

ATTACHMENT 3: LABORATORY ANALYTICAL REPORTS

This attachment contains 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: 28-Oct-10

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

Suite 1420

CASE NARRATIVE

Job: G005862/JPL Groundwater Monitoring

Work Order: BMI10102003

Cooler Temp: 0 °C

Alpha's Sample ID	Client's Sample ID	Matrix
10102003-01A	MW-7	Aqueous
10102003-02A	MW-16	Aqueous
10102003-03A	MW-13	Aqueous
10102003-04A	Trip Blank	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.

Roger Scholl

Randy Gardner

Walter Hinchman

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

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ANALYTICAL REPORT

Battelle Memorial Institute
655 West Broadway
San Diego, CA 92101

Attn: David Conner
Phone: (619) 726-7311
Fax: (614) 458-6641
Date Received : 10/20/10

Job: G005862/JPL Groundwater Monitoring

Anions by IC EPA Method 300.0

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: MW-7				
Lab ID : BMII10102003-01A	Chloride	150	50 mg/L	10/20/10 10:22 10/20/10 13:55
Date Sampled 10/19/10 11:08	Nitrite (NO2) - N	ND	0.25 mg/L	10/20/10 10:22 10/20/10 13:55
	Nitrate (NO3) - N	2.7	0.25 mg/L	10/20/10 10:22 10/20/10 13:55
	Phosphate, ortho - P	ND	0.50 mg/L	10/20/10 10:22 10/20/10 13:55
	Sulfate (SO4)	110	75 mg/L	10/20/10 10:22 10/20/10 13:55
Client ID: MW-16				
Lab ID : BMII10102003-02A	Chloride	170	50 mg/L	10/20/10 10:22 10/20/10 14:14
Date Sampled 10/19/10 13:45	Nitrite (NO2) - N	ND	0.25 mg/L	10/20/10 10:22 10/20/10 14:14
	Nitrate (NO3) - N	2.0	0.25 mg/L	10/20/10 10:22 10/20/10 14:14
	Phosphate, ortho - P	ND	0.50 mg/L	10/20/10 10:22 10/20/10 14:14
	Sulfate (SO4)	110	75 mg/L	10/20/10 10:22 10/20/10 14:14
Client ID: MW-13				
Lab ID : BMII10102003-03A	Chloride	55	50 mg/L	10/20/10 10:22 10/20/10 14:32
Date Sampled 10/19/10 16:42	Nitrite (NO2) - N	ND	0.25 mg/L	10/20/10 10:22 10/20/10 14:32
	Nitrate (NO3) - N	5.9	0.25 mg/L	10/20/10 10:22 10/20/10 14:32
	Phosphate, ortho - P	ND	0.50 mg/L	10/20/10 10:22 10/20/10 14:32
	Sulfate (SO4)	56	0.50 mg/L	10/20/10 10:22 10/20/10 14:32

ND = Not Detected

Roger Scholl *Randy Gardner* *Walter Hinchman*

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11/1/10

Report Date



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ANALYTICAL REPORT

Battelle Memorial Institute
655 West Broadway
San Diego, CA 92101

Attn: David Conner
Phone: (619) 726-7311
Fax: (614) 458-6641
Date Received : 10/20/10

Job: G005862/JPL Groundwater Monitoring

Perchlorate by Ion Chromatography
EPA Method 314.0

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: MW-7 Lab ID: BMI10102003-01A Perchlorate Date Sampled 10/19/10 11:08	9.68	1.00 µg/L	10/27/10 12:35	10/27/10 14:27
Client ID: MW-16 Lab ID: BMI10102003-02A Perchlorate Date Sampled 10/19/10 13:45	ND	1.00 µg/L	10/27/10 12:35	10/27/10 14:45
Client ID: MW-13 Lab ID: BMI10102003-03A Perchlorate Date Sampled 10/19/10 16:42	823	50.0 µg/L	10/27/10 12:35	10/28/10 11:54

ND = Not Detected

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Attn: David Conner
Phone: (619) 726-7311
Fax: (614) 458-6641
Date Received : 10/20/10

Job: G005862/JPL Groundwater Monitoring

Metals by ICPMS
EPA Method 200.8

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: MW-7				
Lab ID : BM110102003-01A Chromium (Cr)	ND	0.0050 mg/L	10/26/10 09:21	10/27/10 17:37
Date Sampled 10/19/10 11:08				
Client ID: MW-16				
Lab ID : BM110102003-02A Chromium (Cr)	0.032	0.0050 mg/L	10/26/10 09:21	10/27/10 17:42
Date Sampled 10/19/10 13:45				
Client ID: MW-13				
Lab ID : BM110102003-03A Chromium (Cr)	0.0081	0.0050 mg/L	10/26/10 09:21	10/27/10 17:06
Date Sampled 10/19/10 16:42				

ND = Not Detected

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

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

Tentatively Identified Compounds - Volatile Organics by GC/MS

Parameter	Estimated Concentration	Estimated Reporting Limit	Date Extracted	Date Analyzed
Client ID: MW-7				
Lab ID: BM110102003-01A *** None Found ***	ND	2.0 µg/L	10/27/10 15:05	10/27/10 15:05
Date Received: 10/20/10				
Date Sampled: 10/19/10 11:08				
Client ID: MW-16				
Lab ID: BM110102003-02A *** None Found ***	ND	2.0 µg/L	10/27/10 15:26	10/27/10 15:26
Date Received: 10/20/10				
Date Sampled: 10/19/10 13:45				
Client ID: MW-13				
Lab ID: BM110102003-03A *** None Found ***	ND	2.0 µg/L	10/27/10 15:48	10/27/10 15:48
Date Received: 10/20/10				
Date Sampled: 10/19/10 16:42				
Client ID: Trip Blank				
Lab ID: BM110102003-04A *** None Found ***	ND	2.0 µg/L	10/27/10 18:42	10/27/10 18:42
Date Received: 10/20/10				
Date Sampled: 10/19/10 00:00				

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

Alpha Analytical Number: BMI10102003-01A
Client I.D. Number: MW-7

Sampled: 10/19/10 11:08
Received: 10/20/10
Extracted: 10/27/10 15:05
Analyzed: 10/27/10 15:05

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethene	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	10 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	5.7	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	4.5	0.50 µg/L	61 Naphthalene	ND	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	101	(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	106	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	2.0	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10102003-02A
Client I.D. Number: MW-16

Sampled: 10/19/10 13:45
Received: 10/20/10
Extracted: 10/27/10 15:26
Analyzed: 10/27/10 15:26

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	1.0 µg/L	40 Bromoform	3.3	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	17	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	20	0.50 µg/L	61 Naphthalene	ND	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	101	(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	104	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	15	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI10102003-03A
Client I.D. Number: MW-13

Sampled: 10/19/10 16:42
Received: 10/20/10
Extracted: 10/27/10 15:48
Analyzed: 10/27/10 15:48

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	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	0.78	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethene	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	10 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	5.8	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	0.86	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	1.6	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	1.6	0.50 µg/L	61 Naphthalene	Q	1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	103	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	105	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	104	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	1.5	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 L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

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

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

11/1/10

Report Date



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10102003-04A
Client I.D. Number: Trip Blank

Sampled: 10/19/10 00:00
Received: 10/20/10
Extracted: 10/27/10 18:42
Analyzed: 10/27/10 18:42

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	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	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	101	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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11/1/10

Report Date

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VOC Sample Preservation Report

Work Order: BMI10102003

Job: G005862/JPL Groundwater Monitoring

Alpha's Sample ID	Client's Sample ID	Matrix	pH
10102003-01A	MW-7	Aqueous	2
10102003-02A	MW-16	Aqueous	2
10102003-03A	MW-13	Aqueous	2
10102003-04A	Trip Blank	Aqueous	2

11/1/10
Report Date

Page 1 of 1



Alpha Analytical, Inc.

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Date:
25-Oct-10

QC Summary Report

Work Order:
10102003

Method Blank

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

File ID: 25			Batch ID: 25292		Analysis Date: 10/20/2010 12:23					
Sample ID: MB-25292	Units : mg/L	Run ID: IC_1_101020A		Prep Date: 10/20/2010 10:22						
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	ND	0.5								
Nitrite (NO ₂) - N	ND	0.25								
Nitrate (NO ₃) - N	ND	0.25								
Phosphate, ortho - P	ND	0.5								
Sulfate (SO ₄)	ND	0.5								

Laboratory Fortified Blank

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

File ID: 26			Batch ID: 25292		Analysis Date: 10/20/2010 12:41					
Sample ID: LFB-25292	Units : mg/L	Run ID: IC_1_101020A		Prep Date: 10/20/2010 10:22						
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	51.9	0.5	50		104	90	110			
Nitrite (NO ₂) - N	4.9	0.25	5		98	90	110			
Nitrate (NO ₃) - N	5.06	0.25	5		101	90	110			
Phosphate, ortho - P	5.3	0.5	5		106	90	110			
Sulfate (SO ₄)	100	0.5	100		100	90	110			

Sample Matrix Spike

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

File ID: 33			Batch ID: 25292		Analysis Date: 10/20/2010 14:51					
Sample ID: 10102003-03ALFM	Units : mg/L	Run ID: IC_1_101020A		Prep Date: 10/20/2010 10:22						
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	138	0.5	100	54.58	83	80	120			
Nitrite (NO ₂) - N	9.9	0.25	10	0	99	80	120			
Nitrate (NO ₃) - N	14.8	0.25	10	5.863	89	80	120			
Phosphate, ortho - P	10.8	0.5	10	0	108	80	120			
Sulfate (SO ₄)	234	0.5	200	56.16	89	80	120			

Sample Matrix Spike Duplicate

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

File ID: 34			Batch ID: 25292		Analysis Date: 10/20/2010 15:09					
Sample ID: 10102003-03ALFMD	Units : mg/L	Run ID: IC_1_101020A		Prep Date: 10/20/2010 10:22						
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	141	0.5	100	54.58	86	80	120	137.8	2.1(15)	
Nitrite (NO ₂) - N	9.99	0.25	10	0	99.9	80	120	9.899	0.9(15)	
Nitrate (NO ₃) - N	15.1	0.25	10	5.863	93	80	120	14.8	2.2(15)	
Phosphate, ortho - P	11.3	0.5	10	0	113	80	120	10.77	4.6(15)	
Sulfate (SO ₄)	238	0.5	200	56.16	91	80	120	233.5	1.8(15)	

Comments:

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



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Date:
01-Nov-10

QC Summary Report

Work Order:
10102003

Method Blank

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

File ID: **14**

Batch ID: **25339**

Analysis Date: **10/27/2010 13:32**

Sample ID: **MB-25339**

Units: **µg/L**

Run ID: **IC_3_101027A**

Prep Date: **10/27/2010 12:35**

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: **25339**

Analysis Date: **10/27/2010 13:50**

Sample ID: **LFB-25339**

Units: **µg/L**

Run ID: **IC_3_101027A**

Prep Date: **10/27/2010 12:35**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	27.3	2	25		109	85	115			

Sample Matrix Spike

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

File ID: **18**

Batch ID: **25339**

Analysis Date: **10/28/2010 12:12**

Sample ID: **10102003-03ALFM**

Units: **µg/L**

Run ID: **IC_3_101027A**

Prep Date: **10/27/2010 12:35**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	2160	100	1250	823	107	80	120			

Sample Matrix Spike Duplicate

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

File ID: **19**

Batch ID: **25339**

Analysis Date: **10/28/2010 12:31**

Sample ID: **10102003-03ALFMD**

Units: **µg/L**

Run ID: **IC_3_101027A**

Prep Date: **10/27/2010 12:35**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	2230	100	1250	823	112	80	120	2157	3.3(15)	

Comments:

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



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Date:
29-Oct-10

QC Summary Report

Work Order:
10102003

Method Blank

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

File ID: 102710.B\025_M1.D\

Batch ID: 25322

Analysis Date: 10/27/2010 16:39

Sample ID: MB-25322

Units : mg/L

Run ID: ICP/MS_101027I

Prep Date: 10/26/2010 09:21

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: 102710.B\025_M2.D\

Batch ID: 25322

Analysis Date: 10/27/2010 16:44

Sample ID: LCS-25322

Units : mg/L

Run ID: ICP/MS_101027I

Prep Date: 10/26/2010 09:21

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0556	0.005	0.05		111	85	115			

Sample Matrix Spike

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

File ID: 102710.B\026_M.D\

Batch ID: 25322

Analysis Date: 10/27/2010 17:14

Sample ID: 10102003-03AMS

Units : mg/L

Run ID: ICP/MS_101027I

Prep Date: 10/26/2010 09:21

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0561	0.005	0.05	0.008073	96	70	130			

Sample Matrix Spike Duplicate

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

File ID: 102710.B\027_M.D\

Batch ID: 25322

Analysis Date: 10/27/2010 17:19

Sample ID: 10102003-03AMSD

Units : mg/L

Run ID: ICP/MS_101027I

Prep Date: 10/26/2010 09:21

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0571	0.005	0.05	0.008073	98	70	130	0.05607	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:
28-Oct-10

QC Summary Report

Work Order:
10102003

Method Blank

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

File ID: **10102706.D**

Batch ID: **MS15W1027M**

Analysis Date: **10/27/2010 09:38**

Sample ID: **MBLK MS15W1027M**

Units : **µg/L**

Run ID: **MSD_15_101027C**

Prep Date: **10/27/2010 09:38**

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	9.66		10		97	70	130			
Surr: Toluene-d8	10.7		10		107	70	130			



Alpha Analytical, Inc.

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Date:

28-Oct-10

QC Summary Report

Work Order:

10102003

Surr: 4-Bromofluorobenzene

10.5

10

105

70

130



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Date:
28-Oct-10

QC Summary Report

Work Order:
10102003

Laboratory Control Spike

Type: LCS

Test Code: EPA Method SW8260B

File ID: 10102703.D

Batch ID: MS15W1027M

Analysis Date: 10/27/2010 08:24

Sample ID: LCS MS15W1027M

Units : µg/L

Run ID: MSD_15_101027C

Prep Date: 10/27/2010 08:24

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	9.3	1	10		93	70	130			
Chloromethane	9.04	2	10		90	70	130			
Vinyl chloride	11.7	1	10		117	70	130			
Chloroethane	10.2	1	10		102	70	130			
Bromomethane	11	2	10		110	70	130			
Trichlorofluoromethane	10.1	1	10		101	70	130			
1,1-Dichloroethene	10.7	1	10		107	70	130			
Dichloromethane	9.59	2	10		96	70	130			
Freon-113	11	1	10		110	67	141			
trans-1,2-Dichloroethene	10.7	1	10		107	70	130			
Methyl tert-butyl ether (MTBE)	9.08	0.5	10		91	70	130			
1,1-Dichloroethane	10.6	1	10		106	70	130			
2-Butanone (MEK)	174	10	200		87	70	130			
cis-1,2-Dichloroethene	10.5	1	10		105	70	130			
Bromochloromethane	9.88	1	10		99	70	130			
Chloroform	10.3	1	10		103	70	130			
2,2-Dichloropropane	11	1	10		110	70	130			
1,2-Dichloroethane	9.97	1	10		99.7	70	130			
1,1,1-Trichloroethane	11	1	10		110	70	130			
1,1-Dichloropropene	11.1	1	10		111	70	130			
Carbon tetrachloride	11	1	10		110	70	130			
Benzene	10.6	0.5	10		106	70	130			
Dibromomethane	9.59	1	10		96	70	130			
1,2-Dichloropropane	10.3	1	10		103	70	130			
Trichloroethene	10.8	1	10		108	70	130			
Bromodichloromethane	10.8	1	10		108	70	130			
4-Methyl-2-pentanone (MIBK)	21.2	2.5	25		85	20	182			
cis-1,3-Dichloropropene	10.3	1	10		103	70	130			
trans-1,3-Dichloropropene	9.23	1	10		92	70	130			
1,1,2-Trichloroethane	9.2	1	10		92	70	130			
Toluene	10.4	0.5	10		104	70	130			
1,3-Dichloropropane	9.69	1	10		97	70	130			
Dibromochloromethane	9.33	1	10		93	70	130			
1,2-Dibromoethane (EDB)	19.1	2	20		95	70	130			
Tetrachloroethene	10.9	1	10		109	70	130			
1,1,1,2-Tetrachloroethane	10.8	1	10		108	70	130			
Chlorobenzene	10.4	1	10		104	70	130			
Ethylbenzene	10.7	0.5	10		107	70	130			
m,p-Xylene	10.7	0.5	10		107	70	130			
Bromoform	8.83	1	10		88	70	130			
Styrene	10.5	1	10		105	70	130			
o-Xylene	10.5	0.5	10		105	70	130			
1,1,1,2,2-Tetrachloroethane	8.71	1	10		87	70	130			
1,2,3-Trichloropropane	17.5	2	20		88	70	130			
Isopropylbenzene	10.8	1	10		108	70	130			
Bromobenzene	10.6	1	10		106	70	130			
n-Propylbenzene	11.3	1	10		113	70	130			
4-Chlorotoluene	11	1	10		110	70	130			
2-Chlorotoluene	11	1	10		110	70	130			
1,3,5-Trimethylbenzene	10.9	1	10		109	70	130			
tert-Butylbenzene	10.8	1	10		108	70	130			
1,2,4-Trimethylbenzene	10.9	1	10		109	70	130			
sec-Butylbenzene	11.1	1	10		111	70	130			
1,3-Dichlorobenzene	11	1	10		110	70	130			
1,4-Dichlorobenzene	10.3	1	10		103	70	130			
4-Isopropyltoluene	11	1	10		110	70	130			
1,2-Dichlorobenzene	9.64	1	10		96	70	130			
n-Butylbenzene	11.3	1	10		113	70	130			
1,2-Dibromo-3-chloropropane (DBCP)	45.3	3	50		91	70	130			
1,2,4-Trichlorobenzene	8.76	2	10		88	70	130			
Naphthalene	6.9	2	10		69	70(70)	130			
Hexachlorobutadiene	20.1	2	20		101	70	130			
1,2,3-Trichlorobenzene	8.2	2	10		82	70	130			
Surr: 1,2-Dichloroethane-d4	9.14		10		91	70	130			
Surr: Toluene-d8	9.98		10		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:

28-Oct-10

QC Summary Report

Work Order:

10102003

Surr: 4-Bromofluorobenzene

10.2

10

102

70

130



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Date:
28-Oct-10

QC Summary Report

Work Order:
10102003

Sample Matrix Spike

File ID: 10102707.D

Sample ID: 10102003-03AMS

Type: MS

Test Code: EPA Method SW8260B

Batch ID: MS15W1027M

Analysis Date: 10/27/2010 10:00

Units: µg/L

Run ID: MSD_15_101027C

Prep Date: 10/27/2010 10:00

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	40.9	2.5	50	0	82	13	167			
Chloromethane	40.5	10	50	0	81	28	145			
Vinyl chloride	52.5	2.5	50	0	105	43	134			
Chloroethane	46.9	2.5	50	0	94	39	154			
Bromomethane	54.7	10	50	0	109	19	176			
Trichlorofluoromethane	46.4	2.5	50	0	93	34	160			
1,1-Dichloroethene	47.7	2.5	50	0	95	60	130			
Dichloromethane	43.1	10	50	0	86	68	130			
Freon-113	52.1	2.5	50	0	104	49	141			
trans-1,2-Dichloroethene	47.7	2.5	50	0	95	63	130			
Methyl tert-butyl ether (MTBE)	44.7	1.3	50	0	89	56	141			
1,1-Dichloroethane	47.3	2.5	50	0	95	61	130			
2-Butanone (MEK)	677	50	1000	0	68	20	182			
cis-1,2-Dichloroethene	47.3	2.5	50	0	95	70	130			
Bromochloromethane	45.9	2.5	50	0	92	70	130			
Chloroform	45.8	2.5	50	5.84	80	67	130			
2,2-Dichloropropane	48.1	2.5	50	0	96	30	152			
1,2-Dichloroethane	46.7	2.5	50	0	93	60	135			
1,1,1-Trichloroethane	47.5	2.5	50	0	95	59	137			
1,1-Dichloropropene	49	2.5	50	0	98	63	130			
Carbon tetrachloride	48.4	2.5	50	0.86	95	50	147			
Benzene	47	1.3	50	0	94	67	130			
Dibromomethane	44.4	2.5	50	0	89	69	133			
1,2-Dichloropropane	46.3	2.5	50	0	93	69	130			
Trichloroethene	46.8	2.5	50	1.57	91	69	130			
Bromodichloromethane	49.3	2.5	50	1.61	95	66	134			
4-Methyl-2-pentanone (MIBK)	103	13	125	0	82	20	182			
cis-1,3-Dichloropropene	46.8	2.5	50	0	94	63	130			
trans-1,3-Dichloropropene	42.9	2.5	50	0	86	66	131			
1,1,2-Trichloroethane	43.9	2.5	50	0	88	68	130			
Toluene	45.9	1.3	50	0	92	66	130			
1,3-Dichloropropane	45.9	2.5	50	0	92	70	130			
Dibromochloromethane	43.4	2.5	50	1.45	84	70	130			
1,2-Dibromoethane (EDB)	89.8	5	100	0	90	70	130			
Tetrachloroethene	47.1	2.5	50	0	94	61	134			
1,1,1,2-Tetrachloroethane	48.5	2.5	50	0	97	70	130			
Chlorobenzene	46.3	2.5	50	0	93	70	130			
Ethylbenzene	47.4	1.3	50	0	95	68	130			
m,p-Xylene	46.9	1.3	50	0	94	64	130			
Bromoform	41.4	2.5	50	0.78	81	64	138			
Styrene	47.1	2.5	50	0	94	69	130			
o-Xylene	46.4	1.3	50	0	93	70	130			
1,1,2,2-Tetrachloroethane	41.9	2.5	50	0	84	65	131			
1,2,3-Trichloropropane	83.7	10	100	0	84	70	130			
Isopropylbenzene	47.5	2.5	50	0	95	64	138			
Bromobenzene	47.9	2.5	50	0	96	70	130			
n-Propylbenzene	49.3	2.5	50	0	99	66	132			
4-Chlorotoluene	48.9	2.5	50	0	98	70	130			
2-Chlorotoluene	48.8	2.5	50	0	98	70	130			
1,3,5-Trimethylbenzene	48.2	2.5	50	0	96	66	136			
tert-Butylbenzene	46.7	2.5	50	0	93	65	137			
1,2,4-Trimethylbenzene	48.3	2.5	50	0	97	65	137			
sec-Butylbenzene	48.2	2.5	50	0	96	66	134			
1,3-Dichlorobenzene	48.7	2.5	50	0	97	70	130			
1,4-Dichlorobenzene	46	2.5	50	0	92	70	130			
4-Isopropyltoluene	48.1	2.5	50	0	96	66	137			
1,2-Dichlorobenzene	43.9	2.5	50	0	88	70	130			
n-Butylbenzene	49	2.5	50	0	98	60	142			
1,2-Dibromo-3-chloropropane (DBCP)	206	15	250	0	82	67	130			
1,2,4-Trichlorobenzene	37.9	10	50	0	76	61	137			
Naphthalene	28.9	10	50	0	58	40	167			
Hexachlorobutadiene	88.2	10	100	0	88	61	130			
1,2,3-Trichlorobenzene	36	10	50	0	72	51	144			
Surr: 1,2-Dichloroethane-d4	48.6		50		97	70	130			
Surr: Toluene-d8	49.5		50		99	70	130			



Alpha Analytical, Inc.

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

Date:

28-Oct-10

QC Summary Report

Work Order:

10102003

Surr: 4-Bromofluorobenzene

50.8

50

102

70

130



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Date:
28-Oct-10

QC Summary Report

Work Order:
10102003

Sample Matrix Spike Duplicate

Type: MSD Test Code: EPA Method SW8260B

File ID: 10102708.D

Batch ID: MS15W1027M

Analysis Date: 10/27/2010 10:22

Sample ID: 10102003-03AMSD

Units : µg/L

Run ID: MSD_15_101027C

Prep Date: 10/27/2010 10:22

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	44.6	2.5	50	0	89	13	167	40.93	8.5(20)	
Chloromethane	46.2	10	50	0	92	28	145	40.53	13.0(20)	
Vinyl chloride	55.4	2.5	50	0	111	43	134	52.49	5.3(20)	
Chloroethane	48.5	2.5	50	0	97	39	154	46.89	3.4(20)	
Bromomethane	57.9	10	50	0	116	19	176	54.71	5.7(20)	
Trichlorofluoromethane	49.8	2.5	50	0	99.5	34	160	46.44	6.9(20)	
1,1-Dichloroethene	50.3	2.5	50	0	101	60	130	47.69	5.4(20)	
Dichloromethane	44.1	10	50	0	88	68	130	43.12	2.3(20)	
Freon-113	55.7	2.5	50	0	111	49	141	52.14	6.6(20)	
trans-1,2-Dichloroethene	50.5	2.5	50	0	101	63	130	47.68	5.7(20)	
Methyl tert-butyl ether (MTBE)	45.4	1.3	50	0	91	56	141	44.7	1.5(20)	
1,1-Dichloroethane	48.9	2.5	50	0	98	61	130	47.26	3.5(20)	
2-Butanone (MEK)	685	50	1000	0	69	20	182	677.5	1.1(20)	
cis-1,2-Dichloroethene	46.7	2.5	50	0	93	70	130	47.28	1.3(20)	
Bromochloromethane	48	2.5	50	0	96	70	130	45.89	4.4(20)	
Chloroform	47.5	2.5	50	5.84	83	67	130	45.84	3.6(20)	
2,2-Dichloropropane	50.6	2.5	50	0	101	30	152	48.07	5.1(20)	
1,2-Dichloroethane	47.4	2.5	50	0	95	60	135	46.72	1.4(20)	
1,1,1-Trichloroethane	49.8	2.5	50	0	99.5	59	137	47.49	4.7(20)	
1,1-Dichloropropene	51.1	2.5	50	0	102	63	130	49.03	4.1(20)	
Carbon tetrachloride	52.6	2.5	50	0.86	103	50	147	48.4	8.3(20)	
Benzene	49.7	1.3	50	0	99	67	130	47.03	5.5(20)	
Dibromomethane	45.3	2.5	50	0	91	69	133	44.41	2.0(20)	
1,2-Dichloropropane	47.7	2.5	50	0	95	69	130	46.25	3.1(20)	
Trichloroethene	49.3	2.5	50	1.57	95	69	130	46.82	5.1(20)	
Bromodichloromethane	51.5	2.5	50	1.61	99.7	66	134	49.31	4.3(20)	
4-Methyl-2-pentanone (MIBK)	103	13	125	0	82	20	182	102.7	0.1(20)	
cis-1,3-Dichloropropene	48.4	2.5	50	0	97	63	130	46.84	3.2(20)	
trans-1,3-Dichloropropene	44.4	2.5	50	0	89	66	131	42.87	3.5(20)	
1,1,2-Trichloroethane	45	2.5	50	0	90	68	130	43.9	2.4(20)	
Toluene	47.9	1.3	50	0	96	66	130	45.91	4.3(20)	
1,3-Dichloropropane	46.9	2.5	50	0	94	70	130	45.94	2.0(20)	
Dibromochloromethane	46	2.5	50	1.45	89	70	130	43.4	5.8(20)	
1,2-Dibromoethane (EDB)	91.9	5	100	0	92	70	130	89.75	2.4(20)	
Tetrachloroethene	50.4	2.5	50	0	101	61	134	47.05	6.8(20)	
1,1,1,2-Tetrachloroethane	51	2.5	50	0	102	70	130	48.54	4.9(20)	
Chlorobenzene	48.2	2.5	50	0	96	70	130	46.34	3.9(20)	
Ethylbenzene	49.8	1.3	50	0	99.6	68	130	47.43	4.9(20)	
m,p-Xylene	49.8	1.3	50	0	99.5	64	130	46.85	6.0(20)	
Bromoform	45	2.5	50	0.78	88	64	138	41.38	8.4(20)	
Styrene	49.4	2.5	50	0	99	69	130	47.07	4.9(20)	
o-Xylene	48.4	1.3	50	0	97	70	130	46.43	4.1(20)	
1,1,2,2-Tetrachloroethane	42.9	2.5	50	0	86	65	131	41.94	2.2(20)	
1,2,3-Trichloropropane	86.6	10	100	0	87	70	130	83.73	3.4(20)	
Isopropylbenzene	49	2.5	50	0	98	64	138	47.46	3.1(20)	
Bromobenzene	48.5	2.5	50	0	97	70	130	47.86	1.3(20)	
n-Propylbenzene	51.9	2.5	50	0	104	66	132	49.27	5.1(20)	
4-Chlorotoluene	50.2	2.5	50	0	100	70	130	48.92	2.5(20)	
2-Chlorotoluene	49.9	2.5	50	0	99.8	70	130	48.84	2.2(20)	
1,3,5-Trimethylbenzene	50.2	2.5	50	0	100	66	136	48.19	4.1(20)	
tert-Butylbenzene	49.2	2.5	50	0	98	65	137	46.7	5.2(20)	
1,2,4-Trimethylbenzene	50.1	2.5	50	0	100	65	137	48.3	3.7(20)	
sec-Butylbenzene	51.1	2.5	50	0	102	66	134	48.19	5.8(20)	
1,3-Dichlorobenzene	50.6	2.5	50	0	101	70	130	48.72	3.9(20)	
1,4-Dichlorobenzene	48	2.5	50	0	96	70	130	45.96	4.4(20)	
4-Isopropyltoluene	50.4	2.5	50	0	101	66	137	48.14	4.5(20)	
1,2-Dichlorobenzene	45.2	2.5	50	0	90	70	130	43.94	2.9(20)	
n-Butylbenzene	52.2	2.5	50	0	104	60	142	49.02	6.3(20)	
1,2-Dibromo-3-chloropropane (DBCP)	217	15	250	0	87	67	130	205.8	5.4(20)	
1,2,4-Trichlorobenzene	41.2	10	50	0	82	61	137	37.91	8.2(20)	
Naphthalene	32.5	10	50	0	65	40	167	28.85	12.0(20)	
Hexachlorobutadiene	97.3	10	100	0	97	61	130	88.16	9.9(20)	
1,2,3-Trichlorobenzene	38.6	10	50	0	77	51	144	35.95	7.1(20)	
Surr: 1,2-Dichloroethane-d4	47.3		50		95	70	130			
Surr: Toluene-d8	49.6		50		99	70	130			



Alpha Analytical, Inc.

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Date:

28-Oct-10

QC Summary Report

Work Order:

10102003

Surr: 4-Bromofluorobenzene	49.8	50	99.7	70	130
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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.

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

Billing Information :

CHAIN-OF-CUSTODY RECORD

CA AMENDED

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

WorkOrder : BMIS10102003
Report Due By : 5:00 PM On : 02-Nov-2010

Client:
 Battelle Memorial Institute
 655 West Broadway
 Suite 1420
 San Diego, CA 92101
 PO : 218013

Report Attention **Phone Number** **Email Address**
 David Conner (619) 726-7311 x connerd@battelle.org
 Betsy Cuite (614) 424-4899 x cuittee@battelle.org
 Shane Walton (614) 424-4117 x waltonss@battelle.org

EDD Required : No

Sampled by : David Loera

Cooler Temp Samples Received Date Printed
 0 °C 20-Oct-2010 22-Oct-2010

Client's COC # : 31908, 31913 Job : G005862/JPL Groundwater Monitoring
 QC Level : DS4 = DOD QC Required : Final Rpt, MBLK, InitCal/ConCal data, LCS, MS/MSD With Surrogates

Alpha Sample ID	Client Sample ID	Collection Date	No. of Bottles Alpha Sub	TAT	Requested Tests				Sample Remarks			
					300_0_W	314_W	METALS_D W	VOC_TIC_W		VOC_W		
BM10102003-01A	MW-7	10/19/10 11:08	9	0	9	NO2, NO3, SO4, Cl, PO4	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria		
BM10102003-02A	MW-16	10/19/10 13:45	9	0	9	NO2, NO3, SO4, Cl, PO4	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria		
BM10102003-03A	MW-13	10/19/10 16:42	18	0	9	NO2, NO3, SO4, Cl, PO4	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria		MS/MSD
BM10102003-04A	Trip Blank	10/19/10 00:00	1	0	9				VOC by 524 Criteria	VOC by 524 Criteria		Reno Trip Blank 9/27/10

Comments: Security seals intact. Frozen ice. Temp Blank #7917 received @ 0°C. Level IV QC. Samples should be used as the control spike sample if possible (I.E. MS/MSD). Trip Blank received and placed on hold by lab. Amended 10/22/10. Per phone conversation w/ : David Conner 10/22/10 @ 11:13 took trip blank off hold and added VOCs. EA

Logged in by: Elizabeth Alder Signature: [Signature] Print Name: Elizabeth Alder Company: Alpha Analytical, Inc. Date/Time: 10-22-10 12:59

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 : BMIS10102003

Report Due By : 5:00 PM On : 02-Nov-2010

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

Report Attention	Phone Number	Email Address
David Conner	(619) 726-7311 x	connerd@battelle.org
Betsy Cuite	(614) 424-4899 x	cuitee@battelle.org
Shane Walton	(614) 424-4117 x	waltonsh@battelle.org

EDD Required : Yes

Sampled by : David Loera

PO : 218013
 Client's COC # : 31908, 31913

Job : G005862/JPL Groundwater Monitoring

Cooler Temp 0 °C Samples Received 20-Oct-2010 Date Printed 20-Oct-2010

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

Alpha Sample ID	Client Sample ID	Collection Date	No. of Bottles			Requested Tests			Sample Remarks			
			Alpha	Sub	TAT	300_0_W	314_W	HOLD		METALS_D W	VOC_TIC_W	VOC_W
BM110102003-01A	MW-7	10/19/10 11:08	9	0	9	NO2, NO3, SO4, Cl, PO4	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria		
BM110102003-02A	MW-16	10/19/10 13:45	9	0	9	NO2, NO3, SO4, Cl, PO4	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria		
BM110102003-03A	MW-13	10/19/10 16:42	18	0	9	NO2, NO3, SO4, Cl, PO4	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria		MS/MSD
BM110102003-04A	Trip Blank	10/19/10 00:00	1	0	9			Hold				Reno Trip Blank 9/27/10

Comments: Security seals intact. Frozen ice. Temp Blank #7917 received @ 0°C. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). Trip Blank received and placed on hold by lab.

Logged in by: Elizabeth Adcox Signature: [Signature] Print Name: Elizabeth Adcox Company: Alpha Analytical, Inc. Date/Time: 10-20-10 1030

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

Billing Information:

Company Name Battelle
 Attn: _____
 Address 505 Kings 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 States?
 AZ _____ CA NV _____ WA _____
 ID _____ OR _____ OTHER _____
 Page # 1 of 1

31913

Consultant / Client Name David Conner Job # 6005862/SPL 610M Job Name SPL-610-4010
 Address _____ Report Attention / Project Manager _____
 City, State, Zip _____ Name: David Conner Email: connerd@battelle.org Mobile: 619 458-6641 Phone: 619 458-6641

Time Sampled	Date Sampled	Matrix* See Key Below	PO #	Lab ID Number	Office (Use Only)	Sample Description	TAT	Field Filled	# Containers**	ED / EDF? YES <input checked="" type="checkbox"/> NO _____	REMARKS
<u>1042</u>	<u>10/9</u>	<u>AA</u>	<u>218013</u>			<u>MW-13</u>	<u>ID</u>		<u>6V 3P</u>		<u>VOC's (524.2)</u>
<u>1042</u>	<u>10/9</u>	<u>AA</u>				<u>MW-13-MS/MSD</u>	<u>ID</u>		<u>6V 3P</u>		<u>Total Cr (200.8)</u>
						<u>TRIP BLANK</u>					<u>Perchlorate (314.0)</u>
											<u>* 300</u>

LAB USE ONLY

ADDITIONAL INSTRUCTIONS: *Chloride, Nitrate, Nitrite, Orthophosphate, Sulfate

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action (NAC 445.0636 (c) (2)). Sampled By: David Conner

Relinquished by: (Signature/Affiliation)	Received by: (Signature/Affiliation)	Date:	Time:
<u>David Conner / Battelle</u>	<u>David Conner / Alpha</u>	<u>10/20/10</u>	<u>1030</u>

*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 27-Oct-10

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

Suite 1420

CASE NARRATIVE

Job: G005862/JPL Groundwater Monitoring

Work Order: BMI10102004

Cooler Temp: 0 °C

Alpha's Sample ID	Client's Sample ID	Matrix
10102004-01A	MW-21-5	Aqueous
10102004-02A	MW-21-4	Aqueous
10102004-03A	MW-21-3	Aqueous
10102004-04A	MW-21-2	Aqueous
10102004-05A	MW-21-1	Aqueous
10102004-06A	DUPE-01-4Q10	Aqueous
10102004-07A	EB-01-10/19/10	Aqueous
10102004-08A	TB-01-10/19/10	Aqueous

Manually Integrated Analytes

Alpha's Sample ID	Test Reference	Analyte
NONE		

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

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

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

Roger Scholl *Randy Gardner* *Walter Hinchman*

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

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ANALYTICAL REPORT

Battelle Memorial Institute
655 West Broadway
San Diego, CA 92101

Attn: David Conner
Phone: (619) 726-7311
Fax: (614) 458-6641
Date Received : 10/20/10

Job: G005862/JPL Groundwater Monitoring

Perchlorate by Ion Chromatography EPA Method 314.0

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: MW-21-5 Lab ID : BMII10102004-01A Perchlorate Date Sampled 10/19/10 09:21	4.26	1.00 µg/L	10/27/10 12:35	10/27/10 15:59
Client ID: MW-21-4 Lab ID : BMII10102004-02A Perchlorate Date Sampled 10/19/10 09:45	3.04	1.00 µg/L	10/27/10 12:35	10/27/10 16:17
Client ID: MW-21-3 Lab ID : BMII10102004-03A Perchlorate Date Sampled 10/19/10 10:10	2.92	1.00 µg/L	10/27/10 12:35	10/27/10 16:36
Client ID: MW-21-2 Lab ID : BMII10102004-04A Perchlorate Date Sampled 10/19/10 10:49	2.53	1.00 µg/L	10/27/10 12:35	10/27/10 16:54
Client ID: MW-21-1 Lab ID : BMII10102004-05A Perchlorate Date Sampled 10/19/10 11:20	2.43	1.00 µg/L	10/27/10 12:35	10/27/10 17:13
Client ID: DUPE-01-4Q10 Lab ID : BMII10102004-06A Perchlorate Date Sampled 10/19/10 00:00	2.59	1.00 µg/L	10/27/10 12:35	10/27/10 17:31
Client ID: EB-01-10/19/10 Lab ID : BMII10102004-07A Perchlorate Date Sampled 10/19/10 11:08	ND	1.00 µg/L	10/27/10 12:35	10/27/10 17:49

ND = Not Detected

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Report Date



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ANALYTICAL REPORT

Battelle Memorial Institute
655 West Broadway
San Diego, CA 92101

Attn: David Conner
Phone: (619) 726-7311
Fax: (614) 458-6641
Date Received : 10/20/10

Job: G005862/JPL Groundwater Monitoring

Metals by ICPMS
EPA Method 200.8

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: MW-21-5				
Lab ID : BM110102004-01A Chromium (Cr)	ND	0.0050 mg/L	10/26/10 09:21	10/27/10 17:48
Date Sampled 10/19/10 09:21				
Client ID: MW-21-4				
Lab ID : BM110102004-02A Chromium (Cr)	ND	0.0050 mg/L	10/26/10 09:21	10/27/10 17:53
Date Sampled 10/19/10 09:45				
Client ID: MW-21-3				
Lab ID : BM110102004-03A Chromium (Cr)	ND	0.0050 mg/L	10/26/10 09:21	10/27/10 17:59
Date Sampled 10/19/10 10:10				
Client ID: MW-21-2				
Lab ID : BM110102004-04A Chromium (Cr)	ND	0.0050 mg/L	10/26/10 09:21	10/27/10 18:04
Date Sampled 10/19/10 10:49				
Client ID: MW-21-1				
Lab ID : BM110102004-05A Chromium (Cr)	ND	0.0050 mg/L	10/26/10 09:21	10/27/10 18:10
Date Sampled 10/19/10 11:20				
Client ID: DUPE-01-4Q10				
Lab ID : BM110102004-06A Chromium (Cr)	ND	0.0050 mg/L	10/26/10 09:21	10/27/10 18:15
Date Sampled 10/19/10 00:00				
Client ID: EB-01-10/19/10				
Lab ID : BM110102004-07A Chromium (Cr)	ND	0.0050 mg/L	10/26/10 09:21	10/27/10 18:21
Date Sampled 10/19/10 11:08				

ND = Not Detected

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

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

Tentatively Identified Compounds - Volatile Organics by GC/MS

Parameter	Estimated Concentration	Estimated Reporting Limit	Date Extracted	Date Analyzed
Client ID: MW-21-5				
Lab ID: BMI10102004-01A	*** None Found ***	ND	2.0 µg/L	10/26/10 14:17 10/26/10 14:17
Date Received: 10/20/10				
Date Sampled: 10/19/10 09:21				
Client ID: MW-21-4				
Lab ID: BMI10102004-02A	*** None Found ***	ND	2.0 µg/L	10/26/10 14:39 10/26/10 14:39
Date Received: 10/20/10				
Date Sampled: 10/19/10 09:45				
Client ID: MW-21-3				
Lab ID: BMI10102004-03A	*** None Found ***	ND	2.0 µg/L	10/26/10 15:01 10/26/10 15:01
Date Received: 10/20/10				
Date Sampled: 10/19/10 10:10				
Client ID: MW-21-2				
Lab ID: BMI10102004-04A	*** None Found ***	ND	2.0 µg/L	10/26/10 15:22 10/26/10 15:22
Date Received: 10/20/10				
Date Sampled: 10/19/10 10:49				
Client ID: MW-21-1				
Lab ID: BMI10102004-05A	*** None Found ***	ND	2.0 µg/L	10/26/10 15:44 10/26/10 15:44
Date Received: 10/20/10				
Date Sampled: 10/19/10 11:20				
Client ID: DUPE-01-4Q10				
Lab ID: BMI10102004-06A	*** None Found ***	ND	2.0 µg/L	10/26/10 16:06 10/26/10 16:06
Date Received: 10/20/10				
Date Sampled: 10/19/10 00:00				
Client ID: EB-01-10/19/10				
Lab ID: BMI10102004-07A	Acetone	72	10 µg/L	10/26/10 13:56 10/26/10 13:56
Date Received: 10/20/10	Tertiary Butyl Alcohol (TBA)	72	10 µg/L	10/26/10 13:56 10/26/10 13:56
Date Sampled: 10/19/10 11:08	3,3-Dimethyl-2-butanone	2.2	2.0 µg/L	10/26/10 13:56 10/26/10 13:56
Client ID: TB-01-10/19/10				
Lab ID: BMI10102004-08A	*** None Found ***	ND	2.0 µg/L	10/26/10 13:34 10/26/10 13:34
Date Received: 10/20/10				
Date Sampled: 10/19/10 07:00				



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

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl

Randy Gardner

Walter Hinchman

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JPG

11/1/10

Report Date

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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10102004-01A
Client I.D. Number: MW-21-5

Sampled: 10/19/10 09:21
Received: 10/20/10
Extracted: 10/26/10 14:17
Analyzed: 10/26/10 14:17

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethene	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	10 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	3.7	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	ND	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	ND	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	100	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	105	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	104	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	1.5	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 L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer
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11/1/10

Report Date



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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10102004-02A
Client I.D. Number: MW-21-4

Sampled: 10/19/10 09:45
Received: 10/20/10
Extracted: 10/26/10 14:39
Analyzed: 10/26/10 14:39

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethene	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	10 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	6.9	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	ND	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (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	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	100	(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	102	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	1.9	0.50 µg/L			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10102004-03A
Client I.D. Number: MW-21-3

Sampled: 10/19/10 10:10
Received: 10/20/10
Extracted: 10/26/10 15:01
Analyzed: 10/26/10 15:01

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	1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethene	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	10 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	0.94	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	4.7	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	1.4	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	103	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	103	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	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	6.2	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 L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

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11/1/10

Report Date



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10102004-04A
Client I.D. Number: MW-21-2

Sampled: 10/19/10 10:49
Received: 10/20/10
Extracted: 10/26/10 15:22
Analyzed: 10/26/10 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	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethene	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	10 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	0.78	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	2.5 µg/L
25 Trichloroethene	ND	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	101	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	105	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	103	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	4.0	0.50 µg/L			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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Report Date



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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10102004-05A
Client I.D. Number: MW-21-1

Sampled: 10/19/10 11:20
Received: 10/20/10
Extracted: 10/26/10 15:44
Analyzed: 10/26/10 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	1.3	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	ND	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (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	Q	1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	101	(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	105	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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

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11/1/10

Report Date



Alpha Analytical, Inc.

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

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10102004-06A
Client I.D. Number: DUPE-01-4Q10

Sampled: 10/19/10 00:00
Received: 10/20/10
Extracted: 10/26/10 16:06
Analyzed: 10/26/10 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	0.77	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	2.5 µg/L
25 Trichloroethene	ND	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	100	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	105	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	103	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	4.6	0.50 µg/L			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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

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11/1/10

Report Date



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10102004-07A
Client I.D. Number: EB-01-10/19/10

Sampled: 10/19/10 11:08
Received: 10/20/10
Extracted: 10/26/10 13:56
Analyzed: 10/26/10 13:56

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	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)	41	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	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	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	106	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10102004-08A
Client I.D. Number: TB-01-10/19/10

Sampled: 10/19/10 07:00
Received: 10/20/10
Extracted: 10/26/10 13:34
Analyzed: 10/26/10 13:34

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethene	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	10 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	ND	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	ND	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	ND	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	99	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	105	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	104	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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

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

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

11/1/10

Report Date



Alpha Analytical, Inc.

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

VOC Sample Preservation Report

Work Order: BMI10102004

Job: G005862/JPL Groundwater Monitoring

Alpha's Sample ID	Client's Sample ID	Matrix	pH
10102004-01A	MW-21-5	Aqueous	2
10102004-02A	MW-21-4	Aqueous	2
10102004-03A	MW-21-3	Aqueous	2
10102004-04A	MW-21-2	Aqueous	2
10102004-05A	MW-21-1	Aqueous	2
10102004-06A	DUPE-01-4Q10	Aqueous	2
10102004-07A	EB-01-10/19/10	Aqueous	2
10102004-08A	TB-01-10/19/10	Aqueous	2

11/1/10
Report Date



Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778
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Date:
01-Nov-10

QC Summary Report

Work Order:
10102004

Method Blank

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

File ID: **14**

Batch ID: **25339**

Analysis Date: **10/27/2010 13:32**

Sample ID: **MB-25339**

Units : **µg/L**

Run ID: **IC_3_101027A**

Prep Date: **10/27/2010 12:35**

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: **25339**

Analysis Date: **10/27/2010 13:50**

Sample ID: **LFB-25339**

Units : **µg/L**

Run ID: **IC_3_101027A**

Prep Date: **10/27/2010 12:35**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	27.3	2	25		109	85	115			

Sample Matrix Spike

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

File ID: **18**

Batch ID: **25339**

Analysis Date: **10/28/2010 12:12**

Sample ID: **10102003-03ALFM**

Units : **µg/L**

Run ID: **IC_3_101027A**

Prep Date: **10/27/2010 12:35**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	2160	100	1250	823	107	80	120			

Sample Matrix Spike Duplicate

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

File ID: **19**

Batch ID: **25339**

Analysis Date: **10/28/2010 12:31**

Sample ID: **10102003-03ALFMD**

Units : **µg/L**

Run ID: **IC_3_101027A**

Prep Date: **10/27/2010 12:35**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	2230	100	1250	823	112	80	120	2157	3.3(15)	

Comments:

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



Alpha Analytical, Inc.

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Date:
29-Oct-10

QC Summary Report

Work Order:
10102004

Method Blank

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

File ID: 102710.B\025_M1.D\

Batch ID: 25322

Analysis Date: 10/27/2010 16:39

Sample ID: MB-25322

Units : mg/L

Run ID: ICP/MS_1010271

Prep Date: 10/26/2010 09:21

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: 102710.B\025_M2.D\

Batch ID: 25322

Analysis Date: 10/27/2010 16:44

Sample ID: LCS-25322

Units : mg/L

Run ID: ICP/MS_1010271

Prep Date: 10/26/2010 09:21

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0556	0.005	0.05		111	85	115			

Sample Matrix Spike

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

File ID: 102710.B\026_M.D\

Batch ID: 25322

Analysis Date: 10/27/2010 17:14

Sample ID: 10102003-03AMS

Units : mg/L

Run ID: ICP/MS_1010271

Prep Date: 10/26/2010 09:21

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0561	0.005	0.05	0.008073	96	70	130			

Sample Matrix Spike Duplicate

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

File ID: 102710.B\027_M.D\

Batch ID: 25322

Analysis Date: 10/27/2010 17:19

Sample ID: 10102003-03AMSD

Units : mg/L

Run ID: ICP/MS_1010271

Prep Date: 10/26/2010 09:21

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0571	0.005	0.05	0.008073	98	70	130	0.05607	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.



Alpha Analytical, Inc.

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Date:
27-Oct-10

QC Summary Report

Work Order:
10102004

Method Blank

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

File ID: **10102606.D**

Batch ID: **MS15W1026M**

Analysis Date: **10/26/2010 10:41**

Sample ID: **MBLK MS15W1026M**

Units : **µg/L**

Run ID: **MSD_15_101015D**

Prep Date: **10/26/2010 10:41**

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	10.6		10		106	70	130			



Alpha Analytical, Inc.

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

Date:

27-Oct-10

QC Summary Report

Work Order:

10102004

Surr: 4-Bromofluorobenzene

10.8

10

108

70

130



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Date:
27-Oct-10

QC Summary Report

Work Order:
10102004

Laboratory Control Spike

Type LCS Test Code: EPA Method SW8260B

File ID: 10102603.D

Batch ID: MS15W1026M

Analysis Date: 10/26/2010 09:25

Sample ID: LCS MS15W1026M

Units : µg/L

Run ID: MSD_15_101015D

Prep Date: 10/26/2010 09:25

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	9.51	1	10		95	70	130			
Chloromethane	9.36	2	10		94	70	130			
Vinyl chloride	9.94	1	10		99	70	130			
Chloroethane	9.8	1	10		98	70	130			
Bromomethane	11.2	2	10		112	70	130			
Trichlorofluoromethane	9.64	1	10		96	70	130			
1,1-Dichloroethene	10.5	1	10		105	70	130			
Dichloromethane	9.11	2	10		91	70	130			
Freon-113	11.2	1	10		112	67	141			
trans-1,2-Dichloroethene	10.5	1	10		105	70	130			
Methyl tert-butyl ether (MTBE)	8.78	0.5	10		88	70	130			
1,1-Dichloroethane	10.2	1	10		102	70	130			
2-Butanone (MEK)	174	10	200		87	70	130			
cis-1,2-Dichloroethene	9.61	1	10		96	70	130			
Bromochloromethane	9.53	1	10		95	70	130			
Chloroform	9.75	1	10		98	70	130			
2,2-Dichloropropane	10.7	1	10		107	70	130			
1,2-Dichloroethane	9.29	1	10		93	70	130			
1,1,1-Trichloroethane	10.5	1	10		105	70	130			
1,1-Dichloropropene	10.6	1	10		106	70	130			
Carbon tetrachloride	10.9	1	10		109	70	130			
Benzene	10.2	0.5	10		102	70	130			
Dibromomethane	8.92	1	10		89	70	130			
1,2-Dichloropropane	9.9	1	10		99	70	130			
Trichloroethene	10.1	1	10		101	70	130			
Bromodichloromethane	10.3	1	10		103	70	130			
4-Methyl-2-pentanone (MIBK)	20.7	2.5	25		83	20	182			
cis-1,3-Dichloropropene	9.91	1	10		99	70	130			
trans-1,3-Dichloropropene	8.88	1	10		89	70	130			
1,1,2-Trichloroethane	8.83	1	10		88	70	130			
Toluene	10	0.5	10		100	70	130			
1,3-Dichloropropane	9.25	1	10		93	70	130			
Dibromochloromethane	8.91	1	10		89	70	130			
1,2-Dibromoethane (EDB)	18.1	2	20		91	70	130			
Tetrachloroethene	10.3	1	10		103	70	130			
1,1,1,2-Tetrachloroethane	10.4	1	10		104	70	130			
Chlorobenzene	9.84	1	10		98	70	130			
Ethylbenzene	10.4	0.5	10		104	70	130			
m,p-Xylene	10.4	0.5	10		104	70	130			
Bromoform	8.51	1	10		85	70	130			
Styrene	10.2	1	10		102	70	130			
o-Xylene	9.95	0.5	10		100	70	130			
1,1,2,2-Tetrachloroethane	8.59	1	10		86	70	130			
1,2,3-Trichloropropane	17	2	20		85	70	130			
Isopropylbenzene	10.6	1	10		106	70	130			
Bromobenzene	10.1	1	10		101	70	130			
n-Propylbenzene	11	1	10		110	70	130			
4-Chlorotoluene	10.6	1	10		106	70	130			
2-Chlorotoluene	10.5	1	10		105	70	130			
1,3,5-Trimethylbenzene	10.7	1	10		107	70	130			
tert-Butylbenzene	10.5	1	10		105	70	130			
1,2,4-Trimethylbenzene	10.6	1	10		106	70	130			
sec-Butylbenzene	10.8	1	10		108	70	130			
1,3-Dichlorobenzene	10.5	1	10		105	70	130			
1,4-Dichlorobenzene	9.99	1	10		99.9	70	130			
4-Isopropyltoluene	10.7	1	10		107	70	130			
1,2-Dichlorobenzene	9.3	1	10		93	70	130			
n-Butylbenzene	11	1	10		110	70	130			
1,2-Dibromo-3-chloropropane (DBCP)	43.7	3	50		87	70	130			
1,2,4-Trichlorobenzene	8.2	2	10		82	70	130			
Naphthalene	6.75	2	10		68	70(70)	130			
Hexachlorobutadiene	19.3	2	20		96	70	130			
1,2,3-Trichlorobenzene	7.81	2	10		78	70	130			
Surr: 1,2-Dichloroethane-d4	9.43		10		94	70	130			
Surr: Toluene-d8	9.99		10		99.9	70	130			



Alpha Analytical, Inc.

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Date:

27-Oct-10

QC Summary Report

Work Order:

10102004

Surr: 4-Bromofluorobenzene

10.3

10

103

70

130



Alpha Analytical, Inc.

