ATTACHMENT 3: LABORATORY ANALYTICAL REPORTS

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

Alpha Analytical, Inc.

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

Date: *10-May-10*

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

CASE NARRATIVE

Job: G005862/JPL Groundwater Monitoring
Work Order: BMI10042803 **Cooler Temp:** 4 °C

Alpha's Sample ID	Client's Sample ID	Matrix
10042803-01A	MW-7	Aqueous

Manually Integrated Analytes

Alpha's Sample ID	Test Reference	Analyte
NONE		

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

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

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

Alpha Analytical, Inc.

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ANALYTICAL REPORT

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 04/28/10

Job: G005862/JPL Groundwater Monitoring

Anions by IC
EPA Method 300.0

	Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-7**					
Lab ID : BMI10042803-01A	Chloride	80	50 mg/L	04/28/10 12:27	04/28/10 23:21
Date Sampled 04/27/10 10:50	Nitrite (NO2) - N	ND	0.25 mg/L	04/28/10 12:27	04/28/10 23:21
	Nitrate (NO3) - N	1.1	0.25 mg/L	04/28/10 12:27	04/28/10 23:21
	Sulfate (SO4)	50	0.50 mg/L	04/28/10 12:27	04/28/10 23:21

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.

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.

5/11/10
Report Date

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Battelle Memorial Institute
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Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 04/28/10

Job: G005862/JPL Groundwater Monitoring

Perchlorate by Ion Chromatography
EPA Method 314.0

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-7**				
Lab ID : BMI10042803-01A Perchlorate	3.60	1.00 µg/L	04/29/10 12:33	04/29/10 19:46
Date Sampled 04/27/10 10:50				

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Fax: (614) 458-6641
Date Received : 04/28/10

Job: G005862/JPL Groundwater Monitoring

Alkalinity
SM2320B

Parameter		Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-7**					
Lab ID : BMI10042803-01A	Alkalinity, Bicarbonate (As CaCO3)	200	10 mg/L	04/28/10 16:25	04/28/10 16:25
Date Sampled 04/27/10 10:50	Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	04/28/10 16:25	04/28/10 16:25
	Alkalinity, Total (As CaCO3 at pH 4.5)	200	10 mg/L	04/28/10 16:25	04/28/10 16:25

ND = Not Detected

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Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 04/28/10

Job: G005862/JPL Groundwater Monitoring

Metals by ICPMS
EPA Method 200.8

	Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-7**					
Lab ID : BMI10042803-01A	Sodium (Na)	34	0.50 mg/L	04/30/10 09:18	04/30/10 16:43
Date Sampled 04/27/10 10:50	Magnesium (Mg)	22	0.50 mg/L	04/30/10 09:18	04/30/10 16:43
	Potassium (K)	4.1	0.50 mg/L	04/30/10 09:18	04/30/10 16:43
	Calcium (Ca)	77	0.50 mg/L	04/30/10 09:18	04/30/10 16:43
	Chromium (Cr)	0.0052	0.0050 mg/L	04/30/10 09:18	04/30/10 16:43
	Iron (Fe)	0.25	0.10 mg/L	04/30/10 09:18	04/30/10 16:43
	Arsenic (As)	ND	0.0020 mg/L	04/30/10 09:18	04/30/10 16:43
	Lead (Pb)	ND	0.0050 mg/L	04/30/10 09:18	04/30/10 16:43

ND = Not Detected

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Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 04/28/10

Job: G005862/JPL Groundwater Monitoring

pH (Range 1.7 to 12.4)
EPA Method 150.2 / SM4500HB / SW9040C

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-7**				
Lab ID : BMI10042803-01A pH	7.1	1.7 pH Units	04/28/10 14:52	04/28/10 14:52
Date Sampled 04/27/10 10:50 pH - Temperature	17	1.0 °C	04/28/10 14:52	04/28/10 14:52

The EPA has established an analytical holding time of 15 minutes for this method as documented in the Methods Update Rule, Federal Register, Vol 72, No 47, March 2007. This holding time will always be exceeded, unless samples are analyzed in the field.
The laboratory performed this analysis in the shortest practical holding time after sample receipt.

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Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 04/28/10

Job: G005862/JPL Groundwater Monitoring

Total Dissolved Solids (TDS)
SM2540C

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-7**				
Lab ID : BMI10042803-01A Solids, Total Dissolved (TDS)	440	10 mg/L	04/30/10	04/30/10
Date Sampled 04/27/10 10:50				

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ANALYTICAL REPORT

Battelle Memorial Institute
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San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI10042803-01A
Client I.D. Number: MW-7

Sampled: 04/27/10 10:50
Received: 04/28/10
Extracted: 04/29/10 23:55
Analyzed: 04/29/10 23:55

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit		Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	Q	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	1.2	0.50	µg/L
6	Trichlorofluoromethane	ND		0.50	µg/L	41 Styrene	ND	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	11		0.50	µg/L	51 tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND		0.50	µg/L	52 1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND		0.50	µg/L	53 sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND		0.50	µg/L	54 1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND		0.50	µg/L	55 1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND		0.50	µg/L	56 4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND		0.50	µg/L	57 1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND		0.50	µg/L	58 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	13		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	(70-120)	%REC
30	1,1,2-Trichloroethane	ND		0.50	µg/L	65 Surr: Toluene-d8	98	(85-120)	%REC
31	Toluene	ND		0.50	µg/L	66 Surr: 4-Bromofluorobenzene	101	(75-120)	%REC
32	1,3-Dichloropropane	ND		0.50	µg/L				
33	Dibromochloromethane	6.9		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.

Q = One or more quality control criteria failed.

ND = Not Detected

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ANALYTICAL REPORT

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

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

Tentatively Identified Compounds - Volatile Organics by GC/MS

		Parameter	Estimated Concentration	Estimated Reporting Limit	Date Extracted	Date Analyzed
Client ID :	**MW-7**					
Lab ID :	BMI10042803-01A	* * * None Found * * *	ND	2.0 µg/L	04/29/10 23:55	04/29/10 23:55
Date Received :	04/28/10					
Date Sampled :	04/27/10 10:50					

ND = Not Detected

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Page 1 of 1

Alpha Analytical, Inc.

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VOC Sample Preservation Report

Work Order: BMI10042803 **Job:** G005862/JPL Groundwater Monitoring

Alpha's Sample ID	Client's Sample ID	Matrix	pH
10042803-01A	MW-7	Aqueous	2

5/11/10
Report Date

Alpha Analytical, Inc.

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Date: *04-May-10*

QC Summary Report

Work Order: 10042803

Method Blank

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

File ID: **45** Batch ID: **24070** Analysis Date: **04/28/2010 17:48**

Sample ID: **MB-24070** Units : **mg/L** Run ID: **IC_1_100428B** Prep Date: **04/28/2010 12:27**

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								
Sulfate (SO4)	ND	0.5								

Laboratory Fortified Blank

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

File ID: **46** Batch ID: **24070** Analysis Date: **04/28/2010 18:07**

Sample ID: **LFB-24070** Units : **mg/L** Run ID: **IC_1_100428B** Prep Date: **04/28/2010 12:27**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	54	0.5	50		108	90	110			
Nitrite (NO2) - N	4.94	0.25	5		99	90	110			
Nitrate (NO3) - N	5.37	0.25	5		107	90	110			
Sulfate (SO4)	108	0.5	100		108	90	110			

Sample Matrix Spike

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

File ID: **64** Batch ID: **24070** Analysis Date: **04/28/2010 23:40**

Sample ID: **10042803-01ALFM** Units : **mg/L** Run ID: **IC_1_100428B** Prep Date: **04/28/2010 12:27**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	177	0.5	100	80.2	97	80	120			
Nitrite (NO2) - N	10.3	0.25	10	0	103	80	120			
Nitrate (NO3) - N	11.6	0.25	10	1.111	105	80	120			
Sulfate (SO4)	158	0.5	200	50.01	54	80	120			M2

Sample Matrix Spike Duplicate

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

File ID: **65** Batch ID: **24070** Analysis Date: **04/28/2010 23:58**

Sample ID: **10042803-01ALFMD** Units : **mg/L** Run ID: **IC_1_100428B** Prep Date: **04/28/2010 12:27**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	176	0.5	100	80.2	96	80	120	177	0.3(15)	
Nitrite (NO2) - N	9.83	0.25	10	0	98	80	120	10.33	5.0(15)	
Nitrate (NO3) - N	11.4	0.25	10	1.111	103	80	120	11.63	1.8(15)	
Sulfate (SO4)	156	0.5	200	50.01	53	80	120	158	1.3(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.

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

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Date: *04-May-10*

QC Summary Report

Work Order: 10042803

Method Blank

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

File ID: **14** Batch ID: **24092** Analysis Date: **04/29/2010 14:11**

Sample ID: **MB-24092** Units : **µg/L** Run ID: **IC_3_100429A** Prep Date: **04/29/2010 12:33**

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: **24092** Analysis Date: **04/29/2010 14:51**

Sample ID: **LFB-24092** Units : **µg/L** Run ID: **IC_3_100429A** Prep Date: **04/29/2010 12:33**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	22.4	2	25		89	85	115			

Sample Matrix Spike

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

File ID: **24** Batch ID: **24092** Analysis Date: **04/29/2010 17:18**

Sample ID: **10042923-03ALFM** Units : **µg/L** Run ID: **IC_3_100429A** Prep Date: **04/29/2010 12:33**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	28.8	2	25	3.205	102	80	120			

Sample Matrix Spike Duplicate

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

File ID: **25** Batch ID: **24092** Analysis Date: **04/29/2010 17:37**

Sample ID: **10042923-03ALFMD** Units : **µg/L** Run ID: **IC_3_100429A** Prep Date: **04/29/2010 12:33**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	30.6	2	25	3.205	110	80	120	28.79	6.1(15)	

Comments:

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Date: *05-May-10*

QC Summary Report

Work Order: 10042803

Laboratory Control Spike Type **LCS** Test Code: **SM2320B**

File ID: Batch ID: **W0428AL** Analysis Date: **04/28/2010 15:48**

Sample ID: **LCS-W0428AL** Units : **mg/L** Run ID: **WETLAB_100428B** Prep Date: **04/28/2010 15:48**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Alkalinity, Bicarbonate (As CaCO3)	254.9	10	250		102	80	120			
Alkalinity, Carbonate (As CaCO3)	254.9	10	250		102	80	120			
Alkalinity, Total (As CaCO3 at pH 4.5)	255	10	250		102	80	120			

Comments:

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Date: *05-May-10*

QC Summary Report

Work Order: 10042803

Method Blank

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

File ID: **042910.B\019SMPL.D** Batch ID: **24097K** Analysis Date: **04/30/2010 14:02**

Sample ID: **MB-24097** Units : **mg/L** Run ID: **ICP/MS_100430A** Prep Date: **04/30/2010 09:18**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sodium (Na)	ND	0.5								
Magnesium (Mg)	ND	0.5								
Potassium (K)	ND	0.5								
Calcium (Ca)	ND	0.5								
Chromium (Cr)	ND	0.005								
Iron (Fe)	ND	0.1								
Arsenic (As)	ND	0.002								
Lead (Pb)	ND	0.005								

Laboratory Control Spike

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

File ID: **042910.B\020_LCS.D** Batch ID: **24097K** Analysis Date: **04/30/2010 14:07**

Sample ID: **LCS-24097** Units : **mg/L** Run ID: **ICP/MS_100430A** Prep Date: **04/30/2010 09:18**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sodium (Na)	5	0.5	5		100	80	120			
Magnesium (Mg)	5.08	0.5	5		102	80	120			
Potassium (K)	4.55	0.5	5		91	80	120			
Calcium (Ca)	4.72	0.5	5		94	80	120			
Chromium (Cr)	0.0456	0.005	0.05		91	80	120			
Iron (Fe)	4.6	0.2	5		92	80	120			
Arsenic (As)	0.0496	0.002	0.05		99	80	120			
Lead (Pb)	0.0492	0.005	0.05		98	80	120			

Sample Matrix Spike

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

File ID: **042910.B\025SMPL.D** Batch ID: **24097K** Analysis Date: **04/30/2010 14:38**

Sample ID: **10042923-03AMS** Units : **mg/L** Run ID: **ICP/MS_100430A** Prep Date: **04/30/2010 09:18**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sodium (Na)	43.3	0.5	5	40.38	57	80	120			M3
Magnesium (Mg)	23.5	0.5	5	19.3	83	80	120			
Potassium (K)	6.66	0.5	5	2.17	90	80	120			
Calcium (Ca)	50.4	0.5	5	47	68	80	120			M3
Chromium (Cr)	0.0475	0.005	0.05	0	95	80	120			
Iron (Fe)	4.55	0.2	5	0.1482	88	80	120			
Arsenic (As)	0.0491	0.002	0.05	0	98	80	120			
Lead (Pb)	0.0481	0.005	0.05	0	96	80	120			

Sample Matrix Spike Duplicate

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

File ID: **042910.B\026SMPL.D** Batch ID: **24097K** Analysis Date: **04/30/2010 14:44**

Sample ID: **10042923-03AMSD** Units : **mg/L** Run ID: **ICP/MS_100430A** Prep Date: **04/30/2010 09:18**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sodium (Na)	31.2	0.5	5	40.38	-180	80	120	43.25	32.5(20)	M3 R58
Magnesium (Mg)	16.5	0.5	5	19.3	-57	80	120	23.45	35.0(20)	M2 R58
Potassium (K)	4.62	0.5	5	2.17	49	80	120	6.658	36.2(20)	M2 R58
Calcium (Ca)	34.4	0.5	5	47	-250	80	120	50.41	37.8(20)	M3 R58
Chromium (Cr)	0.0315	0.005	0.05	0	63	80	120	0.04754	40.6(20)	M2 R58
Iron (Fe)	2.94	0.2	5	0.1482	56	80	120	4.552	43.0(20)	M2 R58
Arsenic (As)	0.0351	0.002	0.05	0	70	80	120	0.04914	33.5(20)	M2 R58
Lead (Pb)	0.0338	0.005	0.05	0	68	80	120	0.04808	34.9(20)	M2 R58

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Date: *05-May-10*

QC Summary Report

Work Order: 10042803

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.

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.

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

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Date: *05-May-10*

QC Summary Report

Work Order: 10042803

Laboratory Control Spike Type **LCS** Test Code: **EPA Method 150.2 / SM4500HB / SW9040C**

File ID: Batch ID: **W0428PH** Analysis Date: **04/28/2010 14:48**

Sample ID: **LCS-W0428PH** Units : **pH Units** Run ID: **WETLAB_100428A** Prep Date: **04/28/2010 14:48**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
pH	5	1.7	5		100	90	110			

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-May-10*

QC Summary Report

Work Order: 10042803

Method Blank

Type **MBLK** Test Code: **SM2540C**

File ID: Batch ID: **W0428DS** Analysis Date: **04/30/2010 00:00**

Sample ID: **MBLK-W0428DS** Units : **mg/L** Run ID: **WETLAB_100428G** Prep Date: **04/30/2010 00:00**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Solids, Total Dissolved (TDS)	ND	10								

Laboratory Control Spike

Type **LCS** Test Code: **SM2540C**

File ID: Batch ID: **W0428DS** Analysis Date: **04/30/2010 00:00**

Sample ID: **LCS-W0428DS** Units : **mg/L** Run ID: **WETLAB_100428G** Prep Date: **04/30/2010 00:00**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Solids, Total Dissolved (TDS)	102	10	100		102	80	120			

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-May-10*

QC Summary Report

Work Order: 10042803

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

File ID: **C:\HPCHEM\MS07\DATA\100429\10042913.D** Batch ID: **MS07W0429M** Analysis Date: **04/29/2010 17:34**

Sample ID: **MBLK MS07W0429M** Units : **µg/L** Run ID: **MSD_07_100429B** Prep Date: **04/29/2010 17:34**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	ND	0.5								
Chloromethane	ND	1								
Vinyl chloride	ND	0.5								
Chloroethane	ND	0.5								
Bromomethane	ND	1								
Trichlorofluoromethane	ND	0.5								
1,1-Dichloroethene	ND	0.5								
Dichloromethane	ND	1								
Freon-113	ND	0.5								
trans-1,2-Dichloroethene	ND	0.5								
Methyl tert-butyl ether (MTBE)	ND	0.5								
1,1-Dichloroethane	ND	0.5								
2-Butanone (MEK)	ND	10								
cis-1,2-Dichloroethene	ND	0.5								
Bromochloromethane	ND	0.5								
Chloroform	ND	0.5								
2,2-Dichloropropane	ND	0.5								
1,2-Dichloroethane	ND	0.5								
1,1,1-Trichloroethane	ND	0.5								
1,1-Dichloropropene	ND	0.5								
Carbon tetrachloride	ND	0.5								
Benzene	ND	0.5								
Dibromomethane	ND	0.5								
1,2-Dichloropropane	ND	0.5								
Trichloroethene	ND	0.5								
Bromodichloromethane	ND	0.5								
4-Methyl-2-pentanone (MIBK)	ND	2.5								
cis-1,3-Dichloropropene	ND	0.5								
trans-1,3-Dichloropropene	ND	0.5								
1,1,2-Trichloroethane	ND	0.5								
Toluene	ND	0.5								
1,3-Dichloropropane	ND	0.5								
Dibromochloromethane	ND	0.5								
1,2-Dibromoethane (EDB)	ND	1								
Tetrachloroethene	ND	0.5								
1,1,1,2-Tetrachloroethane	ND	0.5								
Chlorobenzene	ND	0.5								
Ethylbenzene	ND	0.5								
m,p-Xylene	ND	0.5								
Bromoform	ND	0.5								
Styrene	ND	0.5								
o-Xylene	ND	0.5								
1,1,2,2-Tetrachloroethane	ND	0.5								
1,2,3-Trichloropropane	ND	1								
Isopropylbenzene	ND	0.5								
Bromobenzene	ND	0.5								
n-Propylbenzene	ND	0.5								
4-Chlorotoluene	ND	0.5								
2-Chlorotoluene	ND	0.5								
1,3,5-Trimethylbenzene	ND	0.5								
tert-Butylbenzene	ND	0.5								
1,2,4-Trimethylbenzene	ND	0.5								
sec-Butylbenzene	ND	0.5								
1,3-Dichlorobenzene	ND	0.5								
1,4-Dichlorobenzene	ND	0.5								
4-Isopropyltoluene	ND	0.5								
1,2-Dichlorobenzene	ND	0.5								
n-Butylbenzene	ND	0.5								
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5								
1,2,4-Trichlorobenzene	ND	1								
Naphthalene	ND	1								
Hexachlorobutadiene	ND	1								
1,2,3-Trichlorobenzene	ND	1								
Surr: 1,2-Dichloroethane-d4	10.7		10		107	70	130			
Surr: Toluene-d8	9.54		10		95	70	130			

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QC Summary Report

Work Order: 10042803

Surr: 4-Bromofluorobenzene	9.84		10	98	70	130	

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

File ID: **C:\HPCHEM\MS07\DATA\100429\10042910.D** Batch ID: **MS07W0429M** Analysis Date: **04/29/2010 16:27**

Sample ID: **LCS MS07W0429M** Units : **µg/L** Run ID: **MSD_07_100429B** Prep Date: **04/29/2010 16:27**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	5.31	1	10		53	70(70)	130			L50
Chloromethane	8.35	2	10		84	70	130			
Vinyl chloride	9.53	1	10		95	70	130			
Chloroethane	10.6	1	10		106	70	130			
Bromomethane	10.2	2	10		102	70	130			
Trichlorofluoromethane	9.27	1	10		93	70	130			
1,1-Dichloroethene	9.41	1	10		94	70	130			
Dichloromethane	9.64	2	10		96	70	130			
trans-1,2-Dichloroethene	10.4	1	10		104	70	130			
Methyl tert-butyl ether (MTBE)	9.91	0.5	10		99	70	130			
1,1-Dichloroethane	10.9	1	10		109	70	130			
cis-1,2-Dichloroethene	10.6	1	10		106	70	130			
Bromochloromethane	9.9	1	10		99	70	130			
Chloroform	10.5	1	10		105	70	130			
2,2-Dichloropropane	11.7	1	10		117	70	130			
1,2-Dichloroethane	11.1	1	10		111	70	130			
1,1,1-Trichloroethane	10.6	1	10		106	70	130			
1,1-Dichloropropene	11.3	1	10		113	70	130			
Carbon tetrachloride	10.4	1	10		104	70	130			
Benzene	10.6	0.5	10		106	70	130			
Dibromomethane	10.2	1	10		102	70	130			
1,2-Dichloropropane	11.6	1	10		116	70	130			
Trichloroethene	10.3	1	10		103	70	130			
Bromodichloromethane	10.8	1	10		108	70	130			
cis-1,3-Dichloropropene	10.9	1	10		109	70	130			
trans-1,3-Dichloropropene	11	1	10		110	70	130			
1,1,2-Trichloroethane	10.2	1	10		102	70	130			
Toluene	10.1	0.5	10		101	70	130			
1,3-Dichloropropane	10.3	1	10		103	70	130			
Dibromochloromethane	9.2	1	10		92	70	130			
1,2-Dibromoethane (EDB)	19.1	2	20		96	70	130			
Tetrachloroethene	9.63	1	10		96	70	130			
1,1,1,2-Tetrachloroethane	9.25	1	10		93	70	130			
Chlorobenzene	9.66	1	10		97	70	130			
Ethylbenzene	10.4	0.5	10		104	70	130			
m,p-Xylene	10.2	0.5	10		102	70	130			
Bromoform	8.8	1	10		88	70	130			
Styrene	10.5	1	10		105	70	130			
o-Xylene	10.6	0.5	10		106	70	130			
1,1,2,2-Tetrachloroethane	8.37	1	10		84	70	130			
1,2,3-Trichloropropane	19.1	2	20		96	70	130			
Isopropylbenzene	10.8	1	10		108	70	130			
Bromobenzene	9.24	1	10		92	70	130			
n-Propylbenzene	10	1	10		100	70	130			
4-Chlorotoluene	10	1	10		100	70	130			
2-Chlorotoluene	10.3	1	10		103	70	130			
1,3,5-Trimethylbenzene	10.2	1	10		102	70	130			
tert-Butylbenzene	10.1	1	10		101	70	130			
1,2,4-Trimethylbenzene	9.89	1	10		99	70	130			
sec-Butylbenzene	10.1	1	10		101	70	130			
1,3-Dichlorobenzene	8.95	1	10		90	70	130			
1,4-Dichlorobenzene	9.03	1	10		90	70	130			
4-Isopropyltoluene	10.4	1	10		104	70	130			
1,2-Dichlorobenzene	8.51	1	10		85	70	130			
n-Butylbenzene	11.3	1	10		113	70	130			
1,2-Dibromo-3-chloropropane (DBCP)	38.6	3	50		77	70	130			
1,2,4-Trichlorobenzene	8.76	2	10		88	70	130			
Naphthalene	8.87	2	10		89	70	130			
Hexachlorobutadiene	19.4	2	20		97	70	130			
1,2,3-Trichlorobenzene	8.52	2	10		85	70	130			
Surr: 1,2-Dichloroethane-d4	10.8		10		108	70	130			
Surr: Toluene-d8	9.53		10		95	70	130			
Surr: 4-Bromofluorobenzene	9.72		10		97	70	130			

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Date: *10-May-10*

QC Summary Report

Work Order: 10042803

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

File ID: **C:\HPCHEM\MS07\DATA\100429\10042914.D** Batch ID: **MS07W0429M** Analysis Date: **04/29/2010 17:56**

