,3-Dichloropropane	10.1	1	10		101	70	130			
Dibromochloromethane	9.94	1	10		99	70	130			
1,2-Dibromoethane (EDB)	20.6	2	20		103	70	130			
Tetrachloroethene	11.4	1	10		114	70	130			
1,1,1,2-Tetrachloroethane	10.8	1	10		108	70	130			
Chlorobenzene	10.2	1	10		102	70	130			
Ethylbenzene	10.3	0.5	10		103	70	130			
m,p-Xylene	10.5	0.5	10		105	70	130			
Bromoform	8.95	1	10		90	70	130			
Styrene	11.2	1	10		112	70	130			
o-Xylene	10.6	0.5	10		106	70	130			
1,1,2,2-Tetrachloroethane	8.51	1	10		85	70	130			
1,2,3-Trichloropropane	19.3	2	20		97	70	130			
Isopropylbenzene	10.6	1	10		106	70	130			
Bromobenzene	10.2	1	10		102	70	130			
n-Propylbenzene	10.4	1	10		104	70	130			
4-Chlorotoluene	10.6	1	10		106	70	130			
2-Chlorotoluene	10.4	1	10		104	70	130			
1,3,5-Trimethylbenzene	10.5	1	10		105	70	130			
tert-Butylbenzene	10.2	1	10		102	70	130			
1,2,4-Trimethylbenzene	10.3	1	10		103	70	130			
sec-Butylbenzene	10.4	1	10		104	70	130			
1,3-Dichlorobenzene	10.5	1	10		105	70	130			
1,4-Dichlorobenzene	9.65	1	10		97	70	130			
4-Isopropyltoluene	10.6	1	10		106	70	130			
1,2-Dichlorobenzene	9.61	1	10		96	70	130			
n-Butylbenzene	10.7	1	10		107	70	130			
1,2-Dibromo-3-chloropropane (DBCP)	44.7	3	50		89	70	130			
1,2,4-Trichlorobenzene	11.1	2	10		111	70	130			
Naphthalene	10.2	2	10		102	70	130			
Hexachlorobutadiene	21.5	2	20		107	70	130			
1,2,3-Trichlorobenzene	10.5	2	10		105	70	130			
Surr: 1,2-Dichloroethane-d4	9.61		10		96	70	130			
Surr: Toluene-d8	9.82		10		98	70	130			
Surr: 4-Bromofluorobenzene	9.96		10		99.6	70	130			

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Date: 03-Dec-09

QC Summary Report

Work Order: 09111903

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

File ID: **09112141.D** Batch ID: **MS15W1121M** Analysis Date: **11/22/2009 00:10**

Sample ID: **09111903-01AMS** Units : **µg/L** Run ID: **MSD_15_091121C** Prep Date: **11/22/2009 00:10**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	36.4	2.5	50	0	73	13	167			
Chloromethane	38.2	10	50	0	76	28	145			
Vinyl chloride	46.1	2.5	50	0	92	43	134			
Chloroethane	45.5	2.5	50	0	91	39	154			
Bromomethane	45.4	10	50	0	91	19	176			
Trichlorofluoromethane	45.9	2.5	50	0	92	34	160			
1,1-Dichloroethene	50	2.5	50	0	100	60	130			
Dichloromethane	45.1	10	50	0	90	68	130			
trans-1,2-Dichloroethene	50.3	2.5	50	0	101	63	130			
Methyl tert-butyl ether (MTBE)	48.4	1.3	50	0	97	56	141			
1,1-Dichloroethane	47.8	2.5	50	0.64	94	61	130			
cis-1,2-Dichloroethene	50.4	2.5	50	0	101	70	130			
Bromochloromethane	50	2.5	50	0	100	70	130			
Chloroform	49.5	2.5	50	0.5	98	67	130			
2,2-Dichloropropane	46.4	2.5	50	0	93	30	152			
1,2-Dichloroethane	46.7	2.5	50	0	93	60	135			
1,1,1-Trichloroethane	51.3	2.5	50	0	103	59	137			
1,1-Dichloropropene	50.3	2.5	50	0	101	63	130			
Carbon tetrachloride	52.6	2.5	50	0	105	50	147			
Benzene	47.9	1.3	50	0	96	67	130			
Dibromomethane	47.6	2.5	50	0	95	69	133			
1,2-Dichloropropane	48.1	2.5	50	0	96	69	130			
Trichloroethene	49.4	2.5	50	0	99	69	130			
Bromodichloromethane	48.7	2.5	50	0	97	66	134			
cis-1,3-Dichloropropene	45.4	2.5	50	0	91	63	130			
trans-1,3-Dichloropropene	41.5	2.5	50	0	83	66	131			
1,1,2-Trichloroethane	45.4	2.5	50	0	91	68	130			
Toluene	45.5	1.3	50	0	91	66	130			
1,3-Dichloropropane	46.2	2.5	50	0	92	70	130			
Dibromochloromethane	43.9	2.5	50	0	88	70	130			
1,2-Dibromoethane (EDB)	94.5	5	100	0	95	70	130			
Tetrachloroethene	52.2	2.5	50	1.02	102	61	134			
1,1,1,2-Tetrachloroethane	48	2.5	50	0	96	70	130			
Chlorobenzene	46.1	2.5	50	0	92	70	130			
Ethylbenzene	46.5	1.3	50	0	93	68	130			
m,p-Xylene	47.6	1.3	50	0	95	64	130			
Bromoform	40.1	2.5	50	0	80	64	138			
Styrene	51.4	2.5	50	0	103	69	130			
o-Xylene	48.2	1.3	50	0	96	70	130			
1,1,2,2-Tetrachloroethane	42.5	2.5	50	0	85	65	131			
1,2,3-Trichloropropane	87.8	10	100	0	88	70	130			
Isopropylbenzene	48.1	2.5	50	0	96	64	138			
Bromobenzene	47.2	2.5	50	0	94	70	130			
n-Propylbenzene	47.5	2.5	50	0	95	66	132			
4-Chlorotoluene	48.6	2.5	50	0	97	70	130			
2-Chlorotoluene	47.8	2.5	50	0	96	70	130			
1,3,5-Trimethylbenzene	47.4	2.5	50	0	95	66	136			
tert-Butylbenzene	46.9	2.5	50	0	94	65	137			
1,2,4-Trimethylbenzene	47	2.5	50	0	94	65	137			
sec-Butylbenzene	46.8	2.5	50	0	94	66	134			
1,3-Dichlorobenzene	47.4	2.5	50	0	95	70	130			
1,4-Dichlorobenzene	44.2	2.5	50	0	88	70	130			
4-Isopropyltoluene	47.4	2.5	50	0	95	66	137			
1,2-Dichlorobenzene	43.8	2.5	50	0	88	70	130			
n-Butylbenzene	48.3	2.5	50	0	97	60	142			
1,2-Dibromo-3-chloropropane (DBCP)	205	15	250	0	82	67	130			
1,2,4-Trichlorobenzene	48	10	50	0	96	61	137			
Naphthalene	44.8	10	50	0	90	40	167			
Hexachlorobutadiene	94.1	10	100	0	94	61	130			
1,2,3-Trichlorobenzene	45.5	10	50	0	91	51	144			
Surr: 1,2-Dichloroethane-d4	48.2		50		96	70	130			
Surr: Toluene-d8	49.1		50		98	70	130			
Surr: 4-Bromofluorobenzene	49.5		50		99	70	130			

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Date: 03-Dec-09

QC Summary Report

Work Order: 09111903

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

File ID: **09112143.D** Batch ID: **MS15W1121M** Analysis Date: **11/22/2009 00:55**

Sample ID: **09111903-09AMS** Units : **µg/L** Run ID: **MSD_15_091121C** Prep Date: **11/22/2009 00:55**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	35.1	2.5	50	0	70	13	167			
Chloromethane	36.5	10	50	0	73	28	145			
Vinyl chloride	44.7	2.5	50	0	89	43	134			
Chloroethane	43.7	2.5	50	0	87	39	154			
Bromomethane	47.5	10	50	0	95	19	176			
Trichlorofluoromethane	42.6	2.5	50	0	85	34	160			
1,1-Dichloroethene	47.9	2.5	50	0	96	60	130			
Dichloromethane	44.1	10	50	0	88	68	130			
trans-1,2-Dichloroethene	49.3	2.5	50	0	99	63	130			
Methyl tert-butyl ether (MTBE)	47.4	1.3	50	0	95	56	141			
1,1-Dichloroethane	45.6	2.5	50	0	91	61	130			
cis-1,2-Dichloroethene	49.5	2.5	50	0	99	70	130			
Bromochloromethane	49.3	2.5	50	0	99	70	130			
Chloroform	47.6	2.5	50	0	95	67	130			
2,2-Dichloropropane	44.9	2.5	50	0	90	30	152			
1,2-Dichloroethane	45.2	2.5	50	0	90	60	135			
1,1,1-Trichloroethane	49.9	2.5	50	0	99.9	59	137			
1,1-Dichloropropene	48.7	2.5	50	0	97	63	130			
Carbon tetrachloride	51.3	2.5	50	0	103	50	147			
Benzene	46.6	1.3	50	0	93	67	130			
Dibromomethane	46.2	2.5	50	0	92	69	133			
1,2-Dichloropropane	46.7	2.5	50	0	93	69	130			
Trichloroethene	48.5	2.5	50	0	97	69	130			
Bromodichloromethane	46.9	2.5	50	0	94	66	134			
cis-1,3-Dichloropropene	44.3	2.5	50	0	89	63	130			
trans-1,3-Dichloropropene	40.2	2.5	50	0	80	66	131			
1,1,2-Trichloroethane	44	2.5	50	0	88	68	130			
Toluene	44.9	1.3	50	0	90	66	130			
1,3-Dichloropropane	45.5	2.5	50	0	91	70	130			
Dibromochloromethane	44	2.5	50	0	88	70	130			
1,2-Dibromoethane (EDB)	92.9	5	100	0	93	70	130			
Tetrachloroethene	50.2	2.5	50	0	100	61	134			
1,1,1,2-Tetrachloroethane	47.3	2.5	50	0	95	70	130			
Chlorobenzene	45.7	2.5	50	0	91	70	130			
Ethylbenzene	46	1.3	50	0	92	68	130			
m,p-Xylene	47.2	1.3	50	0	94	64	130			
Bromoform	39.7	2.5	50	0	79	64	138			
Styrene	50.9	2.5	50	0	102	69	130			
o-Xylene	47.9	1.3	50	0	96	70	130			
1,1,2,2-Tetrachloroethane	41.6	2.5	50	0	83	65	131			
1,2,3-Trichloropropane	87.2	10	100	0	87	70	130			
Isopropylbenzene	47	2.5	50	0	94	64	138			
Bromobenzene	46.9	2.5	50	0	94	70	130			
n-Propylbenzene	47.3	2.5	50	0	95	66	132			
4-Chlorotoluene	47.7	2.5	50	0	95	70	130			
2-Chlorotoluene	47	2.5	50	0	94	70	130			
1,3,5-Trimethylbenzene	46.9	2.5	50	0	94	66	136			
tert-Butylbenzene	46.4	2.5	50	0	93	65	137			
1,2,4-Trimethylbenzene	46.7	2.5	50	0	93	65	137			
sec-Butylbenzene	47.1	2.5	50	0	94	66	134			
1,3-Dichlorobenzene	47.1	2.5	50	0	94	70	130			
1,4-Dichlorobenzene	44.2	2.5	50	0	88	70	130			
4-Isopropyltoluene	47.8	2.5	50	0	96	66	137			
1,2-Dichlorobenzene	43.6	2.5	50	0	87	70	130			
n-Butylbenzene	48.5	2.5	50	0	97	60	142			
1,2-Dibromo-3-chloropropane (DBCP)	203	15	250	0	81	67	130			
1,2,4-Trichlorobenzene	49.8	10	50	0	99.5	61	137			
Naphthalene	46.1	10	50	0	92	40	167			
Hexachlorobutadiene	97.4	10	100	0	97	61	130			
1,2,3-Trichlorobenzene	47.5	10	50	0	95	51	144			
Surr: 1,2-Dichloroethane-d4	48.4		50		97	70	130			
Surr: Toluene-d8	49.3		50		99	70	130			
Surr: 4-Bromofluorobenzene	49.9		50		99.8	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-Dec-09

QC Summary Report

Work Order: 09111903

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

File ID: **09112142.D** Batch ID: **MS15W1121M** Analysis Date: **11/22/2009 00:32**

Sample ID: **09111903-01AMSD** Units : **µg/L** Run ID: **MSD_15_091121C** Prep Date: **11/22/2009 00:32**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	39.4	2.5	50	0	79	13	167	36.35	8.0(20)	
Chloromethane	39.8	10	50	0	80	28	145	38.21	4.1(20)	
Vinyl chloride	48.1	2.5	50	0	96	43	134	46.1	4.3(20)	
Chloroethane	50.1	2.5	50	0	100	39	154	45.52	9.6(20)	
Bromomethane	53.6	10	50	0	107	19	176	45.38	16.5(20)	
Trichlorofluoromethane	50.9	2.5	50	0	102	34	160	45.89	10.3(20)	
1,1-Dichloroethene	53	2.5	50	0	106	60	130	49.99	5.8(20)	
Dichloromethane	46.9	10	50	0	94	68	130	45.06	4.0(20)	
trans-1,2-Dichloroethene	52.4	2.5	50	0	105	63	130	50.29	4.1(20)	
Methyl tert-butyl ether (MTBE)	50.6	1.3	50	0	101	56	141	48.41	4.3(20)	
1,1-Dichloroethane	49.3	2.5	50	0.64	97	61	130	47.82	3.0(20)	
cis-1,2-Dichloroethene	52.5	2.5	50	0	105	70	130	50.37	4.1(20)	
Bromochloromethane	52.7	2.5	50	0	105	70	130	50.04	5.1(20)	
Chloroform	51	2.5	50	0.5	101	67	130	49.54	2.9(20)	
2,2-Dichloropropane	47.9	2.5	50	0	96	30	152	46.4	3.2(20)	
1,2-Dichloroethane	48.5	2.5	50	0	97	60	135	46.68	3.8(20)	
1,1,1-Trichloroethane	53.7	2.5	50	0	107	59	137	51.32	4.5(20)	
1,1-Dichloropropene	52.1	2.5	50	0	104	63	130	50.26	3.6(20)	
Carbon tetrachloride	55.2	2.5	50	0	110	50	147	52.62	4.8(20)	
Benzene	49.4	1.3	50	0	99	67	130	47.92	3.1(20)	
Dibromomethane	49.1	2.5	50	0	98	69	133	47.59	3.1(20)	
1,2-Dichloropropane	49.9	2.5	50	0	99.7	69	130	48.14	3.5(20)	
Trichloroethene	51.7	2.5	50	0	103	69	130	49.35	4.6(20)	
Bromodichloromethane	51.3	2.5	50	0	103	66	134	48.74	5.1(20)	
cis-1,3-Dichloropropene	47.1	2.5	50	0	94	63	130	45.42	3.6(20)	
trans-1,3-Dichloropropene	43.5	2.5	50	0	87	66	131	41.51	4.8(20)	
1,1,2-Trichloroethane	47.1	2.5	50	0	94	68	130	45.41	3.6(20)	
Toluene	47.2	1.3	50	0	94	66	130	45.51	3.6(20)	
1,3-Dichloropropane	47.7	2.5	50	0	95	70	130	46.17	3.3(20)	
Dibromochloromethane	46.7	2.5	50	0	93	70	130	43.93	6.1(20)	
1,2-Dibromoethane (EDB)	98.4	5	100	0	98	70	130	94.5	4.0(20)	
Tetrachloroethene	54.4	2.5	50	1.02	107	61	134	52.23	4.1(20)	
1,1,1,2-Tetrachloroethane	50.7	2.5	50	0	101	70	130	47.98	5.5(20)	
Chlorobenzene	47.8	2.5	50	0	96	70	130	46.07	3.6(20)	
Ethylbenzene	48.5	1.3	50	0	97	68	130	46.52	4.2(20)	
m,p-Xylene	49.2	1.3	50	0	98	64	130	47.59	3.4(20)	
Bromoform	42.3	2.5	50	0	85	64	138	40.11	5.2(20)	
Styrene	52.8	2.5	50	0	106	69	130	51.42	2.7(20)	
o-Xylene	50.3	1.3	50	0	101	70	130	48.2	4.2(20)	
1,1,2,2-Tetrachloroethane	43.7	2.5	50	0	87	65	131	42.46	3.0(20)	
1,2,3-Trichloropropane	91.8	10	100	0	92	70	130	87.76	4.5(20)	
Isopropylbenzene	49.6	2.5	50	0	99	64	138	48.1	3.1(20)	
Bromobenzene	47.7	2.5	50	0	95	70	130	47.16	1.2(20)	
n-Propylbenzene	48.8	2.5	50	0	98	66	132	47.47	2.8(20)	
4-Chlorotoluene	49.6	2.5	50	0	99	70	130	48.58	2.1(20)	
2-Chlorotoluene	48.1	2.5	50	0	96	70	130	47.8	0.6(20)	
1,3,5-Trimethylbenzene	48.5	2.5	50	0	97	66	136	47.36	2.5(20)	
tert-Butylbenzene	48.3	2.5	50	0	97	65	137	46.91	2.9(20)	
1,2,4-Trimethylbenzene	48.6	2.5	50	0	97	65	137	47.02	3.2(20)	
sec-Butylbenzene	49.2	2.5	50	0	98	66	134	46.83	5.0(20)	
1,3-Dichlorobenzene	48.4	2.5	50	0	97	70	130	47.38	2.1(20)	
1,4-Dichlorobenzene	45.4	2.5	50	0	91	70	130	44.24	2.7(20)	
4-Isopropyltoluene	49.5	2.5	50	0	99	66	137	47.44	4.2(20)	
1,2-Dichlorobenzene	45.8	2.5	50	0	92	70	130	43.84	4.3(20)	
n-Butylbenzene	50.2	2.5	50	0	100	60	142	48.28	3.9(20)	
1,2-Dibromo-3-chloropropane (DBCP)	211	15	250	0	84	67	130	205	2.9(20)	
1,2,4-Trichlorobenzene	51.9	10	50	0	104	61	137	48.02	7.7(20)	
Naphthalene	47.9	10	50	0	96	40	167	44.76	6.7(20)	
Hexachlorobutadiene	98.9	10	100	0	99	61	130	94.1	5.0(20)	
1,2,3-Trichlorobenzene	48.2	10	50	0	96	51	144	45.52	5.7(20)	
Surr: 1,2-Dichloroethane-d4	49		50		98	70	130			
Surr: Toluene-d8	49.1		50		98	70	130			
Surr: 4-Bromofluorobenzene	48.7		50		97	70	130			

Alpha Analytical, Inc.

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

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Date: 03-Dec-09

QC Summary Report

Work Order: 09111903

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

File ID: **09112144.D** Batch ID: **MS15W1121M** Analysis Date: **11/22/2009 01:17**

Sample ID: **09111903-09AMSD** Units : **µg/L** Run ID: **MSD_15_091121C** Prep Date: **11/22/2009 01:17**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	34.1	2.5	50	0	68	13	167	35.08	2.8(20)	
Chloromethane	39.9	10	50	0	80	28	145	36.47	8.9(20)	
Vinyl chloride	48.1	2.5	50	0	96	43	134	44.67	7.3(20)	
Chloroethane	49.5	2.5	50	0	99	39	154	43.71	12.4(20)	
Bromomethane	55.9	10	50	0	112	19	176	47.48	16.3(20)	
Trichlorofluoromethane	49	2.5	50	0	98	34	160	42.61	13.9(20)	
1,1-Dichloroethene	52.3	2.5	50	0	105	60	130	47.85	9.0(20)	
Dichloromethane	46.7	10	50	0	93	68	130	44.14	5.6(20)	
trans-1,2-Dichloroethene	52.2	2.5	50	0	104	63	130	49.3	5.8(20)	
Methyl tert-butyl ether (MTBE)	50.5	1.3	50	0	101	56	141	47.35	6.5(20)	
1,1-Dichloroethane	49.1	2.5	50	0	98	61	130	45.57	7.5(20)	
cis-1,2-Dichloroethene	52.9	2.5	50	0	106	70	130	49.5	6.7(20)	
Bromochloromethane	52.6	2.5	50	0	105	70	130	49.3	6.4(20)	
Chloroform	50.5	2.5	50	0	101	67	130	47.55	6.1(20)	
2,2-Dichloropropane	47.2	2.5	50	0	94	30	152	44.85	5.2(20)	
1,2-Dichloroethane	48.3	2.5	50	0	97	60	135	45.23	6.6(20)	
1,1,1-Trichloroethane	52.9	2.5	50	0	106	59	137	49.94	5.8(20)	
1,1-Dichloropropene	51.7	2.5	50	0	103	63	130	48.73	6.0(20)	
Carbon tetrachloride	54.8	2.5	50	0	110	50	147	51.32	6.6(20)	
Benzene	49.8	1.3	50	0	99.6	67	130	46.59	6.6(20)	
Dibromomethane	49.7	2.5	50	0	99	69	133	46.2	7.2(20)	
1,2-Dichloropropane	50.2	2.5	50	0	100	69	130	46.71	7.1(20)	
Trichloroethene	51.7	2.5	50	0	103	69	130	48.52	6.3(20)	
Bromodichloromethane	51.4	2.5	50	0	103	66	134	46.85	9.3(20)	
cis-1,3-Dichloropropene	47.5	2.5	50	0	95	63	130	44.31	7.0(20)	
trans-1,3-Dichloropropene	43.4	2.5	50	0	87	66	131	40.22	7.6(20)	
1,1,2-Trichloroethane	47.3	2.5	50	0	95	68	130	44.02	7.1(20)	
Toluene	47.9	1.3	50	0	96	66	130	44.93	6.3(20)	
1,3-Dichloropropane	49	2.5	50	0	98	70	130	45.54	7.2(20)	
Dibromochloromethane	47.7	2.5	50	0	95	70	130	44.01	8.1(20)	
1,2-Dibromoethane (EDB)	100	5	100	0	100	70	130	92.87	7.7(20)	
Tetrachloroethene	53.8	2.5	50	0	108	61	134	50.21	6.9(20)	
1,1,1,2-Tetrachloroethane	51.2	2.5	50	0	102	70	130	47.33	7.8(20)	
Chlorobenzene	48.8	2.5	50	0	98	70	130	45.67	6.7(20)	
Ethylbenzene	49	1.3	50	0	98	68	130	46	6.2(20)	
m,p-Xylene	50.8	1.3	50	0	102	64	130	47.17	7.4(20)	
Bromoform	43.4	2.5	50	0	87	64	138	39.73	8.9(20)	
Styrene	54.2	2.5	50	0	108	69	130	50.94	6.2(20)	
o-Xylene	51.1	1.3	50	0	102	70	130	47.94	6.4(20)	
1,1,2,2-Tetrachloroethane	44.5	2.5	50	0	89	65	131	41.61	6.6(20)	
1,2,3-Trichloropropane	94.1	10	100	0	94	70	130	87.2	7.6(20)	
Isopropylbenzene	49.8	2.5	50	0	99.6	64	138	47.02	5.8(20)	
Bromobenzene	48.6	2.5	50	0	97	70	130	46.88	3.5(20)	
n-Propylbenzene	49.1	2.5	50	0	98	66	132	47.25	3.8(20)	
4-Chlorotoluene	50.4	2.5	50	0	101	70	130	47.71	5.5(20)	
2-Chlorotoluene	49.2	2.5	50	0	98	70	130	47.01	4.5(20)	
1,3,5-Trimethylbenzene	49.3	2.5	50	0	99	66	136	46.94	4.9(20)	
tert-Butylbenzene	48.6	2.5	50	0	97	65	137	46.42	4.6(20)	
1,2,4-Trimethylbenzene	49.1	2.5	50	0	98	65	137	46.67	5.2(20)	
sec-Butylbenzene	48.6	2.5	50	0	97	66	134	47.14	3.1(20)	
1,3-Dichlorobenzene	49.7	2.5	50	0	99	70	130	47.09	5.5(20)	
1,4-Dichlorobenzene	46.4	2.5	50	0	93	70	130	44.15	5.0(20)	
4-Isopropyltoluene	49.7	2.5	50	0	99	66	137	47.78	4.0(20)	
1,2-Dichlorobenzene	45.7	2.5	50	0	91	70	130	43.56	4.8(20)	
n-Butylbenzene	50.7	2.5	50	0	101	60	142	48.48	4.5(20)	
1,2-Dibromo-3-chloropropane (DBCP)	212	15	250	0	85	67	130	203.2	4.1(20)	
1,2,4-Trichlorobenzene	52.6	10	50	0	105	61	137	49.76	5.5(20)	
Naphthalene	47.7	10	50	0	95	40	167	46.1	3.4(20)	
Hexachlorobutadiene	99.2	10	100	0	99	61	130	97.43	1.8(20)	
1,2,3-Trichlorobenzene	49.3	10	50	0	99	51	144	47.49	3.7(20)	
Surr: 1,2-Dichloroethane-d4	48.3		50		97	70	130			
Surr: Toluene-d8	49.2		50		98	70	130			
Surr: 4-Bromofluorobenzene	49		50		98	70	130			

Alpha Analytical, Inc.

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

Date: *03-Dec-09*

QC Summary Report

Work Order: 09111903

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.

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 : BMIS09111903

Report Due By : 5:00 PM On : 04-Dec-2009

Client:
Battelle Memorial Institute
3990 Old Town Ave
Suite C-205
San Diego, CA 92110

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 : **No**

Sampled by : GH/ DBL

PO : 218013

Client's COC # : 023591, 24124 Job : G005862/JPL Groundwater Monitoring

Cooler Temp	Samples Received	Date Printed
4 °C	19-Nov-2009	**23-Nov-2009**

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(A)_W	300_0(B)_W	300_0(C)_W	314_W	METALS_DW	VOC_TIC_W	VOC_W		Sample Remarks
BMI09111903-01A	MW-13	AQ	11/18/09 08:36	10	0	10	NO2, NO3, PO4, SO4, Cl	NO2, NO3, PO4, SO4, Cl	NO2, NO3, PO4, SO4, Cl	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria		MS/MSD
BMI09111903-02A	MW-8	AQ	11/18/09 10:45	5	0	10	NO2, NO3, PO4, SO4, Cl	NO2, NO3, PO4, SO4, Cl	NO2, NO3, PO4, SO4, Cl	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria		
BMI09111903-03A	QCEB-17 NOV	AQ	11/17/09 14:30	3	0	10						VOC by 524 Criteria	VOC by 524 Criteria		
BMI09111903-04A	MW-1	AQ	11/18/09 13:00	5	0	10				Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria		
BMI09111903-05A	MW-3-5	AQ	11/18/09 08:34	5	0	10				Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria		
BMI09111903-06A	MW-3-4	AQ	11/18/09 09:02	5	0	10				Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria		
BMI09111903-07A	MW-3-3	AQ	11/18/09 09:29	5	0	10				Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria		
BMI09111903-08A	MW-3-2	AQ	11/18/09 10:13	5	0	10				Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria		
BMI09111903-09A	MW-3-1	AQ	11/18/09 11:10	10	0	10				Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria		MS/MSD
BMI09111903-10A	DUPE-02-4Q09	AQ	11/18/09 00:00	5	0	10				Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria		

Comments: No security seals. Frozen ice. Temp Blank #8769 received @ 4°C. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). Amended 11/23/09 @ 8:09: Added COC # to workorder due to login error. EA :

	Signature	Print Name	Company	Date/Time
Logged in by:	Elizabeth Adcox	Elizabeth Adcox	**Alpha Analytical, Inc.**	11-23-09 8:15

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

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 : BMIS09111903

Report Due By : 5:00 PM On : 04-Dec-2009

Client:
Battelle Memorial Institute
3990 Old Town Ave
Suite C-205
San Diego, CA 92110

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 : **No**

Sampled by : GH/ DBL

PO : 218013

Client's COC # : 023591, 24124 Job : G005862/JPL Groundwater Monitoring

Cooler Temp	Samples Received	Date Printed
4 °C	19-Nov-2009	23-Nov-2009

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(A)_W	300_0(B)_W	300_0(C)_W	314_W	METALS_D W	VOC_TIC_ W	VOC_W		Sample Remarks
BMI09111903-11A	EB-04-11/18/09	AQ	11/18/09 10:50	5	0	10				Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria		
BMI09111903-12A	TB-04-11/18/09	AQ	11/18/09 00:00	1	0	10						VOC by 524 Criteria	VOC by 524 Criteria		Reno Trip Blank 6/22/09

Comments: No security seals. Frozen ice. Temp Blank #8769 received @ 4°C. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). Amended 11/23/09 @ 8:09: Added COC # to workorder due to login error. EA :

	Signature	Print Name	Company	Date/Time
Logged in by:	Elizabeth Adcox	Elizabeth Adcox	Alpha Analytical, Inc.	11.23.09 8:15

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 : BMIS09111903

Report Due By : 5:00 PM On : 04-Dec-2009

,

Client:
Battelle Memorial Institute
3990 Old Town Ave
Suite C-205
San Diego, CA 92110

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 : GH/ DBL

PO : 218013

Client's COC # : 023591 Job : G005862/JPL Groundwater Monitoring

Cooler Temp	Samples Received	Date Printed
4 °C	19-Nov-2009	**19-Nov-2009**

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(A)_W	300_0(B)_W	300_0(C)_W	314_W	METALS_DW	VOC_TIC_W	VOC_W		Sample Remarks
BMI09111903-01A	MW-13	AQ	11/18/09 08:36	10	0	10	NO2, NO3, PO4, SO4, Cl	NO2, NO3, PO4, SO4, Cl	NO2, NO3, PO4, SO4, Cl	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria		MS/MSD
BMI09111903-02A	MW-8	AQ	11/18/09 10:45	5	0	10	NO2, NO3, PO4, SO4, Cl	NO2, NO3, PO4, SO4, Cl	NO2, NO3, PO4, SO4, Cl	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria		
BMI09111903-03A	QCEB-17 NOV	AQ	11/17/09 14:30	3	0	10						VOC by 524 Criteria	VOC by 524 Criteria		
BMI09111903-04A	MW-1	AQ	11/18/09 13:00	5	0	10				Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria		
BMI09111903-05A	MW-3-5	AQ	11/18/09 08:34	5	0	10				Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria		
BMI09111903-06A	MW-3-4	AQ	11/18/09 09:02	5	0	10				Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria		
BMI09111903-07A	MW-3-3	AQ	11/18/09 09:29	5	0	10				Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria		
BMI09111903-08A	MW-3-2	AQ	11/18/09 10:13	5	0	10				Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria		
BMI09111903-09A	MW-3-1	AQ	11/18/09 11:10	10	0	10				Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria		MS/MSD
BMI09111903-10A	DUPE-02-4Q09	AQ	11/18/09 00:00	5	0	10				Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria		

Comments: No security seals. Frozen ice. Temp Blank #8769 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.**	11.19.09 9:51

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 : BMIS09111903

Report Due By : 5:00 PM On : 04-Dec-2009

Client:
Battelle Memorial Institute
3990 Old Town Ave
Suite C-205
San Diego, CA 92110

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 : GH/ DBL

PO : 218013

Client's COC # : 023591 Job : G005862/JPL Groundwater Monitoring

Cooler Temp	Samples Received	Date Printed
4 °C	19-Nov-2009	19-Nov-2009

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(A)_W	300_0(B)_W	300_0(C)_W	314_W	METALS_DW	VOC_TIC_W	VOC_W		Sample Remarks
BMI09111903-11A	EB-04-11/18/09	AQ	11/18/09 10:50	5	0	10				Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria		
BMI09111903-12A	TB-04-11/18/09	AQ	11/18/09 00:00	1	0	10						VOC by 524 Criteria	VOC by 524 Criteria		Reno Trip Blank 6/22/09

Comments: No security seals. Frozen ice. Temp Blank #8769 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.**	11-19-09 9:57

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
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 ___

023591

Page # 1 of 1

Client Name BATTELLE	P.O. # 218013	Job # JPL-GW-4Q09
Address 505 KING AVE	EMail Address connerd@battelle.org	
City, State, Zip Columbus, OH, 43201	Phone # ~~818 343 6418 2808~~	Fax # 614 458-6641

Time Sampled	Date Sampled	Matrix* See Key Below	Sampled by GH/DBL Lab ID Number (Office Use Only)	Report Attention DAVID CONNER 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, PO4-3 (300.0)	REMARKS
0836	18NOV	AQ	BMT0911103:01	MW-13-MS/MSD			5	X	X	X	X	
0836	18NOV	AQ	~~02~~ 01 dup	MW-13			5	X	X	X	X	
1045	18NOV	AQ	02 ~~03~~	MW-8			5	X	V	X	X	
1430	17NOV	AQ	03 ~~04~~	QCEB-17NOV			3V	X				
1300	18NOV	AQ	04 ~~05~~	MW-1			5	X	X	X		

Required QC Level? I II III IV

EDD / EDF? YES X NO ___

Global ID # ___

ADDITIONAL INSTRUCTIONS: D. Conner PHONE # 619-726-7311

	Signature	Print Name	Company	Date	Time
Relinquished by	Greg Headington	GREG HEADINGTON	BATTELLE	18NOV09	1422
Received by		MARCO MENDOZA	INSIGHT	11/18/09	1430
Relinquished by		MARCO MENDOZA	INSIGHT	11/18/09	1500
Received by	Elizabeth Adcox	Elizabeth Adcox	Alpha	11-19-09	9:51
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.

24124

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
Address: 5990 OLD TOWN AVE. C-205
City, State, Zip: SAN DIEGO CA 92110
P.O. # 218013
Job # G005862
EMail Address:
Phone # (619) 726-7311
Fax #
Report Attention:
Sampled by:

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's (524.2)	TOTAL Cr (200.8)	ClO4- (314.0)	Cl-, SO4-, NO3-, NO2-, PO4-3 (300.0)				REMARKS
0834	11/18/09	AQ	.05	MW-3-5	NORM		V/P 5	X	X	X					
0902	↓	↓	.06	MW-3-4	↓		↓	X	X	X					
0929	↓	↓	.07	MW-3-3	↓		↓	X	X	X					
1013	↓	↓	.08	MW-3-2	↓		V/P 5	X	X	X					
1110	↓	↓	.09	MW-3-1	↓		V/P 10	X	X	X					MS/MSD
—	11/18/09	AQ	.10	DUPE-02-4Q09	↓		V/P 5	X	X	X					DUPLICATE
1050	11/18/09	AQ	.11	EB-04-11/18/09	↓		V/P 5	X	X	X					EQUIPMENT BLANK
—	11/18/09	AQ	.12	TB-04-11/18/09	↓		V 1								TRIP BLANK

ADDITIONAL INSTRUCTIONS:

	Signature	Print Name	Company	Date	Time
Relinquished by	[signature]	MARCO MENDOZA	INSIGHT	11/18/09	1500
Received by	Elizabeth Adcox	Elizabeth Adcox	Alpha	11-19-09	9:51
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: *04-Dec-09*

David Conner
Battelle Memorial Institute
3990 Old Town Ave Suite C-205
San Diego, CA 92110
(818) 393-2808

CASE NARRATIVE

Job: G005862/JPL Groundwater Monitoring
Work Order: BMI09112008 **Cooler Temp:** 4 °C

Alpha's Sample ID	Client's Sample ID	Matrix
09112008-01A	QCEB-18 NOV	Aqueous
09112008-02A	MW-16	Aqueous
09112008-03A	MW-7	Aqueous
09112008-04A	MW-9	Aqueous
09112008-05A	DUPE-8-4Q09	Aqueous
09112008-06A	MW-17-5	Aqueous
09112008-07A	MW-17-4	Aqueous
09112008-08A	MW-17-3	Aqueous
09112008-09A	MW-17-2	Aqueous
09112008-10A	MW-17-1	Aqueous
09112008-11A	DUPE-03-4Q09	Aqueous
09112008-12A	EB-05-11/19/09	Aqueous
09112008-13A	TB-05-11/19/09	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
3990 Old Town Ave
San Diego, CA 92110

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 11/20/09

Job: G005862/JPL Groundwater Monitoring

Anions by IC
EPA Method 300.0

	Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-16**					
Lab ID : BMI09112008-02A	Chloride	65	1.3 mg/L	11/20/09 11:34	11/20/09 17:23
Date Sampled 11/19/09 08:30	Nitrite (NO2) - N	ND	0.25 mg/L	11/20/09 11:34	11/20/09 17:05
	Nitrate (NO3) - N	1.3	0.25 mg/L	11/20/09 11:34	11/20/09 17:05
	Sulfate (SO4)	47	0.50 mg/L	11/20/09 11:34	11/20/09 17:05
	Phosphate, ortho - P	ND	0.25 mg/L	11/20/09 11:34	11/20/09 17:05
Client ID: **MW-7**					
Lab ID : BMI09112008-03A	Chloride	66	1.3 mg/L	11/20/09 11:34	11/20/09 18:37
Date Sampled 11/19/09 10:50	Nitrite (NO2) - N	ND	0.25 mg/L	11/20/09 11:34	11/20/09 18:19
	Nitrate (NO3) - N	1.3	0.25 mg/L	11/20/09 11:34	11/20/09 18:19
	Sulfate (SO4)	46	0.50 mg/L	11/20/09 11:34	11/20/09 18:19
	Phosphate, ortho - P	ND	0.25 mg/L	11/20/09 11:34	11/20/09 18:19

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 / 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.