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Date:
27-Oct-10

QC Summary Report

Work Order:
10102004

Sample Matrix Spike

Type MS Test Code: EPA Method SW8260B

File ID: 10102607.D

Batch ID: MS15W1026M

Analysis Date: 10/26/2010 11:03

Sample ID: 10102004-01AMS

Units : µg/L

Run ID: MSD_15_101015D

Prep Date: 10/26/2010 11:03

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	42.9	2.5	50	0	86	13	167			
Chloromethane	39	10	50	0	78	28	145			
Vinyl chloride	55.6	2.5	50	0	111	43	134			
Chloroethane	47.9	2.5	50	0	96	39	154			
Bromomethane	52.5	10	50	0	105	19	176			
Trichlorofluoromethane	48	2.5	50	0	96	34	160			
1,1-Dichloroethene	48	2.5	50	0	96	60	130			
Dichloromethane	42.8	10	50	0	86	68	130			
Freon-113	52.9	2.5	50	0	106	49	141			
trans-1,2-Dichloroethene	48.3	2.5	50	0	97	63	130			
Methyl tert-butyl ether (MTBE)	43.9	1.3	50	0	88	56	141			
1,1-Dichloroethane	47.1	2.5	50	0	94	61	130			
2-Butanone (MEK)	661	50	1000	0	66	20	182			
cis-1,2-Dichloroethene	46.9	2.5	50	0	94	70	130			
Bromochloromethane	46.2	2.5	50	0	92	70	130			
Chloroform	49	2.5	50	3.68	91	67	130			
2,2-Dichloropropane	48.6	2.5	50	0	97	30	152			
1,2-Dichloroethane	44.9	2.5	50	0	90	60	135			
1,1,1-Trichloroethane	49	2.5	50	0	98	59	137			
1,1-Dichloropropene	49.1	2.5	50	0	98	63	130			
Carbon tetrachloride	49.9	2.5	50	0	99.8	50	147			
Benzene	47.4	1.3	50	0	95	67	130			
Dibromomethane	42.9	2.5	50	0	86	69	133			
1,2-Dichloropropane	46.3	2.5	50	0	93	69	130			
Trichloroethene	47.2	2.5	50	0	94	69	130			
Bromodichloromethane	48.5	2.5	50	0	97	66	134			
4-Methyl-2-pentanone (MIBK)	97.2	13	125	0	78	20	182			
cis-1,3-Dichloropropene	44.8	2.5	50	0	90	63	130			
trans-1,3-Dichloropropene	41.2	2.5	50	0	82	66	131			
1,1,2-Trichloroethane	42.2	2.5	50	0	84	68	130			
Toluene	45.7	1.3	50	0	91	66	130			
1,3-Dichloropropane	44.5	2.5	50	0	89	70	130			
Dibromochloromethane	42.2	2.5	50	0	84	70	130			
1,2-Dibromoethane (EDB)	85.4	5	100	0	85	70	130			
Tetrachloroethene	49.3	2.5	50	1.46	96	61	134			
1,1,1,2-Tetrachloroethane	47.4	2.5	50	0	95	70	130			
Chlorobenzene	45.3	2.5	50	0	91	70	130			
Ethylbenzene	47.6	1.3	50	0	95	68	130			
m,p-Xylene	47.1	1.3	50	0	94	64	130			
Bromoform	39.2	2.5	50	0	78	64	138			
Styrene	46.6	2.5	50	0	93	69	130			
o-Xylene	46.4	1.3	50	0	93	70	130			
1,1,2,2-Tetrachloroethane	40.4	2.5	50	0	81	65	131			
1,2,3-Trichloropropane	80.1	10	100	0	80	70	130			
Isopropylbenzene	49	2.5	50	0	98	64	138			
Bromobenzene	47	2.5	50	0	94	70	130			
n-Propylbenzene	50.9	2.5	50	0	102	66	132			
4-Chlorotoluene	49.3	2.5	50	0	99	70	130			
2-Chlorotoluene	49.4	2.5	50	0	99	70	130			
1,3,5-Trimethylbenzene	49.4	2.5	50	0	99	66	136			
tert-Butylbenzene	48.4	2.5	50	0	97	65	137			
1,2,4-Trimethylbenzene	49.2	2.5	50	0	98	65	137			
sec-Butylbenzene	49.5	2.5	50	0	99	66	134			
1,3-Dichlorobenzene	49	2.5	50	0	98	70	130			
1,4-Dichlorobenzene	46	2.5	50	0	92	70	130			
4-Isopropyltoluene	49.2	2.5	50	0	98	66	137			
1,2-Dichlorobenzene	44	2.5	50	0	88	70	130			
n-Butylbenzene	50.7	2.5	50	0	101	60	142			
1,2-Dibromo-3-chloropropane (DBCP)	202	15	250	0	81	67	130			
1,2,4-Trichlorobenzene	38	10	50	0	76	61	137			
Naphthalene	30.4	10	50	0	61	40	167			
Hexachlorobutadiene	91.4	10	100	0	91	61	130			
1,2,3-Trichlorobenzene	35.3	10	50	0	71	51	144			
Surr: 1,2-Dichloroethane-d4	46.1		50		92	70	130			
Surr: Toluene-d8	49.3		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:

27-Oct-10

QC Summary Report

Work Order:

10102004

Surr: 4-Bromofluorobenzene

51.5

50

103

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:
27-Oct-10

QC Summary Report

Work Order:
10102004

Sample Matrix Spike Duplicate

Type **MSD** Test Code: **EPA Method SW8260B**

File ID: **10102608.D**

Batch ID: **MS15W1026M**

Analysis Date: **10/26/2010 11:25**

Sample ID: **10102004-01AMSD**

Units : **µg/L**

Run ID: **MSD_15_101015D**

Prep Date: **10/26/2010 11:25**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	43.6	2.5	50	0	87	13	167	42.87	1.6(20)	
Chloromethane	43.8	10	50	0	88	28	145	38.97	11.8(20)	
Vinyl chloride	55.9	2.5	50	0	112	43	134	55.59	0.5(20)	
Chloroethane	47.9	2.5	50	0	96	39	154	47.94	0.1(20)	
Bromomethane	56.3	10	50	0	113	19	176	52.52	6.9(20)	
Trichlorofluoromethane	48	2.5	50	0	96	34	160	48.03	0.1(20)	
1,1-Dichloroethene	49.3	2.5	50	0	99	60	130	48.03	2.5(20)	
Dichloromethane	43.3	10	50	0	87	68	130	42.78	1.2(20)	
Freon-113	54.5	2.5	50	0	109	49	141	52.91	2.9(20)	
trans-1,2-Dichloroethene	48.9	2.5	50	0	98	63	130	48.33	1.2(20)	
Methyl tert-butyl ether (MTBE)	44.9	1.3	50	0	90	56	141	43.85	2.3(20)	
1,1-Dichloroethane	47.8	2.5	50	0	96	61	130	47.09	1.4(20)	
2-Butanone (MEK)	667	50	1000	0	67	20	182	660.9	1.0(20)	
cis-1,2-Dichloroethene	47.8	2.5	50	0	96	70	130	46.86	2.1(20)	
Bromochloromethane	47	2.5	50	0	94	70	130	46.19	1.7(20)	
Chloroform	49.7	2.5	50	3.68	92	67	130	48.97	1.4(20)	
2,2-Dichloropropane	49.1	2.5	50	0	98	30	152	48.62	1.0(20)	
1,2-Dichloroethane	45.7	2.5	50	0	91	60	135	44.85	1.9(20)	
1,1,1-Trichloroethane	49.4	2.5	50	0	99	59	137	48.96	1.0(20)	
1,1-Dichloropropene	49.8	2.5	50	0	99.6	63	130	49.14	1.4(20)	
Carbon tetrachloride	51.4	2.5	50	0	103	50	147	49.92	3.0(20)	
Benzene	47.8	1.3	50	0	96	67	130	47.38	0.9(20)	
Dibromomethane	44.3	2.5	50	0	89	69	133	42.91	3.1(20)	
1,2-Dichloropropane	46.4	2.5	50	0	93	69	130	46.33	0.1(20)	
Trichloroethene	47.9	2.5	50	0	96	69	130	47.17	1.6(20)	
Bromodichloromethane	48.8	2.5	50	0	98	66	134	48.52	0.6(20)	
4-Methyl-2-pentanone (MIBK)	97.8	13	125	0	78	20	182	97.19	0.6(20)	
cis-1,3-Dichloropropene	45.8	2.5	50	0	92	63	130	44.83	2.2(20)	
trans-1,3-Dichloropropene	41.8	2.5	50	0	84	66	131	41.16	1.5(20)	
1,1,2-Trichloroethane	43.4	2.5	50	0	87	68	130	42.23	2.8(20)	
Toluene	46.3	1.3	50	0	93	66	130	45.66	1.4(20)	
1,3-Dichloropropane	44.8	2.5	50	0	90	70	130	44.54	0.5(20)	
Dibromochloromethane	44	2.5	50	0	88	70	130	42.17	4.3(20)	
1,2-Dibromoethane (EDB)	87.6	5	100	0	88	70	130	85.35	2.6(20)	
Tetrachloroethene	49.6	2.5	50	1.46	96	61	134	49.3	0.7(20)	
1,1,1,2-Tetrachloroethane	48.5	2.5	50	0	97	70	130	47.37	2.3(20)	
Chlorobenzene	46.2	2.5	50	0	92	70	130	45.34	1.9(20)	
Ethylbenzene	47.6	1.3	50	0	95	68	130	47.57	0.0(20)	
m,p-Xylene	47.7	1.3	50	0	95	64	130	47.06	1.3(20)	
Bromoform	41.5	2.5	50	0	83	64	138	39.2	5.7(20)	
Styrene	47.3	2.5	50	0	95	69	130	46.55	1.6(20)	
o-Xylene	46.3	1.3	50	0	93	70	130	46.41	0.2(20)	
1,1,2,2-Tetrachloroethane	40.9	2.5	50	0	82	65	131	40.39	1.2(20)	
1,2,3-Trichloropropane	81.6	10	100	0	82	70	130	80.11	1.8(20)	
Isopropylbenzene	48	2.5	50	0	96	64	138	48.99	2.1(20)	
Bromobenzene	47	2.5	50	0	94	70	130	47.02	0.1(20)	
n-Propylbenzene	49.9	2.5	50	0	99.8	66	132	50.9	2.0(20)	
4-Chlorotoluene	48.9	2.5	50	0	98	70	130	49.29	0.8(20)	
2-Chlorotoluene	48.3	2.5	50	0	97	70	130	49.37	2.3(20)	
1,3,5-Trimethylbenzene	48.7	2.5	50	0	97	66	136	49.39	1.5(20)	
tert-Butylbenzene	47.9	2.5	50	0	96	65	137	48.43	1.2(20)	
1,2,4-Trimethylbenzene	48.9	2.5	50	0	98	65	137	49.22	0.6(20)	
sec-Butylbenzene	49.4	2.5	50	0	99	66	134	49.53	0.2(20)	
1,3-Dichlorobenzene	49.7	2.5	50	0	99	70	130	49.04	1.4(20)	
1,4-Dichlorobenzene	46.1	2.5	50	0	92	70	130	46.04	0.2(20)	
4-Isopropyltoluene	49.4	2.5	50	0	99	66	137	49.19	0.3(20)	
1,2-Dichlorobenzene	44.2	2.5	50	0	88	70	130	44.03	0.5(20)	
n-Butylbenzene	51.5	2.5	50	0	103	60	142	50.73	1.5(20)	
1,2-Dibromo-3-chloropropane (DBCP)	205	15	250	0	82	67	130	202.5	1.4(20)	
1,2,4-Trichlorobenzene	40.4	10	50	0	81	61	137	37.96	6.2(20)	
Naphthalene	33.9	10	50	0	68	40	167	30.37	10.9(20)	
Hexachlorobutadiene	93.8	10	100	0	94	61	130	91.41	2.6(20)	
1,2,3-Trichlorobenzene	38.3	10	50	0	77	51	144	35.28	8.1(20)	
Surr: 1,2-Dichloroethane-d4	47.3		50		95	70	130			
Surr: Toluene-d8	49.3		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:

27-Oct-10

QC Summary Report

Work Order:

10102004

Surr: 4-Bromofluorobenzene	50.2	50	100	70	130
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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.

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 : BMIS10102004
Report Due By : 5:00 PM On : 02-Nov-2010

Client: Battelle Memorial Institute
 655 West Broadway
 Suite 1420
 San Diego, CA 92101
 PO : 218013
 Client's COC # : 29188

Report Attention Phone Number Email Address
 David Conner (619) 726-7311 x connerd@battelle.org
 Betsy Cutie (614) 424-4899 x cutiee@battelle.org
 Shane Walton (614) 424-4117 x walton@battelle.org

Job : G005862/JPL Groundwater Monitoring
 QC Level : DS4 = DOD QC Required : Final Rpt, MBLK, InitCal/ConCal data, LCS, MS/MSD With Surrogates
 EDD Required : Yes
 Sampled by : Chase Brogdon
 Cooler Temp 0 °C Samples Received 20-Oct-2010 Date Printed 20-Oct-2010

Alpha Sample ID	Client Sample ID	Collection Date	No. of Bottles Alpha Sub TAT	Requested Tests			Sample Remarks
				314_W METALS_D W	VOC_TIC_W	VOC_W	
BM110102004-01A	MW-21-5	10/19/10 09:21	5 0 9	Perchlorate Criteria	VOC by 524 Criteria		
BM110102004-02A	MW-21-4	10/19/10 09:45	5 0 9	Perchlorate Criteria	VOC by 524 Criteria		
BM110102004-03A	MW-21-3	10/19/10 10:10	5 0 9	Perchlorate Criteria	VOC by 524 Criteria		
BM110102004-04A	MW-21-2	10/19/10 10:49	5 0 9	Perchlorate Criteria	VOC by 524 Criteria		
BM110102004-05A	MW-21-1	10/19/10 11:20	5 0 9	Perchlorate Criteria	VOC by 524 Criteria		
BM110102004-06A	DUPE-01-4Q10	10/19/10 00:00	5 0 9	Perchlorate Criteria	VOC by 524 Criteria		
BM110102004-07A	EB-01-10/19/10	10/19/10 11:08	5 0 9	Perchlorate Criteria	VOC by 524 Criteria		
BM110102004-08A	TB-01-10/19/10	10/19/10 07:00	1 0 9		VOC by 524 Criteria		Reno Trip Blank 6/29/10

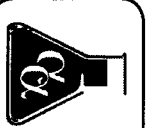
Comments: Security seals intact. Frozen ice. Temp Blank #7686 received @ 0°C. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD) .

Logged in by: Elizabeth Adcox Signature: Elizabeth Adcox Print Name: Elizabeth Adcox Company: Alpha Analytical, Inc. Date/Time: 10-20-10 11:29

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/BATZELLE
 Address 505 KINE-AVE
 City, State, Zip CALHOUNS, OH 43321
 Phone Number _____ Fax _____



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

Samples Collected From Which State?

AZ _____ CA NV _____ WA _____
 ID _____ OR _____ OTHER _____

29188

Page # 1 of 1

Analyses Required

Client Name BATZELLE DAVID GARDEN

Job # CO05862

Address 3990 OLD TOWN AVE, C-205

City, State, Zip SAN DIEGO, CA 92110

Phone # (619) 726-7311

Fax # _____

PO # 218013

E-Mail Address _____

Report Attention _____

Sample Description _____

Matrix* See Key Below

Sampled by CHRIS BARRON

Lab ID Number (Use Only)

TAT _____

Time Sampled

Date Sampled

0921 10/19/10

AQ

0945

1010

1049

1120

1108

10/19/10

0700

10/19/10

Time Sampled	Date Sampled	Matrix* See Key Below	Sampled by	Lab ID Number (Use Only)	Report Attention	Sample Description	TAT	Field Filtered	Total and type of containers ** See below	Analyses Required	Global ID #	REMARKS
0921	10/19/10	AQ	BMT/D/D2004/01			MW-21-5			3v, 2p	IWA (524.2) TOTAL Cr (200.8) ClO4- (314.0)		
0945						MW-21-4						
1010						MW-21-3						
1049						MW-21-2						
1120						MW-21-1						
1108						Duplicate - 01 - 40210						DUPLICATE
0700	10/19/10	AQ				EB-01 - 10 / 19 / 10			3v, 2p			EQUIPMENT BLANK
						TRB-01 - 10 / 19 / 10			1v			TRIP BLANK

ADDITIONAL INSTRUCTIONS:

Signature	Print Name	Company	Date	Time
<i>[Signature]</i>	CHRIS BARRON	INSIGHT RES INC	10/19/10	1006
<i>[Signature]</i>	ALYSON STRA	Alpha Analytical	10/19/10	1536
<i>[Signature]</i>	ELIZABETH ADcox	Alpha	10/20/10	1129

*Key: AQ - Aqueous SO - Soil WA - Waste OT - Other AR - Air ** L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this coc. The liability of the laboratory is limited to the amount paid for the report.



Alpha Analytical, Inc.

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

Date: 03-Nov-10

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

Suite 1420

CASE NARRATIVE

Job: G005862/JPL Groundwater Monitoring

Work Order: BMI10102203

Cooler Temp: 1 °C

Alpha's Sample ID	Client's Sample ID	Matrix
10102203-01A	MW-15	Aqueous
10102203-02A	Trip Blank	Aqueous
10102203-03A	MW-10	Aqueous
10102203-04A	MW-5	Aqueous
10102203-05A	MW-8	Aqueous
10102203-06A	MW-18-5	Aqueous
10102203-07A	MW-18-4	Aqueous
10102203-08A	MW-18-3	Aqueous
10102203-09A	MW-18-2	Aqueous
10102203-10A	MW-18-1	Aqueous
10102203-11A	EB-02-10/21/10	Aqueous
10102203-12A	TB-02-10/21/10	Aqueous

Manually Integrated Analytes

Alpha's Sample ID	Test Reference	Analyte
10102203-03A	EPA Method 314.0	Perchlorate
10102203-07A	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.

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

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

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



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

Battelle Memorial Institute
655 West Broadway
San Diego, CA 92101

Attn: David Conner
Phone: (619) 726-7311
Fax: (614) 458-6641
Date Received : 10/22/10

Job: G005862/JPL Groundwater Monitoring

Anions by IC
EPA Method 300.0

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: MW-8				
Lab ID: BMI10102203-05A Chloride	6.3	0.50 mg/L	10/22/10 09:28	10/22/10 18:14
Date Sampled 10/21/10 14:34 Nitrite (NO2) - N	ND	0.25 mg/L	10/22/10 09:28	10/22/10 18:14
Nitrate (NO3) - N	0.63	0.25 mg/L	10/22/10 09:28	10/22/10 18:14
Phosphate, ortho - P	ND	0.50 mg/L	10/22/10 09:28	10/22/10 18:14
Sulfate (SO4)	20	0.50 mg/L	10/22/10 09:28	10/22/10 18:14

ND = Not Detected

Roger Scholl *Randy Gardner* *Walter Hinchman*

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

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

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

11/4/10

Report Date



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

Battelle Memorial Institute
655 West Broadway
San Diego, CA 92101

Attn: David Conner
Phone: (619) 726-7311
Fax: (614) 458-6641
Date Received : 10/22/10

Job: G005862/JPL Groundwater Monitoring

Perchlorate by Ion Chromatography EPA Method 314.0

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: MW-15 Lab ID : BMI10102203-01A Perchlorate Date Sampled 10/21/10 16:47	ND	1.00 µg/L	10/27/10 12:35	10/27/10 18:45
Client ID: MW-10 Lab ID : BMI10102203-03A Perchlorate Date Sampled 10/21/10 10:00	75.9	1.00 µg/L	10/27/10 12:35	10/27/10 19:03
Client ID: MW-5 Lab ID : BMI10102203-04A Perchlorate Date Sampled 10/21/10 12:04	ND	1.00 µg/L	10/27/10 12:35	10/27/10 19:21
Client ID: MW-8 Lab ID : BMI10102203-05A Perchlorate Date Sampled 10/21/10 14:34	ND	1.00 µg/L	10/27/10 12:35	10/27/10 19:40
Client ID: MW-18-5 Lab ID : BMI10102203-06A Perchlorate Date Sampled 10/21/10 09:48	ND	1.00 µg/L	10/27/10 12:35	10/27/10 19:58
Client ID: MW-18-4 Lab ID : BMI10102203-07A Perchlorate Date Sampled 10/21/10 10:40	30.0	1.00 µg/L	10/27/10 12:35	10/27/10 20:17
Client ID: MW-18-3 Lab ID : BMI10102203-08A Perchlorate Date Sampled 10/21/10 11:27	65.2	1.00 µg/L	10/27/10 12:35	10/27/10 20:35
Client ID: MW-18-2 Lab ID : BMI10102203-09A Perchlorate Date Sampled 10/21/10 12:00	1.87	1.00 µg/L	10/27/10 12:35	10/27/10 20:53
Client ID: MW-18-1 Lab ID : BMI10102203-10A Perchlorate Date Sampled 10/21/10 12:31	ND	1.00 µg/L	10/27/10 12:35	10/27/10 21:12
Client ID: EB-02-10/21/10 Lab ID : BMI10102203-11A Perchlorate Date Sampled 10/21/10 12:19	ND	1.00 µg/L	10/27/10 12:35	10/27/10 21:30



Alpha Analytical, Inc.

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ND = Not Detected

Roger Scholl

Randy Gardner

Walter Hinchman

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

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

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

PS
11/4/10

Report Date



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

Battelle Memorial Institute
655 West Broadway
San Diego, CA 92101

Attn: David Conner
Phone: (619) 726-7311
Fax: (614) 458-6641
Date Received : 10/22/10

Job: G005862/JPL Groundwater Monitoring

Metals by ICPMS
EPA Method 200.8

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: MW-15 Lab ID : BMI10102203-01A Chromium (Cr) Date Sampled 10/21/10 16:47	ND	0.0050 mg/L	10/26/10 09:21	10/27/10 18:48
Client ID: MW-10 Lab ID : BMI10102203-03A Chromium (Cr) Date Sampled 10/21/10 10:00	0.0057	0.0050 mg/L	10/26/10 09:21	10/27/10 18:54
Client ID: MW-5 Lab ID : BMI10102203-04A Chromium (Cr) Date Sampled 10/21/10 12:04	ND	0.0050 mg/L	10/26/10 09:21	10/27/10 18:59
Client ID: MW-8 Lab ID : BMI10102203-05A Chromium (Cr) Date Sampled 10/21/10 14:34	ND	0.0050 mg/L	10/26/10 09:21	10/27/10 19:05
Client ID: MW-18-5 Lab ID : BMI10102203-06A Chromium (Cr) Date Sampled 10/21/10 09:48	ND	0.0050 mg/L	10/26/10 09:21	10/27/10 19:10
Client ID: MW-18-4 Lab ID : BMI10102203-07A Chromium (Cr) Date Sampled 10/21/10 10:40	0.0071	0.0050 mg/L	10/26/10 09:21	10/27/10 19:16
Client ID: MW-18-3 Lab ID : BMI10102203-08A Chromium (Cr) Date Sampled 10/21/10 11:27	ND	0.0050 mg/L	10/26/10 09:21	10/27/10 19:22
Client ID: MW-18-2 Lab ID : BMI10102203-09A Chromium (Cr) Date Sampled 10/21/10 12:00	ND	0.0050 mg/L	10/26/10 09:21	10/27/10 19:27
Client ID: MW-18-1 Lab ID : BMI10102203-10A Chromium (Cr) Date Sampled 10/21/10 12:31	ND	0.0050 mg/L	10/26/10 09:21	10/27/10 19:33
Client ID: EB-02-10/21/10 Lab ID : BMI10102203-11A Chromium (Cr) Date Sampled 10/21/10 12:19	ND	0.0050 mg/L	10/26/10 09:21	10/27/10 19:38



Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778
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ND = Not Detected

Roger Scholl *Randy Gardner* *Walter Hinchman*

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

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

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11/2/10

Report Date



Alpha Analytical, Inc.

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ANALYTICAL REPORT

Battelle Memorial Institute
655 West Broadway
San Diego, CA 92101

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

Job: G005862/JPL Groundwater Monitoring

Tentatively Identified Compounds - Volatile Organics by GC/MS

Parameter	Estimated Concentration	Estimated Reporting Limit	Date Extracted	Date Analyzed
Client ID : MW-15				
Lab ID : BMI10102203-01A	*** None Found ***	ND	2.0 µg/L	10/28/10 13:14 10/28/10 13:14
Date Received : 10/22/10				
Date Sampled : 10/21/10 16:47				
Client ID : Trip Blank				
Lab ID : BMI10102203-02A	*** None Found ***	ND	2.0 µg/L	10/28/10 12:08 10/28/10 12:08
Date Received : 10/22/10				
Date Sampled : 10/21/10 00:00				
Client ID : MW-10				
Lab ID : BMI10102203-03A	*** None Found ***	ND	2.0 µg/L	10/28/10 13:35 10/28/10 13:35
Date Received : 10/22/10				
Date Sampled : 10/21/10 10:00				
Client ID : MW-5				
Lab ID : BMI10102203-04A	*** None Found ***	ND	2.0 µg/L	10/28/10 13:57 10/28/10 13:57
Date Received : 10/22/10				
Date Sampled : 10/21/10 12:04				
Client ID : MW-8				
Lab ID : BMI10102203-05A	*** None Found ***	ND	2.0 µg/L	10/28/10 14:19 10/28/10 14:19
Date Received : 10/22/10				
Date Sampled : 10/21/10 14:34				
Client ID : MW-18-5				
Lab ID : BMI10102203-06A	*** None Found ***	ND	2.0 µg/L	10/28/10 14:41 10/28/10 14:41
Date Received : 10/22/10				
Date Sampled : 10/21/10 09:48				
Client ID : MW-18-4				
Lab ID : BMI10102203-07A	*** None Found ***	ND	4.0 µg/L	10/28/10 15:03 10/28/10 15:03
Date Received : 10/22/10				
Date Sampled : 10/21/10 10:40				
Client ID : MW-18-3				
Lab ID : BMI10102203-08A	*** None Found ***	ND	2.0 µg/L	10/28/10 15:25 10/28/10 15:25
Date Received : 10/22/10				
Date Sampled : 10/21/10 11:27				
Client ID : MW-18-2				
Lab ID : BMI10102203-09A	*** None Found ***	ND	2.0 µg/L	10/28/10 15:46 10/28/10 15:46
Date Received : 10/22/10				
Date Sampled : 10/21/10 12:00				



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Client ID :	MW-18-1						
Lab ID :	BMI10102203-10A	*** None Found ***	ND	2.0 µg/L	10/28/10 16:08	10/28/10 16:08	
Date Received :	10/22/10						
Date Sampled :	10/21/10 12:31						
Client ID :	EB-02-10/21/10						
Lab ID :	BMI10102203-11A	*** None Found ***	ND	2.0 µg/L	10/28/10 12:52	10/28/10 12:52	
Date Received :	10/22/10						
Date Sampled :	10/21/10 12:19						
Client ID :	TB-02-10/21/10						
Lab ID :	BMI10102203-12A	*** None Found ***	ND	2.0 µg/L	10/28/10 12:30	10/28/10 12:30	
Date Received :	10/22/10						
Date Sampled :	10/21/10 07:00						

Note: Analysis conducted using EPA Method 524.2 criteria.
 O = Reporting Limits were increased due to sample foaming.
 ND = Not Detected

Roger Scholl

Randy Gardner

Walter Hinchman

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

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11/4/10

Report Date

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10102203-01A
Client I.D. Number: MW-15

Sampled: 10/21/10 16:47
Received: 10/22/10
Extracted: 10/28/10 13:14
Analyzed: 10/28/10 13:14

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	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	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	101	(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	102	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	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 L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

11/4/10

Report Date

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10102203-02A
Client I.D. Number: Trip Blank

Sampled: 10/21/10 00:00
Received: 10/22/10
Extracted: 10/28/10 12:08
Analyzed: 10/28/10 12:08

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	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	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	102	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	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 L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

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Report Date

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Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10102203-03A
Client I.D. Number: MW-10

Sampled: 10/21/10 10:00
Received: 10/22/10
Extracted: 10/28/10 13:35
Analyzed: 10/28/10 13:35

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	1.2	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	ND	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	3.3	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	Q	1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	105	(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	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			

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 L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer
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11/4/10

Report Date



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10102203-04A
Client I.D. Number: MW-5

Sampled: 10/21/10 12:04
Received: 10/22/10
Extracted: 10/28/10 13:57
Analyzed: 10/28/10 13:57

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	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	101	(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	102	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	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 L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinckman, Quality Assurance Officer
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

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

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

11/4/10

Report Date



Alpha Analytical, Inc.

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

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10102203-05A
Client I.D. Number: MW-8

Sampled: 10/21/10 14:34
Received: 10/22/10
Extracted: 10/28/10 14:19
Analyzed: 10/28/10 14:19

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	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	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	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	101	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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Page 1 of 1



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10102203-06A
Client I.D. Number: MW-18-5

Sampled: 10/21/10 09:48
Received: 10/22/10
Extracted: 10/28/10 14:41
Analyzed: 10/28/10 14:41

Volatile Organics by GC/MS EPA Method SW8260B

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

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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

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Page 1 of 1



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10102203-07A
Client I.D. Number: MW-18-4

Sampled: 10/21/10 10:40
Received: 10/22/10
Extracted: 10/28/10 15:03
Analyzed: 10/28/10 15:03

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	1.0 µg/L	36 1,1,1,2-Tetrachloroethane	ND	1.0 µg/L
2 Chloromethane	ND	2.0 µg/L	37 Chlorobenzene	ND	1.0 µg/L
3 Vinyl chloride	ND	1.0 µg/L	38 Ethylbenzene	ND	1.0 µg/L
4 Chloroethane	ND	1.0 µg/L	39 m,p-Xylene	ND	1.0 µg/L
5 Bromomethane	ND	2.0 µg/L	40 Bromoform	ND	1.0 µg/L
6 Trichlorofluoromethane	ND	1.0 µg/L	41 Styrene	2.7	1.0 µg/L
7 1,1-Dichloroethene	ND	1.0 µg/L	42 o-Xylene	ND	1.0 µg/L
8 Dichloromethane	ND	2.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	1.0 µg/L
9 Freon-113	ND	1.0 µg/L	44 1,2,3-Trichloropropane	ND	2.0 µg/L
10 trans-1,2-Dichloroethene	ND	1.0 µg/L	45 Isopropylbenzene	ND	1.0 µg/L
11 Methyl tert-butyl ether (MTBE)	2.0	1.0 µg/L	46 Bromobenzene	ND	1.0 µg/L
12 1,1-Dichloroethane	ND	1.0 µg/L	47 n-Propylbenzene	ND	1.0 µg/L
13 2-Butanone (MEK)	ND	20 µg/L	48 4-Chlorotoluene	ND	1.0 µg/L
14 cis-1,2-Dichloroethene	ND	1.0 µg/L	49 2-Chlorotoluene	ND	1.0 µg/L
15 Bromochloromethane	ND	1.0 µg/L	50 1,3,5-Trimethylbenzene	ND	1.0 µg/L
16 Chloroform	ND	1.0 µg/L	51 tert-Butylbenzene	ND	1.0 µg/L
17 2,2-Dichloropropane	ND	1.0 µg/L	52 1,2,4-Trimethylbenzene	ND	1.0 µg/L
18 1,2-Dichloroethane	ND	1.0 µg/L	53 sec-Butylbenzene	ND	1.0 µg/L
19 1,1,1-Trichloroethane	ND	1.0 µg/L	54 1,3-Dichlorobenzene	ND	1.0 µg/L
20 1,1-Dichloropropene	ND	1.0 µg/L	55 1,4-Dichlorobenzene	ND	1.0 µg/L
21 Carbon tetrachloride	ND	1.0 µg/L	56 4-Isopropyltoluene	ND	1.0 µg/L
22 Benzene	ND	1.0 µg/L	57 1,2-Dichlorobenzene	ND	1.0 µg/L
23 Dibromomethane	ND	1.0 µg/L	58 n-Butylbenzene	ND	1.0 µg/L
24 1,2-Dichloropropane	ND	1.0 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0 µg/L
25 Trichloroethene	ND	1.0 µg/L	60 1,2,4-Trichlorobenzene	ND	2.0 µg/L
26 Bromodichloromethane	ND	1.0 µg/L	61 Naphthalene	ND	Q 2.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	5.0 µg/L	62 Hexachlorobutadiene	ND	2.0 µg/L
28 cis-1,3-Dichloropropene	ND	1.0 µg/L	63 1,2,3-Trichlorobenzene	ND	2.0 µg/L
29 trans-1,3-Dichloropropene	ND	1.0 µg/L	64 Surr: 1,2-Dichloroethane-d4	106	(70-130) %REC
30 1,1,2-Trichloroethane	ND	1.0 µg/L	65 Surr: Toluene-d8	102	(70-130) %REC
31 Toluene	ND	1.0 µg/L	66 Surr: 4-Bromofluorobenzene	99	(70-130) %REC
32 1,3-Dichloropropane	ND	1.0 µg/L			
33 Dibromochloromethane	ND	1.0 µg/L			
34 1,2-Dibromoethane (EDB)	ND	2.0 µg/L			
35 Tetrachloroethene	ND	1.0 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.

Reporting Limits were increased due to sample foaming.

ND = Not Detected

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

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Report Date



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

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10102203-08A
Client I.D. Number: MW-18-3

Sampled: 10/21/10 11:27
Received: 10/22/10
Extracted: 10/28/10 15:25
Analyzed: 10/28/10 15:25

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethene	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	10 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	2.1	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	20	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	1.3	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	106	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	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			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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Page 1 of 1



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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10102203-09A
Client I.D. Number: MW-18-2

Sampled: 10/21/10 12:00
Received: 10/22/10
Extracted: 10/28/10 15:46
Analyzed: 10/28/10 15:46

Volatile Organics by GC/MS EPA Method SW8260B

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

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

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Page 1 of 1



Alpha Analytical, Inc.

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

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10102203-10A
Client I.D. Number: MW-18-1

Sampled: 10/21/10 12:31
Received: 10/22/10
Extracted: 10/28/10 16:08
Analyzed: 10/28/10 16:08

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-Dichloropropane	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	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	106	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	104	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	97	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

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Page 1 of 1



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10102203-11A
Client I.D. Number: EB-02-10/21/10

Sampled: 10/21/10 12:19
Received: 10/22/10
Extracted: 10/28/10 12:52
Analyzed: 10/28/10 12:52

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethene	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	10 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	ND	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	ND	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	ND	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	99	(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	101	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

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Page 1 of 1



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10102203-12A
Client I.D. Number: TB-02-10/21/10

Sampled: 10/21/10 07:00
Received: 10/22/10
Extracted: 10/28/10 12:30
Analyzed: 10/28/10 12:30

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	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	101	(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	102	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	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.

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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: BMI10102203

Job: G005862/JPL Groundwater Monitoring

Alpha's Sample ID	Client's Sample ID	Matrix	pH
10102203-01A	MW-15	Aqueous	2
10102203-02A	Trip Blank	Aqueous	2
10102203-03A	MW-10	Aqueous	2
10102203-04A	MW-5	Aqueous	2
10102203-05A	MW-8	Aqueous	2
10102203-06A	MW-18-5	Aqueous	2
10102203-07A	MW-18-4	Aqueous	2
10102203-08A	MW-18-3	Aqueous	2
10102203-09A	MW-18-2	Aqueous	2
10102203-10A	MW-18-1	Aqueous	2
10102203-11A	EB-02-10/21/10	Aqueous	2
10102203-12A	TB-02-10/21/10	Aqueous	2

11/4/10
Report Date

Page 1 of 1



Alpha Analytical, Inc.

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

Date:
01-Nov-10

QC Summary Report

Work Order:
10102203

Method Blank

Type: MBLK Test Code: EPA Method 300.0

File ID: 38

Batch ID: 25303

Analysis Date: 10/22/2010 17:19

Sample ID: MB-25303

Units : mg/L

Run ID: IC_1_101022A

Prep Date: 10/22/2010 09:28

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	ND	0.5								
Nitrite (NO2) - N	ND	0.25								
Nitrate (NO3) - N	ND	0.25								
Phosphate, ortho - P	ND	0.5								
Sulfate (SO4)	ND	0.5								

Laboratory Fortified Blank

Type: LFB Test Code: EPA Method 300.0

File ID: 24

Batch ID: 25303

Analysis Date: 10/26/2010 18:28

Sample ID: LFB-25303

Units : mg/L

Run ID: IC_1_101022A

Prep Date: 10/22/2010 09:28

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	51.4	0.5	50		103	90	110			
Nitrite (NO2) - N	5.06	0.25	5		101	90	110			
Nitrate (NO3) - N	5.08	0.25	5		102	90	110			
Phosphate, ortho - P	4.97	0.5	5		99	90	110			
Sulfate (SO4)	102	0.5	100		102	90	110			

Sample Matrix Spike

Type: LFM Test Code: EPA Method 300.0

File ID: 29

Batch ID: 25303

Analysis Date: 10/22/2010 14:32

Sample ID: 10102127-04ALFM

Units : mg/L

Run ID: IC_1_101022A

Prep Date: 10/22/2010 09:28

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	132	0.5	50	107.2	49	80	120			M2
Nitrite (NO2) - N	4.35	0.25	5	0	87	80	120			
Nitrate (NO3) - N	7.71	0.25	5	2.841	97	80	120			
Phosphate, ortho - P	5.48	0.5	5	0	110	80	120			
Sulfate (SO4)	122	0.5	100	37.59	85	80	120			

Sample Matrix Spike Duplicate

Type: LFMD Test Code: EPA Method 300.0

File ID: 30

Batch ID: 25303

Analysis Date: 10/22/2010 14:51

Sample ID: 10102127-04ALFMD

Units : mg/L

Run ID: IC_1_101022A

Prep Date: 10/22/2010 09:28

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	133	0.5	50	107.2	51	80	120	131.7	0.8(15)	M2
Nitrite (NO2) - N	4.56	0.25	5	0	91	80	120	4.346	4.8(15)	
Nitrate (NO3) - N	7.78	0.25	5	2.841	99	80	120	7.713	0.9(15)	
Phosphate, ortho - P	5.81	0.5	5	0	116	80	120	5.484	5.8(15)	
Sulfate (SO4)	123	0.5	100	37.59	85	80	120	122.4	0.4(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 uses descriptive data qualifier flags, which could be replaced with either a DOD Q or J flag.

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



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Date:
01-Nov-10

QC Summary Report

Work Order:
10102203

Method Blank

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

File ID: **14**

Batch ID: **25339**

Analysis Date: **10/27/2010 13:32**

Sample ID: **MB-25339**

Units : **µg/L**

Run ID: **IC_3_101027A**

Prep Date: **10/27/2010 12:35**

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: **25339**

Analysis Date: **10/27/2010 13:50**

Sample ID: **LFB-25339**

Units : **µg/L**

Run ID: **IC_3_101027A**

Prep Date: **10/27/2010 12:35**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	27.3	2	25		109	85	115			

Sample Matrix Spike

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

File ID: **18**

Batch ID: **25339**

Analysis Date: **10/28/2010 12:12**

Sample ID: **10102003-03ALFM**

Units : **µg/L**

Run ID: **IC_3_101027A**

Prep Date: **10/27/2010 12:35**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	2160	100	1250		823	107	80	120		

Sample Matrix Spike Duplicate

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

File ID: **19**

Batch ID: **25339**

Analysis Date: **10/28/2010 12:31**

Sample ID: **10102003-03ALFMD**

Units : **µg/L**

Run ID: **IC_3_101027A**

Prep Date: **10/27/2010 12:35**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	2230	100	1250		823	112	80	120	2157	3.3(15)

Comments:

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



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Date:
29-Oct-10

QC Summary Report

Work Order:
10102203

Method Blank

File ID: 102710.B\025_M1.D\

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

Batch ID: **25322**

Analysis Date: **10/27/2010 16:39**

Sample ID: **MB-25322**

Units : **mg/L**

Run ID: **ICP/MS_1010271**

Prep Date: **10/26/2010 09:21**

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

Laboratory Control Spike

File ID: 102710.B\025_M2.D\

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

Batch ID: **25322**

Analysis Date: **10/27/2010 16:44**

Sample ID: **LCS-25322**

Units : **mg/L**

Run ID: **ICP/MS_1010271**

Prep Date: **10/26/2010 09:21**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0556	0.005	0.05		111	85	115			

Sample Matrix Spike

File ID: 102710.B\026_M.D\

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

Batch ID: **25322**

Analysis Date: **10/27/2010 17:14**

Sample ID: **10102003-03AMS**

Units : **mg/L**

Run ID: **ICP/MS_1010271**

Prep Date: **10/26/2010 09:21**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0561	0.005	0.05	0.008073	96	70	130			

Sample Matrix Spike Duplicate

File ID: 102710.B\027_M.D\

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

Batch ID: **25322**

Analysis Date: **10/27/2010 17:19**

Sample ID: **10102003-03AMSD**

Units : **mg/L**

Run ID: **ICP/MS_1010271**

Prep Date: **10/26/2010 09:21**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0571	0.005	0.05	0.008073	98	70	130	0.05607	1.9(20)	

Comments:

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



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Date:
03-Nov-10

QC Summary Report

Work Order:
10102203

Method Blank

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

File ID: **10102806.D**

Batch ID: **MS15W1028M**

Analysis Date: **10/28/2010 09:36**

Sample ID: **MBLK MS15W1028M**

Units: **µg/L**

Run ID: **MSD_15_101028B**

Prep Date: **10/28/2010 09:36**

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		10		100	70	130			
Surr: Toluene-d8	10.5		10		105	70	130			



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10102203

Surr: 4-Bromofluorobenzene	10.2	10	102	70	130
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Date:
03-Nov-10

QC Summary Report

Work Order:
10102203

Laboratory Control Spike

Type: LCS

Test Code: EPA Method SW8260B

File ID: 10102803.D

Batch ID: MS15W1028M

Analysis Date: 10/28/2010 08:23

Sample ID: LCS MS15W1028M

Units : µg/L

Run ID: MSD_15_101028B

Prep Date: 10/28/2010 08:23

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	9.47	1	10		95	70	130			
Chloromethane	9.79	2	10		98	70	130			
Vinyl chloride	11	1	10		110	70	130			
Chloroethane	10.2	1	10		102	70	130			
Bromomethane	11.4	2	10		114	70	130			
Trichlorofluoromethane	10.2	1	10		102	70	130			
1,1-Dichloroethene	10.6	1	10		106	70	130			
Dichloromethane	9.25	2	10		93	70	130			
Freon-113	11.3	1	10		113	67	141			
trans-1,2-Dichloroethene	10.4	1	10		104	70	130			
Methyl tert-butyl ether (MTBE)	8.81	0.5	10		88	70	130			
1,1-Dichloroethane	10.2	1	10		102	70	130			
2-Butanone (MEK)	167	10	200		83	70	130			
cis-1,2-Dichloroethene	10.1	1	10		101	70	130			
Bromochloromethane	9.64	1	10		96	70	130			
Chloroform	9.83	1	10		98	70	130			
2,2-Dichloropropane	10.4	1	10		104	70	130			
1,2-Dichloroethane	9.55	1	10		96	70	130			
1,1,1-Trichloroethane	10.4	1	10		104	70	130			
1,1-Dichloropropene	10.6	1	10		106	70	130			
Carbon tetrachloride	10.7	1	10		107	70	130			
Benzene	10.1	0.5	10		101	70	130			
Dibromomethane	9.24	1	10		92	70	130			
1,2-Dichloropropane	9.85	1	10		99	70	130			
Trichloroethene	10.3	1	10		103	70	130			
Bromodichloromethane	10.5	1	10		105	70	130			
4-Methyl-2-pentanone (MIBK)	20.9	2.5	25		83	20	182			
cis-1,3-Dichloropropene	9.92	1	10		99	70	130			
trans-1,3-Dichloropropene	8.88	1	10		89	70	130			
1,1,2-Trichloroethane	9.09	1	10		91	70	130			
Toluene	9.91	0.5	10		99	70	130			
1,3-Dichloropropane	9.29	1	10		93	70	130			
Dibromochloromethane	9.18	1	10		92	70	130			
1,2-Dibromoethane (EDB)	18.5	2	20		93	70	130			
Tetrachloroethene	10.3	1	10		103	70	130			
1,1,1,2-Tetrachloroethane	10.5	1	10		105	70	130			
Chlorobenzene	10	1	10		100	70	130			
Ethylbenzene	10.4	0.5	10		104	70	130			
m,p-Xylene	10.2	0.5	10		102	70	130			
Bromoform	8.67	1	10		87	70	130			
Styrene	10.2	1	10		102	70	130			
o-Xylene	10.1	0.5	10		101	70	130			
1,1,2,2-Tetrachloroethane	8.49	1	10		85	70	130			
1,2,3-Trichloropropane	17.1	2	20		86	70	130			
Isopropylbenzene	10.4	1	10		104	70	130			
Bromobenzene	10.2	1	10		102	70	130			
n-Propylbenzene	11	1	10		110	70	130			
4-Chlorotoluene	10.5	1	10		105	70	130			
2-Chlorotoluene	10.5	1	10		105	70	130			
1,3,5-Trimethylbenzene	10.6	1	10		106	70	130			
tert-Butylbenzene	10.4	1	10		104	70	130			
1,2,4-Trimethylbenzene	10.5	1	10		105	70	130			
sec-Butylbenzene	10.8	1	10		108	70	130			
1,3-Dichlorobenzene	10.5	1	10		105	70	130			
1,4-Dichlorobenzene	9.96	1	10		99.6	70	130			
4-Isopropyltoluene	10.6	1	10		106	70	130			
1,2-Dichlorobenzene	9.4	1	10		94	70	130			
n-Butylbenzene	10.9	1	10		109	70	130			
1,2-Dibromo-3-chloropropane (DBCP)	43.3	3	50		87	70	130			
1,2,4-Trichlorobenzene	8.29	2	10		83	70	130			
Naphthalene	5.92	2	10		59	70(70)	130			
Hexachlorobutadiene	19.1	2	20		95	70	130			
1,2,3-Trichlorobenzene	7.72	2	10		77	70	130			
Surr: 1,2-Dichloroethane-d4	9.38		10		94	70	130			
Surr: Toluene-d8	9.89		10		99	70	130			



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Date:

03-Nov-10

QC Summary Report

Work Order:

10102203

Surr: 4-Bromofluorobenzene

10

10

100

70

130



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Date:
03-Nov-10

QC Summary Report

Work Order:
10102203

Sample Matrix Spike

Type: MS

Test Code: EPA Method SW8260B

File ID: 10102807.D

Batch ID: MS15W1028M

Analysis Date: 10/28/2010 09:58

Sample ID: 10102203-09AMS

Units : µg/L

Run ID: MSD_15_101028B

Prep Date: 10/28/2010 09:58

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	40.8	2.5	50	0	82	13	167			
Chloromethane	40.7	10	50	0	81	28	145			
Vinyl chloride	51.9	2.5	50	0	104	43	134			
Chloroethane	46.7	2.5	50	0	93	39	154			
Bromomethane	51.8	10	50	0	104	19	176			
Trichlorofluoromethane	47.4	2.5	50	0	95	34	160			
1,1-Dichloroethene	47.3	2.5	50	0	95	60	130			
Dichloromethane	42	10	50	0	84	68	130			
Freon-113	53.2	2.5	50	0	106	49	141			
trans-1,2-Dichloroethene	47.5	2.5	50	0	95	63	130			
Methyl tert-butyl ether (MTBE)	43.3	1.3	50	0	87	56	141			
1,1-Dichloroethane	46.6	2.5	50	0	93	61	130			
2-Butanone (MEK)	654	50	1000	0	65	20	182			
cis-1,2-Dichloroethene	46	2.5	50	0	92	70	130			
Bromochloromethane	46.3	2.5	50	0	93	70	130			
Chloroform	43.7	2.5	50	0	87	67	130			
2,2-Dichloropropane	47.6	2.5	50	0	95	30	152			
1,2-Dichloroethane	45.1	2.5	50	0	90	60	135			
1,1,1-Trichloroethane	47.3	2.5	50	0	95	59	137			
1,1-Dichloropropene	48.9	2.5	50	0	98	63	130			
Carbon tetrachloride	48.5	2.5	50	0	97	50	147			
Benzene	46.3	1.3	50	0	93	67	130			
Dibromomethane	43.4	2.5	50	0	87	69	133			
1,2-Dichloropropane	45.2	2.5	50	0	90	69	130			
Trichloroethene	46.6	2.5	50	0	93	69	130			
Bromodichloromethane	47.3	2.5	50	0	95	66	134			
4-Methyl-2-pentanone (MIBK)	95.5	13	125	0	76	20	182			
cis-1,3-Dichloropropene	43.8	2.5	50	0	88	63	130			
trans-1,3-Dichloropropene	40.1	2.5	50	0	80	66	131			
1,1,2-Trichloroethane	42.3	2.5	50	0	85	68	130			
Toluene	45.2	1.3	50	0	90	66	130			
1,3-Dichloropropane	44.1	2.5	50	0	88	70	130			
Dibromochloromethane	42	2.5	50	0	84	70	130			
1,2-Dibromoethane (EDB)	86.1	5	100	0	86	70	130			
Tetrachloroethene	47	2.5	50	0	94	61	134			
1,1,1,2-Tetrachloroethane	46.5	2.5	50	0	93	70	130			
Chlorobenzene	45.4	2.5	50	0	91	70	130			
Ethylbenzene	47	1.3	50	0	94	68	130			
m,p-Xylene	46.1	1.3	50	0	92	64	130			
Bromoform	40.7	2.5	50	0	81	64	138			
Styrene	45.8	2.5	50	0	92	69	130			
o-Xylene	45.6	1.3	50	0	91	70	130			
1,1,2,2-Tetrachloroethane	40.2	2.5	50	0	80	65	131			
1,2,3-Trichloropropane	83.6	10	100	0	84	70	130			
Isopropylbenzene	46.2	2.5	50	0	92	64	138			
Bromobenzene	46.2	2.5	50	0	92	70	130			
n-Propylbenzene	48.4	2.5	50	0	97	66	132			
4-Chlorotoluene	47	2.5	50	0	94	70	130			
2-Chlorotoluene	46.9	2.5	50	0	94	70	130			
1,3,5-Trimethylbenzene	47	2.5	50	0	94	66	136			
tert-Butylbenzene	46	2.5	50	0	92	65	137			
1,2,4-Trimethylbenzene	46.5	2.5	50	0	93	65	137			
sec-Butylbenzene	47.4	2.5	50	0	95	66	134			
1,3-Dichlorobenzene	47.8	2.5	50	0	96	70	130			
1,4-Dichlorobenzene	44.8	2.5	50	0	90	70	130			
4-Isopropyltoluene	47.3	2.5	50	0	95	66	137			
1,2-Dichlorobenzene	42.4	2.5	50	0	85	70	130			
n-Butylbenzene	48.4	2.5	50	0	97	60	142			
1,2-Dibromo-3-chloropropane (DBCP)	196	15	250	0	79	67	130			
1,2,4-Trichlorobenzene	36.8	10	50	0	74	61	137			
Naphthalene	26.8	10	50	0	54	40	167			
Hexachlorobutadiene	86.6	10	100	0	87	61	130			
1,2,3-Trichlorobenzene	34	10	50	0	68	51	144			
Surr: 1,2-Dichloroethane-d4	47.5		50		95	70	130			
Surr: Toluene-d8	49.2		50		98	70	130			



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03-Nov-10

QC Summary Report

Work Order:
10102203

Surr: 4-Bromofluorobenzene	49.5	50	99	70	130
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Date:
03-Nov-10

QC Summary Report

Work Order:
10102203

Sample Matrix Spike Duplicate

Type: MSD Test Code: EPA Method SW8260B

File ID: 10102808.D

Batch ID: MS15W1028M

Analysis Date: 10/28/2010 10:19

Sample ID: 10102203-09AMSD

Units : µg/L

Run ID: MSD_15_101028B

Prep Date: 10/28/2010 10:19

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	42.7	2.5	50	0	85	13	167	40.83	4.4(20)	
Chloromethane	45.1	10	50	0	90	28	145	40.67	10.4(20)	
Vinyl chloride	55.6	2.5	50	0	111	43	134	51.86	7.0(20)	
Chloroethane	50.1	2.5	50	0	100	39	154	46.72	6.9(20)	
Bromomethane	58.8	10	50	0	118	19	176	51.75	12.7(20)	
Trichlorofluoromethane	49.9	2.5	50	0	99.8	34	160	47.37	5.2(20)	
1,1-Dichloroethene	49.9	2.5	50	0	99.8	60	130	47.31	5.4(20)	
Dichloromethane	43.8	10	50	0	88	68	130	42.03	4.2(20)	
Freon-113	54.2	2.5	50	0	108	49	141	53.24	1.8(20)	
trans-1,2-Dichloroethene	49.4	2.5	50	0	99	63	130	47.52	3.9(20)	
Methyl tert-butyl ether (MTBE)	45.4	1.3	50	0	91	56	141	43.34	4.6(20)	
1,1-Dichloroethane	48	2.5	50	0	96	61	130	46.55	3.2(20)	
2-Butanone (MEK)	665	50	1000	0	67	20	182	654	1.7(20)	
cis-1,2-Dichloroethene	48.1	2.5	50	0	96	70	130	46.01	4.4(20)	
Bromochloromethane	48.1	2.5	50	0	96	70	130	46.25	3.9(20)	
Chloroform	46.7	2.5	50	0	93	67	130	43.66	6.8(20)	
2,2-Dichloropropane	49.9	2.5	50	0	99.7	30	152	47.63	4.6(20)	
1,2-Dichloroethane	47.1	2.5	50	0	94	60	135	45.1	4.3(20)	
1,1,1-Trichloroethane	50.3	2.5	50	0	101	59	137	47.27	6.2(20)	
1,1-Dichloropropene	51	2.5	50	0	102	63	130	48.93	4.2(20)	
Carbon tetrachloride	52.5	2.5	50	0	105	50	147	48.46	7.9(20)	
Benzene	48.5	1.3	50	0	97	67	130	46.3	4.7(20)	
Dibromomethane	45.3	2.5	50	0	91	69	133	43.4	4.3(20)	
1,2-Dichloropropane	46.5	2.5	50	0	93	69	130	45.16	2.9(20)	
Trichloroethene	48.6	2.5	50	0	97	69	130	46.61	4.2(20)	
Bromodichloromethane	50.9	2.5	50	0	102	66	134	47.31	7.3(20)	
4-Methyl-2-pentanone (MIBK)	98.3	13	125	0	79	20	182	95.49	2.9(20)	
cis-1,3-Dichloropropene	46.2	2.5	50	0	92	63	130	43.84	5.3(20)	
trans-1,3-Dichloropropene	42.3	2.5	50	0	85	66	131	40.12	5.3(20)	
1,1,2-Trichloroethane	44.3	2.5	50	0	89	68	130	42.28	4.6(20)	
Toluene	46.5	1.3	50	0	93	66	130	45.19	2.8(20)	
1,3-Dichloropropane	45.7	2.5	50	0	91	70	130	44.11	3.6(20)	
Dibromochloromethane	44.9	2.5	50	0	90	70	130	42.01	6.7(20)	
1,2-Dibromoethane (EDB)	89.1	5	100	0	89	70	130	86.11	3.4(20)	
Tetrachloroethene	49.4	2.5	50	0	99	61	134	47.01	4.9(20)	
1,1,1,2-Tetrachloroethane	49.1	2.5	50	0	98	70	130	46.53	5.4(20)	
Chlorobenzene	47.4	2.5	50	0	95	70	130	45.44	4.2(20)	
Ethylbenzene	48.6	1.3	50	0	97	68	130	46.98	3.4(20)	
m,p-Xylene	48.2	1.3	50	0	96	64	130	46.05	4.5(20)	
Bromoform	43.7	2.5	50	0	87	64	138	40.67	7.3(20)	
Styrene	47.8	2.5	50	0	96	69	130	45.82	4.3(20)	
o-Xylene	47.5	1.3	50	0	95	70	130	45.64	4.0(20)	
1,1,2,2-Tetrachloroethane	41.5	2.5	50	0	83	65	131	40.22	3.2(20)	
1,2,3-Trichloropropane	85.7	10	100	0	86	70	130	83.63	2.4(20)	
Isopropylbenzene	47.3	2.5	50	0	95	64	138	46.21	2.4(20)	
Bromobenzene	46.9	2.5	50	0	94	70	130	46.17	1.5(20)	
n-Propylbenzene	49.6	2.5	50	0	99	66	132	48.41	2.5(20)	
4-Chlorotoluene	48.4	2.5	50	0	97	70	130	47.01	3.0(20)	
2-Chlorotoluene	48.3	2.5	50	0	97	70	130	46.88	3.0(20)	
1,3,5-Trimethylbenzene	48.1	2.5	50	0	96	66	136	46.97	2.4(20)	
tert-Butylbenzene	47.3	2.5	50	0	95	65	137	46.03	2.8(20)	
1,2,4-Trimethylbenzene	48.2	2.5	50	0	96	65	137	46.49	3.5(20)	
sec-Butylbenzene	49.2	2.5	50	0	98	66	134	47.41	3.6(20)	
1,3-Dichlorobenzene	49.4	2.5	50	0	99	70	130	47.79	3.3(20)	
1,4-Dichlorobenzene	46.5	2.5	50	0	93	70	130	44.77	3.8(20)	
4-Isopropyltoluene	48.6	2.5	50	0	97	66	137	47.34	2.6(20)	
1,2-Dichlorobenzene	44.6	2.5	50	0	89	70	130	42.37	5.2(20)	
n-Butylbenzene	50.9	2.5	50	0	102	60	142	48.44	5.0(20)	
1,2-Dibromo-3-chloropropane (DBCP)	212	15	250	0	85	67	130	196.5	7.7(20)	
1,2,4-Trichlorobenzene	41.2	10	50	0	82	61	137	36.82	11.2(20)	
Naphthalene	30.4	10	50	0	61	40	167	26.78	12.7(20)	
Hexachlorobutadiene	94.8	10	100	0	95	61	130	86.55	9.1(20)	
1,2,3-Trichlorobenzene	39	10	50	0	78	51	144	34.01	13.8(20)	
Surr: 1,2-Dichloroethane-d4	48.4		50		97	70	130			
Surr: Toluene-d8	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:
03-Nov-10

QC Summary Report

Work Order:
10102203

Surr: 4-Bromofluorobenzene	48.7	50	97	70	130
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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.

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 : BMIS10102203
 Report Due By : 5:00 PM On : 05-Nov-2010

Client:
 Battelle Memorial Institute
 655 West Broadway
 Suite 1420
 San Diego, CA 92101
 PO : 218013

Report Attention **Phone Number** **Email Address**
 David Conner (619) 726-7311 x connerd@battelle.org
 Shane Walton (614) 424-4117 x waltonsh@battelle.org
 Betsy Cutie (614) 424-4899 x cutieb@battelle.org

EDD Required : Yes

Sampled by : David Loera, Chase Brogdon

Cooler Temp Samples Received Date Printed
 1 °C 22-Oct-2010 22-Oct-2010

Client's COC # : 31911, 31912, 29185 Job : G005862/JPL Groundwater Monitoring
 QC Level : DS4 = DOD QC Required : Final Rpt, MBLK, Initial/ConCal data, LCS, MS/MSD With Surrogates

Alpha Sample ID	Client Sample ID	Collection Date	No. of Bottles Alpha	Sub	TAT	Requested Tests				Sample Remarks
						300_0_W	314_W	METALS_D W	VOC_TIC_W	
BMI101022203-01A	MW-15	10/21/10 16:47	7	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	
BMI101022203-02A	Trip Blank	10/21/10 00:00	1	0	10			VOC by 524 Criteria	VOC by 524 Criteria	Reno Trip Blank 9/27/10
BMI101022203-03A	MW-10	10/21/10 10:00	7	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	
BMI101022203-04A	MW-5	10/21/10 12:04	7	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	
BMI101022203-05A	MW-8	10/21/10 14:34	9	0	10	Perchlorate	Cr	VOC by 524 NO ₂ , NO ₃ , SO ₄ , Cl, PO ₄ Criteria	VOC by 524 Criteria	
BMI101022203-06A	MW-18-5	10/21/10 09:48	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	
BMI101022203-07A	MW-18-4	10/21/10 10:40	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	
BMI101022203-08A	MW-18-3	10/21/10 11:27	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	Level IV QC
BMI101022203-09A	MW-18-2	10/21/10 12:00	10	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	MS/MSD
BMI101022203-10A	MW-18-1	10/21/10 12:31	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	

Comments: Security seals intact. Frozen ice. Temp Blanks #8842 and #7570 received @ 1°C. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). Per phone conversation w/ David Conner 10/22/10 @ 11:13 lab is to always run : Trip Blanks.

Logged in by: Elizabeth Oldcox Signature: _____ Print Name: Elizabeth Adcox Company: Alpha Analytical, Inc. Date/Time: 10-22-10 11:5

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

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 : BMIS10102203
Report Due By : 5:00 PM On : 05-Nov-2010

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

Report Attention **Phone Number** **Email Address**
 David Conner (619) 726-7311 x connerd@battelle.org
 Shane Walton (614) 424-4117 x waltonsh@battelle.org
 Betsy Cutie (614) 424-4899 x cutiee@battelle.org

EDD Required : Yes

Sampled by : David Loera, Chase Brogdon

PO : 218013
 Client's COC # : 31911, 31912, 29185

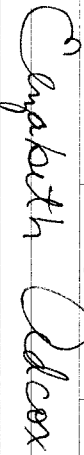
Job : G005862/JPL Groundwater Monitoring

Cooler Temp Samples Received Date Printed
 1 °C 22-Oct-2010 22-Oct-2010

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

Alpha Sample ID	Client Sample ID	Collection Date	No. of Bottles		TAT	Requested Tests				Sample Remarks
			Alpha	Sub		300_0_W	314_W	METALS_D_W	VOC_TIC_W	
BM1101022203-11A	EB-02-10/21/10	10/21/10 12:19	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	
BM1101022203-12A	TB-02-10/21/10	AQ 10/21/10 07:00	1	0	10			VOC by 524 Criteria	VOC by 524 Criteria	Reno Trip Blank 6/29/10

Comments: Security seals intact. Frozen ice. Temp Blanks #8842 and #7570 received @ 1°C. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). Per phone conversation w/ David Conner 10/22/10 @ 11:13 lab is to always run : Trip Blanks.