Sample ID: **10042304-03AMS** Units : **µg/L** Run ID: **MSD_07_100429B** Prep Date: **04/29/2010 17:56**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	47.2	2.5	50	0	94	13	167			
Chloromethane	57.2	10	50	0	114	28	145			
Vinyl chloride	59.5	2.5	50	0	119	43	134			
Chloroethane	58.3	2.5	50	0	117	39	154			
Bromomethane	64.5	10	50	0	129	19	176			
Trichlorofluoromethane	49.7	2.5	50	0	99	34	160			
1,1-Dichloroethene	49.6	2.5	50	0	99	60	130			
Dichloromethane	50.1	10	50	0	100	68	130			
trans-1,2-Dichloroethene	51.8	2.5	50	0	104	63	130			
Methyl tert-butyl ether (MTBE)	49.4	1.3	50	0	99	56	141			
1,1-Dichloroethane	53.6	2.5	50	0	107	61	130			
cis-1,2-Dichloroethene	51.9	2.5	50	0	104	70	130			
Bromochloromethane	48.3	2.5	50	0	97	70	130			
Chloroform	50.5	2.5	50	0	101	67	130			
2,2-Dichloropropane	58.2	2.5	50	0	116	30	152			
1,2-Dichloroethane	54.4	2.5	50	0.51	108	60	135			
1,1,1-Trichloroethane	51.8	2.5	50	0	104	59	137			
1,1-Dichloropropene	54.4	2.5	50	0	109	63	130			
Carbon tetrachloride	51.2	2.5	50	0	102	50	147			
Benzene	52	1.3	50	0	104	67	130			
Dibromomethane	49.9	2.5	50	0	99.8	69	133			
1,2-Dichloropropane	55.3	2.5	50	0	111	69	130			
Trichloroethene	50.4	2.5	50	0	101	69	130			
Bromodichloromethane	52.1	2.5	50	0	104	66	134			
cis-1,3-Dichloropropene	50	2.5	50	0	99.9	63	130			
trans-1,3-Dichloropropene	52.7	2.5	50	0	105	66	131			
1,1,2-Trichloroethane	48.3	2.5	50	0	97	68	130			
Toluene	48.7	1.3	50	0	97	66	130			
1,3-Dichloropropane	48.9	2.5	50	0	98	70	130			
Dibromochloromethane	44	2.5	50	0	88	70	130			
1,2-Dibromoethane (EDB)	91.1	5	100	0	91	70	130			
Tetrachloroethene	47.2	2.5	50	0	94	61	134			
1,1,1,2-Tetrachloroethane	45	2.5	50	0	90	70	130			
Chlorobenzene	46.5	2.5	50	0	93	70	130			
Ethylbenzene	50.1	1.3	50	0	100	68	130			
m,p-Xylene	49.3	1.3	50	0	99	64	130			
Bromoform	43.4	2.5	50	0	87	64	138			
Styrene	50.6	2.5	50	0	101	69	130			
o-Xylene	50.9	1.3	50	0	102	70	130			
1,1,2,2-Tetrachloroethane	42.5	2.5	50	0	85	65	131			
1,2,3-Trichloropropane	104	10	100	0	104	70	130			
Isopropylbenzene	50.9	2.5	50	0	102	64	138			
Bromobenzene	43.9	2.5	50	0	88	70	130			
n-Propylbenzene	47.7	2.5	50	0	95	66	132			
4-Chlorotoluene	47.4	2.5	50	0	95	70	130			
2-Chlorotoluene	48.6	2.5	50	0	97	70	130			
1,3,5-Trimethylbenzene	48.3	2.5	50	0	97	66	136			
tert-Butylbenzene	48.2	2.5	50	0	96	65	137			
1,2,4-Trimethylbenzene	47.7	2.5	50	0	95	65	137			
sec-Butylbenzene	47.5	2.5	50	0	95	66	134			
1,3-Dichlorobenzene	43	2.5	50	0	86	70	130			
1,4-Dichlorobenzene	43.3	2.5	50	0	87	70	130			
4-Isopropyltoluene	49.1	2.5	50	0	98	66	137			
1,2-Dichlorobenzene	40.8	2.5	50	0	82	70	130			
n-Butylbenzene	54	2.5	50	0	108	60	142			
1,2-Dibromo-3-chloropropane (DBCP)	190	15	250	0	76	67	130			
1,2,4-Trichlorobenzene	42.4	10	50	0	85	61	137			
Naphthalene	43.6	10	50	0	87	40	167			
Hexachlorobutadiene	92.2	10	100	0	92	61	130			
1,2,3-Trichlorobenzene	41.3	10	50	0	83	51	144			
Surr: 1,2-Dichloroethane-d4	53.6		50		107	70	130			
Surr: Toluene-d8	47.2		50		94	70	130			
Surr: 4-Bromofluorobenzene	47.7		50		95	70	130			

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Date: *10-May-10*

QC Summary Report

Work Order: 10042803

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

File ID: **C:\HPCHEM\MS07\DATA\100429\10042915.D** Batch ID: **MS07W0429M** Analysis Date: **04/29/2010 18:19**

Sample ID: **10042304-03AMSD** Units : **µg/L** Run ID: **MSD_07_100429B** Prep Date: **04/29/2010 18:19**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	47.8	2.5	50	0	96	13	167	47.24	1.2(20)	
Chloromethane	58.8	10	50	0	118	28	145	57.23	2.7(20)	
Vinyl chloride	61.2	2.5	50	0	122	43	134	59.52	2.8(20)	
Chloroethane	60.9	2.5	50	0	122	39	154	58.26	4.4(20)	
Bromomethane	70.8	10	50	0	142	19	176	64.51	9.3(20)	
Trichlorofluoromethane	50.1	2.5	50	0	100	34	160	49.74	0.7(20)	
1,1-Dichloroethene	51.3	2.5	50	0	103	60	130	49.55	3.4(20)	
Dichloromethane	49.9	10	50	0	99.8	68	130	50.12	0.5(20)	
trans-1,2-Dichloroethene	52.9	2.5	50	0	106	63	130	51.8	2.2(20)	
Methyl tert-butyl ether (MTBE)	50.8	1.3	50	0	102	56	141	49.4	2.8(20)	
1,1-Dichloroethane	54.4	2.5	50	0	109	61	130	53.56	1.5(20)	
cis-1,2-Dichloroethene	53.2	2.5	50	0	106	70	130	51.91	2.4(20)	
Bromochloromethane	48.8	2.5	50	0	98	70	130	48.28	1.1(20)	
Chloroform	50.8	2.5	50	0	102	67	130	50.49	0.6(20)	
2,2-Dichloropropane	58.5	2.5	50	0	117	30	152	58.24	0.4(20)	
1,2-Dichloroethane	54.4	2.5	50	0.51	108	60	135	54.37	0.1(20)	
1,1,1-Trichloroethane	52	2.5	50	0	104	59	137	51.83	0.4(20)	
1,1-Dichloropropene	54.9	2.5	50	0	110	63	130	54.35	1.0(20)	
Carbon tetrachloride	51	2.5	50	0	102	50	147	51.22	0.5(20)	
Benzene	52.4	1.3	50	0	105	67	130	51.95	0.8(20)	
Dibromomethane	49.8	2.5	50	0	99.7	69	133	49.92	0.2(20)	
1,2-Dichloropropane	56	2.5	50	0	112	69	130	55.26	1.3(20)	
Trichloroethene	50.4	2.5	50	0	101	69	130	50.4	0.0(20)	
Bromodichloromethane	51.8	2.5	50	0	104	66	134	52.11	0.6(20)	
cis-1,3-Dichloropropene	49.5	2.5	50	0	99	63	130	49.95	0.9(20)	
trans-1,3-Dichloropropene	53	2.5	50	0	106	66	131	52.68	0.5(20)	
1,1,2-Trichloroethane	48.4	2.5	50	0	97	68	130	48.27	0.3(20)	
Toluene	49.1	1.3	50	0	98	66	130	48.68	0.8(20)	
1,3-Dichloropropane	49.6	2.5	50	0	99	70	130	48.86	1.5(20)	
Dibromochloromethane	43.9	2.5	50	0	88	70	130	44	0.2(20)	
1,2-Dibromoethane (EDB)	91.8	5	100	0	92	70	130	91.13	0.7(20)	
Tetrachloroethene	47.4	2.5	50	0	95	61	134	47.23	0.3(20)	
1,1,1,2-Tetrachloroethane	44.9	2.5	50	0	90	70	130	44.98	0.2(20)	
Chlorobenzene	46.8	2.5	50	0	94	70	130	46.46	0.8(20)	
Ethylbenzene	50.2	1.3	50	0	100	68	130	50.1	0.2(20)	
m,p-Xylene	49.1	1.3	50	0	98	64	130	49.26	0.4(20)	
Bromoform	43.5	2.5	50	0	87	64	138	43.41	0.3(20)	
Styrene	50.5	2.5	50	0	101	69	130	50.57	0.2(20)	
o-Xylene	51	1.3	50	0	102	70	130	50.85	0.4(20)	
1,1,2,2-Tetrachloroethane	42.3	2.5	50	0	85	65	131	42.52	0.6(20)	
1,2,3-Trichloropropane	93.5	10	100	0	93	70	130	104.5	11.1(20)	
Isopropylbenzene	51.5	2.5	50	0	103	64	138	50.93	1.0(20)	
Bromobenzene	43.9	2.5	50	0	88	70	130	43.87	0.1(20)	
n-Propylbenzene	48.3	2.5	50	0	97	66	132	47.67	1.3(20)	
4-Chlorotoluene	48.4	2.5	50	0	97	70	130	47.4	2.0(20)	
2-Chlorotoluene	49.1	2.5	50	0	98	70	130	48.57	1.2(20)	
1,3,5-Trimethylbenzene	48.7	2.5	50	0	97	66	136	48.32	0.9(20)	
tert-Butylbenzene	48.9	2.5	50	0	98	65	137	48.16	1.5(20)	
1,2,4-Trimethylbenzene	48	2.5	50	0	96	65	137	47.65	0.7(20)	
sec-Butylbenzene	48	2.5	50	0	96	66	134	47.5	0.9(20)	
1,3-Dichlorobenzene	43.6	2.5	50	0	87	70	130	43.02	1.2(20)	
1,4-Dichlorobenzene	43.6	2.5	50	0	87	70	130	43.28	0.7(20)	
4-Isopropyltoluene	50.5	2.5	50	0	101	66	137	49.05	2.8(20)	
1,2-Dichlorobenzene	41.1	2.5	50	0	82	70	130	40.82	0.8(20)	
n-Butylbenzene	54.7	2.5	50	0	109	60	142	53.99	1.3(20)	
1,2-Dibromo-3-chloropropane (DBCP)	192	15	250	0	77	67	130	190.4	0.7(20)	
1,2,4-Trichlorobenzene	43.9	10	50	0	88	61	137	42.39	3.5(20)	
Naphthalene	45.3	10	50	0	91	40	167	43.59	3.9(20)	
Hexachlorobutadiene	94.7	10	100	0	95	61	130	92.22	2.7(20)	
1,2,3-Trichlorobenzene	42.5	10	50	0	85	51	144	41.29	2.8(20)	
Surr: 1,2-Dichloroethane-d4	53.8		50		108	70	130			
Surr: Toluene-d8	47.6		50		95	70	130			
Surr: 4-Bromofluorobenzene	47.6		50		95	70	130			

Alpha Analytical, Inc.

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

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

Date: *10-May-10*

QC Summary Report

Work Order: 10042803

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

AMENDED

CA

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

WorkOrder : BMIS10042803

Report Due By : 5:00 PM On : 12-May-2010

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

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

EDD Required : **Yes**

Sampled by : David Loera

PO : 218013

Client's COC # : 29481 Job : G005862/JPL Groundwater Monitoring

Cooler Temp	Samples Received	Date Printed
4 °C	28-Apr-2010	03-May-2010

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

Alpha Sample ID	Client Sample ID	Matrix	Collection Date	No. of Bottles Alpha	Sub	TAT	Requested Tests 300_0_W	314_W	ALKALINITY_W	METALS_DW	PH_W	TDS_W	VOC_TIC_W	VOC_W	Sample Remarks
BMI10042803-01A	MW-7	AQ	04/27/10 10:50	8	0	10	NO2, NO3, SO4, Cl	Perchlorate	Alk (BiCarb/Carb)	Cr, Pb, As, Ca, Mg, K, Na, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	

Comments: No security seals. Frozen ice. Temp Blank #7708 received @ 4°C. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). Per phone conversation w/ Betsy Cutie 4/28/10 @ 11:47: It is o.k. to run Fe by 200.8 not 3500 : as stated on client COC. Amended 5/3/10 @ 8:21: Per email from David Conner added PO# 218013. EA

	Signature	Print Name	Company	Date/Time
Logged in by:	Elizabeth Adcox	Elizabeth Adcox	Alpha Analytical, Inc.	5.3.10 8:24

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

Billing Information :

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 : BMIS10042803

Report Due By : 5:00 PM On : 12-May-2010

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

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

EDD Required : **Yes**

Sampled by : David Loera

PO :

Client's COC # : 29481 Job : G005862/JPL Groundwater Monitoring

Cooler Temp	Samples Received	Date Printed
4 °C	28-Apr-2010	**28-Apr-2010**

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

Alpha Sample ID	Client Sample ID	Matrix	Collection Date	No. of Bottles Alpha	Sub	TAT	Requested Tests 300_0_W	314_W	ALKALINITY_W	METALS_DW	PH_W	TDS_W	VOC_TIC_W	VOC_W	Sample Remarks
BMI10042803-01A	MW-7	AQ	04/27/10 10:50	8	0	10	NO2, NO3, SO4, Cl	Perchlorate	Alk (BiCarb/Carb)	Cr, Pb, As, Ca, Mg, K, Na, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	

Comments: No security seals. Frozen ice. Temp Blank #7708 received @ 4°C. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). Per phone conversation w/ Betsy Cutie 4/28/10 @ 11:47: It is o.k. to run Fe by 200.8 not 3500 : as stated on client COC.

	Signature	Print Name	Company	Date/Time
Logged in by:	Elizabeth Adcox	Elizabeth Adcox	**Alpha Analytical, Inc.**	4.28.10 1156

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 Jerry Tonkins
Address 505 King Ave
City, State, Zip Columbus OH 43201
Phone Number 614-424-4849 Fax 614-424-3667

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

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

29481

Page # 1 of 1

Client Name	P.O. #	Job #
David Conner	214375	6005862/JPL 6444
Address	EMail Address	
	connerd@battelle.org	
City, State, Zip	Phone # 619-726-7311	Fax # 614-458-6641

Time Sampled	Date Sampled	Matrix* See Key Below	Sampled by / Lab ID Number (Office Use Only)	Report Attention / Sample Description	TAT	Field Filtered	Total and type of containers ** See below	VOCs (524.2)	Perchlorate (EPA 314.0)	Total Cr, Pb, As, Ca, Mg, K, Na (200.8)	Fe (3500)	Alk, Cl-, NO3, SO4, Carbonate, TDS, pH, Bicarbonate (SM2320B)			REMARKS
			Analyses Required												
1050	4/27/10	AQ	Sampled by: David Loera BMI/1004-2803-01	Report Attention: David Conner MW-7	10		6VI 2P	X	X	X	X	X	X		

Required QC Level? I II III IV

EDD / EDF? YES X NO ___

Global ID # ___

ADDITIONAL INSTRUCTIONS:

	Signature	Print Name	Company	Date	Time
Relinquished by	David Loera	David Loera	Battelle	4-27-10	1230
Received by		CHASE BRUGGON	INSIGHT GEC INC	4-27-10	1233
Relinquished by		CHASE BRUGGON	INSIGHT GEC INC	4-27-10	1300
Received by	Elizabeth Adcox	Elizabeth Adcox	Alpha	4-28-10	11:17
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: *08-May-10*

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

CASE NARRATIVE

Job: G005862/JPL Groundwater Monitoring

Work Order: BMI10042804 **Cooler Temp:** 4 °C

Alpha's Sample ID	Client's Sample ID	Matrix
10042804-01A	MW-14-5	Aqueous
10042804-02A	MW-14-4	Aqueous
10042804-03A	MW-14-3	Aqueous
10042804-04A	MW-14-2	Aqueous
10042804-05A	MW-14-1	Aqueous
10042804-06A	DUPE-01-2Q10	Aqueous
10042804-07A	EB-01-04/27/10	Aqueous
10042804-08A	TB-01-04/27/10	Aqueous

Manually Integrated Analytes

Alpha's Sample ID	Test Reference	Analyte
NONE		

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

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

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

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 04/28/10

Job: G005862/JPL Groundwater Monitoring

Anions by IC
EPA Method 300.0

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-14-5**				
Lab ID : BMI10042804-01A Chloride	9.4	0.50 mg/L	04/28/10 12:27	04/29/10 01:12
Date Sampled 04/27/10 08:48 Nitrite (NO2) - N	ND	0.25 mg/L	04/28/10 12:27	04/29/10 01:12
Nitrate (NO3) - N	ND	0.25 mg/L	04/28/10 12:27	04/29/10 01:12
Sulfate (SO4)	17	0.50 mg/L	04/28/10 12:27	04/29/10 01:12
Client ID: **MW-14-4**				
Lab ID : BMI10042804-02A Chloride	57	50 mg/L	04/28/10 12:27	04/29/10 01:31
Date Sampled 04/27/10 09:24 Nitrite (NO2) - N	ND	0.25 mg/L	04/28/10 12:27	04/29/10 01:31
Nitrate (NO3) - N	13	0.25 mg/L	04/28/10 12:27	04/29/10 01:31
Sulfate (SO4)	53	0.50 mg/L	04/28/10 12:27	04/29/10 01:31
Client ID: **MW-14-3**				
Lab ID : BMI10042804-03A Chloride	100	50 mg/L	04/28/10 12:27	04/29/10 01:49
Date Sampled 04/27/10 10:00 Nitrite (NO2) - N	ND	0.25 mg/L	04/28/10 12:27	04/29/10 01:49
Nitrate (NO3) - N	16	0.25 mg/L	04/28/10 12:27	04/29/10 01:49
Sulfate (SO4)	150	75 mg/L	04/28/10 12:27	04/29/10 01:49
Client ID: **MW-14-2**				
Lab ID : BMI10042804-04A Chloride	110	50 mg/L	04/28/10 12:27	04/29/10 02:08
Date Sampled 04/27/10 11:08 Nitrite (NO2) - N	0.56	0.25 mg/L	04/28/10 12:27	04/29/10 02:08
Nitrate (NO3) - N	15	0.25 mg/L	04/28/10 12:27	04/29/10 02:08
Sulfate (SO4)	180	75 mg/L	04/28/10 12:27	04/29/10 02:08
Client ID: **MW-14-1**				
Lab ID : BMI10042804-05A Chloride	120	50 mg/L	04/28/10 12:27	04/29/10 02:26
Date Sampled 04/27/10 11:43 Nitrite (NO2) - N	ND	0.25 mg/L	04/28/10 12:27	04/29/10 02:26
Nitrate (NO3) - N	16	0.25 mg/L	04/28/10 12:27	04/29/10 02:26
Sulfate (SO4)	190	75 mg/L	04/28/10 12:27	04/29/10 02:26
Client ID: **DUPE-01-2Q10**				
Lab ID : BMI10042804-06A Chloride	100	50 mg/L	04/28/10 12:27	04/29/10 02:45
Date Sampled 04/27/10 00:00 Nitrite (NO2) - N	ND	0.25 mg/L	04/28/10 12:27	04/29/10 02:45
Nitrate (NO3) - N	15	0.25 mg/L	04/28/10 12:27	04/29/10 02:45
Sulfate (SO4)	150	75 mg/L	04/28/10 12:27	04/29/10 02:45
Client ID: **EB-01-04/27/10**				
Lab ID : BMI10042804-07A Chloride	ND	0.50 mg/L	04/28/10 12:27	04/29/10 03:03
Date Sampled 04/27/10 11:26 Nitrite (NO2) - N	ND	0.25 mg/L	04/28/10 12:27	04/29/10 03:03
Nitrate (NO3) - N	ND	0.25 mg/L	04/28/10 12:27	04/29/10 03:03
Sulfate (SO4)	ND	0.50 mg/L	04/28/10 12:27	04/29/10 03:03

Alpha Analytical, Inc.

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

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

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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

5/11/10

Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 04/28/10

Job: G005862/JPL Groundwater Monitoring

Perchlorate by Ion Chromatography
EPA Method 314.0

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-14-5**				
Lab ID : BMI10042804-01A Perchlorate	ND	1.00 µg/L	04/29/10 12:33	04/29/10 20:04
Date Sampled 04/27/10 08:48				
Client ID: **MW-14-4**				
Lab ID : BMI10042804-02A Perchlorate	4.18	1.00 µg/L	04/29/10 12:33	04/29/10 20:22
Date Sampled 04/27/10 09:24				
Client ID: **MW-14-3**				
Lab ID : BMI10042804-03A Perchlorate	6.01	1.00 µg/L	04/29/10 12:33	04/29/10 20:41
Date Sampled 04/27/10 10:00				
Client ID: **MW-14-2**				
Lab ID : BMI10042804-04A Perchlorate	3.63	1.00 µg/L	04/29/10 12:33	04/29/10 20:59
Date Sampled 04/27/10 11:08				
Client ID: **MW-14-1**				
Lab ID : BMI10042804-05A Perchlorate	4.91	1.00 µg/L	04/29/10 12:33	04/29/10 21:18
Date Sampled 04/27/10 11:43				
Client ID: **DUPE-01-2Q10**				
Lab ID : BMI10042804-06A Perchlorate	5.87	1.00 µg/L	04/29/10 12:33	04/29/10 21:36
Date Sampled 04/27/10 00:00				
Client ID: **EB-01-04/27/10**				
Lab ID : BMI10042804-07A Perchlorate	ND	1.00 µg/L	04/29/10 12:33	04/29/10 21:54
Date Sampled 04/27/10 11:26				

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.