12/4/09
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
3990 Old Town Ave
San Diego, CA 92110

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 11/20/09

Job: G005862/JPL Groundwater Monitoring

Perchlorate by Ion Chromatography
EPA Method 314.0

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-16**				
Lab ID : BMI09112008-02A Perchlorate	ND	1.00 µg/L	11/23/09 13:44	11/24/09 13:46
Date Sampled 11/19/09 08:30				
Client ID: **MW-7**				
Lab ID : BMI09112008-03A Perchlorate	ND	1.00 µg/L	11/23/09 13:44	11/24/09 14:04
Date Sampled 11/19/09 10:50				
Client ID: **MW-9**				
Lab ID : BMI09112008-04A Perchlorate	ND	1.00 µg/L	11/23/09 13:44	11/24/09 14:23
Date Sampled 11/19/09 13:55				
Client ID: **DUPE-8-4Q09**				
Lab ID : BMI09112008-05A Perchlorate	ND	1.00 µg/L	11/23/09 13:44	11/24/09 14:41
Date Sampled 11/19/09 13:55				
Client ID: **MW-17-5**				
Lab ID : BMI09112008-06A Perchlorate	ND	1.00 µg/L	11/23/09 13:44	11/24/09 15:36
Date Sampled 11/19/09 08:20				
Client ID: **MW-17-4**				
Lab ID : BMI09112008-07A Perchlorate	ND	1.00 µg/L	11/23/09 13:44	11/24/09 15:55
Date Sampled 11/19/09 08:52				
Client ID: **MW-17-3**				
Lab ID : BMI09112008-08A Perchlorate	10.2	1.00 µg/L	11/23/09 13:44	11/24/09 16:13
Date Sampled 11/19/09 09:19				
Client ID: **MW-17-2**				
Lab ID : BMI09112008-09A Perchlorate	4.32	1.00 µg/L	11/23/09 13:44	11/24/09 16:32
Date Sampled 11/19/09 09:47				
Client ID: **MW-17-1**				
Lab ID : BMI09112008-10A Perchlorate	ND	1.00 µg/L	11/23/09 13:44	11/24/09 16:50
Date Sampled 11/19/09 10:21				
Client ID: **DUPE-03-4Q09**				
Lab ID : BMI09112008-11A Perchlorate	ND	1.00 µg/L	11/23/09 13:44	11/24/09 17:45
Date Sampled 11/19/09 00:00				
Client ID: **EB-05-11/19/09**				
Lab ID : BMI09112008-12A Perchlorate	ND	1.00 µg/L	11/23/09 13:44	11/25/09 18:43
Date Sampled 11/19/09 10:09				

Alpha Analytical, Inc.

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

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

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 / 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.

12/4/09

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
3990 Old Town Ave
San Diego, CA 92110

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 11/20/09

Job: G005862/JPL Groundwater Monitoring

Metals by ICPMS
EPA Method 200.8

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-16**				
Lab ID : BMI09112008-02A Chromium (Cr)	ND	0.0050 mg/L	11/20/09 14:14	11/20/09 20:37
Date Sampled 11/19/09 08:30				
Client ID: **MW-7**				
Lab ID : BMI09112008-03A Chromium (Cr)	ND	0.0050 mg/L	11/20/09 14:14	11/20/09 20:43
Date Sampled 11/19/09 10:50				
Client ID: **MW-9**				
Lab ID : BMI09112008-04A Chromium (Cr)	0.013	0.0050 mg/L	11/20/09 14:14	11/20/09 20:48
Date Sampled 11/19/09 13:55				
Client ID: **DUPE-8-4Q09**				
Lab ID : BMI09112008-05A Chromium (Cr)	0.0078	0.0050 mg/L	11/20/09 14:14	11/20/09 20:54
Date Sampled 11/19/09 13:55				
Client ID: **MW-17-5**				
Lab ID : BMI09112008-06A Chromium (Cr)	ND	0.0050 mg/L	11/20/09 14:14	11/20/09 21:00
Date Sampled 11/19/09 08:20				
Client ID: **MW-17-4**				
Lab ID : BMI09112008-07A Chromium (Cr)	ND	0.0050 mg/L	11/20/09 14:14	11/20/09 21:05
Date Sampled 11/19/09 08:52				
Client ID: **MW-17-3**				
Lab ID : BMI09112008-08A Chromium (Cr)	ND	0.0050 mg/L	11/20/09 14:14	11/20/09 21:11
Date Sampled 11/19/09 09:19				
Client ID: **MW-17-2**				
Lab ID : BMI09112008-09A Chromium (Cr)	ND	0.0050 mg/L	11/20/09 14:14	11/20/09 21:16
Date Sampled 11/19/09 09:47				
Client ID: **MW-17-1**				
Lab ID : BMI09112008-10A Chromium (Cr)	ND	0.0050 mg/L	11/20/09 14:14	11/20/09 20:20
Date Sampled 11/19/09 10:21				
Client ID: **DUPE-03-4Q09**				
Lab ID : BMI09112008-11A Chromium (Cr)	ND	0.0050 mg/L	11/20/09 14:14	11/20/09 21:44
Date Sampled 11/19/09 00:00				
Client ID: **EB-05-11/19/09**				
Lab ID : BMI09112008-12A Chromium (Cr)	ND	0.0050 mg/L	11/20/09 14:14	11/20/09 21:50
Date Sampled 11/19/09 10:09				

Alpha Analytical, Inc.

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

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

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 / 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.

12/4/09

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
3990 Old Town Ave
San Diego, CA 92110
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 : **QCEB-18 NOV**					
Lab ID : BMI09112008-01A	*** None Found ***	ND	2.0 µg/L	11/23/09 14:03	11/23/09 14:03
Date Received : 11/20/09					
Date Sampled : 11/18/09 15:30					
Client ID : **MW-16**					
Lab ID : BMI09112008-02A	*** None Found ***	ND	2.0 µg/L	11/23/09 14:25	11/23/09 14:25
Date Received : 11/20/09					
Date Sampled : 11/19/09 08:30					
Client ID : **MW-7**					
Lab ID : BMI09112008-03A	*** None Found ***	ND	2.0 µg/L	11/23/09 14:48	11/23/09 14:48
Date Received : 11/20/09					
Date Sampled : 11/19/09 10:50					
Client ID : **MW-9**					
Lab ID : BMI09112008-04A	*** None Found ***	ND	2.0 µg/L	11/23/09 15:11	11/23/09 15:11
Date Received : 11/20/09					
Date Sampled : 11/19/09 13:55					
Client ID : **DUPE-8-4Q09**					
Lab ID : BMI09112008-05A	*** None Found ***	ND	2.0 µg/L	11/23/09 15:32	11/23/09 15:32
Date Received : 11/20/09					
Date Sampled : 11/19/09 13:55					
Client ID : **MW-17-5**					
Lab ID : BMI09112008-06A	*** None Found ***	ND	2.0 µg/L	11/23/09 15:54	11/23/09 15:54
Date Received : 11/20/09					
Date Sampled : 11/19/09 08:20					
Client ID : **MW-17-4**					
Lab ID : BMI09112008-07A	*** None Found ***	ND	2.0 µg/L	11/23/09 16:17	11/23/09 16:17
Date Received : 11/20/09					
Date Sampled : 11/19/09 08:52					
Client ID : **MW-17-3**					
Lab ID : BMI09112008-08A	*** None Found ***	ND	2.0 µg/L	11/23/09 16:39	11/23/09 16:39
Date Received : 11/20/09					
Date Sampled : 11/19/09 09:19					
Client ID : **MW-17-2**					
Lab ID : BMI09112008-09A	*** None Found ***	ND	2.0 µg/L	11/23/09 17:01	11/23/09 17:01
Date Received : 11/20/09					
Date Sampled : 11/19/09 09:47					

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Client ID : **MW-17-1**						
Lab ID : BMI09112008-10A	Sulfur dioxide	10	2.0 µg/L	11/23/09 17:23	11/23/09 17:23
Date Received : 11/20/09						
Date Sampled : 11/19/09 10:21						
Client ID : **DUPE-03-4Q09**						
Lab ID : BMI09112008-11A	Sulfur dioxide	9.6	2.0 µg/L	11/23/09 17:45	11/23/09 17:45
Date Received : 11/20/09						
Date Sampled : 11/19/09 00:00						
Client ID : **EB-05-11/19/09**						
Lab ID : BMI09112008-12A	* * * None Found * * *	ND	2.0 µg/L	11/23/09 13:41	11/23/09 13:41
Date Received : 11/20/09						
Date Sampled : 11/19/09 10:09						
Client ID : **TB-05-11/19/09**						
Lab ID : BMI09112008-13A	* * * None Found * * *	ND	2.0 µg/L	11/23/09 13:18	11/23/09 13:18
Date Received : 11/20/09						
Date Sampled : 11/19/09 00:00						

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 / info@alpha-analytical.com

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12/4/09

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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09112008-01A
Client I.D. Number: QCEB-18 NOV

Sampled: 11/18/09 15:30
Received: 11/20/09
Extracted: 11/23/09 14:03
Analyzed: 11/23/09 14:03

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit	
1	Dichlorodifluoromethane	ND		0.50	µg/L
2	Chloromethane	ND	Q	2.0	µg/L
3	Vinyl chloride	ND		0.50	µg/L
4	Chloroethane	ND		0.50	µg/L
5	Bromomethane	ND		2.0	µg/L
6	Trichlorofluoromethane	ND		0.50	µg/L
7	1,1-Dichloroethene	ND		0.50	µg/L
8	Dichloromethane	ND		2.0	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	0.79		0.50	µg/L
40	Bromoform	ND		0.50	µg/L
41	Styrene	0.92		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		2.0	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		3.0	µg/L
60	1,2,4-Trichlorobenzene	ND		2.0	µg/L
61	Naphthalene	ND		2.0	µg/L
62	Hexachlorobutadiene	ND		2.0	µg/L
63	1,2,3-Trichlorobenzene	ND		2.0	µg/L
64	Surr: 1,2-Dichloroethane-d4	96		(70-130)	%REC
65	Surr: Toluene-d8	105		(70-130)	%REC
66	Surr: 4-Bromofluorobenzene	92		(70-130)	%REC

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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12/4/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09112008-02A
Client I.D. Number: MW-16

Sampled: 11/19/09 08:30
Received: 11/20/09
Extracted: 11/23/09 14:25
Analyzed: 11/23/09 14:25

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		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	97	(70-130)	%REC
30	1,1,2-Trichloroethane	ND		0.50	µg/L	65	Surr: Toluene-d8	103	(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	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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12/4/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09112008-03A
Client I.D. Number: MW-7

Sampled: 11/19/09 10:50
Received: 11/20/09
Extracted: 11/23/09 14:48
Analyzed: 11/23/09 14:48

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		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	97	(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	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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ANALYTICAL REPORT

Battelle Memorial Institute
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09112008-04A
Client I.D. Number: MW-9

Sampled: 11/19/09 13:55
Received: 11/20/09
Extracted: 11/23/09 15:11
Analyzed: 11/23/09 15:11

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit	
1	Dichlorodifluoromethane	ND		0.50	µg/L
2	Chloromethane	ND	Q	2.0	µg/L
3	Vinyl chloride	ND		0.50	µg/L
4	Chloroethane	ND		0.50	µg/L
5	Bromomethane	ND		2.0	µg/L
6	Trichlorofluoromethane	ND		0.50	µg/L
7	1,1-Dichloroethene	ND		0.50	µg/L
8	Dichloromethane	ND		2.0	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		2.0	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		3.0	µg/L
60	1,2,4-Trichlorobenzene	ND		2.0	µg/L
61	Naphthalene	ND		2.0	µg/L
62	Hexachlorobutadiene	ND		2.0	µg/L
63	1,2,3-Trichlorobenzene	ND		2.0	µg/L
64	Surr: 1,2-Dichloroethane-d4	98		(70-130)	%REC
65	Surr: Toluene-d8	104		(70-130)	%REC
66	Surr: 4-Bromofluorobenzene	92		(70-130)	%REC

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.

12/4/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09112008-05A
Client I.D. Number: DUPE-8-4Q09

Sampled: 11/19/09 13:55
Received: 11/20/09
Extracted: 11/23/09 15:32
Analyzed: 11/23/09 15:32

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		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	96	(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	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

Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / 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.

12/4/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09112008-06A
Client I.D. Number: MW-17-5

Sampled: 11/19/09 08:20
Received: 11/20/09
Extracted: 11/23/09 15:54
Analyzed: 11/23/09 15:54

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		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	98	(70-130)	%REC
30	1,1,2-Trichloroethane	ND		0.50	µg/L	65	Surr: Toluene-d8	106	(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	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
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Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

12/4/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09112008-07A
Client I.D. Number: MW-17-4

Sampled: 11/19/09 08:52
Received: 11/20/09
Extracted: 11/23/09 16:17
Analyzed: 11/23/09 16:17

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit	
1	Dichlorodifluoromethane	ND		0.50	µg/L
2	Chloromethane	ND	Q	2.0	µg/L
3	Vinyl chloride	ND		0.50	µg/L
4	Chloroethane	ND		0.50	µg/L
5	Bromomethane	ND		2.0	µg/L
6	Trichlorofluoromethane	ND		0.50	µg/L
7	1,1-Dichloroethene	ND		0.50	µg/L
8	Dichloromethane	ND		2.0	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	0.87		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		2.0	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		3.0	µg/L
60	1,2,4-Trichlorobenzene	ND		2.0	µg/L
61	Naphthalene	ND		2.0	µg/L
62	Hexachlorobutadiene	ND		2.0	µg/L
63	1,2,3-Trichlorobenzene	ND		2.0	µg/L
64	Surr: 1,2-Dichloroethane-d4	99		(70-130)	%REC
65	Surr: Toluene-d8	105		(70-130)	%REC
66	Surr: 4-Bromofluorobenzene	94		(70-130)	%REC

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.

12/4/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09112008-08A
Client I.D. Number: MW-17-3

Sampled: 11/19/09 09:19
Received: 11/20/09
Extracted: 11/23/09 16:39
Analyzed: 11/23/09 16:39

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		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	97	(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	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
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / 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.

12/4/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09112008-09A
Client I.D. Number: MW-17-2

Sampled: 11/19/09 09:47
Received: 11/20/09
Extracted: 11/23/09 17:01
Analyzed: 11/23/09 17:01

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		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	0.98		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	98	(70-130)	%REC
30	1,1,2-Trichloroethane	ND		0.50	µg/L	65	Surr: Toluene-d8	106	(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	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					

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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12/4/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09112008-10A
Client I.D. Number: MW-17-1

Sampled: 11/19/09 10:21
Received: 11/20/09
Extracted: 11/23/09 17:23
Analyzed: 11/23/09 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		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	98	(70-130)	%REC
30	1,1,2-Trichloroethane	ND		0.50	µg/L	65	Surr: Toluene-d8	106	(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	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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12/4/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09112008-11A
Client I.D. Number: DUPE-03-4Q09

Sampled: 11/19/09 00:00
Received: 11/20/09
Extracted: 11/23/09 17:45
Analyzed: 11/23/09 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		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	98	(70-130)	%REC
30	1,1,2-Trichloroethane	ND		0.50	µg/L	65	Surr: Toluene-d8	107	(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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12/4/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09112008-12A
Client I.D. Number: EB-05-11/19/09

Sampled: 11/19/09 10:09
Received: 11/20/09
Extracted: 11/23/09 13:41
Analyzed: 11/23/09 13:41

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit	
1	Dichlorodifluoromethane	ND		0.50	µg/L
2	Chloromethane	ND	Q	2.0	µg/L
3	Vinyl chloride	ND		0.50	µg/L
4	Chloroethane	ND		0.50	µg/L
5	Bromomethane	ND		2.0	µg/L
6	Trichlorofluoromethane	ND		0.50	µg/L
7	1,1-Dichloroethene	ND		0.50	µg/L
8	Dichloromethane	ND		2.0	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		2.0	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		3.0	µg/L
60	1,2,4-Trichlorobenzene	ND		2.0	µg/L
61	Naphthalene	ND		2.0	µg/L
62	Hexachlorobutadiene	ND		2.0	µg/L
63	1,2,3-Trichlorobenzene	ND		2.0	µg/L
64	Surr: 1,2-Dichloroethane-d4	97		(70-130)	%REC
65	Surr: Toluene-d8	103		(70-130)	%REC
66	Surr: 4-Bromofluorobenzene	92		(70-130)	%REC

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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12/4/09
Report Date

Alpha Analytical, Inc.

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ANALYTICAL REPORT

Battelle Memorial Institute
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09112008-13A
Client I.D. Number: TB-05-11/19/09

Sampled: 11/19/09 00:00
Received: 11/20/09
Extracted: 11/23/09 13:18
Analyzed: 11/23/09 13:18

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		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	97	(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	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

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.

12/4/09
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: BMI09112008 **Job:** G005862/JPL Groundwater Monitoring

Alpha's Sample ID	Client's Sample ID	Matrix	pH
09112008-01A	QCEB-18 NOV	Aqueous	2
09112008-02A	MW-16	Aqueous	2
09112008-03A	MW-7	Aqueous	2
09112008-04A	MW-9	Aqueous	2
09112008-05A	DUPE-8-4Q09	Aqueous	2
09112008-06A	MW-17-5	Aqueous	2
09112008-07A	MW-17-4	Aqueous	2
09112008-08A	MW-17-3	Aqueous	2
09112008-09A	MW-17-2	Aqueous	2
09112008-10A	MW-17-1	Aqueous	2
09112008-11A	DUPE-03-4Q09	Aqueous	2
09112008-12A	EB-05-11/19/09	Aqueous	2
09112008-13A	TB-05-11/19/09	Aqueous	2

12/4/09

Report Date

Alpha Analytical, Inc.

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Date: *04-Dec-09*

QC Summary Report

Work Order: 09112008

Method Blank

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

File ID: **16** Batch ID: **23124A** Analysis Date: **11/20/2009 12:09**

Sample ID: **MB-23124** Units : **mg/L** Run ID: **IC_1_091120A** Prep Date: **11/20/2009 11:34**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Nitrite (NO2) - N	ND	0.25								
Nitrate (NO3) - N	ND	0.25								
Phosphate, ortho - P	ND	0.25								

Laboratory Fortified Blank

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

File ID: **17** Batch ID: **23124A** Analysis Date: **11/20/2009 12:27**

Sample ID: **LFB-23124** Units : **mg/L** Run ID: **IC_1_091120A** Prep Date: **11/20/2009 11:34**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Nitrite (NO2) - N	1.19	0.25	1.25		95	90	110			
Nitrate (NO3) - N	1.24	0.25	1.25		99	90	110			
Phosphate, ortho - P	1.32	0.25	1.25		106	90	110			

Sample Matrix Spike

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

File ID: **34** Batch ID: **23124A** Analysis Date: **11/20/2009 17:42**

Sample ID: **09112008-02ALFM** Units : **mg/L** Run ID: **IC_1_091120A** Prep Date: **11/20/2009 11:34**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Nitrite (NO2) - N	11.4	0.25	12.5	0	91	80	120			
Nitrate (NO3) - N	13.8	0.25	12.5	1.317	99.6	80	120			
Phosphate, ortho - P	13.8	0.25	12.5	0	110	80	120			

Sample Matrix Spike Duplicate

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

File ID: **35** Batch ID: **23124A** Analysis Date: **11/20/2009 18:00**

Sample ID: **09112008-02ALFMD** Units : **mg/L** Run ID: **IC_1_091120A** Prep Date: **11/20/2009 11:34**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Nitrite (NO2) - N	11.7	0.25	12.5	0	94	80	120	11.37	3.0(10)	
Nitrate (NO3) - N	13.7	0.25	12.5	1.317	99	80	120	13.77	0.6(10)	
Phosphate, ortho - P	12.8	0.25	12.5	0	102	80	120	13.76	7.4(10)	

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-Dec-09*

QC Summary Report

Work Order: 09112008

Method Blank

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

File ID: **16** Batch ID: **23124B** Analysis Date: **11/20/2009 12:09**

Sample ID: **MB-23124** Units : **mg/L** Run ID: **IC_1_091120A** Prep Date: **11/20/2009 11:34**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sulfate (SO4)	ND	0.5								

Laboratory Fortified Blank

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

File ID: **17** Batch ID: **23124B** Analysis Date: **11/20/2009 12:27**

Sample ID: **LFB-23124** Units : **mg/L** Run ID: **IC_1_091120A** Prep Date: **11/20/2009 11:34**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sulfate (SO4)	9.39	0.5	10		94	90	110			

Sample Matrix Spike

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

File ID: **34** Batch ID: **23124B** Analysis Date: **11/20/2009 17:42**

Sample ID: **09112008-02ALFM** Units : **mg/L** Run ID: **IC_1_091120A** Prep Date: **11/20/2009 11:34**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sulfate (SO4)	141	0.5	100	46.72	94	80	120			

Sample Matrix Spike Duplicate

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

File ID: **35** Batch ID: **23124B** Analysis Date: **11/20/2009 18:00**

Sample ID: **09112008-02ALFMD** Units : **mg/L** Run ID: **IC_1_091120A** Prep Date: **11/20/2009 11:34**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sulfate (SO4)	139	0.5	100	46.72	92	80	120	140.8	1.3(10)	

Comments:

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Date: *04-Dec-09*

QC Summary Report

Work Order: 09112008

Method Blank

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

File ID: **16** Batch ID: **23124C** Analysis Date: **11/20/2009 12:09**

Sample ID: **MB-23124** Units : **mg/L** Run ID: **IC_1_091120B** Prep Date: **11/20/2009 11:34**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	ND	0.5								

Laboratory Fortified Blank

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

File ID: **17** Batch ID: **23124C** Analysis Date: **11/20/2009 12:27**

Sample ID: **LFB-23124** Units : **mg/L** Run ID: **IC_1_091120B** Prep Date: **11/20/2009 11:34**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	4.71	0.5	5		94	90	110			

Sample Matrix Spike

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

File ID: **34** Batch ID: **23124C** Analysis Date: **11/20/2009 17:42**

Sample ID: **09112008-02ALFM** Units : **mg/L** Run ID: **IC_1_091120B** Prep Date: **11/20/2009 11:34**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	115	0.5	50	65.3	99.9	80	120			

Sample Matrix Spike Duplicate

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

File ID: **35** Batch ID: **23124C** Analysis Date: **11/20/2009 18:00**

Sample ID: **09112008-02ALFMD** Units : **mg/L** Run ID: **IC_1_091120B** Prep Date: **11/20/2009 11:34**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	116	0.5	50	65.3	100	80	120	115.2	0.3(10)	

Comments:

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Date: *04-Dec-09*

QC Summary Report

Work Order: 09112008

Method Blank

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

File ID: **15** Batch ID: **23136** Analysis Date: **11/23/2009 14:24**

Sample ID: **MB-23136** Units : **µg/L** Run ID: **IC_3_091123B** Prep Date: **11/23/2009 13:44**

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: **17** Batch ID: **23136** Analysis Date: **11/23/2009 15:01**

Sample ID: **LFB-23136** Units : **µg/L** Run ID: **IC_3_091123B** Prep Date: **11/23/2009 13:44**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	26.2	2	25		105	85	115			

Sample Matrix Spike

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

File ID: **33** Batch ID: **23136** Analysis Date: **11/24/2009 17:08**

Sample ID: **09112008-10ALFM** Units : **µg/L** Run ID: **IC_3_091123B** Prep Date: **11/23/2009 13:44**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	23.3	2	25	0	93	80	120			

Sample Matrix Spike Duplicate

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

File ID: **34** Batch ID: **23136** Analysis Date: **11/24/2009 17:27**

Sample ID: **09112008-10ALFMD** Units : **µg/L** Run ID: **IC_3_091123B** Prep Date: **11/23/2009 13:44**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	23.6	2	25	0	94	80	120	23.29	1.2(15)	

Comments:

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Date: *04-Dec-09*

QC Summary Report

Work Order: 09112008

Method Blank

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

File ID: **112009.B\066SMPL.D** Batch ID: **23127K** Analysis Date: **11/20/2009 19:52**

Sample ID: **MB-23127** Units : **mg/L** Run ID: **ICP/MS_091120B** Prep Date: **11/20/2009 14:14**

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: **112009.B\067_LCS.D** Batch ID: **23127K** Analysis Date: **11/20/2009 19:58**

Sample ID: **LCS-23127** Units : **mg/L** Run ID: **ICP/MS_091120B** Prep Date: **11/20/2009 14:14**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0444	0.005	0.05		89	80	120			

Sample Matrix Spike

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

File ID: **112009.B\072SMPL.D** Batch ID: **23127K** Analysis Date: **11/20/2009 20:26**

Sample ID: **09112008-10AMS** Units : **mg/L** Run ID: **ICP/MS_091120B** Prep Date: **11/20/2009 14:14**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0409	0.005	0.05	0	82	80	120			

Sample Matrix Spike Duplicate

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

File ID: **112009.B\073SMPL.D** Batch ID: **23127K** Analysis Date: **11/20/2009 20:32**

Sample ID: **09112008-10AMSD** Units : **mg/L** Run ID: **ICP/MS_091120B** Prep Date: **11/20/2009 14:14**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0446	0.005	0.05	0	89	80	120	0.04085	8.8(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: *04-Dec-09*

QC Summary Report

Work Order: 09112008

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

File ID: **09112309.D** Batch ID: **MS15W1123M** Analysis Date: **11/23/2009 10:43**

Sample ID: **MBLK MS15W1123M** Units : **µg/L** Run ID: **MSD_15_091123D** Prep Date: **11/23/2009 10:43**

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	9.81		10		98	70	130			
Surr: Toluene-d8	10.4		10		104	70	130			

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Date: 04-Dec-09

QC Summary Report

Work Order: 09112008

Surr: 4-Bromofluorobenzene	9.16		10	92	70	130			

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

File ID: **09112305.D** Batch ID: **MS15W1123M** Analysis Date: **11/23/2009 09:14**

Sample ID: **LCS MS15W1123M** Units : **µg/L** Run ID: **MSD_15_091123D** Prep Date: **11/23/2009 09:14**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	7.49	1	10		75	70	130			
Chloromethane	6.61	2	10		66	70(70)	130			L50
Vinyl chloride	9.24	1	10		92	70	130			
Chloroethane	10.2	1	10		102	70	130			
Bromomethane	9.58	2	10		96	70	130			
Trichlorofluoromethane	10.8	1	10		108	70	130			
1,1-Dichloroethene	10.6	1	10		106	70	130			
Dichloromethane	9.55	2	10		96	70	130			
trans-1,2-Dichloroethene	10.8	1	10		108	70	130			
Methyl tert-butyl ether (MTBE)	10.6	0.5	10		106	70	130			
1,1-Dichloroethane	10.2	1	10		102	70	130			
cis-1,2-Dichloroethene	11	1	10		110	70	130			
Bromochloromethane	10.5	1	10		105	70	130			
Chloroform	10.6	1	10		106	70	130			
2,2-Dichloropropane	12.1	1	10		121	70	130			
1,2-Dichloroethane	10.1	1	10		101	70	130			
1,1,1-Trichloroethane	11.4	1	10		114	70	130			
1,1-Dichloropropene	11	1	10		110	70	130			
Carbon tetrachloride	11.5	1	10		115	70	130			
Benzene	10.4	0.5	10		104	70	130			
Dibromomethane	10.1	1	10		101	70	130			
1,2-Dichloropropane	10.3	1	10		103	70	130			
Trichloroethene	10.9	1	10		109	70	130			
Bromodichloromethane	10.7	1	10		107	70	130			
cis-1,3-Dichloropropene	10.5	1	10		105	70	130			
trans-1,3-Dichloropropene	9.33	1	10		93	70	130			
1,1,2-Trichloroethane	9.71	1	10		97	70	130			
Toluene	10.3	0.5	10		103	70	130			
1,3-Dichloropropane	10.3	1	10		103	70	130			
Dibromochloromethane	10.1	1	10		101	70	130			
1,2-Dibromoethane (EDB)	21.1	2	20		106	70	130			
Tetrachloroethene	11.5	1	10		115	70	130			
1,1,1,2-Tetrachloroethane	10.9	1	10		109	70	130			
Chlorobenzene	10.2	1	10		102	70	130			
Ethylbenzene	10.4	0.5	10		104	70	130			
m,p-Xylene	10.7	0.5	10		107	70	130			
Bromoform	9.4	1	10		94	70	130			
Styrene	11.3	1	10		113	70	130			
o-Xylene	10.7	0.5	10		107	70	130			
1,1,2,2-Tetrachloroethane	9.65	1	10		97	70	130			
1,2,3-Trichloropropane	20.2	2	20		101	70	130			
Isopropylbenzene	9.94	1	10		99	70	130			
Bromobenzene	9.81	1	10		98	70	130			
n-Propylbenzene	10	1	10		100	70	130			
4-Chlorotoluene	10.3	1	10		103	70	130			
2-Chlorotoluene	10	1	10		100	70	130			
1,3,5-Trimethylbenzene	10	1	10		100	70	130			
tert-Butylbenzene	9.8	1	10		98	70	130			
1,2,4-Trimethylbenzene	10	1	10		100	70	130			
sec-Butylbenzene	10	1	10		100	70	130			
1,3-Dichlorobenzene	10.2	1	10		102	70	130			
1,4-Dichlorobenzene	9.58	1	10		96	70	130			
4-Isopropyltoluene	10.2	1	10		102	70	130			
1,2-Dichlorobenzene	9.55	1	10		96	70	130			
n-Butylbenzene	10.6	1	10		106	70	130			
1,2-Dibromo-3-chloropropane (DBCP)	46.5	3	50		93	70	130			
1,2,4-Trichlorobenzene	10.8	2	10		108	70	130			
Naphthalene	10.2	2	10		102	70	130			
Hexachlorobutadiene	20.7	2	20		103	70	130			
1,2,3-Trichlorobenzene	10.3	2	10		103	70	130			
Surr: 1,2-Dichloroethane-d4	9.59		10		96	70	130			
Surr: Toluene-d8	10		10		100	70	130			
Surr: 4-Bromofluorobenzene	9.45		10		95	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: 04-Dec-09

QC Summary Report

Work Order: 09112008

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

File ID: **09112313.D** Batch ID: **MS15W1123M** Analysis Date: **11/23/2009 12:12**

Sample ID: **09112008-10AMS** Units : **µg/L** Run ID: **MSD_15_091123D** Prep Date: **11/23/2009 12:12**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	35.4	2.5	50	0	71	13	167			
Chloromethane	35.6	10	50	0	71	28	145			
Vinyl chloride	41.2	2.5	50	0	82	43	134			
Chloroethane	44	2.5	50	0	88	39	154			
Bromomethane	44.3	10	50	0	89	19	176			
Trichlorofluoromethane	42.6	2.5	50	0	85	34	160			
1,1-Dichloroethene	45.3	2.5	50	0	91	60	130			
Dichloromethane	42.6	10	50	0	85	68	130			
trans-1,2-Dichloroethene	45.9	2.5	50	0	92	63	130			
Methyl tert-butyl ether (MTBE)	47.2	1.3	50	0	94	56	141			
1,1-Dichloroethane	44	2.5	50	0	88	61	130			
cis-1,2-Dichloroethene	47.6	2.5	50	0	95	70	130			
Bromochloromethane	47.7	2.5	50	0	95	70	130			
Chloroform	45.5	2.5	50	0	91	67	130			
2,2-Dichloropropane	50.6	2.5	50	0	101	30	152			
1,2-Dichloroethane	43.5	2.5	50	0	87	60	135			
1,1,1-Trichloroethane	47.3	2.5	50	0	95	59	137			
1,1-Dichloropropene	46.4	2.5	50	0	93	63	130			
Carbon tetrachloride	47.7	2.5	50	0	95	50	147			
Benzene	44.8	1.3	50	0	90	67	130			
Dibromomethane	45.2	2.5	50	0	90	69	133			
1,2-Dichloropropane	45.7	2.5	50	0	91	69	130			
Trichloroethene	45.8	2.5	50	0	92	69	130			
Bromodichloromethane	45.6	2.5	50	0	91	66	134			
cis-1,3-Dichloropropene	44.2	2.5	50	0	88	63	130			
trans-1,3-Dichloropropene	40	2.5	50	0	80	66	131			
1,1,2-Trichloroethane	43.4	2.5	50	0	87	68	130			
Toluene	44.8	1.3	50	0	90	66	130			
1,3-Dichloropropane	46.1	2.5	50	0	92	70	130			
Dibromochloromethane	42.8	2.5	50	0	86	70	130			
1,2-Dibromoethane (EDB)	93.4	5	100	0	93	70	130			
Tetrachloroethene	49.8	2.5	50	0	99.6	61	134			
1,1,1,2-Tetrachloroethane	47.7	2.5	50	0	95	70	130			
Chlorobenzene	44.2	2.5	50	0	88	70	130			
Ethylbenzene	44.3	1.3	50	0	89	68	130			
m,p-Xylene	45.1	1.3	50	0	90	64	130			
Bromoform	38.7	2.5	50	0	77	64	138			
Styrene	48.4	2.5	50	0	97	69	130			
o-Xylene	46	1.3	50	0	92	70	130			
1,1,2,2-Tetrachloroethane	42.3	2.5	50	0	85	65	131			
1,2,3-Trichloropropane	86.6	10	100	0	87	70	130			
Isopropylbenzene	43.2	2.5	50	0	86	64	138			
Bromobenzene	42.8	2.5	50	0	86	70	130			
n-Propylbenzene	43.6	2.5	50	0	87	66	132			
4-Chlorotoluene	44.5	2.5	50	0	89	70	130			
2-Chlorotoluene	43	2.5	50	0	86	70	130			
1,3,5-Trimethylbenzene	43.6	2.5	50	0	87	66	136			
tert-Butylbenzene	42.5	2.5	50	0	85	65	137			
1,2,4-Trimethylbenzene	44	2.5	50	0	88	65	137			
sec-Butylbenzene	43.9	2.5	50	0	88	66	134			
1,3-Dichlorobenzene	45.4	2.5	50	0	91	70	130			
1,4-Dichlorobenzene	42.4	2.5	50	0	85	70	130			
4-Isopropyltoluene	44.8	2.5	50	0	90	66	137			
1,2-Dichlorobenzene	42.5	2.5	50	0	85	70	130			
n-Butylbenzene	46.8	2.5	50	0	94	60	142			
1,2-Dibromo-3-chloropropane (DBCP)	202	15	250	0	81	67	130			
1,2,4-Trichlorobenzene	50.2	10	50	0	100	61	137			
Naphthalene	47.3	10	50	0	95	40	167			
Hexachlorobutadiene	92.2	10	100	0	92	61	130			
1,2,3-Trichlorobenzene	47.7	10	50	0	95	51	144			
Surr: 1,2-Dichloroethane-d4	46.7		50		93	70	130			
Surr: Toluene-d8	50.5		50		101	70	130			
Surr: 4-Bromofluorobenzene	47.6		50		95	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: 04-Dec-09