Logged in by: Elizabeth Adcox Signature:  Print Name: Elizabeth Adcox Company: Alpha Analytical, Inc. Date/Time: 10-22-10 11:15

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 : AQA(Aqueous) AR(Air) SO(Soil) WSW(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

Company Name Battelle

Address 505 King Ave

City, State, Zip Columbus OH 43201

Phone Number _____ Fax _____



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

Samples Collected From Which State?
 AZ _____ CA NV _____ WA _____
 ID _____ OR _____ OTHER _____
 Page # 1 of 1

31911

Consultant / Client Name David Cooper

Address _____

City, State, Zip _____

Job # 8005862/SPL GUM

Job Name _____

Name: David Cooper

Report Attention / Project Manager

Email: dcooper@battelle.org

FAX: 614 458-5641 Mobile: 619 726-7311

Time Sampled 10/19/10

Date Sampled AR

Matrix* AR

See Key Below

P.O. # 218013

Lab ID Number (Use Only)

Office (Use Only)

Sample Description BMT1010220301

TAT MU-15

Field Filtered ID

Containers* 6V, 1P

Analyses Required

VOC's (524.2)

Total Cr (200.8)

Perchlorate (314.0)

*300

Data Validation Level: Dr IV

EDF? YES NO _____

Global ID # _____

REMARKS

Time Sampled	Date Sampled	Matrix* See Key Below	P.O. #	Lab ID Number (Use Only)	Office (Use Only)	Sample Description	TAT	Field Filtered	# Containers**	Analyses Required	REMARKS

ADDITIONAL INSTRUCTIONS: *Chloride, Nitrate, Nitrite, Orthophosphate, Sulfate

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action (NAC 445.0636 (c) (2)). Sampled By: David A

Relinquished by: (Signature/Affiliation) David A / Battelle Received by: (Signature/Affiliation) _____ Date: _____ Time: _____

Relinquished by: (Signature/Affiliation) _____ Received by: (Signature/Affiliation) Elizabeth Decker / Alpha Date: 10-22-10 Time: 1037

Relinquished by: (Signature/Affiliation) _____ Received by: (Signature/Affiliation) _____ Date: _____ Time: _____

*Key: AQ - Aqueous SO - Soil WA - Waste OT - Other AR - Air ** L-liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

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:Company Name Battelle

Attn: _____

Address 505 King AveCity, State, Zip Columbus OH 43201

Phone Number _____ Fax _____

**Alpha Analytical, Inc.**

255 Glendale Avenue, Suite 21

Sparks, Nevada 89431-5778

Phone (775) 355-1044

Fax (775) 355-0406

Samples Collected From Which State?

AZ CA NV WA OR OTHER

Page # _____ of _____

31912

DOD Site 1

Analyses Required

Data Validation Level: III or IVEDD/EDF? YES NO

REMARKS

Job # 6005862 / SPL GUDM Job Name SPL-GUD-4810Name: David Conner Report Attention / Project ManagerEmail: connerd@battelle.orgPhone: 619 458-5661 Mobile: 619 726-7311VOC's (524.2)
Total Cr (200.8)
Perchlorate (314.0)
* 300Consultant / Client Name David Conner

Address _____

City, State, Zip _____

P.O. # 218013

Time Date Sampled _____ Matrix* _____

Lab ID Number _____ Office (Use Only) _____

Sample Description _____ TAT _____

Field Filtered _____ # Containers* _____

Date Sampled _____ See Key Below _____

Lab ID Number _____ Office (Use Only) _____

Sample Description _____ TAT _____

Field Filtered _____ # Containers* _____

Date Sampled _____ See Key Below _____

Lab ID Number _____ Office (Use Only) _____

Sample Description _____ TAT _____

Field Filtered _____ # Containers* _____

Date Sampled _____ See Key Below _____

Lab ID Number _____ Office (Use Only) _____

Sample Description _____ TAT _____

Field Filtered _____ # Containers* _____

Date Sampled _____ See Key Below _____

ADDITIONAL INSTRUCTIONS: * Chloride, Nitrate, Nitrite, Orthophosphate, SulfateI, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action (NAC 445.0636 (c) (2)). Sampled By: David ConnerRelinquished by: (Signature/Affiliation) David Conner / Battelle Received by: (Signature/Affiliation) _____ Date: 10/21/10 Time: 1445Relinquished by: (Signature/Affiliation) _____ Received by: (Signature/Affiliation) FES - CR Date: 10/21/10 Time: 1530Relinquished by: (Signature/Affiliation) _____ Received by: (Signature/Affiliation) Joseph Decey / Decey Date: 10/22/10 Time: 1037

Relinquished by: (Signature/Affiliation) _____ Received by: (Signature/Affiliation) _____ Date: _____ Time: _____

*Key: AQ - Aqueous SO - Soil WA - Waste OT - Other AR - Air ** L-Liter V-Voa S-Soil Jar O-Orbo T-Teclat 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 TOUPEKINS/BATTLELLE
 Address 505 KIRK AVE
 City, State, Zip COLUMBIAS, 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? 29185
 AZ _____ CA NV _____ WA _____
 ID _____ OR _____ OTHER _____ Page # 1 of 1

Analyses Required

Client Name BATTLELLE/EDWARD CANNEN PO. # 218013 Job # 6005862
 Address 5790 OLD TOWN AVE, C-205 Email Address _____
 City, State, Zip SPARKS, NV 89402 Phone # (619) 726-7311 Fax # _____

Time Sampled Date Matrix* See Key Below Sampled by CHRIS BRADEN Lab ID Number (Use Only) Report Attention Sample Description TAT Field Filled Total and type of containers ** See below
 09/18/21/10 AQ .06 MW-18-5 3v, 2p X X
 10/10 .07 MW-18-4 3v, 2p X X
 11/27 .08 MW-18-3 3v, 2p X X
 12/00 .09 MW-18-2 6v, 4p X X
 12/31 .10 MW-18-1 3v, 2p X X
 1/2/19 .11 EB-02-10/21/10 3v, 2p X X
 5/20/21/10 AQ .12 TB-02-10/21/10 1v X X

Required QC Level? I II III IV
 EDD/EDF? YES NO
 Global ID # _____
 REMARKS
 MS/MSD
 EQUIPMENTS BLANK
 TRAP BLANK

ADDITIONAL INSTRUCTIONS:

Signature	Print Name	Company	Date	Time
<i>[Signature]</i>	CHRIS BRADEN	ZUSKAT CORP, INC	10/21/10	1530
<i>[Signature]</i>	Elizabeth Adcox	Alpha	10/22/10	1037

*Key: AQ - Aqueous SO - Soil WA - Waste OT - Other AR - Air ** - L-Liter V-Via 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-Nov-10

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

Suite 1420

CASE NARRATIVE

Job: G005862/JPL Groundwater Monitoring

Work Order: BMI10102703

Cooler Temp: 0 °C

Alpha's Sample ID	Client's Sample ID	Matrix
10102703-01A	MW-6	Aqueous
10102703-02A	MW-17-5	Aqueous
10102703-03A	MW-17-4	Aqueous
10102703-04A	MW-17-3	Aqueous
10102703-05A	MW-17-2	Aqueous
10102703-06A	MW-17-1	Aqueous
10102703-07A	EB-03-10/22/10	Aqueous
10102703-08A	TB-03-10/22/10	Aqueous
10102703-09A	MW-20-5	Aqueous
10102703-10A	MW-20-4	Aqueous
10102703-11A	MW-20-3	Aqueous
10102703-12A	MW-20-2	Aqueous
10102703-13A	MW-20-1	Aqueous
10102703-14A	EB-04-10/25/10	Aqueous
10102703-15A	TB-04-10/25/10	Aqueous
10102703-16A	MW-1	Aqueous
10102703-17A	MW-9	Aqueous
10102703-18A	TRIP BLANK	Aqueous
10102703-19A	MW-14-5	Aqueous
10102703-20A	MW-14-4	Aqueous
10102703-21A	MW-14-3	Aqueous
10102703-22A	MW-14-2	Aqueous
10102703-23A	MW-14-1	Aqueous
10102703-24A	DUPE-02-4Q10	Aqueous
10102703-25A	EB-05-10/26/10	Aqueous
10102703-26A	TB-05-10/26/10	Aqueous

Manually Integrated Analytes

<u>Alpha's Sample ID</u>	<u>Test Reference</u>	<u>Analyte</u>
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.

Roger Scholl

Randy Gardner

Walter Hinchman

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

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

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



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

Battelle Memorial Institute
655 West Broadway
San Diego, CA 92101

Attn: David Conner
Phone: (619) 726-7311
Fax: (614) 458-6641
Date Received : 10/27/10

Job: G005862/JPL Groundwater Monitoring

Perchlorate by Ion Chromatography EPA Method 314.0

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: MW-6				
Lab ID : BM110102703-01A Perchlorate Date Sampled 10/22/10 10:42	3.29	1.00 µg/L	10/28/10 09:46	10/28/10 13:44
Client ID: MW-17-5				
Lab ID : BM110102703-02A Perchlorate Date Sampled 10/22/10 09:35	ND	1.00 µg/L	10/28/10 09:46	10/28/10 14:03
Client ID: MW-17-4				
Lab ID : BM110102703-03A Perchlorate Date Sampled 10/22/10 10:07	ND	1.00 µg/L	10/28/10 09:46	10/28/10 14:21
Client ID: MW-17-3				
Lab ID : BM110102703-04A Perchlorate Date Sampled 10/22/10 10:34	9.21	1.00 µg/L	10/28/10 09:46	10/28/10 15:16
Client ID: MW-17-2				
Lab ID : BM110102703-05A Perchlorate Date Sampled 10/22/10 10:57	5.31	1.00 µg/L	10/28/10 09:46	10/28/10 15:35
Client ID: MW-17-1				
Lab ID : BM110102703-06A Perchlorate Date Sampled 10/22/10 11:39	ND	1.00 µg/L	10/28/10 09:46	10/28/10 15:53
Client ID: EB-03-10/22/10				
Lab ID : BM110102703-07A Perchlorate Date Sampled 10/22/10 11:11	ND	1.00 µg/L	10/28/10 09:46	10/28/10 16:48
Client ID: MW-20-5				
Lab ID : BM110102703-09A Perchlorate Date Sampled 10/25/10 09:14	ND	1.00 µg/L	10/28/10 09:46	10/28/10 17:07
Client ID: MW-20-4				
Lab ID : BM110102703-10A Perchlorate Date Sampled 10/25/10 09:43	ND	1.00 µg/L	10/28/10 09:46	10/28/10 17:25
Client ID: MW-20-3				
Lab ID : BM110102703-11A Perchlorate Date Sampled 10/25/10 10:09	ND	1.00 µg/L	10/28/10 09:46	10/28/10 17:44
Client ID: MW-20-2				
Lab ID : BM110102703-12A Perchlorate Date Sampled 10/25/10 10:34	2.70	1.00 µg/L	10/28/10 09:46	10/28/10 18:02



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Client ID: MW-20-1					
Lab ID : BMI10102703-13A	Perchlorate	ND	1.00 µg/L	10/28/10 09:46	10/28/10 18:20
Date Sampled	10/25/10 11:01				
Client ID: EB-04-10/25/10					
Lab ID : BMI10102703-14A	Perchlorate	ND	1.00 µg/L	10/28/10 09:46	10/28/10 18:39
Date Sampled	10/25/10 10:50				
Client ID: MW-1					
Lab ID : BMI10102703-16A	Perchlorate	ND	1.00 µg/L	10/28/10 09:46	10/28/10 18:57
Date Sampled	10/26/10 13:14				
Client ID: MW-9					
Lab ID : BMI10102703-17A	Perchlorate	ND	1.00 µg/L	10/28/10 09:46	10/28/10 19:16
Date Sampled	10/26/10 16:46				
Client ID: MW-14-5					
Lab ID : BMI10102703-19A	Perchlorate	ND	1.00 µg/L	10/28/10 09:46	10/28/10 19:34
Date Sampled	10/26/10 09:15				
Client ID: MW-14-4					
Lab ID : BMI10102703-20A	Perchlorate	4.45	1.00 µg/L	10/28/10 09:46	10/28/10 20:29
Date Sampled	10/26/10 10:05				
Client ID: MW-14-3					
Lab ID : BMI10102703-21A	Perchlorate	5.98	1.00 µg/L	10/29/10 09:13	10/29/10 11:12
Date Sampled	10/26/10 10:36				
Client ID: MW-14-2					
Lab ID : BMI10102703-22A	Perchlorate	ND	1.00 µg/L	10/29/10 09:13	10/29/10 12:07
Date Sampled	10/26/10 11:11				
Client ID: MW-14-1					
Lab ID : BMI10102703-23A	Perchlorate	2.72	1.00 µg/L	10/29/10 09:13	10/29/10 12:25
Date Sampled	10/26/10 11:44				
Client ID: DUPE-02-4Q10					
Lab ID : BMI10102703-24A	Perchlorate	2.83	1.00 µg/L	10/29/10 09:13	10/29/10 12:44
Date Sampled	10/26/10 00:00				
Client ID: EB-05-10/26/10					
Lab ID : BMI10102703-25A	Perchlorate	ND	1.00 µg/L	10/29/10 09:13	10/29/10 13:02
Date Sampled	10/26/10 11:28				

ND = Not Detected

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Report Date



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ANALYTICAL REPORT

Battelle Memorial Institute
655 West Broadway
San Diego, CA 92101

Attn: David Conner
Phone: (619) 726-7311
Fax: (614) 458-6641
Date Received : 10/27/10

Job: G005862/JPL Groundwater Monitoring

Metals by ICPMS
EPA Method 200.8

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: MW-6				
Lab ID: BMI10102703-01A Chromium (Cr)	ND	0.0050 mg/L	10/28/10 13:51	10/29/10 00:52
Date Sampled 10/22/10 10:42				
Client ID: MW-17-5				
Lab ID: BMI10102703-02A Chromium (Cr)	ND	0.0050 mg/L	10/28/10 13:51	10/29/10 00:57
Date Sampled 10/22/10 09:35				
Client ID: MW-17-4				
Lab ID: BMI10102703-03A Chromium (Cr)	ND	0.0050 mg/L	10/28/10 13:51	10/29/10 00:24
Date Sampled 10/22/10 10:07				
Client ID: MW-17-3				
Lab ID: BMI10102703-04A Chromium (Cr)	ND	0.0050 mg/L	10/29/10 05:52	10/29/10 05:52
Date Sampled 10/22/10 10:34				
Client ID: MW-17-2				
Lab ID: BMI10102703-05A Chromium (Cr)	ND	0.0050 mg/L	10/28/10 13:51	10/29/10 01:03
Date Sampled 10/22/10 10:57				
Client ID: MW-17-1				
Lab ID: BMI10102703-06A Chromium (Cr)	ND	0.0050 mg/L	10/28/10 13:51	10/29/10 01:09
Date Sampled 10/22/10 11:39				
Client ID: EB-03-10/22/10				
Lab ID: BMI10102703-07A Chromium (Cr)	ND	0.0050 mg/L	10/28/10 13:51	10/29/10 01:14
Date Sampled 10/22/10 11:11				
Client ID: MW-20-5				
Lab ID: BMI10102703-09A Chromium (Cr)	ND	0.0050 mg/L	10/28/10 13:51	10/29/10 01:20
Date Sampled 10/25/10 09:14				
Client ID: MW-20-4				
Lab ID: BMI10102703-10A Chromium (Cr)	ND	0.0050 mg/L	10/28/10 13:51	10/29/10 01:26
Date Sampled 10/25/10 09:43				
Client ID: MW-20-3				
Lab ID: BMI10102703-11A Chromium (Cr)	ND	0.0050 mg/L	10/28/10 13:51	10/29/10 01:31
Date Sampled 10/25/10 10:09				
Client ID: MW-20-2				
Lab ID: BMI10102703-12A Chromium (Cr)	ND	0.0050 mg/L	10/28/10 13:51	10/29/10 01:37
Date Sampled 10/25/10 10:34				



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Client ID: MW-20-1

Lab ID : BMI10102703-13A Chromium (Cr) ND 0.0050 mg/L 10/28/10 13:51 10/29/10 02:05
Date Sampled 10/25/10 11:01

Client ID: EB-04-10/25/10

Lab ID : BMI10102703-14A Chromium (Cr) ND 0.0050 mg/L 10/28/10 13:51 10/29/10 02:11
Date Sampled 10/25/10 10:50

Client ID: MW-1

Lab ID : BMI10102703-16A Chromium (Cr) ND 0.0050 mg/L 10/28/10 13:51 10/29/10 02:16
Date Sampled 10/26/10 13:14

Client ID: MW-9

Lab ID : BMI10102703-17A Chromium (Cr) ND 0.0050 mg/L 10/28/10 13:51 10/29/10 02:22
Date Sampled 10/26/10 16:46

Client ID: MW-14-5

Lab ID : BMI10102703-19A Chromium (Cr) ND 0.0050 mg/L 10/28/10 13:51 10/29/10 02:27
Date Sampled 10/26/10 09:15

Client ID: MW-14-4

Lab ID : BMI10102703-20A Chromium (Cr) ND 0.0050 mg/L 10/28/10 13:51 10/29/10 02:33
Date Sampled 10/26/10 10:05

Client ID: MW-14-3

Lab ID : BMI10102703-21A Chromium (Cr) ND 0.0050 mg/L 10/28/10 13:51 10/29/10 02:39
Date Sampled 10/26/10 10:36

Client ID: MW-14-2

Lab ID : BMI10102703-22A Chromium (Cr) ND 0.0050 mg/L 10/28/10 13:51 10/29/10 02:44
Date Sampled 10/26/10 11:11

Client ID: MW-14-1

Lab ID : BMI10102703-23A Chromium (Cr) ND 0.0050 mg/L 10/28/10 20:06 10/29/10 06:25
Date Sampled 10/26/10 11:44

Client ID: DUPE-02-4Q10

Lab ID : BMI10102703-24A Chromium (Cr) ND 0.0050 mg/L 10/28/10 20:06 10/29/10 06:31
Date Sampled 10/26/10 00:00

Client ID: EB-05-10/26/10

Lab ID : BMI10102703-25A Chromium (Cr) ND 0.0050 mg/L 10/28/10 20:06 10/29/10 06:37
Date Sampled 10/26/10 11:28

ND = Not Detected

Roger Scholl *Randy Gardner* *Walter Hinchman*

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

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Report Date



Alpha Analytical, Inc.

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ANALYTICAL REPORT

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

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

Tentatively Identified Compounds - Volatile Organics by GC/MS

	Parameter	Estimated Concentration	Estimated Reporting Limit	Date Extracted	Date Analyzed
Client ID : MW-6					
Lab ID : BMI10102703-01A	*** None Found ***	ND	2.0 µg/L	11/01/10 19:03	11/01/10 19:03
Date Received : 10/27/10					
Date Sampled : 10/22/10 10:42					
Client ID : MW-17-5					
Lab ID : BMI10102703-02A	*** None Found ***	ND	2.0 µg/L	11/01/10 19:24	11/01/10 19:24
Date Received : 10/27/10					
Date Sampled : 10/22/10 09:35					
Client ID : MW-17-4					
Lab ID : BMI10102703-03A	*** None Found ***	ND	2.0 µg/L	11/01/10 19:47	11/01/10 19:47
Date Received : 10/27/10					
Date Sampled : 10/22/10 10:07					
Client ID : MW-17-3					
Lab ID : BMI10102703-04A	*** None Found ***	ND	2.0 µg/L	11/01/10 20:08	11/01/10 20:08
Date Received : 10/27/10					
Date Sampled : 10/22/10 10:34					
Client ID : MW-17-2					
Lab ID : BMI10102703-05A	*** None Found ***	ND	2.0 µg/L	11/01/10 20:30	11/01/10 20:30
Date Received : 10/27/10					
Date Sampled : 10/22/10 10:57					
Client ID : MW-17-1					
Lab ID : BMI10102703-06A	*** None Found ***	ND	2.0 µg/L	11/01/10 20:52	11/01/10 20:52
Date Received : 10/27/10					
Date Sampled : 10/22/10 11:39					
Client ID : EB-03-10/22/10					
Lab ID : BMI10102703-07A	Acetone	17 *	10 µg/L	11/01/10 18:19	11/01/10 18:19
Date Received : 10/27/10	Tertiary Butyl Alcohol (TBA)	16 *	10 µg/L	11/01/10 18:19	11/01/10 18:19
Date Sampled : 10/22/10 11:11					
Client ID : TB-03-10/22/10					
Lab ID : BMI10102703-08A	*** None Found ***	ND	2.0 µg/L	11/01/10 17:13	11/01/10 17:13
Date Received : 10/27/10					
Date Sampled : 10/22/10 07:00					
Client ID : MW-20-5					
Lab ID : BMI10102703-09A	Fluorotrimethylsilanc	2.3	2.0 µg/L	11/01/10 21:14	11/01/10 21:14
Date Received : 10/27/10	Isopropyl alcohol	560	100 µg/L	11/01/10 21:14	11/01/10 21:14
Date Sampled : 10/25/10 09:14					



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Client ID :	MW-20-4					
Lab ID :	BMI10102703-10A	Isopropyl alcohol	610	100 µg/L	11/01/10 21:36	11/01/10 21:36
Date Received :	10/27/10					
Date Sampled :	10/25/10 09:43					
Client ID :	MW-20-3					
Lab ID :	BMI10102703-11A	Isopropyl alcohol	540	100 µg/L	11/01/10 21:57	11/01/10 21:57
Date Received :	10/27/10					
Date Sampled :	10/25/10 10:09					
Client ID :	MW-20-2					
Lab ID :	BMI10102703-12A	*** None Found ***	ND	2.0 µg/L	11/01/10 22:19	11/01/10 22:19
Date Received :	10/27/10					
Date Sampled :	10/25/10 10:34					
Client ID :	MW-20-1					
Lab ID :	BMI10102703-13A	*** None Found ***	ND	2.0 µg/L	11/01/10 22:40	11/01/10 22:40
Date Received :	10/27/10					
Date Sampled :	10/25/10 11:01					
Client ID :	EB-04-10/25/10					
Lab ID :	BMI10102703-14A	*** None Found ***	ND	2.0 µg/L	11/01/10 18:41	11/01/10 18:41
Date Received :	10/27/10					
Date Sampled :	10/25/10 10:50					
Client ID :	TB-04-10/25/10					
Lab ID :	BMI10102703-15A	*** None Found ***	ND	2.0 µg/L	11/01/10 17:35	11/01/10 17:35
Date Received :	10/27/10					
Date Sampled :	10/25/10 07:00					
Client ID :	MW-1					
Lab ID :	BMI10102703-16A	*** None Found ***	ND	2.0 µg/L	11/01/10 23:02	11/01/10 23:02
Date Received :	10/27/10					
Date Sampled :	10/26/10 13:14					
Client ID :	MW-9					
Lab ID :	BMI10102703-17A	*** None Found ***	ND	2.0 µg/L	11/01/10 23:24	11/01/10 23:24
Date Received :	10/27/10					
Date Sampled :	10/26/10 16:46					
Client ID :	TRIP BLANK					
Lab ID :	BMI10102703-18A	*** None Found ***	ND	2.0 µg/L	11/01/10 17:57	11/01/10 17:57
Date Received :	10/27/10					
Date Sampled :	10/26/10 00:00					
Client ID :	MW-14-5					
Lab ID :	BMI10102703-19A	Isopropyl alcohol	350	100 µg/L	11/01/10 23:46	11/01/10 23:46
Date Received :	10/27/10					
Date Sampled :	10/26/10 09:15					
Client ID :	MW-14-4					
Lab ID :	BMI10102703-20A	*** None Found ***	ND	2.0 µg/L	11/02/10 00:07	11/02/10 00:07
Date Received :	10/27/10					
Date Sampled :	10/26/10 10:05					
Client ID :	MW-14-3					
Lab ID :	BMI10102703-21A	*** None Found ***	ND	2.0 µg/L	11/02/10 20:03	11/02/10 20:03
Date Received :	10/27/10					
Date Sampled :	10/26/10 10:36					



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Client ID :	MW-14-2					
Lab ID :	BMI10102703-22A	*** None Found ***	ND	2.0 µg/L	11/02/10 20:25	11/02/10 20:25
Date Received :	10/27/10					
Date Sampled :	10/26/10 11:11					
Client ID :	MW-14-1					
Lab ID :	BMI10102703-23A	*** None Found ***	ND	2.0 µg/L	11/02/10 20:48	11/02/10 20:48
Date Received :	10/27/10					
Date Sampled :	10/26/10 11:44					
Client ID :	DUPE-02-4Q10					
Lab ID :	BMI10102703-24A	*** None Found ***	ND	2.0 µg/L	11/02/10 21:10	11/02/10 21:10
Date Received :	10/27/10					
Date Sampled :	10/26/10 00:00					
Client ID :	EB-05-10/26/10					
Lab ID :	BMI10102703-25A	*** None Found ***	ND	2.0 µg/L	11/02/10 18:35	11/02/10 18:35
Date Received :	10/27/10					
Date Sampled :	10/26/10 11:28					
Client ID :	TB-05-10/26/10					
Lab ID :	BMI10102703-26A	*** None Found ***	ND	2.0 µg/L	11/02/10 18:13	11/02/10 18:13
Date Received :	10/27/10					
Date Sampled :	10/26/10 07:00					

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

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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10102703-01A
Client I.D. Number: MW-6

Sampled: 10/22/10 10:42
Received: 10/27/10
Extracted: 11/01/10 19:03
Analyzed: 11/01/10 19:03

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethene	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	10 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	0.52	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	ND	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	3.0	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	112	(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	1.1	0.50 µg/L			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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



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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10102703-02A
Client I.D. Number: MW-17-5

Sampled: 10/22/10 09:35
Received: 10/27/10
Extracted: 11/01/10 19:24
Analyzed: 11/01/10 19:24

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	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	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	108	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	105	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	96	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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

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11/8/10

Report Date



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10102703-03A
Client I.D. Number: MW-17-4

Sampled: 10/22/10 10:07
Received: 10/27/10
Extracted: 11/01/10 19:47
Analyzed: 11/01/10 19:47

Volatile Organics by GC/MS EPA Method SW8260B

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

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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11/8/10

Report Date



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10102703-04A
Client I.D. Number: MW-17-3

Sampled: 10/22/10 10:34
Received: 10/27/10
Extracted: 11/01/10 20:08
Analyzed: 11/01/10 20:08

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	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	110	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	101	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	96	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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

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

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11/8/10

Report Date



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10102703-05A
Client I.D. Number: MW-17-2

Sampled: 10/22/10 10:57
Received: 10/27/10
Extracted: 11/01/10 20:30
Analyzed: 11/01/10 20:30

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	0.75	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	108	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	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	0.74	0.50 µg/L			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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Report Date



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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10102703-06A
Client I.D. Number: MW-17-1

Sampled: 10/22/10 11:39
Received: 10/27/10
Extracted: 11/01/10 20:52
Analyzed: 11/01/10 20:52

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethene	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	10 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	ND	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	ND	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	ND	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	106	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	104	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	97	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
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 L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

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

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

11/8/10

Report Date



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10102703-07A
Client I.D. Number: EB-03-10/22/10

Sampled: 10/22/10 11:11
Received: 10/27/10
Extracted: 11/01/10 18:19
Analyzed: 11/01/10 18:19

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	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)	11	10 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	ND	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	ND	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	ND	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	109	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	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			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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Report Date



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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10102703-08A
Client I.D. Number: TB-03-10/22/10

Sampled: 10/22/10 07:00
Received: 10/27/10
Extracted: 11/01/10 17:13
Analyzed: 11/01/10 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	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	108	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	103	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	96	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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

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11/8/10

Report Date



Alpha Analytical, Inc.

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

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10102703-09A
Client I.D. Number: MW-20-5

Sampled: 10/25/10 09:14
Received: 10/27/10
Extracted: 11/01/10 21:14
Analyzed: 11/01/10 21:14

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	ND	0.50 µg/L	41 Styrene	0.78	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	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	104	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	103	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	96	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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11/8/10

Report Date



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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10102703-10A
Client I.D. Number: MW-20-4

Sampled: 10/25/10 09:43
Received: 10/27/10
Extracted: 11/01/10 21:36
Analyzed: 11/01/10 21:36

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	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	105	(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	96	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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Page 1 of 1



Alpha Analytical, Inc.

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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10102703-11A
Client I.D. Number: MW-20-3

Sampled: 10/25/10 10:09
Received: 10/27/10
Extracted: 11/01/10 21:57
Analyzed: 11/01/10 21:57

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	0.51	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	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	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			

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

Report Date



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10102703-12A
Client I.D. Number: MW-20-2

Sampled: 10/25/10 10:34
Received: 10/27/10
Extracted: 11/01/10 22:19
Analyzed: 11/01/10 22:19

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	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	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	106	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	105	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	99	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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

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

Alpha Analytical Number: BMI10102703-13A
Client I.D. Number: MW-20-1

Sampled: 10/25/10 11:01
Received: 10/27/10
Extracted: 11/01/10 22:40
Analyzed: 11/01/10 22:40

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	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-Dichloroethane	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	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	105	(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	101	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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11/8/10

Report Date



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10102703-14A
Client I.D. Number: EB-04-10/25/10

Sampled: 10/25/10 10:50
Received: 10/27/10
Extracted: 11/01/10 18:41
Analyzed: 11/01/10 18:41

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethane	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-Dichloroethane	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-Dichloroethane	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	ND	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-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	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	109	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	100	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	98	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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11/8/10

Report Date



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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10102703-15A
Client I.D. Number: TB-04-10/25/10

Sampled: 10/25/10 07:00
Received: 10/27/10
Extracted: 11/01/10 17:35
Analyzed: 11/01/10 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-Dichloroethane	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-Dichloroethane	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-Dichloroethane	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	ND	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	ND	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	ND	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	108	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	112	(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			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10102703-16A
Client I.D. Number: MW-1

Sampled: 10/26/10 13:14
Received: 10/27/10
Extracted: 11/01/10 23:02
Analyzed: 11/01/10 23:02

Volatile Organics by GC/MS EPA Method SW8260B

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

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

Report Date



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10102703-17A
Client I.D. Number: MW-9

Sampled: 10/26/10 16:46
Received: 10/27/10
Extracted: 11/01/10 23:24
Analyzed: 11/01/10 23:24

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	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-Dichloroethane	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	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	103	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	103	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	99	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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Report Date



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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10102703-18A
Client I.D. Number: TRIP BLANK

Sampled: 10/26/10 00:00
Received: 10/27/10
Extracted: 11/01/10 17:57
Analyzed: 11/01/10 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-Dichloroethane	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	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	106	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	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

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11/8/10

Report Date



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10102703-19A
Client I.D. Number: MW-14-5

Sampled: 10/26/10 09:15
Received: 10/27/10
Extracted: 11/01/10 23:46
Analyzed: 11/01/10 23:46

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethane	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	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	103	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	104	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	99	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10102703-20A
Client I.D. Number: MW-14-4

Sampled: 10/26/10 10:05
Received: 10/27/10
Extracted: 11/02/10 00:07
Analyzed: 11/02/10 00:07

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	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-Dichloroethane	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-Dichloroethane	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-Dichloroethane	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	ND	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-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 Trichloroethane	ND	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	105	(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	99	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethane	ND	0.50 µg/L			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10102703-21A
Client I.D. Number: MW-14-3

Sampled: 10/26/10 10:36
Received: 10/27/10
Extracted: 11/02/10 20:03
Analyzed: 11/02/10 20:03

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	Q 1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	Q 1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethene	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	10 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	ND	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	ND	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	1.2	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	110	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	103	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	95	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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

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

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

11/8/10

Report Date



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10102703-22A
Client I.D. Number: MW-14-2

Sampled: 10/26/10 11:11
Received: 10/27/10
Extracted: 11/02/10 20:25
Analyzed: 11/02/10 20:25

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethane	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-Dichloroethane	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-Dichloroethane	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	ND	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-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	4.6	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	111	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	103	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	98	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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11/8/10

Report Date



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10102703-23A
Client I.D. Number: MW-14-1

Sampled: 10/26/10 11:44
Received: 10/27/10
Extracted: 11/02/10 20:48
Analyzed: 11/02/10 20:48

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 1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	Q 1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethene	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	10 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	ND	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	ND	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	3.6	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	111	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	103	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	95	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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

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11/8/10

Report Date



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10102703-24A
Client I.D. Number: DUPE-02-4Q10

Sampled: 10/26/10 00:00
Received: 10/27/10
Extracted: 11/02/10 21:10
Analyzed: 11/02/10 21:10

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	Q 1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	Q 1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethene	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	10 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	ND	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	ND	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	3.8	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	111	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	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			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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Report Date



Alpha Analytical, Inc.

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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10102703-25A
Client I.D. Number: EB-05-10/26/10

Sampled: 10/26/10 11:28
Received: 10/27/10
Extracted: 11/02/10 18:35
Analyzed: 11/02/10 18:35

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	Q 1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	Q 1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethane	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-Dichloroethane	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-Dichloroethane	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	ND	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-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 Trichloroethane	ND	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	109	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	106	(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			

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

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

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

11/8/10

Report Date



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10102703-26A
Client I.D. Number: TB-05-10/26/10

Sampled: 10/26/10 07:00
Received: 10/27/10
Extracted: 11/02/10 18:13
Analyzed: 11/02/10 18:13

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	Q 1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	Q 1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethane	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-Dichloroethane	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-Dichloroethane	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	ND	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-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	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	109	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	101	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	99	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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11/8/10

Report Date



Alpha Analytical, Inc.

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

VOC Sample Preservation Report

Work Order: BMI10102703

Job: G005862/JPL Groundwater Monitoring

Alpha's Sample ID	Client's Sample ID	Matrix	pH
10102703-01A	MW-6	Aqueous	2
10102703-02A	MW-17-5	Aqueous	2
10102703-03A	MW-17-4	Aqueous	2
10102703-04A	MW-17-3	Aqueous	2
10102703-05A	MW-17-2	Aqueous	2
10102703-06A	MW-17-1	Aqueous	2
10102703-07A	EB-03-10/22/10	Aqueous	2
10102703-08A	TB-03-10/22/10	Aqueous	2
10102703-09A	MW-20-5	Aqueous	2
10102703-10A	MW-20-4	Aqueous	2
10102703-11A	MW-20-3	Aqueous	2
10102703-12A	MW-20-2	Aqueous	2
10102703-13A	MW-20-1	Aqueous	2
10102703-14A	EB-04-10/25/10	Aqueous	2
10102703-15A	TB-04-10/25/10	Aqueous	2
10102703-16A	MW-1	Aqueous	2
10102703-17A	MW-9	Aqueous	2
10102703-18A	TRIP BLANK	Aqueous	2
10102703-19A	MW-14-5	Aqueous	2
10102703-20A	MW-14-4	Aqueous	2
10102703-21A	MW-14-3	Aqueous	2
10102703-22A	MW-14-2	Aqueous	2
10102703-23A	MW-14-1	Aqueous	2
10102703-24A	DUPE-02-4Q10	Aqueous	2
10102703-25A	EB-05-10/26/10	Aqueous	2
10102703-26A	TB-05-10/26/10	Aqueous	2

11/8/10
Report Date



Alpha Analytical, Inc.

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

Date:
01-Nov-10

QC Summary Report

Work Order:
10102703

Method Blank

File ID: 14	Type MBLK	Test Code: EPA Method 314.0	Batch ID: 25340	Analysis Date: 10/28/2010 10:59						
Sample ID: MB-25340	Units : µg/L	Run ID: IC_3_101028A	Prep Date: 10/28/2010 09:46							
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	ND	1								

Laboratory Fortified Blank

File ID: 15	Type LFB	Test Code: EPA Method 314.0	Batch ID: 25340	Analysis Date: 10/28/2010 11:17						
Sample ID: LFB-25340	Units : µg/L	Run ID: IC_3_101028A	Prep Date: 10/28/2010 09:46							
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	24.8	2	25		99	85	115			

Sample Matrix Spike

File ID: 26	Type LFM	Test Code: EPA Method 314.0	Batch ID: 25340	Analysis Date: 10/28/2010 14:40						
Sample ID: 10102703-03ALFM	Units : µg/L	Run ID: IC_3_101028A	Prep Date: 10/28/2010 09:46							
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	24.9	2	25	0	99.7	80	120			

Sample Matrix Spike Duplicate

File ID: 27	Type LFMD	Test Code: EPA Method 314.0	Batch ID: 25340	Analysis Date: 10/28/2010 14:58						
Sample ID: 10102703-03ALFMD	Units : µg/L	Run ID: IC_3_101028A	Prep Date: 10/28/2010 09:46							
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	25.6	2	25	0	103	80	120	24.93	2.8(15)	

Comments:

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



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Date:
08-Nov-10

QC Summary Report

Work Order:
10102703

Method Blank

File ID: 14	Type	MBLK	Test Code: EPA Method 314.0	Batch ID: 25358	Analysis Date: 10/29/2010 10:10					
Sample ID: MB-25358	Units :	µg/L	Run ID: IC_3_101029A	Prep Date: 10/29/2010 09:13						
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	ND		1							

Laboratory Fortified Blank

File ID: 15	Type	LFB	Test Code: EPA Method 314.0	Batch ID: 25358	Analysis Date: 10/29/2010 10:28					
Sample ID: LFB-25358	Units :	µg/L	Run ID: IC_3_101029A	Prep Date: 10/29/2010 09:13						
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	25.9	2	25		104	85	115			

Sample Matrix Spike

File ID: 18	Type	LFM	Test Code: EPA Method 314.0	Batch ID: 25358	Analysis Date: 10/29/2010 11:30					
Sample ID: 10102703-21ALFM	Units :	µg/L	Run ID: IC_3_101029A	Prep Date: 10/29/2010 09:13						
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	31.5	2	25	5.979	102	80	120			

Sample Matrix Spike Duplicate

File ID: 18	Type	LFMD	Test Code: EPA Method 314.0	Batch ID: 25358	Analysis Date: 11/03/2010 13:13					
Sample ID: 10102703-21ALFMD	Units :	µg/L	Run ID: IC_3_101029A	Prep Date: 10/29/2010 09:13						
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	31.8	2	25	5.979	103	80	120	31.47	0.9(15)	

Comments:

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Date:

05-Nov-10

QC Summary Report

Work Order:

10102703

Method Blank

File ID: 102810.B\045_M.D\

Sample ID: MB-25350

Analyte

Chromium (Cr)

Type: MBLK

Test Code: EPA Method 200.8

Batch ID: 25350

Analysis Date: 10/28/2010 23:56

Run ID: ICP/MS_101029A

Prep Date: 10/28/2010 13:51

Units : mg/L

Result

PQL

SpkVal

SpkRefVal

%REC

LCL(ME)

UCL(ME)

RPDRefVal

%RPD(Limit)

Qual

ND 0.005

Laboratory Control Spike

File ID: 102810.B\046_M.D\

Sample ID: LCS-25350

Analyte

Chromium (Cr)

Type: LCS

Test Code: EPA Method 200.8

Batch ID: 25350

Analysis Date: 10/29/2010 00:02

Run ID: ICP/MS_101029A

Prep Date: 10/28/2010 13:51

Units : mg/L

Result

PQL

SpkVal

SpkRefVal

%REC

LCL(ME)

UCL(ME)

RPDRefVal

%RPD(Limit)

Qual

0.0461 0.005 0.05 92 85 115

Sample Matrix Spike

File ID: 102810.B\051_M.D\

Sample ID: 10102703-03AMS

Analyte

Chromium (Cr)

Type: MS

Test Code: EPA Method 200.8

Batch ID: 25350

Analysis Date: 10/29/2010 00:29

Run ID: ICP/MS_101029A

Prep Date: 10/28/2010 13:51

Units : mg/L

Result

PQL

SpkVal

SpkRefVal

%REC

LCL(ME)

UCL(ME)

RPDRefVal

%RPD(Limit)

Qual

0.0497 0.005 0.05 0 99 70 130

Sample Matrix Spike Duplicate

File ID: 102810.B\052_M.D\

Sample ID: 10102703-03AMSD

Analyte

Chromium (Cr)

Type: MSD

Test Code: EPA Method 200.8

Batch ID: 25350

Analysis Date: 10/29/2010 00:35

Run ID: ICP/MS_101029A

Prep Date: 10/28/2010 13:51

Units : mg/L

Result

PQL

SpkVal

SpkRefVal

%REC

LCL(ME)

UCL(ME)

RPDRefVal

%RPD(Limit)

Qual

0.0478 0.005 0.05 0 96 70 130 0.0497 3.9(20)

Comments:

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Date:
05-Nov-10

QC Summary Report

Work Order:
10102703

Method Blank

File ID: 102810.B\090_M.D\	Type: MBLK	Test Code: EPA Method 200.8	Batch ID: 25354	Analysis Date: 10/29/2010 04:52						
Sample ID: MB-25354	Units : mg/L	Run ID: ICP/MS_101029B	Prep Date: 10/28/2010 20:06							
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	ND	0.005								

Laboratory Control Spike

File ID: 102810.B\091_M.D\	Type: LCS	Test Code: EPA Method 200.8	Batch ID: 25354	Analysis Date: 10/29/2010 04:58						
Sample ID: LCS-25354	Units : mg/L	Run ID: ICP/MS_101029B	Prep Date: 10/28/2010 20:06							
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0471	0.005	0.05		94	85	115			

Sample Matrix Spike

File ID: 102810.B\096_M.D\	Type: MS	Test Code: EPA Method 200.8	Batch ID: 25354	Analysis Date: 10/29/2010 05:30						
Sample ID: 10102805-02AMS	Units : mg/L	Run ID: ICP/MS_101029B	Prep Date: 10/28/2010 20:06							
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0472	0.005	0.05	0	94	70	130			

Sample Matrix Spike Duplicate

File ID: 102810.B\097_M.D\	Type: MSD	Test Code: EPA Method 200.8	Batch ID: 25354	Analysis Date: 10/29/2010 05:35						
Sample ID: 10102805-02AMSD	Units : mg/L	Run ID: ICP/MS_101029B	Prep Date: 10/28/2010 20:06							
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0477	0.005	0.05	0	95	70	130	0.04721	1.0(20)	

Comments:

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Date:
04-Nov-10

QC Summary Report

Work Order:
10102703

Method Blank

File ID: 10110106.D

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

Batch ID: **MS15W1101M**

Analysis Date: **11/01/2010 15:01**

Sample ID: **MBLK MS15W1101M**

Units: **µg/L**

Run ID: **MSD_15_101101A**

Prep Date: **11/01/2010 15:01**

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	10.5		10		105	70	130			
Surr: Toluene-d8	10.2		10		102	70	130			



Alpha Analytical, Inc.

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Date:

04-Nov-10

QC Summary Report

Work Order:

10102703

Surr: 4-Bromofluorobenzene

9.71

10

97

70

130



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Date:
04-Nov-10

QC Summary Report

Work Order:
10102703

Laboratory Control Spike

Type LCS Test Code: EPA Method SW8260B

File ID: 10110103.D

Batch ID: MS15W1101M

Analysis Date: 11/01/2010 13:47

Sample ID: LCS MS15W1101M

Units: µg/L

Run ID: MSD_15_101101A

Prep Date: 11/01/2010 13:47

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	8.32	1	10		83	70	130			
Chloromethane	9.82	2	10		98	70	130			
Vinyl chloride	11.5	1	10		115	70	130			
Chloroethane	10.4	1	10		104	70	130			
Bromomethane	9.01	2	10		90	70	130			
Trichlorofluoromethane	9.69	1	10		97	70	130			
1,1-Dichloroethene	10.3	1	10		103	70	130			
Dichloromethane	9.43	2	10		94	70	130			
Freon-113	10.8	1	10		108	67	141			
trans-1,2-Dichloroethene	10.6	1	10		106	70	130			
Methyl tert-butyl ether (MTBE)	9.74	0.5	10		97	70	130			
1,1-Dichloroethane	10.2	1	10		102	70	130			
2-Butanone (MEK)	191	10	200		96	70	130			
cis-1,2-Dichloroethene	10.3	1	10		103	70	130			
Bromochloromethane	9.92	1	10		99	70	130			
Chloroform	10	1	10		100	70	130			
2,2-Dichloropropane	10.3	1	10		103	70	130			
1,2-Dichloroethane	9.89	1	10		99	70	130			
1,1,1-Trichloroethane	10.4	1	10		104	70	130			
1,1-Dichloropropene	10.6	1	10		106	70	130			
Carbon tetrachloride	10.3	1	10		103	70	130			
Benzene	10.3	0.5	10		103	70	130			
Dibromomethane	9.63	1	10		96	70	130			
1,2-Dichloropropane	10.1	1	10		101	70	130			
Trichloroethene	10.3	1	10		103	70	130			
Bromodichloromethane	10.8	1	10		108	70	130			
4-Methyl-2-pentanone (MIBK)	23.6	2.5	25		94	20	182			
cis-1,3-Dichloropropene	10.2	1	10		102	70	130			
trans-1,3-Dichloropropene	9.26	1	10		93	70	130			
1,1,2-Trichloroethane	9.63	1	10		96	70	130			
Toluene	9.93	0.5	10		99	70	130			
1,3-Dichloropropane	9.79	1	10		98	70	130			
Dibromochloromethane	9.3	1	10		93	70	130			
1,2-Dibromoethane (EDB)	19.4	2	20		97	70	130			
Tetrachloroethene	10.4	1	10		104	70	130			
1,1,1,2-Tetrachloroethane	10.6	1	10		106	70	130			
Chlorobenzene	9.97	1	10		99.7	70	130			
Ethylbenzene	10.4	0.5	10		104	70	130			
m,p-Xylene	10.2	0.5	10		102	70	130			
Bromoform	9.1	1	10		91	70	130			
Styrene	10.3	1	10		103	70	130			
o-Xylene	10.1	0.5	10		101	70	130			
1,1,2,2-Tetrachloroethane	9.25	1	10		93	70	130			
1,2,3-Trichloropropane	18.7	2	20		93	70	130			
Isopropylbenzene	9.93	1	10		99	70	130			
Bromobenzene	10.1	1	10		101	70	130			
n-Propylbenzene	10.4	1	10		104	70	130			
4-Chlorotoluene	10.1	1	10		101	70	130			
2-Chlorotoluene	10.1	1	10		101	70	130			
1,3,5-Trimethylbenzene	10.1	1	10		101	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	10.4	1	10		104	70	130			
1,4-Dichlorobenzene	9.7	1	10		97	70	130			
4-Isopropyltoluene	10.1	1	10		101	70	130			
1,2-Dichlorobenzene	9.53	1	10		95	70	130			
n-Butylbenzene	10.3	1	10		103	70	130			
1,2-Dibromo-3-chloropropane (DBCP)	45.9	3	50		92	70	130			
1,2,4-Trichlorobenzene	8.66	2	10		87	70	130			
Naphthalene	6.62	2	10		66	70(70)	130			
Hexachlorobutadiene	19.1	2	20		95	70	130			
1,2,3-Trichlorobenzene	8.36	2	10		84	70	130			
Surr: 1,2-Dichloroethane-d4	9.66		10		97	70	130			
Surr: Toluene-d8	9.75		10		98	70	130			



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Date:

04-Nov-10

QC Summary Report

Work Order:

10102703

Surr: 4-Bromofluorobenzene

9.79

10

98

70

130



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Date:
04-Nov-10

QC Summary Report

Work Order:
10102703

Sample Matrix Spike

File ID: 10110107.D

Type MS

Test Code: EPA Method SW8260B

Batch ID: MS15W1101M

Analysis Date: 11/01/2010 15:23

Sample ID: 10102703-03AMS

Units: µg/L

Run ID: MSD_15_101101A

Prep Date: 11/01/2010 15:23

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	26.7	2.5	50	0	53	13	167			
Chloromethane	31.7	10	50	0	63	28	145			
Vinyl chloride	39.1	2.5	50	0	78	43	134			
Chloroethane	35	2.5	50	0	70	39	154			
Bromomethane	30.6	10	50	0	61	19	176			
Trichlorofluoromethane	34	2.5	50	0	68	34	160			
1,1-Dichloroethene	36.5	2.5	50	0	73	60	130			
Dichloromethane	35.8	10	50	0	72	68	130			
Freon-113	38.8	2.5	50	0	78	49	141			
trans-1,2-Dichloroethene	37	2.5	50	0	74	63	130			
Methyl tert-butyl ether (MTBE)	45.3	1.3	50	0	91	56	141			
1,1-Dichloroethane	37.3	2.5	50	0	75	61	130			
2-Butanone (MEK)	731	50	1000	0	73	20	182			
cis-1,2-Dichloroethene	38.1	2.5	50	0	76	70	130			
Bromochloromethane	38.5	2.5	50	0	77	70	130			
Chloroform	36.8	2.5	50	0	74	67	130			
2,2-Dichloropropane	34.7	2.5	50	0	69	30	152			
1,2-Dichloroethane	40.8	2.5	50	0	82	60	135			
1,1,1-Trichloroethane	36.7	2.5	50	0	73	59	137			
1,1-Dichloropropene	37.6	2.5	50	0	75	63	130			
Carbon tetrachloride	35.7	2.5	50	0	71	50	147			
Benzene	38.2	1.3	50	0	76	67	130			
Dibromomethane	40.1	2.5	50	0	80	69	133			
1,2-Dichloropropane	38.4	2.5	50	0	77	69	130			
Trichloroethene	38	2.5	50	1.41	73	69	130			
Bromodichloromethane	40.7	2.5	50	0	81	66	134			
4-Methyl-2-pentanone (MIBK)	109	13	125	0	87	20	182			
cis-1,3-Dichloropropene	37.3	2.5	50	0	75	63	130			
trans-1,3-Dichloropropene	36	2.5	50	0	72	66	131			
1,1,2-Trichloroethane	41.6	2.5	50	0	83	68	130			
Toluene	35.6	1.3	50	0	71	66	130			
1,3-Dichloropropane	40.8	2.5	50	0	82	70	130			
Dibromochloromethane	36.5	2.5	50	0	73	70	130			
1,2-Dibromoethane (EDB)	80.1	5	100	0	80	70	130			
Tetrachloroethene	36.5	2.5	50	0	73	61	134			
1,1,1,2-Tetrachloroethane	39.3	2.5	50	0	79	70	130			
Chlorobenzene	37.2	2.5	50	0	74	70	130			
Ethylbenzene	36.5	1.3	50	0	73	68	130			
m,p-Xylene	36.1	1.3	50	0	72	64	130			
Bromoform	37.3	2.5	50	0	75	64	138			
Styrene	38.4	2.5	50	0	77	69	130			
o-Xylene	36.5	1.3	50	0	73	70	130			
1,1,2,2-Tetrachloroethane	41.8	2.5	50	0	84	65	131			
1,2,3-Trichloropropane	82.3	10	100	0	82	70	130			
Isopropylbenzene	33.5	2.5	50	0	67	64	138			
Bromobenzene	37.5	2.5	50	0	75	70	130			
n-Propylbenzene	34.6	2.5	50	0	69	66	132			
4-Chlorotoluene	35.5	2.5	50	0	71	70	130			
2-Chlorotoluene	35.2	2.5	50	0	70	70	130			
1,3,5-Trimethylbenzene	34.8	2.5	50	0	70	66	136			
tert-Butylbenzene	33.9	2.5	50	0	68	65	137			
1,2,4-Trimethylbenzene	35.3	2.5	50	0	71	65	137			
sec-Butylbenzene	34.8	2.5	50	0	70	66	134			
1,3-Dichlorobenzene	37.5	2.5	50	0	75	70	130			
1,4-Dichlorobenzene	35.9	2.5	50	0	72	70	130			
4-Isopropyltoluene	34.5	2.5	50	0	69	66	137			
1,2-Dichlorobenzene	36.6	2.5	50	0	73	70	130			
n-Butylbenzene	35.9	2.5	50	0	72	60	142			
1,2-Dibromo-3-chloropropane (DBCP)	194	15	250	0	78	67	130			
1,2,4-Trichlorobenzene	32.1	10	50	0	64	61	137			
Naphthalene	27.3	10	50	0	55	40	167			
Hexachlorobutadiene	67.7	10	100	0	68	61	130			
1,2,3-Trichlorobenzene	33	10	50	0	66	51	144			
Surr: 1,2-Dichloroethane-d4	51.5		50		103	70	130			
Surr: Toluene-d8	48.4		50		97	70	130			



Alpha Analytical, Inc.