5/11/10
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 04/28/10

Job: G005862/JPL Groundwater Monitoring

Alkalinity
SM2320B

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-14-5**				
Lab ID : BMI10042804-01A Alkalinity, Bicarbonate (As CaCO3)	140	10 mg/L	04/28/10 16:29	04/28/10 16:29
Date Sampled 04/27/10 08:48 Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	04/28/10 16:29	04/28/10 16:29
Alkalinity, Total (As CaCO3 at pH 4.5)	150	10 mg/L	04/28/10 16:29	04/28/10 16:29
Client ID: **MW-14-4**				
Lab ID : BMI10042804-02A Alkalinity, Bicarbonate (As CaCO3)	170	10 mg/L	04/28/10 16:34	04/28/10 16:34
Date Sampled 04/27/10 09:24 Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	04/28/10 16:34	04/28/10 16:34
Alkalinity, Total (As CaCO3 at pH 4.5)	170	10 mg/L	04/28/10 16:34	04/28/10 16:34
Client ID: **MW-14-3**				
Lab ID : BMI10042804-03A Alkalinity, Bicarbonate (As CaCO3)	240	10 mg/L	04/28/10 16:39	04/28/10 16:39
Date Sampled 04/27/10 10:00 Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	04/28/10 16:39	04/28/10 16:39
Alkalinity, Total (As CaCO3 at pH 4.5)	240	10 mg/L	04/28/10 16:39	04/28/10 16:39
Client ID: **MW-14-2**				
Lab ID : BMI10042804-04A Alkalinity, Bicarbonate (As CaCO3)	260	10 mg/L	04/28/10 16:45	04/28/10 16:45
Date Sampled 04/27/10 11:08 Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	04/28/10 16:45	04/28/10 16:45
Alkalinity, Total (As CaCO3 at pH 4.5)	260	10 mg/L	04/28/10 16:45	04/28/10 16:45
Client ID: **MW-14-1**				
Lab ID : BMI10042804-05A Alkalinity, Bicarbonate (As CaCO3)	220	10 mg/L	04/28/10 16:57	04/28/10 16:57
Date Sampled 04/27/10 11:43 Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	04/28/10 16:57	04/28/10 16:57
Alkalinity, Total (As CaCO3 at pH 4.5)	220	10 mg/L	04/28/10 16:57	04/28/10 16:57
Client ID: **DUPE-01-2Q10**				
Lab ID : BMI10042804-06A Alkalinity, Bicarbonate (As CaCO3)	240	10 mg/L	04/28/10 17:04	04/28/10 17:04
Date Sampled 04/27/10 00:00 Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	04/28/10 17:04	04/28/10 17:04
Alkalinity, Total (As CaCO3 at pH 4.5)	240	10 mg/L	04/28/10 17:04	04/28/10 17:04
Client ID: **EB-01-04/27/10**				
Lab ID : BMI10042804-07A Alkalinity, Bicarbonate (As CaCO3)	ND	10 mg/L	04/28/10 17:09	04/28/10 17:09
Date Sampled 04/27/10 11:26 Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	04/28/10 17:09	04/28/10 17:09
Alkalinity, Total (As CaCO3 at pH 4.5)	ND	10 mg/L	04/28/10 17:09	04/28/10 17:09

Alpha Analytical, Inc.

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

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

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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5/11/10

Report Date

Alpha Analytical, Inc.

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ANALYTICAL REPORT

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 04/28/10

Job: G005862/JPL Groundwater Monitoring

Metals by ICPMS
EPA Method 200.8

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-14-5**				
Lab ID : BMI10042804-01A Sodium (Na)	27	0.50 mg/L	04/30/10 09:18	04/30/10 15:35
Date Sampled 04/27/10 08:48 Magnesium (Mg)	11	0.50 mg/L	04/30/10 09:18	04/30/10 15:35
Potassium (K)	1.6	0.50 mg/L	04/30/10 09:18	04/30/10 15:35
Calcium (Ca)	17	0.50 mg/L	04/30/10 09:18	04/30/10 15:35
Chromium (Cr)	ND	0.0050 mg/L	04/30/10 09:18	04/30/10 15:35
Iron (Fe)	ND	0.10 mg/L	04/30/10 09:18	04/30/10 15:35
Arsenic (As)	ND	0.0020 mg/L	04/30/10 09:18	04/30/10 15:35
Lead (Pb)	ND	0.0050 mg/L	04/30/10 09:18	04/30/10 15:35
Client ID: **MW-14-4**				
Lab ID : BMI10042804-02A Sodium (Na)	27	0.50 mg/L	04/30/10 09:18	04/30/10 15:41
Date Sampled 04/27/10 09:24 Magnesium (Mg)	19	0.50 mg/L	04/30/10 09:18	04/30/10 15:41
Potassium (K)	1.9	0.50 mg/L	04/30/10 09:18	04/30/10 15:41
Calcium (Ca)	56	0.50 mg/L	04/30/10 09:18	04/30/10 15:41
Chromium (Cr)	ND	0.0050 mg/L	04/30/10 09:18	04/30/10 15:41
Iron (Fe)	0.15	0.10 mg/L	04/30/10 09:18	04/30/10 15:41
Arsenic (As)	ND	0.0020 mg/L	04/30/10 09:18	04/30/10 15:41
Lead (Pb)	ND	0.0050 mg/L	04/30/10 09:18	04/30/10 15:41
Client ID: **MW-14-3**				
Lab ID : BMI10042804-03A Sodium (Na)	39	0.50 mg/L	04/30/10 09:18	04/30/10 15:46
Date Sampled 04/27/10 10:00 Magnesium (Mg)	43	0.50 mg/L	04/30/10 09:18	04/30/10 15:46
Potassium (K)	2.8	0.50 mg/L	04/30/10 09:18	04/30/10 15:46
Calcium (Ca)	110	0.50 mg/L	04/30/10 09:18	04/30/10 15:46
Chromium (Cr)	ND	0.0050 mg/L	04/30/10 09:18	04/30/10 15:46
Iron (Fe)	0.36	0.10 mg/L	04/30/10 09:18	04/30/10 15:46
Arsenic (As)	ND	0.0020 mg/L	04/30/10 09:18	04/30/10 15:46
Lead (Pb)	ND	0.0050 mg/L	04/30/10 09:18	04/30/10 15:46
Client ID: **MW-14-2**				
Lab ID : BMI10042804-04A Sodium (Na)	34	0.50 mg/L	04/30/10 09:18	04/30/10 16:20
Date Sampled 04/27/10 11:08 Magnesium (Mg)	47	0.50 mg/L	04/30/10 09:18	04/30/10 16:20
Potassium (K)	2.7	0.50 mg/L	04/30/10 09:18	04/30/10 16:20
Calcium (Ca)	150	0.50 mg/L	04/30/10 09:18	04/30/10 16:20
Chromium (Cr)	ND	0.0050 mg/L	04/30/10 09:18	04/30/10 16:20
Iron (Fe)	0.38	0.10 mg/L	04/30/10 09:18	04/30/10 16:20
Arsenic (As)	ND	0.0020 mg/L	04/30/10 09:18	04/30/10 16:20
Lead (Pb)	ND	0.0050 mg/L	04/30/10 09:18	04/30/10 16:20

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Client ID: **MW-14-1**					
Lab ID : BMI10042804-05A	Sodium (Na)	41	0.50 mg/L	04/30/10 09:18	04/30/10 16:26
Date Sampled 04/27/10 11:43	Magnesium (Mg)	43	0.50 mg/L	04/30/10 09:18	04/30/10 16:26
	Potassium (K)	2.6	0.50 mg/L	04/30/10 09:18	04/30/10 16:26
	Calcium (Ca)	150	0.50 mg/L	04/30/10 09:18	04/30/10 16:26
	Chromium (Cr)	ND	0.0050 mg/L	04/30/10 09:18	04/30/10 16:26
	Iron (Fe)	0.37	0.10 mg/L	04/30/10 09:18	04/30/10 16:26
	Arsenic (As)	ND	0.0020 mg/L	04/30/10 09:18	04/30/10 16:26
	Lead (Pb)	ND	0.0050 mg/L	04/30/10 09:18	04/30/10 16:26
Client ID: **DUPE-01-2Q10**					
Lab ID : BMI10042804-06A	Sodium (Na)	41	0.50 mg/L	04/30/10 09:18	04/30/10 16:32
Date Sampled 04/27/10 00:00	Magnesium (Mg)	46	0.50 mg/L	04/30/10 09:18	04/30/10 16:32
	Potassium (K)	3.1	0.50 mg/L	04/30/10 09:18	04/30/10 16:32
	Calcium (Ca)	120	0.50 mg/L	04/30/10 09:18	04/30/10 16:32
	Chromium (Cr)	ND	0.0050 mg/L	04/30/10 09:18	04/30/10 16:32
	Iron (Fe)	0.30	0.10 mg/L	04/30/10 09:18	04/30/10 16:32
	Arsenic (As)	ND	0.0020 mg/L	04/30/10 09:18	04/30/10 16:32
	Lead (Pb)	ND	0.0050 mg/L	04/30/10 09:18	04/30/10 16:32
Client ID: **EB-01-04/27/10**					
Lab ID : BMI10042804-07A	Sodium (Na)	ND	0.50 mg/L	04/30/10 09:18	04/30/10 16:37
Date Sampled 04/27/10 11:26	Magnesium (Mg)	ND	0.50 mg/L	04/30/10 09:18	04/30/10 16:37
	Potassium (K)	ND	0.50 mg/L	04/30/10 09:18	04/30/10 16:37
	Calcium (Ca)	ND	0.50 mg/L	04/30/10 09:18	04/30/10 16:37
	Chromium (Cr)	ND	0.0050 mg/L	04/30/10 09:18	04/30/10 16:37
	Iron (Fe)	ND	0.10 mg/L	04/30/10 09:18	04/30/10 16:37
	Arsenic (As)	ND	0.0020 mg/L	04/30/10 09:18	04/30/10 16:37
	Lead (Pb)	ND	0.0050 mg/L	04/30/10 09:18	04/30/10 16:37

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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5/11/10

Report Date

Alpha Analytical, Inc.

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ANALYTICAL REPORT

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 04/28/10

Job: G005862/JPL Groundwater Monitoring

pH (Range 1.7 to 12.4)
EPA Method 150.2 / SM4500HB / SW9040C

	Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-14-5**					
Lab ID : BMI10042804-01A	pH	8.5	1.7 pH Units	04/28/10 14:56	04/28/10 14:56
Date Sampled 04/27/10 08:48	pH - Temperature	17	1.0 °C	04/28/10 14:56	04/28/10 14:56
Client ID: **MW-14-4**					
Lab ID : BMI10042804-02A	pH	8.0	1.7 pH Units	04/28/10 14:59	04/28/10 14:59
Date Sampled 04/27/10 09:24	pH - Temperature	17	1.0 °C	04/28/10 14:59	04/28/10 14:59
Client ID: **MW-14-3**					
Lab ID : BMI10042804-03A	pH	7.7	1.7 pH Units	04/28/10 15:02	04/28/10 15:02
Date Sampled 04/27/10 10:00	pH - Temperature	17	1.0 °C	04/28/10 15:02	04/28/10 15:02
Client ID: **MW-14-2**					
Lab ID : BMI10042804-04A	pH	7.3	1.7 pH Units	04/28/10 15:05	04/28/10 15:05
Date Sampled 04/27/10 11:08	pH - Temperature	17	1.0 °C	04/28/10 15:05	04/28/10 15:05
Client ID: **MW-14-1**					
Lab ID : BMI10042804-05A	pH	6.7	1.7 pH Units	04/28/10 15:07	04/28/10 15:07
Date Sampled 04/27/10 11:43	pH - Temperature	17	1.0 °C	04/28/10 15:07	04/28/10 15:07
Client ID: **DUPE-01-2Q10**					
Lab ID : BMI10042804-06A	pH	7.6	1.7 pH Units	04/28/10 15:11	04/28/10 15:11
Date Sampled 04/27/10 00:00	pH - Temperature	17	1.0 °C	04/28/10 15:11	04/28/10 15:11
Client ID: **EB-01-04/27/10**					
Lab ID : BMI10042804-07A	pH	6.1	1.7 pH Units	04/28/10 15:17	04/28/10 15:17
Date Sampled 04/27/10 11:26	pH - Temperature	18	1.0 °C	04/28/10 15:17	04/28/10 15:17

The EPA has established an analytical holding time of 15 minutes for this method as documented in the Methods Update Rule, Federal Register, Vol 72, No 47, March 2007. This holding time will always be exceeded, unless samples are analyzed in the field.
The laboratory performed this analysis in the shortest practical holding time after sample receipt.

Roger Scholl Randy Gardner Walter Hinchman

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5/11/10
Report Date

Alpha Analytical, Inc.

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ANALYTICAL REPORT

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 04/28/10

Job: G005862/JPL Groundwater Monitoring

Total Dissolved Solids (TDS)
SM2540C

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-14-5**				
Lab ID : BMI10042804-01A Solids, Total Dissolved (TDS)	190	10 mg/L	04/30/10	04/30/10
Date Sampled 04/27/10 08:48				
Client ID: **MW-14-4**				
Lab ID : BMI10042804-02A Solids, Total Dissolved (TDS)	350	10 mg/L	04/30/10	04/30/10
Date Sampled 04/27/10 09:24				
Client ID: **MW-14-3**				
Lab ID : BMI10042804-03A Solids, Total Dissolved (TDS)	600	10 mg/L	04/30/10	04/30/10
Date Sampled 04/27/10 10:00				
Client ID: **MW-14-2**				
Lab ID : BMI10042804-04A Solids, Total Dissolved (TDS)	760	10 mg/L	04/30/10	04/30/10
Date Sampled 04/27/10 11:08				
Client ID: **MW-14-1**				
Lab ID : BMI10042804-05A Solids, Total Dissolved (TDS)	760	10 mg/L	04/30/10	04/30/10
Date Sampled 04/27/10 11:43				
Client ID: **DUPE-01-2Q10**				
Lab ID : BMI10042804-06A Solids, Total Dissolved (TDS)	660	10 mg/L	04/30/10	04/30/10
Date Sampled 04/27/10 00:00				
Client ID: **EB-01-04/27/10**				
Lab ID : BMI10042804-07A Solids, Total Dissolved (TDS)	ND	10 mg/L	04/30/10	04/30/10
Date Sampled 04/27/10 11:26				

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10042804-01A
Client I.D. Number: MW-14-5

Sampled: 04/27/10 08:48
Received: 04/28/10
Extracted: 04/30/10 00:18
Analyzed: 04/30/10 00:18

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	Q	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	(70-120)	%REC
30	1,1,2-Trichloroethane	ND		0.50	µg/L	65	Surr: Toluene-d8	97	(85-120)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	100	(75-120)	%REC
32	1,3-Dichloropropane	ND		0.50	µg/L					
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.

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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Report Date

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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10042804-02A
Client I.D. Number: MW-14-4

Sampled: 04/27/10 09:24
Received: 04/28/10
Extracted: 04/30/10 00:40
Analyzed: 04/30/10 00:40

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	Q	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	(70-120)	%REC
30	1,1,2-Trichloroethane	ND		0.50	µg/L	65	Surr: Toluene-d8	98	(85-120)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	99	(75-120)	%REC
32	1,3-Dichloropropane	ND		0.50	µg/L					
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.

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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5/11/10
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10042804-03A
Client I.D. Number: MW-14-3

Sampled: 04/27/10 10:00
Received: 04/28/10
Extracted: 04/30/10 01:03
Analyzed: 04/30/10 01:03

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	Q	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	1.1		0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND		0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND		2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND		0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND		0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	102	(70-120)	%REC
30	1,1,2-Trichloroethane	ND		0.50	µg/L	65	Surr: Toluene-d8	98	(85-120)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	99	(75-120)	%REC
32	1,3-Dichloropropane	ND		0.50	µg/L					
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.

Q = One or more quality control criteria failed.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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

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5/11/10
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10042804-04A
Client I.D. Number: MW-14-2

Sampled: 04/27/10 11:08
Received: 04/28/10
Extracted: 04/30/10 01:25
Analyzed: 04/30/10 01:25

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	Q	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	5.9		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	102	(70-120)	%REC
30	1,1,2-Trichloroethane	ND		0.50	µg/L	65	Surr: Toluene-d8	98	(85-120)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	100	(75-120)	%REC
32	1,3-Dichloropropane	ND		0.50	µg/L					
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.

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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5/11/10
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10042804-05A
Client I.D. Number: MW-14-1

Sampled: 04/27/10 11:43
Received: 04/28/10
Extracted: 04/30/10 01:47
Analyzed: 04/30/10 01:47

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	Q	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	3.2		0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND		0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND		2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND		0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND		0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	103	(70-120)	%REC
30	1,1,2-Trichloroethane	ND		0.50	µg/L	65	Surr: Toluene-d8	98	(85-120)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	99	(75-120)	%REC
32	1,3-Dichloropropane	ND		0.50	µg/L					
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.

Q = One or more quality control criteria failed.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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5/11/10
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10042804-06A
Client I.D. Number: DUPE-01-2Q10

Sampled: 04/27/10 00:00
Received: 04/28/10
Extracted: 04/30/10 02:10
Analyzed: 04/30/10 02:10

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit	
1	Dichlorodifluoromethane	ND	Q	0.50	µg/L
2	Chloromethane	ND		1.0	µg/L
3	Vinyl chloride	ND		0.50	µg/L
4	Chloroethane	ND		0.50	µg/L
5	Bromomethane	ND		1.0	µg/L
6	Trichlorofluoromethane	ND		0.50	µg/L
7	1,1-Dichloroethene	ND		0.50	µg/L
8	Dichloromethane	ND		1.0	µg/L
9	Freon-113	ND		0.50	µg/L
10	trans-1,2-Dichloroethene	ND		0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND		0.50	µg/L
12	1,1-Dichloroethane	ND		0.50	µg/L
13	2-Butanone (MEK)	ND		10	µg/L
14	cis-1,2-Dichloroethene	ND		0.50	µg/L
15	Bromochloromethane	ND		0.50	µg/L
16	Chloroform	ND		0.50	µg/L
17	2,2-Dichloropropane	ND		0.50	µg/L
18	1,2-Dichloroethane	ND		0.50	µg/L
19	1,1,1-Trichloroethane	ND		0.50	µg/L
20	1,1-Dichloropropene	ND		0.50	µg/L
21	Carbon tetrachloride	ND		0.50	µg/L
22	Benzene	ND		0.50	µg/L
23	Dibromomethane	ND		0.50	µg/L
24	1,2-Dichloropropane	ND		0.50	µg/L
25	Trichloroethene	1.3		0.50	µg/L
26	Bromodichloromethane	ND		0.50	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND		2.5	µg/L
28	cis-1,3-Dichloropropene	ND		0.50	µg/L
29	trans-1,3-Dichloropropene	ND		0.50	µg/L
30	1,1,2-Trichloroethane	ND		0.50	µg/L
31	Toluene	ND		0.50	µg/L
32	1,3-Dichloropropane	ND		0.50	µg/L
33	Dibromochloromethane	ND		0.50	µg/L
34	1,2-Dibromoethane (EDB)	ND		1.0	µg/L
35	Tetrachloroethene	ND		0.50	µg/L
36	1,1,1,2-Tetrachloroethane	ND		0.50	µg/L
37	Chlorobenzene	ND		0.50	µg/L
38	Ethylbenzene	ND		0.50	µg/L
39	m,p-Xylene	ND		0.50	µg/L
40	Bromoform	ND		0.50	µg/L
41	Styrene	ND		0.50	µg/L
42	o-Xylene	ND		0.50	µg/L
43	1,1,2,2-Tetrachloroethane	ND		0.50	µg/L
44	1,2,3-Trichloropropane	ND		1.0	µg/L
45	Isopropylbenzene	ND		0.50	µg/L
46	Bromobenzene	ND		0.50	µg/L
47	n-Propylbenzene	ND		0.50	µg/L
48	4-Chlorotoluene	ND		0.50	µg/L
49	2-Chlorotoluene	ND		0.50	µg/L
50	1,3,5-Trimethylbenzene	ND		0.50	µg/L
51	tert-Butylbenzene	ND		0.50	µg/L
52	1,2,4-Trimethylbenzene	ND		0.50	µg/L
53	sec-Butylbenzene	ND		0.50	µg/L
54	1,3-Dichlorobenzene	ND		0.50	µg/L
55	1,4-Dichlorobenzene	ND		0.50	µg/L
56	4-Isopropyltoluene	ND		0.50	µg/L
57	1,2-Dichlorobenzene	ND		0.50	µg/L
58	n-Butylbenzene	ND		0.50	µg/L
59	1,2-Dibromo-3-chloropropane (DBCP)	ND		2.5	µg/L
60	1,2,4-Trichlorobenzene	ND		1.0	µg/L
61	Naphthalene	ND		1.0	µg/L
62	Hexachlorobutadiene	ND		1.0	µg/L
63	1,2,3-Trichlorobenzene	ND		1.0	µg/L
64	Surr: 1,2-Dichloroethane-d4	100		(70-120)	%REC
65	Surr: Toluene-d8	98		(85-120)	%REC
66	Surr: 4-Bromofluorobenzene	100		(75-120)	%REC

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

Q = One or more quality control criteria failed.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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5/11/10
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10042804-07A
Client I.D. Number: EB-01-04/27/10

Sampled: 04/27/10 11:26
Received: 04/28/10
Extracted: 04/29/10 21:18
Analyzed: 04/29/10 21:18

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	Q	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	(70-120)	%REC
30	1,1,2-Trichloroethane	ND		0.50	µg/L	65	Surr: Toluene-d8	98	(85-120)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	98	(75-120)	%REC
32	1,3-Dichloropropane	ND		0.50	µg/L					
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.

Q = One or more quality control criteria failed.

ND = Not Detected

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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10042804-08A
Client I.D. Number: TB-01-04/27/10

Sampled: 04/27/10 07:00
Received: 04/28/10
Extracted: 04/29/10 21:41
Analyzed: 04/29/10 21:41

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit		Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	Q	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	(70-120)	%REC
30	1,1,2-Trichloroethane	ND		0.50	µg/L	65 Surr: Toluene-d8	98	(85-120)	%REC
31	Toluene	ND		0.50	µg/L	66 Surr: 4-Bromofluorobenzene	99	(75-120)	%REC
32	1,3-Dichloropropane	ND		0.50	µg/L				
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.

Q = One or more quality control criteria failed.

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5/11/10
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Tentatively Identified Compounds - Volatile Organics by GC/MS

	Parameter	Estimated Concentration	Estimated Reporting Limit	Date Extracted	Date Analyzed
Client ID : **MW-14-5**					
Lab ID : BMI10042804-01A	* * * None Found * * *	ND	2.0 µg/L	04/30/10 00:18	04/30/10 00:18
Date Received : 04/28/10					
Date Sampled : 04/27/10 08:48					
Client ID : **MW-14-4**					
Lab ID : BMI10042804-02A	* * * None Found * * *	ND	2.0 µg/L	04/30/10 00:40	04/30/10 00:40
Date Received : 04/28/10					
Date Sampled : 04/27/10 09:24					
Client ID : **MW-14-3**					
Lab ID : BMI10042804-03A	* * * None Found * * *	ND	2.0 µg/L	04/30/10 01:03	04/30/10 01:03
Date Received : 04/28/10					
Date Sampled : 04/27/10 10:00					
Client ID : **MW-14-2**					
Lab ID : BMI10042804-04A	* * * None Found * * *	ND	2.0 µg/L	04/30/10 01:25	04/30/10 01:25
Date Received : 04/28/10					
Date Sampled : 04/27/10 11:08					
Client ID : **MW-14-1**					
Lab ID : BMI10042804-05A	* * * None Found * * *	ND	2.0 µg/L	04/30/10 01:47	04/30/10 01:47
Date Received : 04/28/10					
Date Sampled : 04/27/10 11:43					
Client ID : **DUPE-01-2Q10**					
Lab ID : BMI10042804-06A	* * * None Found * * *	ND	2.0 µg/L	04/30/10 02:10	04/30/10 02:10
Date Received : 04/28/10					
Date Sampled : 04/27/10 00:00					
Client ID : **EB-01-04/27/10**					
Lab ID : BMI10042804-07A	Acetone	17	10 µg/L	04/29/10 21:18	04/29/10 21:18
Date Received : 04/28/10	Tertiary Butyl Alcohol (TBA)	47	10 µg/L	04/29/10 21:18	04/29/10 21:18
Date Sampled : 04/27/10 11:26					
Client ID : **TB-01-04/27/10**					
Lab ID : BMI10042804-08A	* * * None Found * * *	ND	2.0 µg/L	04/29/10 21:41	04/29/10 21:41
Date Received : 04/28/10					
Date Sampled : 04/27/10 07:00					

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ND = Not Detected

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VOC Sample Preservation Report

Work Order: BMI10042804 **Job:** G005862/JPL Groundwater Monitoring

Alpha's Sample ID	Client's Sample ID	Matrix	pH
10042804-01A	MW-14-5	Aqueous	2
10042804-02A	MW-14-4	Aqueous	2
10042804-03A	MW-14-3	Aqueous	2
10042804-04A	MW-14-2	Aqueous	2
10042804-05A	MW-14-1	Aqueous	2
10042804-06A	DUPE-01-2Q10	Aqueous	2
10042804-07A	EB-01-04/27/10	Aqueous	2
10042804-08A	TB-01-04/27/10	Aqueous	2

5/11/10
Report Date

Alpha Analytical, Inc.