QC Summary Report

Work Order: 09112008

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

File ID: **09112314.D** Batch ID: **MS15W1123M** Analysis Date: **11/23/2009 12:34**

Sample ID: **09112008-10AMSD** Units : **µg/L** Run ID: **MSD_15_091123D** Prep Date: **11/23/2009 12:34**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	35.5	2.5	50	0	71	13	167	35.43	0.2(20)	
Chloromethane	34.3	10	50	0	69	28	145	35.58	3.6(20)	
Vinyl chloride	42.6	2.5	50	0	85	43	134	41.21	3.4(20)	
Chloroethane	43.4	2.5	50	0	87	39	154	44.04	1.4(20)	
Bromomethane	43.7	10	50	0	87	19	176	44.29	1.3(20)	
Trichlorofluoromethane	43.5	2.5	50	0	87	34	160	42.57	2.1(20)	
1,1-Dichloroethene	46.4	2.5	50	0	93	60	130	45.31	2.3(20)	
Dichloromethane	43	10	50	0	86	68	130	42.6	0.8(20)	
trans-1,2-Dichloroethene	46.3	2.5	50	0	93	63	130	45.94	0.8(20)	
Methyl tert-butyl ether (MTBE)	48.4	1.3	50	0	97	56	141	47.23	2.3(20)	
1,1-Dichloroethane	44	2.5	50	0	88	61	130	44.04	0.0(20)	
cis-1,2-Dichloroethene	47.8	2.5	50	0	96	70	130	47.57	0.4(20)	
Bromochloromethane	48.8	2.5	50	0	98	70	130	47.69	2.2(20)	
Chloroform	45.7	2.5	50	0	91	67	130	45.48	0.5(20)	
2,2-Dichloropropane	50.1	2.5	50	0	100	30	152	50.63	1.0(20)	
1,2-Dichloroethane	44.8	2.5	50	0	90	60	135	43.5	3.0(20)	
1,1,1-Trichloroethane	47.2	2.5	50	0	94	59	137	47.31	0.2(20)	
1,1-Dichloropropene	46.2	2.5	50	0	92	63	130	46.44	0.6(20)	
Carbon tetrachloride	47.8	2.5	50	0	96	50	147	47.74	0.2(20)	
Benzene	45.1	1.3	50	0	90	67	130	44.78	0.7(20)	
Dibromomethane	46.2	2.5	50	0	92	69	133	45.22	2.2(20)	
1,2-Dichloropropane	46.1	2.5	50	0	92	69	130	45.74	0.8(20)	
Trichloroethene	46.3	2.5	50	0	93	69	130	45.78	1.1(20)	
Bromodichloromethane	46.7	2.5	50	0	93	66	134	45.6	2.5(20)	
cis-1,3-Dichloropropene	45	2.5	50	0	90	63	130	44.18	1.9(20)	
trans-1,3-Dichloropropene	41	2.5	50	0	82	66	131	40.02	2.4(20)	
1,1,2-Trichloroethane	44.3	2.5	50	0	89	68	130	43.35	2.2(20)	
Toluene	44.9	1.3	50	0	90	66	130	44.79	0.3(20)	
1,3-Dichloropropane	47.1	2.5	50	0	94	70	130	46.13	2.0(20)	
Dibromochloromethane	44.5	2.5	50	0	89	70	130	42.76	3.9(20)	
1,2-Dibromoethane (EDB)	96.6	5	100	0	97	70	130	93.42	3.3(20)	
Tetrachloroethene	49.5	2.5	50	0	99	61	134	49.78	0.7(20)	
1,1,1,2-Tetrachloroethane	46.6	2.5	50	0	93	70	130	47.71	2.3(20)	
Chlorobenzene	44.6	2.5	50	0	89	70	130	44.21	0.9(20)	
Ethylbenzene	43.9	1.3	50	0	88	68	130	44.3	0.8(20)	
m,p-Xylene	44.7	1.3	50	0	89	64	130	45.05	0.9(20)	
Bromoform	39.8	2.5	50	0	80	64	138	38.71	2.7(20)	
Styrene	49	2.5	50	0	98	69	130	48.44	1.2(20)	
o-Xylene	45.5	1.3	50	0	91	70	130	45.96	0.9(20)	
1,1,2,2-Tetrachloroethane	42.8	2.5	50	0	86	65	131	42.32	1.1(20)	
1,2,3-Trichloropropane	90.3	10	100	0	90	70	130	86.57	4.2(20)	
Isopropylbenzene	43.6	2.5	50	0	87	64	138	43.21	0.9(20)	
Bromobenzene	43.8	2.5	50	0	88	70	130	42.76	2.3(20)	
n-Propylbenzene	43.2	2.5	50	0	86	66	132	43.57	0.9(20)	
4-Chlorotoluene	44.9	2.5	50	0	90	70	130	44.51	0.8(20)	
2-Chlorotoluene	43.7	2.5	50	0	87	70	130	43.03	1.4(20)	
1,3,5-Trimethylbenzene	44.1	2.5	50	0	88	66	136	43.55	1.3(20)	
tert-Butylbenzene	43	2.5	50	0	86	65	137	42.5	1.2(20)	
1,2,4-Trimethylbenzene	44.4	2.5	50	0	89	65	137	43.97	1.0(20)	
sec-Butylbenzene	43.9	2.5	50	0	88	66	134	43.89	0.1(20)	
1,3-Dichlorobenzene	45.5	2.5	50	0	91	70	130	45.44	0.1(20)	
1,4-Dichlorobenzene	42.9	2.5	50	0	86	70	130	42.39	1.2(20)	
4-Isopropyltoluene	45.2	2.5	50	0	90	66	137	44.82	0.8(20)	
1,2-Dichlorobenzene	43.5	2.5	50	0	87	70	130	42.45	2.4(20)	
n-Butylbenzene	47	2.5	50	0	94	60	142	46.76	0.4(20)	
1,2-Dibromo-3-chloropropane (DBCP)	214	15	250	0	86	67	130	202.1	5.8(20)	
1,2,4-Trichlorobenzene	50.9	10	50	0	102	61	137	50.21	1.3(20)	
Naphthalene	49.4	10	50	0	99	40	167	47.29	4.5(20)	
Hexachlorobutadiene	94.1	10	100	0	94	61	130	92.19	2.1(20)	
1,2,3-Trichlorobenzene	49.6	10	50	0	99	51	144	47.69	3.9(20)	
Surr: 1,2-Dichloroethane-d4	47.9		50		96	70	130			
Surr: Toluene-d8	50.9		50		102	70	130			
Surr: 4-Bromofluorobenzene	47.8		50		96	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: *04-Dec-09*

QC Summary Report

Work Order: 09112008

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.

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

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 : BMIS09112008

Report Due By : 5:00 PM On : 07-Dec-2009

Client:
Battelle Memorial Institute
3990 Old Town Ave
Suite C-205
San Diego, CA 92110

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 : GH/ DBL

PO : 218013

Client's COC # : 023592, 24119 Job : G005862/JPL Groundwater Monitoring

Cooler Temp	Samples Received	Date Printed
4 °C	20-Nov-2009	**20-Nov-2009**

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(A)_W	300_0(B)_W	300_0(C)_W	314_W	METALS_DW	VOC_TIC_W	VOC_W	Sample Remarks
BMI09112008-01A	QCEB-18 NOV	AQ	11/18/09 15:30	3	0	10						VOC by 524 Criteria	VOC by 524 Criteria	
BMI09112008-02A	MW-16	AQ	11/19/09 08:30	5	0	10	NO2, NO3, PO4, SO4, Cl	NO2, NO3, PO4, SO4, Cl	NO2, NO3, PO4, SO4, Cl	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	
BMI09112008-03A	MW-7	AQ	11/19/09 10:50	5	0	10	NO2, NO3, PO4, SO4, Cl	NO2, NO3, PO4, SO4, Cl	NO2, NO3, PO4, SO4, Cl	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	
BMI09112008-04A	MW-9	AQ	11/19/09 13:55	5	0	10				Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	
BMI09112008-05A	DUPE-8-4Q09	AQ	11/19/09 13:55	5	0	10				Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	
BMI09112008-06A	MW-17-5	AQ	11/19/09 08:20	5	0	10				Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	
BMI09112008-07A	MW-17-4	AQ	11/19/09 08:52	5	0	10				Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	
BMI09112008-08A	MW-17-3	AQ	11/19/09 09:19	5	0	10				Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	
BMI09112008-09A	MW-17-2	AQ	11/19/09 09:47	5	0	10				Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	
BMI09112008-10A	MW-17-1	AQ	11/19/09 10:21	10	0	10				Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	MS/MSD

Comments: No security seals. Frozen ice. Temp Blank #8278 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.**	11-20-09 1220

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 : BMIS09112008

Report Due By : 5:00 PM On : 07-Dec-2009

Client:
Battelle Memorial Institute
3990 Old Town Ave
Suite C-205
San Diego, CA 92110

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 : GH/ DBL

PO : 218013

Client's COC # : 023592, 24119 Job : G005862/JPL Groundwater Monitoring

Cooler Temp	Samples Received	Date Printed
4 °C	20-Nov-2009	**20-Nov-2009**

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(A)_W	300_0(B)_W	300_0(C)_W	314_W	METALS_D W	VOC_TIC_ W	VOC_W		Sample Remarks
BMI09112008-11A	DUPE-03-4Q09	AQ	11/19/09 00:00	5	0	10				Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria		
BMI09112008-12A	EB-05-11/19/09	AQ	11/19/09 10:09	5	0	10				Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria		Logged in per bottles received.
BMI09112008-13A	TB-05-11/19/09	AQ	11/19/09 00:00	1	0	10						VOC by 524 Criteria	VOC by 524 Criteria		Reno Trip Blank 6/22/09

Comments: No security seals. Frozen ice. Temp Blank #8278 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.**	11-20-09 1220

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
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 ___

023592
Page # 1 of 1

Client Name	P.O. #	Job #
BATTELLE	218013	JPL-GW-4Q09
Address	**EMail Address**	
505 King Ave	connerd@battelle.org	
City, State, Zip	**Phone #**	**Fax #**
Columbus, OH, 43201	~~818 393-2808 GH~~	614 458-6641

Report Attention: DAVID CONNER

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 GH/DBL — Lab ID Number (Office Use Only)	Sample Description	TAT	Field Filtered	Total and type of containers ** See below	VOC (5242)	Total Cr (200.8)	ClO4 - (314.0)	Cl - SO4 - NO3 - NO2 - PO4 -3 (300.0)	REMARKS
~~18NOV~~			~~BMI~~									No Sample Here
1530	18NOV	AQ	BMI09112008-01	QCEB-18NOV			3V	X				
0830	19NOV	AQ	-02	MW-16			5	X	X	X	X	
1050	19NOV	AQ	-03	MW-7			5	X	X	X	X	
1355	19NOV	AQ	-04	MW-9			5	X	X	X		
1355	19NOV	AQ	-05	DUPE-8-4Q09			5	X	X	X		

Alpha Analytical Sample Receipt

Security Seals? YES (NO)

Frozen Ice? (YES) NO

Temperature 4 °C

ADDITIONAL INSTRUCTIONS: D. CONNER PHONE # 619-726-7311

Signature	Print Name	Company	Date	Time
Relinquished by Greg Headington	GREG HEADINGTON	BATTELLE	19NOV09	1412
Received by	MARCO MENDOZA	INSIGHT	11/19/09	1431
Relinquished by	MARCO MENDOZA	INSIGHT	11/19/09	1500
Received by Elizabeth Adcox	Elizabeth Adcox	Alpha	11.20.09	1220
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? 24119
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 — Report Attention

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

Analyses Required: VOC (524.2); TOTAL Cr (200.8); ClO4⁻ (314.0); Cl⁻, SO4⁻, NO3⁻, NO2⁻, PO4-3 (300.0)

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)	Cl⁻, SO4⁻, NO3⁻, NO2⁻, PO4-3 (300.0)				REMARKS
0820	11/19/09	AQ	.06	MW-17-5	NORM		1/P 5	X	X	X					
0852	↓	↓	.07	MW-17-4	↓		↓	X	X	X					
0919	↓	↓	.08	MW-17-3	↓		↓	X	X	X					
0947	↓	↓	.09	MW-17-2	↓		↓	X	X	X					
1021	↓	↓	.10	MW-17-1	↓		1/P 10	X	X	X					MS/MSD
—	11/19/09	AQ	-11	DUPE-03-4209	↓		1/P 5	X	X	X					DUPLICATE
1009	11/19/05	AQ	-12	EB-05-11/19/09	↓		1/P 5								EQUIPMENT BLANK
—	11/19/05	AQ	-13	TB-05-11/19/09	↓		V 1	X							TRIP BLANK

Alpha Analytical Sample Receipt
Security Seals? YES (NO)
Frozen? (YES) NO
Temperature 4 °C

ADDITIONAL INSTRUCTIONS:

	Signature	Print Name	Company	Date	Time
Relinquished by	[signature]	MARCO MENDOZA	INSIGHT	11/19/09	1530
Received by	Elizabeth Adcox	Elizabeth Adcox	Alpha	11-20-09	1220
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: *04-Dec-09*

David Conner
Battelle Memorial Institute
3990 Old Town Ave Suite C-205
San Diego, CA 92110
(818) 393-2808

CASE NARRATIVE

Job: G005862/JPL Groundwater Monitoring

Work Order: BMI09112406 **Cooler Temp:** 4 °C

Alpha's Sample ID	Client's Sample ID	Matrix
09112406-01A	QCEB-19NOV	Aqueous
09112406-02A	MW-10	Aqueous
09112406-03A	QCEB-20NOV	Aqueous
09112406-04A	MW-14-5	Aqueous
09112406-05A	MW-14-4	Aqueous
09112406-06A	MW-14-3	Aqueous
09112406-07A	MW-14-2	Aqueous
09112406-08A	MW-14-1	Aqueous
09112406-09A	EB-06-11/23/09	Aqueous
09112406-10A	TB-06-11/23/09	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
3990 Old Town Ave
San Diego, CA 92110

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 11/24/09

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 : BMI09112406-02A	Perchlorate	3.15	1.00 µg/L	11/25/09 12:32	11/25/09 15:21
Date Sampled 11/20/09 08:50					
Client ID: **MW-14-5**					
Lab ID : BMI09112406-04A	Perchlorate	ND	1.00 µg/L	11/25/09 12:32	11/25/09 15:39
Date Sampled 11/23/09 08:09					
Client ID: **MW-14-4**					
Lab ID : BMI09112406-05A	Perchlorate	3.38	1.00 µg/L	11/25/09 12:32	11/25/09 15:58
Date Sampled 11/23/09 08:47					
Client ID: **MW-14-3**					
Lab ID : BMI09112406-06A	Perchlorate	5.33	1.00 µg/L	11/25/09 12:32	11/25/09 16:53
Date Sampled 11/23/09 09:16					
Client ID: **MW-14-2**					
Lab ID : BMI09112406-07A	Perchlorate	3.31	1.00 µg/L	11/25/09 12:32	11/25/09 17:11
Date Sampled 11/23/09 09:46					
Client ID: **MW-14-1**					
Lab ID : BMI09112406-08A	Perchlorate	2.84	1.00 µg/L	11/25/09 12:32	11/25/09 17:30
Date Sampled 11/23/09 10:13					
Client ID: **EB-06-11/23/09**					
Lab ID : BMI09112406-09A	Perchlorate	ND	1.00 µg/L	11/25/09 12:32	11/25/09 17:58
Date Sampled 11/23/09 10:00					

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 / 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.

12/8/09
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
3990 Old Town Ave
San Diego, CA 92110

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 11/24/09

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 : BMI09112406-02A Chromium (Cr)	ND	0.0050 mg/L	11/25/09 11:11	11/25/09 14:20
Date Sampled 11/20/09 08:50				
Client ID: **MW-14-5**				
Lab ID : BMI09112406-04A Chromium (Cr)	ND	0.0050 mg/L	11/25/09 11:11	11/25/09 14:26
Date Sampled 11/23/09 08:09				
Client ID: **MW-14-4**				
Lab ID : BMI09112406-05A Chromium (Cr)	ND	0.0050 mg/L	11/25/09 11:11	11/25/09 14:32
Date Sampled 11/23/09 08:47				
Client ID: **MW-14-3**				
Lab ID : BMI09112406-06A Chromium (Cr)	ND	0.0050 mg/L	11/25/09 11:11	11/25/09 14:37
Date Sampled 11/23/09 09:16				
Client ID: **MW-14-2**				
Lab ID : BMI09112406-07A Chromium (Cr)	ND	0.0050 mg/L	11/25/09 11:11	11/25/09 14:43
Date Sampled 11/23/09 09:46				
Client ID: **MW-14-1**				
Lab ID : BMI09112406-08A Chromium (Cr)	ND	0.0050 mg/L	11/25/09 11:11	11/25/09 14:48
Date Sampled 11/23/09 10:13				
Client ID: **EB-06-11/23/09**				
Lab ID : BMI09112406-09A Chromium (Cr)	ND	0.0050 mg/L	11/25/09 11:11	11/25/09 14:54
Date Sampled 11/23/09 10:00				

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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12/8/09
Report Date

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ANALYTICAL REPORT

Battelle Memorial Institute
3990 Old Town Ave
San Diego, CA 92110
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 : **QCEB-19NOV**						
Lab ID : BMI09112406-01A	* * * None Found * * *	ND		2.0 µg/L	12/01/09 14:27	12/01/09 14:27
Date Received : 11/24/09						
Date Sampled : 11/19/09 15:30						
Client ID : **MW-10**						
Lab ID : BMI09112406-02A	* * * None Found * * *	ND		2.0 µg/L	12/01/09 15:12	12/01/09 15:12
Date Received : 11/24/09						
Date Sampled : 11/20/09 08:50						
Client ID : **QCEB-20NOV**						
Lab ID : BMI09112406-03A	* * * None Found * * *	ND		2.0 µg/L	12/01/09 14:49	12/01/09 14:49
Date Received : 11/24/09						
Date Sampled : 11/20/09 11:00						
Client ID : **MW-14-5**						
Lab ID : BMI09112406-04A	Sulfur dioxide	6.4		2.0 µg/L	12/01/09 15:35	12/01/09 15:35
Date Received : 11/24/09						
Date Sampled : 11/23/09 08:09						
Client ID : **MW-14-4**						
Lab ID : BMI09112406-05A	* * * None Found * * *	ND		2.0 µg/L	12/01/09 15:56	12/01/09 15:56
Date Received : 11/24/09						
Date Sampled : 11/23/09 08:47						
Client ID : **MW-14-3**						
Lab ID : BMI09112406-06A	* * * None Found * * *	ND		2.0 µg/L	12/01/09 16:18	12/01/09 16:18
Date Received : 11/24/09						
Date Sampled : 11/23/09 09:16						
Client ID : **MW-14-2**						
Lab ID : BMI09112406-07A	* * * None Found * * *	ND		2.0 µg/L	12/01/09 16:40	12/01/09 16:40
Date Received : 11/24/09						
Date Sampled : 11/23/09 09:46						
Client ID : **MW-14-1**						
Lab ID : BMI09112406-08A	* * * None Found * * *	ND		2.0 µg/L	12/01/09 17:03	12/01/09 17:03
Date Received : 11/24/09						
Date Sampled : 11/23/09 10:13						
Client ID : **EB-06-11/23/09**						
Lab ID : BMI09112406-09A	Tertiary Butyl Alcohol (TBA)	13	Q	10 µg/L	12/01/09 14:05	12/01/09 14:05
Date Received : 11/24/09	2-Methyl-1-propene	9.9		2.0 µg/L	12/01/09 14:05	12/01/09 14:05
Date Sampled : 11/23/09 10:00						

Alpha Analytical, Inc.

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

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

Client ID :	**TB-06-11/23/09**					
Lab ID :	BMI09112406-10A	*** None Found ***	ND	2.0 µg/L	12/01/09 13:43	12/01/09 13:43
Date Received :	11/24/09					
Date Sampled :	11/23/09 00:00					

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 / info@alpha-analytical.com

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12/8/09

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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09112406-01A
Client I.D. Number: QCEB-19NOV

Sampled: 11/19/09 15:30
Received: 11/24/09
Extracted: 12/01/09 14:27
Analyzed: 12/01/09 14:27

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	Q	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	1.3		0.50	µg/L
40	Bromoform	ND		0.50	µg/L
41	Styrene	1.9		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	101		(70-130)	%REC
65	Surr: Toluene-d8	101		(70-130)	%REC
66	Surr: 4-Bromofluorobenzene	90		(70-130)	%REC

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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RS

12/8/09

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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09112406-02A
Client I.D. Number: MW-10

Sampled: 11/20/09 08:50
Received: 11/24/09
Extracted: 12/01/09 15:12
Analyzed: 12/01/09 15:12

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	Q	10	µg/L
14	cis-1,2-Dichloroethene	ND		0.50	µg/L
15	Bromochloromethane	ND		0.50	µg/L
16	Chloroform	0.58		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	4.3		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	0.97		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	101		(70-130)	%REC
65	Surr: Toluene-d8	104		(70-130)	%REC
66	Surr: 4-Bromofluorobenzene	90		(70-130)	%REC

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 / 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.

12/8/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09112406-03A
Client I.D. Number: QCEB-20NOV

Sampled: 11/20/09 11:00
Received: 11/24/09
Extracted: 12/01/09 14:49
Analyzed: 12/01/09 14:49

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	Q	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	0.74		0.50	µg/L
39	m,p-Xylene	2.2		0.50	µg/L
40	Bromoform	ND		0.50	µg/L
41	Styrene	20		0.50	µg/L
42	o-Xylene	0.78		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	2.0		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	99		(70-130)	%REC
65	Surr: Toluene-d8	99		(70-130)	%REC
66	Surr: 4-Bromofluorobenzene	90		(70-130)	%REC

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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12/8/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09112406-04A
Client I.D. Number: MW-14-5

Sampled: 11/23/09 08:09
Received: 11/24/09
Extracted: 12/01/09 15:35
Analyzed: 12/01/09 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		1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND		0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND		0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND		1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND		0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND		0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND		1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND		0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND		0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND		0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND		0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	Q	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND		0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND		0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND		0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND		0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND		0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND		0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND		0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND		0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND		0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND		0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND		0.50	µg/L	59	1,2-Dibromo-3-chloropropane (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	98	(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	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

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 / info@alpha-analytical.com

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12/8/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09112406-05A
Client I.D. Number: MW-14-4

Sampled: 11/23/09 08:47
Received: 11/24/09
Extracted: 12/01/09 15:56
Analyzed: 12/01/09 15:56

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	Q	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	99		(70-130)	%REC
65	Surr: Toluene-d8	105		(70-130)	%REC
66	Surr: 4-Bromofluorobenzene	89		(70-130)	%REC

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.

12/8/09
Report Date

Alpha Analytical, Inc.

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ANALYTICAL REPORT

Battelle Memorial Institute
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09112406-06A
Client I.D. Number: MW-14-3

Sampled: 11/23/09 09:16
Received: 11/24/09
Extracted: 12/01/09 16:18
Analyzed: 12/01/09 16:18

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	Q	10	µg/L
14	cis-1,2-Dichloroethene	ND		0.50	µg/L
15	Bromochloromethane	ND		0.50	µg/L
16	Chloroform	0.56		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	1.9		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	0.85		0.50	µg/L

	Compound	Concentration	Reporting Limit	
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	101	(70-130)	%REC
65	Surr: Toluene-d8	104	(70-130)	%REC
66	Surr: 4-Bromofluorobenzene	90	(70-130)	%REC

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 / info@alpha-analytical.com

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

12/8/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09112406-07A
Client I.D. Number: MW-14-2

Sampled: 11/23/09 09:46
Received: 11/24/09
Extracted: 12/01/09 16:40
Analyzed: 12/01/09 16:40

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	Q	10	µg/L
14	cis-1,2-Dichloroethene	0.56		0.50	µg/L
15	Bromochloromethane	ND		0.50	µg/L
16	Chloroform	0.66		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	13		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	0.85		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	100		(70-130)	%REC
65	Surr: Toluene-d8	103		(70-130)	%REC
66	Surr: 4-Bromofluorobenzene	91		(70-130)	%REC

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 / 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.

12/8/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09112406-08A
Client I.D. Number: MW-14-1

Sampled: 11/23/09 10:13
Received: 11/24/09
Extracted: 12/01/09 17:03
Analyzed: 12/01/09 17:03

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	Q	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND		0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND		0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND		0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND		0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND		0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND		0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND		0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND		0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND		0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND		0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND		0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5	µg/L
25	Trichloroethene	4.1		0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND		0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND		2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND		0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND		0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	98	(70-130)	%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	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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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.

12/8/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09112406-09A
Client I.D. Number: EB-06-11/23/09

Sampled: 11/23/09 10:00
Received: 11/24/09
Extracted: 12/01/09 14:05
Analyzed: 12/01/09 14:05

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	Q	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	100		(70-130)	%REC
65	Surr: Toluene-d8	101		(70-130)	%REC
66	Surr: 4-Bromofluorobenzene	92		(70-130)	%REC

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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12/8/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09112406-10A
Client I.D. Number: TB-06-11/23/09

Sampled: 11/23/09 00:00
Received: 11/24/09
Extracted: 12/01/09 13:43
Analyzed: 12/01/09 13:43

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	Q	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

	Compound	Concentration	Reporting Limit	
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	101	(70-130)	%REC
65	Surr: Toluene-d8	102	(70-130)	%REC
66	Surr: 4-Bromofluorobenzene	92	(70-130)	%REC

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 / info@alpha-analytical.com

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

12/8/09
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: BMI09112406 **Job:** G005862/JPL Groundwater Monitoring

Alpha's Sample ID	Client's Sample ID	Matrix	pH
09112406-01A	QCEB-19NOV	Aqueous	2
09112406-02A	MW-10	Aqueous	2
09112406-03A	QCEB-20NOV	Aqueous	2
09112406-04A	MW-14-5	Aqueous	2
09112406-05A	MW-14-4	Aqueous	2
09112406-06A	MW-14-3	Aqueous	2
09112406-07A	MW-14-2	Aqueous	2
09112406-08A	MW-14-1	Aqueous	2
09112406-09A	EB-06-11/23/09	Aqueous	2
09112406-10A	TB-06-11/23/09	Aqueous	2

12/8/09

Report Date

Alpha Analytical, Inc.

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Date: *04-Dec-09*

QC Summary Report

Work Order: 09112406

Method Blank

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

File ID: **14** Batch ID: **23156** Analysis Date: **11/25/2009 13:31**

Sample ID: **MB-23156** Units : **µg/L** Run ID: **IC_3_091125A** Prep Date: **11/25/2009 12:32**

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: **23156** Analysis Date: **11/25/2009 13:49**

Sample ID: **LFB-23156** Units : **µg/L** Run ID: **IC_3_091125A** Prep Date: **11/25/2009 12:32**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	24.9	2	25		99.6	85	115			

Sample Matrix Spike

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

File ID: **23** Batch ID: **23156** Analysis Date: **11/25/2009 16:16**

Sample ID: **09112406-05ALFM** Units : **µg/L** Run ID: **IC_3_091125A** Prep Date: **11/25/2009 12:32**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	26.2	2	25	3.383	91	80	120			

Sample Matrix Spike Duplicate

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

File ID: **24** Batch ID: **23156** Analysis Date: **11/25/2009 16:35**

Sample ID: **09112406-05ALFMD** Units : **µg/L** Run ID: **IC_3_091125A** Prep Date: **11/25/2009 12:32**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	29.2	2	25	3.383	103	80	120	26.16	11.2(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-Dec-09*

QC Summary Report

Work Order: 09112406

Method Blank

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

File ID: **112309.B\MB.D** Batch ID: **23155K** Analysis Date: **11/25/2009 13:35**

Sample ID: **MB-23155** Units : **mg/L** Run ID: **ICP/MS_091125A** Prep Date: **11/25/2009 11:11**

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: **112309.B\L1.D** Batch ID: **23155K** Analysis Date: **11/25/2009 13:41**

Sample ID: **LCS-23155** Units : **mg/L** Run ID: **ICP/MS_091125A** Prep Date: **11/25/2009 11:11**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0482	0.005	0.05		96	80	120			

Sample Matrix Spike

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

File ID: **112309.B\MS.D** Batch ID: **23155K** Analysis Date: **11/25/2009 14:03**

Sample ID: **09112502-10AMS** Units : **mg/L** Run ID: **ICP/MS_091125A** Prep Date: **11/25/2009 11:11**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0548	0.005	0.05	0	110	80	120			

Sample Matrix Spike Duplicate

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

File ID: **112309.B\MSD.D** Batch ID: **23155K** Analysis Date: **11/25/2009 14:09**

Sample ID: **09112502-10AMSD** Units : **mg/L** Run ID: **ICP/MS_091125A** Prep Date: **11/25/2009 11:11**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0568	0.005	0.05	0	114	80	120	0.05483	3.5(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: 04-Dec-09

QC Summary Report

Work Order: 09112406

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

File ID: **09120107.D** Batch ID: **MS15W1201M** Analysis Date: **12/01/2009 11:30**

Sample ID: **MBLK MS15W1201M** Units : **µg/L** Run ID: **MSD_15_091201A** Prep Date: **12/01/2009 11:30**

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	9.81		10		98	70	130			
Surr: Toluene-d8	10.2		10		102	70	130			

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Date: *04-Dec-09*

QC Summary Report

Work Order: 09112406

Surr: 4-Bromofluorobenzene	9.32	10	93	70	130	

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Date: 04-Dec-09

QC Summary Report

Work Order: 09112406

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

File ID: **09120105.D** Batch ID: **MS15W1201M** Analysis Date: **12/01/2009 10:35**

Sample ID: **LCS MS15W1201M** Units : **µg/L** Run ID: **MSD_15_091201A** Prep Date: **12/01/2009 10:35**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	11.4	1	10		114	70	130			
Chloromethane	8.1	2	10		81	70	130			
Vinyl chloride	9.73	1	10		97	70	130			
Chloroethane	11	1	10		110	70	130			
Bromomethane	9.72	2	10		97	70	130			
Trichlorofluoromethane	11.6	1	10		116	70	130			
1,1-Dichloroethene	11.2	1	10		112	70	130			
Dichloromethane	9.74	2	10		97	70	130			
Freon-113	12.1	1	10		121	67	141			
trans-1,2-Dichloroethene	11	1	10		110	70	130			
Methyl tert-butyl ether (MTBE)	10.4	0.5	10		104	70	130			
1,1-Dichloroethane	10.2	1	10		102	70	130			
2-Butanone (MEK)	135	10	200		67	70(70)	130			L50
cis-1,2-Dichloroethene	10.7	1	10		107	70	130			
Bromochloromethane	10.3	1	10		103	70	130			
Chloroform	10.4	1	10		104	70	130			
2,2-Dichloropropane	12.1	1	10		121	70	130			
1,2-Dichloroethane	9.71	1	10		97	70	130			
1,1,1-Trichloroethane	11.3	1	10		113	70	130			
1,1-Dichloropropene	11.1	1	10		111	70	130			
Carbon tetrachloride	11.5	1	10		115	70	130			
Benzene	10.3	0.5	10		103	70	130			
Dibromomethane	9.69	1	10		97	70	130			
1,2-Dichloropropane	10.2	1	10		102	70	130			
Trichloroethene	10.7	1	10		107	70	130			
Bromodichloromethane	10.5	1	10		105	70	130			
cis-1,3-Dichloropropene	10.3	1	10		103	70	130			
trans-1,3-Dichloropropene	9.13	1	10		91	70	130			
1,1,2-Trichloroethane	9.36	1	10		94	70	130			
Toluene	10	0.5	10		100	70	130			
1,3-Dichloropropane	9.84	1	10		98	70	130			
Dibromochloromethane	9.83	1	10		98	70	130			
1,2-Dibromoethane (EDB)	20.1	2	20		101	70	130			
Tetrachloroethene	11.3	1	10		113	70	130			
1,1,1,2-Tetrachloroethane	10.7	1	10		107	70	130			
Chlorobenzene	10	1	10		100	70	130			
Ethylbenzene	10.2	0.5	10		102	70	130			
m,p-Xylene	10.3	0.5	10		103	70	130			
Bromoform	9.35	1	10		94	70	130			
Styrene	11.2	1	10		112	70	130			
o-Xylene	10.5	0.5	10		105	70	130			
1,1,2,2-Tetrachloroethane	9.49	1	10		95	70	130			
1,2,3-Trichloropropane	19.2	2	20		96	70	130			
Isopropylbenzene	9.89	1	10		99	70	130			
Bromobenzene	9.55	1	10		96	70	130			
n-Propylbenzene	9.99	1	10		99.9	70	130			
4-Chlorotoluene	10.2	1	10		102	70	130			
2-Chlorotoluene	9.9	1	10		99	70	130			
1,3,5-Trimethylbenzene	10	1	10		100	70	130			
tert-Butylbenzene	9.82	1	10		98	70	130			
1,2,4-Trimethylbenzene	10.1	1	10		101	70	130			
sec-Butylbenzene	10.2	1	10		102	70	130			
1,3-Dichlorobenzene	10.2	1	10		102	70	130			
1,4-Dichlorobenzene	9.49	1	10		95	70	130			
4-Isopropyltoluene	10.3	1	10		103	70	130			
1,2-Dichlorobenzene	9.48	1	10		95	70	130			
n-Butylbenzene	10.7	1	10		107	70	130			
1,2-Dibromo-3-chloropropane (DBCP)	44.9	3	50		90	70	130			
1,2,4-Trichlorobenzene	10.6	2	10		106	70	130			
Naphthalene	9.44	2	10		94	70	130			
Hexachlorobutadiene	20.6	2	20		103	70	130			
1,2,3-Trichlorobenzene	9.93	2	10		99	70	130			
Surr: 1,2-Dichloroethane-d4	9.64		10		96	70	130			
Surr: Toluene-d8	9.91		10		99	70	130			
Surr: 4-Bromofluorobenzene	9.53		10		95	70	130			

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Date: 04-Dec-09

QC Summary Report

Work Order: 09112406

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

File ID: **09120108.D** Batch ID: **MS15W1201M** Analysis Date: **12/01/2009 11:52**