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Date:

04-Nov-10

QC Summary Report

Work Order:

10102703

Surr: 4-Bromofluorobenzene

46.9

50

94

70

130



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Date:
04-Nov-10

QC Summary Report

Work Order:
10102703

Sample Matrix Spike

File ID: 10110109.D

Type MS

Test Code: EPA Method SW8260B

Batch ID: MS15W1101M

Analysis Date: 11/01/2010 16:07

Sample ID: 10102703-09AMS

Units: µg/L

Run ID: MSD_15_101101A

Prep Date: 11/01/2010 16:07

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	34.2	2.5	50	0	68	13	167			
Chloromethane	40.9	10	50	0	82	28	145			
Vinyl chloride	52.5	2.5	50	0	105	43	134			
Chloroethane	45	2.5	50	0	90	39	154			
Bromomethane	39.4	10	50	0	79	19	176			
Trichlorofluoromethane	44	2.5	50	0	88	34	160			
1,1-Dichloroethene	48.6	2.5	50	0	97	60	130			
Dichloromethane	45.3	10	50	0	91	68	130			
Freon-113	50	2.5	50	0	100	49	141			
trans-1,2-Dichloroethene	49.1	2.5	50	0	98	63	130			
Methyl tert-butyl ether (MTBE)	52.6	1.3	50	0	105	56	141			
1,1-Dichloroethane	47.4	2.5	50	0	95	61	130			
2-Butanone (MEK)	831	50	1000	0	83	20	182			
cis-1,2-Dichloroethene	48.7	2.5	50	0	97	70	130			
Bromochloromethane	50.5	2.5	50	0	101	70	130			
Chloroform	46.1	2.5	50	0	92	67	130			
2,2-Dichloropropane	44.5	2.5	50	0	89	30	152			
1,2-Dichloroethane	49.5	2.5	50	0	99	60	135			
1,1,1-Trichloroethane	48.3	2.5	50	0	97	59	137			
1,1-Dichloropropene	49	2.5	50	0	98	63	130			
Carbon tetrachloride	49.4	2.5	50	0	99	50	147			
Benzene	48.2	1.3	50	0	96	67	130			
Dibromomethane	49	2.5	50	0	98	69	133			
1,2-Dichloropropane	47.8	2.5	50	0	96	69	130			
Trichloroethene	47.6	2.5	50	0	95	69	130			
Bromodichloromethane	52	2.5	50	0	104	66	134			
4-Methyl-2-pentanone (MIBK)	125	13	125	0	100	20	182			
cis-1,3-Dichloropropene	47.7	2.5	50	0	95	63	130			
trans-1,3-Dichloropropene	46	2.5	50	0	92	66	131			
1,1,2-Trichloroethane	49	2.5	50	0	98	68	130			
Toluene	46.3	1.3	50	0	93	66	130			
1,3-Dichloropropane	50	2.5	50	0	100	70	130			
Dibromochloromethane	47.9	2.5	50	0	96	70	130			
1,2-Dibromoethane (EDB)	100	5	100	0	100	70	130			
Tetrachloroethene	48	2.5	50	0	96	61	134			
1,1,1,2-Tetrachloroethane	50.9	2.5	50	0	102	70	130			
Chlorobenzene	47	2.5	50	0	94	70	130			
Ethylbenzene	47.7	1.3	50	0	95	68	130			
m,p-Xylene	47.2	1.3	50	0	94	64	130			
Bromoform	49.9	2.5	50	0	99.8	64	138			
Styrene	49.2	2.5	50	0.78	97	69	130			
o-Xylene	47.2	1.3	50	0	94	70	130			
1,1,2,2-Tetrachloroethane	49.8	2.5	50	0	99.5	65	131			
1,2,3-Trichloropropane	101	10	100	0	101	70	130			
Isopropylbenzene	42.5	2.5	50	0	85	64	138			
Bromobenzene	45.2	2.5	50	0	90	70	130			
n-Propylbenzene	44.4	2.5	50	0	89	66	132			
4-Chlorotoluene	44.3	2.5	50	0	89	70	130			
2-Chlorotoluene	43.5	2.5	50	0	87	70	130			
1,3,5-Trimethylbenzene	43.5	2.5	50	0	87	66	136			
tert-Butylbenzene	42.4	2.5	50	0	85	65	137			
1,2,4-Trimethylbenzene	43.9	2.5	50	0	88	65	137			
sec-Butylbenzene	43.8	2.5	50	0	88	66	134			
1,3-Dichlorobenzene	46.7	2.5	50	0	93	70	130			
1,4-Dichlorobenzene	44.9	2.5	50	0	90	70	130			
4-Isopropyltoluene	43.7	2.5	50	0	87	66	137			
1,2-Dichlorobenzene	44.7	2.5	50	0	89	70	130			
n-Butylbenzene	46	2.5	50	0	92	60	142			
1,2-Dibromo-3-chloropropane (DBCP)	243	15	250	0	97	67	130			
1,2,4-Trichlorobenzene	42.9	10	50	0	86	61	137			
Naphthalene	39.7	10	50	0	79	40	167			
Hexachlorobutadiene	88.5	10	100	0	89	61	130			
1,2,3-Trichlorobenzene	44.5	10	50	0	89	51	144			
Surr: 1,2-Dichloroethane-d4	52.3		50		105	70	130			
Surr: Toluene-d8	49		50		98	70	130			



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Date:

04-Nov-10

QC Summary Report

Work Order:

10102703

Surr: 4-Bromofluorobenzene

46.3

50

93

70

130



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Date:
04-Nov-10

QC Summary Report

Work Order:
10102703

Sample Matrix Spike Duplicate

Type **MSD** Test Code: **EPA Method SW8260B**

File ID: **10110108.D**

Batch ID: **MS15W1101M**

Analysis Date: **11/01/2010 15:45**

Sample ID: **10102703-03AMSD**

Units: **µg/L**

Run ID: **MSD_15_101101A**

Prep Date: **11/01/2010 15:45**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	27.1	2.5	50	0	54	13	167	26.73	1.3(20)	
Chloromethane	33.3	10	50	0	67	28	145	31.65	5.1(20)	
Vinyl chloride	37.9	2.5	50	0	76	43	134	39.06	3.1(20)	
Chloroethane	35.3	2.5	50	0	71	39	154	35.03	0.7(20)	
Bromomethane	32.2	10	50	0	64	19	176	30.6	5.1(20)	
Trichlorofluoromethane	33.7	2.5	50	0	67	34	160	34	0.9(20)	
1,1-Dichloroethene	37	2.5	50	0	74	60	130	36.51	1.3(20)	
Dichloromethane	37.9	10	50	0	76	68	130	35.82	5.6(20)	
Freon-113	38.7	2.5	50	0	77	49	141	38.82	0.3(20)	
trans-1,2-Dichloroethene	38.3	2.5	50	0	77	63	130	36.99	3.5(20)	
Methyl tert-butyl ether (MTBE)	47.7	1.3	50	0	95	56	141	45.27	5.3(20)	
1,1-Dichloroethane	38	2.5	50	0	76	61	130	37.34	1.8(20)	
2-Butanone (MEK)	762	50	1000	0	76	20	182	730.6	4.1(20)	
cis-1,2-Dichloroethene	39.6	2.5	50	0	79	70	130	38.09	3.8(20)	
Bromochloromethane	42.9	2.5	50	0	86	70	130	38.46	10.9(20)	
Chloroform	37.8	2.5	50	0	76	67	130	36.75	2.7(20)	
2,2-Dichloropropane	35	2.5	50	0	70	30	152	34.69	0.8(20)	
1,2-Dichloroethane	43.1	2.5	50	0	86	60	135	40.79	5.5(20)	
1,1,1-Trichloroethane	37.2	2.5	50	0	74	59	137	36.71	1.2(20)	
1,1-Dichloropropene	37.9	2.5	50	0	76	63	130	37.6	0.8(20)	
Carbon tetrachloride	37.2	2.5	50	0	74	50	147	35.66	4.2(20)	
Benzene	39.1	1.3	50	0	78	67	130	38.16	2.4(20)	
Dibromomethane	43	2.5	50	0	86	69	133	40.13	6.8(20)	
1,2-Dichloropropane	40.2	2.5	50	0	80	69	130	38.39	4.6(20)	
Trichloroethene	38.8	2.5	50	1.41	75	69	130	38.04	1.9(20)	
Bromodichloromethane	43.1	2.5	50	0	86	66	134	40.72	5.6(20)	
4-Methyl-2-pentanone (MIBK)	115	13	125	0	92	20	182	109	5.5(20)	
cis-1,3-Dichloropropene	40.1	2.5	50	0	80	63	130	37.32	7.1(20)	
trans-1,3-Dichloropropene	38.7	2.5	50	0	77	66	131	36.01	7.2(20)	
1,1,2-Trichloroethane	42.6	2.5	50	0	85	68	130	41.55	2.6(20)	
Toluene	36.8	1.3	50	0	74	66	130	35.56	3.5(20)	
1,3-Dichloropropane	43.3	2.5	50	0	87	70	130	40.77	6.1(20)	
Dibromochloromethane	40.7	2.5	50	0	81	70	130	36.49	10.9(20)	
1,2-Dibromoethane (EDB)	87.7	5	100	0	88	70	130	80.13	9.0(20)	
Tetrachloroethene	37.1	2.5	50	0	74	61	134	36.54	1.5(20)	
1,1,1,2-Tetrachloroethane	41.8	2.5	50	0	84	70	130	39.25	6.3(20)	
Chlorobenzene	39	2.5	50	0	78	70	130	37.17	4.9(20)	
Ethylbenzene	37.9	1.3	50	0	76	68	130	36.53	3.6(20)	
m,p-Xylene	37.5	1.3	50	0	75	64	130	36.14	3.8(20)	
Bromoform	41.6	2.5	50	0	83	64	138	37.25	11.1(20)	
Styrene	40.8	2.5	50	0	82	69	130	38.44	5.9(20)	
o-Xylene	38.2	1.3	50	0	76	70	130	36.52	4.4(20)	
1,1,2,2-Tetrachloroethane	44.6	2.5	50	0	89	65	131	41.84	6.4(20)	
1,2,3-Trichloropropane	90	10	100	0	90	70	130	82.32	8.9(20)	
Isopropylbenzene	34.7	2.5	50	0	69	64	138	33.52	3.3(20)	
Bromobenzene	39.3	2.5	50	0	79	70	130	37.46	4.8(20)	
n-Propylbenzene	35.8	2.5	50	0	72	66	132	34.63	3.4(20)	
4-Chlorotoluene	37.6	2.5	50	0	75	70	130	35.54	5.7(20)	
2-Chlorotoluene	37	2.5	50	0	74	70	130	35.17	5.0(20)	
1,3,5-Trimethylbenzene	35.7	2.5	50	0	71	66	136	34.77	2.8(20)	
tert-Butylbenzene	34.9	2.5	50	0	70	65	137	33.88	2.8(20)	
1,2,4-Trimethylbenzene	37.2	2.5	50	0	74	65	137	35.33	5.1(20)	
sec-Butylbenzene	35.6	2.5	50	0	71	66	134	34.81	2.1(20)	
1,3-Dichlorobenzene	40.4	2.5	50	0	81	70	130	37.46	7.5(20)	
1,4-Dichlorobenzene	38.5	2.5	50	0	77	70	130	35.93	6.8(20)	
4-Isopropyltoluene	35.8	2.5	50	0	72	66	137	34.49	3.6(20)	
1,2-Dichlorobenzene	39	2.5	50	0	78	70	130	36.59	6.4(20)	
n-Butylbenzene	37.1	2.5	50	0	74	60	142	35.87	3.5(20)	
1,2-Dibromo-3-chloropropane (DBCP)	215	15	250	0	86	67	130	194.3	10.2(20)	
1,2,4-Trichlorobenzene	36.4	10	50	0	73	61	137	32.1	12.7(20)	
Naphthalene	32	10	50	0	64	40	167	27.26	16.0(20)	
Hexachlorobutadiene	71.2	10	100	0	71	61	130	67.7	5.1(20)	
1,2,3-Trichlorobenzene	36.4	10	50	0	73	51	144	33.04	9.7(20)	
Surr: 1,2-Dichloroethane-d4	51.1		50		102	70	130			
Surr: Toluene-d8	48.4		50		97	70	130			



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Date:

04-Nov-10

QC Summary Report

Work Order:

10102703

Surr: 4-Bromofluorobenzene

47.4

50

95

70

130



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Date:
04-Nov-10

QC Summary Report

Work Order:
10102703

Sample Matrix Spike Duplicate

File ID: 10110110.D

Type MSD Test Code: EPA Method SW8260B

Batch ID: MS15W1101M

Analysis Date: 11/01/2010 16:29

Sample ID: 10102703-09AMSD

Units: µg/L

Run ID: MSD_15_101101A

Prep Date: 11/01/2010 16:29

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	32.5	2.5	50	0	65	13	167	34.17	5.0(20)	
Chloromethane	38	10	50	0	76	28	145	40.94	7.6(20)	
Vinyl chloride	48.5	2.5	50	0	97	43	134	52.48	7.9(20)	
Chloroethane	42.7	2.5	50	0	85	39	154	45.03	5.3(20)	
Bromomethane	39.9	10	50	0	80	19	176	39.36	1.3(20)	
Trichlorofluoromethane	42.3	2.5	50	0	85	34	160	43.99	3.9(20)	
1,1-Dichloroethene	46.2	2.5	50	0	92	60	130	48.56	5.0(20)	
Dichloromethane	43.2	10	50	0	86	68	130	45.3	4.7(20)	
Freon-113	47.9	2.5	50	0	96	49	141	50	4.3(20)	
trans-1,2-Dichloroethene	46.1	2.5	50	0	92	63	130	49.09	6.2(20)	
Methyl tert-butyl ether (MTBE)	51.2	1.3	50	0	102	56	141	52.6	2.6(20)	
1,1-Dichloroethane	45.9	2.5	50	0	92	61	130	47.35	3.1(20)	
2-Butanone (MEK)	810	50	1000	0	81	20	182	830.5	2.5(20)	
cis-1,2-Dichloroethene	45.4	2.5	50	0	91	70	130	48.71	7.0(20)	
Bromochloromethane	48.2	2.5	50	0	96	70	130	50.46	4.6(20)	
Chloroform	44.4	2.5	50	0	89	67	130	46.05	3.7(20)	
2,2-Dichloropropane	42.5	2.5	50	0	85	30	152	44.46	4.6(20)	
1,2-Dichloroethane	47.9	2.5	50	0	96	60	135	49.46	3.3(20)	
1,1,1-Trichloroethane	46.3	2.5	50	0	93	59	137	48.28	4.2(20)	
1,1-Dichloropropene	47	2.5	50	0	94	63	130	49.04	4.2(20)	
Carbon tetrachloride	47.7	2.5	50	0	95	50	147	49.39	3.5(20)	
Benzene	46	1.3	50	0	92	67	130	48.16	4.6(20)	
Dibromomethane	48.2	2.5	50	0	96	69	133	49	1.6(20)	
1,2-Dichloropropane	46.6	2.5	50	0	93	69	130	47.82	2.6(20)	
Trichloroethene	45.4	2.5	50	0	91	69	130	47.55	4.7(20)	
Bromodichloromethane	51	2.5	50	0	102	66	134	51.98	1.9(20)	
4-Methyl-2-pentanone (MIBK)	123	13	125	0	98	20	182	125.2	1.8(20)	
cis-1,3-Dichloropropene	45.7	2.5	50	0	91	63	130	47.7	4.3(20)	
trans-1,3-Dichloropropene	44.3	2.5	50	0	89	66	131	46.02	3.8(20)	
1,1,2-Trichloroethane	47.9	2.5	50	0	96	68	130	49.03	2.3(20)	
Toluene	44.2	1.3	50	0	88	66	130	46.31	4.7(20)	
1,3-Dichloropropane	48.4	2.5	50	0	97	70	130	50.01	3.2(20)	
Dibromochloromethane	47.3	2.5	50	0	95	70	130	47.85	1.2(20)	
1,2-Dibromoethane (EDB)	96.8	5	100	0	97	70	130	100.2	3.4(20)	
Tetrachloroethene	45.9	2.5	50	0	92	61	134	47.97	4.4(20)	
1,1,1,2-Tetrachloroethane	49.3	2.5	50	0	99	70	130	50.89	3.2(20)	
Chlorobenzene	45.2	2.5	50	0	90	70	130	46.95	3.8(20)	
Ethylbenzene	45.7	1.3	50	0	91	68	130	47.66	4.2(20)	
m,p-Xylene	45	1.3	50	0	90	64	130	47.15	4.7(20)	
Bromoform	47.6	2.5	50	0	95	64	138	49.88	4.8(20)	
Styrene	47.9	2.5	50	0.78	94	69	130	49.19	2.6(20)	
o-Xylene	45	1.3	50	0	90	70	130	47.24	4.8(20)	
1,1,2,2-Tetrachloroethane	48.5	2.5	50	0	97	65	131	49.77	2.6(20)	
1,2,3-Trichloropropane	97.7	10	100	0	98	70	130	100.7	3.1(20)	
Isopropylbenzene	41.5	2.5	50	0	83	64	138	42.52	2.5(20)	
Bromobenzene	44.7	2.5	50	0	89	70	130	45.22	1.1(20)	
n-Propylbenzene	43.3	2.5	50	0	87	66	132	44.38	2.4(20)	
4-Chlorotoluene	43.1	2.5	50	0	86	70	130	44.26	2.7(20)	
2-Chlorotoluene	42.5	2.5	50	0	85	70	130	43.51	2.3(20)	
1,3,5-Trimethylbenzene	42.8	2.5	50	0	86	66	136	43.52	1.7(20)	
tert-Butylbenzene	41.2	2.5	50	0	82	65	137	42.41	2.9(20)	
1,2,4-Trimethylbenzene	42.7	2.5	50	0	85	65	137	43.85	2.6(20)	
sec-Butylbenzene	43.3	2.5	50	0	87	66	134	43.82	1.1(20)	
1,3-Dichlorobenzene	45.6	2.5	50	0	91	70	130	46.74	2.5(20)	
1,4-Dichlorobenzene	44	2.5	50	0	88	70	130	44.87	2.1(20)	
4-Isopropyltoluene	42.3	2.5	50	0	85	66	137	43.67	3.3(20)	
1,2-Dichlorobenzene	43.8	2.5	50	0	88	70	130	44.68	2.0(20)	
n-Butylbenzene	44.2	2.5	50	0	88	60	142	46.02	3.9(20)	
1,2-Dibromo-3-chloropropane (DBCP)	240	15	250	0	96	67	130	243.2	1.5(20)	
1,2,4-Trichlorobenzene	41.1	10	50	0	82	61	137	42.88	4.2(20)	
Naphthalene	37	10	50	0	74	40	167	39.74	7.2(20)	
Hexachlorobutadiene	83.4	10	100	0	83	61	130	88.52	6.0(20)	
1,2,3-Trichlorobenzene	41.1	10	50	0	82	51	144	44.47	8.0(20)	
Surr: 1,2-Dichloroethane-d4	52.3		50		105	70	130			
Surr: Toluene-d8	48.5		50		97	70	130			



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Date:
04-Nov-10

QC Summary Report

Work Order:
10102703

Surr: 4-Bromofluorobenzene	47	50	94	70	130
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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.

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



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Date:
04-Nov-10

QC Summary Report

Work Order:
10102703

Method Blank

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

File ID: **10110206.D**

Batch ID: **MS15W1102M**

Analysis Date: **11/02/2010 16:45**

Sample ID: **MBLK MS15W1102M**

Units: **µg/L**

Run ID: **MSD_15_101102A**

Prep Date: **11/02/2010 16:45**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	ND	0.5								
Chloromethane	ND	1								
Vinyl chloride	ND	0.5								
Chloroethane	ND	0.5								
Bromomethane	ND	1								
Trichlorofluoromethane	ND	0.5								
1,1-Dichloroethene	ND	0.5								
Dichloromethane	ND	1								
Freon-113	ND	0.5								
trans-1,2-Dichloroethene	ND	0.5								
Methyl tert-butyl ether (MTBE)	ND	0.5								
1,1-Dichloroethane	ND	0.5								
2-Butanone (MEK)	ND	10								
cis-1,2-Dichloroethene	ND	0.5								
Bromochloromethane	ND	0.5								
Chloroform	ND	0.5								
2,2-Dichloropropane	ND	0.5								
1,2-Dichloroethane	ND	0.5								
1,1,1-Trichloroethane	ND	0.5								
1,1-Dichloropropene	ND	0.5								
Carbon tetrachloride	ND	0.5								
Benzene	ND	0.5								
Dibromomethane	ND	0.5								
1,2-Dichloropropane	ND	0.5								
Trichloroethene	ND	0.5								
Bromodichloromethane	ND	0.5								
4-Methyl-2-pentanone (MIBK)	ND	2.5								
cis-1,3-Dichloropropene	ND	0.5								
trans-1,3-Dichloropropene	ND	0.5								
1,1,2-Trichloroethane	ND	0.5								
Toluene	ND	0.5								
1,3-Dichloropropane	ND	0.5								
Dibromochloromethane	ND	0.5								
1,2-Dibromoethane (EDB)	ND	1								
Tetrachloroethene	ND	0.5								
1,1,1,2-Tetrachloroethane	ND	0.5								
Chlorobenzene	ND	0.5								
Ethylbenzene	ND	0.5								
m,p-Xylene	ND	0.5								
Bromoform	ND	0.5								
Styrene	ND	0.5								
o-Xylene	ND	0.5								
1,1,2,2-Tetrachloroethane	ND	0.5								
1,2,3-Trichloropropane	ND	1								
Isopropylbenzene	ND	0.5								
Bromobenzene	ND	0.5								
n-Propylbenzene	ND	0.5								
4-Chlorotoluene	ND	0.5								
2-Chlorotoluene	ND	0.5								
1,3,5-Trimethylbenzene	ND	0.5								
tert-Butylbenzene	ND	0.5								
1,2,4-Trimethylbenzene	ND	0.5								
sec-Butylbenzene	ND	0.5								
1,3-Dichlorobenzene	ND	0.5								
1,4-Dichlorobenzene	ND	0.5								
4-Isopropyltoluene	ND	0.5								
1,2-Dichlorobenzene	ND	0.5								
n-Butylbenzene	ND	0.5								
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5								
1,2,4-Trichlorobenzene	ND	1								
Naphthalene	ND	1								
Hexachlorobutadiene	ND	1								
1,2,3-Trichlorobenzene	ND	1								
Surr: 1,2-Dichloroethane-d4	10.7		10		107	70	130			
Surr: Toluene-d8	10.4		10		104	70	130			



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Date:
04-Nov-10

QC Summary Report

Work Order:
10102703

Surr: 4-Bromofluorobenzene

9.62

10

96

70

130



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Date:
04-Nov-10

QC Summary Report

Work Order:
10102703

Laboratory Control Spike

Type LCS Test Code: EPA Method SW8260B

File ID: 10110203.D

Batch ID: MS15W1102M

Analysis Date: 11/02/2010 15:31

Sample ID: LCS MS15W1102M

Units: µg/L

Run ID: MSD_15_101102A

Prep Date: 11/02/2010 15:31

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	8.35	1	10		84	70	130			
Chloromethane	5.25	2	10		53	70(70)	130			L50
Vinyl chloride	9.4	1	10		94	70	130			
Chloroethane	9.48	1	10		95	70	130			
Bromomethane	3.78	2	10		38	70(70)	130			L50
Trichlorofluoromethane	9.71	1	10		97	70	130			
1,1-Dichloroethene	10.3	1	10		103	70	130			
Dichloromethane	9.52	2	10		95	70	130			
Freon-113	11.1	1	10		111	67	141			
trans-1,2-Dichloroethene	10.4	1	10		104	70	130			
Methyl tert-butyl ether (MTBE)	9.58	0.5	10		96	70	130			
1,1-Dichloroethane	10.2	1	10		102	70	130			
2-Butanone (MEK)	190	10	200		95	70	130			
cis-1,2-Dichloroethene	10.2	1	10		102	70	130			
Bromochloromethane	9.86	1	10		99	70	130			
Chloroform	9.76	1	10		98	70	130			
2,2-Dichloropropane	10	1	10		100	70	130			
1,2-Dichloroethane	10	1	10		100	70	130			
1,1,1-Trichloroethane	10.3	1	10		103	70	130			
1,1-Dichloropropene	10.5	1	10		105	70	130			
Carbon tetrachloride	10.2	1	10		102	70	130			
Benzene	10.2	0.5	10		102	70	130			
Dibromomethane	9.69	1	10		97	70	130			
1,2-Dichloropropane	10	1	10		100	70	130			
Trichloroethene	10.2	1	10		102	70	130			
Bromodichloromethane	10.9	1	10		109	70	130			
4-Methyl-2-pentanone (MIBK)	24.2	2.5	25		97	20	182			
cis-1,3-Dichloropropene	10.1	1	10		101	70	130			
trans-1,3-Dichloropropene	9.26	1	10		93	70	130			
1,1,2-Trichloroethane	9.68	1	10		97	70	130			
Toluene	9.89	0.5	10		99	70	130			
1,3-Dichloropropane	9.94	1	10		99	70	130			
Dibromochloromethane	9.5	1	10		95	70	130			
1,2-Dibromoethane (EDB)	20	2	20		99.8	70	130			
Tetrachloroethene	10.4	1	10		104	70	130			
1,1,1,2-Tetrachloroethane	10.6	1	10		106	70	130			
Chlorobenzene	10.1	1	10		101	70	130			
Ethylbenzene	10.3	0.5	10		103	70	130			
m,p-Xylene	10.1	0.5	10		101	70	130			
Bromoform	9.39	1	10		94	70	130			
Styrene	10.3	1	10		103	70	130			
o-Xylene	10	0.5	10		100	70	130			
1,1,2,2-Tetrachloroethane	9.4	1	10		94	70	130			
1,2,3-Trichloropropane	19.6	2	20		98	70	130			
Isopropylbenzene	9.73	1	10		97	70	130			
Bromobenzene	9.96	1	10		99.6	70	130			
n-Propylbenzene	10.1	1	10		101	70	130			
4-Chlorotoluene	9.99	1	10		99.9	70	130			
2-Chlorotoluene	9.93	1	10		99	70	130			
1,3,5-Trimethylbenzene	9.84	1	10		98	70	130			
tert-Butylbenzene	9.6	1	10		96	70	130			
1,2,4-Trimethylbenzene	9.84	1	10		98	70	130			
sec-Butylbenzene	9.94	1	10		99	70	130			
1,3-Dichlorobenzene	10.2	1	10		102	70	130			
1,4-Dichlorobenzene	9.63	1	10		96	70	130			
4-Isopropyltoluene	9.83	1	10		98	70	130			
1,2-Dichlorobenzene	9.4	1	10		94	70	130			
n-Butylbenzene	10.1	1	10		101	70	130			
1,2-Dibromo-3-chloropropane (DBCP)	46.9	3	50		94	70	130			
1,2,4-Trichlorobenzene	8.16	2	10		82	70	130			
Naphthalene	6.18	2	10		62	70(70)	130			L50
Hexachlorobutadiene	17.3	2	20		86	70	130			
1,2,3-Trichlorobenzene	7.86	2	10		79	70	130			
Surr: 1,2-Dichloroethane-d4	10.1		10		101	70	130			



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Date:
04-Nov-10

QC Summary Report

Work Order:
10102703

Surr: Toluene-d8	9.76	10	98	70	130
Surr: 4-Bromofluorobenzene	9.61	10	96	70	130



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Date:
04-Nov-10

QC Summary Report

Work Order:
10102703

Sample Matrix Spike

File ID: 10110207.D

Type MS

Test Code: EPA Method SW8260B

Sample ID: 10102703-21AMS

Units: µg/L

Batch ID: MS15W1102M

Analysis Date: 11/02/2010 17:07

Run ID: MSD_15_101102A

Prep Date: 11/02/2010 17:07

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	32.3	2.5	50	0	65	13	167			
Chloromethane	29.8	10	50	0	60	28	145			
Vinyl chloride	45.4	2.5	50	0	91	43	134			
Chloroethane	44.3	2.5	50	0	89	39	154			
Bromomethane	21.8	10	50	0	44	19	176			
Trichlorofluoromethane	45.9	2.5	50	0	92	34	160			
1,1-Dichloroethene	49.2	2.5	50	0	98	60	130			
Dichloromethane	45.9	10	50	0	92	68	130			
Freon-113	52.4	2.5	50	0	105	49	141			
trans-1,2-Dichloroethene	49.8	2.5	50	0	99.6	63	130			
Methyl tert-butyl ether (MTBE)	53.6	1.3	50	0	107	56	141			
1,1-Dichloroethane	48.7	2.5	50	0	97	61	130			
2-Butanone (MEK)	854	50	1000	0	85	20	182			
cis-1,2-Dichloroethene	47.4	2.5	50	0	95	70	130			
Bromochloromethane	50.6	2.5	50	0	101	70	130			
Chloroform	48.5	2.5	50	0	97	67	130			
2,2-Dichloropropane	43.7	2.5	50	0	87	30	152			
1,2-Dichloroethane	51.9	2.5	50	0	104	60	135			
1,1,1-Trichloroethane	49.4	2.5	50	0	99	59	137			
1,1-Dichloropropene	50.3	2.5	50	0	101	63	130			
Carbon tetrachloride	49.1	2.5	50	0	98	50	147			
Benzene	49	1.3	50	0	98	67	130			
Dibromomethane	52	2.5	50	0	104	69	133			
1,2-Dichloropropane	49.1	2.5	50	0	98	69	130			
Trichloroethene	49.7	2.5	50	1.2	97	69	130			
Bromodichloromethane	53.6	2.5	50	0	107	66	134			
4-Methyl-2-pentanone (MIBK)	132	13	125	0	106	20	182			
cis-1,3-Dichloropropene	48	2.5	50	0	96	63	130			
trans-1,3-Dichloropropene	47.4	2.5	50	0	95	66	131			
1,1,2-Trichloroethane	52.5	2.5	50	0	105	68	130			
Toluene	46.3	1.3	50	0	93	66	130			
1,3-Dichloropropane	50.3	2.5	50	0	101	70	130			
Dibromochloromethane	47.9	2.5	50	0	96	70	130			
1,2-Dibromoethane (EDB)	102	5	100	0	102	70	130			
Tetrachloroethene	47.9	2.5	50	0	96	61	134			
1,1,1,2-Tetrachloroethane	49.7	2.5	50	0	99	70	130			
Chlorobenzene	46.5	2.5	50	0	93	70	130			
Ethylbenzene	47.3	1.3	50	0	95	68	130			
m,p-Xylene	47.6	1.3	50	0	95	64	130			
Bromoform	49.1	2.5	50	0	98	64	138			
Styrene	48.2	2.5	50	0	96	69	130			
o-Xylene	46.7	1.3	50	0	93	70	130			
1,1,2,2-Tetrachloroethane	50.4	2.5	50	0	101	65	131			
1,2,3-Trichloropropane	103	10	100	0	103	70	130			
Isopropylbenzene	42.2	2.5	50	0	84	64	138			
Bromobenzene	45.5	2.5	50	0	91	70	130			
n-Propylbenzene	44.2	2.5	50	0	88	66	132			
4-Chlorotoluene	43.8	2.5	50	0	88	70	130			
2-Chlorotoluene	43.5	2.5	50	0	87	70	130			
1,3,5-Trimethylbenzene	43.3	2.5	50	0	87	66	136			
tert-Butylbenzene	42.2	2.5	50	0	84	65	137			
1,2,4-Trimethylbenzene	43.9	2.5	50	0	88	65	137			
sec-Butylbenzene	43.5	2.5	50	0	87	66	134			
1,3-Dichlorobenzene	45.8	2.5	50	0	92	70	130			
1,4-Dichlorobenzene	44.2	2.5	50	0	88	70	130			
4-Isopropyltoluene	43	2.5	50	0	86	66	137			
1,2-Dichlorobenzene	43.8	2.5	50	0	88	70	130			
n-Butylbenzene	44.3	2.5	50	0	89	60	142			
1,2-Dibromo-3-chloropropane (DBCP)	240	15	250	0	96	67	130			
1,2,4-Trichlorobenzene	39.5	10	50	0	79	61	137			
Naphthalene	33.1	10	50	0	66	40	167			
Hexachlorobutadiene	81	10	100	0	81	61	130			
1,2,3-Trichlorobenzene	39.2	10	50	0	78	51	144			
Surr: 1,2-Dichloroethane-d4	52.9		50		106	70	130			
Surr: Toluene-d8	47.4		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-Nov-10

QC Summary Report

Work Order:
10102703

Surr: 4-Bromofluorobenzene

45.3

50

91

70

130



Alpha Analytical, Inc.

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

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

Date:
04-Nov-10

QC Summary Report

Work Order:
10102703

Sample Matrix Spike Duplicate

Type MSD Test Code: EPA Method SW8260B

File ID: 10110208.D

Batch ID: MS15W1102M

Analysis Date: 11/02/2010 17:29

Sample ID: 10102703-21AMSD

Units: µg/L

Run ID: MSD_15_101102A

Prep Date: 11/02/2010 17:29

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	31	2.5	50	0	62	13	167	32.27	4.1(20)	
Chloromethane	29	10	50	0	58	28	145	29.83	2.9(20)	
Vinyl chloride	44.7	2.5	50	0	89	43	134	45.35	1.5(20)	
Chloroethane	43.1	2.5	50	0	86	39	154	44.29	2.8(20)	
Bromomethane	27.3	10	50	0	55	19	176	21.79	22.5(20)	R58
Trichlorofluoromethane	44.1	2.5	50	0	88	34	160	45.92	4.1(20)	
1,1-Dichloroethene	47.7	2.5	50	0	95	60	130	49.16	3.0(20)	
Dichloromethane	45	10	50	0	90	68	130	45.87	2.0(20)	
Freon-113	50.6	2.5	50	0	101	49	141	52.44	3.7(20)	
trans-1,2-Dichloroethene	48.7	2.5	50	0	97	63	130	49.81	2.3(20)	
Methyl tert-butyl ether (MTBE)	51.7	1.3	50	0	103	56	141	53.64	3.6(20)	
1,1-Dichloroethane	48	2.5	50	0	96	61	130	48.66	1.4(20)	
2-Butanone (MEK)	840	50	1000	0	84	20	182	854.4	1.7(20)	
cis-1,2-Dichloroethene	48.2	2.5	50	0	96	70	130	47.35	1.8(20)	
Bromochloromethane	49.5	2.5	50	0	99	70	130	50.6	2.3(20)	
Chloroform	47.5	2.5	50	0	95	67	130	48.51	2.1(20)	
2,2-Dichloropropane	42.3	2.5	50	0	85	30	152	43.72	3.3(20)	
1,2-Dichloroethane	51	2.5	50	0	102	60	135	51.93	1.9(20)	
1,1,1-Trichloroethane	48.4	2.5	50	0	97	59	137	49.4	2.1(20)	
1,1-Dichloropropene	49.4	2.5	50	0	99	63	130	50.31	1.9(20)	
Carbon tetrachloride	49.6	2.5	50	0	99	50	147	49.07	1.0(20)	
Benzene	47.7	1.3	50	0	95	67	130	49.01	2.8(20)	
Dibromomethane	50.1	2.5	50	0	100	69	133	51.98	3.6(20)	
1,2-Dichloropropane	48.6	2.5	50	0	97	69	130	49.05	0.9(20)	
Trichloroethene	48.8	2.5	50	1.2	95	69	130	49.72	1.8(20)	
Bromodichloromethane	52.7	2.5	50	0	105	66	134	53.57	1.6(20)	
4-Methyl-2-pentanone (MIBK)	127	13	125	0	101	20	182	132.3	4.4(20)	
cis-1,3-Dichloropropene	47.1	2.5	50	0	94	63	130	48.02	1.9(20)	
trans-1,3-Dichloropropene	45.6	2.5	50	0	91	66	131	47.4	4.0(20)	
1,1,2-Trichloroethane	50	2.5	50	0	100	68	130	52.54	5.0(20)	
Toluene	44.9	1.3	50	0	90	66	130	46.28	3.0(20)	
1,3-Dichloropropane	49.3	2.5	50	0	99	70	130	50.26	2.0(20)	
Dibromochloromethane	48.3	2.5	50	0	97	70	130	47.86	1.0(20)	
1,2-Dibromoethane (EDB)	98.8	5	100	0	99	70	130	102.1	3.2(20)	
Tetrachloroethene	47.4	2.5	50	0	95	61	134	47.92	1.0(20)	
1,1,1,2-Tetrachloroethane	50	2.5	50	0	100	70	130	49.73	0.6(20)	
Chlorobenzene	46.5	2.5	50	0	93	70	130	46.48	0.0(20)	
Ethylbenzene	46.6	1.3	50	0	93	68	130	47.33	1.6(20)	
m,p-Xylene	46.6	1.3	50	0	93	64	130	47.6	2.1(20)	
Bromoform	48.5	2.5	50	0	97	64	138	49.05	1.1(20)	
Styrene	47.8	2.5	50	0	96	69	130	48.17	0.8(20)	
o-Xylene	46.3	1.3	50	0	93	70	130	46.72	0.8(20)	
1,1,1,2,2-Tetrachloroethane	49.3	2.5	50	0	99	65	131	50.41	2.2(20)	
1,2,3-Trichloropropane	99.1	10	100	0	99	70	130	103.5	4.3(20)	
Isopropylbenzene	42.5	2.5	50	0	85	64	138	42.19	0.7(20)	
Bromobenzene	45.5	2.5	50	0	91	70	130	45.53	0.1(20)	
n-Propylbenzene	43.6	2.5	50	0	87	66	132	44.24	1.4(20)	
4-Chlorotoluene	44.2	2.5	50	0	88	70	130	43.76	1.1(20)	
2-Chlorotoluene	44.2	2.5	50	0	88	70	130	43.53	1.6(20)	
1,3,5-Trimethylbenzene	43.5	2.5	50	0	87	66	136	43.3	0.3(20)	
tert-Butylbenzene	42.3	2.5	50	0	85	65	137	42.17	0.3(20)	
1,2,4-Trimethylbenzene	43.7	2.5	50	0	87	65	137	43.89	0.4(20)	
sec-Butylbenzene	43.9	2.5	50	0	88	66	134	43.52	0.9(20)	
1,3-Dichlorobenzene	47	2.5	50	0	94	70	130	45.83	2.6(20)	
1,4-Dichlorobenzene	44.5	2.5	50	0	89	70	130	44.15	0.7(20)	
4-Isopropyltoluene	43.2	2.5	50	0	86	66	137	42.99	0.5(20)	
1,2-Dichlorobenzene	44.3	2.5	50	0	89	70	130	43.76	1.3(20)	
n-Butylbenzene	45.1	2.5	50	0	90	60	142	44.27	1.8(20)	
1,2-Dibromo-3-chloropropane (DBCP)	238	15	250	0	95	67	130	239.5	0.7(20)	
1,2,4-Trichlorobenzene	40.4	10	50	0	81	61	137	39.48	2.4(20)	
Naphthalene	35.1	10	50	0	70	40	167	33.12	5.9(20)	
Hexachlorobutadiene	84.8	10	100	0	85	61	130	81.03	4.5(20)	
1,2,3-Trichlorobenzene	41.3	10	50	0	83	51	144	39.18	5.2(20)	
Surr: 1,2-Dichloroethane-d4	53		50		106	70	130			
Surr: Toluene-d8	47.7		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-Nov-10

QC Summary Report

Work Order:
10102703

Surr: 4-Bromofluorobenzene	45.7	50	91	70	130
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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.

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

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

Billing Information :

CHAIN-OF-CUSTODY RECORD

CA

Alpha Analytical, Inc.

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

WorkOrder : BMIS10102703

Report Due By : 5:00 PM On : 09-Nov-2010

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

Report Attention	Phone Number	Email Address
David Connor	(619) 726-7311 x	connerd@battelle.org
Betsy Cutie	(614) 424-4899 x	cutiee@battelle.org
Shane Walton	(614) 424-4117 x	walton@s@battelle.org

EDD Required : Yes

Sampled by : David Loera, Chase Brogdon

Cooler Temp Samples Received Date Printed

0 °C 27-Oct-2010 27-Oct-2010

PO : 218013
 Client's COC # : 31910, 29184, 29187, 3190 Job : G005862/JPL Groundwater Monitoring
 QC Level : DS4 = DOD QC Required : Final Rpt, MBLK, InitCal/ConCal data, LCS, MS/MSD with Surrogates

Alpha Sample ID	Client Sample ID	Collection Date	No. of Bottles Alpha Sub	TAT	Requested Tests				Sample Remarks	
					314_W	METALS_D W	VOC_TIC_W	VOC_W		
BMI10102703-01A	MW-6	10/22/10 10:42	7	0	9	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10102703-02A	MW-17-5	10/22/10 09:35	5	0	9	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10102703-03A	MW-17-4	10/22/10 10:07	10	0	9	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	MS/MSD
BMI10102703-04A	MW-17-3	10/22/10 10:34	5	0	9	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10102703-05A	MW-17-2	10/22/10 10:57	5	0	9	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10102703-06A	MW-17-1	10/22/10 11:39	5	0	9	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10102703-07A	EB-03-10/22/10	10/22/10 11:11	5	0	9	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10102703-08A	TB-03-10/22/10	10/22/10 07:00	1	0	9	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	Reno Trip Blank 10/7/10
BMI10102703-09A	MW-20-5	10/25/10 09:14	10	0	9	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	MS/MSD Level IV QC
BMI10102703-10A	MW-20-4	10/25/10 09:43	5	0	9	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	

Comments: Security seals intact. Frozen ice. Temp Blanks #9025, #4840, and #7740 received @ 0°C. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). Samples - O1A through -15A were delayed in FedEx shipment.

Signature	Print Name	Company	Date/Time
<i>Elizabeth Adcox</i>	Elizabeth Adcox	Alpha Analytical, Inc.	10-27-10/05

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-Otbo T-Teclar B-Brass P-Plastic OT-Other

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 : BMIS10102703

Report Due By : 5:00 PM On : 09-Nov-2010

Client: Battelle Memorial Institute
 655 West Broadway
 Suite 1420
 San Diego, CA 92101
 PO : 218013

Report Attention: David Corner (619) 726-7311 x connrd@battelle.org
 Betsy Cutie (614) 424-4899 x cutiee@battelle.org
 Shane Walton (614) 424-4117 x walton@battelle.org

EDD Required : Yes

Sampled by : David Loera, Chase Brogdon

Client's COC # : 31910, 29184, 29187, 3190 Job : G005862/JPL Groundwater Monitoring

Cooler Temp 0 °C Samples Received 27-Oct-2010 Date Printed 27-Oct-2010

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

Alpha Sample ID	Client Sample ID	Collection Matrix Date	No. of Bottles Alpha Sub TAT	Requested Tests			Sample Remarks
				314_W	METALS_D W	VOC_TIC_W	
BM110102703-11A	MW-20-3	AQ 10/25/10 10:09	5 0 9	Perchlorate Cr	VOC by 524 Criteria	VOC by 524 Criteria	
BM110102703-12A	MW-20-2	AQ 10/25/10 10:34	5 0 9	Perchlorate Cr	VOC by 524 Criteria	VOC by 524 Criteria	
BM110102703-13A	MW-20-1	AQ 10/25/10 11:01	5 0 9	Perchlorate Cr	VOC by 524 Criteria	VOC by 524 Criteria	
BM110102703-14A	EB-04-10/25/10	AQ 10/25/10 10:50	5 0 9	Perchlorate Cr	VOC by 524 Criteria	VOC by 524 Criteria	
BM110102703-15A	TB-04-10/25/10	AQ 10/25/10 07:00	1 0 9	Perchlorate Cr	VOC by 524 Criteria	VOC by 524 Criteria	Reno Trip Blank 10/7/10
BM110102703-16A	MW-1	AQ 10/26/10 13:14	7 0 9	Perchlorate Cr	VOC by 524 Criteria	VOC by 524 Criteria	
BM110102703-17A	MW-9	AQ 10/26/10 16:46	7 0 9	Perchlorate Cr	VOC by 524 Criteria	VOC by 524 Criteria	
BM110102703-18A	TRIP BLANK	AQ 10/26/10 00:00	1 0 9	Perchlorate Cr	VOC by 524 Criteria	VOC by 524 Criteria	Reno Trip Blank 6/29/10
BM110102703-19A	MW-14-5	AQ 10/26/10 09:15	5 0 9	Perchlorate Cr	VOC by 524 Criteria	VOC by 524 Criteria	
BM110102703-20A	MW-14-4	AQ 10/26/10 10:05	5 0 9	Perchlorate Cr	VOC by 524 Criteria	VOC by 524 Criteria	Level IV QC

Comments: Security seals intact. Frozen ice. Temp Blanks #9025, #4840, and #7740 received @ 0°C. Level IV QC. Samples should be used as the control spike sample if possible (I.E. MS/MSD). Samples - O1A through -15A were delayed in FedEx shipment.

Logged in by: Elizabeth Alder Signature: Elizabeth Alder Print Name: Elizabeth Alder Company: Alpha Analytical, Inc. Date/Time: 10-27-10 1045

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 : AQA(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Teclar 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 : BMIS10102703

Report Due By : 5:00 PM On : 09-Nov-2010

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

Report Attention	Phone Number	Email Address
David Connor	(619) 726-7311 x	connerd@battelle.org
Betsy Cutie	(614) 424-4899 x	cutiee@battelle.org
Shane Walton	(614) 424-4117 x	waltonsh@battelle.org

EDD Required : Yes

Sampled by : David Loera, Chase Brogdon

Cooler Temp 0 °C Samples Received 27-Oct-2010 Date Printed 27-Oct-2010

Client's COC # : 31910, 29184, 29187, 3190 Job : G005862/JPL Groundwater Monitoring
 QC Level : DS4 = DOD QC Required : Final Rpt, MBLK, InitCal/ConCal data, LCS, MS/MSD with Surrogates

Alpha Sample ID	Client Sample ID	Collection Date	No. of Bottles Alpha Sub	TAT	Requested Tests				Sample Remarks	
					314_W	METALS_D W	VOC_TIC_W	VOC_W		
BM110102703-21A	MW-14-3	10/26/10 10:36	10	0	9	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	MS/MSD
BM110102703-22A	MW-14-2	10/26/10 11:11	5	0	9	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	
BM110102703-23A	MW-14-1	10/26/10 11:44	5	0	9	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	
BM110102703-24A	DUPE-02-AQ10	10/26/10 00:00	5	0	9	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	
BM110102703-25A	EB-05-10/26/10	10/26/10 11:28	5	0	9	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	
BM110102703-26A	TB-05-10/26/10	10/26/10 07:00	1	0	9			VOC by 524 Criteria	VOC by 524 Criteria	Reno Trip Blank 10/7/10

Comments: Security seals intact. Frozen ice. Temp Blanks #9025, #4840, and #7740 received @ 0°C. Level IV QC. Samples should be used as the control spike sample if possible (I.E. MS/MSD). Samples - 01A through -15A were delayed in FedEx shipment.

Logged in by: Elizabeth Adcox Signature: [Signature] Print Name: Elizabeth Adcox Company: Alpha Analytical, Inc. Date/Time: 10-27-10 1045

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:

Company Name Battelle

Attn: SOS King Ave

Address: Columbus OH 43201

City, State, Zip OH 43201

Phone Number _____ Fax _____



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

Samples Collected From Which State?
AZ _____ CA NV _____ WA _____
ID _____ OR _____ OTHER _____
DOD Site 1 of 1

31910

Consultant / Client Name David Conner

Address _____

City, State, Zip _____

Job # 6065862/SPL 6um

Name: David Conner

Report Attention / Project Manager

Email: dconner@battelle.org

Cell: 614 458-5554

Mobile: 614 726-7311

Job Name SPL-6um-4Q10

Time Sampled 10/27/10

Date Sampled 10/27/10

Matrix* AD

P.O. # 218013

Lab ID Number (Use Only)

Sample Description MU-6

TAT ID

Field Filtered

Containers** 10V, 1P

VOC's (24.2)

Total (x (200.8))

Perchlorate (314.0)

* 300.0

Analyses Required

Data Validation Level: III or IV

ED/EDF? YES NO _____

Global ID # _____

REMARKS

Time Sampled	Date Sampled	Matrix* See Key Below	P.O. #	Lab ID Number (Use Only)	Sample Description	TAT	Field Filtered	# Containers**	Analyses Required	REMARKS

ADDITIONAL INSTRUCTIONS: * Chloride, Nitrate, Nitrite, Ortho-phosphate, Sulfate

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action (NAAC 445.0636 (c) (2)). Sampled By: David King

Relinquished by: (Signature/Affiliation) <u>David King / Battelle</u>	Received by: (Signature/Affiliation) <u>[Signature]</u>	Date: <u>10/23/10</u>	Time: <u>11:30</u>
Relinquished by: (Signature/Affiliation) <u>[Signature]</u>	Received by: (Signature/Affiliation) <u>[Signature]</u>	Date: <u>10/25/10</u>	Time: <u>1:30</u>
Relinquished by: (Signature/Affiliation) <u>[Signature]</u>	Received by: (Signature/Affiliation) <u>[Signature]</u>	Date: <u>10/27/10</u>	Time: <u>10:45</u>

*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 GENAIDS TOMPKINS/BATTELLE
 Address 505 KINY 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? 29184
 AZ CA NV WA
 ID OR OTHER
 Page # 1 of 1

Analyses Required

Required QC Level?
 I II III IV

EDD / EDP? YES NO

Global ID # _____

REMARKS

Client Name	Address	City, State, Zip	PO #	Job #	Phone #	Report Attention	Sample Description	TAT	Field Filled	Total and type of containers ** See below	EDD / EDP? YES <input type="checkbox"/> NO <input type="checkbox"/>	REMARKS
BATTELLE / DRAVID ANWERT	3990 OLD TRAW AVE, C-205	SAN DIEGO, CA 92110	218013	GOODS662	(619) 726-7311							
0935/10/10/AQ							02 MW-17-5			3v, 2p		MS/ASTD
1007							03 MW-17-4			6v, 4p		
1034							04 MW-17-3			3v, 2p		
1057							05 MW-17-2					
1139							06 MW-17-1					
1111							07 EB-03-10/22/10			3v, 2p		EQUIPMENT BLANK
0200							08 TB-03-10/22/10			1v		TRIP BLANK

ADDITIONAL INSTRUCTIONS:

Signature	Print Name	Company	Date	Time
<i>[Signature]</i>	CHRISTE BARBER	ENVISANT LLC, INC	10/25/10	1300
<i>[Signature]</i>	ANTHONY STRICK	Alpha Analytical	10/25/10	1300
<i>[Signature]</i>	ELIZABETH ADcox	Alpha	10-27-10	1045

*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/BOTTLE
 Address 505 KIN-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? 29187
 AZ CA NV WA
 ID OR OTHER
 Page # 1 of 1

Analyses Required

Client Name BOTTLE/DAVID CAVEN
 Address 3980 OLD TOWN AVE, C-205
 City, State, Zip SAN DIEGO CA 92110

Job # 6005862

PO # 218013
 Email Address _____
 Phone # (619) 726-7311
 Fax # _____


Time Sampled	Date Sampled	Matrix* See Key Below	Sampled by	Lab ID Number (Use Only)	Office (Only)	Report Attention	Sample Description	TAT	Field Filtered	Total and type of containers ** See below	Required QC Level?	EDD / EDP? YES NO	REMARKS
0914	10/27/10	AQ					MW-20-5			6, 4p	<input type="checkbox"/>		MS/MSD, AC LEVEL III
0943							MW-20-4			3, 1, 2p	<input type="checkbox"/>		
1029							MW-20-3				<input type="checkbox"/>		
1035							MW-20-2				<input type="checkbox"/>		
1101							MW-20-1				<input type="checkbox"/>		
1058							EB-04 - 10/25/10			3, 1, 2p	<input type="checkbox"/>		EQUIPMENT BLANK
0700	10/27/10	AQ					7B-04 - 10/25/10			1v	<input type="checkbox"/>		TRAP BLANK

ADDITIONAL INSTRUCTIONS:

Signature	Print Name	Company	Date	Time
<i>[Signature]</i>	CHRIS BRADSHAW	INSIGHT EEC, INC	10/27/10	1300
<i>[Signature]</i>	Anthony Stark	Alpha Analytical	10/27/10	1306
<i>[Signature]</i>	Elizabeth Adeox	Alpha	10-27-10	1045

*Key: AQ - Aqueous SO - Soil WA - Waste OT - Other AR - Air ** L-Liter V-Voa S-Soil Jar O-Orbo T-Tedar 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:
 Company Name Battelle
 Attn: _____
 Address: 505 Kings 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 NV WA
 ID OR OTHER
 Page # 1 of 1

Consultant / Client Name David Conner Job # 600586215PL6W Job Name SP-610-4810
 Address _____ Report Attention / Project Manager _____
 Name: David Conner
 Email: connect@battelle.org
 Phone: 614 458-6651 Mobile: 619-726-7311

Time Sampled	Date Sampled	Matrix* See Key Below	P.O. #	Lab ID Number	Office (Use Only)	Sample Description	TAT	Field Filtered	# Containers**	Analyses Required	REMARKS
1314	10/26/10	AD	218013			MUD-1	ID		6V 1P	VOC's (524.2)	
1616	10/26/10	AD				MUD-9	ID		6V 1P	Total Cr (200.8)	
						TRIP BLANK				Perchlorate (314.0)	

ADDITIONAL INSTRUCTIONS:
 I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action (NAC 445.0636 (c) (2)). Sampled By: David L Battelle

Relinquished by: (Signature/Affiliation) David L Battelle Received by: (Signature/Affiliation) _____ Date: _____ Time: _____
 Relinquished by: (Signature/Affiliation) _____ Received by: (Signature/Affiliation) Stephan Odeker / Debra Date: 10.27.10 Time: 1045
 Relinquished by: (Signature/Affiliation) _____ Received by: (Signature/Affiliation) _____ Date: _____ Time: _____

*Key: AQ - Aqueous SO - Soil WA - Waste OT - Other AR - Air ** L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other
 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 SEYMOUR TOMPKINS/BATELLE
 Address 505 KIRK AVE
 City, State, Zip CALENDAR, OK, 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? 29183
 AZ CA NV WA
 ID OR OTHER
 Page # 1 of 1

Analyses Required

Required QC Level?
 I II III IV

EDD / EDF? YES NO

Global ID # _____
 REMARKS

Client Name	P.O. #	Job #	Address	Email Address	Phone #	Fax #	City, State, Zip	Matrix*	Sampled by	Lab ID Number	Office (Use Only)	Report Attention	Sample Description	TAT	Field Filtered	Total and type of containers ** See below	Analyses Required	REMARKS	
BATELLE / DAVID COLVERN	218013	0205862	3780 OLD TOWN AVE., C-205		(619) 726-7311		San Diego, CA 92110		CHRIST BRADON										
1005								AA								3v, 2p			OC LEVEL III
1036																3v, 2p			14/145D
1111																3v, 2p			SAMPLE TIME 1144
1138								AA								3v, 2p			DUPLICATE
0720								AA								3v, 2p			EQUIPMENT BLANK
																1v			TRYP BLANK

ADDITIONAL INSTRUCTIONS:

Signature	Print Name	Company	Date	Time
<i>[Signature]</i>	CHRIST BRADON	INSTANT CRY, INC	10/28/10	1500
<i>[Signature]</i>	Anthony Stars	Alpha Analytical	10/26/10	1500
<i>[Signature]</i>	Elizabeth Alder	Alpha	10/27/10	1500

*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
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Alpha Analytical, Inc.

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

Date 05-Nov-10

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

Suite 1420

CASE NARRATIVE

Job: G005862/JPL Groundwater Monitoring

Work Order: BMI10102805

Cooler Temp: 1 °C

Alpha's Sample ID	Client's Sample ID	Matrix
10102805-01A	MW-11-5	Aqueous
10102805-02A	MW-11-4	Aqueous
10102805-03A	MW-11-3	Aqueous
10102805-04A	MW-11-2	Aqueous
10102805-05A	MW-11-1	Aqueous
10102805-06A	EB-06-10/27/10	Aqueous
10102805-07A	TB-06-10/27/10	Aqueous

Manually Integrated Analytes

<u>Alpha's Sample ID</u>	<u>Test Reference</u>	<u>Analyte</u>
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.

Roger Scholl *Randy Gardner* *Walter Hinchman*

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

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

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



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

Battelle Memorial Institute
655 West Broadway
San Diego, CA 92101

Attn: David Conner
Phone: (619) 726-7311
Fax: (614) 458-6641
Date Received : 10/28/10

Job: G005862/JPL Groundwater Monitoring

Anions by IC
EPA Method 300.0

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: MW-11-1				
Lab ID: BMI10102805-05A Chloride	24	0.50 mg/L	10/29/10 08:40	10/29/10 09:02
Date Sampled 10/27/10 09:17 Nitrite (NO2) - N	ND	0.25 mg/L	10/29/10 08:40	10/29/10 09:02
Nitrate (NO3) - N	0.79	0.25 mg/L	10/29/10 08:40	10/29/10 09:02
Phosphate, ortho - P	ND	0.50 mg/L	10/29/10 08:40	10/29/10 09:02
Sulfate (SO4)	50	0.50 mg/L	10/29/10 08:40	10/29/10 09:02

ND = Not Detected

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

Report Date



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

Battelle Memorial Institute
655 West Broadway
San Diego, CA 92101

Attn: David Conner
Phone: (619) 726-7311
Fax: (614) 458-6641
Date Received : 10/28/10

Job: G005862/JPL Groundwater Monitoring

Perchlorate by Ion Chromatography
EPA Method 314.0

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: MW-11-5 Lab ID: BMI10102805-01A Perchlorate Date Sampled 10/27/10 07:32	ND	1.00 µg/L	10/29/10 09:13	10/29/10 15:29
Client ID: MW-11-4 Lab ID: BMI10102805-02A Perchlorate Date Sampled 10/27/10 08:01	ND	1.00 µg/L	10/29/10 09:13	10/29/10 15:48
Client ID: MW-11-3 Lab ID: BMI10102805-03A Perchlorate Date Sampled 10/27/10 08:27	ND	1.00 µg/L	10/29/10 09:13	10/29/10 16:06
Client ID: MW-11-2 Lab ID: BMI10102805-04A Perchlorate Date Sampled 10/27/10 08:50	ND	1.00 µg/L	10/29/10 09:13	10/29/10 16:25
Client ID: MW-11-1 Lab ID: BMI10102805-05A Perchlorate Date Sampled 10/27/10 09:17	ND	1.00 µg/L	10/29/10 09:13	10/29/10 16:43
Client ID: EB-06-10/27/10 Lab ID: BMI10102805-06A Perchlorate Date Sampled 10/27/10 09:05	ND	1.00 µg/L	10/29/10 09:13	10/29/10 17:01

ND = Not Detected

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

Report Date



Alpha Analytical, Inc.

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ANALYTICAL REPORT

Battelle Memorial Institute
655 West Broadway
San Diego, CA 92101

Attn: David Conner
Phone: (619) 726-7311
Fax: (614) 458-6641
Date Received : 10/28/10

Job: G005862/JPL Groundwater Monitoring

Metals by ICPMS
EPA Method 200.8

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: MW-11-5 Lab ID: BMI10102805-01A Chromium (Cr) Date Sampled 10/27/10 07:32	ND	0.0050 mg/L	10/28/10 20:06	10/29/10 07:05
Client ID: MW-11-4 Lab ID: BMI10102805-02A Chromium (Cr) Date Sampled 10/27/10 08:01	ND	0.0050 mg/L	10/28/10 20:06	10/29/10 05:24
Client ID: MW-11-3 Lab ID: BMI10102805-03A Chromium (Cr) Date Sampled 10/27/10 08:27	ND	0.0050 mg/L	10/28/10 20:06	10/29/10 07:11
Client ID: MW-11-2 Lab ID: BMI10102805-04A Chromium (Cr) Date Sampled 10/27/10 08:50	ND	0.0050 mg/L	10/28/10 20:06	10/29/10 07:16
Client ID: MW-11-1 Lab ID: BMI10102805-05A Chromium (Cr) Date Sampled 10/27/10 09:17	ND	0.0050 mg/L	10/28/10 20:06	10/29/10 07:22
Client ID: EB-06-10/27/10 Lab ID: BMI10102805-06A Chromium (Cr) Date Sampled 10/27/10 09:05	ND	0.0050 mg/L	10/28/10 20:06	10/29/10 07:27

ND = Not Detected

Roger Scholl *Randy Gardner* *Walter Hinchman*

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

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11/10/10
Report Date



Alpha Analytical, Inc.

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ANALYTICAL REPORT

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

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

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 : BMI10102805-01A Date Received : 10/28/10 Date Sampled : 10/27/10 07:32	*** None Found ***	ND	11/02/10 23:21	11/02/10 23:21
Client ID : MW-11-4 Lab ID : BMI10102805-02A Date Received : 10/28/10 Date Sampled : 10/27/10 08:01	*** None Found ***	ND	11/02/10 23:43	11/02/10 23:43
Client ID : MW-11-3 Lab ID : BMI10102805-03A Date Received : 10/28/10 Date Sampled : 10/27/10 08:27	*** None Found ***	ND	11/03/10 00:04	11/03/10 00:04
Client ID : MW-11-2 Lab ID : BMI10102805-04A Date Received : 10/28/10 Date Sampled : 10/27/10 08:50	*** None Found ***	ND	11/03/10 00:26	11/03/10 00:26
Client ID : MW-11-1 Lab ID : BMI10102805-05A Date Received : 10/28/10 Date Sampled : 10/27/10 09:17	*** None Found ***	ND	11/03/10 00:48	11/03/10 00:48
Client ID : EB-06-10/27/10 Lab ID : BMI10102805-06A Date Received : 10/28/10 Date Sampled : 10/27/10 09:05	*** None Found ***	ND	11/02/10 19:41	11/02/10 19:41
Client ID : TB-06-10/27/10 Lab ID : BMI10102805-07A Date Received : 10/28/10 Date Sampled : 10/27/10 07:00	*** None Found ***	ND	11/02/10 19:19	11/02/10 19:19



Alpha Analytical, Inc.

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Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl

Randy Gardner

Walter Hinchman

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

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

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PS

11/10/10

Report Date

Page 1 of 1



Alpha Analytical, Inc.

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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10102805-01A
Client I.D. Number: MW-11-5

Sampled: 10/27/10 07:32
Received: 10/28/10
Extracted: 11/02/10 23:21
Analyzed: 11/02/10 23:21

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	Q 1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	Q 1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethene	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	1.0 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	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	104	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	103	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	99	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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

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

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PS
11/10/10

Report Date



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10102805-02A
Client I.D. Number: MW-11-4

Sampled: 10/27/10 08:01
Received: 10/28/10
Extracted: 11/02/10 23:43
Analyzed: 11/02/10 23:43

Volatile Organics by GC/MS EPA Method SW8260B

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

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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

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

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

11/10/10

Report Date



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10102805-03A
Client I.D. Number: MW-11-3

Sampled: 10/27/10 08:27
Received: 10/28/10
Extracted: 11/03/10 00:04
Analyzed: 11/03/10 00:04

Volatile Organics by GC/MS EPA Method SW8260B

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

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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[Signature]

11/10/10

Report Date



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10102805-04A
Client I.D. Number: MW-11-2

Sampled: 10/27/10 08:50
Received: 10/28/10
Extracted: 11/03/10 00:26
Analyzed: 11/03/10 00:26

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethane	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	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	103	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	103	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	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			

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

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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.

11/10/10

Report Date



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10102805-05A
Client I.D. Number: MW-11-1

Sampled: 10/27/10 09:17
Received: 10/28/10
Extracted: 11/03/10 00:48
Analyzed: 11/03/10 00:48

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	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-Dichloroethane	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	105	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	101	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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11/10/10

Report Date



Alpha Analytical, Inc.