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

Date: *05-May-10*

QC Summary Report

Work Order: 10042804

Method Blank

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

File ID: **45** Batch ID: **24070** Analysis Date: **04/28/2010 17:48**

Sample ID: **MB-24070** Units : **mg/L** Run ID: **IC_1_100428B** Prep Date: **04/28/2010 12:27**

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								
Sulfate (SO4)	ND	0.5								

Laboratory Fortified Blank

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

File ID: **46** Batch ID: **24070** Analysis Date: **04/28/2010 18:07**

Sample ID: **LFB-24070** Units : **mg/L** Run ID: **IC_1_100428B** Prep Date: **04/28/2010 12:27**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	54	0.5	50		108	90	110			
Nitrite (NO2) - N	4.94	0.25	5		99	90	110			
Nitrate (NO3) - N	5.37	0.25	5		107	90	110			
Sulfate (SO4)	108	0.5	100		108	90	110			

Sample Matrix Spike

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

File ID: **64** Batch ID: **24070** Analysis Date: **04/28/2010 23:40**

Sample ID: **10042803-01ALFM** Units : **mg/L** Run ID: **IC_1_100428B** Prep Date: **04/28/2010 12:27**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	177	0.5	100	80.2	97	80	120			
Nitrite (NO2) - N	10.3	0.25	10	0	103	80	120			
Nitrate (NO3) - N	11.6	0.25	10	1.111	105	80	120			
Sulfate (SO4)	158	0.5	200	50.01	54	80	120			M2

Sample Matrix Spike Duplicate

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

File ID: **65** Batch ID: **24070** Analysis Date: **04/28/2010 23:58**

Sample ID: **10042803-01ALFMD** Units : **mg/L** Run ID: **IC_1_100428B** Prep Date: **04/28/2010 12:27**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	176	0.5	100	80.2	96	80	120	177	0.3(15)	
Nitrite (NO2) - N	9.83	0.25	10	0	98	80	120	10.33	5.0(15)	
Nitrate (NO3) - N	11.4	0.25	10	1.111	103	80	120	11.63	1.8(15)	
Sulfate (SO4)	156	0.5	200	50.01	53	80	120	158	1.3(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.

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

Alpha Analytical, Inc.

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Date: *05-May-10*

QC Summary Report

Work Order: 10042804

Method Blank

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

File ID: **14** Batch ID: **24092** Analysis Date: **04/29/2010 14:11**

Sample ID: **MB-24092** Units : **µg/L** Run ID: **IC_3_100429A** Prep Date: **04/29/2010 12:33**

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: **24092** Analysis Date: **04/29/2010 14:51**

Sample ID: **LFB-24092** Units : **µg/L** Run ID: **IC_3_100429A** Prep Date: **04/29/2010 12:33**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	22.4	2	25		89	85	115			

Sample Matrix Spike

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

File ID: **24** Batch ID: **24092** Analysis Date: **04/29/2010 17:18**

Sample ID: **10042923-03ALFM** Units : **µg/L** Run ID: **IC_3_100429A** Prep Date: **04/29/2010 12:33**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	28.8	2	25	3.205	102	80	120			

Sample Matrix Spike Duplicate

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

File ID: **25** Batch ID: **24092** Analysis Date: **04/29/2010 17:37**

Sample ID: **10042923-03ALFMD** Units : **µg/L** Run ID: **IC_3_100429A** Prep Date: **04/29/2010 12:33**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	30.6	2	25	3.205	110	80	120	28.79	6.1(15)	

Comments:

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Date: *05-May-10*

QC Summary Report

Work Order: 10042804

Laboratory Control Spike Type **LCS** Test Code: **SM2320B**

File ID: Batch ID: **W0428AL** Analysis Date: **04/28/2010 15:48**

Sample ID: **LCS-W0428AL** Units : **mg/L** Run ID: **WETLAB_100428B** Prep Date: **04/28/2010 15:48**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Alkalinity, Bicarbonate (As CaCO3)	254.9	10	250		102	80	120			
Alkalinity, Carbonate (As CaCO3)	254.9	10	250		102	80	120			
Alkalinity, Total (As CaCO3 at pH 4.5)	255	10	250		102	80	120			

Comments:

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Date: *06-May-10*

QC Summary Report

Work Order: 10042804

Method Blank

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

File ID: **042910.B\019SMPL.D** Batch ID: **24097K** Analysis Date: **04/30/2010 14:02**

Sample ID: **MB-24097** Units : **mg/L** Run ID: **ICP/MS_100430A** Prep Date: **04/30/2010 09:18**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sodium (Na)	ND	0.5								
Magnesium (Mg)	ND	0.5								
Potassium (K)	ND	0.5								
Calcium (Ca)	ND	0.5								
Chromium (Cr)	ND	0.005								
Iron (Fe)	ND	0.1								
Arsenic (As)	ND	0.002								
Lead (Pb)	ND	0.005								

Laboratory Control Spike

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

File ID: **042910.B\020_LCS.D** Batch ID: **24097K** Analysis Date: **04/30/2010 14:07**

Sample ID: **LCS-24097** Units : **mg/L** Run ID: **ICP/MS_100430A** Prep Date: **04/30/2010 09:18**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sodium (Na)	5	0.5	5		100	80	120			
Magnesium (Mg)	5.08	0.5	5		102	80	120			
Potassium (K)	4.55	0.5	5		91	80	120			
Calcium (Ca)	4.72	0.5	5		94	80	120			
Chromium (Cr)	0.0456	0.005	0.05		91	80	120			
Iron (Fe)	4.6	0.2	5		92	80	120			
Arsenic (As)	0.0496	0.002	0.05		99	80	120			
Lead (Pb)	0.0492	0.005	0.05		98	80	120			

Sample Matrix Spike

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

File ID: **042910.B\025SMPL.D** Batch ID: **24097K** Analysis Date: **04/30/2010 14:38**

Sample ID: **10042923-03AMS** Units : **mg/L** Run ID: **ICP/MS_100430A** Prep Date: **04/30/2010 09:18**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sodium (Na)	43.3	0.5	5	40.38	57	80	120			M3
Magnesium (Mg)	23.5	0.5	5	19.3	83	80	120			
Potassium (K)	6.66	0.5	5	2.17	90	80	120			
Calcium (Ca)	50.4	0.5	5	47	68	80	120			M3
Chromium (Cr)	0.0475	0.005	0.05	0	95	80	120			
Iron (Fe)	4.55	0.2	5	0.1482	88	80	120			
Arsenic (As)	0.0491	0.002	0.05	0	98	80	120			
Lead (Pb)	0.0481	0.005	0.05	0	96	80	120			

Sample Matrix Spike Duplicate

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

File ID: **042910.B\026SMPL.D** Batch ID: **24097K** Analysis Date: **04/30/2010 14:44**

Sample ID: **10042923-03AMSD** Units : **mg/L** Run ID: **ICP/MS_100430A** Prep Date: **04/30/2010 09:18**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sodium (Na)	31.2	0.5	5	40.38	-180	80	120	43.25	32.5(20)	M3 R58
Magnesium (Mg)	16.5	0.5	5	19.3	-57	80	120	23.45	35.0(20)	M2 R58
Potassium (K)	4.62	0.5	5	2.17	49	80	120	6.658	36.2(20)	M2 R58
Calcium (Ca)	34.4	0.5	5	47	-250	80	120	50.41	37.8(20)	M3 R58
Chromium (Cr)	0.0315	0.005	0.05	0	63	80	120	0.04754	40.6(20)	M2 R58
Iron (Fe)	2.94	0.2	5	0.1482	56	80	120	4.552	43.0(20)	M2 R58
Arsenic (As)	0.0351	0.002	0.05	0	70	80	120	0.04914	33.5(20)	M2 R58
Lead (Pb)	0.0338	0.005	0.05	0	68	80	120	0.04808	34.9(20)	M2 R58

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QC Summary Report

Work Order: 10042804

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.

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.

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

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Date: *05-May-10*

QC Summary Report

Work Order: 10042804

Laboratory Control Spike Type **LCS** Test Code: **EPA Method 150.2 / SM4500HB / SW9040C**

File ID: Batch ID: **W0428PH** Analysis Date: **04/28/2010 14:48**

Sample ID: **LCS-W0428PH** Units : **pH Units** Run ID: **WETLAB_100428A** Prep Date: **04/28/2010 14:48**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
pH	5	1.7	5		100	90	110			

Comments:

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Date: *05-May-10*

QC Summary Report

Work Order: 10042804

Method Blank

Type **MBLK** Test Code: **SM2540C**

File ID: Batch ID: **W0428DS** Analysis Date: **04/30/2010 00:00**

Sample ID: **MBLK-W0428DS** Units : **mg/L** Run ID: **WETLAB_100428G** Prep Date: **04/30/2010 00:00**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Solids, Total Dissolved (TDS)	ND	10								

Laboratory Control Spike

Type **LCS** Test Code: **SM2540C**

File ID: Batch ID: **W0428DS** Analysis Date: **04/30/2010 00:00**

Sample ID: **LCS-W0428DS** Units : **mg/L** Run ID: **WETLAB_100428G** Prep Date: **04/30/2010 00:00**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Solids, Total Dissolved (TDS)	102	10	100		102	80	120			

Comments:

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Date: *10-May-10*

QC Summary Report

Work Order: 10042804

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

File ID: **C:\HPCHEM\MS07\DATA\100429\10042913.D** Batch ID: **MS07W0429M** Analysis Date: **04/29/2010 17:34**

Sample ID: **MBLK MS07W0429M** Units : **µg/L** Run ID: **MSD_07_100429B** Prep Date: **04/29/2010 17:34**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	ND	0.5								
Chloromethane	ND	1								
Vinyl chloride	ND	0.5								
Chloroethane	ND	0.5								
Bromomethane	ND	1								
Trichlorofluoromethane	ND	0.5								
1,1-Dichloroethene	ND	0.5								
Dichloromethane	ND	1								
Freon-113	ND	0.5								
trans-1,2-Dichloroethene	ND	0.5								
Methyl tert-butyl ether (MTBE)	ND	0.5								
1,1-Dichloroethane	ND	0.5								
2-Butanone (MEK)	ND	10								
cis-1,2-Dichloroethene	ND	0.5								
Bromochloromethane	ND	0.5								
Chloroform	ND	0.5								
2,2-Dichloropropane	ND	0.5								
1,2-Dichloroethane	ND	0.5								
1,1,1-Trichloroethane	ND	0.5								
1,1-Dichloropropene	ND	0.5								
Carbon tetrachloride	ND	0.5								
Benzene	ND	0.5								
Dibromomethane	ND	0.5								
1,2-Dichloropropane	ND	0.5								
Trichloroethene	ND	0.5								
Bromodichloromethane	ND	0.5								
4-Methyl-2-pentanone (MIBK)	ND	2.5								
cis-1,3-Dichloropropene	ND	0.5								
trans-1,3-Dichloropropene	ND	0.5								
1,1,2-Trichloroethane	ND	0.5								
Toluene	ND	0.5								
1,3-Dichloropropane	ND	0.5								
Dibromochloromethane	ND	0.5								
1,2-Dibromoethane (EDB)	ND	1								
Tetrachloroethene	ND	0.5								
1,1,1,2-Tetrachloroethane	ND	0.5								
Chlorobenzene	ND	0.5								
Ethylbenzene	ND	0.5								
m,p-Xylene	ND	0.5								
Bromoform	ND	0.5								
Styrene	ND	0.5								
o-Xylene	ND	0.5								
1,1,2,2-Tetrachloroethane	ND	0.5								
1,2,3-Trichloropropane	ND	1								
Isopropylbenzene	ND	0.5								
Bromobenzene	ND	0.5								
n-Propylbenzene	ND	0.5								
4-Chlorotoluene	ND	0.5								
2-Chlorotoluene	ND	0.5								
1,3,5-Trimethylbenzene	ND	0.5								
tert-Butylbenzene	ND	0.5								
1,2,4-Trimethylbenzene	ND	0.5								
sec-Butylbenzene	ND	0.5								
1,3-Dichlorobenzene	ND	0.5								
1,4-Dichlorobenzene	ND	0.5								
4-Isopropyltoluene	ND	0.5								
1,2-Dichlorobenzene	ND	0.5								
n-Butylbenzene	ND	0.5								
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5								
1,2,4-Trichlorobenzene	ND	1								
Naphthalene	ND	1								
Hexachlorobutadiene	ND	1								
1,2,3-Trichlorobenzene	ND	1								
Surr: 1,2-Dichloroethane-d4	10.7		10		107	70	130			
Surr: Toluene-d8	9.54		10		95	70	130			

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Date: *10-May-10*

QC Summary Report

Work Order: 10042804

Surr: 4-Bromofluorobenzene	9.84		10	98	70	130			

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

File ID: **C:\HPCHEM\MS07\DATA\100429\10042910.D** Batch ID: **MS07W0429M** Analysis Date: **04/29/2010 16:27**

Sample ID: **LCS MS07W0429M** Units : **µg/L** Run ID: **MSD_07_100429B** Prep Date: **04/29/2010 16:27**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	5.31	1	10		53	70(70)	130			L50
Chloromethane	8.35	2	10		84	70	130			
Vinyl chloride	9.53	1	10		95	70	130			
Chloroethane	10.6	1	10		106	70	130			
Bromomethane	10.2	2	10		102	70	130			
Trichlorofluoromethane	9.27	1	10		93	70	130			
1,1-Dichloroethene	9.41	1	10		94	70	130			
Dichloromethane	9.64	2	10		96	70	130			
trans-1,2-Dichloroethene	10.4	1	10		104	70	130			
Methyl tert-butyl ether (MTBE)	9.91	0.5	10		99	70	130			
1,1-Dichloroethane	10.9	1	10		109	70	130			
cis-1,2-Dichloroethene	10.6	1	10		106	70	130			
Bromochloromethane	9.9	1	10		99	70	130			
Chloroform	10.5	1	10		105	70	130			
2,2-Dichloropropane	11.7	1	10		117	70	130			
1,2-Dichloroethane	11.1	1	10		111	70	130			
1,1,1-Trichloroethane	10.6	1	10		106	70	130			
1,1-Dichloropropene	11.3	1	10		113	70	130			
Carbon tetrachloride	10.4	1	10		104	70	130			
Benzene	10.6	0.5	10		106	70	130			
Dibromomethane	10.2	1	10		102	70	130			
1,2-Dichloropropane	11.6	1	10		116	70	130			
Trichloroethene	10.3	1	10		103	70	130			
Bromodichloromethane	10.8	1	10		108	70	130			
cis-1,3-Dichloropropene	10.9	1	10		109	70	130			
trans-1,3-Dichloropropene	11	1	10		110	70	130			
1,1,2-Trichloroethane	10.2	1	10		102	70	130			
Toluene	10.1	0.5	10		101	70	130			
1,3-Dichloropropane	10.3	1	10		103	70	130			
Dibromochloromethane	9.2	1	10		92	70	130			
1,2-Dibromoethane (EDB)	19.1	2	20		96	70	130			
Tetrachloroethene	9.63	1	10		96	70	130			
1,1,1,2-Tetrachloroethane	9.25	1	10		93	70	130			
Chlorobenzene	9.66	1	10		97	70	130			
Ethylbenzene	10.4	0.5	10		104	70	130			
m,p-Xylene	10.2	0.5	10		102	70	130			
Bromoform	8.8	1	10		88	70	130			
Styrene	10.5	1	10		105	70	130			
o-Xylene	10.6	0.5	10		106	70	130			
1,1,2,2-Tetrachloroethane	8.37	1	10		84	70	130			
1,2,3-Trichloropropane	19.1	2	20		96	70	130			
Isopropylbenzene	10.8	1	10		108	70	130			
Bromobenzene	9.24	1	10		92	70	130			
n-Propylbenzene	10	1	10		100	70	130			
4-Chlorotoluene	10	1	10		100	70	130			
2-Chlorotoluene	10.3	1	10		103	70	130			
1,3,5-Trimethylbenzene	10.2	1	10		102	70	130			
tert-Butylbenzene	10.1	1	10		101	70	130			
1,2,4-Trimethylbenzene	9.89	1	10		99	70	130			
sec-Butylbenzene	10.1	1	10		101	70	130			
1,3-Dichlorobenzene	8.95	1	10		90	70	130			
1,4-Dichlorobenzene	9.03	1	10		90	70	130			
4-Isopropyltoluene	10.4	1	10		104	70	130			
1,2-Dichlorobenzene	8.51	1	10		85	70	130			
n-Butylbenzene	11.3	1	10		113	70	130			
1,2-Dibromo-3-chloropropane (DBCP)	38.6	3	50		77	70	130			
1,2,4-Trichlorobenzene	8.76	2	10		88	70	130			
Naphthalene	8.87	2	10		89	70	130			
Hexachlorobutadiene	19.4	2	20		97	70	130			
1,2,3-Trichlorobenzene	8.52	2	10		85	70	130			
Surr: 1,2-Dichloroethane-d4	10.8		10		108	70	130			
Surr: Toluene-d8	9.53		10		95	70	130			
Surr: 4-Bromofluorobenzene	9.72		10		97	70	130			

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Date: *10-May-10*

QC Summary Report

Work Order: 10042804

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

File ID: **C:\HPCHEM\MS07\DATA\100429\10042914.D** Batch ID: **MS07W0429M** Analysis Date: **04/29/2010 17:56**

Sample ID: **10042304-03AMS** Units : **µg/L** Run ID: **MSD_07_100429B** Prep Date: **04/29/2010 17:56**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	47.2	2.5	50	0	94	13	167			
Chloromethane	57.2	10	50	0	114	28	145			
Vinyl chloride	59.5	2.5	50	0	119	43	134			
Chloroethane	58.3	2.5	50	0	117	39	154			
Bromomethane	64.5	10	50	0	129	19	176			
Trichlorofluoromethane	49.7	2.5	50	0	99	34	160			
1,1-Dichloroethene	49.6	2.5	50	0	99	60	130			
Dichloromethane	50.1	10	50	0	100	68	130			
trans-1,2-Dichloroethene	51.8	2.5	50	0	104	63	130			
Methyl tert-butyl ether (MTBE)	49.4	1.3	50	0	99	56	141			
1,1-Dichloroethane	53.6	2.5	50	0	107	61	130			
cis-1,2-Dichloroethene	51.9	2.5	50	0	104	70	130			
Bromochloromethane	48.3	2.5	50	0	97	70	130			
Chloroform	50.5	2.5	50	0	101	67	130			
2,2-Dichloropropane	58.2	2.5	50	0	116	30	152			
1,2-Dichloroethane	54.4	2.5	50	0.51	108	60	135			
1,1,1-Trichloroethane	51.8	2.5	50	0	104	59	137			
1,1-Dichloropropene	54.4	2.5	50	0	109	63	130			
Carbon tetrachloride	51.2	2.5	50	0	102	50	147			
Benzene	52	1.3	50	0	104	67	130			
Dibromomethane	49.9	2.5	50	0	99.8	69	133			
1,2-Dichloropropane	55.3	2.5	50	0	111	69	130			
Trichloroethene	50.4	2.5	50	0	101	69	130			
Bromodichloromethane	52.1	2.5	50	0	104	66	134			
cis-1,3-Dichloropropene	50	2.5	50	0	99.9	63	130			
trans-1,3-Dichloropropene	52.7	2.5	50	0	105	66	131			
1,1,2-Trichloroethane	48.3	2.5	50	0	97	68	130			
Toluene	48.7	1.3	50	0	97	66	130			
1,3-Dichloropropane	48.9	2.5	50	0	98	70	130			
Dibromochloromethane	44	2.5	50	0	88	70	130			
1,2-Dibromoethane (EDB)	91.1	5	100	0	91	70	130			
Tetrachloroethene	47.2	2.5	50	0	94	61	134			
1,1,1,2-Tetrachloroethane	45	2.5	50	0	90	70	130			
Chlorobenzene	46.5	2.5	50	0	93	70	130			
Ethylbenzene	50.1	1.3	50	0	100	68	130			
m,p-Xylene	49.3	1.3	50	0	99	64	130			
Bromoform	43.4	2.5	50	0	87	64	138			
Styrene	50.6	2.5	50	0	101	69	130			
o-Xylene	50.9	1.3	50	0	102	70	130			
1,1,2,2-Tetrachloroethane	42.5	2.5	50	0	85	65	131			
1,2,3-Trichloropropane	104	10	100	0	104	70	130			
Isopropylbenzene	50.9	2.5	50	0	102	64	138			
Bromobenzene	43.9	2.5	50	0	88	70	130			
n-Propylbenzene	47.7	2.5	50	0	95	66	132			
4-Chlorotoluene	47.4	2.5	50	0	95	70	130			
2-Chlorotoluene	48.6	2.5	50	0	97	70	130			
1,3,5-Trimethylbenzene	48.3	2.5	50	0	97	66	136			
tert-Butylbenzene	48.2	2.5	50	0	96	65	137			
1,2,4-Trimethylbenzene	47.7	2.5	50	0	95	65	137			
sec-Butylbenzene	47.5	2.5	50	0	95	66	134			
1,3-Dichlorobenzene	43	2.5	50	0	86	70	130			
1,4-Dichlorobenzene	43.3	2.5	50	0	87	70	130			
4-Isopropyltoluene	49.1	2.5	50	0	98	66	137			
1,2-Dichlorobenzene	40.8	2.5	50	0	82	70	130			
n-Butylbenzene	54	2.5	50	0	108	60	142			
1,2-Dibromo-3-chloropropane (DBCP)	190	15	250	0	76	67	130			
1,2,4-Trichlorobenzene	42.4	10	50	0	85	61	137			
Naphthalene	43.6	10	50	0	87	40	167			
Hexachlorobutadiene	92.2	10	100	0	92	61	130			
1,2,3-Trichlorobenzene	41.3	10	50	0	83	51	144			
Surr: 1,2-Dichloroethane-d4	53.6		50		107	70	130			
Surr: Toluene-d8	47.2		50		94	70	130			
Surr: 4-Bromofluorobenzene	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: *10-May-10*

QC Summary Report

Work Order: 10042804

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

File ID: **C:\HPCHEM\MS07\DATA\100429\10042915.D** Batch ID: **MS07W0429M** Analysis Date: **04/29/2010 18:19**