Sample ID: **09112406-05AMS** Units : **µg/L** Run ID: **MSD_15_091201A** Prep Date: **12/01/2009 11:52**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	42.6	2.5	50	0	85	13	167			
Chloromethane	36	10	50	0	72	28	145			
Vinyl chloride	44.9	2.5	50	0	90	43	134			
Chloroethane	50.5	2.5	50	0	101	39	154			
Bromomethane	43.1	10	50	0	86	19	176			
Trichlorofluoromethane	53.2	2.5	50	0	106	34	160			
1,1-Dichloroethene	53.9	2.5	50	0	108	60	130			
Dichloromethane	46.4	10	50	0	93	68	130			
Freon-113	57.4	2.5	50	0	115	49	141			
trans-1,2-Dichloroethene	52.4	2.5	50	0	105	63	130			
Methyl tert-butyl ether (MTBE)	49	1.3	50	0	98	56	141			
1,1-Dichloroethane	49	2.5	50	0	98	61	130			
2-Butanone (MEK)	494	50	1000	0	49	20	182			
cis-1,2-Dichloroethene	52.1	2.5	50	0	104	70	130			
Bromochloromethane	49.8	2.5	50	0	99.6	70	130			
Chloroform	50.5	2.5	50	0	101	67	130			
2,2-Dichloropropane	56.5	2.5	50	0	113	30	152			
1,2-Dichloroethane	47.4	2.5	50	0	95	60	135			
1,1,1-Trichloroethane	53.7	2.5	50	0	107	59	137			
1,1-Dichloropropene	52.5	2.5	50	0	105	63	130			
Carbon tetrachloride	55	2.5	50	0	110	50	147			
Benzene	49.8	1.3	50	0	99.6	67	130			
Dibromomethane	45.7	2.5	50	0	91	69	133			
1,2-Dichloropropane	49.5	2.5	50	0	99	69	130			
Trichloroethene	51.1	2.5	50	0	102	69	130			
Bromodichloromethane	50.4	2.5	50	0	101	66	134			
cis-1,3-Dichloropropene	46.8	2.5	50	0	94	63	130			
trans-1,3-Dichloropropene	42.4	2.5	50	0	85	66	131			
1,1,2-Trichloroethane	45.1	2.5	50	0	90	68	130			
Toluene	48.4	1.3	50	0	97	66	130			
1,3-Dichloropropane	48	2.5	50	0	96	70	130			
Dibromochloromethane	47.4	2.5	50	0	95	70	130			
1,2-Dibromoethane (EDB)	97.4	5	100	0	97	70	130			
Tetrachloroethene	54.3	2.5	50	0	109	61	134			
1,1,1,2-Tetrachloroethane	51.2	2.5	50	0	102	70	130			
Chlorobenzene	48.2	2.5	50	0	96	70	130			
Ethylbenzene	49.2	1.3	50	0	98	68	130			
m,p-Xylene	49.9	1.3	50	0	99.7	64	130			
Bromoform	44.2	2.5	50	0	88	64	138			
Styrene	52.9	2.5	50	0	106	69	130			
o-Xylene	50.2	1.3	50	0	100	70	130			
1,1,2,2-Tetrachloroethane	44.9	2.5	50	0	90	65	131			
1,2,3-Trichloropropane	92.7	10	100	0	93	70	130			
Isopropylbenzene	48.4	2.5	50	0	97	64	138			
Bromobenzene	47.5	2.5	50	0	95	70	130			
n-Propylbenzene	48.7	2.5	50	0	97	66	132			
4-Chlorotoluene	50	2.5	50	0	100	70	130			
2-Chlorotoluene	49.1	2.5	50	0	98	70	130			
1,3,5-Trimethylbenzene	49.1	2.5	50	0	98	66	136			
tert-Butylbenzene	47.9	2.5	50	0	96	65	137			
1,2,4-Trimethylbenzene	48.8	2.5	50	0	98	65	137			
sec-Butylbenzene	48.8	2.5	50	0	98	66	134			
1,3-Dichlorobenzene	49.7	2.5	50	0	99	70	130			
1,4-Dichlorobenzene	46.5	2.5	50	0	93	70	130			
4-Isopropyltoluene	50.3	2.5	50	0	101	66	137			
1,2-Dichlorobenzene	45.9	2.5	50	0	92	70	130			
n-Butylbenzene	52.3	2.5	50	0	105	60	142			
1,2-Dibromo-3-chloropropane (DBCP)	216	15	250	0	86	67	130			
1,2,4-Trichlorobenzene	50.2	10	50	0	100	61	137			
Naphthalene	43.9	10	50	0	88	40	167			
Hexachlorobutadiene	98.8	10	100	0	99	61	130			
1,2,3-Trichlorobenzene	46.8	10	50	0	94	51	144			
Surr: 1,2-Dichloroethane-d4	47.3		50		95	70	130			
Surr: Toluene-d8	49.6		50		99	70	130			
Surr: 4-Bromofluorobenzene	48.2		50		96	70	130			

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Date: 04-Dec-09

QC Summary Report

Work Order: 09112406

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

File ID: **09120109.D** Batch ID: **MS15W1201M** Analysis Date: **12/01/2009 12:14**

Sample ID: **09112406-05AMSD** Units : **µg/L** Run ID: **MSD_15_091201A** Prep Date: **12/01/2009 12:14**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	44.5	2.5	50	0	89	13	167	42.6	4.3(20)	
Chloromethane	36.9	10	50	0	74	28	145	35.97	2.5(20)	
Vinyl chloride	47.3	2.5	50	0	95	43	134	44.89	5.3(20)	
Chloroethane	51.2	2.5	50	0	102	39	154	50.46	1.5(20)	
Bromomethane	47.7	10	50	0	95	19	176	43.12	10.0(20)	
Trichlorofluoromethane	55.6	2.5	50	0	111	34	160	53.17	4.4(20)	
1,1-Dichloroethene	54.4	2.5	50	0	109	60	130	53.87	0.9(20)	
Dichloromethane	48.4	10	50	0	97	68	130	46.39	4.3(20)	
Freon-113	59.4	2.5	50	0	119	49	141	57.39	3.4(20)	
trans-1,2-Dichloroethene	55	2.5	50	0	110	63	130	52.39	4.8(20)	
Methyl tert-butyl ether (MTBE)	51.2	1.3	50	0	102	56	141	48.97	4.4(20)	
1,1-Dichloroethane	51.2	2.5	50	0	102	61	130	48.95	4.5(20)	
2-Butanone (MEK)	515	50	1000	0	52	20	182	494	4.2(20)	
cis-1,2-Dichloroethene	54.6	2.5	50	0	109	70	130	52.14	4.7(20)	
Bromochloromethane	51.5	2.5	50	0	103	70	130	49.79	3.5(20)	
Chloroform	52.3	2.5	50	0	105	67	130	50.45	3.7(20)	
2,2-Dichloropropane	58.7	2.5	50	0	117	30	152	56.45	4.0(20)	
1,2-Dichloroethane	48.7	2.5	50	0	97	60	135	47.44	2.7(20)	
1,1,1-Trichloroethane	54.6	2.5	50	0	109	59	137	53.73	1.6(20)	
1,1-Dichloropropene	54.2	2.5	50	0	108	63	130	52.49	3.2(20)	
Carbon tetrachloride	57.5	2.5	50	0	115	50	147	54.95	4.6(20)	
Benzene	51.2	1.3	50	0	102	67	130	49.79	2.8(20)	
Dibromomethane	48.5	2.5	50	0	97	69	133	45.7	6.0(20)	
1,2-Dichloropropane	50.9	2.5	50	0	102	69	130	49.46	2.8(20)	
Trichloroethene	53.3	2.5	50	0	107	69	130	51.12	4.1(20)	
Bromodichloromethane	52.1	2.5	50	0	104	66	134	50.44	3.3(20)	
cis-1,3-Dichloropropene	49.5	2.5	50	0	99	63	130	46.77	5.6(20)	
trans-1,3-Dichloropropene	44.1	2.5	50	0	88	66	131	42.37	4.1(20)	
1,1,2-Trichloroethane	46.8	2.5	50	0	94	68	130	45.13	3.6(20)	
Toluene	49.5	1.3	50	0	99	66	130	48.36	2.4(20)	
1,3-Dichloropropane	49.6	2.5	50	0	99	70	130	48	3.3(20)	
Dibromochloromethane	48.7	2.5	50	0	97	70	130	47.41	2.8(20)	
1,2-Dibromoethane (EDB)	101	5	100	0	101	70	130	97.44	3.7(20)	
Tetrachloroethene	56	2.5	50	0	112	61	134	54.26	3.2(20)	
1,1,1,2-Tetrachloroethane	53.2	2.5	50	0	106	70	130	51.15	3.9(20)	
Chlorobenzene	49.2	2.5	50	0	98	70	130	48.16	2.2(20)	
Ethylbenzene	50.1	1.3	50	0	100	68	130	49.23	1.8(20)	
m,p-Xylene	50.7	1.3	50	0	101	64	130	49.86	1.8(20)	
Bromoform	44.9	2.5	50	0	90	64	138	44.16	1.7(20)	
Styrene	54.3	2.5	50	0	109	69	130	52.87	2.7(20)	
o-Xylene	51.6	1.3	50	0	103	70	130	50.16	2.8(20)	
1,1,2,2-Tetrachloroethane	46.3	2.5	50	0	93	65	131	44.91	3.0(20)	
1,2,3-Trichloropropane	94	10	100	0	94	70	130	92.71	1.4(20)	
Isopropylbenzene	49.3	2.5	50	0	99	64	138	48.39	1.8(20)	
Bromobenzene	48	2.5	50	0	96	70	130	47.51	0.9(20)	
n-Propylbenzene	49.1	2.5	50	0	98	66	132	48.74	0.8(20)	
4-Chlorotoluene	51	2.5	50	0	102	70	130	50.04	1.9(20)	
2-Chlorotoluene	48.4	2.5	50	0	97	70	130	49.07	1.5(20)	
1,3,5-Trimethylbenzene	50	2.5	50	0	100	66	136	49.09	1.8(20)	
tert-Butylbenzene	49	2.5	50	0	98	65	137	47.86	2.4(20)	
1,2,4-Trimethylbenzene	49.8	2.5	50	0	99.5	65	137	48.75	2.1(20)	
sec-Butylbenzene	50	2.5	50	0	100	66	134	48.78	2.5(20)	
1,3-Dichlorobenzene	50.1	2.5	50	0	100	70	130	49.7	0.9(20)	
1,4-Dichlorobenzene	48.1	2.5	50	0	96	70	130	46.54	3.2(20)	
4-Isopropyltoluene	51.6	2.5	50	0	103	66	137	50.27	2.5(20)	
1,2-Dichlorobenzene	47.3	2.5	50	0	95	70	130	45.93	2.9(20)	
n-Butylbenzene	53.6	2.5	50	0	107	60	142	52.31	2.5(20)	
1,2-Dibromo-3-chloropropane (DBCP)	222	15	250	0	89	67	130	215.7	2.7(20)	
1,2,4-Trichlorobenzene	53.2	10	50	0	106	61	137	50.18	5.9(20)	
Naphthalene	47.7	10	50	0	95	40	167	43.91	8.2(20)	
Hexachlorobutadiene	103	10	100	0	103	61	130	98.84	4.5(20)	
1,2,3-Trichlorobenzene	49.7	10	50	0	99	51	144	46.76	6.0(20)	
Surr: 1,2-Dichloroethane-d4	48		50		96	70	130			
Surr: Toluene-d8	50.1		50		100	70	130			
Surr: 4-Bromofluorobenzene	46.8		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: *04-Dec-09*

QC Summary Report

Work Order: 09112406

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.

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

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 : BMIS09112406

Report Due By : 5:00 PM On : 09-Dec-2009

Client:
Battelle Memorial Institute
3990 Old Town Ave
Suite C-205
San Diego, CA 92110

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 : GH/ DBL

PO : 218013

Client's COC # : 023593, 24120 Job : G005862/JPL Groundwater Monitoring

Cooler Temp	Samples Received	Date Printed
4 °C	24-Nov-2009	**24-Nov-2009**

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
BMI09112406-01A	QCEB-19NOV	AQ	11/19/09 15:30	3	0	10			VOC by 524 Criteria	VOC by 524 Criteria					
BMI09112406-02A	MW-10	AQ	11/20/09 08:50	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI09112406-03A	QCEB-20NOV	AQ	11/20/09 11:00	3	0	10			VOC by 524 Criteria	VOC by 524 Criteria					
BMI09112406-04A	MW-14-5	AQ	11/23/09 08:09	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI09112406-05A	MW-14-4	AQ	11/23/09 08:47	10	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					MS/MSD
BMI09112406-06A	MW-14-3	AQ	11/23/09 09:16	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI09112406-07A	MW-14-2	AQ	11/23/09 09:46	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI09112406-08A	MW-14-1	AQ	11/23/09 10:13	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					Level IV QC
BMI09112406-09A	EB-06-11/23/09	AQ	11/23/09 10:00	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI09112406-10A	TB-06-11/23/09	AQ	11/23/09 00:00	1	0	10			VOC by 524 Criteria	VOC by 524 Criteria					Reno Trip Blank 6/22/09

Comments: No security seals. Frozen ice. Temp Blank #7730 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.**	11-24-09 1211

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
Address 505 King Ave.
City, State, Zip Columbus, OH 43201
Phone Number 6144244849 Fax 6144243667

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 ___

023593
Page # 1 of 1

Client Name	P.O. #	Job #
BATTELLE	218013	JPL-GW-4Q09
Address	**EMail Address**	
505 King Ave	connerd@battelle.org	
City, State, Zip	**Phone #**	**Fax #**
Columbus, OH 43201	~~818-393-2808~~ GH	614 458-6641

Time Sampled	Date Sampled	Matrix* See Key Below	Sampled by GH/DBL Lab ID Number (Office Use Only)	Report Attention DAVID CONNER Sample Description	TAT	Field Filtered	Total and type of containers ** See below	VOC (524.2)	Total Cr (200.8)	ClO4- (314.0)					REMARKS
1530	19NOV	AQ	BMI0911240601	QCEB - 19 NOV			3 V	X							
0850	20NOV	AQ	-02	MW-10			5	X	X	X					
1100	20NOV	AQ	-03	QCEB - 20 NOV			3 V	X							

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

Alpha Analytical Sample Receipt
Security Seal? YES NO
Frozen Ice? YES NO
Temperature 4 °C

ADDITIONAL INSTRUCTIONS: D. Conner Phone # 619-726-7311

	Signature	Print Name	Company	Date	Time
Relinquished by	Greg Henderson	GREG HENDERSON	BATTELLE	20 NOV 09	1200
Received by		MARCO MENDOZA	INSIGHT	11/23/09	1101
Relinquished by		MARCO MENDOZA	INSIGHT	11/23/09	1200
Received by	Elizabeth Adcox	Elizabeth Adcox	Alpha	11-24-09	1211
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 ___

24120

Page # 1 of 1

Client Name	P.O. #	Job #
BATTELLE / DAVID CONNER	218013	60058662
Address 3990 OLD TOWN AVE. C-205	EMail Address	
City, State, Zip SAN DIEGO CA 92110	Phone # (619) 726-7311	Fax #

Analyses Required

Required QC Level? I II (III) IV

EDD / EDF? YES ___ NO ___

Global ID # _____

Time Sampled	Date Sampled	Matrix* See Key Below	Sampled by / 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)	ClO_4^- (314.0)	Cl^-, SO_4, NO_3, NO_2, PO_4 (300.0)	REMARKS
0809	11/23/09	AQ	-04	MW-14-5	NORM		4/P 5	X	X	X		
0847			-05	MW-14-4			4/P 10	X	X	X		MS/MSD
0916			-06	MW-14-3			4/P 5	X	X	X		
0946			-07	MW-14-2			4/P 5	X	X	X		
1013			-08	MW-14-1			4/P 5	X	X	X		LEVEL IV QC
1000	11/23/09		-09	EB-06-11/23/09			4/P 5	X	X	X		EQUIPMENT BLANK
—	11/23/09		-10	TB-06-11/23/09			V 1	X				TRIP BLANK

Alpha Analytical Sample Receipt
Security Seals? YES NO
Frozen Ice? YES NO
Temperature 4 °C

ADDITIONAL INSTRUCTIONS:

Signature	Print Name	Company	Date	Time
Relinquished by	CHASE BRODIGON	INSIGHT ECG, INC	11/23/09	1300
Received by Elizabeth Adcox	Elizabeth Adcox	Alpha	11-24-09	1211
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: *06-Dec-09*

David Conner
Battelle Memorial Institute
3990 Old Town Ave Suite C-205
San Diego, CA 92110
(818) 393-2808

CASE NARRATIVE

Job: G005862/JPL Groundwater Monitoring
Work Order: BMI09112508 **Cooler Temp:** 4 °C

Alpha's Sample ID	Client's Sample ID	Matrix
09112508-01A	MW-22-5	Aqueous
09112508-02A	MW-22-4	Aqueous
09112508-03A	MW-22-3	Aqueous
09112508-04A	MW-22-2	Aqueous
09112508-05A	MW-22-1	Aqueous
09112508-06A	DUPE-04-4Q09	Aqueous
09112508-07A	EB-07-11/24/09	Aqueous
09112508-08A	TB-07-11/24/09	Aqueous

Manually Integrated Analytes

Alpha's Sample ID	Test Reference	Analyte
09112508-01A	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.

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
3990 Old Town Ave
San Diego, CA 92110

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 11/25/09

Job: G005862/JPL Groundwater Monitoring

Perchlorate by Ion Chromatography
EPA Method 314.0

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-22-5**				
Lab ID : BMI09112508-01A Perchlorate	1.29	1.00 µg/L	11/25/09 12:32	11/25/09 19:02
Date Sampled 11/24/09 08:10				
Client ID: **MW-22-4**				
Lab ID : BMI09112508-02A Perchlorate	ND	1.00 µg/L	11/25/09 12:32	11/25/09 19:20
Date Sampled 11/24/09 08:38				
Client ID: **MW-22-3**				
Lab ID : BMI09112508-03A Perchlorate	2.80	1.00 µg/L	11/25/09 12:32	11/25/09 19:39
Date Sampled 11/24/09 09:00				
Client ID: **MW-22-2**				
Lab ID : BMI09112508-04A Perchlorate	2.40	1.00 µg/L	11/25/09 12:32	11/25/09 19:57
Date Sampled 11/24/09 09:22				
Client ID: **MW-22-1**				
Lab ID : BMI09112508-05A Perchlorate	2.77	1.00 µg/L	11/25/09 12:32	11/25/09 20:15
Date Sampled 11/24/09 09:47				
Client ID: **DUPE-04-4Q09**				
Lab ID : BMI09112508-06A Perchlorate	ND	1.00 µg/L	11/25/09 12:32	11/25/09 20:34
Date Sampled 11/24/09 00:00				
Client ID: **EB-07-11/24/09**				
Lab ID : BMI09112508-07A Perchlorate	ND	1.00 µg/L	11/25/09 12:32	11/25/09 20:52
Date Sampled 11/24/09 09:37				

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 / 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.

12/9/09
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
3990 Old Town Ave
San Diego, CA 92110

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 11/25/09

Job: G005862/JPL Groundwater Monitoring

Metals by ICPMS
EPA Method 200.8

Parameter		Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-22-5**					
Lab ID : BMI09112508-01A	Chromium (Cr)	ND	0.0050 mg/L	11/30/09 11:05	11/30/09 18:51
Date Sampled 11/24/09 08:10					
Client ID: **MW-22-4**					
Lab ID : BMI09112508-02A	Chromium (Cr)	ND	0.0050 mg/L	11/30/09 11:05	11/30/09 18:56
Date Sampled 11/24/09 08:38					
Client ID: **MW-22-3**					
Lab ID : BMI09112508-03A	Chromium (Cr)	ND	0.0050 mg/L	11/30/09 11:05	11/30/09 19:02
Date Sampled 11/24/09 09:00					
Client ID: **MW-22-2**					
Lab ID : BMI09112508-04A	Chromium (Cr)	ND	0.0050 mg/L	11/30/09 11:05	11/30/09 19:08
Date Sampled 11/24/09 09:22					
Client ID: **MW-22-1**					
Lab ID : BMI09112508-05A	Chromium (Cr)	ND	0.0050 mg/L	11/30/09 11:05	11/30/09 19:13
Date Sampled 11/24/09 09:47					
Client ID: **DUPE-04-4Q09**					
Lab ID : BMI09112508-06A	Chromium (Cr)	ND	0.0050 mg/L	11/30/09 11:05	11/30/09 19:19
Date Sampled 11/24/09 00:00					
Client ID: **EB-07-11/24/09**					
Lab ID : BMI09112508-07A	Chromium (Cr)	ND	0.0050 mg/L	11/30/09 11:05	11/30/09 19:24
Date Sampled 11/24/09 09:37					

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 / 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.

12/9/09
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
3990 Old Town Ave
San Diego, CA 92110
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-22-5**					
Lab ID : BMI09112508-01A	Sulfur dioxide	21	2.0 µg/L	12/01/09 17:25	12/01/09 17:25
Date Received : 11/25/09					
Date Sampled : 11/24/09 08:10					
Client ID : **MW-22-4**					
Lab ID : BMI09112508-02A	Sulfur dioxide	7.3	2.0 µg/L	12/01/09 17:47	12/01/09 17:47
Date Received : 11/25/09					
Date Sampled : 11/24/09 08:38					
Client ID : **MW-22-3**					
Lab ID : BMI09112508-03A	*** None Found ***	ND	2.0 µg/L	12/01/09 18:09	12/01/09 18:09
Date Received : 11/25/09					
Date Sampled : 11/24/09 09:00					
Client ID : **MW-22-2**					
Lab ID : BMI09112508-04A	*** None Found ***	ND	2.0 µg/L	12/01/09 18:31	12/01/09 18:31
Date Received : 11/25/09					
Date Sampled : 11/24/09 09:22					
Client ID : **MW-22-1**					
Lab ID : BMI09112508-05A	*** None Found ***	ND	2.0 µg/L	12/01/09 18:53	12/01/09 18:53
Date Received : 11/25/09					
Date Sampled : 11/24/09 09:47					
Client ID : **DUPE-04-4Q09**					
Lab ID : BMI09112508-06A	Sulfur dioxide	5.7	2.0 µg/L	12/01/09 19:15	12/01/09 19:15
Date Received : 11/25/09					
Date Sampled : 11/24/09 00:00					
Client ID : **EB-07-11/24/09**					
Lab ID : BMI09112508-07A	*** None Found ***	ND	2.0 µg/L	12/01/09 13:21	12/01/09 13:21
Date Received : 11/25/09					
Date Sampled : 11/24/09 09:37					
Client ID : **TB-07-11/24/09**					
Lab ID : BMI09112508-08A	*** None Found ***	ND	2.0 µg/L	12/01/09 12:58	12/01/09 12:58
Date Received : 11/25/09					
Date Sampled : 11/24/09 00:00					

Alpha Analytical, Inc.

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

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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 / 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.

12/9/09

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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09112508-01A
Client I.D. Number: MW-22-5

Sampled: 11/24/09 08:10
Received: 11/25/09
Extracted: 12/01/09 17:25
Analyzed: 12/01/09 17:25

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	Q	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	98		(70-130)	%REC
65	Surr: Toluene-d8	103		(70-130)	%REC
66	Surr: 4-Bromofluorobenzene	90		(70-130)	%REC

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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12/9/09
Report Date

Alpha Analytical, Inc.

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ANALYTICAL REPORT

Battelle Memorial Institute
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09112508-02A
Client I.D. Number: MW-22-4

Sampled: 11/24/09 08:38
Received: 11/25/09
Extracted: 12/01/09 17:47
Analyzed: 12/01/09 17:47

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	Q	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

	Compound	Concentration	Reporting Limit	
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	99	(70-130)	%REC
65	Surr: Toluene-d8	104	(70-130)	%REC
66	Surr: 4-Bromofluorobenzene	91	(70-130)	%REC

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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12/9/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09112508-03A
Client I.D. Number: MW-22-3

Sampled: 11/24/09 09:00
Received: 11/25/09
Extracted: 12/01/09 18:09
Analyzed: 12/01/09 18:09

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	Q	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	100		(70-130)	%REC
65	Surr: Toluene-d8	102		(70-130)	%REC
66	Surr: 4-Bromofluorobenzene	91		(70-130)	%REC

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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12/9/09
Report Date

Alpha Analytical, Inc.

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ANALYTICAL REPORT

Battelle Memorial Institute
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09112508-04A
Client I.D. Number: MW-22-2

Sampled: 11/24/09 09:22
Received: 11/25/09
Extracted: 12/01/09 18:31
Analyzed: 12/01/09 18:31

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	Q	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND		0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND		0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND		0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND		0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND		0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND		0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND		0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND		0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND		0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND		0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND		0.50	µg/L	59	1,2-Dibromo-3-chloropropane (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	100	(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	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

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

12/9/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09112508-05A
Client I.D. Number: MW-22-1

Sampled: 11/24/09 09:47
Received: 11/25/09
Extracted: 12/01/09 18:53
Analyzed: 12/01/09 18:53

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	Q	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	0.71		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	1.9		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	102		(70-130)	%REC
65	Surr: Toluene-d8	103		(70-130)	%REC
66	Surr: 4-Bromofluorobenzene	89		(70-130)	%REC

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 / 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.

12/9/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09112508-06A
Client I.D. Number: DUPE-04-4Q09

Sampled: 11/24/09 00:00
Received: 11/25/09
Extracted: 12/01/09 19:15
Analyzed: 12/01/09 19:15

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	Q	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	99		(70-130)	%REC
65	Surr: Toluene-d8	102		(70-130)	%REC
66	Surr: 4-Bromofluorobenzene	91		(70-130)	%REC

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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12/9/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09112508-07A
Client I.D. Number: EB-07-11/24/09

Sampled: 11/24/09 09:37
Received: 11/25/09
Extracted: 12/01/09 13:21
Analyzed: 12/01/09 13:21

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	Q	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND		0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND		0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND		0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND		0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND		0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND		0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND		0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND		0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND		0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND		0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND		0.50	µg/L	59	1,2-Dibromo-3-chloropropane (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	99	(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	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

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12/9/09
Report Date

Alpha Analytical, Inc.

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ANALYTICAL REPORT

Battelle Memorial Institute
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09112508-08A
Client I.D. Number: TB-07-11/24/09

Sampled: 11/24/09 00:00
Received: 11/25/09
Extracted: 12/01/09 12:58
Analyzed: 12/01/09 12:58

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	Q	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	99		(70-130)	%REC
65	Surr: Toluene-d8	103		(70-130)	%REC
66	Surr: 4-Bromofluorobenzene	93		(70-130)	%REC

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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12/9/09
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: BMI09112508 **Job:** G005862/JPL Groundwater Monitoring

Alpha's Sample ID	Client's Sample ID	Matrix	pH
09112508-01A	MW-22-5	Aqueous	2
09112508-02A	MW-22-4	Aqueous	2
09112508-03A	MW-22-3	Aqueous	2
09112508-04A	MW-22-2	Aqueous	2
09112508-05A	MW-22-1	Aqueous	2
09112508-06A	DUPE-04-4Q09	Aqueous	2
09112508-07A	EB-07-11/24/09	Aqueous	2
09112508-08A	TB-07-11/24/09	Aqueous	2

12/9/09

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: *06-Dec-09*

QC Summary Report

Work Order: 09112508

Method Blank

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

File ID: **14** Batch ID: **23156** Analysis Date: **11/25/2009 13:31**

Sample ID: **MB-23156** Units : **µg/L** Run ID: **IC_3_091125A** Prep Date: **11/25/2009 12:32**

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: **23156** Analysis Date: **11/25/2009 13:49**

Sample ID: **LFB-23156** Units : **µg/L** Run ID: **IC_3_091125A** Prep Date: **11/25/2009 12:32**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	24.9	2	25		99.6	85	115			

Sample Matrix Spike

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

File ID: **23** Batch ID: **23156** Analysis Date: **11/25/2009 16:16**

Sample ID: **09112406-05ALFM** Units : **µg/L** Run ID: **IC_3_091125A** Prep Date: **11/25/2009 12:32**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	26.2	2	25	3.383	91	80	120			

Sample Matrix Spike Duplicate

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

File ID: **24** Batch ID: **23156** Analysis Date: **11/25/2009 16:35**

Sample ID: **09112406-05ALFMD** Units : **µg/L** Run ID: **IC_3_091125A** Prep Date: **11/25/2009 12:32**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	29.2	2	25	3.383	103	80	120	26.16	11.2(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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QC Summary Report

Work Order: 09112508

Method Blank

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

File ID: **113009.B\019SMPL.D** Batch ID: **23168K** Analysis Date: **11/30/2009 18:00**

Sample ID: **MB-23168** Units : **mg/L** Run ID: **ICP/MS_091130B** Prep Date: **11/30/2009 11:05**

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: **113009.B\020_LCS.D** Batch ID: **23168K** Analysis Date: **11/30/2009 18:06**

Sample ID: **LCS-23168** Units : **mg/L** Run ID: **ICP/MS_091130B** Prep Date: **11/30/2009 11:05**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0568	0.005	0.05		114	80	120			

Sample Matrix Spike

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

File ID: **113009.B\025SMPL.D** Batch ID: **23168K** Analysis Date: **11/30/2009 18:34**

Sample ID: **09113040-01AMS** Units : **mg/L** Run ID: **ICP/MS_091130B** Prep Date: **11/30/2009 11:05**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0474	0.005	0.05	0	95	80	120			

Sample Matrix Spike Duplicate

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

File ID: **113009.B\026SMPL.D** Batch ID: **23168K** Analysis Date: **11/30/2009 18:40**

Sample ID: **09113040-01AMSD** Units : **mg/L** Run ID: **ICP/MS_091130B** Prep Date: **11/30/2009 11:05**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0493	0.005	0.05	0	99	80	120	0.04744	3.9(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: *06-Dec-09*

QC Summary Report

Work Order: 09112508

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

File ID: **09120107.D** Batch ID: **MS15W1201M** Analysis Date: **12/01/2009 11:30**

Sample ID: **MBLK MS15W1201M** Units : **µg/L** Run ID: **MSD_15_091201A** Prep Date: **12/01/2009 11:30**

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	9.81		10		98	70	130			
Surr: Toluene-d8	10.2		10		102	70	130			

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Surr: 4-Bromofluorobenzene	9.32	10	93	70	130	

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Date: 06-Dec-09

QC Summary Report

Work Order: 09112508

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

File ID: **09120105.D** Batch ID: **MS15W1201M** Analysis Date: **12/01/2009 10:35**

Sample ID: **LCS MS15W1201M** Units : **µg/L** Run ID: **MSD_15_091201A** Prep Date: **12/01/2009 10:35**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	11.4	1	10		114	70	130			
Chloromethane	8.1	2	10		81	70	130			
Vinyl chloride	9.73	1	10		97	70	130			
Chloroethane	11	1	10		110	70	130			
Bromomethane	9.72	2	10		97	70	130			
Trichlorofluoromethane	11.6	1	10		116	70	130			
1,1-Dichloroethene	11.2	1	10		112	70	130			
Dichloromethane	9.74	2	10		97	70	130			
Freon-113	12.1	1	10		121	67	141			
trans-1,2-Dichloroethene	11	1	10		110	70	130			
Methyl tert-butyl ether (MTBE)	10.4	0.5	10		104	70	130			
1,1-Dichloroethane	10.2	1	10		102	70	130			
2-Butanone (MEK)	135	10	200		67	70(70)	130			L50
cis-1,2-Dichloroethene	10.7	1	10		107	70	130			
Bromochloromethane	10.3	1	10		103	70	130			
Chloroform	10.4	1	10		104	70	130			
2,2-Dichloropropane	12.1	1	10		121	70	130			
1,2-Dichloroethane	9.71	1	10		97	70	130			
1,1,1-Trichloroethane	11.3	1	10		113	70	130			
1,1-Dichloropropene	11.1	1	10		111	70	130			
Carbon tetrachloride	11.5	1	10		115	70	130			
Benzene	10.3	0.5	10		103	70	130			
Dibromomethane	9.69	1	10		97	70	130			
1,2-Dichloropropane	10.2	1	10		102	70	130			
Trichloroethene	10.7	1	10		107	70	130			
Bromodichloromethane	10.5	1	10		105	70	130			
cis-1,3-Dichloropropene	10.3	1	10		103	70	130			
trans-1,3-Dichloropropene	9.13	1	10		91	70	130			
1,1,2-Trichloroethane	9.36	1	10		94	70	130			
Toluene	10	0.5	10		100	70	130			
1,3-Dichloropropane	9.84	1	10		98	70	130			
Dibromochloromethane	9.83	1	10		98	70	130			
1,2-Dibromoethane (EDB)	20.1	2	20		101	70	130			
Tetrachloroethene	11.3	1	10		113	70	130			
1,1,1,2-Tetrachloroethane	10.7	1	10		107	70	130			
Chlorobenzene	10	1	10		100	70	130			
Ethylbenzene	10.2	0.5	10		102	70	130			
m,p-Xylene	10.3	0.5	10		103	70	130			
Bromoform	9.35	1	10		94	70	130			
Styrene	11.2	1	10		112	70	130			
o-Xylene	10.5	0.5	10		105	70	130			
1,1,2,2-Tetrachloroethane	9.49	1	10		95	70	130			
1,2,3-Trichloropropane	19.2	2	20		96	70	130			
Isopropylbenzene	9.89	1	10		99	70	130			
Bromobenzene	9.55	1	10		96	70	130			
n-Propylbenzene	9.99	1	10		99.9	70	130			
4-Chlorotoluene	10.2	1	10		102	70	130			
2-Chlorotoluene	9.9	1	10		99	70	130			
1,3,5-Trimethylbenzene	10	1	10		100	70	130			
tert-Butylbenzene	9.82	1	10		98	70	130			
1,2,4-Trimethylbenzene	10.1	1	10		101	70	130			
sec-Butylbenzene	10.2	1	10		102	70	130			
1,3-Dichlorobenzene	10.2	1	10		102	70	130			
1,4-Dichlorobenzene	9.49	1	10		95	70	130			
4-isopropyltoluene	10.3	1	10		103	70	130			
1,2-Dichlorobenzene	9.48	1	10		95	70	130			
n-Butylbenzene	10.7	1	10		107	70	130			
1,2-Dibromo-3-chloropropane (DBCP)	44.9	3	50		90	70	130			
1,2,4-Trichlorobenzene	10.6	2	10		106	70	130			
Naphthalene	9.44	2	10		94	70	130			
Hexachlorobutadiene	20.6	2	20		103	70	130			
1,2,3-Trichlorobenzene	9.93	2	10		99	70	130			
Surr: 1,2-Dichloroethane-d4	9.64		10		96	70	130			
Surr: Toluene-d8	9.91		10		99	70	130			
Surr: 4-Bromofluorobenzene	9.53		10		95	70	130			

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QC Summary Report

Work Order: 09112508

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

File ID: **09120108.D** Batch ID: **MS15W1201M** Analysis Date: **12/01/2009 11:52**

Sample ID: **09112406-05AMS** Units : µg/L Run ID: **MSD_15_091201A** Prep Date: **12/01/2009 11:52**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	42.6	2.5	50	0	85	13	167			
Chloromethane	36	10	50	0	72	28	145			
Vinyl chloride	44.9	2.5	50	0	90	43	134			
Chloroethane	50.5	2.5	50	0	101	39	154			
Bromomethane	43.1	10	50	0	86	19	176			
Trichlorofluoromethane	53.2	2.5	50	0	106	34	160			
1,1-Dichloroethene	53.9	2.5	50	0	108	60	130			
Dichloromethane	46.4	10	50	0	93	68	130			
Freon-113	57.4	2.5	50	0	115	49	141			
trans-1,2-Dichloroethene	52.4	2.5	50	0	105	63	130			
Methyl tert-butyl ether (MTBE)	49	1.3	50	0	98	56	141			
1,1-Dichloroethane	49	2.5	50	0	98	61	130			
2-Butanone (MEK)	494	50	1000	0	49	20	182			
cis-1,2-Dichloroethene	52.1	2.5	50	0	104	70	130			
Bromochloromethane	49.8	2.5	50	0	99.6	70	130			
Chloroform	50.5	2.5	50	0	101	67	130			
2,2-Dichloropropane	56.5	2.5	50	0	113	30	152			
1,2-Dichloroethane	47.4	2.5	50	0	95	60	135			
1,1,1-Trichloroethane	53.7	2.5	50	0	107	59	137			
1,1-Dichloropropene	52.5	2.5	50	0	105	63	130			
Carbon tetrachloride	55	2.5	50	0	110	50	147			
Benzene	49.8	1.3	50	0	99.6	67	130			
Dibromomethane	45.7	2.5	50	0	91	69	133			
1,2-Dichloropropane	49.5	2.5	50	0	99	69	130			
Trichloroethene	51.1	2.5	50	0	102	69	130			
Bromodichloromethane	50.4	2.5	50	0	101	66	134			
cis-1,3-Dichloropropene	46.8	2.5	50	0	94	63	130			
trans-1,3-Dichloropropene	42.4	2.5	50	0	85	66	131			
1,1,2-Trichloroethane	45.1	2.5	50	0	90	68	130			
Toluene	48.4	1.3	50	0	97	66	130			
1,3-Dichloropropane	48	2.5	50	0	96	70	130			
Dibromochloromethane	47.4	2.5	50	0	95	70	130			
1,2-Dibromoethane (EDB)	97.4	5	100	0	97	70	130			
Tetrachloroethene	54.3	2.5	50	0	109	61	134			
1,1,1,2-Tetrachloroethane	51.2	2.5	50	0	102	70	130			
Chlorobenzene	48.2	2.5	50	0	96	70	130			
Ethylbenzene	49.2	1.3	50	0	98	68	130			
m,p-Xylene	49.9	1.3	50	0	99.7	64	130			
Bromoform	44.2	2.5	50	0	88	64	138			
Styrene	52.9	2.5	50	0	106	69	130			
o-Xylene	50.2	1.3	50	0	100	70	130			
1,1,2,2-Tetrachloroethane	44.9	2.5	50	0	90	65	131			
1,2,3-Trichloropropane	92.7	10	100	0	93	70	130			
Isopropylbenzene	48.4	2.5	50	0	97	64	138			
Bromobenzene	47.5	2.5	50	0	95	70	130			
n-Propylbenzene	48.7	2.5	50	0	97	66	132			
4-Chlorotoluene	50	2.5	50	0	100	70	130			
2-Chlorotoluene	49.1	2.5	50	0	98	70	130			
1,3,5-Trimethylbenzene	49.1	2.5	50	0	98	66	136			
tert-Butylbenzene	47.9	2.5	50	0	96	65	137			
1,2,4-Trimethylbenzene	48.8	2.5	50	0	98	65	137			
sec-Butylbenzene	48.8	2.5	50	0	98	66	134			
1,3-Dichlorobenzene	49.7	2.5	50	0	99	70	130			
1,4-Dichlorobenzene	46.5	2.5	50	0	93	70	130			
4-Isopropyltoluene	50.3	2.5	50	0	101	66	137			
1,2-Dichlorobenzene	45.9	2.5	50	0	92	70	130			
n-Butylbenzene	52.3	2.5	50	0	105	60	142			
1,2-Dibromo-3-chloropropane (DBCP)	216	15	250	0	86	67	130			
1,2,4-Trichlorobenzene	50.2	10	50	0	100	61	137			
Naphthalene	43.9	10	50	0	88	40	167			
Hexachlorobutadiene	98.8	10	100	0	99	61	130			
1,2,3-Trichlorobenzene	46.8	10	50	0	94	51	144			
Surr: 1,2-Dichloroethane-d4	47.3		50		95	70	130			
Surr: Toluene-d8	49.6		50		99	70	130			
Surr: 4-Bromofluorobenzene	48.2		50		96	70	130			