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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10102805-06A
Client I.D. Number: EB-06-10/27/10

Sampled: 10/27/10 09:05
Received: 10/28/10
Extracted: 11/02/10 19:41
Analyzed: 11/02/10 19:41

Volatile Organics by GC/MS EPA Method SW8260B

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

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

Roger Scholl *Randy Gardner* *Walter Hinchman*

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

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

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

11/10/10

Report Date



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10102805-07A
Client I.D. Number: TB-06-10/27/10

Sampled: 10/27/10 07:00
Received: 10/28/10
Extracted: 11/02/10 19:19
Analyzed: 11/02/10 19:19

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	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-Dichloroethane	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	1.0 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	ND	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	ND	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	ND	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	110	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	103	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	98	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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11/10/10

Report Date



Alpha Analytical, Inc.

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VOC Sample Preservation Report

Work Order: BMI10102805

Job: G005862/JPL Groundwater Monitoring

Alpha's Sample ID	Client's Sample ID	Matrix	pH
10102805-01A	MW-11-5	Aqueous	2
10102805-02A	MW-11-4	Aqueous	2
10102805-03A	MW-11-3	Aqueous	2
10102805-04A	MW-11-2	Aqueous	2
10102805-05A	MW-11-1	Aqueous	2
10102805-06A	EB-06-10/27/10	Aqueous	2
10102805-07A	TB-06-10/27/10	Aqueous	2

11/10/10
Report Date

Page 1 of 1



Alpha Analytical, Inc.

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Date:
10-Nov-10

QC Summary Report

Work Order:
10102805

Method Blank

Type: MBLK Test Code: EPA Method 300.0

File ID: 22	Units : mg/L		Batch ID: 25356		Analysis Date: 10/29/2010 09:39					
Sample ID: MB-25356	Run ID: IC_1_101029A		Prep Date: 10/29/2010 08:40							
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	ND	0.5								
Nitrite (NO2) - N	ND	0.25								
Nitrate (NO3) - N	ND	0.25								
Phosphate, ortho - P	ND	0.5								
Sulfate (SO4)	ND	0.5								

Laboratory Fortified Blank

Type: LFB Test Code: EPA Method 300.0

File ID: 23	Units : mg/L		Batch ID: 25356		Analysis Date: 10/29/2010 09:58					
Sample ID: LFB-25356	Run ID: IC_1_101029A		Prep Date: 10/29/2010 08:40							
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	48.8	0.5	50		98	90	110			
Nitrite (NO2) - N	4.71	0.25	5		94	90	110			
Nitrate (NO3) - N	4.68	0.25	5		94	90	110			
Phosphate, ortho - P	4.76	0.5	5		95	90	110			
Sulfate (SO4)	96.1	0.5	100		96	90	110			

Sample Matrix Spike

Type: LFM Test Code: EPA Method 300.0

File ID: 41	Units : mg/L		Batch ID: 25356		Analysis Date: 10/29/2010 15:53					
Sample ID: 10102905-01ALFM	Run ID: IC_1_101029A		Prep Date: 10/29/2010 08:40							
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	137	0.5	100	58.37	79	80	120			M2
Nitrite (NO2) - N	9.5	0.25	10	0	95	80	120			
Nitrate (NO3) - N	17.3	0.25	10	9.679	76	80	120			M2
Phosphate, ortho - P	10.5	0.5	10	0	105	80	120			
Sulfate (SO4)	238	0.5	200	67.42	85	80	120			

Sample Matrix Spike Duplicate

Type: LFMD Test Code: EPA Method 300.0

File ID: 42	Units : mg/L		Batch ID: 25356		Analysis Date: 10/29/2010 16:12					
Sample ID: 10102905-01ALFMD	Run ID: IC_1_101029A		Prep Date: 10/29/2010 08:40							
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	140	0.5	100	58.37	81	80	120	136.9	1.9(15)	
Nitrite (NO2) - N	9.72	0.25	10	0	97	80	120	9.5	2.3(15)	
Nitrate (NO3) - N	17.8	0.25	10	9.679	81	80	120	17.25	2.9(15)	
Phosphate, ortho - P	10.9	0.5	10	0	109	80	120	10.52	3.5(15)	
Sulfate (SO4)	241	0.5	200	67.42	87	80	120	238.2	1.1(15)	

Comments:

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

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

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



Alpha Analytical, Inc.

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Date:
09-Nov-10

QC Summary Report

Work Order:
10102805

Method Blank

File ID: 14	Type: MBLK	Test Code: EPA Method 314.0	Batch ID: 25358	Analysis Date: 10/29/2010 10:10						
Sample ID: MB-25358	Units : µg/L	Run ID: IC_3_101029A	Prep Date: 10/29/2010 09:13							
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	ND	1								

Laboratory Fortified Blank

File ID: 15	Type: LFB	Test Code: EPA Method 314.0	Batch ID: 25358	Analysis Date: 10/29/2010 10:28						
Sample ID: LFB-25358	Units : µg/L	Run ID: IC_3_101029A	Prep Date: 10/29/2010 09:13							
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	25.9	2	25		104	85	115			

Sample Matrix Spike

File ID: 18	Type: LFM	Test Code: EPA Method 314.0	Batch ID: 25358	Analysis Date: 10/29/2010 11:30						
Sample ID: 10102703-21ALFM	Units : µg/L	Run ID: IC_3_101029A	Prep Date: 10/29/2010 09:13							
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	31.5	2	25	5.979	102	80	120			

Sample Matrix Spike Duplicate

File ID: 18	Type: LFMD	Test Code: EPA Method 314.0	Batch ID: 25358	Analysis Date: 11/03/2010 13:13						
Sample ID: 10102703-21ALFMD	Units : µg/L	Run ID: IC_3_101029A	Prep Date: 10/29/2010 09:13							
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	31.8	2	25	5.979	103	80	120	31.47	0.9(15)	

Comments:

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



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Date:
04-Nov-10

QC Summary Report

Work Order:
10102805

Method Blank

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

File ID: 102810.B\090_M.D\

Batch ID: 25354

Analysis Date: 10/29/2010 04:52

Sample ID: MB-25354

Units : mg/L

Run ID: ICP/MS_101029B

Prep Date: 10/28/2010 20:06

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: 102810.B\091_M.D\

Batch ID: 25354

Analysis Date: 10/29/2010 04:58

Sample ID: LCS-25354

Units : mg/L

Run ID: ICP/MS_101029B

Prep Date: 10/28/2010 20:06

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0471	0.005	0.05		94	85	115			

Sample Matrix Spike

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

File ID: 102810.B\096_M.D\

Batch ID: 25354

Analysis Date: 10/29/2010 05:30

Sample ID: 10102805-02AMS

Units : mg/L

Run ID: ICP/MS_101029B

Prep Date: 10/28/2010 20:06

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0472	0.005	0.05	0	94	70	130			

Sample Matrix Spike Duplicate

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

File ID: 102810.B\097_M.D\

Batch ID: 25354

Analysis Date: 10/29/2010 05:35

Sample ID: 10102805-02AMSD

Units : mg/L

Run ID: ICP/MS_101029B

Prep Date: 10/28/2010 20:06

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0477	0.005	0.05	0	95	70	130	0.04721	1.0(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:
05-Nov-10

QC Summary Report

Work Order:
10102805

Method Blank

File ID: 10110206.D

Sample ID: MBLK MS15W1102M

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	ND	0.5								
Chloromethane	ND	1								
Vinyl chloride	ND	0.5								
Chloroethane	ND	0.5								
Bromomethane	ND	1								
Trichlorofluoromethane	ND	0.5								
1,1-Dichloroethene	ND	0.5								
Dichloromethane	ND	1								
Freon-113	ND	0.5								
trans-1,2-Dichloroethene	ND	0.5								
Methyl tert-butyl ether (MTBE)	ND	0.5								
1,1-Dichloroethane	ND	0.5								
2-Butanone (MEK)	ND	10								
cis-1,2-Dichloroethene	ND	0.5								
Bromochloromethane	ND	0.5								
Chloroform	ND	0.5								
2,2-Dichloropropane	ND	0.5								
1,2-Dichloroethane	ND	0.5								
1,1,1-Trichloroethane	ND	0.5								
1,1-Dichloropropene	ND	0.5								
Carbon tetrachloride	ND	0.5								
Benzene	ND	0.5								
Dibromomethane	ND	0.5								
1,2-Dichloropropane	ND	0.5								
Trichloroethene	ND	0.5								
Bromodichloromethane	ND	0.5								
4-Methyl-2-pentanone (MIBK)	ND	2.5								
cis-1,3-Dichloropropene	ND	0.5								
trans-1,3-Dichloropropene	ND	0.5								
1,1,2-Trichloroethane	ND	0.5								
Toluene	ND	0.5								
1,3-Dichloropropane	ND	0.5								
Dibromochloromethane	ND	0.5								
1,2-Dibromoethane (EDB)	ND	1								
Tetrachloroethene	ND	0.5								
1,1,1,2-Tetrachloroethane	ND	0.5								
Chlorobenzene	ND	0.5								
Ethylbenzene	ND	0.5								
m,p-Xylene	ND	0.5								
Bromoform	ND	0.5								
Styrene	ND	0.5								
o-Xylene	ND	0.5								
1,1,2,2-Tetrachloroethane	ND	0.5								
1,2,3-Trichloropropane	ND	1								
Isopropylbenzene	ND	0.5								
Bromobenzene	ND	0.5								
n-Propylbenzene	ND	0.5								
4-Chlorotoluene	ND	0.5								
2-Chlorotoluene	ND	0.5								
1,3,5-Trimethylbenzene	ND	0.5								
tert-Butylbenzene	ND	0.5								
1,2,4-Trimethylbenzene	ND	0.5								
sec-Butylbenzene	ND	0.5								
1,3-Dichlorobenzene	ND	0.5								
1,4-Dichlorobenzene	ND	0.5								
4-Isopropyltoluene	ND	0.5								
1,2-Dichlorobenzene	ND	0.5								
n-Butylbenzene	ND	0.5								
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5								
1,2,4-Trichlorobenzene	ND	1								
Naphthalene	ND	1								
Hexachlorobutadiene	ND	1								
1,2,3-Trichlorobenzene	ND	1								
Surr: 1,2-Dichloroethane-d4	10.7		10		107	70	130			
Surr: Toluene-d8	10.4		10		104	70	130			



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Date:
05-Nov-10

QC Summary Report

Work Order:
10102805

Surr: 4-Bromofluorobenzene

9.62

10

96

70

130



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Date:
05-Nov-10

QC Summary Report

Work Order:
10102805

Laboratory Control Spike

Type **LCS** Test Code: **EPA Method SW8260B**

File ID: **10110203.D**

Batch ID: **MS15W1102M**

Analysis Date: **11/02/2010 15:31**

Sample ID: **LCS MS15W1102M**

Units: **µg/L**

Run ID: **MSD_15_101102A**

Prep Date: **11/02/2010 15:31**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	8.35	1	10		84	70	130			
Chloromethane	5.25	2	10		53	70(70)	130			L50
Vinyl chloride	9.4	1	10		94	70	130			
Chloroethane	9.48	1	10		95	70	130			
Bromomethane	3.78	2	10		38	70(70)	130			L50
Trichlorofluoromethane	9.71	1	10		97	70	130			
1,1-Dichloroethene	10.3	1	10		103	70	130			
Dichloromethane	9.52	2	10		95	70	130			
Freon-113	11.1	1	10		111	67	141			
trans-1,2-Dichloroethene	10.4	1	10		104	70	130			
Methyl tert-butyl ether (MTBE)	9.58	0.5	10		96	70	130			
1,1-Dichloroethane	10.2	1	10		102	70	130			
2-Butanone (MEK)	190	10	200		95	70	130			
cis-1,2-Dichloroethene	10.2	1	10		102	70	130			
Bromochloromethane	9.86	1	10		99	70	130			
Chloroform	9.76	1	10		98	70	130			
2,2-Dichloropropane	10	1	10		100	70	130			
1,2-Dichloroethane	10	1	10		100	70	130			
1,1,1-Trichloroethane	10.3	1	10		103	70	130			
1,1-Dichloropropene	10.5	1	10		105	70	130			
Carbon tetrachloride	10.2	1	10		102	70	130			
Benzene	10.2	0.5	10		102	70	130			
Dibromomethane	9.69	1	10		97	70	130			
1,2-Dichloropropane	10	1	10		100	70	130			
Trichloroethene	10.2	1	10		102	70	130			
Bromodichloromethane	10.9	1	10		109	70	130			
4-Methyl-2-pentanone (MIBK)	24.2	2.5	25		97	20	182			
cis-1,3-Dichloropropene	10.1	1	10		101	70	130			
trans-1,3-Dichloropropene	9.26	1	10		93	70	130			
1,1,2-Trichloroethane	9.68	1	10		97	70	130			
Toluene	9.89	0.5	10		99	70	130			
1,3-Dichloropropane	9.94	1	10		99	70	130			
Dibromochloromethane	9.5	1	10		95	70	130			
1,2-Dibromoethane (EDB)	20	2	20		99.8	70	130			
Tetrachloroethene	10.4	1	10		104	70	130			
1,1,1,2-Tetrachloroethane	10.6	1	10		106	70	130			
Chlorobenzene	10.1	1	10		101	70	130			
Ethylbenzene	10.3	0.5	10		103	70	130			
m,p-Xylene	10.1	0.5	10		101	70	130			
Bromoform	9.39	1	10		94	70	130			
Styrene	10.3	1	10		103	70	130			
o-Xylene	10	0.5	10		100	70	130			
1,1,2,2-Tetrachloroethane	9.4	1	10		94	70	130			
1,2,3-Trichloropropane	19.6	2	20		98	70	130			
Isopropylbenzene	9.73	1	10		97	70	130			
Bromobenzene	9.96	1	10		99.6	70	130			
n-Propylbenzene	10.1	1	10		101	70	130			
4-Chlorotoluene	9.99	1	10		99.9	70	130			
2-Chlorotoluene	9.93	1	10		99	70	130			
1,3,5-Trimethylbenzene	9.84	1	10		98	70	130			
tert-Butylbenzene	9.6	1	10		96	70	130			
1,2,4-Trimethylbenzene	9.84	1	10		98	70	130			
sec-Butylbenzene	9.94	1	10		99	70	130			
1,3-Dichlorobenzene	10.2	1	10		102	70	130			
1,4-Dichlorobenzene	9.63	1	10		96	70	130			
4-Isopropyltoluene	9.83	1	10		98	70	130			
1,2-Dichlorobenzene	9.4	1	10		94	70	130			
n-Butylbenzene	10.1	1	10		101	70	130			
1,2-Dibromo-3-chloropropane (DBCP)	46.9	3	50		94	70	130			
1,2,4-Trichlorobenzene	8.16	2	10		82	70	130			
Naphthalene	6.18	2	10		62	70(70)	130			L50
Hexachlorobutadiene	17.3	2	20		86	70	130			
1,2,3-Trichlorobenzene	7.86	2	10		79	70	130			
Surr: 1,2-Dichloroethane-d4	10.1		10		101	70	130			



Alpha Analytical, Inc.

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

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

Date:
05-Nov-10

QC Summary Report

Work Order:
10102805

Surr: Toluene-d8	9.76	10	98	70	130
Surr: 4-Bromofluorobenzene	9.61	10	96	70	130



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Date:
05-Nov-10

QC Summary Report

Work Order:
10102805

Sample Matrix Spike

File ID: 10110207.D

Sample ID: 10102703-21AMS

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	32.3	2.5	50	0	65	13	167			
Chloromethane	29.8	10	50	0	60	28	145			
Vinyl chloride	45.4	2.5	50	0	91	43	134			
Chloroethane	44.3	2.5	50	0	89	39	154			
Bromomethane	21.8	10	50	0	44	19	176			
Trichlorofluoromethane	45.9	2.5	50	0	92	34	160			
1,1-Dichloroethene	49.2	2.5	50	0	98	60	130			
Dichloromethane	45.9	10	50	0	92	68	130			
Freon-113	52.4	2.5	50	0	105	49	141			
trans-1,2-Dichloroethene	49.8	2.5	50	0	99.6	63	130			
Methyl tert-butyl ether (MTBE)	53.6	1.3	50	0	107	56	141			
1,1-Dichloroethane	48.7	2.5	50	0	97	61	130			
2-Butanone (MEK)	854	50	1000	0	85	20	182			
cis-1,2-Dichloroethene	47.4	2.5	50	0	95	70	130			
Bromochloromethane	50.6	2.5	50	0	101	70	130			
Chloroform	48.5	2.5	50	0	97	67	130			
2,2-Dichloropropane	43.7	2.5	50	0	87	30	152			
1,2-Dichloroethane	51.9	2.5	50	0	104	60	135			
1,1,1-Trichloroethane	49.4	2.5	50	0	99	59	137			
1,1-Dichloropropene	50.3	2.5	50	0	101	63	130			
Carbon tetrachloride	49.1	2.5	50	0	98	50	147			
Benzene	49	1.3	50	0	98	67	130			
Dibromomethane	52	2.5	50	0	104	69	133			
1,2-Dichloropropane	49.1	2.5	50	0	98	69	130			
Trichloroethene	49.7	2.5	50	1.2	97	69	130			
Bromodichloromethane	53.6	2.5	50	0	107	66	134			
4-Methyl-2-pentanone (MIBK)	132	13	125	0	106	20	182			
cis-1,3-Dichloropropene	48	2.5	50	0	96	63	130			
trans-1,3-Dichloropropene	47.4	2.5	50	0	95	66	131			
1,1,2-Trichloroethane	52.5	2.5	50	0	105	68	130			
Toluene	46.3	1.3	50	0	93	66	130			
1,3-Dichloropropane	50.3	2.5	50	0	101	70	130			
Dibromochloromethane	47.9	2.5	50	0	96	70	130			
1,2-Dibromoethane (EDB)	102	5	100	0	102	70	130			
Tetrachloroethene	47.9	2.5	50	0	96	61	134			
1,1,1,2-Tetrachloroethane	49.7	2.5	50	0	99	70	130			
Chlorobenzene	46.5	2.5	50	0	93	70	130			
Ethylbenzene	47.3	1.3	50	0	95	68	130			
m,p-Xylene	47.6	1.3	50	0	95	64	130			
Bromoform	49.1	2.5	50	0	98	64	138			
Styrene	48.2	2.5	50	0	96	69	130			
o-Xylene	46.7	1.3	50	0	93	70	130			
1,1,2,2-Tetrachloroethane	50.4	2.5	50	0	101	65	131			
1,2,3-Trichloropropane	103	10	100	0	103	70	130			
Isopropylbenzene	42.2	2.5	50	0	84	64	138			
Bromobenzene	45.5	2.5	50	0	91	70	130			
n-Propylbenzene	44.2	2.5	50	0	88	66	132			
4-Chlorotoluene	43.8	2.5	50	0	88	70	130			
2-Chlorotoluene	43.5	2.5	50	0	87	70	130			
1,3,5-Trimethylbenzene	43.3	2.5	50	0	87	66	136			
tert-Butylbenzene	42.2	2.5	50	0	84	65	137			
1,2,4-Trimethylbenzene	43.9	2.5	50	0	88	65	137			
sec-Butylbenzene	43.5	2.5	50	0	87	66	134			
1,3-Dichlorobenzene	45.8	2.5	50	0	92	70	130			
1,4-Dichlorobenzene	44.2	2.5	50	0	88	70	130			
4-Isopropyltoluene	43	2.5	50	0	86	66	137			
1,2-Dichlorobenzene	43.8	2.5	50	0	88	70	130			
n-Butylbenzene	44.3	2.5	50	0	89	60	142			
1,2-Dibromo-3-chloropropane (DBCP)	240	15	250	0	96	67	130			
1,2,4-Trichlorobenzene	39.5	10	50	0	79	61	137			
Naphthalene	33.1	10	50	0	66	40	167			
Hexachlorobutadiene	81	10	100	0	81	61	130			
1,2,3-Trichlorobenzene	39.2	10	50	0	78	51	144			
Surr: 1,2-Dichloroethane-d4	52.9		50		106	70	130			
Surr: Toluene-d8	47.4		50		95	70	130			



Alpha Analytical, Inc.

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Date:
05-Nov-10

QC Summary Report

Work Order:
10102805

Surr: 4-Bromofluorobenzene

45.3

50

91

70

130



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Date:
05-Nov-10

QC Summary Report

Work Order:
10102805

Sample Matrix Spike Duplicate

Type **MSD** Test Code: **EPA Method SW8260B**

File ID: **10110208.D**

Batch ID: **MS15W1102M**

Analysis Date: **11/02/2010 17:29**

Sample ID: **10102703-21AMSD**

Units : **µg/L**

Run ID: **MSD_15_101102A**

Prep Date: **11/02/2010 17:29**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	31	2.5	50	0	62	13	167	32.27	4.1(20)	
Chloromethane	29	10	50	0	58	28	145	29.83	2.9(20)	
Vinyl chloride	44.7	2.5	50	0	89	43	134	45.35	1.5(20)	
Chloroethane	43.1	2.5	50	0	86	39	154	44.29	2.8(20)	
Bromomethane	27.3	10	50	0	55	19	176	21.79	22.5(20)	R58
Trichlorofluoromethane	44.1	2.5	50	0	88	34	160	45.92	4.1(20)	
1,1-Dichloroethene	47.7	2.5	50	0	95	60	130	49.16	3.0(20)	
Dichloromethane	45	10	50	0	90	68	130	45.87	2.0(20)	
Freon-113	50.6	2.5	50	0	101	49	141	52.44	3.7(20)	
trans-1,2-Dichloroethene	48.7	2.5	50	0	97	63	130	49.81	2.3(20)	
Methyl tert-butyl ether (MTBE)	51.7	1.3	50	0	103	56	141	53.64	3.6(20)	
1,1-Dichloroethane	48	2.5	50	0	96	61	130	48.66	1.4(20)	
2-Butanone (MEK)	840	50	1000	0	84	20	182	854.4	1.7(20)	
cis-1,2-Dichloroethene	48.2	2.5	50	0	96	70	130	47.35	1.8(20)	
Bromochloromethane	49.5	2.5	50	0	99	70	130	50.6	2.3(20)	
Chloroform	47.5	2.5	50	0	95	67	130	48.51	2.1(20)	
2,2-Dichloropropane	42.3	2.5	50	0	85	30	152	43.72	3.3(20)	
1,2-Dichloroethane	51	2.5	50	0	102	60	135	51.93	1.9(20)	
1,1,1-Trichloroethane	48.4	2.5	50	0	97	59	137	49.4	2.1(20)	
1,1-Dichloropropene	49.4	2.5	50	0	99	63	130	50.31	1.9(20)	
Carbon tetrachloride	49.6	2.5	50	0	99	50	147	49.07	1.0(20)	
Benzene	47.7	1.3	50	0	95	67	130	49.01	2.8(20)	
Dibromomethane	50.1	2.5	50	0	100	69	133	51.98	3.6(20)	
1,2-Dichloropropane	48.6	2.5	50	0	97	69	130	49.05	0.9(20)	
Trichloroethene	48.8	2.5	50	1.2	95	69	130	49.72	1.8(20)	
Bromodichloromethane	52.7	2.5	50	0	105	66	134	53.57	1.6(20)	
4-Methyl-2-pentanone (MIBK)	127	13	125	0	101	20	182	132.3	4.4(20)	
cis-1,3-Dichloropropene	47.1	2.5	50	0	94	63	130	48.02	1.9(20)	
trans-1,3-Dichloropropene	45.6	2.5	50	0	91	66	131	47.4	4.0(20)	
1,1,2-Trichloroethane	50	2.5	50	0	100	68	130	52.54	5.0(20)	
Toluene	44.9	1.3	50	0	90	66	130	46.28	3.0(20)	
1,3-Dichloropropane	49.3	2.5	50	0	99	70	130	50.26	2.0(20)	
Dibromochloromethane	48.3	2.5	50	0	97	70	130	47.86	1.0(20)	
1,2-Dibromoethane (EDB)	98.8	5	100	0	99	70	130	102.1	3.2(20)	
Tetrachloroethene	47.4	2.5	50	0	95	61	134	47.92	1.0(20)	
1,1,1,2-Tetrachloroethane	50	2.5	50	0	100	70	130	49.73	0.6(20)	
Chlorobenzene	46.5	2.5	50	0	93	70	130	46.48	0.0(20)	
Ethylbenzene	46.6	1.3	50	0	93	68	130	47.33	1.6(20)	
m,p-Xylene	46.6	1.3	50	0	93	64	130	47.6	2.1(20)	
Bromoform	48.5	2.5	50	0	97	64	138	49.05	1.1(20)	
Styrene	47.8	2.5	50	0	96	69	130	48.17	0.8(20)	
o-Xylene	46.3	1.3	50	0	93	70	130	46.72	0.8(20)	
1,1,2,2-Tetrachloroethane	49.3	2.5	50	0	99	65	131	50.41	2.2(20)	
1,2,3-Trichloropropane	99.1	10	100	0	99	70	130	103.5	4.3(20)	
Isopropylbenzene	42.5	2.5	50	0	85	64	138	42.19	0.7(20)	
Bromobenzene	45.5	2.5	50	0	91	70	130	45.53	0.1(20)	
n-Propylbenzene	43.6	2.5	50	0	87	66	132	44.24	1.4(20)	
4-Chlorotoluene	44.2	2.5	50	0	88	70	130	43.76	1.1(20)	
2-Chlorotoluene	44.2	2.5	50	0	88	70	130	43.53	1.6(20)	
1,3,5-Trimethylbenzene	43.5	2.5	50	0	87	66	136	43.3	0.3(20)	
tert-Butylbenzene	42.3	2.5	50	0	85	65	137	42.17	0.3(20)	
1,2,4-Trimethylbenzene	43.7	2.5	50	0	87	65	137	43.89	0.4(20)	
sec-Butylbenzene	43.9	2.5	50	0	88	66	134	43.52	0.9(20)	
1,3-Dichlorobenzene	47	2.5	50	0	94	70	130	45.83	2.6(20)	
1,4-Dichlorobenzene	44.5	2.5	50	0	89	70	130	44.15	0.7(20)	
4-Isopropyltoluene	43.2	2.5	50	0	86	66	137	42.99	0.5(20)	
1,2-Dichlorobenzene	44.3	2.5	50	0	89	70	130	43.76	1.3(20)	
n-Butylbenzene	45.1	2.5	50	0	90	60	142	44.27	1.8(20)	
1,2-Dibromo-3-chloropropane (DBCP)	238	15	250	0	95	67	130	239.5	0.7(20)	
1,2,4-Trichlorobenzene	40.4	10	50	0	81	61	137	39.48	2.4(20)	
Naphthalene	35.1	10	50	0	70	40	167	33.12	5.9(20)	
Hexachlorobutadiene	84.8	10	100	0	85	61	130	81.03	4.5(20)	
1,2,3-Trichlorobenzene	41.3	10	50	0	83	51	144	39.18	5.2(20)	
Surr: 1,2-Dichloroethane-d4	53		50		106	70	130			
Surr: Toluene-d8	47.7		50		95	70	130			



Alpha Analytical, Inc.

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Date:
05-Nov-10

QC Summary Report

Work Order:
10102805

Surr: 4-Bromofluorobenzene	45.7	50	91	70	130
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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.

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

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

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 : BMIS10102805

Report Due By : 5:00 PM On : 11-Nov-2010

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

Report Attention **Phone Number** **Email Address**
 David Conner (619) 726-7311 x connerd@battelle.org
 Shane Walton (614) 424-4117 x waltonss@battelle.org
 Betsy Cutie (614) 424-4899 x cutiee@battelle.org

EDD Required : Yes

Sampled by : Chase Brogdon

Cooler Temp Samples Received Date Printed
 1 °C 28-Oct-2010 28-Oct-2010

Client's COC # : 29181 Job : G005862/JPL Groundwater Monitoring
 QC Level : DS4 = DOD QC Required : Final Rpt, MBLK, Initial/ConCal data, LCS, MS/MSD with Surrogates

Alpha Sample ID	Client Sample ID	Collection Matrix Date	No. of Bottles Alpha Sub	TAT	Requested Tests				Sample Remarks	
					300_0_W	314_W	METALS D W	VOC_TIC_W		VOC_W
BM110102805-01A	MW-11-5	AQ 10/27/10 07:32	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	
BM110102805-02A	MW-11-4	AQ 10/27/10 08:01	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	Level IV QC
BM110102805-03A	MW-11-3	AQ 10/27/10 08:27	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	
BM110102805-04A	MW-11-2	AQ 10/27/10 08:50	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	
BM110102805-05A	MW-11-1	AQ 10/27/10 09:17	5	0	10	NO2, NO3, SO4, Cl, PO4	Cr	VOC by 524 Criteria	VOC by 524 Criteria	
BM110102805-06A	EB-06-10/27/10	AQ 10/27/10 09:05	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	
BM110102805-07A	TB-06-10/27/10	AQ 10/27/10 07:00	1	0	10			VOC by 524 Criteria	VOC by 524 Criteria	Reno Trip Blank 8/12/10

Comments: Security seals intact. Frozen ice. Temp Blank #9105 received @ 1°C. Level IV QC. Samples should be used as the control spike sample if possible (I.E. MS/MSD).

Logged in by: Elizabeth Alder Signature: [Signature] Print Name: Elizabeth Alder
 Company: Alpha Analytical, Inc. Date/Time: 10-28-10 1153

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 GENERAL TOMPKINS/BATELLE
 Address 505 KINF 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? 29181
 AZ _____ CA NV _____ WA _____
 ID _____ OR _____ OTHER _____ Page # 1 of 1

Analyses Required

Client Name BATELLE/DAVID CONNER P.O. # 218013 Job # 6005862
 Address 3990 OLD TOWN AVE, C-205 Email Address _____
 City, State, Zip SAN BERTO, CA 92410 Phone # (619) 726-7211 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	Required QC Level?	EDD / EDF? YES NO	REMARKS
0732	10/27/10	AQ	CHASE BRADON	BMT10102805-01			MW-11-5			3v, 2p	I		OC LEVEL III
0801							MW-11-4			X	II		
0827							MW-11-3			X	III		
0852							MW-11-2			X	IV		
0912							MW-11-1			X			
0905							OB-06-10/27/10			X			EQUIPMENT BLANK
0700	10/27/10	AQ					773-06-10/27/10			1v			TRAP BLANK

vol's (524.2)
 TOTAL CC (200.8)
 Clay - (314.0)
 Cr, Sa, Mg, Nox, Pox (300.0)

ADDITIONAL INSTRUCTIONS:

Signature	Print Name	Company	Date	Time
<i>[Signature]</i>	CHASE BRADON	INSIGHT RESOURCE	10/27/10	1300
<i>[Signature]</i>	Elizabeth Adcox	Alpha	10-28-10	1153
Received by				
Relinquished by				
Received by				
Relinquished by				
Received by				
Relinquished 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-Nov-2010

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

Suite 1420

CASE NARRATIVE

Job: G005862/JPL Groundwater Monitoring

Work Order: BMI10102907

Cooler Temp: 0 °C

Alpha's Sample ID	Client's Sample ID	Matrix
10102907-01A	MW-22-5	Aqueous
10102907-02A	MW-22-4	Aqueous
10102907-03A	MW-22-3	Aqueous
10102907-04A	MW-22-2	Aqueous
10102907-05A	MW-22-1	Aqueous
10102907-06A	DUPE-03-4Q10	Aqueous
10102907-07A	EB-07-10/28/10	Aqueous
10102907-08A	TB-07-10/28/10	Aqueous

Manually Integrated Analytes

Alpha's Sample ID	Test Reference	Analyte
NONE		

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

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

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

Roger Scholl

Randy Gardner

Walter Hinchman

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

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

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



Alpha Analytical, Inc.

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ANALYTICAL REPORT

Battelle Memorial Institute
655 West Broadway
San Diego, CA 92101

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

Job: G005862/JPL Groundwater Monitoring

Perchlorate by Ion Chromatography
EPA Method 314.0

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: MW-22-5				
Lab ID : BMI10102907-01A Perchlorate Date Sampled 10/28/10 08:25	ND	1.00 µg/L	11/03/10 10:48	11/03/10 13:31
Client ID: MW-22-4				
Lab ID : BMI10102907-02A Perchlorate Date Sampled 10/28/10 08:47	ND	1.00 µg/L	11/03/10 10:48	11/03/10 13:50
Client ID: MW-22-3				
Lab ID : BMI10102907-03A Perchlorate Date Sampled 10/28/10 09:11	1.98	1.00 µg/L	11/03/10 10:48	11/03/10 14:08
Client ID: MW-22-2				
Lab ID : BMI10102907-04A Perchlorate Date Sampled 10/28/10 09:47	2.51	1.00 µg/L	11/03/10 10:48	11/03/10 14:26
Client ID: MW-22-1				
Lab ID : BMI10102907-05A Perchlorate Date Sampled 10/28/10 10:13	2.31	1.00 µg/L	11/03/10 10:48	11/03/10 14:45
Client ID: DUPE-03-4Q10				
Lab ID : BMI10102907-06A Perchlorate Date Sampled 10/28/10 00:00	2.56	1.00 µg/L	11/03/10 10:48	11/03/10 15:03
Client ID: EB-07-10/28/10				
Lab ID : BMI10102907-07A Perchlorate Date Sampled 10/28/10 10:04	ND	1.00 µg/L	11/03/10 10:48	11/03/10 15:22

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
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11/10/10
Report Date



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

Battelle Memorial Institute
655 West Broadway
San Diego, CA 92101

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

Job: G005862/JPL Groundwater Monitoring

Metals by ICPMS
EPA Method 200.8

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: MW-22-5				
Lab ID : BMI10102907-01A Chromium (Cr)	ND	0.0050 mg/L	11/03/10 11:33	11/03/10 17:20
Date Sampled 10/28/10 08:25				
Client ID: MW-22-4				
Lab ID : BMI10102907-02A Chromium (Cr)	ND	0.0050 mg/L	11/03/10 11:33	11/03/10 17:26
Date Sampled 10/28/10 08:47				
Client ID: MW-22-3				
Lab ID : BMI10102907-03A Chromium (Cr)	ND	0.0050 mg/L	11/03/10 11:33	11/03/10 17:34
Date Sampled 10/28/10 09:11				
Client ID: MW-22-2				
Lab ID : BMI10102907-04A Chromium (Cr)	ND	0.0050 mg/L	11/03/10 11:33	11/03/10 17:52
Date Sampled 10/28/10 09:47				
Client ID: MW-22-1				
Lab ID : BMI10102907-05A Chromium (Cr)	ND	0.0050 mg/L	11/03/10 11:33	11/03/10 17:57
Date Sampled 10/28/10 10:13				
Client ID: DUPE-03-4Q10				
Lab ID : BMI10102907-06A Chromium (Cr)	ND	0.0050 mg/L	11/03/10 11:33	11/03/10 18:03
Date Sampled 10/28/10 00:00				
Client ID: EB-07-10/28/10				
Lab ID : BMI10102907-07A Chromium (Cr)	ND	0.0050 mg/L	11/03/10 11:33	11/03/10 17:08
Date Sampled 10/28/10 10:04				

ND = Not Detected

Roger Scholl *Randy Gardner* *Walter Hinchman*

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

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

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

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: BM110102907-01A Date Received: 10/29/10 Date Sampled: 10/28/10 08:25	*** None Found ***	ND	2.0 µg/L	11/03/10 21:36 11/03/10 21:36
Client ID: MW-22-4 Lab ID: BM110102907-02A Date Received: 10/29/10 Date Sampled: 10/28/10 08:47	*** None Found ***	ND	2.0 µg/L	11/03/10 21:57 11/03/10 21:57
Client ID: MW-22-3 Lab ID: BM110102907-03A Date Received: 10/29/10 Date Sampled: 10/28/10 09:11	*** None Found ***	ND	2.0 µg/L	11/03/10 22:19 11/03/10 22:19
Client ID: MW-22-2 Lab ID: BM110102907-04A Date Received: 10/29/10 Date Sampled: 10/28/10 09:47	*** None Found ***	ND	2.0 µg/L	11/03/10 22:41 11/03/10 22:41
Client ID: MW-22-1 Lab ID: BM110102907-05A Date Received: 10/29/10 Date Sampled: 10/28/10 10:13	*** None Found ***	ND	2.0 µg/L	11/03/10 23:03 11/03/10 23:03
Client ID: DUPE-03-4Q10 Lab ID: BM110102907-06A Date Received: 10/29/10 Date Sampled: 10/28/10 00:00	*** None Found ***	ND	2.0 µg/L	11/03/10 23:24 11/03/10 23:24
Client ID: EB-07-10/28/10 Lab ID: BM110102907-07A Date Received: 10/29/10 Date Sampled: 10/28/10 10:04	*** None Found ***	ND	2.0 µg/L	11/03/10 18:15 11/03/10 18:15
Client ID: TB-07-10/28/10 Lab ID: BM110102907-08A Date Received: 10/29/10 Date Sampled: 10/28/10 07:00	*** None Found ***	ND	2.0 µg/L	11/03/10 17:53 11/03/10 17:53



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Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

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

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11/10/10

Report Date

Page 1 of 1



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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10102907-01A
Client I.D. Number: MW-22-5

Sampled: 10/28/10 08:25
Received: 10/29/10
Extracted: 11/03/10 21:36
Analyzed: 11/03/10 21:36

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	Q 1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	Q 1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethene	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	10 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	ND	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	ND	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	ND	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	110	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	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 L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

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11/10/10

Report Date



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10102907-02A
Client I.D. Number: MW-22-4

Sampled: 10/28/10 08:47
Received: 10/29/10
Extracted: 11/03/10 21:57
Analyzed: 11/03/10 21:57

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	107	(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	95	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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[Signature]
11/10/10

Report Date



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10102907-03A
Client I.D. Number: MW-22-3

Sampled: 10/28/10 09:11
Received: 10/29/10
Extracted: 11/03/10 22:19
Analyzed: 11/03/10 22:19

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	Q 1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	Q 1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethene	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	10 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	ND	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	ND	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	ND	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	109	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	103	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	95	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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Report Date



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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10102907-04A
Client I.D. Number: MW-22-2

Sampled: 10/28/10 09:47
Received: 10/29/10
Extracted: 11/03/10 22:41
Analyzed: 11/03/10 22:41

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethene	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	10 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	ND	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	ND	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	ND	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	106	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	103	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	98	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

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

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11/10/10

Report Date



Alpha Analytical, Inc.

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

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10102907-05A
Client I.D. Number: MW-22-1

Sampled: 10/28/10 10:13
Received: 10/29/10
Extracted: 11/03/10 23:03
Analyzed: 11/03/10 23:03

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	Q 1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	Q 1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethene	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	0.51	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	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	109	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	104	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	99	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	2.0	0.50 µg/L			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10102907-06A
Client I.D. Number: DUPE-03-4Q10

Sampled: 10/28/10 00:00
Received: 10/29/10
Extracted: 11/03/10 23:24
Analyzed: 11/03/10 23:24

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethene	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	10 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	ND	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	ND	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	ND	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	108	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	105	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	98	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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

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11/10/10

Report Date



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10102907-07A
Client I.D. Number: EB-07-10/28/10

Sampled: 10/28/10 10:04
Received: 10/29/10
Extracted: 11/03/10 18:15
Analyzed: 11/03/10 18:15

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	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	112	(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			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10102907-08A
Client I.D. Number: TB-07-10/28/10

Sampled: 10/28/10 07:00
Received: 10/29/10
Extracted: 11/03/10 17:53
Analyzed: 11/03/10 17:53

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	Q 1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	Q 1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethene	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	10 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	ND	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	ND	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	ND	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	113	(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			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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11/10/10

Report Date

Page 1 of 1



Alpha Analytical, Inc.

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

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

VOC Sample Preservation Report

Work Order: BMI10102907

Job: G005862/JPL Groundwater Monitoring

Alpha's Sample ID	Client's Sample ID	Matrix	pH
10102907-01A	MW-22-5	Aqueous	2
10102907-02A	MW-22-4	Aqueous	2
10102907-03A	MW-22-3	Aqueous	2
10102907-04A	MW-22-2	Aqueous	2
10102907-05A	MW-22-1	Aqueous	2
10102907-06A	DUPE-03-4Q10	Aqueous	2
10102907-07A	EB-07-10/28/10	Aqueous	2
10102907-08A	TB-07-10/28/10	Aqueous	2

11/10/10
Report Date



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Date:
09-Nov-10

QC Summary Report

Work Order:
10102907

Method Blank

Type: MBLK Test Code: EPA Method 314.0

File ID: 15				Batch ID: 25385				Analysis Date: 11/03/2010 12:17		
Sample ID: MB-25385	Units : µg/L			Run ID: IC_3_101103A				Prep Date: 11/03/2010 10:48		
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: 16				Batch ID: 25385				Analysis Date: 11/03/2010 12:36		
Sample ID: LFB-25385	Units : µg/L			Run ID: IC_3_101103A				Prep Date: 11/03/2010 10:48		
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	25.9	2	25		104	85	115			

Sample Matrix Spike

Type: LFM Test Code: EPA Method 314.0

File ID: 28				Batch ID: 25385				Analysis Date: 11/03/2010 16:17		
Sample ID: 10110205-02ALFM	Units : µg/L			Run ID: IC_3_101103A				Prep Date: 11/03/2010 10:48		
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	22.9	2	25		0 91	80	120			

Sample Matrix Spike Duplicate

Type: LFMD Test Code: EPA Method 314.0

File ID: 29				Batch ID: 25385				Analysis Date: 11/03/2010 16:35		
Sample ID: 10110205-02ALFMD	Units : µg/L			Run ID: IC_3_101103A				Prep Date: 11/03/2010 10:48		
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	23.9	2	25		0 95	80	120	22.86	4.3(15)	

Comments:

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



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08-Nov-10

QC Summary Report

Work Order:
10102907

Method Blank

File ID: 110310.B\018_M.D\	Type MBLK	Test Code: EPA Method 200.8	Batch ID: 25388	Analysis Date: 11/03/2010 15:02						
Sample ID: MB-25388	Units : mg/L	Run ID: ICP/MS_101103A	Prep Date: 11/03/2010 11:33							
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	ND	0.005								

Laboratory Control Spike

File ID: 110310.B\019_M.D\	Type LCS	Test Code: EPA Method 200.8	Batch ID: 25388	Analysis Date: 11/03/2010 15:07						
Sample ID: LCS-25388	Units : mg/L	Run ID: ICP/MS_101103A	Prep Date: 11/03/2010 11:33							
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0555	0.005	0.05		111	85	115			

Sample Matrix Spike

File ID: 110310.B\024_M1.D\	Type MS	Test Code: EPA Method 200.8	Batch ID: 25388	Analysis Date: 11/03/2010 15:35						
Sample ID: 10110205-02AMS	Units : mg/L	Run ID: ICP/MS_101103A	Prep Date: 11/03/2010 11:33							
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0476	0.005	0.05	0	95	70	130			

Sample Matrix Spike Duplicate

File ID: 110310.B\024_M2.D\	Type MSD	Test Code: EPA Method 200.8	Batch ID: 25388	Analysis Date: 11/03/2010 15:40						
Sample ID: 10110205-02AMSD	Units : mg/L	Run ID: ICP/MS_101103A	Prep Date: 11/03/2010 11:33							
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0522	0.005	0.05	0	104	70	130	0.04758	9.2(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:
10102907

Method Blank

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

File ID: **10110307.D**

Batch ID: **MS15W1103M**

Analysis Date: **11/03/2010 15:36**

Sample ID: **MBLK MS15W1103M**

Units: **µg/L**

Run ID: **MSD_15_101103D**

Prep Date: **11/03/2010 15:36**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	ND	0.5								
Chloromethane	ND	1								
Vinyl chloride	ND	0.5								
Chloroethane	ND	0.5								
Bromomethane	ND	1								
Trichlorofluoromethane	ND	0.5								
1,1-Dichloroethene	ND	0.5								
Dichloromethane	ND	1								
Freon-113	ND	0.5								
trans-1,2-Dichloroethene	ND	0.5								
Methyl tert-butyl ether (MTBE)	ND	0.5								
1,1-Dichloroethane	ND	0.5								
2-Butanone (MEK)	ND	10								
cis-1,2-Dichloroethene	ND	0.5								
Bromochloromethane	ND	0.5								
Chloroform	ND	0.5								
2,2-Dichloropropane	ND	0.5								
1,2-Dichloroethane	ND	0.5								
1,1,1-Trichloroethane	ND	0.5								
1,1-Dichloropropene	ND	0.5								
Carbon tetrachloride	ND	0.5								
Benzene	ND	0.5								
Dibromomethane	ND	0.5								
1,2-Dichloropropane	ND	0.5								
Trichloroethene	ND	0.5								
Bromodichloromethane	ND	0.5								
4-Methyl-2-pentanone (MIBK)	ND	2.5								
cis-1,3-Dichloropropene	ND	0.5								
trans-1,3-Dichloropropene	ND	0.5								
1,1,2-Trichloroethane	ND	0.5								
Toluene	ND	0.5								
1,3-Dichloropropane	ND	0.5								
Dibromochloromethane	ND	0.5								
1,2-Dibromoethane (EDB)	ND	1								
Tetrachloroethene	ND	0.5								
1,1,1,2-Tetrachloroethane	ND	0.5								
Chlorobenzene	ND	0.5								
Ethylbenzene	ND	0.5								
m,p-Xylene	ND	0.5								
Bromoform	ND	0.5								
Styrene	ND	0.5								
o-Xylene	ND	0.5								
1,1,2,2-Tetrachloroethane	ND	0.5								
1,2,3-Trichloropropane	ND	1								
Isopropylbenzene	ND	0.5								
Bromobenzene	ND	0.5								
n-Propylbenzene	ND	0.5								
4-Chlorotoluene	ND	0.5								
2-Chlorotoluene	ND	0.5								
1,3,5-Trimethylbenzene	ND	0.5								
tert-Butylbenzene	ND	0.5								
1,2,4-Trimethylbenzene	ND	0.5								
sec-Butylbenzene	ND	0.5								
1,3-Dichlorobenzene	ND	0.5								
1,4-Dichlorobenzene	ND	0.5								
4-Isopropyltoluene	ND	0.5								
1,2-Dichlorobenzene	ND	0.5								
n-Butylbenzene	ND	0.5								
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5								
1,2,4-Trichlorobenzene	ND	1								
Naphthalene	ND	1								
Hexachlorobutadiene	ND	1								
1,2,3-Trichlorobenzene	ND	1								
Surr: 1,2-Dichloroethane-d4	11.1		10		111	70	130			
Surr: Toluene-d8	10.2		10		102	70	130			



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Work Order:
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Surr: 4-Bromofluorobenzene

9.8

10

98

70

130



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QC Summary Report

Work Order:
10102907

Laboratory Control Spike

Type LCS Test Code: EPA Method SW8260B

File ID: 10110303.D

Batch ID: MS15W1103M

Analysis Date: 11/03/2010 14:00

Sample ID: LCS MS15W1103M

Units: µg/L

Run ID: MSD_15_101103D

Prep Date: 11/03/2010 14:00

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	8.55	1	10		86	70	130			
Chloromethane	6.12	2	10		61	70(70)	130			L50
Vinyl chloride	10.1	1	10		101	70	130			
Chloroethane	9.75	1	10		98	70	130			
Bromomethane	4.79	2	10		48	70(70)	130			L2
Trichlorofluoromethane	9.88	1	10		99	70	130			
1,1-Dichloroethene	10.6	1	10		106	70	130			
Dichloromethane	9.54	2	10		95	70	130			
Freon-113	11.3	1	10		113	67	141			
trans-1,2-Dichloroethene	10.5	1	10		105	70	130			
Methyl tert-butyl ether (MTBE)	10.1	0.5	10		101	70	130			
1,1-Dichloroethane	10.1	1	10		101	70	130			
2-Butanone (MEK)	206	10	200		103	70	130			
cis-1,2-Dichloroethene	10.1	1	10		101	70	130			
Bromochloromethane	9.51	1	10		95	70	130			
Chloroform	9.99	1	10		99.9	70	130			
2,2-Dichloropropane	10.2	1	10		102	70	130			
1,2-Dichloroethane	10.4	1	10		104	70	130			
1,1,1-Trichloroethane	10.5	1	10		105	70	130			
1,1-Dichloropropene	10.5	1	10		105	70	130			
Carbon tetrachloride	10.2	1	10		102	70	130			
Benzene	10.1	0.5	10		101	70	130			
Dibromomethane	10	1	10		100	70	130			
1,2-Dichloropropane	9.92	1	10		99	70	130			
Trichloroethene	10.1	1	10		101	70	130			
Bromodichloromethane	10.9	1	10		109	70	130			
4-Methyl-2-pentanone (MIBK)	25.4	2.5	25		102	20	182			
cis-1,3-Dichloropropene	10	1	10		100	70	130			
trans-1,3-Dichloropropene	9.16	1	10		92	70	130			
1,1,2-Trichloroethane	9.75	1	10		98	70	130			
Toluene	9.72	0.5	10		97	70	130			
1,3-Dichloropropane	9.89	1	10		99	70	130			
Dibromochloromethane	9.61	1	10		96	70	130			
1,2-Dibromoethane (EDB)	19.9	2	20		99	70	130			
Tetrachloroethene	10.3	1	10		103	70	130			
1,1,1,2-Tetrachloroethane	10.3	1	10		103	70	130			
Chlorobenzene	9.91	1	10		99	70	130			
Ethylbenzene	10.1	0.5	10		101	70	130			
m,p-Xylene	10	0.5	10		100	70	130			
Bromoform	9.42	1	10		94	70	130			
Styrene	10.2	1	10		102	70	130			
o-Xylene	9.88	0.5	10		99	70	130			
1,1,2,2-Tetrachloroethane	9.78	1	10		98	70	130			
1,2,3-Trichloropropane	20.2	2	20		101	70	130			
Isopropylbenzene	9.51	1	10		95	70	130			
Bromobenzene	9.86	1	10		99	70	130			
n-Propylbenzene	9.91	1	10		99	70	130			
4-Chlorotoluene	9.7	1	10		97	70	130			
2-Chlorotoluene	9.66	1	10		97	70	130			
1,3,5-Trimethylbenzene	9.68	1	10		97	70	130			
tert-Butylbenzene	9.29	1	10		93	70	130			
1,2,4-Trimethylbenzene	9.68	1	10		97	70	130			
sec-Butylbenzene	9.73	1	10		97	70	130			
1,3-Dichlorobenzene	10.1	1	10		101	70	130			
1,4-Dichlorobenzene	9.42	1	10		94	70	130			
4-Isopropyltoluene	9.58	1	10		96	70	130			
1,2-Dichlorobenzene	9.24	1	10		92	70	130			
n-Butylbenzene	9.89	1	10		99	70	130			
1,2-Dibromo-3-chloropropane (DBCP)	46.3	3	50		93	70	130			
1,2,4-Trichlorobenzene	7.94	2	10		79	70	130			
Naphthalene	6.15	2	10		62	70(70)	130			L50
Hexachlorobutadiene	16.8	2	20		84	70	130			
1,2,3-Trichlorobenzene	7.5	2	10		75	70	130			
Surr: 1,2-Dichloroethane-d4	10.3		10		103	70	130			



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Surr: Toluene-d8	9.72	10	97	70	130
Surr: 4-Bromofluorobenzene	9.49	10	95	70	130



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QC Summary Report

Work Order:
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Sample Matrix Spike

File ID: 10110308.D

Type MS Test Code: EPA Method SW8260B

Batch ID: MS15W1103M

Analysis Date: 11/03/2010 15:59

Sample ID: 10110105-01AMS

Units: µg/L

Run ID: MSD_15_101103D

Prep Date: 11/03/2010 15:59

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	44.9	2.5	50	0	90	13	167			
Chloromethane	24.7	10	50	0	49	28	145			
Vinyl chloride	49.5	2.5	50	0	99	43	134			
Chloroethane	45.2	2.5	50	0	90	39	154			
Bromomethane	18.9	10	50	0	38	19	176			
Trichlorofluoromethane	46.9	2.5	50	0	94	34	160			
1,1-Dichloroethene	51	2.5	50	0	102	60	130			
Dichloromethane	50	10	50	0	100	68	130			
Freon-113	54.2	2.5	50	0	108	49	141			
trans-1,2-Dichloroethene	51.1	2.5	50	0	102	63	130			
Methyl tert-butyl ether (MTBE)	62.9	1.3	50	5.21	115	56	141			
1,1-Dichloroethane	49.5	2.5	50	0	99	61	130			
2-Butanone (MEK)	947	50	1000	0	95	20	182			
cis-1,2-Dichloroethene	60.6	2.5	50	10.54	100	70	130			
Bromochloromethane	48.6	2.5	50	0	97	70	130			
Chloroform	49.3	2.5	50	0	99	67	130			
2,2-Dichloropropane	44.8	2.5	50	0	90	30	152			
1,2-Dichloroethane	55	2.5	50	0	110	60	135			
1,1,1-Trichloroethane	51.2	2.5	50	0	102	59	137			
1,1-Dichloropropene	51.7	2.5	50	0	103	63	130			
Carbon tetrachloride	49.5	2.5	50	0	99	50	147			
Benzene	49.6	1.3	50	0	99	67	130			
Dibromomethane	55	2.5	50	0	110	69	133			
1,2-Dichloropropane	49.7	2.5	50	0	99	69	130			
Trichloroethene	48.9	2.5	50	0	98	69	130			
Bromodichloromethane	55.3	2.5	50	0	111	66	134			
4-Methyl-2-pentanone (MIBK)	144	13	125	0	115	20	182			
cis-1,3-Dichloropropene	49.3	2.5	50	0	99	63	130			
trans-1,3-Dichloropropene	49.1	2.5	50	0	98	66	131			
1,1,2-Trichloroethane	53.2	2.5	50	0	106	68	130			
Toluene	45.8	1.3	50	0	92	66	130			
1,3-Dichloropropane	52.1	2.5	50	0	104	70	130			
Dibromochloromethane	49.8	2.5	50	0	100	70	130			
1,2-Dibromoethane (EDB)	106	5	100	0	106	70	130			
Tetrachloroethene	47.9	2.5	50	0	96	61	134			
1,1,1,2-Tetrachloroethane	50.8	2.5	50	0	102	70	130			
Chlorobenzene	47.7	2.5	50	0	95	70	130			
Ethylbenzene	48.1	1.3	50	0	96	68	130			
m,p-Xylene	47.5	1.3	50	0	95	64	130			
Bromoform	51.4	2.5	50	0	103	64	138			
Styrene	49.2	2.5	50	0	98	69	130			
o-Xylene	47.2	1.3	50	0	94	70	130			
1,1,2,2-Tetrachloroethane	54.1	2.5	50	0	108	65	131			
1,2,3-Trichloropropane	111	10	100	0	111	70	130			
Isopropylbenzene	43.6	2.5	50	0	87	64	138			
Bromobenzene	47.4	2.5	50	0	95	70	130			
n-Propylbenzene	45.1	2.5	50	0	90	66	132			
4-Chlorotoluene	44.6	2.5	50	0	89	70	130			
2-Chlorotoluene	45.6	2.5	50	0	91	70	130			
1,3,5-Trimethylbenzene	45.2	2.5	50	0	90	66	136			
tert-Butylbenzene	43.2	2.5	50	0	86	65	137			
1,2,4-Trimethylbenzene	45.5	2.5	50	0	91	65	137			
sec-Butylbenzene	45.3	2.5	50	0	91	66	134			
1,3-Dichlorobenzene	48.2	2.5	50	0	96	70	130			
1,4-Dichlorobenzene	45.7	2.5	50	0	91	70	130			
4-Isopropyltoluene	44.3	2.5	50	0	89	66	137			
1,2-Dichlorobenzene	46.5	2.5	50	0	93	70	130			
n-Butylbenzene	46.4	2.5	50	0	93	60	142			
1,2-Dibromo-3-chloropropane (DBCP)	260	15	250	0	104	67	130			
1,2,4-Trichlorobenzene	40.6	10	50	0	81	61	137			
Naphthalene	34.9	10	50	0	70	40	167			
Hexachlorobutadiene	84.6	10	100	0	85	61	130			
1,2,3-Trichlorobenzene	41	10	50	0	82	51	144			
Surr: 1,2-Dichloroethane-d4	55.7		50		111	70	130			
Surr: Toluene-d8	47.2		50		94	70	130			



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QC Summary Report

Work Order:
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Surr: 4-Bromofluorobenzene

46

50

92

70

130



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QC Summary Report

Work Order:
10102907

Sample Matrix Spike Duplicate

Type **MSD** Test Code: **EPA Method SW8260B**

File ID: **10110309.D**

Batch ID: **MS15W1103M**

Analysis Date: **11/03/2010 16:22**

Sample ID: **10110105-01AMSD**

Units: **µg/L**

Run ID: **MSD_15_101103D**

Prep Date: **11/03/2010 16:22**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	39	2.5	50	0	78	13	167	44.87	14.0(20)	
Chloromethane	33	10	50	0	66	28	145	24.72	28.6(20)	R58
Vinyl chloride	56.6	2.5	50	0	113	43	134	49.45	13.5(20)	
Chloroethane	40.2	2.5	50	0	80	39	154	45.24	11.7(20)	
Bromomethane	5.9	10	50	0	12	19	176	18.87	105.0(20)	M57R58
Trichlorofluoromethane	42.6	2.5	50	0	85	34	160	46.87	9.6(20)	
1,1-Dichloroethene	44.7	2.5	50	0	89	60	130	50.97	13.0(20)	
Dichloromethane	46.9	10	50	0	94	68	130	50.03	6.4(20)	
Freon-113	47.9	2.5	50	0	96	49	141	54.22	12.4(20)	
trans-1,2-Dichloroethene	45	2.5	50	0	90	63	130	51.05	12.7(20)	
Methyl tert-butyl ether (MTBE)	59.1	1.3	50	5.21	108	56	141	62.87	6.3(20)	
1,1-Dichloroethane	44.4	2.5	50	0	89	61	130	49.52	10.9(20)	
2-Butanone (MEK)	913	50	1000	0	91	20	182	947.2	3.7(20)	
cis-1,2-Dichloroethene	56.8	2.5	50	10.54	92	70	130	60.56	6.5(20)	
Bromochloromethane	45.4	2.5	50	0	91	70	130	48.63	7.0(20)	
Chloroform	44.4	2.5	50	0	89	67	130	49.25	10.3(20)	
2,2-Dichloropropane	39.6	2.5	50	0	79	30	152	44.82	12.4(20)	
1,2-Dichloroethane	51.4	2.5	50	0	103	60	135	55.02	6.9(20)	
1,1,1-Trichloroethane	45.4	2.5	50	0	91	59	137	51.17	11.9(20)	
1,1-Dichloropropene	44.9	2.5	50	0	90	63	130	51.65	13.9(20)	
Carbon tetrachloride	45.5	2.5	50	0	91	50	147	49.53	8.5(20)	
Benzene	44.4	1.3	50	0	89	67	130	49.55	11.0(20)	
Dibromomethane	50	2.5	50	0	99.9	69	133	55	9.6(20)	
1,2-Dichloropropane	45.1	2.5	50	0	90	69	130	49.67	9.7(20)	
Trichloroethene	44.3	2.5	50	0	89	69	130	48.89	9.9(20)	
Bromodichloromethane	50.6	2.5	50	0	101	66	134	55.26	8.7(20)	
4-Methyl-2-pentanone (MIBK)	137	13	125	0	110	20	182	144.1	5.0(20)	
cis-1,3-Dichloropropene	45.3	2.5	50	0	91	63	130	49.33	8.5(20)	
trans-1,3-Dichloropropene	44.7	2.5	50	0	89	66	131	49.1	9.3(20)	
1,1,2-Trichloroethane	49.1	2.5	50	0	98	68	130	53.17	7.9(20)	
Toluene	41.9	1.3	50	0	84	66	130	45.81	8.9(20)	
1,3-Dichloropropane	49.2	2.5	50	0	98	70	130	52.06	5.7(20)	
Dibromochloromethane	47.8	2.5	50	0	96	70	130	49.75	4.0(20)	
1,2-Dibromoethane (EDB)	100	5	100	0	100	70	130	105.6	5.1(20)	
Tetrachloroethene	42.6	2.5	50	0	85	61	134	47.94	11.8(20)	
1,1,1,2-Tetrachloroethane	48.1	2.5	50	0	96	70	130	50.82	5.5(20)	
Chlorobenzene	44.2	2.5	50	0	88	70	130	47.71	7.6(20)	
Ethylbenzene	44.2	1.3	50	0	88	68	130	48.05	8.5(20)	
m,p-Xylene	43.3	1.3	50	0	87	64	130	47.45	9.2(20)	
Bromoform	49.8	2.5	50	0	99.6	64	138	51.39	3.1(20)	
Styrene	46.1	2.5	50	0	92	69	130	49.18	6.4(20)	
o-Xylene	44	1.3	50	0	88	70	130	47.21	7.0(20)	
1,1,2,2-Tetrachloroethane	52.8	2.5	50	0	106	65	131	54.08	2.4(20)	
1,2,3-Trichloropropane	107	10	100	0	107	70	130	110.6	3.7(20)	
Isopropylbenzene	37.2	2.5	50	0	74	64	138	43.64	16.0(20)	
Bromobenzene	42.4	2.5	50	0	85	70	130	47.43	11.2(20)	
n-Propylbenzene	39.2	2.5	50	0	78	66	132	45.13	14.1(20)	
4-Chlorotoluene	39.6	2.5	50	0	79	70	130	44.6	11.8(20)	
2-Chlorotoluene	39.4	2.5	50	0	79	70	130	45.6	14.7(20)	
1,3,5-Trimethylbenzene	39.2	2.5	50	0	78	66	136	45.15	14.0(20)	
tert-Butylbenzene	37.7	2.5	50	0	75	65	137	43.2	13.7(20)	
1,2,4-Trimethylbenzene	39.9	2.5	50	0	80	65	137	45.45	12.9(20)	
sec-Butylbenzene	38.9	2.5	50	0	78	66	134	45.3	15.1(20)	
1,3-Dichlorobenzene	43.4	2.5	50	0	87	70	130	48.18	10.5(20)	
1,4-Dichlorobenzene	41.4	2.5	50	0	83	70	130	45.73	9.9(20)	
4-Isopropyltoluene	39.1	2.5	50	0	78	66	137	44.28	12.4(20)	
1,2-Dichlorobenzene	42.9	2.5	50	0	86	70	130	46.47	7.9(20)	
n-Butylbenzene	41.5	2.5	50	0	83	60	142	46.35	11.1(20)	
1,2-Dibromo-3-chloropropane (DBCP)	275	15	250	0	110	67	130	260.3	5.4(20)	
1,2,4-Trichlorobenzene	45.3	10	50	0	91	61	137	40.63	10.8(20)	
Naphthalene	47	10	50	0	94	40	167	34.92	29.5(20)	R58
Hexachlorobutadiene	88	10	100	0	88	61	130	84.55	4.0(20)	
1,2,3-Trichlorobenzene	49.8	10	50	0	99.7	51	144	41.02	19.4(20)	
Surr: 1,2-Dichloroethane-d4	55		50		110	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-Nov-2010

QC Summary Report

Work Order:
10102907

Surr: Toluene-d8	48.1	50	96	70	130
Surr: 4-Bromofluorobenzene	44	50	88	70	130

Comments:

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

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

L2 = The associated blank spike recovery was below laboratory acceptance limits.