Sample ID: **10042304-03AMSD** Units : **µg/L** Run ID: **MSD_07_100429B** Prep Date: **04/29/2010 18:19**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	47.8	2.5	50	0	96	13	167	47.24	1.2(20)	
Chloromethane	58.8	10	50	0	118	28	145	57.23	2.7(20)	
Vinyl chloride	61.2	2.5	50	0	122	43	134	59.52	2.8(20)	
Chloroethane	60.9	2.5	50	0	122	39	154	58.26	4.4(20)	
Bromomethane	70.8	10	50	0	142	19	176	64.51	9.3(20)	
Trichlorofluoromethane	50.1	2.5	50	0	100	34	160	49.74	0.7(20)	
1,1-Dichloroethene	51.3	2.5	50	0	103	60	130	49.55	3.4(20)	
Dichloromethane	49.9	10	50	0	99.8	68	130	50.12	0.5(20)	
trans-1,2-Dichloroethene	52.9	2.5	50	0	106	63	130	51.8	2.2(20)	
Methyl tert-butyl ether (MTBE)	50.8	1.3	50	0	102	56	141	49.4	2.8(20)	
1,1-Dichloroethane	54.4	2.5	50	0	109	61	130	53.56	1.5(20)	
cis-1,2-Dichloroethene	53.2	2.5	50	0	106	70	130	51.91	2.4(20)	
Bromochloromethane	48.8	2.5	50	0	98	70	130	48.28	1.1(20)	
Chloroform	50.8	2.5	50	0	102	67	130	50.49	0.6(20)	
2,2-Dichloropropane	58.5	2.5	50	0	117	30	152	58.24	0.4(20)	
1,2-Dichloroethane	54.4	2.5	50	0.51	108	60	135	54.37	0.1(20)	
1,1,1-Trichloroethane	52	2.5	50	0	104	59	137	51.83	0.4(20)	
1,1-Dichloropropene	54.9	2.5	50	0	110	63	130	54.35	1.0(20)	
Carbon tetrachloride	51	2.5	50	0	102	50	147	51.22	0.5(20)	
Benzene	52.4	1.3	50	0	105	67	130	51.95	0.8(20)	
Dibromomethane	49.8	2.5	50	0	99.7	69	133	49.92	0.2(20)	
1,2-Dichloropropane	56	2.5	50	0	112	69	130	55.26	1.3(20)	
Trichloroethene	50.4	2.5	50	0	101	69	130	50.4	0.0(20)	
Bromodichloromethane	51.8	2.5	50	0	104	66	134	52.11	0.6(20)	
cis-1,3-Dichloropropene	49.5	2.5	50	0	99	63	130	49.95	0.9(20)	
trans-1,3-Dichloropropene	53	2.5	50	0	106	66	131	52.68	0.5(20)	
1,1,2-Trichloroethane	48.4	2.5	50	0	97	68	130	48.27	0.3(20)	
Toluene	49.1	1.3	50	0	98	66	130	48.68	0.8(20)	
1,3-Dichloropropane	49.6	2.5	50	0	99	70	130	48.86	1.5(20)	
Dibromochloromethane	43.9	2.5	50	0	88	70	130	44	0.2(20)	
1,2-Dibromoethane (EDB)	91.8	5	100	0	92	70	130	91.13	0.7(20)	
Tetrachloroethene	47.4	2.5	50	0	95	61	134	47.23	0.3(20)	
1,1,1,2-Tetrachloroethane	44.9	2.5	50	0	90	70	130	44.98	0.2(20)	
Chlorobenzene	46.8	2.5	50	0	94	70	130	46.46	0.8(20)	
Ethylbenzene	50.2	1.3	50	0	100	68	130	50.1	0.2(20)	
m,p-Xylene	49.1	1.3	50	0	98	64	130	49.26	0.4(20)	
Bromoform	43.5	2.5	50	0	87	64	138	43.41	0.3(20)	
Styrene	50.5	2.5	50	0	101	69	130	50.57	0.2(20)	
o-Xylene	51	1.3	50	0	102	70	130	50.85	0.4(20)	
1,1,2,2-Tetrachloroethane	42.3	2.5	50	0	85	65	131	42.52	0.6(20)	
1,2,3-Trichloropropane	93.5	10	100	0	93	70	130	104.5	11.1(20)	
Isopropylbenzene	51.5	2.5	50	0	103	64	138	50.93	1.0(20)	
Bromobenzene	43.9	2.5	50	0	88	70	130	43.87	0.1(20)	
n-Propylbenzene	48.3	2.5	50	0	97	66	132	47.67	1.3(20)	
4-Chlorotoluene	48.4	2.5	50	0	97	70	130	47.4	2.0(20)	
2-Chlorotoluene	49.1	2.5	50	0	98	70	130	48.57	1.2(20)	
1,3,5-Trimethylbenzene	48.7	2.5	50	0	97	66	136	48.32	0.9(20)	
tert-Butylbenzene	48.9	2.5	50	0	98	65	137	48.16	1.5(20)	
1,2,4-Trimethylbenzene	48	2.5	50	0	96	65	137	47.65	0.7(20)	
sec-Butylbenzene	48	2.5	50	0	96	66	134	47.5	0.9(20)	
1,3-Dichlorobenzene	43.6	2.5	50	0	87	70	130	43.02	1.2(20)	
1,4-Dichlorobenzene	43.6	2.5	50	0	87	70	130	43.28	0.7(20)	
4-Isopropyltoluene	50.5	2.5	50	0	101	66	137	49.05	2.8(20)	
1,2-Dichlorobenzene	41.1	2.5	50	0	82	70	130	40.82	0.8(20)	
n-Butylbenzene	54.7	2.5	50	0	109	60	142	53.99	1.3(20)	
1,2-Dibromo-3-chloropropane (DBCP)	192	15	250	0	77	67	130	190.4	0.7(20)	
1,2,4-Trichlorobenzene	43.9	10	50	0	88	61	137	42.39	3.5(20)	
Naphthalene	45.3	10	50	0	91	40	167	43.59	3.9(20)	
Hexachlorobutadiene	94.7	10	100	0	95	61	130	92.22	2.7(20)	
1,2,3-Trichlorobenzene	42.5	10	50	0	85	51	144	41.29	2.8(20)	
Surr: 1,2-Dichloroethane-d4	53.8		50		108	70	130			
Surr: Toluene-d8	47.6		50		95	70	130			
Surr: 4-Bromofluorobenzene	47.6		50		95	70	130			

Alpha Analytical, Inc.

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

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

Date: *10-May-10*

QC Summary Report

Work Order: 10042804

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.

AMENDED

Billing Information :

CHAIN-OF-CUSTODY RECORD

CA

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

WorkOrder : BMIS10042804

Report Due By : 5:00 PM On : 12-May-2010

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

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

EDD Required : **Yes**

Sampled by : Chase Brogdon

PO : 218013

Client's COC # : 28926 Job : G005862/JPL Groundwater Monitoring

Cooler Temp	Samples Received	Date Printed
4 °C	28-Apr-2010	03-May-2010

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

Alpha Sample ID	Client Sample ID	Matrix	Collection Date	No. of Bottles Alpha	Sub	TAT	Requested Tests 300_0_W	314_W	ALKALINITY_W	METALS_DW	PH_W	TDS_W	VOC_TIC_W	VOC_W	Sample Remarks
BMI10042804-01A	MW-14-5	AQ	04/27/10 08:48	5	0	10	NO2, NO3, SO4, Cl	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10042804-02A	MW-14-4	AQ	04/27/10 09:24	5	0	10	NO2, NO3, SO4, Cl	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10042804-03A	MW-14-3	AQ	04/27/10 10:00	5	0	10	NO2, NO3, SO4, Cl	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10042804-04A	MW-14-2	AQ	04/27/10 11:08	5	0	10	NO2, NO3, SO4, Cl	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10042804-05A	MW-14-1	AQ	04/27/10 11:43	5	0	10	NO2, NO3, SO4, Cl	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10042804-06A	DUPE-01-2Q10	AQ	04/27/10 00:00	5	0	10	NO2, NO3, SO4, Cl	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10042804-07A	EB-01-04/27/10	AQ	04/27/10 11:26	5	0	10	NO2, NO3, SO4, Cl	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10042804-08A	TB-01-04/27/10	AQ	04/27/10 07:00	1	0	10							VOC by 524 Criteria	VOC by 524 Criteria	Reno Trip Blank 8/25/09

Comments: No security seals. Frozen ice. Temp Blank #7708 received @ 4°C. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). Amended 5/3/10 @ 8:21: Per email from David Conner added PO# 218013. EA :

	Signature	Print Name	Company	Date/Time
Logged in by:	Elizabeth Adcox	Elizabeth Adcox	**Alpha Analytical, Inc.**	5.3.10 8:27

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 : BMIS10042804

Report Due By : 5:00 PM On : 12-May-2010

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

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

EDD Required : **Yes**

Sampled by : Chase Brogdon

PO :

Client's COC # : 28926 Job : G005862/JPL Groundwater Monitoring

Cooler Temp	Samples Received	Date Printed
4 °C	28-Apr-2010	28-Apr-2010

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

Alpha Sample ID	Client Sample ID	Matrix	Collection Date	No. of Bottles Alpha	Sub	TAT	Requested Tests 300_0_W	314_W	ALKALINITY_W	METALS_DW	PH_W	TDS_W	VOC_TIC_W	VOC_W	Sample Remarks
BMI10042804-01A	MW-14-5	AQ	04/27/10 08:48	5	0	10	NO2, NO3, SO4, Cl	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10042804-02A	MW-14-4	AQ	04/27/10 09:24	5	0	10	NO2, NO3, SO4, Cl	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10042804-03A	MW-14-3	AQ	04/27/10 10:00	5	0	10	NO2, NO3, SO4, Cl	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10042804-04A	MW-14-2	AQ	04/27/10 11:08	5	0	10	NO2, NO3, SO4, Cl	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10042804-05A	MW-14-1	AQ	04/27/10 11:43	5	0	10	NO2, NO3, SO4, Cl	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10042804-06A	DUPE-01-2Q10	AQ	04/27/10 00:00	5	0	10	NO2, NO3, SO4, Cl	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10042804-07A	EB-01-04/27/10	AQ	04/27/10 11:26	5	0	10	NO2, NO3, SO4, Cl	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10042804-08A	TB-01-04/27/10	AQ	04/27/10 07:00	1	0	10							VOC by 524 Criteria	VOC by 524 Criteria	Reno Trip Blank 8/25/09

Comments: No security seals. Frozen ice. Temp Blank #7708 received @ 4°C. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). :

	Signature	Print Name	Company	Date/Time
Logged in by:	Elizabeth Adcox	Elizabeth Adcox	**Alpha Analytical, Inc.**	4.28.10 1202

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

Billing Information:

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

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

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

28926

Page # 1 of 1

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

Analyses Required: VOC (524.2); TOTAL CR, LEAD ARSENIC (200.8); GEN CHEM (NO3, N, Ca, Mg, FE) (200.7); ClO4 - (314.0); GEN CHEM (300.0, 310.1, 160.1, 150.1)

Required QC Level? I II (III) IV

EDD / EDF? YES ___ NO ___

Global ID # _____

Time Sampled	Date Sampled	Matrix* See Key Below	Sampled by CHASE BRADSON / Lab ID Number (Office Use Only)	Report Attention / Sample Description	TAT	Field Filtered	Total and type of containers ** See below	VOC	TOTAL CR, LEAD	ARSENIC	GEN CHEM	ClO4 -	GEN CHEM			REMARKS
0848	4/27/10	AQ	BMI/004280 4-01	MW-14-5	NORM		5	X	X	X	X	X	X			
0924			-02	MW-14-4			5	X	X	X	X	X	X			
1000			-03	MW-14-3			5	X	X	X	X	X	X			
1108			-04	MW-14-2			5	X	X	X	X	X	X			
1143			-05	MW-14-1			5	X	X	X	X	X	X			
—			-06	DUPE-01-2Q10			5	X	X	X	X	X	X			DUPLICATE
1126			-07	EB-01-04/27/10			5	X	X	X	X	X	X			EQUIPMENT BLANK
0700			-08	TB-01-04/27/10			1	X								TRIP BLANK

ADDITIONAL INSTRUCTIONS:

	Signature	Print Name	Company	Date	Time
Relinquished by	[signature]	CHASE BRADSON	INSIGHT ENG.	4-27-10	1300
Received by	Elizabeth Adcox	Elizabeth Adcox	Alpha	4.28.10	1202
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: *11-May-10*

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

CASE NARRATIVE

Job: G005862/JPL Groundwater Monitoring
Work Order: BMI10042923 **Cooler Temp:** 4 °C

Alpha's Sample ID	Client's Sample ID	Matrix
10042923-01A	MW-22-5	Aqueous
10042923-02A	MW-22-4	Aqueous
10042923-03A	MW-22-3	Aqueous
10042923-04A	MW-22-2	Aqueous
10042923-05A	MW-22-1	Aqueous
10042923-06A	EB-02-04/28/10	Aqueous
10042923-07A	TB-02-04/28/10	Aqueous

Manually Integrated Analytes

Alpha's Sample ID	Test Reference	Analyte
NONE		

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

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

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

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 04/29/10

Job: G005862/JPL Groundwater Monitoring

Anions by IC
EPA Method 300.0

Parameter		Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-22-5**					
Lab ID : BMI10042923-01A	Chloride	7.0	0.50 mg/L	04/29/10 12:42	04/29/10 14:45
Date Sampled 04/28/10 08:03	Nitrite (NO2) - N	ND	0.25 mg/L	04/29/10 12:42	04/29/10 14:45
	Nitrate (NO3) - N	ND	0.25 mg/L	04/29/10 12:42	04/29/10 14:45
	Sulfate (SO4)	18	0.50 mg/L	04/29/10 12:42	04/29/10 14:45
Client ID: **MW-22-4**					
Lab ID : BMI10042923-02A	Chloride	14	0.50 mg/L	04/29/10 12:42	04/29/10 15:04
Date Sampled 04/28/10 08:42	Nitrite (NO2) - N	ND	0.25 mg/L	04/29/10 12:42	04/29/10 15:04
	Nitrate (NO3) - N	3.2	0.25 mg/L	04/29/10 12:42	04/29/10 15:04
	Sulfate (SO4)	18	0.50 mg/L	04/29/10 12:42	04/29/10 15:04
Client ID: **MW-22-3**					
Lab ID : BMI10042923-03A	Chloride	46	0.50 mg/L	04/29/10 12:42	04/29/10 15:22
Date Sampled 04/28/10 09:19	Nitrite (NO2) - N	ND	0.25 mg/L	04/29/10 12:42	04/29/10 15:22
	Nitrate (NO3) - N	7.3	0.25 mg/L	04/29/10 12:42	04/29/10 15:22
	Sulfate (SO4)	53	0.50 mg/L	04/29/10 12:42	04/29/10 15:22
Client ID: **MW-22-2**					
Lab ID : BMI10042923-04A	Chloride	48	0.50 mg/L	04/29/10 12:42	04/29/10 16:18
Date Sampled 04/28/10 10:20	Nitrite (NO2) - N	ND	0.25 mg/L	04/29/10 12:42	04/29/10 16:18
	Nitrate (NO3) - N	7.5	0.25 mg/L	04/29/10 12:42	04/29/10 16:18
	Sulfate (SO4)	44	0.50 mg/L	04/29/10 12:42	04/29/10 16:18
Client ID: **MW-22-1**					
Lab ID : BMI10042923-05A	Chloride	120	50 mg/L	04/29/10 12:42	04/29/10 16:37
Date Sampled 04/28/10 11:00	Nitrite (NO2) - N	ND	0.25 mg/L	04/29/10 12:42	04/29/10 16:37
	Nitrate (NO3) - N	13	0.25 mg/L	04/29/10 12:42	04/29/10 16:37
	Sulfate (SO4)	160	75 mg/L	04/29/10 12:42	04/29/10 16:37
Client ID: **EB-02-04/28/10**					
Lab ID : BMI10042923-06A	Chloride	ND	0.50 mg/L	04/29/10 12:42	04/29/10 16:55
Date Sampled 04/28/10 10:41	Nitrite (NO2) - N	ND	0.25 mg/L	04/29/10 12:42	04/29/10 16:55
	Nitrate (NO3) - N	ND	0.25 mg/L	04/29/10 12:42	04/29/10 16:55
	Sulfate (SO4)	ND	0.50 mg/L	04/29/10 12:42	04/29/10 16:55

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

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5/12/10

Report Date

Alpha Analytical, Inc.

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ANALYTICAL REPORT

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 04/29/10

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 : BMI10042923-01A Perchlorate	ND	1.00 µg/L	04/29/10 12:33	04/29/10 16:23
Date Sampled 04/28/10 08:03				
Client ID: **MW-22-4**				
Lab ID : BMI10042923-02A Perchlorate	ND	1.00 µg/L	04/29/10 12:33	04/29/10 16:42
Date Sampled 04/28/10 08:42				
Client ID: **MW-22-3**				
Lab ID : BMI10042923-03A Perchlorate	3.21	1.00 µg/L	04/29/10 12:33	04/29/10 17:00
Date Sampled 04/28/10 09:19				
Client ID: **MW-22-2**				
Lab ID : BMI10042923-04A Perchlorate	2.72	1.00 µg/L	04/29/10 12:33	04/29/10 17:55
Date Sampled 04/28/10 10:20				
Client ID: **MW-22-1**				
Lab ID : BMI10042923-05A Perchlorate	2.73	1.00 µg/L	04/29/10 12:33	04/29/10 18:14
Date Sampled 04/28/10 11:00				
Client ID: **EB-02-04/28/10**				
Lab ID : BMI10042923-06A Perchlorate	ND	1.00 µg/L	04/29/10 12:33	04/29/10 18:32
Date Sampled 04/28/10 10:41				

ND = Not Detected

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5/12/10
Report Date

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ANALYTICAL REPORT

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 04/29/10

Job: G005862/JPL Groundwater Monitoring

Alkalinity
SM2320B

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-22-5**				
Lab ID : BMI10042923-01A Alkalinity, Bicarbonate (As CaCO3)	ND	10 mg/L	04/30/10 11:02	04/30/10 11:02
Date Sampled 04/28/10 08:03 Alkalinity, Carbonate (As CaCO3)	140	10 mg/L	04/30/10 11:02	04/30/10 11:02
Alkalinity, Total (As CaCO3 at pH 4.5)	140	10 mg/L	04/30/10 11:02	04/30/10 11:02
Client ID: **MW-22-4**				
Lab ID : BMI10042923-02A Alkalinity, Bicarbonate (As CaCO3)	180	10 mg/L	04/30/10 11:06	04/30/10 11:06
Date Sampled 04/28/10 08:42 Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	04/30/10 11:06	04/30/10 11:06
Alkalinity, Total (As CaCO3 at pH 4.5)	180	10 mg/L	04/30/10 11:06	04/30/10 11:06
Client ID: **MW-22-3**				
Lab ID : BMI10042923-03A Alkalinity, Bicarbonate (As CaCO3)	170	10 mg/L	04/30/10 11:11	04/30/10 11:11
Date Sampled 04/28/10 09:19 Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	04/30/10 11:11	04/30/10 11:11
Alkalinity, Total (As CaCO3 at pH 4.5)	170	10 mg/L	04/30/10 11:11	04/30/10 11:11
Client ID: **MW-22-2**				
Lab ID : BMI10042923-04A Alkalinity, Bicarbonate (As CaCO3)	170	10 mg/L	04/30/10 11:16	04/30/10 11:16
Date Sampled 04/28/10 10:20 Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	04/30/10 11:16	04/30/10 11:16
Alkalinity, Total (As CaCO3 at pH 4.5)	170	10 mg/L	04/30/10 11:16	04/30/10 11:16
Client ID: **MW-22-1**				
Lab ID : BMI10042923-05A Alkalinity, Bicarbonate (As CaCO3)	290	10 mg/L	04/30/10 11:21	04/30/10 11:21
Date Sampled 04/28/10 11:00 Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	04/30/10 11:21	04/30/10 11:21
Alkalinity, Total (As CaCO3 at pH 4.5)	290	10 mg/L	04/30/10 11:21	04/30/10 11:21
Client ID: **EB-02-04/28/10**				
Lab ID : BMI10042923-06A Alkalinity, Bicarbonate (As CaCO3)	ND	10 mg/L	04/30/10 11:24	04/30/10 11:24
Date Sampled 04/28/10 10:41 Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	04/30/10 11:24	04/30/10 11:24
Alkalinity, Total (As CaCO3 at pH 4.5)	ND	10 mg/L	04/30/10 11:24	04/30/10 11:24

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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Report Date

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ANALYTICAL REPORT

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 04/29/10

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 : BMI10042923-01A	Sodium (Na)	72	0.50 mg/L	04/30/10 09:18	04/30/10 15:01
Date Sampled 04/28/10 08:03	Magnesium (Mg)	ND	0.50 mg/L	04/30/10 09:18	04/30/10 15:01
	Potassium (K)	0.77	0.50 mg/L	04/30/10 09:18	04/30/10 15:01
	Calcium (Ca)	2.7	0.50 mg/L	04/30/10 09:18	04/30/10 15:01
	Chromium (Cr)	ND	0.0050 mg/L	04/30/10 09:18	04/30/10 15:01
	Iron (Fe)	ND	0.10 mg/L	04/30/10 09:18	04/30/10 15:01
	Arsenic (As)	ND	0.0020 mg/L	04/30/10 09:18	04/30/10 15:01
	Lead (Pb)	ND	0.0050 mg/L	04/30/10 09:18	04/30/10 15:01
Client ID: **MW-22-4**					
Lab ID : BMI10042923-02A	Sodium (Na)	25	0.50 mg/L	04/30/10 09:18	04/30/10 15:07
Date Sampled 04/28/10 08:42	Magnesium (Mg)	10	0.50 mg/L	04/30/10 09:18	04/30/10 15:07
	Potassium (K)	1.4	0.50 mg/L	04/30/10 09:18	04/30/10 15:07
	Calcium (Ca)	35	0.50 mg/L	04/30/10 09:18	04/30/10 15:07
	Chromium (Cr)	ND	0.0050 mg/L	04/30/10 09:18	04/30/10 15:07
	Iron (Fe)	0.34	0.10 mg/L	04/30/10 09:18	04/30/10 15:07
	Arsenic (As)	ND	0.0020 mg/L	04/30/10 09:18	04/30/10 15:07
	Lead (Pb)	ND	0.0050 mg/L	04/30/10 09:18	04/30/10 15:07
Client ID: **MW-22-3**					
Lab ID : BMI10042923-03A	Sodium (Na)	40	0.50 mg/L	04/30/10 09:18	04/30/10 14:33
Date Sampled 04/28/10 09:19	Magnesium (Mg)	19	0.50 mg/L	04/30/10 09:18	04/30/10 14:33
	Potassium (K)	2.2	0.50 mg/L	04/30/10 09:18	04/30/10 14:33
	Calcium (Ca)	47	0.50 mg/L	04/30/10 09:18	04/30/10 14:33
	Chromium (Cr)	ND	0.0050 mg/L	04/30/10 09:18	04/30/10 14:33
	Iron (Fe)	0.15	0.10 mg/L	04/30/10 09:18	04/30/10 14:33
	Arsenic (As)	ND	0.0020 mg/L	04/30/10 09:18	04/30/10 14:33
	Lead (Pb)	ND	0.0050 mg/L	04/30/10 09:18	04/30/10 14:33
Client ID: **MW-22-2**					
Lab ID : BMI10042923-04A	Sodium (Na)	28	0.50 mg/L	04/30/10 09:18	04/30/10 15:13
Date Sampled 04/28/10 10:20	Magnesium (Mg)	19	0.50 mg/L	04/30/10 09:18	04/30/10 15:13
	Potassium (K)	1.8	0.50 mg/L	04/30/10 09:18	04/30/10 15:13
	Calcium (Ca)	43	0.50 mg/L	04/30/10 09:18	04/30/10 15:13
	Chromium (Cr)	ND	0.0050 mg/L	04/30/10 09:18	04/30/10 15:13
	Iron (Fe)	0.13	0.10 mg/L	04/30/10 09:18	04/30/10 15:13
	Arsenic (As)	ND	0.0020 mg/L	04/30/10 09:18	04/30/10 15:13
	Lead (Pb)	ND	0.0050 mg/L	04/30/10 09:18	04/30/10 15:13

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Client ID: **MW-22-1**					
Lab ID : BMI10042923-05A	Sodium (Na)	30	0.50 mg/L	04/30/10 09:18	04/30/10 15:18
Date Sampled 04/28/10 11:00	Magnesium (Mg)	43	0.50 mg/L	04/30/10 09:18	04/30/10 15:18
	Potassium (K)	2.5	0.50 mg/L	04/30/10 09:18	04/30/10 15:18
	Calcium (Ca)	130	0.50 mg/L	04/30/10 09:18	04/30/10 15:18
	Chromium (Cr)	ND	0.0050 mg/L	04/30/10 09:18	04/30/10 15:18
	Iron (Fe)	0.43	0.10 mg/L	04/30/10 09:18	04/30/10 15:18
	Arsenic (As)	ND	0.0020 mg/L	04/30/10 09:18	04/30/10 15:18
	Lead (Pb)	ND	0.0050 mg/L	04/30/10 09:18	04/30/10 15:18
Client ID: **EB-02-04/28/10**					
Lab ID : BMI10042923-06A	Sodium (Na)	ND	0.50 mg/L	04/30/10 09:18	04/30/10 15:24
Date Sampled 04/28/10 10:41	Magnesium (Mg)	ND	0.50 mg/L	04/30/10 09:18	04/30/10 15:24
	Potassium (K)	ND	0.50 mg/L	04/30/10 09:18	04/30/10 15:24
	Calcium (Ca)	ND	0.50 mg/L	04/30/10 09:18	04/30/10 15:24
	Chromium (Cr)	ND	0.0050 mg/L	04/30/10 09:18	04/30/10 15:24
	Iron (Fe)	ND	0.10 mg/L	04/30/10 09:18	04/30/10 15:24
	Arsenic (As)	ND	0.0020 mg/L	04/30/10 09:18	04/30/10 15:24
	Lead (Pb)	ND	0.0050 mg/L	04/30/10 09:18	04/30/10 15:24

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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5/12/10

Report Date

Alpha Analytical, Inc.