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QC Summary Report

Work Order: 09112508

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

File ID: **09120109.D** Batch ID: **MS15W1201M** Analysis Date: **12/01/2009 12:14**

Sample ID: **09112406-05AMSD** Units : **µg/L** Run ID: **MSD_15_091201A** Prep Date: **12/01/2009 12:14**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	44.5	2.5	50	0	89	13	167	42.6	4.3(20)	
Chloromethane	36.9	10	50	0	74	28	145	35.97	2.5(20)	
Vinyl chloride	47.3	2.5	50	0	95	43	134	44.89	5.3(20)	
Chloroethane	51.2	2.5	50	0	102	39	154	50.46	1.5(20)	
Bromomethane	47.7	10	50	0	95	19	176	43.12	10.0(20)	
Trichlorofluoromethane	55.6	2.5	50	0	111	34	160	53.17	4.4(20)	
1,1-Dichloroethene	54.4	2.5	50	0	109	60	130	53.87	0.9(20)	
Dichloromethane	48.4	10	50	0	97	68	130	46.39	4.3(20)	
Freon-113	59.4	2.5	50	0	119	49	141	57.39	3.4(20)	
trans-1,2-Dichloroethene	55	2.5	50	0	110	63	130	52.39	4.8(20)	
Methyl tert-butyl ether (MTBE)	51.2	1.3	50	0	102	56	141	48.97	4.4(20)	
1,1-Dichloroethane	51.2	2.5	50	0	102	61	130	48.95	4.5(20)	
2-Butanone (MEK)	515	50	1000	0	52	20	182	494	4.2(20)	
cis-1,2-Dichloroethene	54.6	2.5	50	0	109	70	130	52.14	4.7(20)	
Bromochloromethane	51.5	2.5	50	0	103	70	130	49.79	3.5(20)	
Chloroform	52.3	2.5	50	0	105	67	130	50.45	3.7(20)	
2,2-Dichloropropane	58.7	2.5	50	0	117	30	152	56.45	4.0(20)	
1,2-Dichloroethane	48.7	2.5	50	0	97	60	135	47.44	2.7(20)	
1,1,1-Trichloroethane	54.6	2.5	50	0	109	59	137	53.73	1.6(20)	
1,1-Dichloropropene	54.2	2.5	50	0	108	63	130	52.49	3.2(20)	
Carbon tetrachloride	57.5	2.5	50	0	115	50	147	54.95	4.6(20)	
Benzene	51.2	1.3	50	0	102	67	130	49.79	2.8(20)	
Dibromomethane	48.5	2.5	50	0	97	69	133	45.7	6.0(20)	
1,2-Dichloropropane	50.9	2.5	50	0	102	69	130	49.46	2.8(20)	
Trichloroethene	53.3	2.5	50	0	107	69	130	51.12	4.1(20)	
Bromodichloromethane	52.1	2.5	50	0	104	66	134	50.44	3.3(20)	
cis-1,3-Dichloropropene	49.5	2.5	50	0	99	63	130	46.77	5.6(20)	
trans-1,3-Dichloropropene	44.1	2.5	50	0	88	66	131	42.37	4.1(20)	
1,1,2-Trichloroethane	46.8	2.5	50	0	94	68	130	45.13	3.6(20)	
Toluene	49.5	1.3	50	0	99	66	130	48.36	2.4(20)	
1,3-Dichloropropane	49.6	2.5	50	0	99	70	130	48	3.3(20)	
Dibromochloromethane	48.7	2.5	50	0	97	70	130	47.41	2.8(20)	
1,2-Dibromoethane (EDB)	101	5	100	0	101	70	130	97.44	3.7(20)	
Tetrachloroethene	56	2.5	50	0	112	61	134	54.26	3.2(20)	
1,1,1,2-Tetrachloroethane	53.2	2.5	50	0	106	70	130	51.15	3.9(20)	
Chlorobenzene	49.2	2.5	50	0	98	70	130	48.16	2.2(20)	
Ethylbenzene	50.1	1.3	50	0	100	68	130	49.23	1.8(20)	
m,p-Xylene	50.7	1.3	50	0	101	64	130	49.86	1.8(20)	
Bromoform	44.9	2.5	50	0	90	64	138	44.16	1.7(20)	
Styrene	54.3	2.5	50	0	109	69	130	52.87	2.7(20)	
o-Xylene	51.6	1.3	50	0	103	70	130	50.16	2.8(20)	
1,1,2,2-Tetrachloroethane	46.3	2.5	50	0	93	65	131	44.91	3.0(20)	
1,2,3-Trichloropropane	94	10	100	0	94	70	130	92.71	1.4(20)	
Isopropylbenzene	49.3	2.5	50	0	99	64	138	48.39	1.8(20)	
Bromobenzene	48	2.5	50	0	96	70	130	47.51	0.9(20)	
n-Propylbenzene	49.1	2.5	50	0	98	66	132	48.74	0.8(20)	
4-Chlorotoluene	51	2.5	50	0	102	70	130	50.04	1.9(20)	
2-Chlorotoluene	48.4	2.5	50	0	97	70	130	49.07	1.5(20)	
1,3,5-Trimethylbenzene	50	2.5	50	0	100	66	136	49.09	1.8(20)	
tert-Butylbenzene	49	2.5	50	0	98	65	137	47.86	2.4(20)	
1,2,4-Trimethylbenzene	49.8	2.5	50	0	99.5	65	137	48.75	2.1(20)	
sec-Butylbenzene	50	2.5	50	0	100	66	134	48.78	2.5(20)	
1,3-Dichlorobenzene	50.1	2.5	50	0	100	70	130	49.7	0.9(20)	
1,4-Dichlorobenzene	48.1	2.5	50	0	96	70	130	46.54	3.2(20)	
4-Isopropyltoluene	51.6	2.5	50	0	103	66	137	50.27	2.5(20)	
1,2-Dichlorobenzene	47.3	2.5	50	0	95	70	130	45.93	2.9(20)	
n-Butylbenzene	53.6	2.5	50	0	107	60	142	52.31	2.5(20)	
1,2-Dibromo-3-chloropropane (DBCP)	222	15	250	0	89	67	130	215.7	2.7(20)	
1,2,4-Trichlorobenzene	53.2	10	50	0	106	61	137	50.18	5.9(20)	
Naphthalene	47.7	10	50	0	95	40	167	43.91	8.2(20)	
Hexachlorobutadiene	103	10	100	0	103	61	130	98.84	4.5(20)	
1,2,3-Trichlorobenzene	49.7	10	50	0	99	51	144	46.76	6.0(20)	
Surr: 1,2-Dichloroethane-d4	48		50		96	70	130			
Surr: Toluene-d8	50.1		50		100	70	130			
Surr: 4-Bromofluorobenzene	46.8		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: *06-Dec-09*

QC Summary Report

Work Order: 09112508

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.

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

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 : BMIS09112508

Report Due By : 5:00 PM On : 10-Dec-2009

Client:
Battelle Memorial Institute
3990 Old Town Ave
Suite C-205
San Diego, CA 92110

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 : Client

PO : 218013

Client's COC # : 28889 Job : G005862/JPL Groundwater Monitoring

Cooler Temp	Samples Received	Date Printed
4 °C	25-Nov-2009	**25-Nov-2009**

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
BMI09112508-01A	MW-22-5	AQ	11/24/09 08:10	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI09112508-02A	MW-22-4	AQ	11/24/09 08:38	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI09112508-03A	MW-22-3	AQ	11/24/09 09:00	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI09112508-04A	MW-22-2	AQ	11/24/09 09:22	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI09112508-05A	MW-22-1	AQ	11/24/09 09:47	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI09112508-06A	DUPE-04-4Q09	AQ	11/24/09 00:00	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI09112508-07A	EB-07-11/24/09	AQ	11/24/09 09:37	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI09112508-08A	TB-07-11/24/09	AQ	11/24/09 00:00	1	0	10			VOC by 524 Criteria	VOC by 524 Criteria					Reno Trip Blank 6/22/09

Comments: No security seals. Frozen ice. Temp Blank #2587 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.**	11.25.09 1520

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 ___

28889

Page # 1 **of** 1

Client Name BATTELLE / DAVID CONNER				P.O. # 218013	Job # G005862				Analyses Required							Required QC Level? I II (III) IV
Address 3990 OLD TOWN AVE. C-205				EMail Address												EDD / EDF? YES ___ NO ___
City, State, Zip SAN DIEGO CA 92110				Phone # (619) 726-7311	Fax #											Global ID #
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	VOC (524.2)	TOTAL Cr (200.8)	ClO4- (314.0)	Cl-, SO4-, NO3-, NO2-, PO4-3 (300.0)					REMARKS
0810	11/24/09	AQ	BMI09112508-01	MW-22-5			V/P 5	X	X	X						
0838	↓	↓	.02	MW-22-4			↓	X	X	X						
0900	↓	↓	.03	MW-22-3			↓	X	X	X						
0922	↓	↓	.04	MW-22-2			↓	X	X	X						
0947	↓	↓	.05	MW-22-1			↓	X	X	X						
—	11/24/09	↓	.06	DUPE-04-Q409			V/P 5	X	X	X						DUPLICATE
0937	11/24/09	↓	.07	EB-07-11/24/09			V/P 5	X	X	X						EQUIPMENT BLANK
—	11/24/09	↓	.08	TB-07-11/24/09			V 1	X								TRIP BLANK

ADDITIONAL INSTRUCTIONS:

	Signature	Print Name	Company	Date	Time
Relinquished by	[signature]	CHASE BRADDON	INSIGHT ECC, INC	11/24/09	1300
Received by	Elizabeth Adcox	Elizabeth Adcox	Alpha	11-25-09	1520
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: *09-Dec-09*

David Conner
Battelle Memorial Institute
3990 Old Town Ave Suite C-205
San Diego, CA 92110
(818) 393-2808

CASE NARRATIVE

Job: G005862/JPL Groundwater Monitoring
Work Order: BMI09120150 **Cooler Temp:** 4 °C

Alpha's Sample ID	Client's Sample ID	Matrix
09120150-01A	MW-4-5	Aqueous
09120150-02A	MW-4-4	Aqueous
09120150-03A	MW-4-3	Aqueous
09120150-04A	MW-4-2	Aqueous
09120150-05A	MW-4-1	Aqueous
09120150-06A	DUPE-05-4209	Aqueous
09120150-07A	EB-08-11/30/09	Aqueous
09120150-08A	TB-08-11/30/09	Aqueous

Manually Integrated Analytes

Alpha's Sample ID	Test Reference	Analyte
09120150-05A	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
3990 Old Town Ave
San Diego, CA 92110

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 12/01/09

Job: G005862/JPL Groundwater Monitoring

Perchlorate by Ion Chromatography
EPA Method 314.0

	Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-4-5**					
Lab ID : BMI09120150-01A	Perchlorate	ND	1.00 µg/L	12/02/09 12:28	12/02/09 15:28
Date Sampled 11/30/09 08:31					
Client ID: **MW-4-4**					
Lab ID : BMI09120150-02A	Perchlorate	ND	1.00 µg/L	12/02/09 12:28	12/02/09 15:46
Date Sampled 11/30/09 08:56					
Client ID: **MW-4-3**					
Lab ID : BMI09120150-03A	Perchlorate	ND	1.00 µg/L	12/02/09 12:28	12/02/09 16:05
Date Sampled 11/30/09 09:28					
Client ID: **MW-4-2**					
Lab ID : BMI09120150-04A	Perchlorate	2.24	1.00 µg/L	12/02/09 12:28	12/02/09 16:23
Date Sampled 11/30/09 09:57					
Client ID: **MW-4-1**					
Lab ID : BMI09120150-05A	Perchlorate	96.0	1.00 µg/L	12/02/09 12:28	12/02/09 16:42
Date Sampled 11/30/09 10:38					
Client ID: **DUPE-05-4209**					
Lab ID : BMI09120150-06A	Perchlorate	ND	1.00 µg/L	12/02/09 12:28	12/02/09 18:14
Date Sampled 11/30/09 00:00					
Client ID: **EB-08-11/30/09**					
Lab ID : BMI09120150-07A	Perchlorate	ND	1.00 µg/L	12/02/09 12:28	12/02/09 18:32
Date Sampled 11/30/09 10:18					

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 / 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.

12/14/09
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
3990 Old Town Ave
San Diego, CA 92110

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 12/01/09

Job: G005862/JPL Groundwater Monitoring

Metals by ICPMS
EPA Method 200.8

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-4-5**				
Lab ID : BMI09120150-01A Chromium (Cr)	0.0052	0.0050 mg/L	12/02/09 11:07	12/02/09
Date Sampled 11/30/09 08:31				
Client ID: **MW-4-4**				
Lab ID : BMI09120150-02A Chromium (Cr)	ND	0.0050 mg/L	12/02/09 11:07	12/02/09
Date Sampled 11/30/09 08:56				
Client ID: **MW-4-3**				
Lab ID : BMI09120150-03A Chromium (Cr)	ND	0.0050 mg/L	12/02/09 11:07	12/02/09
Date Sampled 11/30/09 09:28				
Client ID: **MW-4-2**				
Lab ID : BMI09120150-04A Chromium (Cr)	ND	0.0050 mg/L	12/02/09 11:07	12/02/09
Date Sampled 11/30/09 09:57				
Client ID: **MW-4-1**				
Lab ID : BMI09120150-05A Chromium (Cr)	ND	0.0050 mg/L	12/02/09 11:07	12/02/09
Date Sampled 11/30/09 10:38				
Client ID: **DUPE-05-4209**				
Lab ID : BMI09120150-06A Chromium (Cr)	ND	0.0050 mg/L	12/02/09 11:07	12/02/09
Date Sampled 11/30/09 00:00				
Client ID: **EB-08-11/30/09**				
Lab ID : BMI09120150-07A Chromium (Cr)	ND	0.0050 mg/L	12/02/09 11:07	12/02/09
Date Sampled 11/30/09 10:18				

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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12/14/09
Report Date

Alpha Analytical, Inc.

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ANALYTICAL REPORT

Battelle Memorial Institute
3990 Old Town Ave
San Diego, CA 92110
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-4-5** Lab ID : BMI09120150-01A Date Received : 12/01/09 Date Sampled : 11/30/09 08:31	* * * None Found * * *	ND	2.0 µg/L	12/04/09 14:37	12/04/09 14:37
Client ID : **MW-4-4** Lab ID : BMI09120150-02A Date Received : 12/01/09 Date Sampled : 11/30/09 08:56	* * * None Found * * *	ND	2.0 µg/L	12/04/09 14:59	12/04/09 14:59
Client ID : **MW-4-3** Lab ID : BMI09120150-03A Date Received : 12/01/09 Date Sampled : 11/30/09 09:28	* * * None Found * * *	ND	2.0 µg/L	12/04/09 15:22	12/04/09 15:22
Client ID : **MW-4-2** Lab ID : BMI09120150-04A Date Received : 12/01/09 Date Sampled : 11/30/09 09:57	* * * None Found * * *	ND	2.0 µg/L	12/04/09 15:44	12/04/09 15:44
Client ID : **MW-4-1** Lab ID : BMI09120150-05A Date Received : 12/01/09 Date Sampled : 11/30/09 10:38	* * * None Found * * *	ND	2.0 µg/L	12/04/09 16:06	12/04/09 16:06
Client ID : **DUPE-05-4209** Lab ID : BMI09120150-06A Date Received : 12/01/09 Date Sampled : 11/30/09 00:00	Sulfur dioxide	2.2	2.0 µg/L	12/04/09 16:28	12/04/09 16:28
Client ID : **EB-08-11/30/09** Lab ID : BMI09120150-07A Date Received : 12/01/09 Date Sampled : 11/30/09 10:18	* * * None Found * * *	ND	2.0 µg/L	12/04/09 13:31	12/04/09 13:31
Client ID : **TB-08-11/30/09** Lab ID : BMI09120150-08A Date Received : 12/01/09 Date Sampled : 11/30/09 00:00	* * * None Found * * *	ND	2.0 µg/L	12/04/09 13:09	12/04/09 13:09

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 / 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.

12/14/09

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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09120150-01A
Client I.D. Number: MW-4-5

Sampled: 11/30/09 08:31
Received: 12/01/09
Extracted: 12/04/09 14:37
Analyzed: 12/04/09 14:37

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	97	(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 / info@alpha-analytical.com

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12/14/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09120150-02A
Client I.D. Number: MW-4-4

Sampled: 11/30/09 08:56
Received: 12/01/09
Extracted: 12/04/09 14:59
Analyzed: 12/04/09 14:59

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	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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12/14/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09120150-03A
Client I.D. Number: MW-4-3

Sampled: 11/30/09 09:28
Received: 12/01/09
Extracted: 12/04/09 15:22
Analyzed: 12/04/09 15:22

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	0.95	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	0.52	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	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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12/14/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09120150-04A
Client I.D. Number: MW-4-2

Sampled: 11/30/09 09:57
Received: 12/01/09
Extracted: 12/04/09 15:44
Analyzed: 12/04/09 15:44

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	100	(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	0.55	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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12/14/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09120150-05A
Client I.D. Number: MW-4-1

Sampled: 11/30/09 10:38
Received: 12/01/09
Extracted: 12/04/09 16:06
Analyzed: 12/04/09 16:06

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	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

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12/14/09
Report Date

Alpha Analytical, Inc.

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ANALYTICAL REPORT

Battelle Memorial Institute
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09120150-06A
Client I.D. Number: DUPE-05-4209

Sampled: 11/30/09 00:00
Received: 12/01/09
Extracted: 12/04/09 16:28
Analyzed: 12/04/09 16:28

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	1.1	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	0.55	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	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

Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / 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.

12/14/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09120150-07A
Client I.D. Number: EB-08-11/30/09

Sampled: 11/30/09 10:18
Received: 12/01/09
Extracted: 12/04/09 13:31
Analyzed: 12/04/09 13:31

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	102	(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					

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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12/14/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09120150-08A
Client I.D. Number: TB-08-11/30/09

Sampled: 11/30/09 00:00
Received: 12/01/09
Extracted: 12/04/09 13:09
Analyzed: 12/04/09 13:09

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	100	(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	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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12/14/09
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: BMI09120150 **Job:** G005862/JPL Groundwater Monitoring

Alpha's Sample ID	Client's Sample ID	Matrix	pH
09120150-01A	MW-4-5	Aqueous	2
09120150-02A	MW-4-4	Aqueous	2
09120150-03A	MW-4-3	Aqueous	2
09120150-04A	MW-4-2	Aqueous	2
09120150-05A	MW-4-1	Aqueous	2
09120150-06A	DUPE-05-4209	Aqueous	2
09120150-07A	EB-08-11/30/09	Aqueous	2
09120150-08A	TB-08-11/30/09	Aqueous	2

12/14/09

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: *09-Dec-09*

QC Summary Report

Work Order: 09120150

Method Blank

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

File ID: **14** Batch ID: **23184** Analysis Date: **12/02/2009 13:38**

Sample ID: **MB-23184** Units : **µg/L** Run ID: **IC_3_091202A** Prep Date: **12/02/2009 12:28**

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: **23184** Analysis Date: **12/02/2009 13:56**

Sample ID: **LFB-23184** Units : **µg/L** Run ID: **IC_3_091202A** Prep Date: **12/02/2009 12:28**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	24.6	2	25		98	85	115			

Sample Matrix Spike

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

File ID: **27** Batch ID: **23184** Analysis Date: **12/02/2009 17:37**

Sample ID: **09120150-05ALFM** Units : **µg/L** Run ID: **IC_3_091202A** Prep Date: **12/02/2009 12:28**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	343	20	250	96.03	99	80	120			

Sample Matrix Spike Duplicate

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

File ID: **28** Batch ID: **23184** Analysis Date: **12/02/2009 17:55**

Sample ID: **09120150-05ALFMD** Units : **µg/L** Run ID: **IC_3_091202A** Prep Date: **12/02/2009 12:28**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	349	20	250	96.03	101	80	120	343	1.7(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.

Alpha Analytical, Inc.

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Date: *09-Dec-09*

QC Summary Report

Work Order: 09120150

Method Blank

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

File ID: **120309.B\79MB.D** Batch ID: **23179K** Analysis Date: **12/02/2009 22:39**

Sample ID: **MB-23179** Units : **mg/L** Run ID: **ICP/MS_091202C** Prep Date: **12/02/2009 11:07**

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: **120309.B\79L1.D** Batch ID: **23179K** Analysis Date: **12/02/2009 22:45**

Sample ID: **LCS-23179** Units : **mg/L** Run ID: **ICP/MS_091202C** Prep Date: **12/02/2009 11:07**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.057	0.005	0.05		114	80	120			

Sample Matrix Spike

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

File ID: **120309.B\79MS.D** Batch ID: **23179K** Analysis Date: **12/02/2009 23:13**

Sample ID: **09120150-05AMS** Units : **mg/L** Run ID: **ICP/MS_091202C** Prep Date: **12/02/2009 11:07**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0605	0.005	0.05	0	121	80	120			M1

Sample Matrix Spike Duplicate

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

File ID: **120309.B\79MSD.D** Batch ID: **23179K** Analysis Date: **12/02/2009 23:19**

Sample ID: **09120150-05AMSD** Units : **mg/L** Run ID: **ICP/MS_091202C** Prep Date: **12/02/2009 11:07**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0596	0.005	0.05	0	119	80	120	0.06047	1.4(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 uses descriptive data qualifier flags, which could be replaced with either a DOD Q or J flag.

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

Alpha Analytical, Inc.

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

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

Date: *09-Dec-09*

QC Summary Report

Work Order: 09120150

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

File ID: **09120408.D** Batch ID: **MS15W1204M** Analysis Date: **12/04/2009 11:40**

Sample ID: **MBLK MS15W1204M** Units : **µg/L** Run ID: **MSD_15_091204B** Prep Date: **12/04/2009 11:40**

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	10.1		10		101	70	130			
Surr: Toluene-d8	10.1		10		101	70	130			

Alpha Analytical, Inc.

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Date: *09-Dec-09*

QC Summary Report

Work Order: 09120150

Surr: 4-Bromofluorobenzene	9.52	10	95	70	130	

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Date: 09-Dec-09

QC Summary Report

Work Order: 09120150

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

File ID: **09120405.D** Batch ID: **MS15W1204M** Analysis Date: **12/04/2009 10:24**

Sample ID: **LCS MS15W1204M** Units : **µg/L** Run ID: **MSD_15_091204B** Prep Date: **12/04/2009 10:24**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	8.7	1	10		87	70	130			
Chloromethane	8.27	2	10		83	70	130			
Vinyl chloride	8.52	1	10		85	70	130			
Chloroethane	9.85	1	10		99	70	130			
Bromomethane	13.2	2	10		132	70	130(130)			L51
Trichlorofluoromethane	9.65	1	10		97	70	130			
1,1-Dichloroethene	11.2	1	10		112	70	130			
Dichloromethane	10.4	2	10		104	70	130			
Freon-113	10.8	1	10		108	67	141			
trans-1,2-Dichloroethene	11.3	1	10		113	70	130			
Methyl tert-butyl ether (MTBE)	11.4	0.5	10		114	70	130			
1,1-Dichloroethane	10.8	1	10		108	70	130			
2-Butanone (MEK)	197	10	200		98	70	130			
cis-1,2-Dichloroethene	11.5	1	10		115	70	130			
Bromochloromethane	11.4	1	10		114	70	130			
Chloroform	11.2	1	10		112	70	130			
2,2-Dichloropropane	12.3	1	10		123	70	130			
1,2-Dichloroethane	10.9	1	10		109	70	130			
1,1,1-Trichloroethane	11.4	1	10		114	70	130			
1,1-Dichloropropene	11.2	1	10		112	70	130			
Carbon tetrachloride	11.7	1	10		117	70	130			
Benzene	11	0.5	10		110	70	130			
Dibromomethane	11.2	1	10		112	70	130			
1,2-Dichloropropane	11.3	1	10		113	70	130			
Trichloroethene	11.5	1	10		115	70	130			
Bromodichloromethane	11.3	1	10		113	70	130			
cis-1,3-Dichloropropene	11.3	1	10		113	70	130			
trans-1,3-Dichloropropene	10.3	1	10		103	70	130			
1,1,2-Trichloroethane	10.8	1	10		108	70	130			
Toluene	10.5	0.5	10		105	70	130			
1,3-Dichloropropane	10.8	1	10		108	70	130			
Dibromochloromethane	10.2	1	10		102	70	130			
1,2-Dibromoethane (EDB)	21.9	2	20		109	70	130			
Tetrachloroethene	11.5	1	10		115	70	130			
1,1,1,2-Tetrachloroethane	11	1	10		110	70	130			
Chlorobenzene	10.5	1	10		105	70	130			
Ethylbenzene	10.7	0.5	10		107	70	130			
m,p-Xylene	10.9	0.5	10		109	70	130			
Bromoform	9.36	1	10		94	70	130			
Styrene	11.7	1	10		117	70	130			
o-Xylene	11	0.5	10		110	70	130			
1,1,2,2-Tetrachloroethane	10.1	1	10		101	70	130			
1,2,3-Trichloropropane	21.1	2	20		106	70	130			
Isopropylbenzene	10.7	1	10		107	70	130			
Bromobenzene	10.4	1	10		104	70	130			
n-Propylbenzene	10.6	1	10		106	70	130			
4-Chlorotoluene	10.8	1	10		108	70	130			
2-Chlorotoluene	10.7	1	10		107	70	130			
1,3,5-Trimethylbenzene	10.6	1	10		106	70	130			
tert-Butylbenzene	10.3	1	10		103	70	130			
1,2,4-Trimethylbenzene	10.6	1	10		106	70	130			
sec-Butylbenzene	10.5	1	10		105	70	130			
1,3-Dichlorobenzene	10.8	1	10		108	70	130			
1,4-Dichlorobenzene	9.94	1	10		99	70	130			
4-Isopropyltoluene	10.6	1	10		106	70	130			
1,2-Dichlorobenzene	10.1	1	10		101	70	130			
n-Butylbenzene	11.1	1	10		111	70	130			
1,2-Dibromo-3-chloropropane (DBCP)	47.8	3	50		96	70	130			
1,2,4-Trichlorobenzene	10.7	2	10		107	70	130			
Naphthalene	10.1	2	10		101	70	130			
Hexachlorobutadiene	20.4	2	20		102	70	130			
1,2,3-Trichlorobenzene	10.4	2	10		104	70	130			
Surr: 1,2-Dichloroethane-d4	10.1		10		101	70	130			
Surr: Toluene-d8	9.72		10		97	70	130			
Surr: 4-Bromofluorobenzene	9.56		10		96	70	130			

Alpha Analytical, Inc.

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Date: 09-Dec-09

QC Summary Report

Work Order: 09120150

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

File ID: **09120409.D** Batch ID: **MS15W1204M** Analysis Date: **12/04/2009 12:02**

Sample ID: **09120150-05AMS** Units : **µg/L** Run ID: **MSD_15_091204B** Prep Date: **12/04/2009 12:02**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	34.6	2.5	50	0	69	13	167			
Chloromethane	36.3	10	50	0	73	28	145			
Vinyl chloride	40.1	2.5	50	0	80	43	134			
Chloroethane	42.9	2.5	50	0	86	39	154			
Bromomethane	46.1	10	50	0	92	19	176			
Trichlorofluoromethane	41.7	2.5	50	0	83	34	160			
1,1-Dichloroethene	49.3	2.5	50	0	99	60	130			
Dichloromethane	47.3	10	50	0	95	68	130			
Freon-113	54.2	2.5	50	0	108	49	141			
trans-1,2-Dichloroethene	51.4	2.5	50	0	103	63	130			
Methyl tert-butyl ether (MTBE)	50.5	1.3	50	0	101	56	141			
1,1-Dichloroethane	49.2	2.5	50	0	98	61	130			
2-Butanone (MEK)	552	50	1000	0	55	20	182			
cis-1,2-Dichloroethene	52.4	2.5	50	0	105	70	130			
Bromochloromethane	50.7	2.5	50	0	101	70	130			
Chloroform	50.8	2.5	50	0	102	67	130			
2,2-Dichloropropane	56	2.5	50	0	112	30	152			
1,2-Dichloroethane	48.6	2.5	50	0	97	60	135			
1,1,1-Trichloroethane	52.1	2.5	50	0	104	59	137			
1,1-Dichloropropene	51.6	2.5	50	0	103	63	130			
Carbon tetrachloride	52.7	2.5	50	0	105	50	147			
Benzene	49.7	1.3	50	0	99	67	130			
Dibromomethane	48.5	2.5	50	0	97	69	133			
1,2-Dichloropropane	50.1	2.5	50	0	100	69	130			
Trichloroethene	50	2.5	50	0	99.9	69	130			
Bromodichloromethane	49.7	2.5	50	0	99	66	134			
cis-1,3-Dichloropropene	47.6	2.5	50	0	95	63	130			
trans-1,3-Dichloropropene	43.7	2.5	50	0	87	66	131			
1,1,2-Trichloroethane	47.1	2.5	50	0	94	68	130			
Toluene	47.1	1.3	50	0	94	66	130			
1,3-Dichloropropane	48	2.5	50	0	96	70	130			
Dibromochloromethane	44	2.5	50	0	88	70	130			
1,2-Dibromoethane (EDB)	96.5	5	100	0	96	70	130			
Tetrachloroethene	51.6	2.5	50	0	103	61	134			
1,1,1,2-Tetrachloroethane	49.1	2.5	50	0	98	70	130			
Chlorobenzene	47.7	2.5	50	0	95	70	130			
Ethylbenzene	47.7	1.3	50	0	95	68	130			
m,p-Xylene	48.5	1.3	50	0	97	64	130			
Bromoform	40.2	2.5	50	0	80	64	138			
Styrene	52.9	2.5	50	0	106	69	130			
o-Xylene	49	1.3	50	0	98	70	130			
1,1,2,2-Tetrachloroethane	44.7	2.5	50	0	89	65	131			
1,2,3-Trichloropropane	92.8	10	100	0	93	70	130			
Isopropylbenzene	48.5	2.5	50	0	97	64	138			
Bromobenzene	47.5	2.5	50	0	95	70	130			
n-Propylbenzene	48.2	2.5	50	0	96	66	132			
4-Chlorotoluene	49.2	2.5	50	0	98	70	130			
2-Chlorotoluene	48.4	2.5	50	0	97	70	130			
1,3,5-Trimethylbenzene	48.2	2.5	50	0	96	66	136			
tert-Butylbenzene	46.8	2.5	50	0	94	65	137			
1,2,4-Trimethylbenzene	47.6	2.5	50	0	95	65	137			
sec-Butylbenzene	47.3	2.5	50	0	95	66	134			
1,3-Dichlorobenzene	48	2.5	50	0	96	70	130			
1,4-Dichlorobenzene	44.5	2.5	50	0	89	70	130			
4-Isopropyltoluene	48	2.5	50	0	96	66	137			
1,2-Dichlorobenzene	44.5	2.5	50	0	89	70	130			
n-Butylbenzene	49.2	2.5	50	0	98	60	142			
1,2-Dibromo-3-chloropropane (DBCP)	206	15	250	0	82	67	130			
1,2,4-Trichlorobenzene	44.9	10	50	0	90	61	137			
Naphthalene	41.7	10	50	0	83	40	167			
Hexachlorobutadiene	87.3	10	100	0	87	61	130			
1,2,3-Trichlorobenzene	42.3	10	50	0	85	51	144			
Surr: 1,2-Dichloroethane-d4	49.7		50		99	70	130			
Surr: Toluene-d8	48.6		50		97	70	130			
Surr: 4-Bromofluorobenzene	49.2		50		98	70	130			

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Date: *09-Dec-09*

QC Summary Report

Work Order: 09120150

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

File ID: **09120410.D** Batch ID: **MS15W1204M** Analysis Date: **12/04/2009 12:24**

Sample ID: **09120150-05AMSD** Units : **µg/L** Run ID: **MSD_15_091204B** Prep Date: **12/04/2009 12:24**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	35.8	2.5	50	0	72	13	167	34.61	3.3(20)	
Chloromethane	36.9	10	50	0	74	28	145	36.26	1.7(20)	
Vinyl chloride	40	2.5	50	0	80	43	134	40.08	0.2(20)	
Chloroethane	45	2.5	50	0	90	39	154	42.89	4.8(20)	
Bromomethane	55.7	10	50	0	111	19	176	46.06	19.0(20)	
Trichlorofluoromethane	46.9	2.5	50	0	94	34	160	41.73	11.7(20)	
1,1-Dichloroethene	51.2	2.5	50	0	102	60	130	49.25	3.9(20)	
Dichloromethane	47.9	10	50	0	96	68	130	47.32	1.2(20)	
Freon-113	54.2	2.5	50	0	108	49	141	54.24	0.2(20)	
trans-1,2-Dichloroethene	52.4	2.5	50	0	105	63	130	51.38	1.9(20)	
Methyl tert-butyl ether (MTBE)	51.3	1.3	50	0	103	56	141	50.45	1.7(20)	
1,1-Dichloroethane	49.9	2.5	50	0	99.8	61	130	49.2	1.4(20)	
2-Butanone (MEK)	565	50	1000	0	57	20	182	552.5	2.3(20)	
cis-1,2-Dichloroethene	53.1	2.5	50	0	106	70	130	52.39	1.4(20)	
Bromochloromethane	52	2.5	50	0	104	70	130	50.68	2.5(20)	
Chloroform	52.1	2.5	50	0	104	67	130	50.75	2.6(20)	
2,2-Dichloropropane	56.4	2.5	50	0	113	30	152	55.97	0.7(20)	
1,2-Dichloroethane	49.5	2.5	50	0	99	60	135	48.58	2.0(20)	
1,1,1-Trichloroethane	52.8	2.5	50	0	106	59	137	52.11	1.3(20)	
1,1-Dichloropropene	52.2	2.5	50	0	104	63	130	51.62	1.1(20)	
Carbon tetrachloride	53.8	2.5	50	0	108	50	147	52.73	2.1(20)	
Benzene	50.4	1.3	50	0	101	67	130	49.74	1.4(20)	
Dibromomethane	50.3	2.5	50	0	101	69	133	48.45	3.8(20)	
1,2-Dichloropropane	51.3	2.5	50	0	103	69	130	50.14	2.3(20)	
Trichloroethene	51.8	2.5	50	0	104	69	130	49.95	3.6(20)	
Bromodichloromethane	51.7	2.5	50	0	103	66	134	49.74	3.9(20)	
cis-1,3-Dichloropropene	49.5	2.5	50	0	99	63	130	47.64	3.9(20)	
trans-1,3-Dichloropropene	45.7	2.5	50	0	91	66	131	43.69	4.4(20)	
1,1,2-Trichloroethane	48.6	2.5	50	0	97	68	130	47.12	3.1(20)	
Toluene	48	1.3	50	0	96	66	130	47.05	2.0(20)	
1,3-Dichloropropane	49.3	2.5	50	0	99	70	130	47.96	2.8(20)	
Dibromochloromethane	46.5	2.5	50	0	93	70	130	43.97	5.6(20)	
1,2-Dibromoethane (EDB)	99.6	5	100	0	99.6	70	130	96.45	3.2(20)	
Tetrachloroethene	52.7	2.5	50	0	105	61	134	51.63	2.1(20)	
1,1,1,2-Tetrachloroethane	51.1	2.5	50	0	102	70	130	49.09	3.9(20)	
Chlorobenzene	48.8	2.5	50	0	98	70	130	47.7	2.3(20)	
Ethylbenzene	48.7	1.3	50	0	97	68	130	47.72	2.0(20)	
m,p-Xylene	49.3	1.3	50	0	99	64	130	48.46	1.7(20)	
Bromoform	42.8	2.5	50	0	86	64	138	40.16	6.4(20)	
Styrene	54	2.5	50	0	108	69	130	52.85	2.2(20)	
o-Xylene	50.6	1.3	50	0	101	70	130	48.97	3.2(20)	
1,1,2,2-Tetrachloroethane	45.6	2.5	50	0	91	65	131	44.73	2.0(20)	
1,2,3-Trichloropropane	95.6	10	100	0	96	70	130	92.81	3.0(20)	
Isopropylbenzene	48.6	2.5	50	0	97	64	138	48.5	0.2(20)	
Bromobenzene	48.3	2.5	50	0	97	70	130	47.47	1.8(20)	
n-Propylbenzene	48.3	2.5	50	0	97	66	132	48.21	0.2(20)	
4-Chlorotoluene	50.1	2.5	50	0	100	70	130	49.24	1.8(20)	
2-Chlorotoluene	48.7	2.5	50	0	97	70	130	48.4	0.5(20)	
1,3,5-Trimethylbenzene	48.8	2.5	50	0	98	66	136	48.18	1.2(20)	
tert-Butylbenzene	47.5	2.5	50	0	95	65	137	46.81	1.5(20)	
1,2,4-Trimethylbenzene	48.6	2.5	50	0	97	65	137	47.6	2.0(20)	
sec-Butylbenzene	48.2	2.5	50	0	96	66	134	47.25	2.1(20)	
1,3-Dichlorobenzene	48.9	2.5	50	0	98	70	130	48	1.9(20)	
1,4-Dichlorobenzene	46.4	2.5	50	0	93	70	130	44.5	4.2(20)	
4-Isopropyltoluene	49.1	2.5	50	0	98	66	137	48.04	2.1(20)	
1,2-Dichlorobenzene	46.5	2.5	50	0	93	70	130	44.51	4.4(20)	
n-Butylbenzene	50.4	2.5	50	0	101	60	142	49.21	2.4(20)	
1,2-Dibromo-3-chloropropane (DBCP)	212	15	250	0	85	67	130	205.9	3.1(20)	
1,2,4-Trichlorobenzene	47.7	10	50	0	95	61	137	44.85	6.2(20)	
Naphthalene	44.7	10	50	0	89	40	167	41.66	7.1(20)	
Hexachlorobutadiene	92.3	10	100	0	92	61	130	87.26	5.7(20)	
1,2,3-Trichlorobenzene	46	10	50	0	92	51	144	42.33	8.2(20)	
Surr: 1,2-Dichloroethane-d4	49.6		50		99	70	130			
Surr: Toluene-d8	48.9		50		98	70	130			
Surr: 4-Bromofluorobenzene	48.8		50		98	70	130			

Alpha Analytical, Inc.