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

M57 = Matrix spike recovery was below laboratory acceptance limits.

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

Billing Information :

CHAIN-OF-CUSTODY RECORD

CA

Alpha Analytical, Inc.

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

WorkOrder : BMIS10102907

Report Due By : 5:00 PM On : 11-Nov-2010

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

Report Attention **Phone Number** **Email Address**
 David Connor (619) 726-7311 x connerd@battelle.org
 Betsy Cutie (614) 424-4899 x cutiee@battelle.org
 Shane Walton (614) 424-4117 x waltonsn@battelle.org

EDD Required : Yes

Sampled by : Chase Brogton

PO : 218013
 Client's COC # : 29189

Job : G005862/JPL Groundwater Monitoring

Cooler Temp Samples Received Date Printed
 0 °C 29-Oct-2010 29-Oct-2010

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

Alpha Sample ID	Client Sample ID	Collection Date	No. of Bottles Alpha Sub	TAT	Requested Tests				Sample Remarks	
					314_W	METALS_D W	VOC_TIC_W	VOC_W		
BM10102907-01A	MW-22-5	10/28/10 08:25	5	0	9	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	
BM10102907-02A	MW-22-4	10/28/10 08:47	5	0	9	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	
BM10102907-03A	MW-22-3	10/28/10 09:11	5	0	9	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	
BM10102907-04A	MW-22-2	10/28/10 09:47	5	0	9	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	
BM10102907-05A	MW-22-1	10/28/10 10:13	5	0	9	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	
BM10102907-06A	DUPE-03-4Q10	10/28/10 00:00	5	0	9	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	
BM10102907-07A	EB-07-10/28/10	10/28/10 10:04	5	0	9	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	
BM10102907-08A	TB-07-10/28/10	10/28/10 07:00	1	0	9			VOC by 524 Criteria	VOC by 524 Criteria	Reno Trip Blank 10/7/10

Comments: Security seals intact. Frozen ice. Temp Blank #5596 received @ 0°C. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD).

Logged in by: Elizabeth Aldcox Signature: [Signature] Print Name: Elizabeth Aldcox Company: Alpha Analytical, Inc. Date/Time: 10/29/10 12:16

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-Lier V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

Billing Information:

Name GENAIDA THOMPSON/BATTELLE
 Address 505 KNOX AVE
 City, State, Zip CAUMBRIDGE, 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? 29189
 AZ _____ CA NV _____ WA _____
 ID _____ OR _____ OTHER _____
 Page # 1 of 1

Analyses Required

Client Name BATTELLE/DAVID CALVERT PO. # 215013 Job # 6005862
 Address 5790 OLD TRAIL 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	EDD / EDF7 YES	NO	REMARKS
0825	10/25/10	AQ	BMTIDR2907-01				MW-22-5			3v, 2p			
0844							MW-22-4						
0911							MW-22-3						
0947							MW-22-2						
1013							MW-22-1						
1020	10/20/10	AQ					Duplicate - 03 - 4810			3v, 2p			Duplicate
							07 EB-07-10/28/10						Equipment Blank
							08 TB-07-10/28/10			1v			TRIP BLANK

ADDITIONAL INSTRUCTIONS:

Signature	Print Name	Company	Date	Time
	Chase Brodeur	INSURANCE	10/28/10	1200
	Anthony	Angstar	10/28/10	1205
	Elizabeth	Alpha	10/29/10	1216

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



Alpha Analytical, Inc.

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

Date: 10-Nov-2010

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

Suite 1420

CASE NARRATIVE

Job: G005862/JPL Groundwater Monitoring

Work Order: BMI10110205

Cooler Temp: 3 °C

Alpha's Sample ID	Client's Sample ID	Matrix
10110205-01A	MW-4-5	Aqueous
10110205-02A	MW-4-4	Aqueous
10110205-03A	MW-4-3	Aqueous
10110205-04A	MW-4-2	Aqueous
10110205-05A	MW-4-1	Aqueous
10110205-06A	EB-08-10/2910	Aqueous
10110205-07A	TB-08-10/29/10	Aqueous
10110205-08A	MW-3-5	Aqueous
10110205-09A	MW-3-4	Aqueous
10110205-10A	MW-3-3	Aqueous
10110205-11A	MW-3-2	Aqueous
10110205-12A	MW-3-1	Aqueous
10110205-13A	DUPE-04-4Q10	Aqueous
10110205-14A	EB-09-11/01/10	Aqueous
10110205-15A	TB-09-11/01/10	Aqueous

Manually Integrated Analytes

Alpha's Sample ID	Test Reference	Analyte
NONE		

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

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

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

Roger Scholl *Randy Gardner* *Walter Hinchman*

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

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

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



Alpha Analytical, Inc.

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ANALYTICAL REPORT

Battelle Memorial Institute
655 West Broadway
San Diego, CA 92101

Attn: David Conner
Phone: (619) 726-7311
Fax: (614) 458-6641
Date Received : 11/02/10

Job: G005862/JPL Groundwater Monitoring

Perchlorate by Ion Chromatography
EPA Method 314.0

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: MW-4-5 Lab ID : BMI10110205-01A Perchlorate Date Sampled 10/29/10 09:13	ND	1.00 µg/L	11/03/10 10:48	11/03/10 15:40
Client ID: MW-4-4 Lab ID : BMI10110205-02A Perchlorate Date Sampled 10/29/10 09:42	ND	1.00 µg/L	11/03/10 10:48	11/03/10 15:58
Client ID: MW-4-3 Lab ID : BMI10110205-03A Perchlorate Date Sampled 10/29/10 10:05	ND	1.00 µg/L	11/03/10 10:48	11/03/10 16:54
Client ID: MW-4-2 Lab ID : BMI10110205-04A Perchlorate Date Sampled 10/29/10 10:28	3.68	1.00 µg/L	11/03/10 10:48	11/03/10 17:49
Client ID: MW-4-1 Lab ID : BMI10110205-05A Perchlorate Date Sampled 10/29/10 10:55	ND	1.00 µg/L	11/03/10 10:48	11/03/10 18:07
Client ID: EB-08-10/2910 Lab ID : BMI10110205-06A Perchlorate Date Sampled 10/29/10 10:46	ND	1.00 µg/L	11/03/10 10:48	11/03/10 18:26
Client ID: MW-3-5 Lab ID : BMI10110205-08A Perchlorate Date Sampled 11/01/10 09:16	ND	1.00 µg/L	11/03/10 10:48	11/03/10 18:44
Client ID: MW-3-4 Lab ID : BMI10110205-09A Perchlorate Date Sampled 11/01/10 10:06	ND	1.00 µg/L	11/03/10 10:48	11/03/10 19:02
Client ID: MW-3-3 Lab ID : BMI10110205-10A Perchlorate Date Sampled 11/01/10 10:29	ND	1.00 µg/L	11/03/10 10:48	11/03/10 19:21
Client ID: MW-3-2 Lab ID : BMI10110205-11A Perchlorate Date Sampled 11/01/10 10:50	180	10.0 µg/L	11/03/10 10:48	11/04/10 15:00
Client ID: MW-3-1 Lab ID : BMI10110205-12A Perchlorate Date Sampled 11/01/10 11:22	ND	1.00 µg/L	11/03/10 10:48	11/03/10 19:58



Alpha Analytical, Inc.

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Client ID: **DUPE-04-4Q10**

Lab ID : BMI10110205-13A Perchlorate
Date Sampled 11/01/10 00:00

ND

1.00 µg/L

11/03/10 10:48 11/03/10 20:16

Client ID: **EB-09-11/01/10**

Lab ID : BMI10110205-14A Perchlorate
Date Sampled 11/01/10 11:07

ND

1.00 µg/L

11/03/10 10:48 11/03/10 20:34

ND = Not Detected

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

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

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11/15/10

Report Date



Alpha Analytical, Inc.

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ANALYTICAL REPORT

Battelle Memorial Institute
655 West Broadway
San Diego, CA 92101

Attn: David Conner
Phone: (619) 726-7311
Fax: (614) 458-6641
Date Received : 11/02/10

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 : BM110110205-01A Chromium (Cr) Date Sampled 10/29/10 09:13	ND	0.0050 mg/L	11/03/10 11:33	11/03/10 17:46
Client ID: MW-4-4 Lab ID : BM110110205-02A Chromium (Cr) Date Sampled 10/29/10 09:42	ND	0.0050 mg/L	11/03/10 11:33	11/03/10 15:29
Client ID: MW-4-3 Lab ID : BM110110205-03A Chromium (Cr) Date Sampled 10/29/10 10:05	ND	0.0050 mg/L	11/03/10 11:33	11/03/10 15:57
Client ID: MW-4-2 Lab ID : BM110110205-04A Chromium (Cr) Date Sampled 10/29/10 10:28	ND	0.0050 mg/L	11/03/10 11:33	11/03/10 16:03
Client ID: MW-4-1 Lab ID : BM110110205-05A Chromium (Cr) Date Sampled 10/29/10 10:55	ND	0.0050 mg/L	11/03/10 11:33	11/03/10 16:08
Client ID: EB-08-10/2910 Lab ID : BM110110205-06A Chromium (Cr) Date Sampled 10/29/10 10:46	ND	0.0050 mg/L	11/03/10 11:33	11/03/10 16:14
Client ID: MW-3-5 Lab ID : BM110110205-08A Chromium (Cr) Date Sampled 11/01/10 09:16	ND	0.0050 mg/L	11/03/10 11:33	11/03/10 16:19
Client ID: MW-3-4 Lab ID : BM110110205-09A Chromium (Cr) Date Sampled 11/01/10 10:06	ND	0.0050 mg/L	11/03/10 11:33	11/03/10 16:25
Client ID: MW-3-3 Lab ID : BM110110205-10A Chromium (Cr) Date Sampled 11/01/10 10:29	ND	0.0050 mg/L	11/03/10 11:33	11/03/10 16:30
Client ID: MW-3-2 Lab ID : BM110110205-11A Chromium (Cr) Date Sampled 11/01/10 10:50	ND	0.0050 mg/L	11/03/10 11:33	11/03/10 16:36
Client ID: MW-3-1 Lab ID : BM110110205-12A Chromium (Cr) Date Sampled 11/01/10 11:22	ND	0.0050 mg/L	11/03/10 11:33	11/03/10 16:41



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Client ID: **DUPE-04-4Q10**

Lab ID : BM110110205-13A Chromium (Cr) ND 0.0050 mg/L 11/03/10 11:33 11/03/10 16:47
Date Sampled 11/01/10 00:00

Client ID: **EB-09-11/01/10**

Lab ID : BM110110205-14A Chromium (Cr) ND 0.0050 mg/L 11/03/10 11:33 11/03/10 17:15
Date Sampled 11/01/10 11:07

ND = Not Detected

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

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

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11/15/10

Report Date



Alpha Analytical, Inc.

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ANALYTICAL REPORT

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

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

Tentatively Identified Compounds - Volatile Organics by GC/MS

	Parameter	Estimated Concentration	Estimated Reporting Limit	Date Extracted	Date Analyzed
Client ID : MW-4-5					
Lab ID : BMI10110205-01A	*** None Found ***	ND	2.0 µg/L	11/08/10 18:33	11/08/10 18:33
Date Received : 11/02/10					
Date Sampled : 10/29/10 09:13					
Client ID : MW-4-4					
Lab ID : BMI10110205-02A	*** None Found ***	ND	2.0 µg/L	11/08/10 18:55	11/08/10 18:55
Date Received : 11/02/10					
Date Sampled : 10/29/10 09:42					
Client ID : MW-4-3					
Lab ID : BMI10110205-03A	*** None Found ***	ND	2.0 µg/L	11/08/10 19:17	11/08/10 19:17
Date Received : 11/02/10					
Date Sampled : 10/29/10 10:05					
Client ID : MW-4-2					
Lab ID : BMI10110205-04A	*** None Found ***	ND	2.0 µg/L	11/08/10 19:38	11/08/10 19:38
Date Received : 11/02/10					
Date Sampled : 10/29/10 10:28					
Client ID : MW-4-1					
Lab ID : BMI10110205-05A	*** None Found ***	ND	2.0 µg/L	11/08/10 20:00	11/08/10 20:00
Date Received : 11/02/10					
Date Sampled : 10/29/10 10:55					
Client ID : EB-08-10/2910					
Lab ID : BMI10110205-06A	*** None Found ***	ND	2.0 µg/L	11/08/10 16:22	11/08/10 16:22
Date Received : 11/02/10					
Date Sampled : 10/29/10 10:46					
Client ID : TB-08-10/29/10					
Lab ID : BMI10110205-07A	*** None Found ***	ND	2.0 µg/L	11/08/10 15:39	11/08/10 15:39
Date Received : 11/02/10					
Date Sampled : 10/29/10 07:00					
Client ID : MW-3-5					
Lab ID : BMI10110205-08A	*** None Found ***	ND	2.0 µg/L	11/08/10 20:21	11/08/10 20:21
Date Received : 11/02/10					
Date Sampled : 11/01/10 09:16					
Client ID : MW-3-4					
Lab ID : BMI10110205-09A	*** None Found ***	ND	2.0 µg/L	11/08/10 20:43	11/08/10 20:43
Date Received : 11/02/10					
Date Sampled : 11/01/10 10:06					



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Client ID :	MW-3-3					
Lab ID :	BMI10110205-10A	*** None Found ***	ND	2.0 µg/L	11/08/10 21:04	11/08/10 21:04
Date Received :	11/02/10					
Date Sampled :	11/01/10 10:29					
Client ID :	MW-3-2					
Lab ID :	BMI10110205-11A	*** None Found ***	ND	2.0 µg/L	11/08/10 21:26	11/08/10 21:26
Date Received :	11/02/10					
Date Sampled :	11/01/10 10:50					
Client ID :	MW-3-1					
Lab ID :	BMI10110205-12A	*** None Found ***	ND	2.0 µg/L	11/08/10 21:48	11/08/10 21:48
Date Received :	11/02/10					
Date Sampled :	11/01/10 11:22					
Client ID :	DUPE-04-4Q10					
Lab ID :	BMI10110205-13A	*** None Found ***	ND	2.0 µg/L	11/08/10 22:09	11/08/10 22:09
Date Received :	11/02/10					
Date Sampled :	11/01/10 00:00					
Client ID :	EB-09-11/01/10					
Lab ID :	BMI10110205-14A	*** None Found ***	ND	2.0 µg/L	11/08/10 16:44	11/08/10 16:44
Date Received :	11/02/10					
Date Sampled :	11/01/10 11:07					
Client ID :	TB-09-11/01/10					
Lab ID :	BMI10110205-15A	*** None Found ***	ND	2.0 µg/L	11/08/10 16:00	11/08/10 16:00
Date Received :	11/02/10					
Date Sampled :	11/01/10 07:00					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

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

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Report Date

Page 1 of 1



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10110205-01A
Client I.D. Number: MW-4-5

Sampled: 10/29/10 09:13
Received: 11/02/10
Extracted: 11/08/10 18:33
Analyzed: 11/08/10 18:33

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	Q 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	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	Q 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	106	(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			

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

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Page 1 of 1



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10110205-02A
Client I.D. Number: MW-4-4

Sampled: 10/29/10 09:42
Received: 11/02/10
Extracted: 11/08/10 18:55
Analyzed: 11/08/10 18:55

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	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	Q 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	105	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	99	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer
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11/15/10

Report Date



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10110205-03A
Client I.D. Number: MW-4-3

Sampled: 10/29/10 10:05
Received: 11/02/10
Extracted: 11/08/10 19:17
Analyzed: 11/08/10 19:17

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethene	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	10 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	ND	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	ND	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	ND	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	Q 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	106	(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			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10110205-04A
Client I.D. Number: MW-4-2

Sampled: 10/29/10 10:28
Received: 11/02/10
Extracted: 11/08/10 19:38
Analyzed: 11/08/10 19:38

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethene	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	10 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	ND	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	ND	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	0.61	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	Q 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	104	(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	0.73	0.50 µg/L			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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Page 1 of 1



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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10110205-05A
Client I.D. Number: MW-4-1

Sampled: 10/29/10 10:55
Received: 11/02/10
Extracted: 11/08/10 20:00
Analyzed: 11/08/10 20:00

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethene	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	10 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	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	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	Q 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	106	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	101	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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

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11/15/10

Report Date



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10110205-06A
Client I.D. Number: EB-08-10/2910

Sampled: 10/29/10 10:46
Received: 11/02/10
Extracted: 11/08/10 16:22
Analyzed: 11/08/10 16:22

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	Q 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	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	Q 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	105	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	103	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	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.

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ND = Not Detected

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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10110205-07A
Client I.D. Number: TB-08-10/29/10

Sampled: 10/29/10 07:00
Received: 11/02/10
Extracted: 11/08/10 15:39
Analyzed: 11/08/10 15:39

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethene	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	10 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	ND	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	ND	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	ND	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	Q 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	106	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	102	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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11/15/10

Report Date

Page 1 of 1



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10110205-08A
Client I.D. Number: MW-3-5

Sampled: 11/01/10 09:16
Received: 11/02/10
Extracted: 11/08/10 20:21
Analyzed: 11/08/10 20:21

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	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	Q 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	105	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	102	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10110205-09A
Client I.D. Number: MW-3-4

Sampled: 11/01/10 10:06
Received: 11/02/10
Extracted: 11/08/10 20:43
Analyzed: 11/08/10 20:43

Volatile Organics by GC/MS EPA Method SW8260B

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

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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Report Date



Alpha Analytical, Inc.

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

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10110205-10A
Client I.D. Number: MW-3-3

Sampled: 11/01/10 10:29
Received: 11/02/10
Extracted: 11/08/10 21:04
Analyzed: 11/08/10 21:04

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	Q 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	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	Q 1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	104	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	103	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	101	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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.

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11/15/10

Report Date

Page 1 of 1



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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10110205-11A
Client I.D. Number: MW-3-2

Sampled: 11/01/10 10:50
Received: 11/02/10
Extracted: 11/08/10 21:26
Analyzed: 11/08/10 21:26

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethene	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	10 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	2.1	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	ND	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	ND	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	0.74	0.50 µg/L	61 Naphthalene	ND	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	Q 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	106	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	102	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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11/15/10

Report Date



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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10110205-12A
Client I.D. Number: MW-3-1

Sampled: 11/01/10 11:22
Received: 11/02/10
Extracted: 11/08/10 21:48
Analyzed: 11/08/10 21:48

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	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	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	Q 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	106	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	104	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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11/15/10

Report Date



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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10110205-13A
Client I.D. Number: DUPE-04-4Q10

Sampled: 11/01/10 00:00
Received: 11/02/10
Extracted: 11/08/10 22:09
Analyzed: 11/08/10 22:09

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	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	Q 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	107	(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			

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Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10110205-14A
Client I.D. Number: EB-09-11/01/10

Sampled: 11/01/10 11:07
Received: 11/02/10
Extracted: 11/08/10 16:44
Analyzed: 11/08/10 16:44

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	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	Q 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	105	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	101	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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

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

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

11/15/10

Report Date



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10110205-15A
Client I.D. Number: TB-09-11/01/10

Sampled: 11/01/10 07:00
Received: 11/02/10
Extracted: 11/08/10 16:00
Analyzed: 11/08/10 16:00

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethane	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-Dichloroethane	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-Dichloroethane	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	ND	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-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	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	Q 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	106	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	104	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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11/15/10

Report Date



Alpha Analytical, Inc.

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

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

VOC Sample Preservation Report

Work Order: BMI10110205

Job: G005862/JPL Groundwater Monitoring

Alpha's Sample ID	Client's Sample ID	Matrix	pH
10110205-01A	MW-4-5	Aqueous	2
10110205-02A	MW-4-4	Aqueous	2
10110205-03A	MW-4-3	Aqueous	2
10110205-04A	MW-4-2	Aqueous	2
10110205-05A	MW-4-1	Aqueous	2
10110205-06A	EB-08-10/2910	Aqueous	2
10110205-07A	TB-08-10/29/10	Aqueous	2
10110205-08A	MW-3-5	Aqueous	2
10110205-09A	MW-3-4	Aqueous	2
10110205-10A	MW-3-3	Aqueous	2
10110205-11A	MW-3-2	Aqueous	2
10110205-12A	MW-3-1	Aqueous	2
10110205-13A	DUPE-04-4Q10	Aqueous	2
10110205-14A	EB-09-11/01/10	Aqueous	2
10110205-15A	TB-09-11/01/10	Aqueous	2

11/15/10

Report Date

Page 1 of 1



Alpha Analytical, Inc.

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Date:
09-Nov-10

QC Summary Report

Work Order:
10110205

Method Blank

File ID: 15	Type MBLK	Test Code: EPA Method 314.0	Batch ID: 25385	Analysis Date: 11/03/2010 12:17						
Sample ID: MB-25385	Units : µg/L	Run ID: IC_3_101103A	Prep Date: 11/03/2010 10:48							
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	ND	1								

Laboratory Fortified Blank

File ID: 16	Type LFB	Test Code: EPA Method 314.0	Batch ID: 25385	Analysis Date: 11/03/2010 12:36						
Sample ID: LFB-25385	Units : µg/L	Run ID: IC_3_101103A	Prep Date: 11/03/2010 10:48							
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	25.9	2	25		104	85	115			

Sample Matrix Spike

File ID: 28	Type LFM	Test Code: EPA Method 314.0	Batch ID: 25385	Analysis Date: 11/03/2010 16:17						
Sample ID: 10110205-02ALFM	Units : µg/L	Run ID: IC_3_101103A	Prep Date: 11/03/2010 10:48							
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	22.9	2	25		0	91	80	120		

Sample Matrix Spike Duplicate

File ID: 29	Type LFMD	Test Code: EPA Method 314.0	Batch ID: 25385	Analysis Date: 11/03/2010 16:35						
Sample ID: 10110205-02ALFMD	Units : µg/L	Run ID: IC_3_101103A	Prep Date: 11/03/2010 10:48							
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	23.9	2	25		0	95	80	120	22.86	4.3(15)

Comments:

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



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Date:
10-Nov-10

QC Summary Report

Work Order:
10110205

Method Blank

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

File ID: 110310.B\018_M.D\

Batch ID: 25388

Analysis Date: 11/03/2010 15:02

Sample ID: MB-25388

Units : mg/L

Run ID: ICP/MS_101103A

Prep Date: 11/03/2010 11:33

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: 110310.B\019_M.D\

Batch ID: 25388

Analysis Date: 11/03/2010 15:07

Sample ID: LCS-25388

Units : mg/L

Run ID: ICP/MS_101103A

Prep Date: 11/03/2010 11:33

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0555	0.005	0.05		111	85	115			

Sample Matrix Spike

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

File ID: 110310.B\024_M1.D\

Batch ID: 25388

Analysis Date: 11/03/2010 15:35

Sample ID: 10110205-02AMS

Units : mg/L

Run ID: ICP/MS_101103A

Prep Date: 11/03/2010 11:33

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0476	0.005	0.05	0	95	70	130			

Sample Matrix Spike Duplicate

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

File ID: 110310.B\024_M2.D\

Batch ID: 25388

Analysis Date: 11/03/2010 15:40

Sample ID: 10110205-02AMSD

Units : mg/L

Run ID: ICP/MS_101103A

Prep Date: 11/03/2010 11:33

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0522	0.005	0.05	0	104	70	130	0.04758	9.2(20)	

Comments:

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



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Date:
10-Nov-2010

QC Summary Report

Work Order:
10110205

Method Blank

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

File ID: **10110806.D**

Batch ID: **MS15W1108M**

Analysis Date: **11/08/2010 13:50**

Sample ID: **MBLK MS15W1108M**

Units : **µg/L**

Run ID: **MSD_15_101108A**

Prep Date: **11/08/2010 13:50**

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	10.6		10		106	70	130			



Alpha Analytical, Inc.

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Date:

10-Nov-2010

QC Summary Report

Work Order:

10110205

Surr: 4-Bromofluorobenzene

10.4

10

104

70

130



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Date:
10-Nov-2010

QC Summary Report

Work Order:
10110205

Laboratory Control Spike

Type **LCS** Test Code: **EPA Method SW8260B**

File ID: **10110803.D**

Batch ID: **MS15W1108M**

Analysis Date: **11/08/2010 12:45**

Sample ID: **LCS MS15W1108M**

Units: **µg/L**

Run ID: **MSD_15_101108A**

Prep Date: **11/08/2010 12:45**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	8.07	1	10		81	70	130			
Chloromethane	6.22	2	10		62	70(70)	130			L50
Vinyl chloride	9.91	1	10		99	70	130			
Chloroethane	9.42	1	10		94	70	130			
Bromomethane	8.07	2	10		81	70	130			
Trichlorofluoromethane	9.97	1	10		99.7	70	130			
1,1-Dichloroethene	10.2	1	10		102	70	130			
Dichloromethane	9.07	2	10		91	70	130			
Freon-113	11.2	1	10		112	67	141			
trans-1,2-Dichloroethene	10.2	1	10		102	70	130			
Methyl tert-butyl ether (MTBE)	8.45	0.5	10		85	70	130			
1,1-Dichloroethane	9.93	1	10		99	70	130			
2-Butanone (MEK)	168	10	200		84	70	130			
cis-1,2-Dichloroethene	9.79	1	10		98	70	130			
Bromochloromethane	9.24	1	10		92	70	130			
Chloroform	9.68	1	10		97	70	130			
2,2-Dichloropropane	9.93	1	10		99	70	130			
1,2-Dichloroethane	9.33	1	10		93	70	130			
1,1,1-Trichloroethane	10.2	1	10		102	70	130			
1,1-Dichloropropene	10.3	1	10		103	70	130			
Carbon tetrachloride	9.73	1	10		97	70	130			
Benzene	9.79	0.5	10		98	70	130			
Dibromomethane	8.87	1	10		89	70	130			
1,2-Dichloropropane	9.55	1	10		96	70	130			
Trichloroethene	9.74	1	10		97	70	130			
Bromodichloromethane	10.1	1	10		101	70	130			
4-Methyl-2-pentanone (MIBK)	20.4	2.5	25		82	20	182			
cis-1,3-Dichloropropene	9.14	1	10		91	70	130			
trans-1,3-Dichloropropene	8.32	1	10		83	70	130			
1,1,2-Trichloroethane	8.79	1	10		88	70	130			
Toluene	9.48	0.5	10		95	70	130			
1,3-Dichloropropane	8.98	1	10		90	70	130			
Dibromochloromethane	8.58	1	10		86	70	130			
1,2-Dibromoethane (EDB)	17.6	2	20		88	70	130			
Tetrachloroethene	9.75	1	10		98	70	130			
1,1,1,2-Tetrachloroethane	9.69	1	10		97	70	130			
Chlorobenzene	9.62	1	10		96	70	130			
Ethylbenzene	9.97	0.5	10		99.7	70	130			
m,p-Xylene	9.67	0.5	10		97	70	130			
Bromoform	7.96	1	10		80	70	130			
Styrene	9.65	1	10		97	70	130			
o-Xylene	9.67	0.5	10		97	70	130			
1,1,2,2-Tetrachloroethane	8.29	1	10		83	70	130			
1,2,3-Trichloropropane	16.8	2	20		84	70	130			
Isopropylbenzene	10.1	1	10		101	70	130			
Bromobenzene	9.89	1	10		99	70	130			
n-Propylbenzene	10.4	1	10		104	70	130			
4-Chlorotoluene	9.97	1	10		99.7	70	130			
2-Chlorotoluene	10.2	1	10		102	70	130			
1,3,5-Trimethylbenzene	10.2	1	10		102	70	130			
tert-Butylbenzene	9.78	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	10.1	1	10		101	70	130			
1,4-Dichlorobenzene	9.44	1	10		94	70	130			
4-Isopropyltoluene	10.1	1	10		101	70	130			
1,2-Dichlorobenzene	8.96	1	10		90	70	130			
n-Butylbenzene	10.3	1	10		103	70	130			
1,2-Dibromo-3-chloropropane (DBCP)	40.3	3	50		81	70	130			
1,2,4-Trichlorobenzene	7.06	2	10		71	70	130			
Naphthalene	4.17	2	10		42	70(70)	130			L50
Hexachlorobutadiene	16.9	2	20		84	70	130			
1,2,3-Trichlorobenzene	6.66	2	10		67	70(70)	130			L50
Surr: 1,2-Dichloroethane-d4	9.95		10		100	70	130			



Alpha Analytical, Inc.

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Date:

10-Nov-2010

QC Summary Report

Work Order:

10110205

Surr: Toluene-d8	9.82	10	98	70	130
Surr: 4-Bromofluorobenzene	10.1	10	101	70	130



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Date:
10-Nov-2010

QC Summary Report

Work Order:
10110205

Sample Matrix Spike

Type MS Test Code: EPA Method SW8260B

File ID: 10110807.D

Batch ID: MS15W1108M

Analysis Date: 11/08/2010 14:12

Sample ID: 10110205-02AMS

Units : µg/L

Run ID: MSD_15_101108A

Prep Date: 11/08/2010 14:12

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	40	2.5	50	0	80	13	167			
Chloromethane	36.1	10	50	0	72	28	145			
Vinyl chloride	55.2	2.5	50	0	110	43	134			
Chloroethane	50.3	2.5	50	0	101	39	154			
Bromomethane	43.4	10	50	0	87	19	176			
Trichlorofluoromethane	51.1	2.5	50	0	102	34	160			
1,1-Dichloroethene	49	2.5	50	0	98	60	130			
Dichloromethane	45.7	10	50	0	91	68	130			
Freon-113	54.6	2.5	50	0	109	49	141			
trans-1,2-Dichloroethene	50.1	2.5	50	0	100	63	130			
Methyl tert-butyl ether (MTBE)	45.9	1.3	50	0	92	56	141			
1,1-Dichloroethane	49.3	2.5	50	0	99	61	130			
2-Butanone (MEK)	683	50	1000	0	68	20	182			
cis-1,2-Dichloroethene	49.1	2.5	50	0	98	70	130			
Bromochloromethane	48.2	2.5	50	0	96	70	130			
Chloroform	48	2.5	50	0	96	67	130			
2,2-Dichloropropane	46.8	2.5	50	0	94	30	152			
1,2-Dichloroethane	49.5	2.5	50	0	99	60	135			
1,1,1-Trichloroethane	50	2.5	50	0	100	59	137			
1,1-Dichloropropene	51.3	2.5	50	0	103	63	130			
Carbon tetrachloride	48.1	2.5	50	0	96	50	147			
Benzene	48.8	1.3	50	0	98	67	130			
Dibromomethane	46.5	2.5	50	0	93	69	133			
1,2-Dichloropropane	47.8	2.5	50	0	96	69	130			
Trichloroethene	48.9	2.5	50	0	98	69	130			
Bromodichloromethane	52.1	2.5	50	0	104	66	134			
4-Methyl-2-pentanone (MIBK)	103	13	125	0	82	20	182			
cis-1,3-Dichloropropene	45	2.5	50	0	90	63	130			
trans-1,3-Dichloropropene	42.1	2.5	50	0	84	66	131			
1,1,2-Trichloroethane	45.2	2.5	50	0	90	68	130			
Toluene	47.2	1.3	50	0	94	66	130			
1,3-Dichloropropane	46.6	2.5	50	0	93	70	130			
Dibromochloromethane	45	2.5	50	0	90	70	130			
1,2-Dibromoethane (EDB)	92.2	5	100	0	92	70	130			
Tetrachloroethene	48	2.5	50	0	96	61	134			
1,1,1,2-Tetrachloroethane	49.1	2.5	50	0	98	70	130			
Chlorobenzene	47.8	2.5	50	0	96	70	130			
Ethylbenzene	49.1	1.3	50	0	98	68	130			
m,p-Xylene	48.3	1.3	50	0	97	64	130			
Bromoform	42.4	2.5	50	0	85	64	138			
Styrene	47.8	2.5	50	0	96	69	130			
o-Xylene	48	1.3	50	0	96	70	130			
1,1,2,2-Tetrachloroethane	43.8	2.5	50	0	88	65	131			
1,2,3-Trichloropropane	88.7	10	100	0	89	70	130			
Isopropylbenzene	47.7	2.5	50	0	95	64	138			
Bromobenzene	48.7	2.5	50	0	97	70	130			
n-Propylbenzene	50.3	2.5	50	0	101	66	132			
4-Chlorotoluene	48.3	2.5	50	0	97	70	130			
2-Chlorotoluene	48.9	2.5	50	0	98	70	130			
1,3,5-Trimethylbenzene	49	2.5	50	0	98	66	136			
tert-Butylbenzene	47.1	2.5	50	0	94	65	137			
1,2,4-Trimethylbenzene	49	2.5	50	0	98	65	137			
sec-Butylbenzene	49.2	2.5	50	0	98	66	134			
1,3-Dichlorobenzene	49.1	2.5	50	0	98	70	130			
1,4-Dichlorobenzene	46	2.5	50	0	92	70	130			
4-Isopropyltoluene	48.3	2.5	50	0	97	66	137			
1,2-Dichlorobenzene	44.9	2.5	50	0	90	70	130			
n-Butylbenzene	49.6	2.5	50	0	99	60	142			
1,2-Dibromo-3-chloropropane (DBCP)	205	15	250	0	82	67	130			
1,2,4-Trichlorobenzene	36.7	10	50	0	73	61	137			
Naphthalene	20	10	50	0	40	40	167			
Hexachlorobutadiene	87.5	10	100	0	88	61	130			
1,2,3-Trichlorobenzene	33.8	10	50	0	68	51	144			
Surr: 1,2-Dichloroethane-d4	49.6		50		99	70	130			
Surr: Toluene-d8	49		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:
10-Nov-2010

QC Summary Report

Work Order:
10110205

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:
10-Nov-2010

QC Summary Report

Work Order:
10110205

Sample Matrix Spike Duplicate

Type MSD Test Code: EPA Method SW8260B

File ID: 10110808.D

Batch ID: MS15W1108M

Analysis Date: 11/08/2010 14:34

Sample ID: 10110205-02AMSD

Units: µg/L

Run ID: MSD_15_101108A

Prep Date: 11/08/2010 14:34

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	37.5	2.5	50	0	75	13	167	39.99	6.6(20)	
Chloromethane	34	10	50	0	68	28	145	36.05	5.8(20)	
Vinyl chloride	52.9	2.5	50	0	106	43	134	55.21	4.2(20)	
Chloroethane	48.1	2.5	50	0	96	39	154	50.3	4.4(20)	
Bromomethane	44.7	10	50	0	89	19	176	43.39	2.9(20)	
Trichlorofluoromethane	48.2	2.5	50	0	96	34	160	51.14	5.8(20)	
1,1-Dichloroethene	46.2	2.5	50	0	92	60	130	49.01	6.0(20)	
Dichloromethane	43.4	10	50	0	87	68	130	45.66	5.1(20)	
Freon-113	52.2	2.5	50	0	104	49	141	54.63	4.7(20)	
trans-1,2-Dichloroethene	47.3	2.5	50	0	95	63	130	50.1	5.8(20)	
Methyl tert-butyl ether (MTBE)	45	1.3	50	0	90	56	141	45.85	1.9(20)	
1,1-Dichloroethane	47	2.5	50	0	94	61	130	49.33	4.9(20)	
2-Butanone (MEK)	695	50	1000	0	70	20	182	682.8	1.8(20)	
cis-1,2-Dichloroethene	44.2	2.5	50	0	88	70	130	49.08	10.5(20)	
Bromochloromethane	47.2	2.5	50	0	94	70	130	48.24	2.1(20)	
Chloroform	46.2	2.5	50	0	92	67	130	47.99	3.9(20)	
2,2-Dichloropropane	45.5	2.5	50	0	91	30	152	46.8	2.8(20)	
1,2-Dichloroethane	47.1	2.5	50	0	94	60	135	49.47	4.8(20)	
1,1,1-Trichloroethane	47.7	2.5	50	0	95	59	137	49.99	4.8(20)	
1,1-Dichloropropene	48.7	2.5	50	0	97	63	130	51.33	5.4(20)	
Carbon tetrachloride	48.4	2.5	50	0	97	50	147	48.05	0.7(20)	
Benzene	46.4	1.3	50	0	93	67	130	48.84	5.1(20)	
Dibromomethane	45.2	2.5	50	0	90	69	133	46.45	2.8(20)	
1,2-Dichloropropane	45.5	2.5	50	0	91	69	130	47.81	4.9(20)	
Trichloroethene	46.2	2.5	50	0	92	69	130	48.85	5.6(20)	
Bromodichloromethane	50.3	2.5	50	0	101	66	134	52.08	3.6(20)	
4-Methyl-2-pentanone (MIBK)	102	13	125	0	82	20	182	102.8	0.6(20)	
cis-1,3-Dichloropropene	43.8	2.5	50	0	88	63	130	45.01	2.8(20)	
trans-1,3-Dichloropropene	40.9	2.5	50	0	82	66	131	42.13	3.0(20)	
1,1,2-Trichloroethane	44.3	2.5	50	0	89	68	130	45.19	2.1(20)	
Toluene	45.4	1.3	50	0	91	66	130	47.19	3.8(20)	
1,3-Dichloropropane	45.7	2.5	50	0	91	70	130	46.62	2.0(20)	
Dibromochloromethane	44.9	2.5	50	0	90	70	130	45.01	0.3(20)	
1,2-Dibromoethane (EDB)	90.2	5	100	0	90	70	130	92.16	2.2(20)	
Tetrachloroethene	46.9	2.5	50	0	94	61	134	47.98	2.3(20)	
1,1,1,2-Tetrachloroethane	48.3	2.5	50	0	97	70	130	49.11	1.6(20)	
Chlorobenzene	46.2	2.5	50	0	92	70	130	47.75	3.4(20)	
Ethylbenzene	47.2	1.3	50	0	94	68	130	49.07	3.9(20)	
m,p-Xylene	46.4	1.3	50	0	93	64	130	48.29	3.9(20)	
Bromoform	42.7	2.5	50	0	85	64	138	42.42	0.6(20)	
Styrene	46.7	2.5	50	0	93	69	130	47.8	2.4(20)	
o-Xylene	45.4	1.3	50	0	91	70	130	47.95	5.6(20)	
1,1,2,2-Tetrachloroethane	42.4	2.5	50	0	85	65	131	43.8	3.2(20)	
1,2,3-Trichloropropane	87.7	10	100	0	88	70	130	88.68	1.1(20)	
Isopropylbenzene	46.6	2.5	50	0	93	64	138	47.67	2.4(20)	
Bromobenzene	46.9	2.5	50	0	94	70	130	48.72	3.8(20)	
n-Propylbenzene	48.5	2.5	50	0	97	66	132	50.29	3.7(20)	
4-Chlorotoluene	47.7	2.5	50	0	95	70	130	48.26	1.2(20)	
2-Chlorotoluene	48.1	2.5	50	0	96	70	130	48.89	1.6(20)	
1,3,5-Trimethylbenzene	48.2	2.5	50	0	96	66	136	49.04	1.7(20)	
tert-Butylbenzene	46.7	2.5	50	0	93	65	137	47.12	0.9(20)	
1,2,4-Trimethylbenzene	48	2.5	50	0	96	65	137	49.01	2.1(20)	
sec-Butylbenzene	48.5	2.5	50	0	97	66	134	49.16	1.4(20)	
1,3-Dichlorobenzene	49.3	2.5	50	0	99	70	130	49.1	0.4(20)	
1,4-Dichlorobenzene	46.2	2.5	50	0	92	70	130	45.97	0.5(20)	
4-Isopropyltoluene	47.7	2.5	50	0	95	66	137	48.33	1.4(20)	
1,2-Dichlorobenzene	45.2	2.5	50	0	90	70	130	44.92	0.6(20)	
n-Butylbenzene	49.5	2.5	50	0	99	60	142	49.62	0.2(20)	
1,2-Dibromo-3-chloropropane (DBCP)	210	15	250	0	84	67	130	204.7	2.6(20)	
1,2,4-Trichlorobenzene	39.5	10	50	0	79	61	137	36.7	7.3(20)	
Naphthalene	23.6	10	50	0	47	40	167	20	16.4(20)	
Hexachlorobutadiene	91.2	10	100	0	91	61	130	87.54	4.1(20)	
1,2,3-Trichlorobenzene	37.1	10	50	0	74	51	144	33.79	9.3(20)	
Surr: 1,2-Dichloroethane-d4	49.3		50		99	70	130			
Surr: Toluene-d8	49.6		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:
10-Nov-2010

QC Summary Report

Work Order:
10110205

Surr: 4-Bromofluorobenzene	49.2	50	98	70	130
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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.

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 : BMIS10110205

Report Due By : 5:00 PM On : 16-Nov-2010

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

Report Attention **Phone Number** **Email Address**
 David Comer (619) 726-7311 x comerd@battelle.org
 Betsy Cutie (614) 424-4899 x cutie@battelle.org
 Shane Walton (614) 424-4117 x walton@battelle.org

EDD Required : Yes

Sampled by : Chase Brogdon

Cooler Temp

Samples Received

Date Printed

PO : 218013

Job : G005862/JPL Groundwater Monitoring

3 °C

02-Nov-2010

02-Nov-2010

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

Alpha Sample ID	Client Sample ID	Collection Date	No. of Bottles		Matrix	Alpha Sub	TAT	Requested Tests				Sample Remarks
			314_W	METALS_D W				VOC_TIC_W	VOC_W			
BM110110205-01A	MW-4-5	10/29/10 09:13	5	0	AQ	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria		
BM110110205-02A	MW-4-4	10/29/10 09:42	10	0	AQ	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria		MS/MSD
BM110110205-03A	MW-4-3	10/29/10 10:05	5	0	AQ	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria		Level IV QC
BM110110205-04A	MW-4-2	10/29/10 10:28	5	0	AQ	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria		
BM110110205-05A	MW-4-1	10/29/10 10:55	5	0	AQ	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria		
BM110110205-06A	EB-08-10/29/10	10/29/10 10:46	5	0	AQ	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria		
BM110110205-07A	TB-08-10/29/10	10/29/10 07:00	1	0	AQ	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria		Reno Trip Blank 10/7/10
BM110110205-08A	MW-3-5	11/01/10 09:16	5	0	AQ	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria		
BM110110205-09A	MW-3-4	11/01/10 10:06	5	0	AQ	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria		
BM110110205-10A	MW-3-3	11/01/10 10:29	5	0	AQ	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria		

Comments: Security seals intact. Frozen ice. Temp Blank #8985 received @ 3°C. Level IV QC. Samples should be used as the control spike sample if possible (L.E.: MS/MSD).

Logged in by: Elizabeth Adcox Signature: [Signature] Print Name: Elizabeth Adcox Company: Alpha Analytical, Inc. Date/Time: 11:210 1154

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 : BMIS10110205
Report Due By : 5:00 PM On : 16-Nov-2010

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

Report Attention **Phone Number** **Email Address**
 David Conner (619) 726-7311 x connerd@battelle.org
 Betsy Cutie (614) 424-4899 x cutiee@battelle.org
 Shane Walton (614) 424-4117 x waltonsg@battelle.org

PO : 218013
 Client's COC # : 25750, 25739 Job : G005862/JPL Groundwater Monitoring

QC Level : DS4 = DOD QC Required : Final Rpt, MBLK, InitCal/ConCal data, LCS, MS/MSD With Surrogates
 EDD Required : Yes
 Sampled by : Chase Brogdon
 Cooler Temp Samples Received Date Printed
 3 °C 02-Nov-2010 02-Nov-2010

Alpha Sample ID	Client Sample ID	Collection Matrix Date	No. of Bottles Alpha Sub	TAT	Requested Tests				Sample Remarks	
					314_W	METALS_D W	VOC_TIC_W	VOC_W		
BMI10110205-11A	MW-3-2	AQ 11/01/10 10:50	5	0	10	Pechlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10110205-12A	MW-3-1	AQ 11/01/10 11:22	5	0	10	Pechlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10110205-13A	DUPE-04-4Q10	AQ 11/01/10 00:00	5	0	10	Pechlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10110205-14A	EB-09-11/01/10	AQ 11/01/10 11:07	5	0	10	Pechlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10110205-15A	TB-09-11/01/10	AQ 11/01/10 07:00	1	0	10			VOC by 524 Criteria	VOC by 524 Criteria	Reno Trip Blank 8/12/10

Comments: Security seals intact. Frozen ice. Temp Blank #8985 received @ 3°C. Level IV QC. Samples should be used as the control spike sample if possible (I.E. MS/MSD).

Logged in by: *Elizabeth Adcox* **Signature** **Print Name** **Company** **Date/Time**
 Elizabeth Adcox Alpha Analytical, Inc. 11-2-10 1154

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 GENERALD TOMPKINS/BATTLE
 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 NV _____ WA _____
 ID _____ OR _____ OTHER _____
 Page # 1 of 1

Analyses Required

Client Name BATTLE DAVID CONVEN PO. # 218013 Job # 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 (Use Only)	Report Attention	Sample Description	TAT	Field Filtered	Total and type of containers ** See below	Required QC Level? I II III IV	EDD / EDF? YES NO	Global ID #	REMARKS
09/3	10/29/10	AQ	CHASE BRADON	BMTID11020501		MW-4-5			3, 2p	X			MS/MSD
09/4	10/29/10	AQ				MW-4-4			6, 4p	X			OCULET III
10/0	10/29/10	AQ				MW-4-3			3, 2p	X			
10/2	10/29/10	AQ				MW-4-2			3, 2p	X			
10/5	10/29/10	AQ				MW-4-1			3, 2p	X			
10/6	10/29/10	AQ				ETB-08 - 10/29/10			3, 2p	X			COMPONENT BLANK
01/0	10/29/10	AQ				TB-08 - 10/29/10			1V	X			TRAP BLANK

VOCS (524.2)
 TOTAL Cr (2008)
 Ch4 - (314.0)

ADDITIONAL INSTRUCTIONS:

Signature	Print Name	Company	Date	Time
<i>[Signature]</i>	CHASE BRADON	INTEGRAL	11/01/10	1330
<i>[Signature]</i>	Elizabeth Adcox	Alpha	11-2-10	1154
Received by				
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 / BATTLE
 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? 25739

AZ _____ CA NV _____ WA _____
 ID _____ OR _____ OTHER _____

Page # 1 of 1

Analyses Required

Client Name BATTLE / DAVID LOWMEYER
 Address 3940 OLD TOWN AVE, C-205
 City, State, Zip SAN DIEGO CA 92110
 P.O. # 218013
 Email Address (619) 726-7311
 Job # 6005862
 Fax # _____

Time Sampled _____ Date Sampled _____ Matrix* See Key Below
 Sampled by CHRIS BROWN
 Lab ID Number (Use Only) _____ Office (Use Only) _____
 Report Attention _____ Sample Description _____
 TAT _____ Field Filled _____

Total and type of containers ** See below

VOL (524.2)
 TOTAL G (200.8)
 CLAY (314.0)

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

Time Sampled	Date Sampled	Matrix* See Key Below	Sampled by	Lab ID Number (Use Only)	Office (Use Only)	Report Attention	Sample Description	TAT	Field Filled	Total and type of containers ** See below	Analyses Required	REMARKS
0916	11/01/10	AA								3V, 2P		
1026												
1029												
1030												
1122												
1102										3V, 2P		DUPLICATE
0700	11/01/10	AA								3V, 2P		EQUIPMENT BLANK
										1V		TRAP BLANK

ADDITIONAL INSTRUCTIONS:

Signature	Print Name	Company	Date	Time
<i>[Signature]</i>	CHRIS BROWN	INTEGRATE INC	11/01/10	1330
<i>[Signature]</i>	ELIZABETH ADcox	Alpha	11-2-10	1154
Relinquished by				
Received by				
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: 15-Nov-10

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

Suite 1420

CASE NARRATIVE

Job: G005862/JPL Groundwater Monitoring

Work Order: BMI10110304

Cooler Temp: 0°C

Alpha's Sample ID	Client's Sample ID	Matrix
10110304-01A	MW-12-5	Aqueous
10110304-02A	MW-12-4	Aqueous
10110304-03A	MW-12-3	Aqueous
10110304-04A	MW-12-2	Aqueous
10110304-05A	MW-12-1	Aqueous
10110304-06A	DUPE-05-4Q10	Aqueous
10110304-07A	EB-10-11/02/10	Aqueous
10110304-08A	TB-10-11/02/10	Aqueous

Manually Integrated Analytes

<u>Alpha's Sample ID</u>	<u>Test Reference</u>	<u>Analyte</u>
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.

Roger Scholl *Randy Gardner* *Walter Hinchman*

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

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

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



Alpha Analytical, Inc.

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ANALYTICAL REPORT

Battelle Memorial Institute
655 West Broadway
San Diego, CA 92101

Attn: David Conner
Phone: (619) 726-7311
Fax: (614) 458-6641
Date Received : 11/03/10

Job: G005862/JPL Groundwater Monitoring

Perchlorate by Ion Chromatography EPA Method 314.0

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: MW-12-5 Lab ID: BMII0110304-01A Perchlorate Date Sampled 11/02/10 08:43	1.89	1.00 µg/L	11/04/10 13:08	11/04/10 18:41
Client ID: MW-12-4 Lab ID: BMII0110304-02A Perchlorate Date Sampled 11/02/10 09:07	3.25	1.00 µg/L	11/04/10 13:08	11/04/10 19:36
Client ID: MW-12-3 Lab ID: BMII0110304-03A Perchlorate Date Sampled 11/02/10 09:39	1.81	1.00 µg/L	11/04/10 13:08	11/04/10 19:55
Client ID: MW-12-2 Lab ID: BMII0110304-04A Perchlorate Date Sampled 11/02/10 10:10	6.11	1.00 µg/L	11/04/10 13:08	11/04/10 20:13
Client ID: MW-12-1 Lab ID: BMII0110304-05A Perchlorate Date Sampled 11/02/10 10:34	ND	1.00 µg/L	11/04/10 13:08	11/04/10 20:32
Client ID: DUPE-05-4Q10 Lab ID: BMII0110304-06A Perchlorate Date Sampled 11/02/10 00:00	1.55	1.00 µg/L	11/04/10 13:08	11/04/10 20:50
Client ID: EB-10-11/02/10 Lab ID: BMII0110304-07A Perchlorate Date Sampled 11/02/10 10:23	ND	1.00 µg/L	11/04/10 13:08	11/04/10 21:08

ND = Not Detected

Roger Scholl *Randy Gardner* *Walter Hinchman*

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11/15/10

Report Date



Alpha Analytical, Inc.

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ANALYTICAL REPORT

Battelle Memorial Institute
655 West Broadway
San Diego, CA 92101

Attn: David Conner
Phone: (619) 726-7311
Fax: (614) 458-6641
Date Received : 11/03/10

Job: G005862/JPL Groundwater Monitoring

Metals by ICPMS
EPA Method 200.8

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: MW-12-5				
Lab ID : BMI10110304-01A Chromium (Cr) Date Sampled 11/02/10 08:43	ND	0.0050 mg/L	11/04/10 12:29	11/05/10 01:16
Client ID: MW-12-4				
Lab ID : BMI10110304-02A Chromium (Cr) Date Sampled 11/02/10 09:07	ND	0.0050 mg/L	11/04/10 12:29	11/05/10 01:43
Client ID: MW-12-3				
Lab ID : BMI10110304-03A Chromium (Cr) Date Sampled 11/02/10 09:39	ND	0.0050 mg/L	11/04/10 12:29	11/05/10 01:49
Client ID: MW-12-2				
Lab ID : BMI10110304-04A Chromium (Cr) Date Sampled 11/02/10 10:10	ND	0.0050 mg/L	11/04/10 12:29	11/05/10 01:55
Client ID: MW-12-1				
Lab ID : BMI10110304-05A Chromium (Cr) Date Sampled 11/02/10 10:34	ND	0.0050 mg/L	11/04/10 12:29	11/05/10 02:00
Client ID: DUPE-05-4Q10				
Lab ID : BMI10110304-06A Chromium (Cr) Date Sampled 11/02/10 00:00	ND	0.0050 mg/L	11/04/10 12:29	11/05/10 02:06
Client ID: EB-10-11/02/10				
Lab ID : BMI10110304-07A Chromium (Cr) Date Sampled 11/02/10 10:23	ND	0.0050 mg/L	11/04/10 12:29	11/05/10 02:11

ND = Not Detected

Roger Scholl *Randy Gardner* *Walter Hinchman*

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11/15/10

Report Date



Alpha Analytical, Inc.