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ANALYTICAL REPORT

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 04/29/10

Job: G005862/JPL Groundwater Monitoring

pH (Range 1.7 to 12.4)
EPA Method 150.2 / SM4500HB / SW9040C

	Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-22-5**					
Lab ID : BMI10042923-01A	pH	9.9	1.7 pH Units	04/29/10 15:49	04/29/10 15:49
Date Sampled 04/28/10 08:03	pH - Temperature	19	1.0 °C	04/29/10 15:49	04/29/10 15:49
Client ID: **MW-22-4**					
Lab ID : BMI10042923-02A	pH	7.9	1.7 pH Units	04/29/10 15:47	04/29/10 15:47
Date Sampled 04/28/10 08:42	pH - Temperature	17	1.0 °C	04/29/10 15:47	04/29/10 15:47
Client ID: **MW-22-3**					
Lab ID : BMI10042923-03A	pH	8.0	1.7 pH Units	04/29/10 15:50	04/29/10 15:50
Date Sampled 04/28/10 09:19	pH - Temperature	17	1.0 °C	04/29/10 15:50	04/29/10 15:50
Client ID: **MW-22-2**					
Lab ID : BMI10042923-04A	pH	8.1	1.7 pH Units	04/29/10 15:53	04/29/10 15:53
Date Sampled 04/28/10 10:20	pH - Temperature	17	1.0 °C	04/29/10 15:53	04/29/10 15:53
Client ID: **MW-22-1**					
Lab ID : BMI10042923-05A	pH	7.4	1.7 pH Units	04/29/10 15:55	04/29/10 15:55
Date Sampled 04/28/10 11:00	pH - Temperature	18	1.0 °C	04/29/10 15:55	04/29/10 15:55
Client ID: **EB-02-04/28/10**					
Lab ID : BMI10042923-06A	pH	6.4	1.7 pH Units	04/29/10 16:04	04/29/10 16:04
Date Sampled 04/28/10 10:41	pH - Temperature	19	1.0 °C	04/29/10 16:04	04/29/10 16:04

The EPA has established an analytical holding time of 15 minutes for this method as documented in the Methods Update Rule, Federal Register, Vol 72, No 47, March 2007. This holding time will always be exceeded, unless samples are analyzed in the field.
The laboratory performed this analysis in the shortest practical holding time after sample receipt.

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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5/12/10
Report Date

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ANALYTICAL REPORT

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 04/29/10

Job: G005862/JPL Groundwater Monitoring

Total Dissolved Solids (TDS)
SM2540C

Parameter		Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-22-5**					
Lab ID : BMI10042923-01A	Solids, Total Dissolved (TDS)	120	10 mg/L	04/30/10	04/30/10
Date Sampled 04/28/10 08:03					
Client ID: **MW-22-4**					
Lab ID : BMI10042923-02A	Solids, Total Dissolved (TDS)	180	10 mg/L	05/03/10	05/03/10
Date Sampled 04/28/10 08:42					
Client ID: **MW-22-3**					
Lab ID : BMI10042923-03A	Solids, Total Dissolved (TDS)	260	10 mg/L	05/03/10	05/03/10
Date Sampled 04/28/10 09:19					
Client ID: **MW-22-2**					
Lab ID : BMI10042923-04A	Solids, Total Dissolved (TDS)	260	10 mg/L	05/03/10	05/03/10
Date Sampled 04/28/10 10:20					
Client ID: **MW-22-1**					
Lab ID : BMI10042923-05A	Solids, Total Dissolved (TDS)	770	10 mg/L	04/30/10	04/30/10
Date Sampled 04/28/10 11:00					
Client ID: **EB-02-04/28/10**					
Lab ID : BMI10042923-06A	Solids, Total Dissolved (TDS)	ND	10 mg/L	05/03/10	05/03/10
Date Sampled 04/28/10 10:41					

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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ANALYTICAL REPORT

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

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

Tentatively Identified Compounds - Volatile Organics by GC/MS

		Parameter	Estimated Concentration	Estimated Reporting Limit	Date Extracted	Date Analyzed
Client ID :	**MW-22-5**					
Lab ID :	BMI10042923-01A	* * * None Found * * *	ND	2.0 µg/L	05/03/10 23:19	05/03/10 23:19
Date Received :	04/29/10					
Date Sampled :	04/28/10 08:03					
Client ID :	**MW-22-4**					
Lab ID :	BMI10042923-02A	* * * None Found * * *	ND	2.0 µg/L	05/03/10 23:41	05/03/10 23:41
Date Received :	04/29/10					
Date Sampled :	04/28/10 08:42					
Client ID :	**MW-22-3**					
Lab ID :	BMI10042923-03A	* * * None Found * * *	ND	2.0 µg/L	05/04/10 00:05	05/04/10 00:05
Date Received :	04/29/10					
Date Sampled :	04/28/10 09:19					
Client ID :	**MW-22-2**					
Lab ID :	BMI10042923-04A	* * * None Found * * *	ND	2.0 µg/L	05/04/10 00:28	05/04/10 00:28
Date Received :	04/29/10					
Date Sampled :	04/28/10 10:20					
Client ID :	**MW-22-1**					
Lab ID :	BMI10042923-05A	* * * None Found * * *	ND	2.0 µg/L	05/04/10 00:05	05/04/10 00:05
Date Received :	04/29/10					
Date Sampled :	04/28/10 11:00					
Client ID :	**EB-02-04/28/10**					
Lab ID :	BMI10042923-06A	* * * None Found * * *	ND	2.0 µg/L	05/03/10 20:38	05/03/10 20:38
Date Received :	04/29/10					
Date Sampled :	04/28/10 10:41					
Client ID :	**TB-02-04/28/10**					
Lab ID :	BMI10042923-07A	* * * None Found * * *	ND	2.0 µg/L	05/03/10 21:01	05/03/10 21:01
Date Received :	04/29/10					
Date Sampled :	04/28/10 07:00					

Alpha Analytical, Inc.

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Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10042923-01A
Client I.D. Number: MW-22-5

Sampled: 04/28/10 08:03
Received: 04/29/10
Extracted: 05/03/10 23:19
Analyzed: 05/03/10 23:19

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	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	97	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	99	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl 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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5/12/10
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10042923-02A
Client I.D. Number: MW-22-4

Sampled: 04/28/10 08:42
Received: 04/29/10
Extracted: 05/03/10 23:41
Analyzed: 05/03/10 23:41

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5	µg/L
25	Trichloroethene	ND	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	110	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	97	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	95	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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5/12/10
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10042923-03A
Client I.D. Number: MW-22-3

Sampled: 04/28/10 09:19
Received: 04/29/10
Extracted: 05/04/10 00:05
Analyzed: 05/04/10 00:05

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	111	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	97	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	93	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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5/12/10
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10042923-04A
Client I.D. Number: MW-22-2

Sampled: 04/28/10 10:20
Received: 04/29/10
Extracted: 05/04/10 00:28
Analyzed: 05/04/10 00:28

Volatile Organics by GC/MS
EPA Method SW8260B

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

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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5/12/10

Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10042923-05A
Client I.D. Number: MW-22-1

Sampled: 04/28/10 11:00
Received: 04/29/10
Extracted: 05/04/10 00:05
Analyzed: 05/04/10 00:05

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	111	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	98	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	96	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / 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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5/12/10
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10042923-06A
Client I.D. Number: EB-02-04/28/10

Sampled: 04/28/10 10:41
Received: 04/29/10
Extracted: 05/03/10 20:38
Analyzed: 05/03/10 20:38

Volatile Organics by GC/MS
EPA Method SW8260B

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

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer
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5/12/10
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10042923-07A
Client I.D. Number: TB-02-04/28/10

Sampled: 04/28/10 07:00
Received: 04/29/10
Extracted: 05/03/10 21:01
Analyzed: 05/03/10 21:01

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	ND	0.50	µg/L	49	2-Chlorotoluene	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	96	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	98	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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5/12/10
Report Date

Alpha Analytical, Inc.

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

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

VOC Sample Preservation Report

Work Order: BMI10042923 **Job:** G005862/JPL Groundwater Monitoring

Alpha's Sample ID	Client's Sample ID	Matrix	pH
10042923-01A	MW-22-5	Aqueous	2
10042923-02A	MW-22-4	Aqueous	2
10042923-03A	MW-22-3	Aqueous	2
10042923-04A	MW-22-2	Aqueous	2
10042923-05A	MW-22-1	Aqueous	2
10042923-06A	EB-02-04/28/10	Aqueous	2
10042923-07A	TB-02-04/28/10	Aqueous	2

5/12/10

Report Date

Alpha Analytical, Inc.

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

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

Date: *06-May-10*

QC Summary Report

Work Order: 10042923

Method Blank

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

File ID: **21** Batch ID: **24093** Analysis Date: **04/29/2010 13:50**

Sample ID: **MB-24093** Units : **mg/L** Run ID: **IC_1_100429A** Prep Date: **04/29/2010 12:42**

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								
Sulfate (SO4)	ND	0.5								

Laboratory Fortified Blank

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

File ID: **22** Batch ID: **24093** Analysis Date: **04/29/2010 14:08**

Sample ID: **LFB-24093** Units : **mg/L** Run ID: **IC_1_100429A** Prep Date: **04/29/2010 12:42**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	52.4	0.5	50		105	90	110			
Nitrite (NO2) - N	5.27	0.25	5		105	90	110			
Nitrate (NO3) - N	5.16	0.25	5		103	90	110			
Sulfate (SO4)	109	0.5	100		109	90	110			

Sample Matrix Spike

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

File ID: **27** Batch ID: **24093** Analysis Date: **04/29/2010 15:41**

Sample ID: **10042923-03ALFM** Units : **mg/L** Run ID: **IC_1_100429A** Prep Date: **04/29/2010 12:42**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	145	0.5	100	46.12	99	80	120			
Nitrite (NO2) - N	10.1	0.25	10	0	101	80	120			
Nitrate (NO3) - N	17.6	0.25	10	7.336	103	80	120			
Sulfate (SO4)	249	0.5	200	52.81	98	80	120			

Sample Matrix Spike Duplicate

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

File ID: **28** Batch ID: **24093** Analysis Date: **04/29/2010 16:00**

Sample ID: **10042923-03ALFMD** Units : **mg/L** Run ID: **IC_1_100429A** Prep Date: **04/29/2010 12:42**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	146	0.5	100	46.12	99	80	120	144.9	0.5(15)	
Nitrite (NO2) - N	11	0.25	10	0	110	80	120	10.13	8.2(15)	
Nitrate (NO3) - N	17.8	0.25	10	7.336	105	80	120	17.64	0.9(15)	
Sulfate (SO4)	252	0.5	200	52.81	99.6	80	120	248.9	1.3(15)	

Comments:

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

Alpha Analytical, Inc.

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

Date: *06-May-10*

QC Summary Report

Work Order: 10042923

Method Blank

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

File ID: **14** Batch ID: **24092** Analysis Date: **04/29/2010 14:11**

Sample ID: **MB-24092** Units : **µg/L** Run ID: **IC_3_100429A** Prep Date: **04/29/2010 12:33**

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: **24092** Analysis Date: **04/29/2010 14:51**

Sample ID: **LFB-24092** Units : **µg/L** Run ID: **IC_3_100429A** Prep Date: **04/29/2010 12:33**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	22.4	2	25		89	85	115			

Sample Matrix Spike

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

File ID: **24** Batch ID: **24092** Analysis Date: **04/29/2010 17:18**

Sample ID: **10042923-03ALFM** Units : **µg/L** Run ID: **IC_3_100429A** Prep Date: **04/29/2010 12:33**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	28.8	2	25	3.205	102	80	120			

Sample Matrix Spike Duplicate

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

File ID: **25** Batch ID: **24092** Analysis Date: **04/29/2010 17:37**

Sample ID: **10042923-03ALFMD** Units : **µg/L** Run ID: **IC_3_100429A** Prep Date: **04/29/2010 12:33**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	30.6	2	25	3.205	110	80	120	28.79	6.1(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 Analytical, Inc.

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Date: *06-May-10*

QC Summary Report

Work Order: 10042923

Laboratory Control Spike Type **LCS** Test Code: **SM2320B**

File ID: Batch ID: **W0430AL** Analysis Date: **04/30/2010 10:51**

Sample ID: **LCS-W0430AL** Units : **mg/L** Run ID: **WETLAB_100430A** Prep Date: **04/30/2010 10:51**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Alkalinity, Bicarbonate (As CaCO3)	237.2	10	250		95	80	120			
Alkalinity, Carbonate (As CaCO3)	237.2	10	250		95	80	120			
Alkalinity, Total (As CaCO3 at pH 4.5)	237	10	250		95	80	120			

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: 06-May-10

QC Summary Report

Work Order: 10042923

Method Blank

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

File ID: **042910.B\019SMPL.D** Batch ID: **24097K** Analysis Date: **04/30/2010 14:02**

Sample ID: **MB-24097** Units : **mg/L** Run ID: **ICP/MS_100430A** Prep Date: **04/30/2010 09:18**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sodium (Na)	ND	0.5								
Magnesium (Mg)	ND	0.5								
Potassium (K)	ND	0.5								
Calcium (Ca)	ND	0.5								
Chromium (Cr)	ND	0.005								
Iron (Fe)	ND	0.1								
Arsenic (As)	ND	0.002								
Lead (Pb)	ND	0.005								

Laboratory Control Spike

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

File ID: **042910.B\020_LCS.D** Batch ID: **24097K** Analysis Date: **04/30/2010 14:07**

Sample ID: **LCS-24097** Units : **mg/L** Run ID: **ICP/MS_100430A** Prep Date: **04/30/2010 09:18**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sodium (Na)	5	0.5	5		100	80	120			
Magnesium (Mg)	5.08	0.5	5		102	80	120			
Potassium (K)	4.55	0.5	5		91	80	120			
Calcium (Ca)	4.72	0.5	5		94	80	120			
Chromium (Cr)	0.0456	0.005	0.05		91	80	120			
Iron (Fe)	4.6	0.2	5		92	80	120			
Arsenic (As)	0.0496	0.002	0.05		99	80	120			
Lead (Pb)	0.0492	0.005	0.05		98	80	120			

Sample Matrix Spike

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

File ID: **042910.B\025SMPL.D** Batch ID: **24097K** Analysis Date: **04/30/2010 14:38**

Sample ID: **10042923-03AMS** Units : **mg/L** Run ID: **ICP/MS_100430A** Prep Date: **04/30/2010 09:18**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sodium (Na)	43.3	0.5	5	40.38	57	80	120			M3
Magnesium (Mg)	23.5	0.5	5	19.3	83	80	120			
Potassium (K)	6.66	0.5	5	2.17	90	80	120			
Calcium (Ca)	50.4	0.5	5	47	68	80	120			M3
Chromium (Cr)	0.0475	0.005	0.05	0	95	80	120			
Iron (Fe)	4.55	0.2	5	0.1482	88	80	120			
Arsenic (As)	0.0491	0.002	0.05	0	98	80	120			
Lead (Pb)	0.0481	0.005	0.05	0	96	80	120			

Sample Matrix Spike Duplicate

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

File ID: **042910.B\026SMPL.D** Batch ID: **24097K** Analysis Date: **04/30/2010 14:44**

Sample ID: **10042923-03AMSD** Units : **mg/L** Run ID: **ICP/MS_100430A** Prep Date: **04/30/2010 09:18**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sodium (Na)	31.2	0.5	5	40.38	-180	80	120	43.25	32.5(20)	M3 R58
Magnesium (Mg)	16.5	0.5	5	19.3	-57	80	120	23.45	35.0(20)	M2 R58
Potassium (K)	4.62	0.5	5	2.17	49	80	120	6.658	36.2(20)	M2 R58
Calcium (Ca)	34.4	0.5	5	47	-250	80	120	50.41	37.8(20)	M3 R58
Chromium (Cr)	0.0315	0.005	0.05	0	63	80	120	0.04754	40.6(20)	M2 R58
Iron (Fe)	2.94	0.2	5	0.1482	56	80	120	4.552	43.0(20)	M2 R58
Arsenic (As)	0.0351	0.002	0.05	0	70	80	120	0.04914	33.5(20)	M2 R58
Lead (Pb)	0.0338	0.005	0.05	0	68	80	120	0.04808	34.9(20)	M2 R58

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Date: *06-May-10*

QC Summary Report

Work Order: 10042923

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.

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.

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

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Date: *06-May-10*

QC Summary Report

Work Order: 10042923

Laboratory Control Spike Type **LCS** Test Code: **EPA Method 150.2 / SM4500HB / SW9040C**

File ID: Batch ID: **W0429PH** Analysis Date: **04/29/2010 15:30**

Sample ID: **LCS-W0429PH** Units : **pH Units** Run ID: **WETLAB_100429B** Prep Date: **04/29/2010 15:30**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
pH	5.03	1.7	5		101	90	110			

Comments:

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

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Date: *06-May-10*

QC Summary Report

Work Order: 10042923

Method Blank

Type **MBLK** Test Code: **SM2540C**

File ID: Batch ID: **W0428DS** Analysis Date: **04/30/2010 00:00**

Sample ID: **MBLK-W0428DS** Units : **mg/L** Run ID: **WETLAB_100428G** Prep Date: **04/30/2010 00:00**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Solids, Total Dissolved (TDS)	ND	10								

Laboratory Control Spike

Type **LCS** Test Code: **SM2540C**

File ID: Batch ID: **W0428DS** Analysis Date: **04/30/2010 00:00**

Sample ID: **LCS-W0428DS** Units : **mg/L** Run ID: **WETLAB_100428G** Prep Date: **04/30/2010 00:00**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Solids, Total Dissolved (TDS)	102	10	100		102	80	120			

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-May-10*

QC Summary Report

Work Order: 10042923

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

File ID: **C:\HPCHEM\MS07\DATA\100503\10050307.D** Batch ID: **MS07W0503M** Analysis Date: **05/03/2010 19:08**

Sample ID: **MBLK MS07W0503M** Units : **µg/L** Run ID: **MSD_07_100503B** Prep Date: **05/03/2010 19:08**

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	10.8		10		108	70	130			
Surr: Toluene-d8	9.74		10		97	70	130			

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Date: *11-May-10*

QC Summary Report

Work Order: 10042923

Surr: 4-Bromofluorobenzene	9.77		10	98	70	130				

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

File ID: **C:\HPCHEM\MS07\DATA\100503\10050304.D** Batch ID: **MS07W0503M** Analysis Date: **05/03/2010 17:58**

Sample ID: **LCS MS07W0503M** Units : **µg/L** Run ID: **MSD_07_100503B** Prep Date: **05/03/2010 17:58**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	9.35	1	10		94	70	130			
Chloromethane	10.8	2	10		108	70	130			
Vinyl chloride	11.5	1	10		115	70	130			
Chloroethane	11.8	1	10		118	70	130			
Bromomethane	10.7	2	10		107	70	130			
Trichlorofluoromethane	10.5	1	10		105	70	130			
1,1-Dichloroethene	11.9	1	10		119	70	130			
Dichloromethane	10.5	2	10		105	70	130			
trans-1,2-Dichloroethene	11.5	1	10		115	70	130			
Methyl tert-butyl ether (MTBE)	11.6	0.5	10		116	70	130			
1,1-Dichloroethane	11.7	1	10		117	70	130			
cis-1,2-Dichloroethene	11.4	1	10		114	70	130			
Bromochloromethane	10.7	1	10		107	70	130			
Chloroform	11.1	1	10		111	70	130			
2,2-Dichloropropane	13.5	1	10		135	70	130(130)			L51
1,2-Dichloroethane	11.9	1	10		119	70	130			
1,1,1-Trichloroethane	11.9	1	10		119	70	130			
1,1-Dichloropropene	12	1	10		120	70	130			
Carbon tetrachloride	11.5	1	10		115	70	130			
Benzene	11.2	0.5	10		112	70	130			
Dibromomethane	11	1	10		110	70	130			
1,2-Dichloropropane	12	1	10		120	70	130			
Trichloroethene	11.1	1	10		111	70	130			
Bromodichloromethane	11.8	1	10		118	70	130			
cis-1,3-Dichloropropene	11.9	1	10		119	70	130			
trans-1,3-Dichloropropene	12.2	1	10		122	70	130			
1,1,2-Trichloroethane	10.7	1	10		107	70	130			
Toluene	10.5	0.5	10		105	70	130			
1,3-Dichloropropane	10.5	1	10		105	70	130			
Dibromochloromethane	10.7	1	10		107	70	130			
1,2-Dibromoethane (EDB)	20.1	2	20		101	70	130			
Tetrachloroethene	10.3	1	10		103	70	130			
1,1,1,2-Tetrachloroethane	10.1	1	10		101	70	130			
Chlorobenzene	10	1	10		100	70	130			
Ethylbenzene	10.8	0.5	10		108	70	130			
m,p-Xylene	10.6	0.5	10		106	70	130			
Bromoform	10.8	1	10		108	70	130			
Styrene	14.7	1	10		147	70	130(130)			L51
o-Xylene	10.9	0.5	10		109	70	130			
1,1,2,2-Tetrachloroethane	9.03	1	10		90	70	130			
1,2,3-Trichloropropane	21.3	2	20		107	70	130			
Isopropylbenzene	11	1	10		110	70	130			
Bromobenzene	9.37	1	10		94	70	130			
n-Propylbenzene	10.2	1	10		102	70	130			
4-Chlorotoluene	10.3	1	10		103	70	130			
2-Chlorotoluene	10.3	1	10		103	70	130			
1,3,5-Trimethylbenzene	10.4	1	10		104	70	130			
tert-Butylbenzene	10.4	1	10		104	70	130			
1,2,4-Trimethylbenzene	10.4	1	10		104	70	130			
sec-Butylbenzene	10.3	1	10		103	70	130			
1,3-Dichlorobenzene	9.22	1	10		92	70	130			
1,4-Dichlorobenzene	9.28	1	10		93	70	130			
4-Isopropyltoluene	10.8	1	10		108	70	130			
1,2-Dichlorobenzene	8.75	1	10		88	70	130			
n-Butylbenzene	11.6	1	10		116	70	130			
1,2-Dibromo-3-chloropropane (DBCP)	43.1	3	50		86	70	130			
1,2,4-Trichlorobenzene	9.34	2	10		93	70	130			
Naphthalene	9.7	2	10		97	70	130			
Hexachlorobutadiene	20.7	2	20		104	70	130			
1,2,3-Trichlorobenzene	9.1	2	10		91	70	130			
Surr: 1,2-Dichloroethane-d4	11.1		10		111	70	130			
Surr: Toluene-d8	9.51		10		95	70	130			
Surr: 4-Bromofluorobenzene	9.44		10		94	70	130			