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Date: *09-Dec-09*

QC Summary Report

Work Order: 09120150

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.

L51 = Analyte recovery was above acceptance limits for the LCS, but was acceptable in the MS/MSD.

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 : BMIS09120150

Report Due By : 5:00 PM On : 15-Dec-09

Client:
Battelle Memorial Institute
3990 Old Town Ave
Suite C-205
San Diego, CA 92110

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 : Client

PO : 218013

Client's COC # : 24123 Job : G005862/JPL Groundwater Monitoring

Cooler Temp	Samples Received	Date Printed
4 °C	01-Dec-09	**01-Dec-09**

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
BMI09120150-01A	MW-4-5	AQ	11/30/09 08:31	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI09120150-02A	MW-4-4	AQ	11/30/09 08:56	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					Level IV QC
BMI09120150-03A	MW-4-3	AQ	11/30/09 09:28	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI09120150-04A	MW-4-2	AQ	11/30/09 09:57	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI09120150-05A	MW-4-1	AQ	11/30/09 10:38	10	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					MS/MSD
BMI09120150-06A	DUPE-05-4209	AQ	11/30/09 00:00	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI09120150-07A	EB-08-11/30/09	AQ	11/30/09 10:18	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI09120150-08A	TB-08-11/30/09	AQ	11/30/09 00:00	1	0	10			VOC by 524 Criteria	VOC by 524 Criteria					Reno TB, 8/25/09

Comments: No security seals. Frozen ice. Temp Blank #7737 received @ 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:			**Alpha Analytical, Inc.**	

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 ___

24123

Page # 1 of 1

Client Name	P.O. #	Job #
BATTELLE / DAVID CONNER	218013	6005862
Address: 3990 OLD TOWN AVE, C-205	EMail Address	
City, State, Zip: SAN DIEGO CA 92110	Phone # (619) 726-7311	Fax #

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	VOA (524.2)	TOTAL Cr (6010)	Cl04-(314.0) Cl-,SO4=,NO3-,NO2- PO43- (300.0)					REMARKS
0831	11/30/09	AQ	[illegible]-01	MW-4-5	NORM		V/P 5	X	X	X					
0857			-02	MW-4-4				X	X	X					LEVEL IV QC
0928			-03	MW-4-3				X	X	X					
0957			-04	MW-4-2			V/P 5	X	X	X					
1038			-05	MW-4-1			V/P 10	X	X	X					MS/MSD
—	11/30/09	AQ	-06	DUPE-05-4009			V/P 5	X	X	X					DUPLICATE
1018			-07	EB-08-11/30/09			V/P 5	X	X	X					EQUIPMENT BLANK
—	11/30/09		-08	TB-08-11/30/09			V 1	X							TRIP BLANK

ADDITIONAL INSTRUCTIONS:

	Signature	Print Name	Company	Date	Time
Relinquished by	[signature]	CHASE BROGDON	INSIGHT ECC, INC.	11/30/09	1300
Received by	[signature]	[illegible]	[illegible]	12-1-09	0004
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: *07-Dec-09*

David Conner
Battelle Memorial Institute
3990 Old Town Ave Suite C-205
San Diego, CA 92110
(818) 393-2808

CASE NARRATIVE

Job: G005862/JPL Groundwater Monitoring

Work Order: BMI09120203 **Cooler Temp:** 4 °C

Alpha's Sample ID	Client's Sample ID	Matrix
09120203-01A	MW-12-5	Aqueous
09120203-02A	MW-12-4	Aqueous
09120203-03A	MW-12-3	Aqueous
09120203-04A	MW-12-2	Aqueous
09120203-05A	MW-12-1	Aqueous
09120203-06A	DUPE-06-4Q09	Aqueous
09120203-07A	EB-09-12/01/09	Aqueous
09120203-08A	TB-09-12/01/09	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
3990 Old Town Ave
San Diego, CA 92110

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 12/02/09

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 : BMI09120203-01A Perchlorate	1.10	1.00 µg/L	12/02/09 12:28	12/02/09 19:27
Date Sampled 12/01/09 08:11				
Client ID: **MW-12-4**				
Lab ID : BMI09120203-02A Perchlorate	2.91	1.00 µg/L	12/02/09 12:28	12/02/09 19:46
Date Sampled 12/01/09 08:41				
Client ID: **MW-12-3**				
Lab ID : BMI09120203-03A Perchlorate	3.16	1.00 µg/L	12/02/09 12:28	12/02/09 20:04
Date Sampled 12/01/09 09:19				
Client ID: **MW-12-2**				
Lab ID : BMI09120203-04A Perchlorate	2.38	1.00 µg/L	12/02/09 12:28	12/02/09 20:22
Date Sampled 12/01/09 09:45				
Client ID: **MW-12-1**				
Lab ID : BMI09120203-05A Perchlorate	1.28	1.00 µg/L	12/02/09 12:28	12/02/09 20:41
Date Sampled 12/01/09 10:15				
Client ID: **DUPE-06-4Q09**				
Lab ID : BMI09120203-06A Perchlorate	3.11	1.00 µg/L	12/02/09 12:28	12/02/09 20:59
Date Sampled 12/01/09 00:00				
Client ID: **EB-09-12/01/09**				
Lab ID : BMI09120203-07A Perchlorate	ND	1.00 µg/L	12/02/09 12:28	12/02/09 21:18
Date Sampled 12/01/09 10:01				

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 / 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.

12/15/09
Report Date

Alpha Analytical, Inc.

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ANALYTICAL REPORT

Battelle Memorial Institute
3990 Old Town Ave
San Diego, CA 92110

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 12/02/09

Job: G005862/JPL Groundwater Monitoring

Metals by ICPMS
EPA Method 200.8

Parameter		Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-12-5**					
Lab ID : BMI09120203-01A	Chromium (Cr)	ND	0.0050 mg/L	12/02/09 11:07	12/03/09 00:33
Date Sampled 12/01/09 08:11					
Client ID: **MW-12-4**					
Lab ID : BMI09120203-02A	Chromium (Cr)	ND	0.0050 mg/L	12/02/09 11:07	12/03/09 00:38
Date Sampled 12/01/09 08:41					
Client ID: **MW-12-3**					
Lab ID : BMI09120203-03A	Chromium (Cr)	ND	0.0050 mg/L	12/02/09 11:07	12/03/09 00:44
Date Sampled 12/01/09 09:19					
Client ID: **MW-12-2**					
Lab ID : BMI09120203-04A	Chromium (Cr)	ND	0.0050 mg/L	12/02/09 11:07	12/03/09 00:50
Date Sampled 12/01/09 09:45					
Client ID: **MW-12-1**					
Lab ID : BMI09120203-05A	Chromium (Cr)	ND	0.0050 mg/L	12/02/09 11:07	12/03/09 00:55
Date Sampled 12/01/09 10:15					
Client ID: **DUPE-06-4Q09**					
Lab ID : BMI09120203-06A	Chromium (Cr)	ND	0.0050 mg/L	12/02/09 11:07	12/03/09 01:01
Date Sampled 12/01/09 00:00					
Client ID: **EB-09-12/01/09**					
Lab ID : BMI09120203-07A	Chromium (Cr)	ND	0.0050 mg/L	12/02/09 11:07	12/03/09 01:06
Date Sampled 12/01/09 10:01					

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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ANALYTICAL REPORT

Battelle Memorial Institute
3990 Old Town Ave
San Diego, CA 92110
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-12-5**					
Lab ID : BMI09120203-01A	* * * None Found * * *	ND	2.0 µg/L	12/03/09 13:10	12/03/09 13:10
Date Received : 12/02/09					
Date Sampled : 12/01/09 08:11					
Client ID : **MW-12-4**					
Lab ID : BMI09120203-02A	Sulfur dioxide	8.5	2.0 µg/L	12/03/09 13:32	12/03/09 13:32
Date Received : 12/02/09					
Date Sampled : 12/01/09 08:41					
Client ID : **MW-12-3**					
Lab ID : BMI09120203-03A	Sulfur dioxide	9.0	2.0 µg/L	12/03/09 13:54	12/03/09 13:54
Date Received : 12/02/09					
Date Sampled : 12/01/09 09:19					
Client ID : **MW-12-2**					
Lab ID : BMI09120203-04A	Sulfur dioxide	2.8	2.0 µg/L	12/03/09 14:16	12/03/09 14:16
Date Received : 12/02/09					
Date Sampled : 12/01/09 09:45					
Client ID : **MW-12-1**					
Lab ID : BMI09120203-05A	* * * None Found * * *	ND	2.0 µg/L	12/03/09 14:38	12/03/09 14:38
Date Received : 12/02/09					
Date Sampled : 12/01/09 10:15					
Client ID : **DUPE-06-4Q09**					
Lab ID : BMI09120203-06A	Sulfur dioxide	7.4	2.0 µg/L	12/03/09 15:01	12/03/09 15:01
Date Received : 12/02/09					
Date Sampled : 12/01/09 00:00					
Client ID : **EB-09-12/01/09**					
Lab ID : BMI09120203-07A	Tertiary Butyl Alcohol (TBA)	15	10 µg/L	12/03/09 12:47	12/03/09 12:47
Date Received : 12/02/09	2-Methyl-1-propene	5.9	2.0 µg/L	12/03/09 12:47	12/03/09 12:47
Date Sampled : 12/01/09 10:01					
Client ID : **TB-09-12/01/09**					
Lab ID : BMI09120203-08A	* * * None Found * * *	ND	2.0 µg/L	12/03/09 12:25	12/03/09 12:25
Date Received : 12/02/09					
Date Sampled : 12/01/09 00:00					

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

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12/15/09

Report Date

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ANALYTICAL REPORT

Battelle Memorial Institute
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09120203-01A
Client I.D. Number: MW-12-5

Sampled: 12/01/09 08:11
Received: 12/02/09
Extracted: 12/03/09 13:10
Analyzed: 12/03/09 13:10

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	101	(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					

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 / info@alpha-analytical.com

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12/15/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09120203-02A
Client I.D. Number: MW-12-4

Sampled: 12/01/09 08:41
Received: 12/02/09
Extracted: 12/03/09 13:32
Analyzed: 12/03/09 13:32

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	0.60	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	1.1	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	102	(70-130)	%REC
65	Surr: Toluene-d8	101	(70-130)	%REC
66	Surr: 4-Bromofluorobenzene	93	(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
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / 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.

12/15/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09120203-03A
Client I.D. Number: MW-12-3

Sampled: 12/01/09 09:19
Received: 12/02/09
Extracted: 12/03/09 13:54
Analyzed: 12/03/09 13:54

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	2.4	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	1.7	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	102	(70-130)	%REC
65	Surr: Toluene-d8	101	(70-130)	%REC
66	Surr: 4-Bromofluorobenzene	92	(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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12/15/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09120203-04A
Client I.D. Number: MW-12-2

Sampled: 12/01/09 09:45
Received: 12/02/09
Extracted: 12/03/09 14:16
Analyzed: 12/03/09 14:16

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	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	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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12/15/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09120203-05A
Client I.D. Number: MW-12-1

Sampled: 12/01/09 10:15
Received: 12/02/09
Extracted: 12/03/09 14:38
Analyzed: 12/03/09 14:38

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	102	(70-130)	%REC
65	Surr: Toluene-d8	101	(70-130)	%REC
66	Surr: 4-Bromofluorobenzene	92	(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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12/15/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09120203-06A
Client I.D. Number: DUPE-06-4Q09

Sampled: 12/01/09 00:00
Received: 12/02/09
Extracted: 12/03/09 15:01
Analyzed: 12/03/09 15:01

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	2.9	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	2.2	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	102	(70-130)	%REC
65	Surr: Toluene-d8	102	(70-130)	%REC
66	Surr: 4-Bromofluorobenzene	93	(70-130)	%REC

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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12/15/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09120203-07A
Client I.D. Number: EB-09-12/01/09

Sampled: 12/01/09 10:01
Received: 12/02/09
Extracted: 12/03/09 12:47
Analyzed: 12/03/09 12:47

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	100	(70-130)	%REC
65	Surr: Toluene-d8	102	(70-130)	%REC
66	Surr: 4-Bromofluorobenzene	93	(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
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / 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.

12/15/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09120203-08A
Client I.D. Number: TB-09-12/01/09

Sampled: 12/01/09 00:00
Received: 12/02/09
Extracted: 12/03/09 12:25
Analyzed: 12/03/09 12:25

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	98	(70-130)	%REC
65	Surr: Toluene-d8	101	(70-130)	%REC
66	Surr: 4-Bromofluorobenzene	93	(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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12/15/09
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: BMI09120203 **Job:** G005862/JPL Groundwater Monitoring

Alpha's Sample ID	Client's Sample ID	Matrix	pH
09120203-01A	MW-12-5	Aqueous	2
09120203-02A	MW-12-4	Aqueous	2
09120203-03A	MW-12-3	Aqueous	2
09120203-04A	MW-12-2	Aqueous	2
09120203-05A	MW-12-1	Aqueous	2
09120203-06A	DUPE-06-4Q09	Aqueous	2
09120203-07A	EB-09-12/01/09	Aqueous	2
09120203-08A	TB-09-12/01/09	Aqueous	2

12/15/09

Report Date

Alpha Analytical, Inc.

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Date: *09-Dec-09*

QC Summary Report

Work Order: 09120203

Method Blank

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

File ID: **14** Batch ID: **23184** Analysis Date: **12/02/2009 13:38**

Sample ID: **MB-23184** Units : **µg/L** Run ID: **IC_3_091202A** Prep Date: **12/02/2009 12:28**

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: **23184** Analysis Date: **12/02/2009 13:56**

Sample ID: **LFB-23184** Units : **µg/L** Run ID: **IC_3_091202A** Prep Date: **12/02/2009 12:28**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	24.6	2	25		98	85	115			

Sample Matrix Spike

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

File ID: **27** Batch ID: **23184** Analysis Date: **12/02/2009 17:37**

Sample ID: **09120150-05ALFM** Units : **µg/L** Run ID: **IC_3_091202A** Prep Date: **12/02/2009 12:28**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	343	20	250	96.03	99	80	120			

Sample Matrix Spike Duplicate

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

File ID: **28** Batch ID: **23184** Analysis Date: **12/02/2009 17:55**

Sample ID: **09120150-05ALFMD** Units : **µg/L** Run ID: **IC_3_091202A** Prep Date: **12/02/2009 12:28**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	349	20	250	96.03	101	80	120	343	1.7(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: *09-Dec-09*

QC Summary Report

Work Order: 09120203

Method Blank

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

File ID: **120309.B\79MB.D** Batch ID: **23179K** Analysis Date: **12/02/2009 22:39**

Sample ID: **MB-23179** Units : **mg/L** Run ID: **ICP/MS_091202C** Prep Date: **12/02/2009 11:07**

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: **120309.B\79L1.D** Batch ID: **23179K** Analysis Date: **12/02/2009 22:45**

Sample ID: **LCS-23179** Units : **mg/L** Run ID: **ICP/MS_091202C** Prep Date: **12/02/2009 11:07**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.057	0.005	0.05		114	80	120			

Sample Matrix Spike

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

File ID: **120309.B\79MS.D** Batch ID: **23179K** Analysis Date: **12/02/2009 23:13**

Sample ID: **09120150-05AMS** Units : **mg/L** Run ID: **ICP/MS_091202C** Prep Date: **12/02/2009 11:07**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0605	0.005	0.05	0	121	80	120			M1

Sample Matrix Spike Duplicate

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

File ID: **120309.B\79MSD.D** Batch ID: **23179K** Analysis Date: **12/02/2009 23:19**

Sample ID: **09120150-05AMSD** Units : **mg/L** Run ID: **ICP/MS_091202C** Prep Date: **12/02/2009 11:07**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0596	0.005	0.05	0	119	80	120	0.06047	1.4(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 uses descriptive data qualifier flags, which could be replaced with either a DOD Q or J flag.

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

Alpha Analytical, Inc.

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Date: 09-Dec-09

QC Summary Report

Work Order: 09120203

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

File ID: **09120308.D** Batch ID: **MS15W1203M** Analysis Date: **12/03/2009 10:12**

Sample ID: **MBLK MS15W1203M** Units : **µg/L** Run ID: **MSD_15_091203D** Prep Date: **12/03/2009 10:12**

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	9.87		10		99	70	130			
Surr: Toluene-d8	10.3		10		103	70	130			

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Date: *09-Dec-09*

QC Summary Report

Work Order: 09120203

Surr: 4-Bromofluorobenzene	9.36	10	94	70	130	

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Date: 09-Dec-09

QC Summary Report

Work Order: 09120203

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

File ID: **09120305.D** Batch ID: **MS15W1203M** Analysis Date: **12/03/2009 09:05**

Sample ID: **LCS MS15W1203M** Units : **µg/L** Run ID: **MSD_15_091203D** Prep Date: **12/03/2009 09:05**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	9.67	1	10		97	70	130			
Chloromethane	7.75	2	10		78	70	130			
Vinyl chloride	8.77	1	10		88	70	130			
Chloroethane	10.2	1	10		102	70	130			
Bromomethane	12.4	2	10		124	70	130			
Trichlorofluoromethane	10.7	1	10		107	70	130			
1,1-Dichloroethene	11	1	10		110	70	130			
Dichloromethane	9.95	2	10		100	70	130			
Freon-113	11.5	1	10		115	67	141			
trans-1,2-Dichloroethene	10.9	1	10		109	70	130			
Methyl tert-butyl ether (MTBE)	10.4	0.5	10		104	70	130			
1,1-Dichloroethane	10.4	1	10		104	70	130			
2-Butanone (MEK)	168	10	200		84	70	130			
cis-1,2-Dichloroethene	11	1	10		110	70	130			
Bromochloromethane	10.6	1	10		106	70	130			
Chloroform	10.7	1	10		107	70	130			
2,2-Dichloropropane	12.1	1	10		121	70	130			
1,2-Dichloroethane	10.1	1	10		101	70	130			
1,1,1-Trichloroethane	11.2	1	10		112	70	130			
1,1-Dichloropropene	11	1	10		110	70	130			
Carbon tetrachloride	11.5	1	10		115	70	130			
Benzene	10.4	0.5	10		104	70	130			
Dibromomethane	10.2	1	10		102	70	130			
1,2-Dichloropropane	10.8	1	10		108	70	130			
Trichloroethene	10.9	1	10		109	70	130			
Bromodichloromethane	10.9	1	10		109	70	130			
cis-1,3-Dichloropropene	10.7	1	10		107	70	130			
trans-1,3-Dichloropropene	9.6	1	10		96	70	130			
1,1,2-Trichloroethane	10.1	1	10		101	70	130			
Toluene	10.2	0.5	10		102	70	130			
1,3-Dichloropropane	10.2	1	10		102	70	130			
Dibromochloromethane	9.99	1	10		99.9	70	130			
1,2-Dibromoethane (EDB)	20.6	2	20		103	70	130			
Tetrachloroethene	11.5	1	10		115	70	130			
1,1,1,2-Tetrachloroethane	10.9	1	10		109	70	130			
Chlorobenzene	10.3	1	10		103	70	130			
Ethylbenzene	10.5	0.5	10		105	70	130			
m,p-Xylene	10.7	0.5	10		107	70	130			
Bromoform	9.29	1	10		93	70	130			
Styrene	11.5	1	10		115	70	130			
o-Xylene	10.7	0.5	10		107	70	130			
1,1,2,2-Tetrachloroethane	9.52	1	10		95	70	130			
1,2,3-Trichloropropane	19.6	2	20		98	70	130			
Isopropylbenzene	10.4	1	10		104	70	130			
Bromobenzene	10	1	10		100	70	130			
n-Propylbenzene	10.5	1	10		105	70	130			
4-Chlorotoluene	10.7	1	10		107	70	130			
2-Chlorotoluene	10.4	1	10		104	70	130			
1,3,5-Trimethylbenzene	10.5	1	10		105	70	130			
tert-Butylbenzene	10.2	1	10		102	70	130			
1,2,4-Trimethylbenzene	10.4	1	10		104	70	130			
sec-Butylbenzene	10.5	1	10		105	70	130			
1,3-Dichlorobenzene	10.4	1	10		104	70	130			
1,4-Dichlorobenzene	9.75	1	10		98	70	130			
4-Isopropyltoluene	10.5	1	10		105	70	130			
1,2-Dichlorobenzene	9.73	1	10		97	70	130			
n-Butylbenzene	10.9	1	10		109	70	130			
1,2-Dibromo-3-chloropropane (DBCP)	45.1	3	50		90	70	130			
1,2,4-Trichlorobenzene	10.5	2	10		105	70	130			
Naphthalene	9.55	2	10		96	70	130			
Hexachlorobutadiene	20.6	2	20		103	70	130			
1,2,3-Trichlorobenzene	9.87	2	10		99	70	130			
Surr: 1,2-Dichloroethane-d4	9.59		10		96	70	130			
Surr: Toluene-d8	9.95		10		100	70	130			
Surr: 4-Bromofluorobenzene	9.75		10		98	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: *09-Dec-09*

QC Summary Report

Work Order: 09120203

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

File ID: **09120309.D** Batch ID: **MS15W1203M** Analysis Date: **12/03/2009 10:34**

Sample ID: **09120203-01AMS** Units : **µg/L** Run ID: **MSD_15_091203D** Prep Date: **12/03/2009 10:34**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	37.5	2.5	50	0	75	13	167			
Chloromethane	33.7	10	50	0	67	28	145			
Vinyl chloride	39.6	2.5	50	0	79	43	134			
Chloroethane	44.6	2.5	50	0	89	39	154			
Bromomethane	43.4	10	50	0	87	19	176			
Trichlorofluoromethane	46.3	2.5	50	0	93	34	160			
1,1-Dichloroethene	48.3	2.5	50	0	97	60	130			
Dichloromethane	45.6	10	50	0	91	68	130			
Freon-113	51.5	2.5	50	0	103	49	141			
trans-1,2-Dichloroethene	48.3	2.5	50	0	97	63	130			
Methyl tert-butyl ether (MTBE)	48.8	1.3	50	0	98	56	141			
1,1-Dichloroethane	47.1	2.5	50	0	94	61	130			
2-Butanone (MEK)	536	50	1000	0	54	20	182			
cis-1,2-Dichloroethene	50.2	2.5	50	0	100	70	130			
Bromochloromethane	50.4	2.5	50	0	101	70	130			
Chloroform	49	2.5	50	0	98	67	130			
2,2-Dichloropropane	53.5	2.5	50	0	107	30	152			
1,2-Dichloroethane	48	2.5	50	0	96	60	135			
1,1,1-Trichloroethane	49.5	2.5	50	0	99	59	137			
1,1-Dichloropropene	48.1	2.5	50	0	96	63	130			
Carbon tetrachloride	50.4	2.5	50	0	101	50	147			
Benzene	47.4	1.3	50	0	95	67	130			
Dibromomethane	48.6	2.5	50	0	97	69	133			
1,2-Dichloropropane	49	2.5	50	0	98	69	130			
Trichloroethene	47.9	2.5	50	0	96	69	130			
Bromodichloromethane	50	2.5	50	0	100	66	134			
cis-1,3-Dichloropropene	48.2	2.5	50	0	96	63	130			
trans-1,3-Dichloropropene	44.3	2.5	50	0	89	66	131			
1,1,2-Trichloroethane	46.7	2.5	50	0	93	68	130			
Toluene	44.7	1.3	50	0	89	66	130			
1,3-Dichloropropane	47.5	2.5	50	0	95	70	130			
Dibromochloromethane	45.4	2.5	50	0	91	70	130			
1,2-Dibromoethane (EDB)	96.1	5	100	0	96	70	130			
Tetrachloroethene	48.6	2.5	50	0	97	61	134			
1,1,1,2-Tetrachloroethane	48.5	2.5	50	0	97	70	130			
Chlorobenzene	45.9	2.5	50	0	92	70	130			
Ethylbenzene	45.7	1.3	50	0	91	68	130			
m,p-Xylene	46.3	1.3	50	0	93	64	130			
Bromoform	42.3	2.5	50	0	85	64	138			
Styrene	51.4	2.5	50	0	103	69	130			
o-Xylene	47.2	1.3	50	0	94	70	130			
1,1,2,2-Tetrachloroethane	44	2.5	50	0	88	65	131			
1,2,3-Trichloropropane	90.8	10	100	0	91	70	130			
Isopropylbenzene	46.8	2.5	50	0	94	64	138			
Bromobenzene	47.1	2.5	50	0	94	70	130			
n-Propylbenzene	46.3	2.5	50	0	93	66	132			
4-Chlorotoluene	48.3	2.5	50	0	97	70	130			
2-Chlorotoluene	47.1	2.5	50	0	94	70	130			
1,3,5-Trimethylbenzene	46.8	2.5	50	0	94	66	136			
tert-Butylbenzene	45	2.5	50	0	90	65	137			
1,2,4-Trimethylbenzene	46.8	2.5	50	0	94	65	137			
sec-Butylbenzene	45.7	2.5	50	0	91	66	134			
1,3-Dichlorobenzene	47.6	2.5	50	0	95	70	130			
1,4-Dichlorobenzene	44.9	2.5	50	0	90	70	130			
4-Isopropyltoluene	46.9	2.5	50	0	94	66	137			
1,2-Dichlorobenzene	45.1	2.5	50	0	90	70	130			
n-Butylbenzene	48	2.5	50	0	96	60	142			
1,2-Dibromo-3-chloropropane (DBCP)	211	15	250	0	84	67	130			
1,2,4-Trichlorobenzene	46.4	10	50	0	93	61	137			
Naphthalene	43.3	10	50	0	87	40	167			
Hexachlorobutadiene	87.9	10	100	0	88	61	130			
1,2,3-Trichlorobenzene	43.8	10	50	0	88	51	144			
Surr: 1,2-Dichloroethane-d4	48.7		50		97	70	130			
Surr: Toluene-d8	48.5		50		97	70	130			
Surr: 4-Bromofluorobenzene	48.5		50		97	70	130			

Alpha Analytical, Inc.

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

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Date: 09-Dec-09

QC Summary Report

Work Order: 09120203

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

File ID: **09120310.D** Batch ID: **MS15W1203M** Analysis Date: **12/03/2009 10:56**

Sample ID: **09120203-01AMSD** Units : **µg/L** Run ID: **MSD_15_091203D** Prep Date: **12/03/2009 10:56**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	34.4	2.5	50	0	69	13	167	37.52	8.6(20)	
Chloromethane	32.7	10	50	0	65	28	145	33.68	3.1(20)	
Vinyl chloride	36.3	2.5	50	0	73	43	134	39.61	8.9(20)	
Chloroethane	41.5	2.5	50	0	83	39	154	44.58	7.2(20)	
Bromomethane	46.4	10	50	0	93	19	176	43.35	6.9(20)	
Trichlorofluoromethane	42.2	2.5	50	0	84	34	160	46.29	9.3(20)	
1,1-Dichloroethene	44.4	2.5	50	0	89	60	130	48.27	8.3(20)	
Dichloromethane	44.5	10	50	0	89	68	130	45.56	2.5(20)	
Freon-113	46.7	2.5	50	0	93	49	141	51.54	9.9(20)	
trans-1,2-Dichloroethene	46.2	2.5	50	0	92	63	130	48.32	4.5(20)	
Methyl tert-butyl ether (MTBE)	48	1.3	50	0	96	56	141	48.77	1.7(20)	
1,1-Dichloroethane	44.9	2.5	50	0	90	61	130	47.1	4.7(20)	
2-Butanone (MEK)	523	50	1000	0	52	20	182	535.5	2.4(20)	
cis-1,2-Dichloroethene	48.3	2.5	50	0	97	70	130	50.18	3.8(20)	
Bromochloromethane	48.9	2.5	50	0	98	70	130	50.42	3.1(20)	
Chloroform	47.1	2.5	50	0	94	67	130	49.02	4.0(20)	
2,2-Dichloropropane	50.2	2.5	50	0	100	30	152	53.54	6.5(20)	
1,2-Dichloroethane	46.8	2.5	50	0	94	60	135	47.96	2.5(20)	
1,1,1-Trichloroethane	45.9	2.5	50	0	92	59	137	49.54	7.6(20)	
1,1-Dichloropropene	45	2.5	50	0	90	63	130	48.09	6.7(20)	
Carbon tetrachloride	46.6	2.5	50	0	93	50	147	50.43	8.0(20)	
Benzene	45.4	1.3	50	0	91	67	130	47.36	4.2(20)	
Dibromomethane	46.6	2.5	50	0	93	69	133	48.6	4.3(20)	
1,2-Dichloropropane	47.5	2.5	50	0	95	69	130	48.96	3.0(20)	
Trichloroethene	45	2.5	50	0	90	69	130	47.87	6.3(20)	
Bromodichloromethane	48.7	2.5	50	0	97	66	134	50.02	2.8(20)	
cis-1,3-Dichloropropene	46.3	2.5	50	0	93	63	130	48.21	4.1(20)	
trans-1,3-Dichloropropene	42.8	2.5	50	0	86	66	131	44.25	3.4(20)	
1,1,2-Trichloroethane	44.8	2.5	50	0	90	68	130	46.69	4.1(20)	
Toluene	42.9	1.3	50	0	86	66	130	44.74	4.3(20)	
1,3-Dichloropropane	46	2.5	50	0	92	70	130	47.52	3.3(20)	
Dibromochloromethane	44.1	2.5	50	0	88	70	130	45.38	2.8(20)	
1,2-Dibromoethane (EDB)	93.1	5	100	0	93	70	130	96.11	3.2(20)	
Tetrachloroethene	45.3	2.5	50	0	91	61	134	48.63	7.2(20)	
1,1,1,2-Tetrachloroethane	47.4	2.5	50	0	95	70	130	48.5	2.3(20)	
Chlorobenzene	44.7	2.5	50	0	89	70	130	45.9	2.7(20)	
Ethylbenzene	43.7	1.3	50	0	87	68	130	45.74	4.7(20)	
m,p-Xylene	44.4	1.3	50	0	89	64	130	46.3	4.2(20)	
Bromoform	41.1	2.5	50	0	82	64	138	42.26	2.8(20)	
Styrene	49.9	2.5	50	0	99.9	69	130	51.38	2.9(20)	
o-Xylene	46.5	1.3	50	0	93	70	130	47.21	1.4(20)	
1,1,2,2-Tetrachloroethane	43.4	2.5	50	0	87	65	131	44.01	1.3(20)	
1,2,3-Trichloropropane	88.1	10	100	0	88	70	130	90.78	3.0(20)	
Isopropylbenzene	43.9	2.5	50	0	88	64	138	46.75	6.4(20)	
Bromobenzene	46.2	2.5	50	0	92	70	130	47.11	2.0(20)	
n-Propylbenzene	44.1	2.5	50	0	88	66	132	46.3	4.9(20)	
4-Chlorotoluene	45.9	2.5	50	0	92	70	130	48.33	5.2(20)	
2-Chlorotoluene	45.5	2.5	50	0	91	70	130	47.08	3.3(20)	
1,3,5-Trimethylbenzene	44.8	2.5	50	0	90	66	136	46.8	4.5(20)	
tert-Butylbenzene	42.8	2.5	50	0	86	65	137	45.03	5.0(20)	
1,2,4-Trimethylbenzene	45	2.5	50	0	90	65	137	46.81	3.9(20)	
sec-Butylbenzene	43.4	2.5	50	0	87	66	134	45.7	5.1(20)	
1,3-Dichlorobenzene	47.2	2.5	50	0	94	70	130	47.62	0.9(20)	
1,4-Dichlorobenzene	44.2	2.5	50	0	88	70	130	44.93	1.7(20)	
4-Isopropyltoluene	44.7	2.5	50	0	89	66	137	46.93	4.9(20)	
1,2-Dichlorobenzene	43.9	2.5	50	0	88	70	130	45.12	2.8(20)	
n-Butylbenzene	46.1	2.5	50	0	92	60	142	48.04	4.2(20)	
1,2-Dibromo-3-chloropropane (DBCP)	207	15	250	0	83	67	130	210.8	1.9(20)	
1,2,4-Trichlorobenzene	47.2	10	50	0	94	61	137	46.36	1.7(20)	
Naphthalene	43.9	10	50	0	88	40	167	43.25	1.5(20)	
Hexachlorobutadiene	87.9	10	100	0	88	61	130	87.92	0.0(20)	
1,2,3-Trichlorobenzene	45.8	10	50	0	92	51	144	43.78	4.5(20)	
Surr: 1,2-Dichloroethane-d4	48.9		50		98	70	130			
Surr: Toluene-d8	48.5		50		97	70	130			
Surr: 4-Bromofluorobenzene	48.1		50		96	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: *09-Dec-09*

QC Summary Report

Work Order: 09120203

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

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

CA

WorkOrder : BMIS09120203

Report Due By : 5:00 PM On : 16-Dec-2009

Client:
Battelle Memorial Institute
3990 Old Town Ave
Suite C-205
San Diego, CA 92110

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 : Client

PO : 218013

Client's COC # : 24121 Job : G005862/JPL Groundwater Monitoring

Cooler Temp	Samples Received	Date Printed
4 °C	02-Dec-2009	**02-Dec-2009**

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
BMI09120203-01A	MW-12-5	AQ	12/01/09 08:11	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI09120203-02A	MW-12-4	AQ	12/01/09 08:41	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI09120203-03A	MW-12-3	AQ	12/01/09 09:19	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI09120203-04A	MW-12-2	AQ	12/01/09 09:45	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI09120203-05A	MW-12-1	AQ	12/01/09 10:15	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI09120203-06A	DUPE-06-4Q09	AQ	12/01/09 00:00	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI09120203-07A	EB-09-12/01/09	AQ	12/01/09 10:01	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI09120203-08A	TB-09-12/01/09	AQ	12/01/09 00:00	1	0	10			VOC by 524 Criteria	VOC by 524 Criteria					Reno Trip Blank 8/25/09

Comments: No security seals. Frozen ice. Temp Blank #8765 received @ 4°C. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). Logged in EB and TB per previous workorders. :

	Signature	Print Name	Company	Date/Time
Logged in by:	Elizabeth Adcox	Elizabeth Adcox	**Alpha Analytical, Inc.**	12.2.09 1029

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 ___

24121

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 #
Report Attention
Sampled by

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

Analyses Required: VOC (524.2); TOTAL Cr (200.8); ClO4- (314.0); Cl-, SO4=, NO3-, NO2-, PO4-3 (300.0)

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)	Cl-, SO4=, NO3-, NO2-, PO4-3 (300.0)				REMARKS
0811	12/01/09	AQ	BMI09120203-01	MW-12-5	NORM		4/P 5	X	X	X					
0841	↓	↓	.02	MW-12-4	↓		↓	X	X	X					
0919			.03	MW-12-3				X	X	X					
0945			.04	MW-12-2				X	X	X					
1015			.05	MW-12-1			↓	X	X	X					
--			.06	DUPE-06-4Q09			4/P 5	X	X	X					DUPLICATE
1001			.07	EB-09-12/01/09			1/P 5								EQUIPMENT BLANK
--	↓	↓	.08	TB-09-12/01/09	↓		V1								TRIP BLANK

ADDITIONAL INSTRUCTIONS:

	Signature	Print Name	Company	Date	Time
Relinquished by	[signature]	CHASE BRAGDON	INSIGHT E.C.C. INC	12/01/09	1300
Received by	Elizabeth Adcox	Elizabeth Adcox	Alpha	12-2-09	1029
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: *16-Dec-09*

David Conner
Battelle Memorial Institute
3990 Old Town Ave Suite C-205
San Diego, CA 92110
(818) 393-2808

CASE NARRATIVE

Job: G005862/JPL Groundwater Monitoring

Work Order: BMI09120304 **Cooler Temp:** 4 °C

Alpha's Sample ID	Client's Sample ID	Matrix
09120304-01A	MW-11-5	Aqueous
09120304-02A	MW-11-4	Aqueous
09120304-03A	MW-11-3	Aqueous
09120304-04A	MW-11-2	Aqueous
09120304-05A	MW-11-1	Aqueous
09120304-06A	EB-10-12/02/09	Aqueous
09120304-07A	TB-10-12/02/09	Aqueous

Manually Integrated Analytes

Alpha's Sample ID	Test Reference	Analyte
09120304-01A	EPA Method 314.0	Perchlorate
09120304-02A	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.