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

Date: 10-Nov-2010

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

Suite 1420

CASE NARRATIVE

Job: G005862/JPL Groundwater Monitoring

Work Order: BMI10110304

Cooler Temp: 0°C

Alpha's Sample ID	Client's Sample ID	Matrix
10110304-01A	MW-12-5	Aqueous
10110304-02A	MW-12-4	Aqueous
10110304-03A	MW-12-3	Aqueous
10110304-04A	MW-12-2	Aqueous
10110304-05A	MW-12-1	Aqueous
10110304-06A	DUPE-05-4Q10	Aqueous
10110304-07A	EB-10-11/02/10	Aqueous
10110304-08A	TB-10-11/02/10	Aqueous

Manually Integrated Analytes

Alpha's Sample ID	Test Reference	Analyte
NONE		

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

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ANALYTICAL REPORT

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

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

Tentatively Identified Compounds - Volatile Organics by GC/MS

Parameter	Estimated Concentration	Estimated Reporting Limit	Date Extracted	Date Analyzed
Client ID : MW-12-5 Lab ID : BMI10110304-01A *** None Found *** Date Received : 11/03/10 Date Sampled : 11/02/10 08:43	ND	2.0 µg/L	11/09/10 03:56	11/09/10 03:56
Client ID : MW-12-4 Lab ID : BMI10110304-02A *** None Found *** Date Received : 11/03/10 Date Sampled : 11/02/10 09:07	ND	2.0 µg/L	11/09/10 04:18	11/09/10 04:18
Client ID : MW-12-3 Lab ID : BMI10110304-03A *** None Found *** Date Received : 11/03/10 Date Sampled : 11/02/10 09:39	ND	2.0 µg/L	11/09/10 04:40	11/09/10 04:40
Client ID : MW-12-2 Lab ID : BMI10110304-04A *** None Found *** Date Received : 11/03/10 Date Sampled : 11/02/10 10:10	ND	2.0 µg/L	11/09/10 05:02	11/09/10 05:02
Client ID : MW-12-1 Lab ID : BMI10110304-05A *** None Found *** Date Received : 11/03/10 Date Sampled : 11/02/10 10:34	ND	2.0 µg/L	11/09/10 05:23	11/09/10 05:23
Client ID : DUPE-05-4Q10 Lab ID : BMI10110304-06A *** None Found *** Date Received : 11/03/10 Date Sampled : 11/02/10 00:00	ND	2.0 µg/L	11/09/10 05:45	11/09/10 05:45
Client ID : EB-10-11/02/10 Lab ID : BMI10110304-07A *** None Found *** Date Received : 11/03/10 Date Sampled : 11/02/10 10:23	ND	2.0 µg/L	11/09/10 02:51	11/09/10 02:51
Client ID : TB-10-11/02/10 Lab ID : BMI10110304-08A *** None Found *** Date Received : 11/03/10 Date Sampled : 11/02/10 07:00	ND	2.0 µg/L	11/09/10 02:29	11/09/10 02:29



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Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

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11/15/10

Report Date

Page 1 of 1



Alpha Analytical, Inc.

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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10110304-01A
Client I.D. Number: MW-12-5

Sampled: 11/02/10 08:43
Received: 11/03/10
Extracted: 11/09/10 03:56
Analyzed: 11/09/10 03:56

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	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	0.51	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	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	103	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	105	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	101	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer
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11/15/10

Report Date



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10110304-02A
Client I.D. Number: MW-12-4

Sampled: 11/02/10 09:07
Received: 11/03/10
Extracted: 11/09/10 04:18
Analyzed: 11/09/10 04:18

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	1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethene	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	10 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	0.59	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	0.99	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	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	103	(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	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			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10110304-03A
Client I.D. Number: MW-12-3

Sampled: 11/02/10 09:39
Received: 11/03/10
Extracted: 11/09/10 04:40
Analyzed: 11/09/10 04:40

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethene	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	10 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	0.78	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	0.56	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	107	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	102	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	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 L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

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11/15/10

Report Date



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10110304-04A
Client I.D. Number: MW-12-2

Sampled: 11/02/10 10:10
Received: 11/03/10
Extracted: 11/09/10 05:02
Analyzed: 11/09/10 05:02

Volatile Organics by GC/MS EPA Method SW8260B

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

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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Page 1 of 1



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10110304-05A
Client I.D. Number: MW-12-1

Sampled: 11/02/10 10:34
Received: 11/03/10
Extracted: 11/09/10 05:23
Analyzed: 11/09/10 05:23

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethene	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	10 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	ND	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	ND	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	ND	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	101	(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	102	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	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 L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

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11/15/10

Report Date



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10110304-06A
Client I.D. Number: DUPE-05-4Q10

Sampled: 11/02/10 00:00
Received: 11/03/10
Extracted: 11/09/10 05:45
Analyzed: 11/09/10 05:45

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	0.94	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	0.77	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	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	101	(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	102	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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11/15/10

Report Date



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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10110304-07A
Client I.D. Number: EB-10-11/02/10

Sampled: 11/02/10 10:23
Received: 11/03/10
Extracted: 11/09/10 02:51
Analyzed: 11/09/10 02:51

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	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	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	103	(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	101	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10110304-08A
Client I.D. Number: TB-10-11/02/10

Sampled: 11/02/10 07:00
Received: 11/03/10
Extracted: 11/09/10 02:29
Analyzed: 11/09/10 02:29

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	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	107	(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			

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

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

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

11/15/10

Report Date



Alpha Analytical, Inc.

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

VOC Sample Preservation Report

Work Order: BMI10110304

Job: G005862/JPL Groundwater Monitoring

Alpha's Sample ID	Client's Sample ID	Matrix	pH
10110304-01A	MW-12-5	Aqueous	2
10110304-02A	MW-12-4	Aqueous	2
10110304-03A	MW-12-3	Aqueous	2
10110304-04A	MW-12-2	Aqueous	2
10110304-05A	MW-12-1	Aqueous	2
10110304-06A	DUPE-05-4Q10	Aqueous	2
10110304-07A	EB-10-11/02/10	Aqueous	2
10110304-08A	TB-10-11/02/10	Aqueous	2

11/15/10
Report Date

Page 1 of 1



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Date:
09-Nov-10

QC Summary Report

Work Order:
10110304

Method Blank

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

File ID: **14**

Batch ID: **25408**

Analysis Date: **11/04/2010 14:04**

Sample ID: **MB-25408**

Units : **µg/L**

Run ID: **IC_3_101104A**

Prep Date: **11/04/2010 13:08**

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: **25408**

Analysis Date: **11/04/2010 14:23**

Sample ID: **LFB-25408**

Units : **µg/L**

Run ID: **IC_3_101104A**

Prep Date: **11/04/2010 13:08**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	25.7	2	25		103	85	115			

Sample Matrix Spike

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

File ID: **30**

Batch ID: **25408**

Analysis Date: **11/04/2010 18:59**

Sample ID: **10110304-01ALFM**

Units : **µg/L**

Run ID: **IC_3_101104A**

Prep Date: **11/04/2010 13:08**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	26.6	2	25	1.887	99	80	120			

Sample Matrix Spike Duplicate

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

File ID: **31**

Batch ID: **25408**

Analysis Date: **11/04/2010 19:18**

Sample ID: **10110304-01ALFMD**

Units : **µg/L**

Run ID: **IC_3_101104A**

Prep Date: **11/04/2010 13:08**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	28	2	25	1.887	104	80	120	26.62	4.9(15)	

Comments:

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



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Date:
11-Nov-10

QC Summary Report

Work Order:
10110304

Method Blank

File ID: 110410.B\035_M.D\

Sample ID: MB-25407

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

Laboratory Control Spike

File ID: 110410.B\036_M.D\

Sample ID: LCS-25407

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0527	0.005	0.05		105	85	115			

Sample Matrix Spike

File ID: 110410.B\041_M.D\

Sample ID: 10110304-01AMS

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0456	0.005	0.05		0 91	70	130			

Sample Matrix Spike Duplicate

File ID: 110410.B\042_M.D\

Sample ID: 10110304-01AMSD

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0432	0.005	0.05		0 86	70	130	0.04558	5.5(20)	

Comments:

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



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Date:
10-Nov-2010

QC Summary Report

Work Order:
10110304

Method Blank
File ID: 10110837.D

Type MBLK Test Code: EPA Method SW8260B

Batch ID: MS15W1108N

Analysis Date: 11/09/2010 01:02

Sample ID: MBLK MS15W1108N

Units: µg/L

Run ID: MSD_15_101108B

Prep Date: 11/09/2010 01:02

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	10.6		10		106	70	130			



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Date:
10-Nov-2010

QC Summary Report

Work Order:
10110304

Surr: 4-Bromofluorobenzene

10.3

10

103

70

130



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Date:
10-Nov-2010

QC Summary Report

Work Order:
10110304

Laboratory Control Spike

Type LCS Test Code: EPA Method SW8260B

File ID: 10110832.D

Batch ID: MS15W1108N

Analysis Date: 11/08/2010 23:14

Sample ID: LCS MS15W1108N

Units: µg/L

Run ID: MSD_15_101108B

Prep Date: 11/08/2010 23:14

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	7.74	1	10		77	70	130			
Chloromethane	6.7	2	10		67	70(70)	130			L50
Vinyl chloride	10.4	1	10		104	70	130			
Chloroethane	10.1	1	10		101	70	130			
Bromomethane	6.39	2	10		64	70(70)	130			L50
Trichlorofluoromethane	10.5	1	10		105	70	130			
1,1-Dichloroethene	10.1	1	10		101	70	130			
Dichloromethane	9.29	2	10		93	70	130			
Freon-113	11.1	1	10		111	67	141			
trans-1,2-Dichloroethene	10.2	1	10		102	70	130			
Methyl tert-butyl ether (MTBE)	9.11	0.5	10		91	70	130			
1,1-Dichloroethane	10.3	1	10		103	70	130			
2-Butanone (MEK)	179	10	200		90	70	130			
cis-1,2-Dichloroethene	10.2	1	10		102	70	130			
Bromochloromethane	9.82	1	10		98	70	130			
Chloroform	10.1	1	10		101	70	130			
2,2-Dichloropropane	9.5	1	10		95	70	130			
1,2-Dichloroethane	10.2	1	10		102	70	130			
1,1,1-Trichloroethane	10.3	1	10		103	70	130			
1,1-Dichloropropene	10.8	1	10		108	70	130			
Carbon tetrachloride	9.97	1	10		99.7	70	130			
Benzene	10.1	0.5	10		101	70	130			
Dibromomethane	9.71	1	10		97	70	130			
1,2-Dichloropropane	10.1	1	10		101	70	130			
Trichloroethene	10.7	1	10		107	70	130			
Bromodichloromethane	10.9	1	10		109	70	130			
4-Methyl-2-pentanone (MIBK)	22.1	2.5	25		88	20	182			
cis-1,3-Dichloropropene	9.53	1	10		95	70	130			
trans-1,3-Dichloropropene	8.85	1	10		89	70	130			
1,1,2-Trichloroethane	9.46	1	10		95	70	130			
Toluene	9.87	0.5	10		99	70	130			
1,3-Dichloropropane	9.74	1	10		97	70	130			
Dibromochloromethane	9.27	1	10		93	70	130			
1,2-Dibromoethane (EDB)	19	2	20		95	70	130			
Tetrachloroethene	10.2	1	10		102	70	130			
1,1,1,2-Tetrachloroethane	10.4	1	10		104	70	130			
Chlorobenzene	10.2	1	10		102	70	130			
Ethylbenzene	10.4	0.5	10		104	70	130			
m,p-Xylene	10.1	0.5	10		101	70	130			
Bromoform	8.44	1	10		84	70	130			
Styrene	10.1	1	10		101	70	130			
o-Xylene	10	0.5	10		100	70	130			
1,1,2,2-Tetrachloroethane	8.81	1	10		88	70	130			
1,2,3-Trichloropropane	18.5	2	20		93	70	130			
Isopropylbenzene	10.4	1	10		104	70	130			
Bromobenzene	10.4	1	10		104	70	130			
n-Propylbenzene	10.8	1	10		108	70	130			
4-Chlorotoluene	10.4	1	10		104	70	130			
2-Chlorotoluene	10.6	1	10		106	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	10.5	1	10		105	70	130			
sec-Butylbenzene	10.6	1	10		106	70	130			
1,3-Dichlorobenzene	10.5	1	10		105	70	130			
1,4-Dichlorobenzene	9.89	1	10		99	70	130			
4-Isopropyltoluene	10.4	1	10		104	70	130			
1,2-Dichlorobenzene	9.65	1	10		97	70	130			
n-Butylbenzene	10.6	1	10		106	70	130			
1,2-Dibromo-3-chloropropane (DBCP)	43.4	3	50		87	70	130			
1,2,4-Trichlorobenzene	7.96	2	10		80	70	130			
Naphthalene	4.38	2	10		44	70(70)	130			L50
Hexachlorobutadiene	18.8	2	20		94	70	130			
1,2,3-Trichlorobenzene	7.36	2	10		74	70	130			
Surr: 1,2-Dichloroethane-d4	10.1		10		101	70	130			



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Work Order:
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Surr: Toluene-d8	9.78	10	98	70	130
Surr: 4-Bromofluorobenzene	9.92	10	99	70	130



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Date:
10-Nov-2010

QC Summary Report

Work Order:
10110304

Sample Matrix Spike

File ID: 10110838.D

Type MS

Test Code: EPA Method SW8260B

Sample ID: 10110406-03AMS

Units : µg/L

Batch ID: MS15W1108N

Analysis Date: 11/09/2010 01:24

Run ID: MSD_15_101108B

Prep Date: 11/09/2010 01:24

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	37.7	2.5	50	0	75	13	167			
Chloromethane	33.8	10	50	0	68	28	145			
Vinyl chloride	52.1	2.5	50	0	104	43	134			
Chloroethane	49.9	2.5	50	0	99.7	39	154			
Bromomethane	39.2	10	50	0	78	19	176			
Trichlorofluoromethane	50.6	2.5	50	0	101	34	160			
1,1-Dichloroethene	47.8	2.5	50	0	96	60	130			
Dichloromethane	44.5	10	50	0	89	68	130			
Freon-113	52.5	2.5	50	0	105	49	141			
trans-1,2-Dichloroethene	47.5	2.5	50	0	95	63	130			
Methyl tert-butyl ether (MTBE)	45	1.3	50	0	90	56	141			
1,1-Dichloroethane	48	2.5	50	0	96	61	130			
2-Butanone (MEK)	697	50	1000	0	70	20	182			
cis-1,2-Dichloroethene	47.4	2.5	50	0	95	70	130			
Bromochloromethane	47.2	2.5	50	0	94	70	130			
Chloroform	47.7	2.5	50	0	95	67	130			
2,2-Dichloropropane	37.7	2.5	50	0	75	30	152			
1,2-Dichloroethane	48.2	2.5	50	0	96	60	135			
1,1,1-Trichloroethane	48.4	2.5	50	0	97	59	137			
1,1-Dichloropropene	49.8	2.5	50	0	99.6	63	130			
Carbon tetrachloride	47.9	2.5	50	0	96	50	147			
Benzene	47.8	1.3	50	0	96	67	130			
Dibromomethane	45.6	2.5	50	0	91	69	133			
1,2-Dichloropropane	46.5	2.5	50	0	93	69	130			
Trichloroethene	46.5	2.5	50	0	93	69	130			
Bromodichloromethane	50.4	2.5	50	0	101	66	134			
4-Methyl-2-pentanone (MIBK)	102	13	125	0	82	20	182			
cis-1,3-Dichloropropene	42.5	2.5	50	0	85	63	130			
trans-1,3-Dichloropropene	39.2	2.5	50	0	78	66	131			
1,1,2-Trichloroethane	45	2.5	50	0	90	68	130			
Toluene	45.3	1.3	50	0	91	66	130			
1,3-Dichloropropane	45.3	2.5	50	0	91	70	130			
Dibromochloromethane	43.3	2.5	50	0	87	70	130			
1,2-Dibromoethane (EDB)	89.6	5	100	0	90	70	130			
Tetrachloroethene	46.6	2.5	50	0	93	61	134			
1,1,1,2-Tetrachloroethane	48.2	2.5	50	0	96	70	130			
Chlorobenzene	46.7	2.5	50	0	93	70	130			
Ethylbenzene	47.5	1.3	50	0	95	68	130			
m,p-Xylene	46.7	1.3	50	0	93	64	130			
Bromoform	41.2	2.5	50	0	82	64	138			
Styrene	46.5	2.5	50	0	93	69	130			
o-Xylene	46.2	1.3	50	0	92	70	130			
1,1,2,2-Tetrachloroethane	41.8	2.5	50	0	84	65	131			
1,2,3-Trichloropropane	86.7	10	100	0	87	70	130			
Isopropylbenzene	46.9	2.5	50	0	94	64	138			
Bromobenzene	48.5	2.5	50	0	97	70	130			
n-Propylbenzene	49	2.5	50	0	98	66	132			
4-Chlorotoluene	47.4	2.5	50	0	95	70	130			
2-Chlorotoluene	48.4	2.5	50	0	97	70	130			
1,3,5-Trimethylbenzene	48.4	2.5	50	0	97	66	136			
tert-Butylbenzene	46.6	2.5	50	0	93	65	137			
1,2,4-Trimethylbenzene	48.1	2.5	50	0	96	65	137			
sec-Butylbenzene	48.4	2.5	50	0	97	66	134			
1,3-Dichlorobenzene	48.5	2.5	50	0	97	70	130			
1,4-Dichlorobenzene	45.4	2.5	50	0	91	70	130			
4-Isopropyltoluene	47.4	2.5	50	0	95	66	137			
1,2-Dichlorobenzene	44.1	2.5	50	0	88	70	130			
n-Butylbenzene	48.1	2.5	50	0	96	60	142			
1,2-Dibromo-3-chloropropane (DBCP)	203	15	250	0	81	67	130			
1,2,4-Trichlorobenzene	36.6	10	50	0	73	61	137			
Naphthalene	20.7	10	50	0	41	40	167			
Hexachlorobutadiene	84.1	10	100	0	84	61	130			
1,2,3-Trichlorobenzene	34.6	10	50	0	69	51	144			
Surr: 1,2-Dichloroethane-d4	49.9		50		99.7	70	130			
Surr: Toluene-d8	48.7		50		97	70	130			



Alpha Analytical, Inc.

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

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

Date:

10-Nov-2010

QC Summary Report

Work Order:

10110304

Surr: 4-Bromofluorobenzene

48.1

50

96

70

130



Alpha Analytical, Inc.

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

Date:
10-Nov-2010

QC Summary Report

Work Order:
10110304

Sample Matrix Spike Duplicate

Type **MSD** Test Code: **EPA Method SW8260B**

File ID: **10110839.D**

Batch ID: **MS15W1108N**

Analysis Date: **11/09/2010 01:45**

Sample ID: **10110406-03AMSD**

Units: **µg/L**

Run ID: **MSD_15_101108B**

Prep Date: **11/09/2010 01:45**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	38.8	2.5	50	0	78	13	167	37.68	2.9(20)	
Chloromethane	34.4	10	50	0	69	28	145	33.78	1.9(20)	
Vinyl chloride	54.1	2.5	50	0	108	43	134	52.13	3.8(20)	
Chloroethane	51.2	2.5	50	0	102	39	154	49.85	2.6(20)	
Bromomethane	45.9	10	50	0	92	19	176	39.23	15.7(20)	
Trichlorofluoromethane	51.6	2.5	50	0	103	34	160	50.56	2.1(20)	
1,1-Dichloroethene	49.5	2.5	50	0	99	60	130	47.83	3.5(20)	
Dichloromethane	44.8	10	50	0	90	68	130	44.52	0.6(20)	
Freon-113	52.5	2.5	50	0	105	49	141	52.45	0.0(20)	
trans-1,2-Dichloroethene	49.3	2.5	50	0	99	63	130	47.46	3.8(20)	
Methyl tert-butyl ether (MTBE)	46.4	1.3	50	0	93	56	141	45.03	3.0(20)	
1,1-Dichloroethane	49.2	2.5	50	0	98	61	130	48.04	2.5(20)	
2-Butanone (MEK)	705	50	1000	0	71	20	182	697.1	1.1(20)	
cis-1,2-Dichloroethene	48.3	2.5	50	0	97	70	130	47.35	2.0(20)	
Bromochloromethane	49	2.5	50	0	98	70	130	47.16	3.9(20)	
Chloroform	48.3	2.5	50	0	97	67	130	47.67	1.2(20)	
2,2-Dichloropropane	38.5	2.5	50	0	77	30	152	37.68	2.2(20)	
1,2-Dichloroethane	49.3	2.5	50	0	99	60	135	48.18	2.2(20)	
1,1,1-Trichloroethane	50.1	2.5	50	0	100	59	137	48.41	3.3(20)	
1,1-Dichloropropene	50.6	2.5	50	0	101	63	130	49.79	1.5(20)	
Carbon tetrachloride	50.8	2.5	50	0	102	50	147	47.88	5.8(20)	
Benzene	48.3	1.3	50	0	97	67	130	47.75	1.2(20)	
Dibromomethane	46.7	2.5	50	0	93	69	133	45.6	2.3(20)	
1,2-Dichloropropane	47.9	2.5	50	0	96	69	130	46.51	2.9(20)	
Trichloroethene	48.3	2.5	50	0	97	69	130	46.47	3.9(20)	
Bromodichloromethane	52.7	2.5	50	0	105	66	134	50.41	4.4(20)	
4-Methyl-2-pentanone (MIBK)	105	13	125	0	84	20	182	101.9	2.6(20)	
cis-1,3-Dichloropropene	44.1	2.5	50	0	88	63	130	42.46	3.7(20)	
trans-1,3-Dichloropropene	41.1	2.5	50	0	82	66	131	39.19	4.8(20)	
1,1,2-Trichloroethane	45.3	2.5	50	0	91	68	130	45.01	0.7(20)	
Toluene	46.5	1.3	50	0	93	66	130	45.31	2.6(20)	
1,3-Dichloropropane	47.3	2.5	50	0	95	70	130	45.3	4.2(20)	
Dibromochloromethane	46	2.5	50	0	92	70	130	43.29	6.1(20)	
1,2-Dibromoethane (EDB)	93.6	5	100	0	94	70	130	89.6	4.4(20)	
Tetrachloroethene	48	2.5	50	0	96	61	134	46.59	3.0(20)	
1,1,1,2-Tetrachloroethane	51.1	2.5	50	0	102	70	130	48.23	5.8(20)	
Chlorobenzene	48.3	2.5	50	0	97	70	130	46.66	3.5(20)	
Ethylbenzene	49.2	1.3	50	0	98	68	130	47.5	3.5(20)	
m,p-Xylene	48	1.3	50	0	96	64	130	46.74	2.6(20)	
Bromoform	44.4	2.5	50	0	89	64	138	41.19	7.6(20)	
Styrene	48.1	2.5	50	0	96	69	130	46.54	3.2(20)	
o-Xylene	48	1.3	50	0	96	70	130	46.15	3.9(20)	
1,1,2,2-Tetrachloroethane	43.6	2.5	50	0	87	65	131	41.81	4.3(20)	
1,2,3-Trichloropropane	91	10	100	0	91	70	130	86.65	4.9(20)	
Isopropylbenzene	47.7	2.5	50	0	95	64	138	46.91	1.6(20)	
Bromobenzene	49.4	2.5	50	0	99	70	130	48.52	1.9(20)	
n-Propylbenzene	49.8	2.5	50	0	99.6	66	132	49	1.6(20)	
4-Chlorotoluene	48.7	2.5	50	0	97	70	130	47.37	2.8(20)	
2-Chlorotoluene	49.2	2.5	50	0	98	70	130	48.42	1.5(20)	
1,3,5-Trimethylbenzene	49.2	2.5	50	0	98	66	136	48.35	1.8(20)	
tert-Butylbenzene	47.5	2.5	50	0	95	65	137	46.56	2.0(20)	
1,2,4-Trimethylbenzene	48.9	2.5	50	0	98	65	137	48.13	1.6(20)	
sec-Butylbenzene	49.1	2.5	50	0	98	66	134	48.4	1.5(20)	
1,3-Dichlorobenzene	49.9	2.5	50	0	99.8	70	130	48.45	2.9(20)	
1,4-Dichlorobenzene	47.3	2.5	50	0	95	70	130	45.35	4.2(20)	
4-Isopropyltoluene	48.2	2.5	50	0	96	66	137	47.39	1.6(20)	
1,2-Dichlorobenzene	46.4	2.5	50	0	93	70	130	44.11	5.0(20)	
n-Butylbenzene	49.6	2.5	50	0	99	60	142	48.12	3.0(20)	
1,2-Dibromo-3-chloropropane (DBCP)	217	15	250	0	87	67	130	203.4	6.3(20)	
1,2,4-Trichlorobenzene	40.7	10	50	0	81	61	137	36.61	10.7(20)	
Naphthalene	24.6	10	50	0	49	40	167	20.66	17.4(20)	
Hexachlorobutadiene	91.2	10	100	0	91	61	130	84.11	8.1(20)	
1,2,3-Trichlorobenzene	38.2	10	50	0	76	51	144	34.59	9.9(20)	
Surr: 1,2-Dichloroethane-d4	50		50		100	70	130			
Surr: Toluene-d8	49.1		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:
10-Nov-2010

QC Summary Report

Work Order:
10110304

Surr: 4-Bromofluorobenzene	48	50	96	70	130
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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.

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

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 : BMIS10110304
Report Due By : 5:00 PM On : 16-Nov-2010

Client: Battelle Memorial Institute
 655 West Broadway
 Suite 1420
 San Diego, CA 92101
 PO : 218013

Report Attention **Phone Number** **Email Address**

David Conner	(619) 726-7311 x	connerd@battelle.org
Betsy Cuite	(614) 424-4899 x	cuitee@battelle.org
Shane Walton	(614) 424-4117 x	waltonsh@battelle.org

Client's COC # : 29182 **Job :** G005862/JPL Groundwater Monitoring

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

EDD Required : Yes **Sampled by :** Chase Brogdon

Cooler Temp **Samples Received** **Date Printed**

0 °C 03-Nov-2010 03-Nov-2010

Alpha Sample ID	Client Sample ID	Collection Date	No. of Bottles			Requested Tests				Sample Remarks
			Alpha	Sub	TAT	314_W	METALS_D W	VOC_TIC_W	VOC_W	
BM10110304-01A	MW-12-5	11/02/10 08:43	5	0	9	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	
BM10110304-02A	MW-12-4	11/02/10 09:07	5	0	9	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	
BM10110304-03A	MW-12-3	11/02/10 09:39	5	0	9	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	
BM10110304-04A	MW-12-2	11/02/10 10:10	5	0	9	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	
BM10110304-05A	MW-12-1	11/02/10 10:34	5	0	9	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	
BM10110304-06A	DUPE-05-4Q10	11/02/10 00:00	5	0	9	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	
BM10110304-07A	EB-10-11/02/10	11/02/10 10:23	5	0	9	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	
BM10110304-08A	TB-10-11/02/10	11/02/10 07:00	1	0	9			VOC by 524 Criteria	VOC by 524 Criteria	Reno Trip Blank 8/12/10

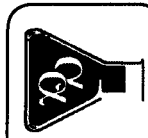
Comments: Security seals intact. Frozen ice. Temp Blank #8964 received @ 0°C. Level IV QC. Samples should be used as the control spike sample if possible (I.E. MS/MSD).

Logged in by: Elizabeth Alex **Signature** Elizabeth Alex **Print Name** Elizabeth Alex **Company** Alpha Analytical, Inc. **Date/Time** 11-3-10 1148

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 / BATTLE
 Address 505 KINF 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 States? 29182
 AZ CA NV WA
 ID OR OTHER
 Page # 1 of 1

Analyses Required

Client Name BATTLE / DAVID BURNEM P.O. # 218013 Job # 6005862
 Address 3990 025 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 CHASE BRADSON Lab ID Number (Use Office Only) _____
 Report Attention _____ Sample Description _____

Time Sampled	Date Sampled	Matrix* See Key Below	Sampled by	Lab ID Number (Use Office Only)	Report Attention	Sample Description	TAT	Field Filtered	Total and type of containers ** See below	Remarks
0913	11/02/10	AQ		BMI1011030401		MW-12-5			3v, 2p	
0907						MW-12-4			X	
0939						MW-12-3			X	
1010						MW-12-2			X	
1034						MW-12-1			3v, 2p	
1023	11/02/10					DUPRE-05 - 4/21/0			3v, 2p	
0900	11/02/10	AQ				TR3-10-10/02/10			1v	

ADDITIONAL INSTRUCTIONS:

Signature	Print Name	Company	Date	Time
	CHASE BRADSON	EMERSON	11/02/10	1230
	Anthony Star	ANGSTRA	11/21/10	1730
	Elizabeth Alder	Alpha	11/14/10	1430
	Elizabeth Alder	Alpha	11-3-10	1448

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



Alpha Analytical, Inc.

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

Date: 10-Nov-10

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

Suite 1420

CASE NARRATIVE

Job: G005862/JPL Groundwater Monitoring

Work Order: BMI10110406

Cooler Temp: 1 °C

Alpha's Sample ID	Client's Sample ID	Matrix
10110406-01A	MW-24-5	Aqueous
10110406-02A	MW-24-4	Aqueous
10110406-03A	MW-24-3	Aqueous
10110406-04A	MW-24-2	Aqueous
10110406-05A	MW-24-1	Aqueous
10110406-06A	DUPE-06-4Q10	Aqueous
10110406-07A	EB-11-11/03/10	Aqueous
10110406-08A	TB-11-11/03/10	Aqueous

Manually Integrated Analytes

<u>Alpha's Sample ID</u>	<u>Test Reference</u>	<u>Analyte</u>
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.

Roger Scholl

Randy Gardner

Walter Hinchman

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

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



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

Battelle Memorial Institute
655 West Broadway
San Diego, CA 92101

Attn: David Conner
Phone: (619) 726-7311
Fax: (614) 458-6641
Date Received : 11/04/10

Job: G005862/JPL Groundwater Monitoring

Anions by IC
EPA Method 300.0

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: MW-24-1				
Lab ID: BM110110406-05A Chloride	71	50 mg/L	11/04/10 11:46	11/04/10 19:26
Date Sampled 11/03/10 10:30 Nitrite (NO2) - N	ND	0.25 mg/L	11/04/10 11:46	11/04/10 19:26
Nitrate (NO3) - N	1.2	0.25 mg/L	11/04/10 11:46	11/04/10 19:26
Phosphate, ortho - P	ND	0.50 mg/L	11/04/10 11:46	11/04/10 19:26
Sulfate (SO4)	47	0.50 mg/L	11/04/10 11:46	11/04/10 19:26

ND = Not Detected

Roger Scholl *Randy Gardner* *Walter Hinchman*

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

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

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

11/16/10

Report Date



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

Battelle Memorial Institute
655 West Broadway
San Diego, CA 92101

Attn: David Conner
Phone: (619) 726-7311
Fax: (614) 458-6641
Date Received : 11/04/10

Job: G005862/JPL Groundwater Monitoring

Perchlorate by Ion Chromatography
EPA Method 314.0

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: MW-24-5				
Lab ID : BMI10110406-01A Perchlorate	ND	1.00 µg/L	11/09/10 12:42	11/09/10 15:29
Date Sampled 11/03/10 08:43				
Client ID: MW-24-4				
Lab ID : BMI10110406-02A Perchlorate	ND	1.00 µg/L	11/09/10 12:42	11/09/10 15:48
Date Sampled 11/03/10 09:18				
Client ID: MW-24-3				
Lab ID : BMI10110406-03A Perchlorate	ND	1.00 µg/L	11/09/10 12:42	11/09/10 16:06
Date Sampled 11/03/10 09:46				
Client ID: MW-24-2				
Lab ID : BMI10110406-04A Perchlorate	11.1	1.00 µg/L	11/09/10 12:42	11/09/10 16:25
Date Sampled 11/03/10 10:07				
Client ID: MW-24-1				
Lab ID : BMI10110406-05A Perchlorate	9.18	1.00 µg/L	11/09/10 12:42	11/09/10 16:43
Date Sampled 11/03/10 10:30				
Client ID: DUPE-06-4Q10				
Lab ID : BMI10110406-06A Perchlorate	ND	1.00 µg/L	11/09/10 12:42	11/09/10 17:01
Date Sampled 11/03/10 00:00				
Client ID: EB-11-11/03/10				
Lab ID : BMI10110406-07A Perchlorate	ND	1.00 µg/L	11/09/10 12:42	11/09/10 17:20
Date Sampled 11/03/10 10:21				

ND = Not Detected

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

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

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

11/16/10

Report Date



Alpha Analytical, Inc.

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ANALYTICAL REPORT

Battelle Memorial Institute
655 West Broadway
San Diego, CA 92101

Attn: David Conner
Phone: (619) 726-7311
Fax: (614) 458-6641
Date Received : 11/04/10

Job: G005862/JPL Groundwater Monitoring

Metals by ICPMS
EPA Method 200.8

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: MW-24-5				
Lab ID : BMI10110406-01A Chromium (Cr)	ND	0.0050 mg/L	11/05/10 16:28	11/05/10 19:48
Date Sampled 11/03/10 08:43				
Client ID: MW-24-4				
Lab ID : BMI10110406-02A Chromium (Cr)	ND	0.0050 mg/L	11/05/10 16:28	11/05/10 19:53
Date Sampled 11/03/10 09:18				
Client ID: MW-24-3				
Lab ID : BMI10110406-03A Chromium (Cr)	ND	0.0050 mg/L	11/05/10 16:28	11/05/10 19:03
Date Sampled 11/03/10 09:46				
Client ID: MW-24-2				
Lab ID : BMI10110406-04A Chromium (Cr)	ND	0.0050 mg/L	11/05/10 16:28	11/05/10 19:59
Date Sampled 11/03/10 10:07				
Client ID: MW-24-1				
Lab ID : BMI10110406-05A Chromium (Cr)	0.0060	0.0050 mg/L	11/05/10 16:28	11/05/10 20:05
Date Sampled 11/03/10 10:30				
Client ID: DUPE-06-4Q10				
Lab ID : BMI10110406-06A Chromium (Cr)	ND	0.0050 mg/L	11/05/10 16:28	11/05/10 20:10
Date Sampled 11/03/10 00:00				
Client ID: EB-11-11/03/10				
Lab ID : BMI10110406-07A Chromium (Cr)	ND	0.0050 mg/L	11/05/10 16:28	11/05/10 20:16
Date Sampled 11/03/10 10:21				

ND = Not Detected

Roger Scholl *Randy Gardner* *Walter Hinchman*

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

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

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11/16/10

Report Date



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

Battelle Memorial Institute
655 West Broadway
San Diego, CA 92101

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

Job: G005862/JPL Groundwater Monitoring

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 : BMI10110406-01A Date Received : 11/04/10 Date Sampled : 11/03/10 08:43	*** None Found ***	ND	11/09/10 06:07	11/09/10 06:07
Client ID : MW-24-4 Lab ID : BMI10110406-02A Date Received : 11/04/10 Date Sampled : 11/03/10 09:18	*** None Found ***	ND	11/09/10 06:29	11/09/10 06:29
Client ID : MW-24-3 Lab ID : BMI10110406-03A Date Received : 11/04/10 Date Sampled : 11/03/10 09:46	*** None Found ***	ND	11/09/10 06:51	11/09/10 06:51
Client ID : MW-24-2 Lab ID : BMI10110406-04A Date Received : 11/04/10 Date Sampled : 11/03/10 10:07	*** None Found ***	ND	11/09/10 07:13	11/09/10 07:13
Client ID : MW-24-1 Lab ID : BMI10110406-05A Date Received : 11/04/10 Date Sampled : 11/03/10 10:30	*** None Found ***	ND	11/09/10 07:34	11/09/10 07:34
Client ID : DUPE-06-4Q10 Lab ID : BMI10110406-06A Date Received : 11/04/10 Date Sampled : 11/03/10 00:00	Sulfur dioxide	2.5	11/09/10 07:56	11/09/10 07:56
Client ID : EB-11-11/03/10 Lab ID : BMI10110406-07A Date Received : 11/04/10 Date Sampled : 11/03/10 10:21	*** None Found ***	ND	11/09/10 03:35	11/09/10 03:35
Client ID : TB-11-11/03/10 Lab ID : BMI10110406-08A Date Received : 11/04/10 Date Sampled : 11/03/10 07:00	*** None Found ***	ND	11/09/10 03:13	11/09/10 03:13



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Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl

Randy Gardner

Walter Hinchman

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11/16/10

Report Date

Page 1 of 1



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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10110406-01A
Client I.D. Number: MW-24-5

Sampled: 11/03/10 08:43
Received: 11/04/10
Extracted: 11/09/10 06:07
Analyzed: 11/09/10 06:07

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	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	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	99	(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	99	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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11/16/10

Report Date



Alpha Analytical, Inc.

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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10110406-02A
Client I.D. Number: MW-24-4

Sampled: 11/03/10 09:18
Received: 11/04/10
Extracted: 11/09/10 06:29
Analyzed: 11/09/10 06:29

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	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	106	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	102	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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Report Date



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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10110406-03A
Client I.D. Number: MW-24-3

Sampled: 11/03/10 09:46
Received: 11/04/10
Extracted: 11/09/10 06:51
Analyzed: 11/09/10 06:51

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	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	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	101	(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	101	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10110406-04A
Client I.D. Number: MW-24-2

Sampled: 11/03/10 10:07
Received: 11/04/10
Extracted: 11/09/10 07:13
Analyzed: 11/09/10 07:13

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-Dichloroethane	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-Dichloroethane	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-Dichloroethane	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	ND	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-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 Trichloroethane	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	106	(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 Tetrachloroethane	ND	0.50 µg/L			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10110406-05A
Client I.D. Number: MW-24-1

Sampled: 11/03/10 10:30
Received: 11/04/10
Extracted: 11/09/10 07:34
Analyzed: 11/09/10 07:34

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethene	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	10 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	2.3	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	ND	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	ND	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	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	106	(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			

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

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11/16/10

Report Date



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10110406-06A
Client I.D. Number: DUPE-06-4Q10

Sampled: 11/03/10 00:00
Received: 11/04/10
Extracted: 11/09/10 07:56
Analyzed: 11/09/10 07:56

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	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	105	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	98	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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11/16/10

Report Date



Alpha Analytical, Inc.

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

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10110406-07A
Client I.D. Number: EB-11-11/03/10

Sampled: 11/03/10 10:21
Received: 11/04/10
Extracted: 11/09/10 03:35
Analyzed: 11/09/10 03:35

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	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	107	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	102	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

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11/16/10

Report Date

Page 1 of 1



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10110406-08A
Client I.D. Number: TB-11-11/03/10

Sampled: 11/03/10 07:00
Received: 11/04/10
Extracted: 11/09/10 03:13
Analyzed: 11/09/10 03:13

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-Dichloroethane	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-Dichloroethane	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-Dichloroethane	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	ND	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-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	107	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	106	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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11/16/10

Report Date



Alpha Analytical, Inc.

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

VOC Sample Preservation Report

Work Order: BMI10110406

Job: G005862/JPL Groundwater Monitoring

Alpha's Sample ID	Client's Sample ID	Matrix	pH
10110406-01A	MW-24-5	Aqueous	2
10110406-02A	MW-24-4	Aqueous	2
10110406-03A	MW-24-3	Aqueous	2
10110406-04A	MW-24-2	Aqueous	2
10110406-05A	MW-24-1	Aqueous	2
10110406-06A	DUPE-06-4Q10	Aqueous	2
10110406-07A	EB-11-11/03/10	Aqueous	2
10110406-08A	TB-11-11/03/10	Aqueous	2

11/16/10
Report Date



Alpha Analytical, Inc.

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

Date:
09-Nov-10

QC Summary Report

Work Order:
10110406

Method Blank

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

File ID: **21**

Batch ID: **25406**

Analysis Date: **11/04/2010 11:24**

Sample ID: **MB-25406**

Units : **mg/L**

Run ID: **IC_1_101104A**

Prep Date: **11/04/2010 11:46**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	ND	0.5								
Nitrite (NO2) - N	ND	0.25								
Nitrate (NO3) - N	ND	0.25								
Phosphate, ortho - P	ND	0.5								
Sulfate (SO4)	ND	0.5								

Laboratory Fortified Blank

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

File ID: **22**

Batch ID: **25406**

Analysis Date: **11/04/2010 11:43**

Sample ID: **LFB-25406**

Units : **mg/L**

Run ID: **IC_1_101104A**

Prep Date: **11/04/2010 11:46**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	48.3	0.5	50		97	90	110			
Nitrite (NO2) - N	4.68	0.25	5		94	90	110			
Nitrate (NO3) - N	4.67	0.25	5		93	90	110			
Phosphate, ortho - P	4.58	0.5	5		92	90	110			
Sulfate (SO4)	96.5	0.5	100		96	90	110			

Sample Matrix Spike

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

File ID: **25**

Batch ID: **25406**

Analysis Date: **11/04/2010 12:38**

Sample ID: **10110421-01ALFM**

Units : **mg/L**

Run ID: **IC_1_101104A**

Prep Date: **11/04/2010 11:46**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	728	0.5	50	839.8	-220	80	120			M3
Nitrite (NO2) - N	5.45	0.25	5	0	109	80	120			
Nitrate (NO3) - N	4.78	0.25	5	0	96	80	120			
Phosphate, ortho - P	6.18	0.5	5	0	124	80	120			M1
Sulfate (SO4)	235	0.5	100	176.5	59	80	120			M2

Sample Matrix Spike Duplicate

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

File ID: **26**

Batch ID: **25406**

Analysis Date: **11/04/2010 12:57**

Sample ID: **10110421-01ALFMD**

Units : **mg/L**

Run ID: **IC_1_101104A**

Prep Date: **11/04/2010 11:46**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	730	0.5	50	839.8	-220	80	120	728	0.3(15)	M3
Nitrite (NO2) - N	5.48	0.25	5	0	110	80	120	5.449	0.6(15)	
Nitrate (NO3) - N	4.84	0.25	5	0	97	80	120	4.784	1.1(15)	
Phosphate, ortho - P	6.65	0.5	5	0	133	80	120	6.18	7.4(15)	M1
Sulfate (SO4)	236	0.5	100	176.5	60	80	120	235.2	0.4(15)	M2

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.

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

M3 = The accuracy of the spike recovery value is reduced since the analyte concentration in the sample is disproportionate to the spike level. The method control sample recovery was acceptable.



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Date:
16-Nov-10

QC Summary Report

Work Order:
10110406

Method Blank

File ID: 14	Type MBLK	Test Code: EPA Method 314.0	Batch ID: 25439	Analysis Date: 11/09/2010 13:39						
Sample ID: MB-25439	Units : µg/L	Run ID: IC_3_101109A	Prep Date: 11/09/2010 12:42							
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	ND	1								

Laboratory Fortified Blank

File ID: 15	Type LFB	Test Code: EPA Method 314.0	Batch ID: 25439	Analysis Date: 11/09/2010 13:58						
Sample ID: LFB-25439	Units : µg/L	Run ID: IC_3_101109A	Prep Date: 11/09/2010 12:42							
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	22.9	2	25		91	85	115			

Sample Matrix Spike

File ID: 30	Type LFM	Test Code: EPA Method 314.0	Batch ID: 25439	Analysis Date: 11/09/2010 18:34						
Sample ID: 10110503-01ALFM	Units : µg/L	Run ID: IC_3_101109A	Prep Date: 11/09/2010 12:42							
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	26.4	2	25	2.319	96	80	120			

Sample Matrix Spike Duplicate

File ID: 31	Type LFMD	Test Code: EPA Method 314.0	Batch ID: 25439	Analysis Date: 11/09/2010 18:52						
Sample ID: 10110503-01ALFMD	Units : µg/L	Run ID: IC_3_101109A	Prep Date: 11/09/2010 12:42							
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	28.7	2	25	2.319	106	80	120	26.36	8.6(15)	

Comments:

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Date:
15-Nov-10

QC Summary Report

Work Order:
10110406

Method Blank

File ID: 110510.B\018_M.D\	Type MBLK	Test Code: EPA Method 200.8	Batch ID: 25419	Analysis Date: 11/05/2010 18:35						
Sample ID: MB-25419	Units : mg/L	Run ID: ICP/MS_101105D	Prep Date: 11/05/2010 16:28							
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	ND	0.005								

Laboratory Control Spike

File ID: 110510.B\019_M.D\	Type LCS	Test Code: EPA Method 200.8	Batch ID: 25419	Analysis Date: 11/05/2010 18:41						
Sample ID: LCS-25419	Units : mg/L	Run ID: ICP/MS_101105D	Prep Date: 11/05/2010 16:28							
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0493	0.005	0.05		99	85	115			

Sample Matrix Spike

File ID: 110510.B\024_M.D\	Type MS	Test Code: EPA Method 200.8	Batch ID: 25419	Analysis Date: 11/05/2010 19:08						
Sample ID: 10110406-03AMS	Units : mg/L	Run ID: ICP/MS_101105D	Prep Date: 11/05/2010 16:28							
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0445	0.005	0.05		0	89	70	130		

Sample Matrix Spike Duplicate

File ID: 110510.B\025_M.D\	Type MSD	Test Code: EPA Method 200.8	Batch ID: 25419	Analysis Date: 11/05/2010 19:14						
Sample ID: 10110406-03AMSD	Units : mg/L	Run ID: ICP/MS_101105D	Prep Date: 11/05/2010 16:28							
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.043	0.005	0.05		0	86	70	130	0.04448	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:
10-Nov-10

QC Summary Report

Work Order:
10110406

Method Blank

File ID: 10110837.D

Type MBLK Test Code: EPA Method SW8260B

Batch ID: MS15W1108N

Analysis Date: 11/09/2010 01:02

Sample ID: MBLK MS15W1108N

Units: µg/L

Run ID: MSD_15_101108B

Prep Date: 11/09/2010 01:02

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	10.6		10		106	70	130			



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QC Summary Report

Work Order:

10110406

Surr: 4-Bromofluorobenzene

10.3

10

103

70

130



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QC Summary Report

Work Order:
10110406

Laboratory Control Spike

Type LCS Test Code: EPA Method SW8260B

File ID: 10110832.D

Batch ID: MS15W1108N

Analysis Date: 11/08/2010 23:14

Sample ID: LCS MS15W1108N

Units: µg/L

Run ID: MSD_15_101108B

Prep Date: 11/08/2010 23:14

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	7.74	1	10		77	70	130			
Chloromethane	6.7	2	10		67	70(70)	130			L50
Vinyl chloride	10.4	1	10		104	70	130			
Chloroethane	10.1	1	10		101	70	130			
Bromomethane	6.39	2	10		64	70(70)	130			L50
Trichlorofluoromethane	10.5	1	10		105	70	130			
1,1-Dichloroethene	10.1	1	10		101	70	130			
Dichloromethane	9.29	2	10		93	70	130			
Freon-113	11.1	1	10		111	67	141			
trans-1,2-Dichloroethene	10.2	1	10		102	70	130			
Methyl tert-butyl ether (MTBE)	9.11	0.5	10		91	70	130			
1,1-Dichloroethane	10.3	1	10		103	70	130			
2-Butanone (MEK)	179	10	200		90	70	130			
cis-1,2-Dichloroethene	10.2	1	10		102	70	130			
Bromochloromethane	9.82	1	10		98	70	130			
Chloroform	10.1	1	10		101	70	130			
2,2-Dichloropropane	9.5	1	10		95	70	130			
1,2-Dichloroethane	10.2	1	10		102	70	130			
1,1,1-Trichloroethane	10.3	1	10		103	70	130			
1,1-Dichloropropene	10.8	1	10		108	70	130			
Carbon tetrachloride	9.97	1	10		99.7	70	130			
Benzene	10.1	0.5	10		101	70	130			
Dibromomethane	9.71	1	10		97	70	130			
1,2-Dichloropropane	10.1	1	10		101	70	130			
Trichloroethene	10.7	1	10		107	70	130			
Bromodichloromethane	10.9	1	10		109	70	130			
4-Methyl-2-pentanone (MIBK)	22.1	2.5	25		88	20	182			
cis-1,3-Dichloropropene	9.53	1	10		95	70	130			
trans-1,3-Dichloropropene	8.85	1	10		89	70	130			
1,1,2-Trichloroethane	9.46	1	10		95	70	130			
Toluene	9.87	0.5	10		99	70	130			
1,3-Dichloropropane	9.74	1	10		97	70	130			
Dibromochloromethane	9.27	1	10		93	70	130			
1,2-Dibromoethane (EDB)	19	2	20		95	70	130			
Tetrachloroethene	10.2	1	10		102	70	130			
1,1,1,2-Tetrachloroethane	10.4	1	10		104	70	130			
Chlorobenzene	10.2	1	10		102	70	130			
Ethylbenzene	10.4	0.5	10		104	70	130			
m,p-Xylene	10.1	0.5	10		101	70	130			
Bromoform	8.44	1	10		84	70	130			
Styrene	10.1	1	10		101	70	130			
o-Xylene	10	0.5	10		100	70	130			
1,1,2,2-Tetrachloroethane	8.81	1	10		88	70	130			
1,2,3-Trichloropropane	18.5	2	20		93	70	130			
Isopropylbenzene	10.4	1	10		104	70	130			
Bromobenzene	10.4	1	10		104	70	130			
n-Propylbenzene	10.8	1	10		108	70	130			
4-Chlorotoluene	10.4	1	10		104	70	130			
2-Chlorotoluene	10.6	1	10		106	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	10.5	1	10		105	70	130			
sec-Butylbenzene	10.6	1	10		106	70	130			
1,3-Dichlorobenzene	10.5	1	10		105	70	130			
1,4-Dichlorobenzene	9.89	1	10		99	70	130			
4-Isopropyltoluene	10.4	1	10		104	70	130			
1,2-Dichlorobenzene	9.65	1	10		97	70	130			
n-Butylbenzene	10.6	1	10		106	70	130			
1,2-Dibromo-3-chloropropane (DBCP)	43.4	3	50		87	70	130			
1,2,4-Trichlorobenzene	7.96	2	10		80	70	130			
Naphthalene	4.38	2	10		44	70(70)	130			L50
Hexachlorobutadiene	18.8	2	20		94	70	130			
1,2,3-Trichlorobenzene	7.36	2	10		74	70	130			
Surr: 1,2-Dichloroethane-d4	10.1		10		101	70	130			



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Surr: Toluene-d8	9.78	10	98	70	130
Surr: 4-Bromofluorobenzene	9.92	10	99	70	130



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Date:
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QC Summary Report

Work Order:
10110406

Sample Matrix Spike

File ID: 10110838.D

Type MS

Test Code: EPA Method SW8260B

Sample ID: 10110406-03AMS

Units: µg/L

Batch ID: MS15W1108N

Analysis Date: 11/09/2010 01:24

Run ID: MSD_15_101108B

Prep Date: 11/09/2010 01:24

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	37.7	2.5	50	0	75	13	167			
Chloromethane	33.8	10	50	0	68	28	145			
Vinyl chloride	52.1	2.5	50	0	104	43	134			
Chloroethane	49.9	2.5	50	0	99.7	39	154			
Bromomethane	39.2	10	50	0	78	19	176			
Trichlorofluoromethane	50.6	2.5	50	0	101	34	160			
1,1-Dichloroethene	47.8	2.5	50	0	96	60	130			
Dichloromethane	44.5	10	50	0	89	68	130			
Freon-113	52.5	2.5	50	0	105	49	141			
trans-1,2-Dichloroethene	47.5	2.5	50	0	95	63	130			
Methyl tert-butyl ether (MTBE)	45	1.3	50	0	90	56	141			
1,1-Dichloroethane	48	2.5	50	0	96	61	130			
2-Butanone (MEK)	697	50	1000	0	70	20	182			
cis-1,2-Dichloroethene	47.4	2.5	50	0	95	70	130			
Bromochloromethane	47.2	2.5	50	0	94	70	130			
Chloroform	47.7	2.5	50	0	95	67	130			
2,2-Dichloropropane	37.7	2.5	50	0	75	30	152			
1,2-Dichloroethane	48.2	2.5	50	0	96	60	135			
1,1,1-Trichloroethane	48.4	2.5	50	0	97	59	137			
1,1-Dichloropropene	49.8	2.5	50	0	99.6	63	130			
Carbon tetrachloride	47.9	2.5	50	0	96	50	147			
Benzene	47.8	1.3	50	0	96	67	130			
Dibromomethane	45.6	2.5	50	0	91	69	133			
1,2-Dichloropropane	46.5	2.5	50	0	93	69	130			
Trichloroethene	46.5	2.5	50	0	93	69	130			
Bromodichloromethane	50.4	2.5	50	0	101	66	134			
4-Methyl-2-pentanone (MIBK)	102	13	125	0	82	20	182			
cis-1,3-Dichloropropene	42.5	2.5	50	0	85	63	130			
trans-1,3-Dichloropropene	39.2	2.5	50	0	78	66	131			
1,1,2-Trichloroethane	45	2.5	50	0	90	68	130			
Toluene	45.3	1.3	50	0	91	66	130			
1,3-Dichloropropane	45.3	2.5	50	0	91	70	130			
Dibromochloromethane	43.3	2.5	50	0	87	70	130			
1,2-Dibromoethane (EDB)	89.6	5	100	0	90	70	130			
Tetrachloroethene	46.6	2.5	50	0	93	61	134			
1,1,1,2-Tetrachloroethane	48.2	2.5	50	0	96	70	130			
Chlorobenzene	46.7	2.5	50	0	93	70	130			
Ethylbenzene	47.5	1.3	50	0	95	68	130			
m,p-Xylene	46.7	1.3	50	0	93	64	130			
Bromoform	41.2	2.5	50	0	82	64	138			
Styrene	46.5	2.5	50	0	93	69	130			
o-Xylene	46.2	1.3	50	0	92	70	130			
1,1,2,2-Tetrachloroethane	41.8	2.5	50	0	84	65	131			
1,2,3-Trichloropropane	86.7	10	100	0	87	70	130			
Isopropylbenzene	46.9	2.5	50	0	94	64	138			
Bromobenzene	48.5	2.5	50	0	97	70	130			
n-Propylbenzene	49	2.5	50	0	98	66	132			
4-Chlorotoluene	47.4	2.5	50	0	95	70	130			
2-Chlorotoluene	48.4	2.5	50	0	97	70	130			
1,3,5-Trimethylbenzene	48.4	2.5	50	0	97	66	136			
tert-Butylbenzene	46.6	2.5	50	0	93	65	137			
1,2,4-Trimethylbenzene	48.1	2.5	50	0	96	65	137			
sec-Butylbenzene	48.4	2.5	50	0	97	66	134			
1,3-Dichlorobenzene	48.5	2.5	50	0	97	70	130			
1,4-Dichlorobenzene	45.4	2.5	50	0	91	70	130			
4-Isopropyltoluene	47.4	2.5	50	0	95	66	137			
1,2-Dichlorobenzene	44.1	2.5	50	0	88	70	130			
n-Butylbenzene	48.1	2.5	50	0	96	60	142			
1,2-Dibromo-3-chloropropane (DBCP)	203	15	250	0	81	67	130			
1,2,4-Trichlorobenzene	36.6	10	50	0	73	61	137			
Naphthalene	20.7	10	50	0	41	40	167			
Hexachlorobutadiene	84.1	10	100	0	84	61	130			
1,2,3-Trichlorobenzene	34.6	10	50	0	69	51	144			
Surr: 1,2-Dichloroethane-d4	49.9		50		99.7	70	130			
Surr: Toluene-d8	48.7		50		97	70	130			



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QC Summary Report

Work Order:

10110406

Surr: 4-Bromofluorobenzene

48.1

50

96

70

130



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Date:
10-Nov-10

QC Summary Report

Work Order:
10110406

Sample Matrix Spike Duplicate

Type **MSD** Test Code: **EPA Method SW8260B**

File ID: **10110839.D**

Batch ID: **MS15W1108N**

Analysis Date: **11/09/2010 01:45**

Sample ID: **10110406-03AMSD**

Units: **µg/L**

Run ID: **MSD_15_101108B**

Prep Date: **11/09/2010 01:45**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	38.8	2.5	50	0	78	13	167	37.68	2.9(20)	
Chloromethane	34.4	10	50	0	69	28	145	33.78	1.9(20)	
Vinyl chloride	54.1	2.5	50	0	108	43	134	52.13	3.8(20)	
Chloroethane	51.2	2.5	50	0	102	39	154	49.85	2.6(20)	
Bromomethane	45.9	10	50	0	92	19	176	39.23	15.7(20)	
Trichlorofluoromethane	51.6	2.5	50	0	103	34	160	50.56	2.1(20)	
1,1-Dichloroethene	49.5	2.5	50	0	99	60	130	47.83	3.5(20)	
Dichloromethane	44.8	10	50	0	90	68	130	44.52	0.6(20)	
Freon-113	52.5	2.5	50	0	105	49	141	52.45	0.0(20)	
trans-1,2-Dichloroethene	49.3	2.5	50	0	99	63	130	47.46	3.8(20)	
Methyl tert-butyl ether (MTBE)	46.4	1.3	50	0	93	56	141	45.03	3.0(20)	
1,1-Dichloroethane	49.2	2.5	50	0	98	61	130	48.04	2.5(20)	
2-Butanone (MEK)	705	50	1000	0	71	20	182	697.1	1.1(20)	
cis-1,2-Dichloroethene	48.3	2.5	50	0	97	70	130	47.35	2.0(20)	
Bromochloromethane	49	2.5	50	0	98	70	130	47.16	3.9(20)	
Chloroform	48.3	2.5	50	0	97	67	130	47.67	1.2(20)	
2,2-Dichloropropane	38.5	2.5	50	0	77	30	152	37.68	2.2(20)	
1,2-Dichloroethane	49.3	2.5	50	0	99	60	135	48.18	2.2(20)	
1,1,1-Trichloroethane	50.1	2.5	50	0	100	59	137	48.41	3.3(20)	
1,1-Dichloropropene	50.6	2.5	50	0	101	63	130	49.79	1.5(20)	
Carbon tetrachloride	50.8	2.5	50	0	102	50	147	47.88	5.8(20)	
Benzene	48.3	1.3	50	0	97	67	130	47.75	1.2(20)	
Dibromomethane	46.7	2.5	50	0	93	69	133	45.6	2.3(20)	
1,2-Dichloropropane	47.9	2.5	50	0	96	69	130	46.51	2.9(20)	
Trichloroethene	48.3	2.5	50	0	97	69	130	46.47	3.9(20)	
Bromodichloromethane	52.7	2.5	50	0	105	66	134	50.41	4.4(20)	
4-Methyl-2-pentanone (MIBK)	105	13	125	0	84	20	182	101.9	2.6(20)	
cis-1,3-Dichloropropene	44.1	2.5	50	0	88	63	130	42.46	3.7(20)	
trans-1,3-Dichloropropene	41.1	2.5	50	0	82	66	131	39.19	4.8(20)	
1,1,2-Trichloroethane	45.3	2.5	50	0	91	68	130	45.01	0.7(20)	
Toluene	46.5	1.3	50	0	93	66	130	45.31	2.6(20)	
1,3-Dichloropropane	47.3	2.5	50	0	95	70	130	45.3	4.2(20)	
Dibromochloromethane	46	2.5	50	0	92	70	130	43.29	6.1(20)	
1,2-Dibromoethane (EDB)	93.6	5	100	0	94	70	130	89.6	4.4(20)	
Tetrachloroethene	48	2.5	50	0	96	61	134	46.59	3.0(20)	
1,1,1,2-Tetrachloroethane	51.1	2.5	50	0	102	70	130	48.23	5.8(20)	
Chlorobenzene	48.3	2.5	50	0	97	70	130	46.66	3.5(20)	
Ethylbenzene	49.2	1.3	50	0	98	68	130	47.5	3.5(20)	
m,p-Xylene	48	1.3	50	0	96	64	130	46.74	2.6(20)	
Bromoform	44.4	2.5	50	0	89	64	138	41.19	7.6(20)	
Styrene	48.1	2.5	50	0	96	69	130	46.54	3.2(20)	
o-Xylene	48	1.3	50	0	96	70	130	46.15	3.9(20)	
1,1,2,2-Tetrachloroethane	43.6	2.5	50	0	87	65	131	41.81	4.3(20)	
1,2,3-Trichloropropane	91	10	100	0	91	70	130	86.65	4.9(20)	
Isopropylbenzene	47.7	2.5	50	0	95	64	138	46.91	1.6(20)	
Bromobenzene	49.4	2.5	50	0	99	70	130	48.52	1.9(20)	
n-Propylbenzene	49.8	2.5	50	0	99.6	66	132	49	1.6(20)	
4-Chlorotoluene	48.7	2.5	50	0	97	70	130	47.37	2.8(20)	
2-Chlorotoluene	49.2	2.5	50	0	98	70	130	48.42	1.5(20)	
1,3,5-Trimethylbenzene	49.2	2.5	50	0	98	66	136	48.35	1.8(20)	
tert-Butylbenzene	47.5	2.5	50	0	95	65	137	46.56	2.0(20)	
1,2,4-Trimethylbenzene	48.9	2.5	50	0	98	65	137	48.13	1.6(20)	
sec-Butylbenzene	49.1	2.5	50	0	98	66	134	48.4	1.5(20)	
1,3-Dichlorobenzene	49.9	2.5	50	0	99.8	70	130	48.45	2.9(20)	
1,4-Dichlorobenzene	47.3	2.5	50	0	95	70	130	45.35	4.2(20)	
4-Isopropyltoluene	48.2	2.5	50	0	96	66	137	47.39	1.6(20)	
1,2-Dichlorobenzene	46.4	2.5	50	0	93	70	130	44.11	5.0(20)	
n-Butylbenzene	49.6	2.5	50	0	99	60	142	48.12	3.0(20)	
1,2-Dibromo-3-chloropropane (DBCP)	217	15	250	0	87	67	130	203.4	6.3(20)	
1,2,4-Trichlorobenzene	40.7	10	50	0	81	61	137	36.61	10.7(20)	
Naphthalene	24.6	10	50	0	49	40	167	20.66	17.4(20)	
Hexachlorobutadiene	91.2	10	100	0	91	61	130	84.11	8.1(20)	
1,2,3-Trichlorobenzene	38.2	10	50	0	76	51	144	34.59	9.9(20)	
Surr: 1,2-Dichloroethane-d4	50		50		100	70	130			
Surr: Toluene-d8	49.1		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:

10-Nov-10

QC Summary Report

Work Order:

10110406

Surr: 4-Bromofluorobenzene

48

50

96

70

130

Comments:

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

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 : BMIS10110406
Report Due By : 5:00 PM On : 17-Nov-2010

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

Report Attention	Phone Number	Email Address
David Conner	(619) 726-7311 x	connerd@battelle.org
Betsy Cutie	(614) 424-4899 x	cutiee@battelle.org
Shane Walton	(614) 424-4117 x	walton@battelle.org

EDD Required : Yes

Sampled by : Chase Brogdon

Cooler Temp

Samples Received

Date Printed

Client's COC # : 29191

Job : G005862/JPL Groundwater Monitoring

1 °C

04-Nov-2010

04-Nov-2010

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

Alpha Sample ID	Client Sample ID	Collection Matrix Date	No. of Bottles			Requested Tests						Sample Remarks
			Alpha	Sub	TAT	300_0_W	314_W	METALS_D W	VOC_TIC_W	VOC_W		
BMI10110406-01A	MW-24-5	11/03/10 08:43	5	0	9	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria			
BMI10110406-02A	MW-24-4	11/03/10 09:18	5	0	9	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria			
BMI10110406-03A	MW-24-3	11/03/10 09:46	5	0	9	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria			Level IV QC
BMI10110406-04A	MW-24-2	11/03/10 10:07	5	0	9	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria			
BMI10110406-05A	MW-24-1	11/03/10 10:30	5	0	9	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria			
BMI10110406-06A	DUPE-06-4Q10	11/03/10 00:00	5	0	9	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria			
BMI10110406-07A	EB-11-11/03/10	11/03/10 10:21	5	0	9	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria			
BMI10110406-08A	TB-11-11/03/10	11/03/10 07:00	1	0	9	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria			Reno Trip Blank 8/12/10

Comments: Security seals intact. Frozen ice. Temp Blank #8529 received @ 1°C. Level IV QC. Samples should be used as the control spike sample if possible (IE: MS/MSD).