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Date: *11-May-10*

QC Summary Report

Work Order: 10042923

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

File ID: **C:\HPCHEM\MS07\DATA\100503\10050308.D** Batch ID: **MS07W0503M** Analysis Date: **05/03/2010 19:31**

Sample ID: **10042923-03AMS** Units : **µg/L** Run ID: **MSD_07_100503B** Prep Date: **05/03/2010 19:31**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	24.9	2.5	50	0	50	13	167			
Chloromethane	40.8	10	50	0	82	28	145			
Vinyl chloride	44.9	2.5	50	0	90	43	134			
Chloroethane	44.9	2.5	50	0	90	39	154			
Bromomethane	45.4	10	50	0	91	19	176			
Trichlorofluoromethane	43.5	2.5	50	0	87	34	160			
1,1-Dichloroethene	50.4	2.5	50	0	101	60	130			
Dichloromethane	45.4	10	50	0	91	68	130			
trans-1,2-Dichloroethene	49.6	2.5	50	0	99	63	130			
Methyl tert-butyl ether (MTBE)	49.9	1.3	50	0	99.8	56	141			
1,1-Dichloroethane	51	2.5	50	0	102	61	130			
cis-1,2-Dichloroethene	49.4	2.5	50	0	99	70	130			
Bromochloromethane	46.3	2.5	50	0	93	70	130			
Chloroform	49.1	2.5	50	0	98	67	130			
2,2-Dichloropropane	53.8	2.5	50	0	108	30	152			
1,2-Dichloroethane	51.6	2.5	50	0	103	60	135			
1,1,1-Trichloroethane	51.6	2.5	50	0	103	59	137			
1,1-Dichloropropene	52	2.5	50	0	104	63	130			
Carbon tetrachloride	50.9	2.5	50	0	102	50	147			
Benzene	49.5	1.3	50	0	99	67	130			
Dibromomethane	47.6	2.5	50	0	95	69	133			
1,2-Dichloropropane	53.8	2.5	50	0	108	69	130			
Trichloroethene	49.3	2.5	50	0	99	69	130			
Bromodichloromethane	50.3	2.5	50	0	101	66	134			
cis-1,3-Dichloropropene	45.7	2.5	50	0	91	63	130			
trans-1,3-Dichloropropene	51.7	2.5	50	0	103	66	131			
1,1,2-Trichloroethane	46.8	2.5	50	0	94	68	130			
Toluene	47.1	1.3	50	0	94	66	130			
1,3-Dichloropropane	47.4	2.5	50	0	95	70	130			
Dibromochloromethane	43.2	2.5	50	0	86	70	130			
1,2-Dibromoethane (EDB)	88.6	5	100	0	89	70	130			
Tetrachloroethene	46.1	2.5	50	0	92	61	134			
1,1,1,2-Tetrachloroethane	44.2	2.5	50	0	88	70	130			
Chlorobenzene	45.3	2.5	50	0	91	70	130			
Ethylbenzene	48.9	1.3	50	0	98	68	130			
m,p-Xylene	47.5	1.3	50	0	95	64	130			
Bromoform	43	2.5	50	0	86	64	138			
Styrene	48.8	2.5	50	0	98	69	130			
o-Xylene	49.1	1.3	50	0	98	70	130			
1,1,2,2-Tetrachloroethane	40.4	2.5	50	0	81	65	131			
1,2,3-Trichloropropane	89.5	10	100	0	90	70	130			
Isopropylbenzene	49.6	2.5	50	0	99	64	138			
Bromobenzene	42.3	2.5	50	0	85	70	130			
n-Propylbenzene	46.5	2.5	50	0	93	66	132			
4-Chlorotoluene	46.4	2.5	50	0	93	70	130			
2-Chlorotoluene	46.8	2.5	50	0	94	70	130			
1,3,5-Trimethylbenzene	46.4	2.5	50	0	93	66	136			
tert-Butylbenzene	47.1	2.5	50	0	94	65	137			
1,2,4-Trimethylbenzene	45.9	2.5	50	0	92	65	137			
sec-Butylbenzene	46.5	2.5	50	0	93	66	134			
1,3-Dichlorobenzene	41.5	2.5	50	0	83	70	130			
1,4-Dichlorobenzene	42	2.5	50	0	84	70	130			
4-Isopropyltoluene	48	2.5	50	0	96	66	137			
1,2-Dichlorobenzene	39.3	2.5	50	0	79	70	130			
n-Butylbenzene	51.1	2.5	50	0	102	60	142			
1,2-Dibromo-3-chloropropane (DBCP)	180	15	250	0	72	67	130			
1,2,4-Trichlorobenzene	41.6	10	50	0	83	61	137			
Naphthalene	41.6	10	50	0	83	40	167			
Hexachlorobutadiene	88.5	10	100	0	88	61	130			
1,2,3-Trichlorobenzene	40.3	10	50	0	81	51	144			
Surr: 1,2-Dichloroethane-d4	54.5		50		109	70	130			
Surr: Toluene-d8	47.5		50		95	70	130			
Surr: 4-Bromofluorobenzene	47.9		50		96	70	130			

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Date: *11-May-10*

QC Summary Report

Work Order: 10042923

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

File ID: **C:\HPCHEM\MS07\DATA\100503\10050309.D** Batch ID: **MS07W0503M** Analysis Date: **05/03/2010 19:53**

Sample ID: **10042923-03AMSD** Units : **µg/L** Run ID: **MSD_07_100503B** Prep Date: **05/03/2010 19:53**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	25.9	2.5	50	0	52	13	167	24.89	4.1(20)	
Chloromethane	43.3	10	50	0	87	28	145	40.76	6.0(20)	
Vinyl chloride	48.4	2.5	50	0	97	43	134	44.85	7.5(20)	
Chloroethane	49.3	2.5	50	0	99	39	154	44.85	9.4(20)	
Bromomethane	55	10	50	0	110	19	176	45.39	19.2(20)	
Trichlorofluoromethane	45.1	2.5	50	0	90	34	160	43.52	3.6(20)	
1,1-Dichloroethene	45.6	2.5	50	0	91	60	130	50.35	9.8(20)	
Dichloromethane	46.9	10	50	0	94	68	130	45.35	3.3(20)	
trans-1,2-Dichloroethene	51.6	2.5	50	0	103	63	130	49.56	4.0(20)	
Methyl tert-butyl ether (MTBE)	52.6	1.3	50	0	105	56	141	49.88	5.2(20)	
1,1-Dichloroethane	52.7	2.5	50	0	105	61	130	51	3.3(20)	
cis-1,2-Dichloroethene	51.3	2.5	50	0	103	70	130	49.4	3.8(20)	
Bromochloromethane	48.2	2.5	50	0	96	70	130	46.25	4.0(20)	
Chloroform	50.2	2.5	50	0	100	67	130	49.14	2.1(20)	
2,2-Dichloropropane	54.8	2.5	50	0	110	30	152	53.77	2.0(20)	
1,2-Dichloroethane	52.7	2.5	50	0	105	60	135	51.61	2.1(20)	
1,1,1-Trichloroethane	53.3	2.5	50	0	107	59	137	51.58	3.2(20)	
1,1-Dichloropropene	53.6	2.5	50	0	107	63	130	51.97	3.2(20)	
Carbon tetrachloride	52.2	2.5	50	0	104	50	147	50.93	2.5(20)	
Benzene	51	1.3	50	0	102	67	130	49.49	3.0(20)	
Dibromomethane	48.6	2.5	50	0	97	69	133	47.64	2.0(20)	
1,2-Dichloropropane	56.3	2.5	50	0	113	69	130	53.81	4.5(20)	
Trichloroethene	50.6	2.5	50	0	101	69	130	49.33	2.5(20)	
Bromodichloromethane	51.3	2.5	50	0	103	66	134	50.33	2.0(20)	
cis-1,3-Dichloropropene	46.8	2.5	50	0	94	63	130	45.74	2.3(20)	
trans-1,3-Dichloropropene	52.9	2.5	50	0	106	66	131	51.74	2.2(20)	
1,1,2-Trichloroethane	47.5	2.5	50	0	95	68	130	46.76	1.5(20)	
Toluene	49	1.3	50	0	98	66	130	47.13	3.9(20)	
1,3-Dichloropropane	48.8	2.5	50	0	98	70	130	47.43	2.9(20)	
Dibromochloromethane	44.5	2.5	50	0	89	70	130	43.19	3.0(20)	
1,2-Dibromoethane (EDB)	92.1	5	100	0	92	70	130	88.58	3.9(20)	
Tetrachloroethene	47.6	2.5	50	0	95	61	134	46.1	3.2(20)	
1,1,1,2-Tetrachloroethane	45.8	2.5	50	0	92	70	130	44.2	3.5(20)	
Chlorobenzene	46.6	2.5	50	0	93	70	130	45.31	2.8(20)	
Ethylbenzene	50.8	1.3	50	0	102	68	130	48.91	3.8(20)	
m,p-Xylene	49.6	1.3	50	0	99	64	130	47.45	4.3(20)	
Bromoform	44.2	2.5	50	0	88	64	138	43.04	2.6(20)	
Styrene	51	2.5	50	0	102	69	130	48.84	4.3(20)	
o-Xylene	51.3	1.3	50	0	103	70	130	49.09	4.5(20)	
1,1,2,2-Tetrachloroethane	41.8	2.5	50	0	84	65	131	40.41	3.5(20)	
1,2,3-Trichloropropane	92.6	10	100	0	93	70	130	89.5	3.4(20)	
Isopropylbenzene	50.5	2.5	50	0	101	64	138	49.61	1.7(20)	
Bromobenzene	43.1	2.5	50	0	86	70	130	42.33	1.8(20)	
n-Propylbenzene	47.3	2.5	50	0	95	66	132	46.45	1.8(20)	
4-Chlorotoluene	47.6	2.5	50	0	95	70	130	46.38	2.6(20)	
2-Chlorotoluene	47.8	2.5	50	0	96	70	130	46.82	2.2(20)	
1,3,5-Trimethylbenzene	47.6	2.5	50	0	95	66	136	46.39	2.5(20)	
tert-Butylbenzene	48.1	2.5	50	0	96	65	137	47.05	2.2(20)	
1,2,4-Trimethylbenzene	47.6	2.5	50	0	95	65	137	45.88	3.6(20)	
sec-Butylbenzene	47.7	2.5	50	0	95	66	134	46.5	2.6(20)	
1,3-Dichlorobenzene	43.5	2.5	50	0	87	70	130	41.53	4.7(20)	
1,4-Dichlorobenzene	43.1	2.5	50	0	86	70	130	41.99	2.7(20)	
4-Isopropyltoluene	49.3	2.5	50	0	99	66	137	48.04	2.6(20)	
1,2-Dichlorobenzene	40.8	2.5	50	0	82	70	130	39.29	3.7(20)	
n-Butylbenzene	53.2	2.5	50	0	106	60	142	51.12	3.9(20)	
1,2-Dibromo-3-chloropropane (DBCP)	191	15	250	0	76	67	130	180.2	5.7(20)	
1,2,4-Trichlorobenzene	44.4	10	50	0	89	61	137	41.58	6.6(20)	
Naphthalene	45.2	10	50	0	90	40	167	41.55	8.3(20)	
Hexachlorobutadiene	93.1	10	100	0	93	61	130	88.45	5.1(20)	
1,2,3-Trichlorobenzene	43.2	10	50	0	86	51	144	40.27	7.0(20)	
Surr: 1,2-Dichloroethane-d4	53.5		50		107	70	130			
Surr: Toluene-d8	48.2		50		96	70	130			
Surr: 4-Bromofluorobenzene	47.2		50		94	70	130			

Alpha Analytical, Inc.

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

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

Date: *11-May-10*

QC Summary Report

Work Order: 10042923

Comments:

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

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

L51 = Analyte recovery was above acceptance limits for the LCS, but was acceptable in the MS/MSD.

Billing Information :

CHAIN-OF-CUSTODY RECORD

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

CA

WorkOrder : BMIS10042923

Report Due By : 5:00 PM On : 13-May-10

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

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

EDD Required : **Yes**

Sampled by : Chase Brogdon

PO : 218013

Client's COC # : 28931 Job : G005862/JPL Groundwater Monitoring

Cooler Temp	Samples Received	Date Printed
4 °C	29-Apr-10	29-Apr-10

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

Alpha Sample ID	Client Sample ID	Matrix	Collection Date	No. of Bottles Alpha	Sub	TAT	Requested Tests 300_0_W	314_W	ALKALINITY_W	METALS_DW	PH_W	TDS_W	VOC_TIC_W	VOC_W	Sample Remarks
BMI10042923-01A	MW-22-5	AQ	04/28/10 08:03	5	0	10	NO2, NO3, SO4, Cl	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10042923-02A	MW-22-4	AQ	04/28/10 08:42	5	0	10	NO2, NO3, SO4, Cl	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10042923-03A	MW-22-3	AQ	04/28/10 09:19	10	0	10	NO2, NO3, SO4, Cl	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	MS/MSD
BMI10042923-04A	MW-22-2	AQ	04/28/10 10:20	5	0	10	NO2, NO3, SO4, Cl	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	Level IV QC
BMI10042923-05A	MW-22-1	AQ	04/28/10 11:00	5	0	10	NO2, NO3, SO4, Cl	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10042923-06A	EB-02-04/28/10	AQ	04/28/10 10:41	5	0	10	NO2, NO3, SO4, Cl	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10042923-07A	TB-02-04/28/10	AQ	04/28/10 07:00	1	0	10							VOC by 524 Criteria	VOC by 524 Criteria	Reno Trip Blank 12/31/09

Comments: Security seals intact. Frozen ice. Temp Blank #8668 received @ 4°C. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). :

	Signature	Print Name	Company	Date/Time
Logged in by:	K Murray	K Murray	Alpha Analytical, Inc.	4/29/10 1155

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

Billing Information:

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

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

Samples Collected From Which State? 28931
AZ ___ **CA** X **NV** ___ **WA** ___
ID ___ **OR** ___ **OTHER** ___
Page # 1 *of* 1

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

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

Analyses Required

Time Sampled	Date Sampled	Matrix* See Key Below	Lab ID Number (Office Use Only)	Sample Description	TAT	Field Filtered	Total and type of containers ** See below	VOC (524.2)	TOTAL CR, LEAD, ARSENIC (200.8)	GEN CHEM (Na, K, Ca, Mg, FE) (200.7)	ClO4- (314.0)	GEN CHEM (300.0, 310.1, 160.1, 150.1)			REMARKS
0803	4/28/10	AQ	BM110042923-01	mw-22-5	NORM		5	X	X	X	X	X			
0642	↓	↓	02	mw-22-4	↓		5	X	X	X	X	X			
0919	↓	↓	03	mw-22-3	↓		10	X	X	X	X	X			MS/MSD
1020	↓	↓	04	mw-22-2	↓		5	X	X	X	X	X			LEVEL IV QC
1100	↓	↓	05	mw-22-1	↓		5	X	X	X	X	X			
1041	↓	↓	06	EB-02-04/28/10	↓		5	X	X	X	X	X			EQUIPMENT BLANK
0700	↓	↓	07	TB-02-04/28/10	↓		1	X							TRIP BLANK

ADDITIONAL INSTRUCTIONS:

	Signature	Print Name	Company	Date	Time
Relinquished by	[signature]	CHASE BROGDON	INSIGHT CECI	4-28-10	1300
Received by	[signature]	Anthony Sterks	Alpha Analytical	4-28-10	1300
Relinquished by	[signature]	"	"	"	"
Received by	[signature]	K Murray	AAI	4/29/10	1110
Relinquished by					
Received by					

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

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

Alpha Analytical, Inc.

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

Date: *11-May-10*

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

CASE NARRATIVE

Job: G005862/JPL Groundwater Monitoring
Work Order: BMI10042944 **Cooler Temp:** 4 °C

Alpha's Sample ID	Client's Sample ID	Matrix
10042944-01A	MW-16	Aqueous

Manually Integrated Analytes

Alpha's Sample ID	Test Reference	Analyte
NONE		

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

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

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

Alpha Analytical, Inc.

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ANALYTICAL REPORT

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 04/29/10

Job: G005862/JPL Groundwater Monitoring

Anions by IC
EPA Method 300.0

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-16**				
Lab ID : BMI10042944-01A Chloride	90	50 mg/L	04/29/10 12:42	04/29/10 17:14
Date Sampled 04/28/10 10:28 Nitrite (NO2) - N	ND	0.25 mg/L	04/29/10 12:42	04/29/10 17:14
Nitrate (NO3) - N	1.2	0.25 mg/L	04/29/10 12:42	04/29/10 17:14
Phosphate, ortho - P	49	0.50 mg/L	04/29/10 12:42	04/29/10 17:14
Sulfate (SO4)	ND	0.50 mg/L	04/29/10 12:42	04/29/10 17:14

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.

5/12/10
Report Date

Alpha Analytical, Inc.

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ANALYTICAL REPORT

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 04/29/10

Job: G005862/JPL Groundwater Monitoring

Perchlorate by Ion Chromatography
EPA Method 314.0

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-16**				
Lab ID : BMI10042944-01A Perchlorate	7.32	1.00 µg/L	04/29/10 12:33	04/29/10 18:50
Date Sampled 04/28/10 10:28				

Roger Scholl Randy Gardner Walter Hinchman

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ANALYTICAL REPORT

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 04/29/10

Job: G005862/JPL Groundwater Monitoring

Alkalinity
SM2320B

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-16**				
Lab ID : BMI10042944-01A	Alkalinity, Bicarbonate (As CaCO3)	230	10 mg/L	04/30/10 10:55	04/30/10 10:55
Date Sampled 04/28/10 10:28	Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	04/30/10 10:55	04/30/10 10:55
	Alkalinity, Total (As CaCO3 at pH 4.5)	230	10 mg/L	04/30/10 10:55	04/30/10 10:55

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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ANALYTICAL REPORT

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 04/29/10

Job: G005862/JPL Groundwater Monitoring

Metals by ICPMS
EPA Method 200.8

Parameter		Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-16**					
Lab ID : BMI10042944-01A	Sodium (Na)	35	0.50 mg/L	04/30/10 09:18	04/30/10 15:30
Date Sampled 04/28/10 10:28	Magnesium (Mg)	22	0.50 mg/L	04/30/10 09:18	04/30/10 15:30
	Potassium (K)	2.9	0.50 mg/L	04/30/10 09:18	04/30/10 15:30
	Calcium (Ca)	64	0.50 mg/L	04/30/10 09:18	04/30/10 15:30
	Chromium (Cr)	0.017	0.0050 mg/L	04/30/10 09:18	04/30/10 15:30
	Iron (Fe)	0.35	0.10 mg/L	04/30/10 09:18	04/30/10 15:30
	Arsenic (As)	0.0036	0.0020 mg/L	04/30/10 09:18	04/30/10 15:30
	Lead (Pb)	ND	0.0050 mg/L	04/30/10 09:18	04/30/10 15:30

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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ANALYTICAL REPORT

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3990 Old Town Ave
San Diego, CA 92110

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 04/29/10

Job: G005862/JPL Groundwater Monitoring

pH (Range 1.7 to 12.4)
EPA Method 150.2 / SM4500HB / SW9040C

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-16**				
Lab ID : BMI10042944-01A pH	7.1	1.7 pH Units	04/29/10 15:39	04/29/10 15:39
Date Sampled 04/28/10 10:28 pH - Temperature	19	1.0 °C	04/29/10 15:39	04/29/10 15:39

The EPA has established an analytical holding time of 15 minutes for this method as documented in the Methods Update Rule, Federal Register, Vol 72, No 47, March 2007. This holding time will always be exceeded, unless samples are analyzed in the field.
The laboratory performed this analysis in the shortest practical holding time after sample receipt.

Roger Scholl Randy Gardner Walter Hinchman

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5/12/10
Report Date

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ANALYTICAL REPORT

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3990 Old Town Ave
San Diego, CA 92110

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 04/29/10

Job: G005862/JPL Groundwater Monitoring

Total Dissolved Solids (TDS)
SM2540C

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-16**				
Lab ID : BMI10042944-01A Solids, Total Dissolved (TDS)	410	10 mg/L	04/30/10	04/30/10
Date Sampled 04/28/10 10:28				

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

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

5/12/10
Report Date

Alpha Analytical, Inc.

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ANALYTICAL REPORT

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

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

Tentatively Identified Compounds - Volatile Organics by GC/MS

	Parameter	Estimated Concentration	Estimated Reporting Limit	Date Extracted	Date Analyzed
Client ID : **MW-16**					
Lab ID : BMI10042944-01A	* * * None Found * * *	ND	2.0 µg/L	05/04/10 01:13	05/04/10 01:13
Date Received : 04/29/10					
Date Sampled : 04/28/10 10:28					

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.

5/12/10
Report Date

Page 1 of 1

Alpha Analytical, Inc.

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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10042944-01A
Client I.D. Number: MW-16

Sampled: 04/28/10 10:28
Received: 04/29/10
Extracted: 05/04/10 01:13
Analyzed: 05/04/10 01:13

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	6.3		0.50	µg/L
6	Trichlorofluoromethane	ND		0.50	µg/L	41	Styrene	ND	Q	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	Q	0.50	µg/L	44	1,2,3-Trichloropropane	ND		1.0	µg/L
10	trans-1,2-Dichloroethene	ND		0.50	µg/L	45	Isopropylbenzene	ND		0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND		0.50	µg/L	46	Bromobenzene	ND		0.50	µg/L
12	1,1-Dichloroethane	ND		0.50	µg/L	47	n-Propylbenzene	ND		0.50	µg/L
13	2-Butanone (MEK)	ND		10	µg/L	48	4-Chlorotoluene	ND		0.50	µg/L
14	cis-1,2-Dichloroethene	ND		0.50	µg/L	49	2-Chlorotoluene	ND		0.50	µg/L
15	Bromochloromethane	ND		0.50	µg/L	50	1,3,5-Trimethylbenzene	ND		0.50	µg/L
16	Chloroform	10		0.50	µg/L	51	tert-Butylbenzene	ND		0.50	µg/L
17	2,2-Dichloropropane	ND	Q	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND		0.50	µg/L
18	1,2-Dichloroethane	ND		0.50	µg/L	53	sec-Butylbenzene	ND		0.50	µg/L
19	1,1,1-Trichloroethane	ND		0.50	µg/L	54	1,3-Dichlorobenzene	ND		0.50	µg/L
20	1,1-Dichloropropene	ND		0.50	µg/L	55	1,4-Dichlorobenzene	ND		0.50	µg/L
21	Carbon tetrachloride	ND		0.50	µg/L	56	4-Isopropyltoluene	ND		0.50	µg/L
22	Benzene	ND		0.50	µg/L	57	1,2-Dichlorobenzene	ND		0.50	µg/L
23	Dibromomethane	ND		0.50	µg/L	58	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	16		0.50	µg/L	61	Naphthalene	ND		1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND		2.5	µg/L	62	Hexachlorobutadiene	ND		1.0	µg/L
28	cis-1,3-Dichloropropene	ND		0.50	µg/L	63	1,2,3-Trichlorobenzene	ND		1.0	µg/L
29	trans-1,3-Dichloropropene	ND		0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	109		(70-130)	%REC
30	1,1,2-Trichloroethane	ND		0.50	µg/L	65	Surr: Toluene-d8	96		(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	16		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.