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
3990 Old Town Ave
San Diego, CA 92110

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 12/03/09

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 : BMI09120304-05A	Chloride	31	0.50 mg/L	12/03/09 12:51	12/03/09 14:22
Date Sampled 12/02/09 10:38	Nitrite (NO2) - N	ND	0.25 mg/L	12/03/09 12:51	12/03/09 14:22
	Nitrate (NO3) - N	1.2	0.25 mg/L	12/03/09 12:51	12/03/09 14:22
	Sulfate (SO4)	51	0.50 mg/L	12/03/09 12:51	12/03/09 14:22
	Phosphate, ortho - P	ND	0.25 mg/L	12/03/09 12:51	12/03/09 14:22

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 / 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.

12/16/09
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
3990 Old Town Ave
San Diego, CA 92110

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 12/03/09

Job: G005862/JPL Groundwater Monitoring

Perchlorate by Ion Chromatography
EPA Method 314.0

Parameter		Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-11-5**					
Lab ID : BMI09120304-01A	Perchlorate	1.11	1.00 µg/L	12/11/09 11:22	12/11/09 13:16
Date Sampled 12/02/09 08:42					
Client ID: **MW-11-4**					
Lab ID : BMI09120304-02A	Perchlorate	1.27	1.00 µg/L	12/11/09 11:22	12/11/09 13:35
Date Sampled 12/02/09 09:09					
Client ID: **MW-11-3**					
Lab ID : BMI09120304-03A	Perchlorate	ND	1.00 µg/L	12/11/09 11:22	12/11/09 13:53
Date Sampled 12/02/09 09:41					
Client ID: **MW-11-2**					
Lab ID : BMI09120304-04A	Perchlorate	ND	1.00 µg/L	12/11/09 11:22	12/11/09 14:12
Date Sampled 12/02/09 10:07					
Client ID: **MW-11-1**					
Lab ID : BMI09120304-05A	Perchlorate	1.64	1.00 µg/L	12/11/09 11:22	12/11/09 14:30
Date Sampled 12/02/09 10:38					
Client ID: **EB-10-12/02/09**					
Lab ID : BMI09120304-06A	Perchlorate	ND	1.00 µg/L	12/11/09 11:22	12/11/09 14:48
Date Sampled 12/02/09 10:23					

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 / info@alpha-analytical.com

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

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Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 12/03/09

Job: G005862/JPL Groundwater Monitoring

Metals by ICPMS
EPA Method 200.8

Parameter		Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-11-5**					
Lab ID : BMI09120304-01A	Chromium (Cr)	ND	0.0050 mg/L	12/04/09 10:17	12/04/09 22:39
Date Sampled 12/02/09 08:42					
Client ID: **MW-11-4**					
Lab ID : BMI09120304-02A	Chromium (Cr)	ND	0.0050 mg/L	12/04/09 10:17	12/04/09 22:45
Date Sampled 12/02/09 09:09					
Client ID: **MW-11-3**					
Lab ID : BMI09120304-03A	Chromium (Cr)	ND	0.0050 mg/L	12/04/09 10:17	12/04/09 22:50
Date Sampled 12/02/09 09:41					
Client ID: **MW-11-2**					
Lab ID : BMI09120304-04A	Chromium (Cr)	ND	0.0050 mg/L	12/04/09 10:17	12/04/09 22:56
Date Sampled 12/02/09 10:07					
Client ID: **MW-11-1**					
Lab ID : BMI09120304-05A	Chromium (Cr)	ND	0.0050 mg/L	12/04/09 10:17	12/04/09 23:01
Date Sampled 12/02/09 10:38					
Client ID: **EB-10-12/02/09**					
Lab ID : BMI09120304-06A	Chromium (Cr)	ND	0.0050 mg/L	12/04/09 10:17	12/04/09 23:35
Date Sampled 12/02/09 10:23					

ND = Not Detected

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San Diego, CA 92110
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-11-5**					
Lab ID : BMI09120304-01A	Sulfur dioxide	8.4	2.0 µg/L	12/04/09 16:50	12/04/09 16:50
Date Received : 12/03/09					
Date Sampled : 12/02/09 08:42					
Client ID : **MW-11-4**					
Lab ID : BMI09120304-02A	Sulfur dioxide	9.9	2.0 µg/L	12/04/09 17:13	12/04/09 17:13
Date Received : 12/03/09					
Date Sampled : 12/02/09 09:09					
Client ID : **MW-11-3**					
Lab ID : BMI09120304-03A	Sulfur dioxide	10	2.0 µg/L	12/04/09 17:35	12/04/09 17:35
Date Received : 12/03/09					
Date Sampled : 12/02/09 09:41					
Client ID : **MW-11-2**					
Lab ID : BMI09120304-04A	Sulfur dioxide	7.1	2.0 µg/L	12/04/09 17:57	12/04/09 17:57
Date Received : 12/03/09					
Date Sampled : 12/02/09 10:07					
Client ID : **MW-11-1**					
Lab ID : BMI09120304-05A	Sulfur dioxide	4.5	2.0 µg/L	12/04/09 18:20	12/04/09 18:20
Date Received : 12/03/09					
Date Sampled : 12/02/09 10:38					
Client ID : **EB-10-12/02/09**					
Lab ID : BMI09120304-06A	* * * None Found * * *	ND	2.0 µg/L	12/04/09 14:15	12/04/09 14:15
Date Received : 12/03/09					
Date Sampled : 12/02/09 10:23					
Client ID : **TB-10-12/02/09**					
Lab ID : BMI09120304-07A	* * * None Found * * *	ND	2.0 µg/L	12/04/09 13:53	12/04/09 13:53
Date Received : 12/03/09					
Date Sampled : 12/02/09 00:00					

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Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

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ANALYTICAL REPORT

Battelle Memorial Institute
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09120304-01A
Client I.D. Number: MW-11-5

Sampled: 12/02/09 08:42
Received: 12/03/09
Extracted: 12/04/09 16:50
Analyzed: 12/04/09 16:50

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	103	(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

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San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09120304-02A
Client I.D. Number: MW-11-4

Sampled: 12/02/09 09:09
Received: 12/03/09
Extracted: 12/04/09 17:13
Analyzed: 12/04/09 17:13

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	102	(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					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

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Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09120304-03A
Client I.D. Number: MW-11-3

Sampled: 12/02/09 09:41
Received: 12/03/09
Extracted: 12/04/09 17:35
Analyzed: 12/04/09 17:35

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	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	102	(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					

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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Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09120304-04A
Client I.D. Number: MW-11-2

Sampled: 12/02/09 10:07
Received: 12/03/09
Extracted: 12/04/09 17:57
Analyzed: 12/04/09 17:57

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	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	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 / info@alpha-analytical.com

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

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12/16/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09120304-05A
Client I.D. Number: MW-11-1

Sampled: 12/02/09 10:38
Received: 12/03/09
Extracted: 12/04/09 18:20
Analyzed: 12/04/09 18:20

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	102	(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	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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12/16/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09120304-06A
Client I.D. Number: EB-10-12/02/09

Sampled: 12/02/09 10:23
Received: 12/03/09
Extracted: 12/04/09 14:15
Analyzed: 12/04/09 14:15

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	102	(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

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12/16/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09120304-07A
Client I.D. Number: TB-10-12/02/09

Sampled: 12/02/09 00:00
Received: 12/03/09
Extracted: 12/04/09 13:53
Analyzed: 12/04/09 13:53

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	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					

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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12/16/09
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: BMI09120304 **Job:** G005862/JPL Groundwater Monitoring

Alpha's Sample ID	Client's Sample ID	Matrix	pH
09120304-01A	MW-11-5	Aqueous	2
09120304-02A	MW-11-4	Aqueous	2
09120304-03A	MW-11-3	Aqueous	2
09120304-04A	MW-11-2	Aqueous	2
09120304-05A	MW-11-1	Aqueous	2
09120304-06A	EB-10-12/02/09	Aqueous	2
09120304-07A	TB-10-12/02/09	Aqueous	2

12/16/09

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: 09-Dec-09

QC Summary Report

Work Order: 09120304

Method Blank

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

File ID: **16** Batch ID: **23190A** Analysis Date: **12/03/2009 13:26**

Sample ID: **MB-23190** Units : **mg/L** Run ID: **IC_1_091203A** Prep Date: **12/03/2009 12:51**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Nitrite (NO2) - N	ND	0.25								
Nitrate (NO3) - N	ND	0.25								
Phosphate, ortho - P	ND	0.25								

Laboratory Fortified Blank

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

File ID: **17** Batch ID: **23190A** Analysis Date: **12/03/2009 13:45**

Sample ID: **LFB-23190** Units : **mg/L** Run ID: **IC_1_091203A** Prep Date: **12/03/2009 12:51**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Nitrite (NO2) - N	1.16	0.25	1.25		92	90	110			
Nitrate (NO3) - N	1.29	0.25	1.25		103	90	110			
Phosphate, ortho - P	1.42	0.25	1.25		113	90	110			L1

Laboratory Fortified Blank Duplicate

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

File ID: **18** Batch ID: **23190A** Analysis Date: **12/03/2009 14:03**

Sample ID: **LFBD-23190** Units : **mg/L** Run ID: **IC_1_091203A** Prep Date: **12/03/2009 12:51**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Nitrite (NO2) - N	1.23	0.25	1.25		98	90	110	1.156	6.1(10)	
Nitrate (NO3) - N	1.32	0.25	1.25		106	90	110	1.288	2.6(10)	
Phosphate, ortho - P	1.33	0.25	1.25		106	90	110	1.418	6.4(10)	

Sample Matrix Spike

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

File ID: **23** Batch ID: **23190A** Analysis Date: **12/03/2009 15:36**

Sample ID: **09120304-05ALFM** Units : **mg/L** Run ID: **IC_1_091203A** Prep Date: **12/03/2009 12:51**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Nitrite (NO2) - N	1.07	0.25	1.25	0	86	80	120			
Nitrate (NO3) - N	2.48	0.25	1.25	1.186	103	80	120			
Phosphate, ortho - P	1.54	0.25	1.25	0	123	80	120			M1

Sample Matrix Spike Duplicate

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

File ID: **24** Batch ID: **23190A** Analysis Date: **12/03/2009 15:54**

Sample ID: **09120304-05ALFMD** Units : **mg/L** Run ID: **IC_1_091203A** Prep Date: **12/03/2009 12:51**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Nitrite (NO2) - N	1.09	0.25	1.25	0	87	80	120	1.074	1.2(10)	
Nitrate (NO3) - N	2.48	0.25	1.25	1.186	103	80	120	2.477	0.0(10)	
Phosphate, ortho - P	1.73	0.25	1.25	0	138	80	120	1.538	11.7(10)	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.

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

L1 = The associated blank spike recovery was above laboratory acceptance limits.

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

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

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Date: *09-Dec-09*

QC Summary Report

Work Order: 09120304

Method Blank

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

File ID: **16** Batch ID: **23190B** Analysis Date: **12/03/2009 13:26**

Sample ID: **MB-23190** Units : **mg/L** Run ID: **IC_1_091203A** Prep Date: **12/03/2009 12:51**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sulfate (SO4)	ND	0.5								

Laboratory Fortified Blank

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

File ID: **17** Batch ID: **23190B** Analysis Date: **12/03/2009 13:45**

Sample ID: **LFB-23190** Units : **mg/L** Run ID: **IC_1_091203A** Prep Date: **12/03/2009 12:51**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sulfate (SO4)	9.62	0.5	10		96	90	110			

Sample Matrix Spike

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

File ID: **23** Batch ID: **23190B** Analysis Date: **12/03/2009 15:36**

Sample ID: **09120304-05ALFM** Units : **mg/L** Run ID: **IC_1_091203A** Prep Date: **12/03/2009 12:51**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sulfate (SO4)	59.8	0.5	10	51.3	85	80	120			

Sample Matrix Spike Duplicate

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

File ID: **24** Batch ID: **23190B** Analysis Date: **12/03/2009 15:54**

Sample ID: **09120304-05ALFMD** Units : **mg/L** Run ID: **IC_1_091203A** Prep Date: **12/03/2009 12:51**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sulfate (SO4)	60.7	0.5	10	51.3	94	80	120	59.78	1.5(10)	

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-Dec-09*

QC Summary Report

Work Order: 09120304

Method Blank

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

File ID: **16** Batch ID: **23190C** Analysis Date: **12/03/2009 13:26**

Sample ID: **MB-23190** Units : **mg/L** Run ID: **IC_1_091203A** Prep Date: **12/03/2009 12:51**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	ND	0.5								

Laboratory Fortified Blank

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

File ID: **17** Batch ID: **23190C** Analysis Date: **12/03/2009 13:45**

Sample ID: **LFB-23190** Units : **mg/L** Run ID: **IC_1_091203A** Prep Date: **12/03/2009 12:51**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	4.74	0.5	5		95	90	110			

Sample Matrix Spike

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

File ID: **23** Batch ID: **23190C** Analysis Date: **12/03/2009 15:36**

Sample ID: **09120304-05ALFM** Units : **mg/L** Run ID: **IC_1_091203A** Prep Date: **12/03/2009 12:51**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	35.6	0.5	5	31.18	89	80	120			

Sample Matrix Spike Duplicate

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

File ID: **24** Batch ID: **23190C** Analysis Date: **12/03/2009 15:54**

Sample ID: **09120304-05ALFMD** Units : **mg/L** Run ID: **IC_1_091203A** Prep Date: **12/03/2009 12:51**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	35.9	0.5	5	31.18	93	80	120	35.61	0.7(10)	

Comments:

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QC Summary Report

Work Order: 09120304

Method Blank

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

File ID: **14** Batch ID: **23231** Analysis Date: **12/11/2009 12:21**

Sample ID: **MB-23231** Units : **µg/L** Run ID: **IC_3_091211A** Prep Date: **12/11/2009 11:22**

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: **23231** Analysis Date: **12/11/2009 12:40**

Sample ID: **LFB-23231** Units : **µg/L** Run ID: **IC_3_091211A** Prep Date: **12/11/2009 11:22**

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: **34** Batch ID: **23231** Analysis Date: **12/11/2009 18:29**

Sample ID: **09121005-03ALFM** Units : **µg/L** Run ID: **IC_3_091211A** Prep Date: **12/11/2009 11:22**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	72.6	2	25	42.21	122	80	120			M1

Sample Matrix Spike Duplicate

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

File ID: **35** Batch ID: **23231** Analysis Date: **12/11/2009 18:48**

Sample ID: **09121005-03ALFMD** Units : **µg/L** Run ID: **IC_3_091211A** Prep Date: **12/11/2009 11:22**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	73.4	2	25	42.21	125	80	120	72.65	1.0(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.

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

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

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QC Summary Report

Work Order: 09120304

Method Blank

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

File ID: **120409.B\92MB.D** Batch ID: **23192K** Analysis Date: **12/04/2009 21:08**

Sample ID: **MB-23192** Units : **mg/L** Run ID: **ICP/MS_091204B** Prep Date: **12/04/2009 10:17**

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: **120409.B\92L1.D** Batch ID: **23192K** Analysis Date: **12/04/2009 21:14**

Sample ID: **LCS-23192** Units : **mg/L** Run ID: **ICP/MS_091204B** Prep Date: **12/04/2009 10:17**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0535	0.005	0.05		107	80	120			

Sample Matrix Spike

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

File ID: **120409.B\92MS.D** Batch ID: **23192K** Analysis Date: **12/04/2009 21:42**

Sample ID: **09120401-01AMS** Units : **mg/L** Run ID: **ICP/MS_091204B** Prep Date: **12/04/2009 10:17**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0487	0.005	0.05	0	97	80	120			

Sample Matrix Spike Duplicate

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

File ID: **120409.B\92MSD.D** Batch ID: **23192K** Analysis Date: **12/04/2009 21:48**

Sample ID: **09120401-01AMSD** Units : **mg/L** Run ID: **ICP/MS_091204B** Prep Date: **12/04/2009 10:17**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0479	0.005	0.05	0	96	80	120	0.04871	1.8(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: *09-Dec-09*

QC Summary Report

Work Order: 09120304

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

File ID: **09120408.D** Batch ID: **MS15W1204M** Analysis Date: **12/04/2009 11:40**

Sample ID: **MBLK MS15W1204M** Units : **µg/L** Run ID: **MSD_15_091204B** Prep Date: **12/04/2009 11:40**

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	10.1		10		101	70	130			
Surr: Toluene-d8	10.1		10		101	70	130			

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Work Order: 09120304

Surr: 4-Bromofluorobenzene	9.52	10	95	70	130	

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Date: 09-Dec-09

QC Summary Report

Work Order: 09120304

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

File ID: **09120405.D** Batch ID: **MS15W1204M** Analysis Date: **12/04/2009 10:24**

Sample ID: **LCS MS15W1204M** Units : **µg/L** Run ID: **MSD_15_091204B** Prep Date: **12/04/2009 10:24**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	8.7	1	10		87	70	130			
Chloromethane	8.27	2	10		83	70	130			
Vinyl chloride	8.52	1	10		85	70	130			
Chloroethane	9.85	1	10		99	70	130			
Bromomethane	13.2	2	10		132	70	130(130)			L51
Trichlorofluoromethane	9.65	1	10		97	70	130			
1,1-Dichloroethene	11.2	1	10		112	70	130			
Dichloromethane	10.4	2	10		104	70	130			
Freon-113	10.8	1	10		108	67	141			
trans-1,2-Dichloroethene	11.3	1	10		113	70	130			
Methyl tert-butyl ether (MTBE)	11.4	0.5	10		114	70	130			
1,1-Dichloroethane	10.8	1	10		108	70	130			
2-Butanone (MEK)	197	10	200		98	70	130			
cis-1,2-Dichloroethene	11.5	1	10		115	70	130			
Bromochloromethane	11.4	1	10		114	70	130			
Chloroform	11.2	1	10		112	70	130			
2,2-Dichloropropane	12.3	1	10		123	70	130			
1,2-Dichloroethane	10.9	1	10		109	70	130			
1,1,1-Trichloroethane	11.4	1	10		114	70	130			
1,1-Dichloropropene	11.2	1	10		112	70	130			
Carbon tetrachloride	11.7	1	10		117	70	130			
Benzene	11	0.5	10		110	70	130			
Dibromomethane	11.2	1	10		112	70	130			
1,2-Dichloropropane	11.3	1	10		113	70	130			
Trichloroethene	11.5	1	10		115	70	130			
Bromodichloromethane	11.3	1	10		113	70	130			
cis-1,3-Dichloropropene	11.3	1	10		113	70	130			
trans-1,3-Dichloropropene	10.3	1	10		103	70	130			
1,1,2-Trichloroethane	10.8	1	10		108	70	130			
Toluene	10.5	0.5	10		105	70	130			
1,3-Dichloropropane	10.8	1	10		108	70	130			
Dibromochloromethane	10.2	1	10		102	70	130			
1,2-Dibromoethane (EDB)	21.9	2	20		109	70	130			
Tetrachloroethene	11.5	1	10		115	70	130			
1,1,1,2-Tetrachloroethane	11	1	10		110	70	130			
Chlorobenzene	10.5	1	10		105	70	130			
Ethylbenzene	10.7	0.5	10		107	70	130			
m,p-Xylene	10.9	0.5	10		109	70	130			
Bromoform	9.36	1	10		94	70	130			
Styrene	11.7	1	10		117	70	130			
o-Xylene	11	0.5	10		110	70	130			
1,1,2,2-Tetrachloroethane	10.1	1	10		101	70	130			
1,2,3-Trichloropropane	21.1	2	20		106	70	130			
Isopropylbenzene	10.7	1	10		107	70	130			
Bromobenzene	10.4	1	10		104	70	130			
n-Propylbenzene	10.6	1	10		106	70	130			
4-Chlorotoluene	10.8	1	10		108	70	130			
2-Chlorotoluene	10.7	1	10		107	70	130			
1,3,5-Trimethylbenzene	10.6	1	10		106	70	130			
tert-Butylbenzene	10.3	1	10		103	70	130			
1,2,4-Trimethylbenzene	10.6	1	10		106	70	130			
sec-Butylbenzene	10.5	1	10		105	70	130			
1,3-Dichlorobenzene	10.8	1	10		108	70	130			
1,4-Dichlorobenzene	9.94	1	10		99	70	130			
4-Isopropyltoluene	10.6	1	10		106	70	130			
1,2-Dichlorobenzene	10.1	1	10		101	70	130			
n-Butylbenzene	11.1	1	10		111	70	130			
1,2-Dibromo-3-chloropropane (DBCP)	47.8	3	50		96	70	130			
1,2,4-Trichlorobenzene	10.7	2	10		107	70	130			
Naphthalene	10.1	2	10		101	70	130			
Hexachlorobutadiene	20.4	2	20		102	70	130			
1,2,3-Trichlorobenzene	10.4	2	10		104	70	130			
Surr: 1,2-Dichloroethane-d4	10.1		10		101	70	130			
Surr: Toluene-d8	9.72		10		97	70	130			
Surr: 4-Bromofluorobenzene	9.56		10		96	70	130			

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QC Summary Report

Work Order: 09120304

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

File ID: **09120409.D** Batch ID: **MS15W1204M** Analysis Date: **12/04/2009 12:02**

Sample ID: **09120150-05AMS** Units : **µg/L** Run ID: **MSD_15_091204B** Prep Date: **12/04/2009 12:02**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	34.6	2.5	50	0	69	13	167			
Chloromethane	36.3	10	50	0	73	28	145			
Vinyl chloride	40.1	2.5	50	0	80	43	134			
Chloroethane	42.9	2.5	50	0	86	39	154			
Bromomethane	46.1	10	50	0	92	19	176			
Trichlorofluoromethane	41.7	2.5	50	0	83	34	160			
1,1-Dichloroethene	49.3	2.5	50	0	99	60	130			
Dichloromethane	47.3	10	50	0	95	68	130			
Freon-113	54.2	2.5	50	0	108	49	141			
trans-1,2-Dichloroethene	51.4	2.5	50	0	103	63	130			
Methyl tert-butyl ether (MTBE)	50.5	1.3	50	0	101	56	141			
1,1-Dichloroethane	49.2	2.5	50	0	98	61	130			
2-Butanone (MEK)	552	50	1000	0	55	20	182			
cis-1,2-Dichloroethene	52.4	2.5	50	0	105	70	130			
Bromochloromethane	50.7	2.5	50	0	101	70	130			
Chloroform	50.8	2.5	50	0	102	67	130			
2,2-Dichloropropane	56	2.5	50	0	112	30	152			
1,2-Dichloroethane	48.6	2.5	50	0	97	60	135			
1,1,1-Trichloroethane	52.1	2.5	50	0	104	59	137			
1,1-Dichloropropene	51.6	2.5	50	0	103	63	130			
Carbon tetrachloride	52.7	2.5	50	0	105	50	147			
Benzene	49.7	1.3	50	0	99	67	130			
Dibromomethane	48.5	2.5	50	0	97	69	133			
1,2-Dichloropropane	50.1	2.5	50	0	100	69	130			
Trichloroethene	50	2.5	50	0	99.9	69	130			
Bromodichloromethane	49.7	2.5	50	0	99	66	134			
cis-1,3-Dichloropropene	47.6	2.5	50	0	95	63	130			
trans-1,3-Dichloropropene	43.7	2.5	50	0	87	66	131			
1,1,2-Trichloroethane	47.1	2.5	50	0	94	68	130			
Toluene	47.1	1.3	50	0	94	66	130			
1,3-Dichloropropane	48	2.5	50	0	96	70	130			
Dibromochloromethane	44	2.5	50	0	88	70	130			
1,2-Dibromoethane (EDB)	96.5	5	100	0	96	70	130			
Tetrachloroethene	51.6	2.5	50	0	103	61	134			
1,1,1,2-Tetrachloroethane	49.1	2.5	50	0	98	70	130			
Chlorobenzene	47.7	2.5	50	0	95	70	130			
Ethylbenzene	47.7	1.3	50	0	95	68	130			
m,p-Xylene	48.5	1.3	50	0	97	64	130			
Bromoform	40.2	2.5	50	0	80	64	138			
Styrene	52.9	2.5	50	0	106	69	130			
o-Xylene	49	1.3	50	0	98	70	130			
1,1,2,2-Tetrachloroethane	44.7	2.5	50	0	89	65	131			
1,2,3-Trichloropropane	92.8	10	100	0	93	70	130			
Isopropylbenzene	48.5	2.5	50	0	97	64	138			
Bromobenzene	47.5	2.5	50	0	95	70	130			
n-Propylbenzene	48.2	2.5	50	0	96	66	132			
4-Chlorotoluene	49.2	2.5	50	0	98	70	130			
2-Chlorotoluene	48.4	2.5	50	0	97	70	130			
1,3,5-Trimethylbenzene	48.2	2.5	50	0	96	66	136			
tert-Butylbenzene	46.8	2.5	50	0	94	65	137			
1,2,4-Trimethylbenzene	47.6	2.5	50	0	95	65	137			
sec-Butylbenzene	47.3	2.5	50	0	95	66	134			
1,3-Dichlorobenzene	48	2.5	50	0	96	70	130			
1,4-Dichlorobenzene	44.5	2.5	50	0	89	70	130			
4-Isopropyltoluene	48	2.5	50	0	96	66	137			
1,2-Dichlorobenzene	44.5	2.5	50	0	89	70	130			
n-Butylbenzene	49.2	2.5	50	0	98	60	142			
1,2-Dibromo-3-chloropropane (DBCP)	206	15	250	0	82	67	130			
1,2,4-Trichlorobenzene	44.9	10	50	0	90	61	137			
Naphthalene	41.7	10	50	0	83	40	167			
Hexachlorobutadiene	87.3	10	100	0	87	61	130			
1,2,3-Trichlorobenzene	42.3	10	50	0	85	51	144			
Surr: 1,2-Dichloroethane-d4	49.7		50		99	70	130			
Surr: Toluene-d8	48.6		50		97	70	130			
Surr: 4-Bromofluorobenzene	49.2		50		98	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: 09-Dec-09

QC Summary Report

Work Order: 09120304

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

File ID: **09120410.D** Batch ID: **MS15W1204M** Analysis Date: **12/04/2009 12:24**

Sample ID: **09120150-05AMSD** Units : µg/L Run ID: **MSD_15_091204B** Prep Date: **12/04/2009 12:24**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	35.8	2.5	50	0	72	13	167	34.61	3.3(20)	
Chloromethane	36.9	10	50	0	74	28	145	36.26	1.7(20)	
Vinyl chloride	40	2.5	50	0	80	43	134	40.08	0.2(20)	
Chloroethane	45	2.5	50	0	90	39	154	42.89	4.8(20)	
Bromomethane	55.7	10	50	0	111	19	176	46.06	19.0(20)	
Trichlorofluoromethane	46.9	2.5	50	0	94	34	160	41.73	11.7(20)	
1,1-Dichloroethene	51.2	2.5	50	0	102	60	130	49.25	3.9(20)	
Dichloromethane	47.9	10	50	0	96	68	130	47.32	1.2(20)	
Freon-113	54.2	2.5	50	0	108	49	141	54.24	0.2(20)	
trans-1,2-Dichloroethene	52.4	2.5	50	0	105	63	130	51.38	1.9(20)	
Methyl tert-butyl ether (MTBE)	51.3	1.3	50	0	103	56	141	50.45	1.7(20)	
1,1-Dichloroethane	49.9	2.5	50	0	99.8	61	130	49.2	1.4(20)	
2-Butanone (MEK)	565	50	1000	0	57	20	182	552.5	2.3(20)	
cis-1,2-Dichloroethene	53.1	2.5	50	0	106	70	130	52.39	1.4(20)	
Bromochloromethane	52	2.5	50	0	104	70	130	50.68	2.5(20)	
Chloroform	52.1	2.5	50	0	104	67	130	50.75	2.6(20)	
2,2-Dichloropropane	56.4	2.5	50	0	113	30	152	55.97	0.7(20)	
1,2-Dichloroethane	49.5	2.5	50	0	99	60	135	48.58	2.0(20)	
1,1,1-Trichloroethane	52.8	2.5	50	0	106	59	137	52.11	1.3(20)	
1,1-Dichloropropene	52.2	2.5	50	0	104	63	130	51.62	1.1(20)	
Carbon tetrachloride	53.8	2.5	50	0	108	50	147	52.73	2.1(20)	
Benzene	50.4	1.3	50	0	101	67	130	49.74	1.4(20)	
Dibromomethane	50.3	2.5	50	0	101	69	133	48.45	3.8(20)	
1,2-Dichloropropane	51.3	2.5	50	0	103	69	130	50.14	2.3(20)	
Trichloroethene	51.8	2.5	50	0	104	69	130	49.95	3.6(20)	
Bromodichloromethane	51.7	2.5	50	0	103	66	134	49.74	3.9(20)	
cis-1,3-Dichloropropene	49.5	2.5	50	0	99	63	130	47.64	3.9(20)	
trans-1,3-Dichloropropene	45.7	2.5	50	0	91	66	131	43.69	4.4(20)	
1,1,2-Trichloroethane	48.6	2.5	50	0	97	68	130	47.12	3.1(20)	
Toluene	48	1.3	50	0	96	66	130	47.05	2.0(20)	
1,3-Dichloropropane	49.3	2.5	50	0	99	70	130	47.96	2.8(20)	
Dibromochloromethane	46.5	2.5	50	0	93	70	130	43.97	5.6(20)	
1,2-Dibromoethane (EDB)	99.6	5	100	0	99.6	70	130	96.45	3.2(20)	
Tetrachloroethene	52.7	2.5	50	0	105	61	134	51.63	2.1(20)	
1,1,1,2-Tetrachloroethane	51.1	2.5	50	0	102	70	130	49.09	3.9(20)	
Chlorobenzene	48.8	2.5	50	0	98	70	130	47.7	2.3(20)	
Ethylbenzene	48.7	1.3	50	0	97	68	130	47.72	2.0(20)	
m,p-Xylene	49.3	1.3	50	0	99	64	130	48.46	1.7(20)	
Bromoform	42.8	2.5	50	0	86	64	138	40.16	6.4(20)	
Styrene	54	2.5	50	0	108	69	130	52.85	2.2(20)	
o-Xylene	50.6	1.3	50	0	101	70	130	48.97	3.2(20)	
1,1,2,2-Tetrachloroethane	45.6	2.5	50	0	91	65	131	44.73	2.0(20)	
1,2,3-Trichloropropane	95.6	10	100	0	96	70	130	92.81	3.0(20)	
Isopropylbenzene	48.6	2.5	50	0	97	64	138	48.5	0.2(20)	
Bromobenzene	48.3	2.5	50	0	97	70	130	47.47	1.8(20)	
n-Propylbenzene	48.3	2.5	50	0	97	66	132	48.21	0.2(20)	
4-Chlorotoluene	50.1	2.5	50	0	100	70	130	49.24	1.8(20)	
2-Chlorotoluene	48.7	2.5	50	0	97	70	130	48.4	0.5(20)	
1,3,5-Trimethylbenzene	48.8	2.5	50	0	98	66	136	48.18	1.2(20)	
tert-Butylbenzene	47.5	2.5	50	0	95	65	137	46.81	1.5(20)	
1,2,4-Trimethylbenzene	48.6	2.5	50	0	97	65	137	47.6	2.0(20)	
sec-Butylbenzene	48.2	2.5	50	0	96	66	134	47.25	2.1(20)	
1,3-Dichlorobenzene	48.9	2.5	50	0	98	70	130	48	1.9(20)	
1,4-Dichlorobenzene	46.4	2.5	50	0	93	70	130	44.5	4.2(20)	
4-Isopropyltoluene	49.1	2.5	50	0	98	66	137	48.04	2.1(20)	
1,2-Dichlorobenzene	46.5	2.5	50	0	93	70	130	44.51	4.4(20)	
n-Butylbenzene	50.4	2.5	50	0	101	60	142	49.21	2.4(20)	
1,2-Dibromo-3-chloropropane (DBCP)	212	15	250	0	85	67	130	205.9	3.1(20)	
1,2,4-Trichlorobenzene	47.7	10	50	0	95	61	137	44.85	6.2(20)	
Naphthalene	44.7	10	50	0	89	40	167	41.66	7.1(20)	
Hexachlorobutadiene	92.3	10	100	0	92	61	130	87.26	5.7(20)	
1,2,3-Trichlorobenzene	46	10	50	0	92	51	144	42.33	8.2(20)	
Surr: 1,2-Dichloroethane-d4	49.6		50		99	70	130			
Surr: Toluene-d8	48.9		50		98	70	130			
Surr: 4-Bromofluorobenzene	48.8		50		98	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: *09-Dec-09*

QC Summary Report

Work Order: 09120304

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.