Signature	Print Name	Company	Date/Time
<i>Elizabeth Adams</i>	Elizabeth Adams	Alpha Analytical, Inc.	11-4-10 1407

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-Lier V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

Billing Information:

Name GERALD TOMPKINS/BOTTLE
 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? 29191
 AZ _____ CA NV _____ WA _____
 ID _____ OR _____ OTHER _____ Page # 1 of 1

Analyses Required

Required QC Level? I II III IV

EDD / EDF? YES _____ NO _____

Global ID # _____

REMARKS

Client Name	Address	City, State, Zip	PO. #	Job #	Phone #	Fax #	Report Attention	Sample Description	TAT	Field Filled	Total and type of containers ** See below	REMARKS
BOTTLES / SAUD CONCRETE	3990 OLD TOWN AVE, C-205	SAN DIEGO, CA 92110	218013	605562	(619) 736-7311							
0843	11/03/10	AR	BMI1011070601		MW-24-5						3v, 2p	
0846	11/03/10	AR			MW-24-4							
0847	11/03/10	AR			MW-24-3							
1030	11/03/10	AR			MW-24-2							
1021	11/03/10	AR			MW-24-1							
0700	11/03/10	AR			DUPES - 06 - 4010						3v, 2p	DUPES
					07 075-11-11/03/10						1v	EQUIPMENT BLANK
					08 075-11-11/03/10							TRAP BLANK

ADDITIONAL INSTRUCTIONS:

Signature	Print Name	Company	Date	Time
<i>[Signature]</i>	CHRIS BARBER	INSISTA ETC, INC	11/03/10	1200
<i>[Signature]</i>	Anthony Stark	Alpha Analytical	11/3/10	1200
<i>[Signature]</i>	Elizabeth Aldox	Alpha	11/3/10	1200
<i>[Signature]</i>			11/4/10	1404

*Key: AQ - Aqueous SO - Soil WA - Waste OT - Other AR - Air ** L-Liter V-Vol S-Soil Jar O-Orbo T-Tedar B-Brass P-Plastic QF-Other

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this coc. The liability of the laboratory is limited to the amount paid for the report.



Alpha Analytical, Inc.

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

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

Date 10-Nov-10

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

Suite 1420

CASE NARRATIVE

Job: G005862/JPL Groundwater Monitoring

Work Order: BMI10110503

Cooler Temp: 3 °C

Alpha's Sample ID	Client's Sample ID	Matrix
10110503-01A	MW-23-5	Aqueous
10110503-02A	MW-23-4	Aqueous
10110503-03A	MW-23-3	Aqueous
10110503-04A	MW-23-2	Aqueous
10110503-05A	MW-23-1	Aqueous
10110503-06A	DUPE-07-4Q10	Aqueous
10110503-07A	EB-12-11/04/10	Aqueous
10110503-08A	TB-12-11/04/10	Aqueous

Manually Integrated Analytes

Alpha's Sample ID	Test Reference	Analyte
NONE		

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

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

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

Roger Scholl *Randy Gardner* *Walter Hinchman*

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

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

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



Alpha Analytical, Inc.

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

Battelle Memorial Institute
655 West Broadway
San Diego, CA 92101

Attn: David Conner
Phone: (619) 726-7311
Fax: (614) 458-6641
Date Received : 11/05/10

Job: G005862/JPL Groundwater Monitoring

Perchlorate by Ion Chromatography EPA Method 314.0

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: MW-23-5				
Lab ID : BM110110503-01A Perchlorate	ND	1.00 µg/L	11/09/10 12:42	11/09/10 18:15
Date Sampled 11/04/10 08:23				
Client ID: MW-23-4				
Lab ID : BM110110503-02A Perchlorate	ND	1.00 µg/L	11/09/10 12:42	11/09/10 19:10
Date Sampled 11/04/10 08:45				
Client ID: MW-23-3				
Lab ID : BM110110503-03A Perchlorate	2.19	1.00 µg/L	11/09/10 12:42	11/09/10 19:29
Date Sampled 11/04/10 09:04				
Client ID: MW-23-2				
Lab ID : BM110110503-04A Perchlorate	4.40	1.00 µg/L	11/09/10 12:42	11/09/10 19:47
Date Sampled 11/04/10 09:26				
Client ID: MW-23-1				
Lab ID : BM110110503-05A Perchlorate	30.4	1.00 µg/L	11/09/10 12:42	11/09/10 20:06
Date Sampled 11/04/10 09:58				
Client ID: DUPE-07-4Q10				
Lab ID : BM110110503-06A Perchlorate	29.9	1.00 µg/L	11/09/10 12:42	11/09/10 20:24
Date Sampled 11/04/10 00:00				
Client ID: EB-12-11/04/10				
Lab ID : BM110110503-07A Perchlorate	ND	1.00 µg/L	11/09/10 12:42	11/09/10 20:42
Date Sampled 11/04/10 09:44				

ND = Not Detected

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

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11/17/10

Report Date



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

Battelle Memorial Institute
655 West Broadway
San Diego, CA 92101

Attn: David Conner
Phone: (619) 726-7311
Fax: (614) 458-6641
Date Received : 11/05/10

Job: G005862/JPL Groundwater Monitoring

Metals by ICPMS
EPA Method 200.8

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: MW-23-5				
Lab ID: BM110110503-01A Chromium (Cr)	ND	0.0050 mg/L	11/05/10 16:28	11/05/10 20:43
Date Sampled 11/04/10 08:23				
Client ID: MW-23-4				
Lab ID: BM110110503-02A Chromium (Cr)	ND	0.0050 mg/L	11/05/10 16:28	11/05/10 20:49
Date Sampled 11/04/10 08:45				
Client ID: MW-23-3				
Lab ID: BM110110503-03A Chromium (Cr)	ND	0.0050 mg/L	11/05/10 16:28	11/05/10 20:55
Date Sampled 11/04/10 09:04				
Client ID: MW-23-2				
Lab ID: BM110110503-04A Chromium (Cr)	ND	0.0050 mg/L	11/05/10 16:28	11/05/10 21:00
Date Sampled 11/04/10 09:26				
Client ID: MW-23-1				
Lab ID: BM110110503-05A Chromium (Cr)	ND	0.0050 mg/L	11/05/10 16:28	11/05/10 21:06
Date Sampled 11/04/10 09:58				
Client ID: DUPE-07-4Q10				
Lab ID: BM110110503-06A Chromium (Cr)	ND	0.0050 mg/L	11/05/10 16:28	11/05/10 21:11
Date Sampled 11/04/10 00:00				
Client ID: EB-12-11/04/10				
Lab ID: BM110110503-07A Chromium (Cr)	ND	0.0050 mg/L	11/05/10 16:28	11/05/10 21:17
Date Sampled 11/04/10 09:44				

ND = Not Detected

Roger Scholl *Randy Gardner* *Walter Hinchman*

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

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11/17/10

Report Date



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ANALYTICAL REPORT

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

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

Tentatively Identified Compounds - Volatile Organics by GC/MS

Parameter	Estimated Concentration	Estimated Reporting Limit	Date Extracted	Date Analyzed
Client ID: MW-23-5 Lab ID: BMI10110503-01A Date Received: 11/05/10 Date Sampled: 11/04/10 08:23	*** None Found ***	ND	11/09/10 20:05	11/09/10 20:05
Client ID: MW-23-4 Lab ID: BMI10110503-02A Date Received: 11/05/10 Date Sampled: 11/04/10 08:45	*** None Found ***	ND	11/09/10 20:26	11/09/10 20:26
Client ID: MW-23-3 Lab ID: BMI10110503-03A Date Received: 11/05/10 Date Sampled: 11/04/10 09:04	*** None Found ***	ND	11/09/10 20:48	11/09/10 20:48
Client ID: MW-23-2 Lab ID: BMI10110503-04A Date Received: 11/05/10 Date Sampled: 11/04/10 09:26	*** None Found ***	ND	11/09/10 21:10	11/09/10 21:10
Client ID: MW-23-1 Lab ID: BMI10110503-05A Date Received: 11/05/10 Date Sampled: 11/04/10 09:58	*** None Found ***	ND	11/09/10 21:31	11/09/10 21:31
Client ID: DUPE-07-4Q10 Lab ID: BMI10110503-06A Date Received: 11/05/10 Date Sampled: 11/04/10 00:00	*** None Found ***	ND	11/09/10 21:53	11/09/10 21:53
Client ID: EB-12-11/04/10 Lab ID: BMI10110503-07A Date Received: 11/05/10 Date Sampled: 11/04/10 09:44	*** None Found ***	ND	11/09/10 19:43	11/09/10 19:43
Client ID: TB-12-11/04/10 Lab ID: BMI10110503-08A Date Received: 11/05/10 Date Sampled: 11/04/10 07:00	*** None Found ***	ND	11/09/10 19:21	11/09/10 19:21



Alpha Analytical, Inc.

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Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl

Randy Gardner

Walter Hinchman

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

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.

JSG

11/17/10

Report Date

Page 1 of 1



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10110503-01A
Client I.D. Number: MW-23-5

Sampled: 11/04/10 08:23
Received: 11/05/10
Extracted: 11/09/10 20:05
Analyzed: 11/09/10 20:05

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	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-Dichloroethane	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-Dichloroethane	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-Dichloroethane	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	ND	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	ND	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	ND	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	105	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	102	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	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			

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.

J=Estimated: The analyte was positively identified; the quantitation is an estimation.

ND = Not Detected

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

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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.

11/17/10

Report Date



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10110503-02A
Client I.D. Number: MW-23-4

Sampled: 11/04/10 08:45
Received: 11/05/10
Extracted: 11/09/10 20:26
Analyzed: 11/09/10 20:26

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	Q 1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	Q 1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethene	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	10 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	ND	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	ND	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	ND	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	105	(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	101	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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11/17/10

Report Date



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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10110503-03A
Client I.D. Number: MW-23-3

Sampled: 11/04/10 09:04
Received: 11/05/10
Extracted: 11/09/10 20:48
Analyzed: 11/09/10 20:48

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 1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	Q 1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethane	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-Dichloroethane	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-Dichloroethane	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	ND	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-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	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	106	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	104	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	99	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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

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11/17/10

Report Date



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10110503-04A
Client I.D. Number: MW-23-2

Sampled: 11/04/10 09:26
Received: 11/05/10
Extracted: 11/09/10 21:10
Analyzed: 11/09/10 21:10

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	0.61	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	ND	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	1.4	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	107	(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	101	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	0.61	0.50 µg/L			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer
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11/17/10

Report Date



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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10110503-05A
Client I.D. Number: MW-23-1

Sampled: 11/04/10 09:58
Received: 11/05/10
Extracted: 11/09/10 21:31
Analyzed: 11/09/10 21:31

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

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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11/17/10

Report Date



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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10110503-06A
Client I.D. Number: DUPE-07-4Q10

Sampled: 11/04/10 00:00
Received: 11/05/10
Extracted: 11/09/10 21:53
Analyzed: 11/09/10 21:53

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	Q	1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	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	98	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	0.55	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 L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

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

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

11/17/10

Report Date



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10110503-07A
Client I.D. Number: EB-12-11/04/10

Sampled: 11/04/10 09:44
Received: 11/05/10
Extracted: 11/09/10 19:43
Analyzed: 11/09/10 19:43

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethene	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	10 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	ND	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	ND	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	ND	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	Q	1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	105	(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	101	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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

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11/17/10

Report Date



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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10110503-08A
Client I.D. Number: TB-12-11/04/10

Sampled: 11/04/10 07:00
Received: 11/05/10
Extracted: 11/09/10 19:21
Analyzed: 11/09/10 19:21

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	Q 1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	106	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	105	(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			

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

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11/17/10

Report Date



Alpha Analytical, Inc.

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

VOC Sample Preservation Report

Work Order: BMI10110503

Job: G005862/JPL Groundwater Monitoring

Alpha's Sample ID	Client's Sample ID	Matrix	pH
10110503-01A	MW-23-5	Aqueous	2
10110503-02A	MW-23-4	Aqueous	2
10110503-03A	MW-23-3	Aqueous	2
10110503-04A	MW-23-2	Aqueous	2
10110503-05A	MW-23-1	Aqueous	2
10110503-06A	DUPE-07-4Q10	Aqueous	2
10110503-07A	EB-12-11/04/10	Aqueous	2
10110503-08A	TB-12-11/04/10	Aqueous	2

11/17/10
Report Date



Alpha Analytical, Inc.

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

Date:
16-Nov-10

QC Summary Report

Work Order:
10110503

Method Blank

Type: MBLK Test Code: EPA Method 314.0

File ID: 14 Batch ID: 25439 Analysis Date: 11/09/2010 13:39
Sample ID: MB-25439 Units: µg/L Run ID: IC_3_101109A Prep Date: 11/09/2010 12:42
Analyte Result PQL SpkVal SpkRefVal %REC LCL(ME) UCL(ME) RPDRefVal %RPD(Limit) Qual
Perchlorate ND 1

Laboratory Fortified Blank

Type: LFB Test Code: EPA Method 314.0

File ID: 15 Batch ID: 25439 Analysis Date: 11/09/2010 13:58
Sample ID: LFB-25439 Units: µg/L Run ID: IC_3_101109A Prep Date: 11/09/2010 12:42
Analyte Result PQL SpkVal SpkRefVal %REC LCL(ME) UCL(ME) RPDRefVal %RPD(Limit) Qual
Perchlorate 22.9 2 25 91 85 115

Sample Matrix Spike

Type: LFM Test Code: EPA Method 314.0

File ID: 30 Batch ID: 25439 Analysis Date: 11/09/2010 18:34
Sample ID: 10110503-01ALFM Units: µg/L Run ID: IC_3_101109A Prep Date: 11/09/2010 12:42
Analyte Result PQL SpkVal SpkRefVal %REC LCL(ME) UCL(ME) RPDRefVal %RPD(Limit) Qual
Perchlorate 26.4 2 25 2.319 96 80 120

Sample Matrix Spike Duplicate

Type: LFMD Test Code: EPA Method 314.0

File ID: 31 Batch ID: 25439 Analysis Date: 11/09/2010 18:52
Sample ID: 10110503-01ALFMD Units: µg/L Run ID: IC_3_101109A Prep Date: 11/09/2010 12:42
Analyte Result PQL SpkVal SpkRefVal %REC LCL(ME) UCL(ME) RPDRefVal %RPD(Limit) Qual
Perchlorate 28.7 2 25 2.319 106 80 120 26.36 8.6(15)

Comments:

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



Alpha Analytical, Inc.

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

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

Date:
15-Nov-10

QC Summary Report

Work Order:
10110503

Method Blank

File ID: 110510.B\018_M.D\

Sample ID: MB-25419

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

Laboratory Control Spike

File ID: 110510.B\019_M.D\

Sample ID: LCS-25419

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0493	0.005	0.05		99	85	115			

Sample Matrix Spike

File ID: 110510.B\024_M.D\

Sample ID: 10110406-03AMS

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0445	0.005	0.05	0	89	70	130			

Sample Matrix Spike Duplicate

File ID: 110510.B\025_M.D\

Sample ID: 10110406-03AMSD

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.043	0.005	0.05	0	86	70	130	0.04448	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.



Alpha Analytical, Inc.

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Date:
10-Nov-10

QC Summary Report

Work Order:
10110503

Method Blank

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

File ID: **10110912.D**

Batch ID: **MS15W1109M**

Analysis Date: **11/09/2010 17:10**

Sample ID: **MBLK MS15W1109M**

Units: **µg/L**

Run ID: **MSD_15_101109B**

Prep Date: **11/09/2010 17:10**

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	10.6		10		106	70	130			



Alpha Analytical, Inc.

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

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

Date:
10-Nov-10

QC Summary Report

Work Order:
10110503

Surr: 4-Bromofluorobenzene

10.2

10

102

70

130



Alpha Analytical, Inc.

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

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

Date:
10-Nov-10

QC Summary Report

Work Order:
10110503

Laboratory Control Spike

Type **LCS** Test Code: **EPA Method SW8260B**

File ID: **10110908.D**

Batch ID: **MS15W1109M**

Analysis Date: **11/09/2010 15:34**

Sample ID: **LCS MS15W1109M**

Units: **µg/L**

Run ID: **MSD_15_101109B**

Prep Date: **11/09/2010 15:34**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	7.36	1	10		74	70	130			
Chloromethane	5.13	2	10		51	70(70)	130			L50
Vinyl chloride	9.66	1	10		97	70	130			
Chloroethane	10.2	1	10		102	70	130			
Bromomethane	4.19	2	10		42	70(70)	130			L50
Trichlorofluoromethane	10.3	1	10		103	70	130			
1,1-Dichloroethene	10.2	1	10		102	70	130			
Dichloromethane	9.08	2	10		91	70	130			
Freon-113	10.8	1	10		108	67	141			
trans-1,2-Dichloroethene	10.2	1	10		102	70	130			
Methyl tert-butyl ether (MTBE)	8.76	0.5	10		88	70	130			
1,1-Dichloroethane	9.94	1	10		99	70	130			
2-Butanone (MEK)	176	10	200		88	70	130			
cis-1,2-Dichloroethene	9.87	1	10		99	70	130			
Bromochloromethane	9.4	1	10		94	70	130			
Chloroform	9.97	1	10		99.7	70	130			
2,2-Dichloropropane	9.78	1	10		98	70	130			
1,2-Dichloroethane	9.82	1	10		98	70	130			
1,1,1-Trichloroethane	10.4	1	10		104	70	130			
1,1-Dichloropropene	10.6	1	10		106	70	130			
Carbon tetrachloride	9.93	1	10		99	70	130			
Benzene	9.88	0.5	10		99	70	130			
Dibromomethane	9.25	1	10		93	70	130			
1,2-Dichloropropane	9.68	1	10		97	70	130			
Trichloroethene	10.1	1	10		101	70	130			
Bromodichloromethane	10.4	1	10		104	70	130			
4-Methyl-2-pentanone (MIBK)	21.7	2.5	25		87	20	182			
cis-1,3-Dichloropropene	9.32	1	10		93	70	130			
trans-1,3-Dichloropropene	8.38	1	10		84	70	130			
1,1,2-Trichloroethane	9.08	1	10		91	70	130			
Toluene	9.68	0.5	10		97	70	130			
1,3-Dichloropropane	9.13	1	10		91	70	130			
Dibromochloromethane	8.94	1	10		89	70	130			
1,2-Dibromoethane (EDB)	18.3	2	20		91	70	130			
Tetrachloroethene	10.2	1	10		102	70	130			
1,1,1,2-Tetrachloroethane	10.1	1	10		101	70	130			
Chlorobenzene	9.96	1	10		99.6	70	130			
Ethylbenzene	10.1	0.5	10		101	70	130			
m,p-Xylene	9.96	0.5	10		99.6	70	130			
Bromoform	8.08	1	10		81	70	130			
Styrene	9.77	1	10		98	70	130			
o-Xylene	9.84	0.5	10		98	70	130			
1,1,2,2-Tetrachloroethane	8.44	1	10		84	70	130			
1,2,3-Trichloropropane	17.9	2	20		90	70	130			
Isopropylbenzene	10	1	10		100	70	130			
Bromobenzene	10.1	1	10		101	70	130			
n-Propylbenzene	10.5	1	10		105	70	130			
4-Chlorotoluene	10.1	1	10		101	70	130			
2-Chlorotoluene	10.2	1	10		102	70	130			
1,3,5-Trimethylbenzene	10.3	1	10		103	70	130			
tert-Butylbenzene	9.82	1	10		98	70	130			
1,2,4-Trimethylbenzene	10.2	1	10		102	70	130			
sec-Butylbenzene	10.4	1	10		104	70	130			
1,3-Dichlorobenzene	10.2	1	10		102	70	130			
1,4-Dichlorobenzene	9.56	1	10		96	70	130			
4-Isopropyltoluene	10.1	1	10		101	70	130			
1,2-Dichlorobenzene	9.37	1	10		94	70	130			
n-Butylbenzene	10.4	1	10		104	70	130			
1,2-Dibromo-3-chloropropane (DBCP)	42.3	3	50		85	70	130			
1,2,4-Trichlorobenzene	7.81	2	10		78	70	130			
Naphthalene	4.64	2	10		46	70(70)	130			L50
Hexachlorobutadiene	17.9	2	20		90	70	130			
1,2,3-Trichlorobenzene	7.25	2	10		73	70	130			
Surr: 1,2-Dichloroethane-d4	9.97		10		99.7	70	130			



Alpha Analytical, Inc.

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Date:
10-Nov-10

QC Summary Report

Work Order:
10110503

Surr: Toluene-d8	9.78	10	98	70	130
Surr: 4-Bromofluorobenzene	9.78	10	98	70	130



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Date:
10-Nov-10

QC Summary Report

Work Order:
10110503

Sample Matrix Spike

Type MS Test Code: EPA Method SW8260B

File ID: 10110913.D

Batch ID: MS15W1109M

Analysis Date: 11/09/2010 17:32

Sample ID: 10110503-01AMS

Units: µg/L

Run ID: MSD_15_101109B

Prep Date: 11/09/2010 17:32

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	35.9	2.5	50	0	72	13	167			
Chloromethane	21.1	10	50	0	42	28	145			
Vinyl chloride	53.7	2.5	50	0	107	43	134			
Chloroethane	49.5	2.5	50	0	99	39	154			
Bromomethane	17.3	10	50	0	35	19	176			
Trichlorofluoromethane	51.6	2.5	50	0	103	34	160			
1,1-Dichloroethene	48.3	2.5	50	0	97	60	130			
Dichloromethane	43.5	10	50	0	87	68	130			
Freon-113	53.7	2.5	50	0	107	49	141			
trans-1,2-Dichloroethene	48.4	2.5	50	0	97	63	130			
Methyl tert-butyl ether (MTBE)	47.7	1.3	50	0	95	56	141			
1,1-Dichloroethane	47.9	2.5	50	0	96	61	130			
2-Butanone (MEK)	738	50	1000	0	74	20	182			
cis-1,2-Dichloroethene	48.4	2.5	50	0	97	70	130			
Bromochloromethane	47.1	2.5	50	0	94	70	130			
Chloroform	47.2	2.5	50	0	94	67	130			
2,2-Dichloropropane	42.8	2.5	50	0	86	30	152			
1,2-Dichloroethane	49.5	2.5	50	0	99	60	135			
1,1,1-Trichloroethane	48.5	2.5	50	0	97	59	137			
1,1-Dichloropropene	49.5	2.5	50	0	99	63	130			
Carbon tetrachloride	48.2	2.5	50	0	96	50	147			
Benzene	47.6	1.3	50	0	95	67	130			
Dibromomethane	48	2.5	50	0	96	69	133			
1,2-Dichloropropane	46.5	2.5	50	0	93	69	130			
Trichloroethene	47.1	2.5	50	0	94	69	130			
Bromodichloromethane	50.7	2.5	50	0	101	66	134			
4-Methyl-2-pentanone (MIBK)	112	13	125	0	89	20	182			
cis-1,3-Dichloropropene	44.3	2.5	50	0	89	63	130			
trans-1,3-Dichloropropene	41.8	2.5	50	0	84	66	131			
1,1,2-Trichloroethane	47.2	2.5	50	0	94	68	130			
Toluene	46.7	1.3	50	0	93	66	130			
1,3-Dichloropropane	47.3	2.5	50	0	95	70	130			
Dibromochloromethane	44.9	2.5	50	0	90	70	130			
1,2-Dibromoethane (EDB)	94	5	100	0	94	70	130			
Tetrachloroethene	47	2.5	50	0	94	61	134			
1,1,1,2-Tetrachloroethane	48.3	2.5	50	0	97	70	130			
Chlorobenzene	46.9	2.5	50	0	94	70	130			
Ethylbenzene	48.4	1.3	50	0	97	68	130			
m,p-Xylene	48.2	1.3	50	0	96	64	130			
Bromoform	42.9	2.5	50	0	86	64	138			
Styrene	48	2.5	50	0	96	69	130			
o-Xylene	47	1.3	50	0	94	70	130			
1,1,2,2-Tetrachloroethane	44.8	2.5	50	0	90	65	131			
1,2,3-Trichloropropane	93.5	10	100	0	94	70	130			
Isopropylbenzene	44.6	2.5	50	0	89	64	138			
Bromobenzene	46.5	2.5	50	0	93	70	130			
n-Propylbenzene	46.5	2.5	50	0	93	66	132			
4-Chlorotoluene	45.5	2.5	50	0	91	70	130			
2-Chlorotoluene	45.7	2.5	50	0	91	70	130			
1,3,5-Trimethylbenzene	46.1	2.5	50	0	92	66	136			
tert-Butylbenzene	44.3	2.5	50	0	89	65	137			
1,2,4-Trimethylbenzene	47	2.5	50	0	94	65	137			
sec-Butylbenzene	46.2	2.5	50	0	92	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	45.2	2.5	50	0	90	66	137			
1,2-Dichlorobenzene	43.8	2.5	50	0	88	70	130			
n-Butylbenzene	46.8	2.5	50	0	94	60	142			
1,2-Dibromo-3-chloropropane (DBCP)	210	15	250	0	84	67	130			
1,2,4-Trichlorobenzene	37.8	10	50	0	76	61	137			
Naphthalene	22.3	10	50	0	45	40	167			
Hexachlorobutadiene	83.7	10	100	0	84	61	130			
1,2,3-Trichlorobenzene	35.6	10	50	0	71	51	144			
Surr: 1,2-Dichloroethane-d4	52.1		50		104	70	130			
Surr: Toluene-d8	48.6		50		97	70	130			



Alpha Analytical, Inc.

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Date:
10-Nov-10

QC Summary Report

Work Order:
10110503

Surr: 4-Bromofluorobenzene

47.1

50

94

70

130



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Date:
10-Nov-10

QC Summary Report

Work Order:
10110503

Sample Matrix Spike Duplicate

Type **MSD** Test Code: **EPA Method SW8260B**

File ID: **10110914.D**

Batch ID: **MS15W1109M**

Analysis Date: **11/09/2010 17:54**

Sample ID: **10110503-01AMSD**

Units: **µg/L**

Run ID: **MSD_15_101109B**

Prep Date: **11/09/2010 17:54**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	41.9	2.5	50	0	84	13	167	35.87	15.4(20)	
Chloromethane	20.6	10	50	0	41	28	145	21.06	2.3(20)	
Vinyl chloride	62.7	2.5	50	0	125	43	134	53.68	15.4(20)	
Chloroethane	58.4	2.5	50	0	117	39	154	49.5	16.6(20)	
Bromomethane	27.4	10	50	0	55	19	176	17.34	45.1(20)	R58
Trichlorofluoromethane	60.1	2.5	50	0	120	34	160	51.64	15.1(20)	
1,1-Dichloroethene	56.6	2.5	50	0	113	60	130	48.25	15.9(20)	
Dichloromethane	50.3	10	50	0	101	68	130	43.51	14.5(20)	
Freon-113	62.3	2.5	50	0	125	49	141	53.69	14.9(20)	
trans-1,2-Dichloroethene	56.3	2.5	50	0	113	63	130	48.35	15.2(20)	
Methyl tert-butyl ether (MTBE)	54.2	1.3	50	0	108	56	141	47.74	12.7(20)	
1,1-Dichloroethane	55.5	2.5	50	0	111	61	130	47.92	14.6(20)	
2-Butanone (MEK)	842	50	1000	0	84	20	182	737.8	13.2(20)	
cis-1,2-Dichloroethene	54.5	2.5	50	0	109	70	130	48.35	11.9(20)	
Bromochloromethane	55.6	2.5	50	0	111	70	130	47.08	16.7(20)	
Chloroform	55	2.5	50	0	110	67	130	47.2	15.3(20)	
2,2-Dichloropropane	51.2	2.5	50	0	102	30	152	42.81	17.8(20)	
1,2-Dichloroethane	57	2.5	50	0	114	60	135	49.45	14.1(20)	
1,1,1-Trichloroethane	57.4	2.5	50	0	115	59	137	48.52	16.7(20)	
1,1-Dichloropropene	59.1	2.5	50	0	118	63	130	49.5	17.7(20)	
Carbon tetrachloride	58.9	2.5	50	0	118	50	147	48.21	19.9(20)	
Benzene	55.2	1.3	50	0	110	67	130	47.58	14.9(20)	
Dibromomethane	54.9	2.5	50	0	110	69	133	47.99	13.3(20)	
1,2-Dichloropropane	54.8	2.5	50	0	110	69	130	46.48	16.4(20)	
Trichloroethene	56.4	2.5	50	0	113	69	130	47.14	17.9(20)	
Bromodichloromethane	60.2	2.5	50	0	120	66	134	50.74	17.0(20)	
4-Methyl-2-pentanone (MIBK)	126	13	125	0	101	20	182	111.7	12.4(20)	
cis-1,3-Dichloropropene	52.2	2.5	50	0	104	63	130	44.33	16.2(20)	
trans-1,3-Dichloropropene	49	2.5	50	0	98	66	131	41.81	15.8(20)	
1,1,2-Trichloroethane	53.1	2.5	50	0	106	68	130	47.21	11.8(20)	
Toluene	52.6	1.3	50	0	105	66	130	46.67	11.9(20)	
1,3-Dichloropropane	53.4	2.5	50	0	107	70	130	47.31	12.2(20)	
Dibromochloromethane	53.2	2.5	50	0	106	70	130	44.88	16.9(20)	
1,2-Dibromoethane (EDB)	107	5	100	0	107	70	130	93.96	13.4(20)	
Tetrachloroethene	55.2	2.5	50	0	110	61	134	47.03	16.0(20)	
1,1,1,2-Tetrachloroethane	57.2	2.5	50	0	114	70	130	48.3	16.8(20)	
Chlorobenzene	54.6	2.5	50	0	109	70	130	46.9	15.2(20)	
Ethylbenzene	56	1.3	50	0	112	68	130	48.39	14.6(20)	
m,p-Xylene	54.7	1.3	50	0	109	64	130	48.15	12.8(20)	
Bromoform	51.2	2.5	50	0	102	64	138	42.9	17.6(20)	
Styrene	55.2	2.5	50	0	110	69	130	47.98	14.0(20)	
o-Xylene	53.4	1.3	50	0	107	70	130	47	12.8(20)	
1,1,2,2-Tetrachloroethane	49.5	2.5	50	0	99	65	131	44.77	10.0(20)	
1,2,3-Trichloropropane	103	10	100	0	103	70	130	93.5	10.1(20)	
Isopropylbenzene	52.8	2.5	50	0	106	64	138	44.6	16.9(20)	
Bromobenzene	54.6	2.5	50	0	109	70	130	46.51	16.0(20)	
n-Propylbenzene	55.7	2.5	50	0	111	66	132	46.52	18.0(20)	
4-Chlorotoluene	54.1	2.5	50	0	108	70	130	45.45	17.3(20)	
2-Chlorotoluene	54.1	2.5	50	0	108	70	130	45.65	17.0(20)	
1,3,5-Trimethylbenzene	54.7	2.5	50	0	109	66	136	46.14	17.0(20)	
tert-Butylbenzene	53.2	2.5	50	0	106	65	137	44.28	18.2(20)	
1,2,4-Trimethylbenzene	54.4	2.5	50	0	109	65	137	47	14.5(20)	
sec-Butylbenzene	54.4	2.5	50	0	109	66	134	46.18	16.4(20)	
1,3-Dichlorobenzene	55.6	2.5	50	0	111	70	130	46.74	17.3(20)	
1,4-Dichlorobenzene	52.1	2.5	50	0	104	70	130	44.19	16.4(20)	
4-Isopropyltoluene	54.4	2.5	50	0	109	66	137	45.22	18.5(20)	
1,2-Dichlorobenzene	51.9	2.5	50	0	104	70	130	43.84	16.9(20)	
n-Butylbenzene	56	2.5	50	0	112	60	142	46.84	17.7(20)	
1,2-Dibromo-3-chloropropane (DBCP)	248	15	250	0	99	67	130	210.5	16.4(20)	
1,2,4-Trichlorobenzene	45.8	10	50	0	92	61	137	37.79	19.1(20)	
Naphthalene	30.1	10	50	0	60	40	167	22.31	29.7(20)	R58
Hexachlorobutadiene	102	10	100	0	102	61	130	83.71	19.6(20)	
1,2,3-Trichlorobenzene	43	10	50	0	86	51	144	35.55	19.0(20)	
Surr: 1,2-Dichloroethane-d4	50.5		50		101	70	130			



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Date:
10-Nov-10

QC Summary Report

Work Order:
10110503

Surr: Toluene-d8	48.4	50	97	70	130
Surr: 4-Bromofluorobenzene	47.3	50	95	70	130

Comments:

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

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.

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

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 : BMIS10110503
Report Due By : 5:00 PM On : 18-Nov-2010

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

Report Attention Phone Number Email Address
 David Conner (619) 726-7311 X connerd@battelle.org
 Betsy Cutie (614) 424-4899 X cutiee@battelle.org
 Shane Walton (614) 424-4117 X waltonss@battelle.org

EDD Required : Yes

Sampled by : Chase Brogdon

Cooler Temp 3 °C

Samples Received 05-Nov-2010

Date Printed 05-Nov-2010

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

Alpha Sample ID	Client Sample ID	Collection Matrix Date	No. of Bottles			Requested Tests		Sample Remarks			
			Alpha	Sub	TAT	314_W	METALS_D W		VOC_TIC_W	VOC_W	
BM110110503-01A	MW-23-5	11/04/10 08:23	5	0	9	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria		
BM110110503-02A	MW-23-4	11/04/10 08:45	5	0	9	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria		
BM110110503-03A	MW-23-3	11/04/10 09:04	5	0	9	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria		
BM110110503-04A	MW-23-2	11/04/10 09:26	5	0	9	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria		
BM110110503-05A	MW-23-1	11/04/10 09:58	5	0	9	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria		
BM110110503-06A	DUPE-07-4Q10	11/04/10 00:00	5	0	9	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria		
BM110110503-07A	EB-12-11/04/10	11/04/10 09:44	5	0	9	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria		
BM110110503-08A	TB-12-11/04/10	11/04/10 07:00	1	0	9			VOC by 524 Criteria	VOC by 524 Criteria		Reno Trip Blank 8/12/10

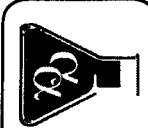
Comments: Security seals intact. Frozen ice. Temp Blank #7197 received @ 3°C. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD).

Logged in by: Elizabeth Aldcox Signature: Elizabeth Aldcox Print Name: Elizabeth Aldcox Company: Alpha Analytical, Inc. Date/Time: 11-5-10 1214

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 TRUCKRIGS/BATTELLE
 Address 505 KING AVE
 City, State, Zip SAN DIEGO, CA 92110
 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 States? **29190**
 AZ CA NV WA
 ID OR OTHER
 Page # 1 of 1

Analyses Required

Client Name BATTELLE / DAVID CONWELL P.O. # 218013 Job # 6005862
 Address 2410 OLD TOWN AVE, C-205 Email Address _____
 City, State, Zip SAN DIEGO, CA 92110 Phone # (619) 726-3311 Fax # _____

Required QC Level?
 I II III IV

EDD / EDF? YES NO

Global ID # _____
 REMARKS

Time Sampled	Date Sampled	Matrix* See Key Below	Sampled by Lab ID Number (Use Only)	Office (Use Only)	Report Attention	Sample Description	TAT	Field Filtered	Total and Type of containers ** See below	Remarks
0823	11/04/10	AQ	BMT1011050301			MW-23-5			3V, 2P	
0845						MW-23-4				
0904						MW-23-3				
0926						MW-23-2				
0935						MW-23-1				
0944						DUPS - 07 - 4Q10				
0900	11/04/10	AQ				ERS-12-11/04/10			3V, 2P	DUPLICATE EQUIPMENTS BLANK TRAP BLANK
						TRB-12-11/04/10			1V	

ADDITIONAL INSTRUCTIONS:

Signature	Print Name	Company	Date	Time
<i>[Signature]</i>	CHRIST BRONSON	TRUSHT E&E, INC	11/04/10	1130
<i>[Signature]</i>	Anthony Stark	Alpha Analytical	11/4/10	1130
<i>[Signature]</i>	"	"	11/4/10	1130
<i>[Signature]</i>	Elizabeth Adcox	Alpha	11/5/10	1214

*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-Nov-10

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

Suite 1420

CASE NARRATIVE

Job: G005862/JPL Groundwater Monitoring

Work Order: BMI10110905

Cooler Temp: 4 °C

Alpha's Sample ID	Client's Sample ID	Matrix
10110905-01A	MW-26-2	Aqueous
10110905-02A	MW-26-1	Aqueous
10110905-03A	DUPE-08-4Q10	Aqueous
10110905-04A	EB-13-11/05/10	Aqueous
10110905-05A	TB-13-11/05/10	Aqueous
10110905-06A	MW-25-5	Aqueous
10110905-07A	MW-25-4	Aqueous
10110905-08A	MW-25-3	Aqueous
10110905-09A	MW-25-2	Aqueous
10110905-10A	MW-25-1	Aqueous
10110905-11A	MW-19-5	Aqueous
10110905-12A	MW-19-4	Aqueous
10110905-13A	MW-19-3	Aqueous
10110905-14A	MW-19-2	Aqueous
10110905-15A	MW-19-1	Aqueous
10110905-16A	EB-14-11/08/10	Aqueous
10110905-17A	TB-14-11/08/10	Aqueous

Manually Integrated Analytes

Alpha's Sample ID	Test Reference	Analyte
NONE		

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

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

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

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

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ANALYTICAL REPORT

Battelle Memorial Institute
655 West Broadway
San Diego, CA 92101

Attn: David Conner
Phone: (619) 726-7311
Fax: (614) 458-6641
Date Received : 11/09/10

Job: G005862/JPL Groundwater Monitoring

Perchlorate by Ion Chromatography
EPA Method 314.0

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: MW-26-2				
Lab ID: BM110110905-01A Perchlorate Date Sampled 11/05/10 08:31	ND	1.00 µg/L	11/10/10 10:54	11/10/10 14:13
Client ID: MW-26-1				
Lab ID: BM110110905-02A Perchlorate Date Sampled 11/05/10 09:06	2.97	1.00 µg/L	11/10/10 10:54	11/10/10 14:31
Client ID: DUPE-08-4Q10				
Lab ID: BM110110905-03A Perchlorate Date Sampled 11/05/10 00:00	2.51	1.00 µg/L	11/10/10 10:54	11/10/10 14:50
Client ID: EB-13-11/05/10				
Lab ID: BM110110905-04A Perchlorate Date Sampled 11/05/10 08:51	ND	1.00 µg/L	11/10/10 10:54	11/10/10 15:08
Client ID: MW-25-5				
Lab ID: BM110110905-06A Perchlorate Date Sampled 11/05/10 10:18	ND	1.00 µg/L	11/10/10 10:54	11/10/10 15:27
Client ID: MW-25-4				
Lab ID: BM110110905-07A Perchlorate Date Sampled 11/05/10 10:56	8.31	1.00 µg/L	11/10/10 10:54	11/10/10 15:45
Client ID: MW-25-3				
Lab ID: BM110110905-08A Perchlorate Date Sampled 11/05/10 11:18	10.0	1.00 µg/L	11/10/10 10:54	11/10/10 16:41
Client ID: MW-25-2				
Lab ID: BM110110905-09A Perchlorate Date Sampled 11/05/10 11:37	14.5	1.00 µg/L	11/10/10 10:54	11/10/10 16:59
Client ID: MW-25-1				
Lab ID: BM110110905-10A Perchlorate Date Sampled 11/05/10 11:59	10.5	1.00 µg/L	11/10/10 10:54	11/10/10 17:17
Client ID: MW-19-5				
Lab ID: BM110110905-11A Perchlorate Date Sampled 11/08/10 08:57	3.34	1.00 µg/L	11/10/10 10:54	11/10/10 18:13
Client ID: MW-19-4				
Lab ID: BM110110905-12A Perchlorate Date Sampled 11/08/10 09:19	3.16	1.00 µg/L	11/10/10 10:54	11/10/10 18:31



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Client ID: **MW-19-3**

Lab ID : BMI10110905-13A Perchlorate 3.61 1.00 µg/L 11/10/10 10:54 11/10/10 18:49
Date Sampled 11/08/10 09:50

Client ID: **MW-19-2**

Lab ID : BMI10110905-14A Perchlorate 5.98 1.00 µg/L 11/10/10 10:54 11/10/10 19:08
Date Sampled 11/08/10 10:14

Client ID: **MW-19-1**

Lab ID : BMI10110905-15A Perchlorate 8.97 1.00 µg/L 11/10/10 10:54 11/10/10 19:26
Date Sampled 11/08/10 10:39

Client ID: **EB-14-11/08/10**

Lab ID : BMI10110905-16A Perchlorate ND 1.00 µg/L 11/10/10 10:54 11/10/10 19:45
Date Sampled 11/08/10 10:30

ND = Not Detected

Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer
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11/22/10

Report Date



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ANALYTICAL REPORT

Battelle Memorial Institute
655 West Broadway
San Diego, CA 92101

Attn: David Conner
Phone: (619) 726-7311
Fax: (614) 458-6641
Date Received : 11/09/10

Job: G005862/JPL Groundwater Monitoring

Metals by ICPMS
EPA Method 200.8

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: MW-26-2 Lab ID : BMI10110905-01A Chromium (Cr) Date Sampled 11/05/10 08:31	ND	0.0050 mg/L	11/09/10 16:21	11/09/10 20:26
Client ID: MW-26-1 Lab ID : BMI10110905-02A Chromium (Cr) Date Sampled 11/05/10 09:06	ND	0.0050 mg/L	11/09/10 16:21	11/09/10 20:31
Client ID: DUPE-08-4Q10 Lab ID : BMI10110905-03A Chromium (Cr) Date Sampled 11/05/10 00:00	ND	0.0050 mg/L	11/09/10 16:21	11/09/10 20:37
Client ID: EB-13-11/05/10 Lab ID : BMI10110905-04A Chromium (Cr) Date Sampled 11/05/10 08:51	ND	0.0050 mg/L	11/09/10 16:21	11/09/10 20:42
Client ID: MW-25-5 Lab ID : BMI10110905-06A Chromium (Cr) Date Sampled 11/05/10 10:18	ND	0.0050 mg/L	11/09/10 16:21	11/09/10 20:48
Client ID: MW-25-4 Lab ID : BMI10110905-07A Chromium (Cr) Date Sampled 11/05/10 10:56	ND	0.0050 mg/L	11/09/10 16:21	11/09/10 19:58
Client ID: MW-25-3 Lab ID : BMI10110905-08A Chromium (Cr) Date Sampled 11/05/10 11:18	ND	0.0050 mg/L	11/09/10 16:21	11/09/10 20:54
Client ID: MW-25-2 Lab ID : BMI10110905-09A Chromium (Cr) Date Sampled 11/05/10 11:37	ND	0.0050 mg/L	11/09/10 16:21	11/09/10 20:59
Client ID: MW-25-1 Lab ID : BMI10110905-10A Chromium (Cr) Date Sampled 11/05/10 11:59	ND	0.0050 mg/L	11/09/10 16:21	11/09/10 21:05
Client ID: MW-19-5 Lab ID : BMI10110905-11A Chromium (Cr) Date Sampled 11/08/10 08:57	ND	0.0050 mg/L	11/09/10 16:21	11/09/10 21:11
Client ID: MW-19-4 Lab ID : BMI10110905-12A Chromium (Cr) Date Sampled 11/08/10 09:19	ND	0.0050 mg/L	11/09/10 16:21	11/09/10 21:38



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Client ID: **MW-19-3**

Lab ID : BMI10110905-13A Chromium (Cr) ND 0.0050 mg/L 11/09/10 16:21 11/09/10 21:44
Date Sampled 11/08/10 09:50

Client ID: **MW-19-2**

Lab ID : BMI10110905-14A Chromium (Cr) ND 0.0050 mg/L 11/09/10 16:21 11/09/10 21:50
Date Sampled 11/08/10 10:14

Client ID: **MW-19-1**

Lab ID : BMI10110905-15A Chromium (Cr) ND 0.0050 mg/L 11/09/10 16:21 11/09/10 21:55
Date Sampled 11/08/10 10:39

Client ID: **EB-14-11/08/10**

Lab ID : BMI10110905-16A Chromium (Cr) ND 0.0050 mg/L 11/09/10 16:21 11/09/10 22:01
Date Sampled 11/08/10 10:30

ND = Not Detected

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11/22/10

Report Date



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ANALYTICAL REPORT

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

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

Tentatively Identified Compounds - Volatile Organics by GC/MS

Parameter	Estimated Concentration	Estimated Reporting Limit	Date Extracted	Date Analyzed
Client ID: MW-26-2 Lab ID: BMI10110905-01A Date Received: 11/09/10 Date Sampled: 11/05/10 08:31	*** None Found ***	ND	2.0 µg/L	11/15/10 23:36 11/15/10 23:36
Client ID: MW-26-1 Lab ID: BMI10110905-02A Date Received: 11/09/10 Date Sampled: 11/05/10 09:06	*** None Found ***	ND	2.0 µg/L	11/15/10 23:57 11/15/10 23:57
Client ID: DUPE-08-4Q10 Lab ID: BMI10110905-03A Date Received: 11/09/10 Date Sampled: 11/05/10 00:00	*** None Found ***	ND	2.0 µg/L	11/16/10 00:21 11/16/10 00:21
Client ID: EB-13-11/05/10 Lab ID: BMI10110905-04A Date Received: 11/09/10 Date Sampled: 11/05/10 08:51	*** None Found ***	ND	2.0 µg/L	11/15/10 21:47 11/15/10 21:47
Client ID: TB-13-11/05/10 Lab ID: BMI10110905-05A Date Received: 11/09/10 Date Sampled: 11/05/10 07:00	*** None Found ***	ND	2.0 µg/L	11/15/10 21:26 11/15/10 21:26
Client ID: MW-25-5 Lab ID: BMI10110905-06A Date Received: 11/09/10 Date Sampled: 11/05/10 10:18	*** None Found ***	ND	2.0 µg/L	11/16/10 00:43 11/16/10 00:43
Client ID: MW-25-4 Lab ID: BMI10110905-07A Date Received: 11/09/10 Date Sampled: 11/05/10 10:56	*** None Found ***	ND	2.0 µg/L	11/16/10 01:05 11/16/10 01:05
Client ID: MW-25-3 Lab ID: BMI10110905-08A Date Received: 11/09/10 Date Sampled: 11/05/10 11:18	*** None Found ***	ND	2.0 µg/L	11/16/10 01:26 11/16/10 01:26
Client ID: MW-25-2 Lab ID: BMI10110905-09A Date Received: 11/09/10 Date Sampled: 11/05/10 11:37	*** None Found ***	ND	2.0 µg/L	11/16/10 01:47 11/16/10 01:47



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Client ID : MW-25-1							
Lab ID : BM110110905-10A	*** None Found ***	ND		2.0 µg/L		11/16/10 02:09	11/16/10 02:09
Date Received : 11/09/10							
Date Sampled : 11/05/10 11:59							
Client ID : MW-19-5							
Lab ID : BM110110905-11A	*** None Found ***	ND		2.0 µg/L		11/16/10 02:31	11/16/10 02:31
Date Received : 11/09/10							
Date Sampled : 11/08/10 08:57							
Client ID : MW-19-4							
Lab ID : BM110110905-12A	*** None Found ***	ND		2.0 µg/L		11/16/10 02:52	11/16/10 02:52
Date Received : 11/09/10							
Date Sampled : 11/08/10 09:19							
Client ID : MW-19-3							
Lab ID : BM110110905-13A	*** None Found ***	ND		2.0 µg/L		11/16/10 03:14	11/16/10 03:14
Date Received : 11/09/10							
Date Sampled : 11/08/10 09:50							
Client ID : MW-19-2							
Lab ID : BM110110905-14A	*** None Found ***	ND		2.0 µg/L		11/16/10 03:36	11/16/10 03:36
Date Received : 11/09/10							
Date Sampled : 11/08/10 10:14							
Client ID : MW-19-1							
Lab ID : BM110110905-15A	*** None Found ***	ND		2.0 µg/L		11/16/10 03:58	11/16/10 03:58
Date Received : 11/09/10							
Date Sampled : 11/08/10 10:39							
Client ID : EB-14-11/08/10							
Lab ID : BM110110905-16A	Acetone	15	*	10 µg/L		11/15/10 22:31	11/15/10 22:31
Date Received : 11/09/10							
Date Sampled : 11/08/10 10:30							
Client ID : TB-14-11/08/10							
Lab ID : BM110110905-17A	*** None Found ***	ND		2.0 µg/L		11/15/10 22:09	11/15/10 22:09
Date Received : 11/09/10							
Date Sampled : 11/08/10 07:00							

* No other TICs were found at a reporting limit of 2.0 µg/L.

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl

Randy Gardner

Walter Hinchman

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

11/22/10

Report Date

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Alpha Analytical, Inc.

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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10110905-01A
Client I.D. Number: MW-26-2

Sampled: 11/05/10 08:31
Received: 11/09/10
Extracted: 11/15/10 23:36
Analyzed: 11/15/10 23:36

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	101	(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	102	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

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11/22/10

Report Date

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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10110905-02A
Client I.D. Number: MW-26-1

Sampled: 11/05/10 09:06
Received: 11/09/10
Extracted: 11/15/10 23:57
Analyzed: 11/15/10 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	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	101	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

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

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11/22/10

Report Date



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10110905-03A
Client I.D. Number: DUPE-08-4Q10

Sampled: 11/05/10 00:00
Received: 11/09/10
Extracted: 11/16/10 00:21
Analyzed: 11/16/10 00:21

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	100	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	105	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	103	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	0.76	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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Page 1 of 1



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10110905-04A
Client I.D. Number: EB-13-11/05/10

Sampled: 11/05/10 08:51
Received: 11/09/10
Extracted: 11/15/10 21:47
Analyzed: 11/15/10 21:47

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethene	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	10 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	ND	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	ND	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	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	104	(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 L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

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11/22/10

Report Date



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10110905-05A
Client I.D. Number: TB-13-11/05/10

Sampled: 11/05/10 07:00
Received: 11/09/10
Extracted: 11/15/10 21:26
Analyzed: 11/15/10 21:26

Volatile Organics by GC/MS EPA Method SW8260B

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

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

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

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

Alpha Analytical Number: BMI10110905-06A
Client I.D. Number: MW-25-5

Sampled: 11/05/10 10:18
Received: 11/09/10
Extracted: 11/16/10 12:43
Analyzed: 11/16/10 12:43

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethane	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	104	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	102	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer
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Page 1 of 1



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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10110905-07A
Client I.D. Number: MW-25-4

Sampled: 11/05/10 10:56
Received: 11/09/10
Extracted: 11/16/10 01:05
Analyzed: 11/16/10 01:05

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	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	104	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

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

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11/22/10

Report Date

Page 1 of 1



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10110905-08A
Client I.D. Number: MW-25-3

Sampled: 11/05/10 11:18
Received: 11/09/10
Extracted: 11/16/10 01:26
Analyzed: 11/16/10 01:26

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethene	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	10 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	ND	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	ND	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	ND	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	100	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	105	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	103	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer
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Page 1 of 1



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10110905-09A
Client I.D. Number: MW-25-2

Sampled: 11/05/10 11:37
Received: 11/09/10
Extracted: 11/16/10 01:47
Analyzed: 11/16/10 01:47

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethene	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	10 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	ND	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	ND	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	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	103	(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 Hinckman*
 Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinckman, Quality Assurance Officer
 Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

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11/22/10

Report Date



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10110905-10A
Client I.D. Number: MW-25-1

Sampled: 11/05/10 11:59
Received: 11/09/10
Extracted: 11/16/10 02:09
Analyzed: 11/16/10 02:09

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	2.9	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	104	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	101	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

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

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

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

Alpha Analytical Number: BMI10110905-11A
Client I.D. Number: MW-19-5

Sampled: 11/08/10 08:57
Received: 11/09/10
Extracted: 11/16/10 02:31
Analyzed: 11/16/10 02:31

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	99	(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	106	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	1.2	0.50 µg/L			

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

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

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

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

11/22/10

Report Date



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10110905-12A
Client I.D. Number: MW-19-4

Sampled: 11/08/10 09:19
Received: 11/09/10
Extracted: 11/16/10 02:52
Analyzed: 11/16/10 02:52

Volatile Organics by GC/MS EPA Method SW8260B

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

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11/22/10

Report Date



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10110905-13A
Client I.D. Number: MW-19-3

Sampled: 11/08/10 09:50
Received: 11/09/10
Extracted: 11/16/10 03:14
Analyzed: 11/16/10 03:14

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	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	105	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	102	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

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11/22/10

Report Date

Page 1 of 1



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10110905-14A
Client I.D. Number: MW-19-2

Sampled: 11/08/10 10:14
Received: 11/09/10
Extracted: 11/16/10 03:36
Analyzed: 11/16/10 03:36

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-Dichloroethane	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	1.6	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	106	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	101	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	0.53	0.50 µg/L			

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

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



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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10110905-15A
Client I.D. Number: MW-19-1

Sampled: 11/08/10 10:39
Received: 11/09/10
Extracted: 11/16/10 03:58
Analyzed: 11/16/10 03:58

Volatile Organics by GC/MS EPA Method SW8260B

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

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

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Report Date



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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10110905-16A
Client I.D. Number: EB-14-11/08/10

Sampled: 11/08/10 10:30
Received: 11/09/10
Extracted: 11/15/10 22:31
Analyzed: 11/15/10 22:31

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	100	(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	101	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

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

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

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

11/22/10

Report Date

Page 1 of 1