L51 = Analyte recovery was above acceptance limits for the LCS, but was acceptable in the MS/MSD.

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 : BMIS09120304

Report Due By : 5:00 PM On : 17-Dec-2009

Client:
Battelle Memorial Institute
3990 Old Town Ave
Suite C-205
San Diego, CA 92110

PO : 218013

Client's COC # : 24122 Job : G005862/JPL Groundwater Monitoring

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 : Client

Cooler Temp	Samples Received	Date Printed
4 °C	03-Dec-2009	**03-Dec-2009**

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(A)_W	300_0(B)_W	300_0(C)_W	314_W	METALS_DW	VOC_TIC_W	VOC_W		Sample Remarks
BMI09120304-01A	MW-11-5	AQ	12/02/09 08:42	5	0	10				Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria		Level IV QC
BMI09120304-02A	MW-11-4	AQ	12/02/09 09:09	5	0	10				Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria		
BMI09120304-03A	MW-11-3	AQ	12/02/09 09:41	5	0	10				Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria		Level IV QC
BMI09120304-04A	MW-11-2	AQ	12/02/09 10:07	5	0	10				Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria		
BMI09120304-05A	MW-11-1	AQ	12/02/09 10:38	5	0	10	NO2, NO3, PO4, SO4, Cl	NO2, NO3, PO4, SO4, Cl	NO2, NO3, PO4, SO4, Cl	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria		
BMI09120304-06A	EB-10-12/02/09	AQ	12/02/09 10:23	5	0	10				Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria		
BMI09120304-07A	TB-10-12/02/09	AQ	12/02/09 00:00	1	0	10						VOC by 524 Criteria	VOC by 524 Criteria		Reno Trip Blank 8/25/09

Comments: No security seals. Frozen ice. Temp Blank #7776 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.**	12-3-09 12:39

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 ___

24122

Page # 1 of 1

Client Name: BATTELLE / DAVID CONNER
P.O. # 218013
Job # 60058G2
Address: 5710 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 / Lab ID Number (Office Use Only)	Sample Description	TAT	Field Filtered	Total and type of containers ** See below	VOC (524.2)	TOTAL Cr (6010B)	ClO4 - (314.0) Cl-, SO4, NO3, NO2, PO4?3 (300.0)					REMARKS
0842	12/02/09	AQ	BMI09120304-01	MW-11-5	NORM		4/P 5	X	X	X					LEVEL III QC
0909			-02	MW-11-4				X	X	X					
0941			-03	MW-11-3				X	X	X					LEVEL III QC
1007			-04	MW-11-2				X	X	X					
1038	12/02/09		-05	MW-11-1			4/P 5	X	X	X	X				
1023	12/02/09		-06	EB-10-12/02/09			4/P 5	X	X	X					EQUIPMENT BLANK
"	12/02/09		-07	TB-10-12/02/09			V1	X							TRIP BLANK

ADDITIONAL INSTRUCTIONS:

	Signature	Print Name	Company	Date	Time
Relinquished by		CHASE BROUDOU	INSIGHT E.E.C., INC.	12/02/09	1300
Received by	Elizabeth Adcox	Elizabeth Adcox	Alpha	12-3-09	12:39
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-Dec-09*

David Conner
Battelle Memorial Institute
3990 Old Town Ave Suite C-205
San Diego, CA 92110
(818) 393-2808

CASE NARRATIVE

Job: G005862/JPL Groundwater Monitoring
Work Order: BMI09120403 **Cooler Temp:** 4 °C

Alpha's Sample ID	Client's Sample ID	Matrix
09120403-01A	MW-24-5	Aqueous
09120403-02A	MW-24-4	Aqueous
09120403-03A	MW-24-3	Aqueous
09120403-04A	MW-24-2	Aqueous
09120403-05A	MW-24-1	Aqueous
09120403-06A	EB-11-12/03/09	Aqueous
09120403-07A	TB-11-12/03/09	Aqueous

Manually Integrated Analytes

Alpha's Sample ID	Test Reference	Analyte
09120403-03A	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.

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
3990 Old Town Ave
San Diego, CA 92110

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 12/04/09

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 : BMI09120403-05A	Chloride	71	2.5 mg/L	12/04/09 13:59	12/04/09 16:14
Date Sampled 12/03/09 10:11	Nitrite (NO2) - N	ND	0.25 mg/L	12/04/09 13:59	12/04/09 14:23
	Nitrate (NO3) - N	1.4	0.25 mg/L	12/04/09 13:59	12/04/09 14:23
	Sulfate (SO4)	46	0.50 mg/L	12/04/09 13:59	12/04/09 14:23
	Phosphate, ortho - P	ND	0.25 mg/L	12/04/09 13:59	12/04/09 14:23

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 / 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.

12/17/09
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
3990 Old Town Ave
San Diego, CA 92110

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 12/04/09

Job: G005862/JPL Groundwater Monitoring

Perchlorate by Ion Chromatography
EPA Method 314.0

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-24-5**				
Lab ID : BMI09120403-01A Perchlorate	ND	1.00 µg/L	12/11/09 11:22	12/11/09 15:07
Date Sampled 12/03/09 08:17				
Client ID: **MW-24-4**				
Lab ID : BMI09120403-02A Perchlorate	ND	1.00 µg/L	12/11/09 11:22	12/11/09 15:25
Date Sampled 12/03/09 08:49				
Client ID: **MW-24-3**				
Lab ID : BMI09120403-03A Perchlorate	27.9	1.00 µg/L	12/11/09 11:22	12/11/09 15:44
Date Sampled 12/03/09 09:17				
Client ID: **MW-24-2**				
Lab ID : BMI09120403-04A Perchlorate	2.61	1.00 µg/L	12/11/09 11:22	12/11/09 16:02
Date Sampled 12/03/09 09:40				
Client ID: **MW-24-1**				
Lab ID : BMI09120403-05A Perchlorate	1.13	1.00 µg/L	12/11/09 11:22	12/11/09 16:57
Date Sampled 12/03/09 10:11				
Client ID: **EB-11-12/03/09**				
Lab ID : BMI09120403-06A Perchlorate	ND	1.00 µg/L	12/11/09 11:22	12/11/09 17:16
Date Sampled 12/03/09 09:59				

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 / 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.

12/17/09
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
3990 Old Town Ave
San Diego, CA 92110

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 12/04/09

Job: G005862/JPL Groundwater Monitoring

Metals by ICPMS
EPA Method 200.8

Parameter		Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-24-5**					
Lab ID : BMI09120403-01A	Chromium (Cr)	ND	0.0050 mg/L	12/04/09 10:17	12/04/09 23:47
Date Sampled 12/03/09 08:17					
Client ID: **MW-24-4**					
Lab ID : BMI09120403-02A	Chromium (Cr)	ND	0.0050 mg/L	12/04/09 10:17	12/04/09 23:52
Date Sampled 12/03/09 08:49					
Client ID: **MW-24-3**					
Lab ID : BMI09120403-03A	Chromium (Cr)	ND	0.0050 mg/L	12/04/09 10:17	12/04/09 23:58
Date Sampled 12/03/09 09:17					
Client ID: **MW-24-2**					
Lab ID : BMI09120403-04A	Chromium (Cr)	ND	0.0050 mg/L	12/04/09 10:17	12/05/09 00:04
Date Sampled 12/03/09 09:40					
Client ID: **MW-24-1**					
Lab ID : BMI09120403-05A	Chromium (Cr)	0.013	0.0050 mg/L	12/04/09 10:17	12/05/09 00:09
Date Sampled 12/03/09 10:11					
Client ID: **EB-11-12/03/09**					
Lab ID : BMI09120403-06A	Chromium (Cr)	ND	0.0050 mg/L	12/04/09 10:17	12/05/09 00:15
Date Sampled 12/03/09 09:59					

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 / info@alpha-analytical.com

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12/17/09
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
3990 Old Town Ave
San Diego, CA 92110
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-24-5**					
Lab ID : BMI09120403-01A	* * * None Found * * *	ND	2.0 µg/L	12/10/09	12/10/09
Date Received : 12/04/09					
Date Sampled : 12/03/09 08:17					
Client ID : **MW-24-4**					
Lab ID : BMI09120403-02A	Sulfur dioxide	18	2.0 µg/L	12/10/09	12/10/09
Date Received : 12/04/09					
Date Sampled : 12/03/09 08:49					
Client ID : **MW-24-3**					
Lab ID : BMI09120403-03A	Sulfur dioxide	20	2.0 µg/L	12/10/09	12/10/09
Date Received : 12/04/09					
Date Sampled : 12/03/09 09:17					
Client ID : **MW-24-2**					
Lab ID : BMI09120403-04A	Sulfur dioxide	9.2	2.0 µg/L	12/10/09	12/10/09
Date Received : 12/04/09					
Date Sampled : 12/03/09 09:40					
Client ID : **MW-24-1**					
Lab ID : BMI09120403-05A	Sulfur dioxide	5.5	2.0 µg/L	12/10/09	12/10/09
Date Received : 12/04/09					
Date Sampled : 12/03/09 10:11					
Client ID : **EB-11-12/03/09**					
Lab ID : BMI09120403-06A	* * * None Found * * *	ND	2.0 µg/L	12/10/09	12/10/09
Date Received : 12/04/09					
Date Sampled : 12/03/09 09:59					
Client ID : **TB-11-12/03/09**					
Lab ID : BMI09120403-07A	* * * None Found * * *	ND	2.0 µg/L	12/10/09	12/10/09
Date Received : 12/04/09					
Date Sampled : 12/03/09 00:00					

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

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12/18/09

Report Date

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ANALYTICAL REPORT

Battelle Memorial Institute
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09120403-01A
Client I.D. Number: MW-24-5

Sampled: 12/03/09 08:17
Received: 12/04/09
Extracted: 12/10/09
Analyzed: 12/10/09

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	101	(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	100	(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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Report Date

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ANALYTICAL REPORT

Battelle Memorial Institute
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09120403-02A
Client I.D. Number: MW-24-4

Sampled: 12/03/09 08:49
Received: 12/04/09
Extracted: 12/10/09
Analyzed: 12/10/09

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	103	(70-130)	%REC
65	Surr: Toluene-d8	101	(70-130)	%REC
66	Surr: 4-Bromofluorobenzene	101	(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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ANALYTICAL REPORT

Battelle Memorial Institute
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09120403-03A
Client I.D. Number: MW-24-3

Sampled: 12/03/09 09:17
Received: 12/04/09
Extracted: 12/10/09
Analyzed: 12/10/09

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	102	(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	103	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl 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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09120403-04A
Client I.D. Number: MW-24-2

Sampled: 12/03/09 09:40
Received: 12/04/09
Extracted: 12/10/09
Analyzed: 12/10/09

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	101	(70-130)	%REC
65	Surr: Toluene-d8	102	(70-130)	%REC
66	Surr: 4-Bromofluorobenzene	102	(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
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / info@alpha-analytical.com

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12/18/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09120403-05A
Client I.D. Number: MW-24-1

Sampled: 12/03/09 10:11
Received: 12/04/09
Extracted: 12/10/09
Analyzed: 12/10/09

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	1.2	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	101	(70-130)	%REC
65	Surr: Toluene-d8	102	(70-130)	%REC
66	Surr: 4-Bromofluorobenzene	102	(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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12/18/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09120403-06A
Client I.D. Number: EB-11-12/03/09

Sampled: 12/03/09 09:59
Received: 12/04/09
Extracted: 12/10/09
Analyzed: 12/10/09

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	99	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	104	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	98	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
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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12/18/09
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI09120403-07A
Client I.D. Number: TB-11-12/03/09

Sampled: 12/03/09 00:00
Received: 12/04/09
Extracted: 12/10/09
Analyzed: 12/10/09

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	102	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	104	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	98	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
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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12/18/09
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: BMI09120403 **Job:** G005862/JPL Groundwater Monitoring

Alpha's Sample ID	Client's Sample ID	Matrix	pH
09120403-01A	MW-24-5	Aqueous	2
09120403-02A	MW-24-4	Aqueous	2
09120403-03A	MW-24-3	Aqueous	2
09120403-04A	MW-24-2	Aqueous	2
09120403-05A	MW-24-1	Aqueous	2
09120403-06A	EB-11-12/03/09	Aqueous	2
09120403-07A	TB-11-12/03/09	Aqueous	2

12/18/09

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: *09-Dec-09*

QC Summary Report

Work Order: 09120403

Method Blank

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

File ID: **18** Batch ID: **23198A** Analysis Date: **12/04/2009 14:42**

Sample ID: **MB-23198** Units : **mg/L** Run ID: **IC_1_091204A** Prep Date: **12/04/2009 13:59**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Nitrite (NO2) - N	ND	0.25								
Nitrate (NO3) - N	ND	0.25								
Phosphate, ortho - P	ND	0.25								

Laboratory Fortified Blank

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

File ID: **19** Batch ID: **23198A** Analysis Date: **12/04/2009 15:00**

Sample ID: **LFB-23198** Units : **mg/L** Run ID: **IC_1_091204A** Prep Date: **12/04/2009 13:59**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Nitrite (NO2) - N	1.14	0.25	1.25		91	90	110			
Nitrate (NO3) - N	1.32	0.25	1.25		106	90	110			
Phosphate, ortho - P	1.3	0.25	1.25		104	90	110			

Sample Matrix Spike

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

File ID: **24** Batch ID: **23198A** Analysis Date: **12/04/2009 16:33**

Sample ID: **09120403-05ALFM** Units : **mg/L** Run ID: **IC_1_091204A** Prep Date: **12/04/2009 13:59**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Nitrite (NO2) - N	5.48	0.25	6.25	0	88	80	120			
Nitrate (NO3) - N	8.14	0.25	6.25	1.366	108	80	120			
Phosphate, ortho - P	7.76	0.25	6.25	0	124	80	120			M1

Sample Matrix Spike Duplicate

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

File ID: **25** Batch ID: **23198A** Analysis Date: **12/04/2009 16:51**

Sample ID: **09120403-05ALFMD** Units : **mg/L** Run ID: **IC_1_091204A** Prep Date: **12/04/2009 13:59**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Nitrite (NO2) - N	5.52	0.25	6.25	0	88	80	120	5.482	0.7(10)	
Nitrate (NO3) - N	7.82	0.25	6.25	1.366	103	80	120	8.139	4.0(10)	
Phosphate, ortho - P	7.63	0.25	6.25	0	122	80	120	7.757	1.7(10)	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.

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

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

Alpha Analytical, Inc.

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

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

Date: *09-Dec-09*

QC Summary Report

Work Order: 09120403

Method Blank

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

File ID: **18** Batch ID: **23198B** Analysis Date: **12/04/2009 14:42**

Sample ID: **MB-23198** Units : **mg/L** Run ID: **IC_1_091204A** Prep Date: **12/04/2009 13:59**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sulfate (SO4)	ND	0.5								

Laboratory Fortified Blank

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

File ID: **19** Batch ID: **23198B** Analysis Date: **12/04/2009 15:00**

Sample ID: **LFB-23198** Units : **mg/L** Run ID: **IC_1_091204A** Prep Date: **12/04/2009 13:59**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sulfate (SO4)	9.52	0.5	10		95	90	110			

Sample Matrix Spike

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

File ID: **24** Batch ID: **23198B** Analysis Date: **12/04/2009 16:33**

Sample ID: **09120403-05ALFM** Units : **mg/L** Run ID: **IC_1_091204A** Prep Date: **12/04/2009 13:59**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sulfate (SO4)	94.1	0.5	50	46.39	95	80	120			

Sample Matrix Spike Duplicate

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

File ID: **25** Batch ID: **23198B** Analysis Date: **12/04/2009 16:51**

Sample ID: **09120403-05ALFMD** Units : **mg/L** Run ID: **IC_1_091204A** Prep Date: **12/04/2009 13:59**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sulfate (SO4)	92.6	0.5	50	46.39	93	80	120	94.08	1.5(10)	

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-Dec-09*

QC Summary Report

Work Order: 09120403

Method Blank

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

File ID: **18** Batch ID: **23198C** Analysis Date: **12/04/2009 14:42**

Sample ID: **MB-23198** Units : **mg/L** Run ID: **IC_1_091204B** Prep Date: **12/04/2009 13:59**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	ND	0.5								

Laboratory Fortified Blank

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

File ID: **19** Batch ID: **23198C** Analysis Date: **12/04/2009 15:00**

Sample ID: **LFB-23198** Units : **mg/L** Run ID: **IC_1_091204B** Prep Date: **12/04/2009 13:59**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	4.73	0.5	5		95	90	110			

Sample Matrix Spike

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

File ID: **24** Batch ID: **23198C** Analysis Date: **12/04/2009 16:33**

Sample ID: **09120403-05ALFM** Units : **mg/L** Run ID: **IC_1_091204B** Prep Date: **12/04/2009 13:59**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	96.7	0.5	25	70.84	103	80	120			

Sample Matrix Spike Duplicate

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

File ID: **25** Batch ID: **23198C** Analysis Date: **12/04/2009 16:51**

Sample ID: **09120403-05ALFMD** Units : **mg/L** Run ID: **IC_1_091204B** Prep Date: **12/04/2009 13:59**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	97	0.5	25	70.84	105	80	120	96.7	0.3(10)	

Comments:

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Date: *17-Dec-09*

QC Summary Report

Work Order: 09120403

Method Blank

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

File ID: **14** Batch ID: **23231** Analysis Date: **12/11/2009 12:21**

Sample ID: **MB-23231** Units : **µg/L** Run ID: **IC_3_091211A** Prep Date: **12/11/2009 11:22**

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: **23231** Analysis Date: **12/11/2009 12:40**

Sample ID: **LFB-23231** Units : **µg/L** Run ID: **IC_3_091211A** Prep Date: **12/11/2009 11:22**

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: **34** Batch ID: **23231** Analysis Date: **12/11/2009 18:29**

Sample ID: **09121005-03ALFM** Units : **µg/L** Run ID: **IC_3_091211A** Prep Date: **12/11/2009 11:22**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	72.6	2	25	42.21	122	80	120			M1

Sample Matrix Spike Duplicate

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

File ID: **35** Batch ID: **23231** Analysis Date: **12/11/2009 18:48**

Sample ID: **09121005-03ALFMD** Units : **µg/L** Run ID: **IC_3_091211A** Prep Date: **12/11/2009 11:22**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	73.4	2	25	42.21	125	80	120	72.65	1.0(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.

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

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

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QC Summary Report

Work Order: 09120403

Method Blank

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

File ID: **120409.B\92MB.D** Batch ID: **23192K** Analysis Date: **12/04/2009 21:08**

Sample ID: **MB-23192** Units : **mg/L** Run ID: **ICP/MS_091204B** Prep Date: **12/04/2009 10:17**

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: **120409.B\92L1.D** Batch ID: **23192K** Analysis Date: **12/04/2009 21:14**

Sample ID: **LCS-23192** Units : **mg/L** Run ID: **ICP/MS_091204B** Prep Date: **12/04/2009 10:17**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0535	0.005	0.05		107	80	120			

Sample Matrix Spike

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

File ID: **120409.B\92MS.D** Batch ID: **23192K** Analysis Date: **12/04/2009 21:42**

Sample ID: **09120401-01AMS** Units : **mg/L** Run ID: **ICP/MS_091204B** Prep Date: **12/04/2009 10:17**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0487	0.005	0.05	0	97	80	120			

Sample Matrix Spike Duplicate

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

File ID: **120409.B\92MSD.D** Batch ID: **23192K** Analysis Date: **12/04/2009 21:48**

Sample ID: **09120401-01AMSD** Units : **mg/L** Run ID: **ICP/MS_091204B** Prep Date: **12/04/2009 10:17**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0479	0.005	0.05	0	96	80	120	0.04871	1.8(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-Dec-2009*

QC Summary Report

Work Order: 09120403

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

File ID: **09121007.D** Batch ID: **MS15W1210M** Analysis Date: **12/10/2009 10:14**

Sample ID: **MBLK MS15W1210M** Units : **µg/L** Run ID: **MSD_15_091210B** Prep Date: **12/10/2009 10:14**

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	9.94		10		99	70	130			
Surr: Toluene-d8	10.2		10		102	70	130			

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QC Summary Report

Work Order: 09120403

Surr: 4-Bromofluorobenzene	9.57		10		96	70	130			

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

File ID: **09121005.D** Batch ID: **MS15W1210M** Analysis Date: **12/10/2009 09:18**

Sample ID: **LCS MS15W1210M** Units : **µg/L** Run ID: **MSD_15_091210B** Prep Date: **12/10/2009 09:18**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	8.35	1	10		84	70	130			
Chloromethane	8	2	10		80	70	130			
Vinyl chloride	8.45	1	10		85	70	130			
Chloroethane	9.56	1	10		96	70	130			
Bromomethane	13.6	2	10		136	70	130(130)			L51
Trichlorofluoromethane	9.59	1	10		96	70	130			
1,1-Dichloroethene	11	1	10		110	70	130			
Dichloromethane	10.1	2	10		101	70	130			
trans-1,2-Dichloroethene	11	1	10		110	70	130			
Methyl tert-butyl ether (MTBE)	10.5	0.5	10		105	70	130			
1,1-Dichloroethane	10.5	1	10		105	70	130			
cis-1,2-Dichloroethene	11.3	1	10		113	70	130			
Bromochloromethane	10.7	1	10		107	70	130			
Chloroform	10.8	1	10		108	70	130			
2,2-Dichloropropane	12.4	1	10		124	70	130			
1,2-Dichloroethane	10.2	1	10		102	70	130			
1,1,1-Trichloroethane	11.3	1	10		113	70	130			
1,1-Dichloropropene	11.2	1	10		112	70	130			
Carbon tetrachloride	11.7	1	10		117	70	130			
Benzene	10.8	0.5	10		108	70	130			
Dibromomethane	10.3	1	10		103	70	130			
1,2-Dichloropropane	11	1	10		110	70	130			
Trichloroethene	11	1	10		110	70	130			
Bromodichloromethane	10.8	1	10		108	70	130			
cis-1,3-Dichloropropene	11	1	10		110	70	130			
trans-1,3-Dichloropropene	9.78	1	10		98	70	130			
1,1,2-Trichloroethane	9.87	1	10		99	70	130			
Toluene	10.5	0.5	10		105	70	130			
1,3-Dichloropropane	10.3	1	10		103	70	130			
Dibromochloromethane	9.94	1	10		99	70	130			
1,2-Dibromoethane (EDB)	21	2	20		105	70	130			
Tetrachloroethene	11.5	1	10		115	70	130			
1,1,1,2-Tetrachloroethane	11	1	10		110	70	130			
Chlorobenzene	10.5	1	10		105	70	130			
Ethylbenzene	10.8	0.5	10		108	70	130			
m,p-Xylene	11	0.5	10		110	70	130			
Bromoform	9.08	1	10		91	70	130			
Styrene	11.8	1	10		118	70	130			
o-Xylene	11.2	0.5	10		112	70	130			
1,1,2,2-Tetrachloroethane	9.77	1	10		98	70	130			
1,2,3-Trichloropropane	20	2	20		99.8	70	130			
Isopropylbenzene	10.8	1	10		108	70	130			
Bromobenzene	10.4	1	10		104	70	130			
n-Propylbenzene	10.9	1	10		109	70	130			
4-Chlorotoluene	11	1	10		110	70	130			
2-Chlorotoluene	10.8	1	10		108	70	130			
1,3,5-Trimethylbenzene	10.9	1	10		109	70	130			
tert-Butylbenzene	10.6	1	10		106	70	130			
1,2,4-Trimethylbenzene	10.8	1	10		108	70	130			
sec-Butylbenzene	10.8	1	10		108	70	130			
1,3-Dichlorobenzene	10.8	1	10		108	70	130			
1,4-Dichlorobenzene	10.1	1	10		101	70	130			
4-Isopropyltoluene	10.9	1	10		109	70	130			
1,2-Dichlorobenzene	10.1	1	10		101	70	130			
n-Butylbenzene	11.3	1	10		113	70	130			
1,2-Dibromo-3-chloropropane (DBCP)	45.5	3	50		91	70	130			
1,2,4-Trichlorobenzene	10.6	2	10		106	70	130			
Naphthalene	9.72	2	10		97	70	130			
Hexachlorobutadiene	21.1	2	20		105	70	130			
1,2,3-Trichlorobenzene	10.1	2	10		101	70	130			
Surr: 1,2-Dichloroethane-d4	9.72		10		97	70	130			
Surr: Toluene-d8	9.9		10		99	70	130			
Surr: 4-Bromofluorobenzene	9.79		10		98	70	130			

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Date: *18-Dec-2009*

QC Summary Report

Work Order: 09120403

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

File ID: **09121010.D** Batch ID: **MS15W1210M** Analysis Date: **12/10/2009 11:21**

Sample ID: **09120308-07AMS** Units : **µg/L** Run ID: **MSD_15_091210B** Prep Date: **12/10/2009 11:21**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	42.6	2.5	50	0	85	13	167			
Chloromethane	38.2	10	50	0	76	28	145			
Vinyl chloride	42.4	2.5	50	0	85	43	134			
Chloroethane	42.4	2.5	50	0	85	39	154			
Bromomethane	50.9	10	50	0	102	19	176			
Trichlorofluoromethane	42	2.5	50	0	84	34	160			
1,1-Dichloroethene	49.4	2.5	50	0	99	60	130			
Dichloromethane	46.6	10	50	0	93	68	130			
trans-1,2-Dichloroethene	50.2	2.5	50	0	100	63	130			
Methyl tert-butyl ether (MTBE)	51.9	1.3	50	0.86	102	56	141			
1,1-Dichloroethane	48.3	2.5	50	0	97	61	130			
cis-1,2-Dichloroethene	51	2.5	50	0	102	70	130			
Bromochloromethane	50.7	2.5	50	0	101	70	130			
Chloroform	48.9	2.5	50	0	98	67	130			
2,2-Dichloropropane	55.2	2.5	50	0	110	30	152			
1,2-Dichloroethane	48.4	2.5	50	0	97	60	135			
1,1,1-Trichloroethane	50.6	2.5	50	0	101	59	137			
1,1-Dichloropropene	50.3	2.5	50	0	101	63	130			
Carbon tetrachloride	50.1	2.5	50	0	100	50	147			
Benzene	49.2	1.3	50	0	98	67	130			
Dibromomethane	48.1	2.5	50	0	96	69	133			
1,2-Dichloropropane	50.3	2.5	50	0	101	69	130			
Trichloroethene	49.4	2.5	50	0	99	69	130			
Bromodichloromethane	49.6	2.5	50	0	99	66	134			
cis-1,3-Dichloropropene	48.9	2.5	50	0	98	63	130			
trans-1,3-Dichloropropene	44.3	2.5	50	0	89	66	131			
1,1,2-Trichloroethane	47.5	2.5	50	0	95	68	130			
Toluene	47.1	1.3	50	0	94	66	130			
1,3-Dichloropropane	48.7	2.5	50	0	97	70	130			
Dibromochloromethane	44.4	2.5	50	0	89	70	130			
1,2-Dibromoethane (EDB)	98.1	5	100	0	98	70	130			
Tetrachloroethene	51.6	2.5	50	1.5	100	61	134			
1,1,1,2-Tetrachloroethane	49	2.5	50	0	98	70	130			
Chlorobenzene	46.7	2.5	50	0	93	70	130			
Ethylbenzene	46.9	1.3	50	0	94	68	130			
m,p-Xylene	47.5	1.3	50	0	95	64	130			
Bromoform	40.3	2.5	50	0	81	64	138			
Styrene	51	2.5	50	0	102	69	130			
o-Xylene	47.9	1.3	50	0	96	70	130			
1,1,2,2-Tetrachloroethane	44	2.5	50	0	88	65	131			
1,2,3-Trichloropropane	90.7	10	100	0	91	70	130			
Isopropylbenzene	48.6	2.5	50	0	97	64	138			
Bromobenzene	47.6	2.5	50	0	95	70	130			
n-Propylbenzene	47.8	2.5	50	0	96	66	132			
4-Chlorotoluene	47.7	2.5	50	0	95	70	130			
2-Chlorotoluene	47.3	2.5	50	0	95	70	130			
1,3,5-Trimethylbenzene	47.2	2.5	50	0	94	66	136			
tert-Butylbenzene	45.5	2.5	50	0	91	65	137			
1,2,4-Trimethylbenzene	46.4	2.5	50	0	93	65	137			
sec-Butylbenzene	45.7	2.5	50	0	91	66	134			
1,3-Dichlorobenzene	46.7	2.5	50	0	93	70	130			
1,4-Dichlorobenzene	44.2	2.5	50	0	88	70	130			
4-Isopropyltoluene	46.9	2.5	50	0	94	66	137			
1,2-Dichlorobenzene	43.7	2.5	50	0	87	70	130			
n-Butylbenzene	47.4	2.5	50	0	95	60	142			
1,2-Dibromo-3-chloropropane (DBCP)	219	15	250	0	88	67	130			
1,2,4-Trichlorobenzene	44.8	10	50	0	90	61	137			
Naphthalene	44.5	10	50	0	89	40	167			
Hexachlorobutadiene	85.4	10	100	0	85	61	130			
1,2,3-Trichlorobenzene	43	10	50	0	86	51	144			
Surr: 1,2-Dichloroethane-d4	49		50		98	70	130			
Surr: Toluene-d8	49.2		50		98	70	130			
Surr: 4-Bromofluorobenzene	49.4		50		99	70	130			

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Date: 18-Dec-2009

QC Summary Report

Work Order: 09120403

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

File ID: **09121011.D** Batch ID: **MS15W1210M** Analysis Date: **12/10/2009 11:43**

Sample ID: **09120308-07AMSD** Units : **µg/L** Run ID: **MSD_15_091210B** Prep Date: **12/10/2009 11:43**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	49.6	2.5	50	0	99	13	167	42.63	15.2(20)	
Chloromethane	43.6	10	50	0	87	28	145	38.2	13.1(20)	
Vinyl chloride	46.9	2.5	50	0	94	43	134	42.43	10.1(20)	
Chloroethane	48	2.5	50	0	96	39	154	42.4	12.3(20)	
Bromomethane	69	10	50	0	138	19	176	50.89	30.2(20)	R58
Trichlorofluoromethane	52.2	2.5	50	0	104	34	160	41.95	21.8(20)	R5
1,1-Dichloroethene	55.8	2.5	50	0	112	60	130	49.39	12.1(20)	
Dichloromethane	50	10	50	0	100	68	130	46.63	7.0(20)	
trans-1,2-Dichloroethene	55.3	2.5	50	0	111	63	130	50.18	9.7(20)	
Methyl tert-butyl ether (MTBE)	54	1.3	50	0.86	106	56	141	51.86	4.1(20)	
1,1-Dichloroethane	53.1	2.5	50	0	106	61	130	48.31	9.4(20)	
cis-1,2-Dichloroethene	56	2.5	50	0	112	70	130	51.01	9.4(20)	
Bromochloromethane	54.5	2.5	50	0	109	70	130	50.7	7.3(20)	
Chloroform	53.1	2.5	50	0	106	67	130	48.85	8.4(20)	
2,2-Dichloropropane	62	2.5	50	0	124	30	152	55.22	11.5(20)	
1,2-Dichloroethane	51.2	2.5	50	0	102	60	135	48.4	5.6(20)	
1,1,1-Trichloroethane	55.8	2.5	50	0	112	59	137	50.62	9.7(20)	
1,1-Dichloropropene	55.6	2.5	50	0	111	63	130	50.27	10.1(20)	
Carbon tetrachloride	57.7	2.5	50	0	115	50	147	50.12	14.1(20)	
Benzene	53.5	1.3	50	0	107	67	130	49.23	8.3(20)	
Dibromomethane	51.8	2.5	50	0	104	69	133	48.13	7.3(20)	
1,2-Dichloropropane	54	2.5	50	0	108	69	130	50.27	7.2(20)	
Trichloroethene	54.4	2.5	50	0	109	69	130	49.37	9.6(20)	
Bromodichloromethane	53.3	2.5	50	0	107	66	134	49.55	7.3(20)	
cis-1,3-Dichloropropene	53	2.5	50	0	106	63	130	48.94	8.0(20)	
trans-1,3-Dichloropropene	47.8	2.5	50	0	96	66	131	44.33	7.5(20)	
1,1,2-Trichloroethane	50.5	2.5	50	0	101	68	130	47.54	6.0(20)	
Toluene	50.7	1.3	50	0	101	66	130	47.05	7.4(20)	
1,3-Dichloropropane	50.9	2.5	50	0	102	70	130	48.65	4.6(20)	
Dibromochloromethane	47.3	2.5	50	0	95	70	130	44.35	6.5(20)	
1,2-Dibromoethane (EDB)	102	5	100	0	102	70	130	98.05	4.3(20)	
Tetrachloroethene	56.9	2.5	50	1.5	111	61	134	51.64	9.7(20)	
1,1,1,2-Tetrachloroethane	52.9	2.5	50	0	106	70	130	49.01	7.6(20)	
Chlorobenzene	50.6	2.5	50	0	101	70	130	46.66	8.0(20)	
Ethylbenzene	51.2	1.3	50	0	102	68	130	46.85	8.9(20)	
m,p-Xylene	52.1	1.3	50	0	104	64	130	47.52	9.2(20)	
Bromoform	42.8	2.5	50	0	86	64	138	40.3	6.0(20)	
Styrene	56.1	2.5	50	0	112	69	130	50.96	9.6(20)	
o-Xylene	52.6	1.3	50	0	105	70	130	47.88	9.4(20)	
1,1,2,2-Tetrachloroethane	46.1	2.5	50	0	92	65	131	44	4.6(20)	
1,2,3-Trichloropropane	93	10	100	0	93	70	130	90.71	2.5(20)	
Isopropylbenzene	55.1	2.5	50	0	110	64	138	48.64	12.5(20)	
Bromobenzene	52.3	2.5	50	0	105	70	130	47.6	9.5(20)	
n-Propylbenzene	54.1	2.5	50	0	108	66	132	47.76	12.5(20)	
4-Chlorotoluene	54.5	2.5	50	0	109	70	130	47.71	13.2(20)	
2-Chlorotoluene	53.9	2.5	50	0	108	70	130	47.27	13.0(20)	
1,3,5-Trimethylbenzene	52.9	2.5	50	0	106	66	136	47.21	11.3(20)	
tert-Butylbenzene	51.5	2.5	50	0	103	65	137	45.53	12.4(20)	
1,2,4-Trimethylbenzene	52.2	2.5	50	0	104	65	137	46.44	11.6(20)	
sec-Butylbenzene	53	2.5	50	0	106	66	134	45.65	15.0(20)	
1,3-Dichlorobenzene	52.3	2.5	50	0	105	70	130	46.68	11.3(20)	
1,4-Dichlorobenzene	48.8	2.5	50	0	98	70	130	44.16	10.0(20)	
4-Isopropyltoluene	52.5	2.5	50	0	105	66	137	46.87	11.4(20)	
1,2-Dichlorobenzene	48.6	2.5	50	0	97	70	130	43.73	10.5(20)	
n-Butylbenzene	54.4	2.5	50	0	109	60	142	47.42	13.7(20)	
1,2-Dibromo-3-chloropropane (DBCP)	230	15	250	0	92	67	130	219.1	4.8(20)	
1,2,4-Trichlorobenzene	51.1	10	50	0	102	61	137	44.75	13.2(20)	
Naphthalene	48.8	10	50	0	98	40	167	44.48	9.3(20)	
Hexachlorobutadiene	98.6	10	100	0	99	61	130	85.39	14.3(20)	
1,2,3-Trichlorobenzene	49.1	10	50	0	98	51	144	42.97	13.3(20)	
Surr: 1,2-Dichloroethane-d4	48.9		50		98	70	130			
Surr: Toluene-d8	49		50		98	70	130			
Surr: 4-Bromofluorobenzene	50.4		50		101	70	130			

Alpha Analytical, Inc.

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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.

L51 = Analyte recovery was above acceptance limits for the LCS, but was acceptable in the MS/MSD.

R5 = MS/MSD RPD exceeded the laboratory control limit. Recovery met acceptance criteria.

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