5/12/10
Report Date

Alpha Analytical, Inc.

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

VOC Sample Preservation Report

Work Order: BMI10042944 **Job:** G005862/JPL Groundwater Monitoring

Alpha's Sample ID	Client's Sample ID	Matrix	pH
10042944-01A	MW-16	Aqueous	2

5/12/10

Report Date

Alpha Analytical, Inc.

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Date: *06-May-10*

QC Summary Report

Work Order: 10042944

Method Blank

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

File ID: **21** Batch ID: **24093** Analysis Date: **04/29/2010 13:50**

Sample ID: **MB-24093** Units : **mg/L** Run ID: **IC_1_100429A** Prep Date: **04/29/2010 12:42**

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: **24093** Analysis Date: **04/29/2010 14:08**

Sample ID: **LFB-24093** Units : **mg/L** Run ID: **IC_1_100429A** Prep Date: **04/29/2010 12:42**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	52.4	0.5	50		105	90	110			
Nitrite (NO2) - N	5.27	0.25	5		105	90	110			
Nitrate (NO3) - N	5.16	0.25	5		103	90	110			
Phosphate, ortho - P	4.94	0.5	5		99	90	110			
Sulfate (SO4)	109	0.5	100		109	90	110			

Sample Matrix Spike

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

File ID: **27** Batch ID: **24093** Analysis Date: **04/29/2010 15:41**

Sample ID: **10042923-03ALFM** Units : **mg/L** Run ID: **IC_1_100429A** Prep Date: **04/29/2010 12:42**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	145	0.5	100	46.12	99	80	120			
Nitrite (NO2) - N	10.1	0.25	10	0	101	80	120			
Nitrate (NO3) - N	17.6	0.25	10	7.336	103	80	120			
Phosphate, ortho - P	10.8	0.5	10	0	108	80	120			
Sulfate (SO4)	249	0.5	200	52.81	98	80	120			

Sample Matrix Spike Duplicate

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

File ID: **28** Batch ID: **24093** Analysis Date: **04/29/2010 16:00**

Sample ID: **10042923-03ALFMD** Units : **mg/L** Run ID: **IC_1_100429A** Prep Date: **04/29/2010 12:42**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	146	0.5	100	46.12	99	80	120	144.9	0.5(15)	
Nitrite (NO2) - N	11	0.25	10	0	110	80	120	10.13	8.2(15)	
Nitrate (NO3) - N	17.8	0.25	10	7.336	105	80	120	17.64	0.9(15)	
Phosphate, ortho - P	9.7	0.5	10	0	97	80	120	10.85	11.2(15)	
Sulfate (SO4)	252	0.5	200	52.81	99.6	80	120	248.9	1.3(15)	

Comments:

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

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Date: *06-May-10*

QC Summary Report

Work Order: 10042944

Method Blank

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

File ID: **14** Batch ID: **24092** Analysis Date: **04/29/2010 14:11**

Sample ID: **MB-24092** Units : **µg/L** Run ID: **IC_3_100429A** Prep Date: **04/29/2010 12:33**

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: **24092** Analysis Date: **04/29/2010 14:51**

Sample ID: **LFB-24092** Units : **µg/L** Run ID: **IC_3_100429A** Prep Date: **04/29/2010 12:33**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	22.4	2	25		89	85	115			

Sample Matrix Spike

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

File ID: **24** Batch ID: **24092** Analysis Date: **04/29/2010 17:18**

Sample ID: **10042923-03ALFM** Units : **µg/L** Run ID: **IC_3_100429A** Prep Date: **04/29/2010 12:33**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	28.8	2	25	3.205	102	80	120			

Sample Matrix Spike Duplicate

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

File ID: **25** Batch ID: **24092** Analysis Date: **04/29/2010 17:37**

Sample ID: **10042923-03ALFMD** Units : **µg/L** Run ID: **IC_3_100429A** Prep Date: **04/29/2010 12:33**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	30.6	2	25	3.205	110	80	120	28.79	6.1(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.

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Date: *06-May-10*

QC Summary Report

Work Order: 10042944

Laboratory Control Spike Type **LCS** Test Code: **SM2320B**

File ID: Batch ID: **W0430AL** Analysis Date: **04/30/2010 10:51**

Sample ID: **LCS-W0430AL** Units : **mg/L** Run ID: **WETLAB_100430A** Prep Date: **04/30/2010 10:51**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Alkalinity, Bicarbonate (As CaCO3)	237.2	10	250		95	80	120			
Alkalinity, Carbonate (As CaCO3)	237.2	10	250		95	80	120			
Alkalinity, Total (As CaCO3 at pH 4.5)	237	10	250		95	80	120			

Comments:

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

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Date: 06-May-10

QC Summary Report

Work Order: 10042944

Method Blank

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

File ID: **042910.B\019SMPL.D** Batch ID: **24097K** Analysis Date: **04/30/2010 14:02**

Sample ID: **MB-24097** Units : **mg/L** Run ID: **ICP/MS_100430A** Prep Date: **04/30/2010 09:18**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sodium (Na)	ND	0.5								
Magnesium (Mg)	ND	0.5								
Potassium (K)	ND	0.5								
Calcium (Ca)	ND	0.5								
Chromium (Cr)	ND	0.005								
Iron (Fe)	ND	0.1								
Arsenic (As)	ND	0.002								
Lead (Pb)	ND	0.005								

Laboratory Control Spike

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

File ID: **042910.B\020_LCS.D** Batch ID: **24097K** Analysis Date: **04/30/2010 14:07**

Sample ID: **LCS-24097** Units : **mg/L** Run ID: **ICP/MS_100430A** Prep Date: **04/30/2010 09:18**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sodium (Na)	5	0.5	5		100	80	120			
Magnesium (Mg)	5.08	0.5	5		102	80	120			
Potassium (K)	4.55	0.5	5		91	80	120			
Calcium (Ca)	4.72	0.5	5		94	80	120			
Chromium (Cr)	0.0456	0.005	0.05		91	80	120			
Iron (Fe)	4.6	0.2	5		92	80	120			
Arsenic (As)	0.0496	0.002	0.05		99	80	120			
Lead (Pb)	0.0492	0.005	0.05		98	80	120			

Sample Matrix Spike

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

File ID: **042910.B\025SMPL.D** Batch ID: **24097K** Analysis Date: **04/30/2010 14:38**

Sample ID: **10042923-03AMS** Units : **mg/L** Run ID: **ICP/MS_100430A** Prep Date: **04/30/2010 09:18**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sodium (Na)	43.3	0.5	5	40.38	57	80	120			M3
Magnesium (Mg)	23.5	0.5	5	19.3	83	80	120			
Potassium (K)	6.66	0.5	5	2.17	90	80	120			
Calcium (Ca)	50.4	0.5	5	47	68	80	120			M3
Chromium (Cr)	0.0475	0.005	0.05	0	95	80	120			
Iron (Fe)	4.55	0.2	5	0.1482	88	80	120			
Arsenic (As)	0.0491	0.002	0.05	0	98	80	120			
Lead (Pb)	0.0481	0.005	0.05	0	96	80	120			

Sample Matrix Spike Duplicate

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

File ID: **042910.B\026SMPL.D** Batch ID: **24097K** Analysis Date: **04/30/2010 14:44**

Sample ID: **10042923-03AMSD** Units : **mg/L** Run ID: **ICP/MS_100430A** Prep Date: **04/30/2010 09:18**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sodium (Na)	31.2	0.5	5	40.38	-180	80	120	43.25	32.5(20)	M3 R58
Magnesium (Mg)	16.5	0.5	5	19.3	-57	80	120	23.45	35.0(20)	M2 R58
Potassium (K)	4.62	0.5	5	2.17	49	80	120	6.658	36.2(20)	M2 R58
Calcium (Ca)	34.4	0.5	5	47	-250	80	120	50.41	37.8(20)	M3 R58
Chromium (Cr)	0.0315	0.005	0.05	0	63	80	120	0.04754	40.6(20)	M2 R58
Iron (Fe)	2.94	0.2	5	0.1482	56	80	120	4.552	43.0(20)	M2 R58
Arsenic (As)	0.0351	0.002	0.05	0	70	80	120	0.04914	33.5(20)	M2 R58
Lead (Pb)	0.0338	0.005	0.05	0	68	80	120	0.04808	34.9(20)	M2 R58

Alpha Analytical, Inc.

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Date: *06-May-10*

QC Summary Report

Work Order: 10042944

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.

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.

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

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Date: *06-May-10*

QC Summary Report

Work Order: 10042944

Laboratory Control Spike Type **LCS** Test Code: **EPA Method 150.2 / SM4500HB / SW9040C**

File ID: Batch ID: **W0429PH** Analysis Date: **04/29/2010 15:30**

Sample ID: **LCS-W0429PH** Units : **pH Units** Run ID: **WETLAB_100429B** Prep Date: **04/29/2010 15:30**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
pH	5.03	1.7	5		101	90	110			

Comments:

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

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Date: *06-May-10*

QC Summary Report

Work Order: 10042944

Method Blank

Type **MBLK** Test Code: **SM2540C**

File ID: Batch ID: **W0428DS** Analysis Date: **04/30/2010 00:00**

Sample ID: **MBLK-W0428DS** Units : **mg/L** Run ID: **WETLAB_100428G** Prep Date: **04/30/2010 00:00**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Solids, Total Dissolved (TDS)	ND	10								

Laboratory Control Spike

Type **LCS** Test Code: **SM2540C**

File ID: Batch ID: **W0428DS** Analysis Date: **04/30/2010 00:00**

Sample ID: **LCS-W0428DS** Units : **mg/L** Run ID: **WETLAB_100428G** Prep Date: **04/30/2010 00:00**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Solids, Total Dissolved (TDS)	102	10	100		102	80	120			

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-May-10*

QC Summary Report

Work Order: 10042944

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

File ID: **C:\HPCHEM\MS07\DATA\100503\10050307.D** Batch ID: **MS07W0503M** Analysis Date: **05/03/2010 19:08**

Sample ID: **MBLK MS07W0503M** Units : **µg/L** Run ID: **MSD_07_100503B** Prep Date: **05/03/2010 19:08**

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	10.8		10		108	70	130			
Surr: Toluene-d8	9.74		10		97	70	130			

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Date: *11-May-10*

QC Summary Report

Work Order: 10042944

Surr: 4-Bromofluorobenzene	9.77		10	98	70	130				

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

File ID: **C:\HPCHEM\MS07\DATA\100503\10050304.D** Batch ID: **MS07W0503M** Analysis Date: **05/03/2010 17:58**

Sample ID: **LCS MS07W0503M** Units : **µg/L** Run ID: **MSD_07_100503B** Prep Date: **05/03/2010 17:58**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	9.35	1	10		94	70	130			
Chloromethane	10.8	2	10		108	70	130			
Vinyl chloride	11.5	1	10		115	70	130			
Chloroethane	11.8	1	10		118	70	130			
Bromomethane	10.7	2	10		107	70	130			
Trichlorofluoromethane	10.5	1	10		105	70	130			
1,1-Dichloroethene	11.9	1	10		119	70	130			
Dichloromethane	10.5	2	10		105	70	130			
trans-1,2-Dichloroethene	11.5	1	10		115	70	130			
Methyl tert-butyl ether (MTBE)	11.6	0.5	10		116	70	130			
1,1-Dichloroethane	11.7	1	10		117	70	130			
cis-1,2-Dichloroethene	11.4	1	10		114	70	130			
Bromochloromethane	10.7	1	10		107	70	130			
Chloroform	11.1	1	10		111	70	130			
2,2-Dichloropropane	13.5	1	10		135	70	130(130)			L51
1,2-Dichloroethane	11.9	1	10		119	70	130			
1,1,1-Trichloroethane	11.9	1	10		119	70	130			
1,1-Dichloropropene	12	1	10		120	70	130			
Carbon tetrachloride	11.5	1	10		115	70	130			
Benzene	11.2	0.5	10		112	70	130			
Dibromomethane	11	1	10		110	70	130			
1,2-Dichloropropane	12	1	10		120	70	130			
Trichloroethene	11.1	1	10		111	70	130			
Bromodichloromethane	11.8	1	10		118	70	130			
cis-1,3-Dichloropropene	11.9	1	10		119	70	130			
trans-1,3-Dichloropropene	12.2	1	10		122	70	130			
1,1,2-Trichloroethane	10.7	1	10		107	70	130			
Toluene	10.5	0.5	10		105	70	130			
1,3-Dichloropropane	10.5	1	10		105	70	130			
Dibromochloromethane	10.7	1	10		107	70	130			
1,2-Dibromoethane (EDB)	20.1	2	20		101	70	130			
Tetrachloroethene	10.3	1	10		103	70	130			
1,1,1,2-Tetrachloroethane	10.1	1	10		101	70	130			
Chlorobenzene	10	1	10		100	70	130			
Ethylbenzene	10.8	0.5	10		108	70	130			
m,p-Xylene	10.6	0.5	10		106	70	130			
Bromoform	10.8	1	10		108	70	130			
Styrene	14.7	1	10		147	70	130(130)			L51
o-Xylene	10.9	0.5	10		109	70	130			
1,1,2,2-Tetrachloroethane	9.03	1	10		90	70	130			
1,2,3-Trichloropropane	21.3	2	20		107	70	130			
Isopropylbenzene	11	1	10		110	70	130			
Bromobenzene	9.37	1	10		94	70	130			
n-Propylbenzene	10.2	1	10		102	70	130			
4-Chlorotoluene	10.3	1	10		103	70	130			
2-Chlorotoluene	10.3	1	10		103	70	130			
1,3,5-Trimethylbenzene	10.4	1	10		104	70	130			
tert-Butylbenzene	10.4	1	10		104	70	130			
1,2,4-Trimethylbenzene	10.4	1	10		104	70	130			
sec-Butylbenzene	10.3	1	10		103	70	130			
1,3-Dichlorobenzene	9.22	1	10		92	70	130			
1,4-Dichlorobenzene	9.28	1	10		93	70	130			
4-Isopropyltoluene	10.8	1	10		108	70	130			
1,2-Dichlorobenzene	8.75	1	10		88	70	130			
n-Butylbenzene	11.6	1	10		116	70	130			
1,2-Dibromo-3-chloropropane (DBCP)	43.1	3	50		86	70	130			
1,2,4-Trichlorobenzene	9.34	2	10		93	70	130			
Naphthalene	9.7	2	10		97	70	130			
Hexachlorobutadiene	20.7	2	20		104	70	130			
1,2,3-Trichlorobenzene	9.1	2	10		91	70	130			
Surr: 1,2-Dichloroethane-d4	11.1		10		111	70	130			
Surr: Toluene-d8	9.51		10		95	70	130			
Surr: 4-Bromofluorobenzene	9.44		10		94	70	130			

Alpha Analytical, Inc.

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

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

Date: *11-May-10*

QC Summary Report

Work Order: 10042944

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

File ID: **C:\HPCHEM\MS07\DATA\100503\10050308.D** Batch ID: **MS07W0503M** Analysis Date: **05/03/2010 19:31**

Sample ID: **10042923-03AMS** Units : **µg/L** Run ID: **MSD_07_100503B** Prep Date: **05/03/2010 19:31**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	24.9	2.5	50	0	50	13	167			
Chloromethane	40.8	10	50	0	82	28	145			
Vinyl chloride	44.9	2.5	50	0	90	43	134			
Chloroethane	44.9	2.5	50	0	90	39	154			
Bromomethane	45.4	10	50	0	91	19	176			
Trichlorofluoromethane	43.5	2.5	50	0	87	34	160			
1,1-Dichloroethene	50.4	2.5	50	0	101	60	130			
Dichloromethane	45.4	10	50	0	91	68	130			
trans-1,2-Dichloroethene	49.6	2.5	50	0	99	63	130			
Methyl tert-butyl ether (MTBE)	49.9	1.3	50	0	99.8	56	141			
1,1-Dichloroethane	51	2.5	50	0	102	61	130			
cis-1,2-Dichloroethene	49.4	2.5	50	0	99	70	130			
Bromochloromethane	46.3	2.5	50	0	93	70	130			
Chloroform	49.1	2.5	50	0	98	67	130			
2,2-Dichloropropane	53.8	2.5	50	0	108	30	152			
1,2-Dichloroethane	51.6	2.5	50	0	103	60	135			
1,1,1-Trichloroethane	51.6	2.5	50	0	103	59	137			
1,1-Dichloropropene	52	2.5	50	0	104	63	130			
Carbon tetrachloride	50.9	2.5	50	0	102	50	147			
Benzene	49.5	1.3	50	0	99	67	130			
Dibromomethane	47.6	2.5	50	0	95	69	133			
1,2-Dichloropropane	53.8	2.5	50	0	108	69	130			
Trichloroethene	49.3	2.5	50	0	99	69	130			
Bromodichloromethane	50.3	2.5	50	0	101	66	134			
cis-1,3-Dichloropropene	45.7	2.5	50	0	91	63	130			
trans-1,3-Dichloropropene	51.7	2.5	50	0	103	66	131			
1,1,2-Trichloroethane	46.8	2.5	50	0	94	68	130			
Toluene	47.1	1.3	50	0	94	66	130			
1,3-Dichloropropane	47.4	2.5	50	0	95	70	130			
Dibromochloromethane	43.2	2.5	50	0	86	70	130			
1,2-Dibromoethane (EDB)	88.6	5	100	0	89	70	130			
Tetrachloroethene	46.1	2.5	50	0	92	61	134			
1,1,1,2-Tetrachloroethane	44.2	2.5	50	0	88	70	130			
Chlorobenzene	45.3	2.5	50	0	91	70	130			
Ethylbenzene	48.9	1.3	50	0	98	68	130			
m,p-Xylene	47.5	1.3	50	0	95	64	130			
Bromoform	43	2.5	50	0	86	64	138			
Styrene	48.8	2.5	50	0	98	69	130			
o-Xylene	49.1	1.3	50	0	98	70	130			
1,1,2,2-Tetrachloroethane	40.4	2.5	50	0	81	65	131			
1,2,3-Trichloropropane	89.5	10	100	0	90	70	130			
Isopropylbenzene	49.6	2.5	50	0	99	64	138			
Bromobenzene	42.3	2.5	50	0	85	70	130			
n-Propylbenzene	46.5	2.5	50	0	93	66	132			
4-Chlorotoluene	46.4	2.5	50	0	93	70	130			
2-Chlorotoluene	46.8	2.5	50	0	94	70	130			
1,3,5-Trimethylbenzene	46.4	2.5	50	0	93	66	136			
tert-Butylbenzene	47.1	2.5	50	0	94	65	137			
1,2,4-Trimethylbenzene	45.9	2.5	50	0	92	65	137			
sec-Butylbenzene	46.5	2.5	50	0	93	66	134			
1,3-Dichlorobenzene	41.5	2.5	50	0	83	70	130			
1,4-Dichlorobenzene	42	2.5	50	0	84	70	130			
4-Isopropyltoluene	48	2.5	50	0	96	66	137			
1,2-Dichlorobenzene	39.3	2.5	50	0	79	70	130			
n-Butylbenzene	51.1	2.5	50	0	102	60	142			
1,2-Dibromo-3-chloropropane (DBCP)	180	15	250	0	72	67	130			
1,2,4-Trichlorobenzene	41.6	10	50	0	83	61	137			
Naphthalene	41.6	10	50	0	83	40	167			
Hexachlorobutadiene	88.5	10	100	0	88	61	130			
1,2,3-Trichlorobenzene	40.3	10	50	0	81	51	144			
Surr: 1,2-Dichloroethane-d4	54.5		50		109	70	130			
Surr: Toluene-d8	47.5		50		95	70	130			
Surr: 4-Bromofluorobenzene	47.9		50		96	70	130			

Alpha Analytical, Inc.

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

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

Date: *11-May-10*

QC Summary Report

Work Order: 10042944

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

File ID: **C:\HPCHEM\MS07\DATA\100503\10050309.D** Batch ID: **MS07W0503M** Analysis Date: **05/03/2010 19:53**

Sample ID: **10042923-03AMSD** Units : **µg/L** Run ID: **MSD_07_100503B** Prep Date: **05/03/2010 19:53**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	25.9	2.5	50	0	52	13	167	24.89	4.1(20)	
Chloromethane	43.3	10	50	0	87	28	145	40.76	6.0(20)	
Vinyl chloride	48.4	2.5	50	0	97	43	134	44.85	7.5(20)	
Chloroethane	49.3	2.5	50	0	99	39	154	44.85	9.4(20)	
Bromomethane	55	10	50	0	110	19	176	45.39	19.2(20)	
Trichlorofluoromethane	45.1	2.5	50	0	90	34	160	43.52	3.6(20)	
1,1-Dichloroethene	45.6	2.5	50	0	91	60	130	50.35	9.8(20)	
Dichloromethane	46.9	10	50	0	94	68	130	45.35	3.3(20)	
trans-1,2-Dichloroethene	51.6	2.5	50	0	103	63	130	49.56	4.0(20)	
Methyl tert-butyl ether (MTBE)	52.6	1.3	50	0	105	56	141	49.88	5.2(20)	
1,1-Dichloroethane	52.7	2.5	50	0	105	61	130	51	3.3(20)	
cis-1,2-Dichloroethene	51.3	2.5	50	0	103	70	130	49.4	3.8(20)	
Bromochloromethane	48.2	2.5	50	0	96	70	130	46.25	4.0(20)	
Chloroform	50.2	2.5	50	0	100	67	130	49.14	2.1(20)	
2,2-Dichloropropane	54.8	2.5	50	0	110	30	152	53.77	2.0(20)	
1,2-Dichloroethane	52.7	2.5	50	0	105	60	135	51.61	2.1(20)	
1,1,1-Trichloroethane	53.3	2.5	50	0	107	59	137	51.58	3.2(20)	
1,1-Dichloropropene	53.6	2.5	50	0	107	63	130	51.97	3.2(20)	
Carbon tetrachloride	52.2	2.5	50	0	104	50	147	50.93	2.5(20)	
Benzene	51	1.3	50	0	102	67	130	49.49	3.0(20)	
Dibromomethane	48.6	2.5	50	0	97	69	133	47.64	2.0(20)	
1,2-Dichloropropane	56.3	2.5	50	0	113	69	130	53.81	4.5(20)	
Trichloroethene	50.6	2.5	50	0	101	69	130	49.33	2.5(20)	
Bromodichloromethane	51.3	2.5	50	0	103	66	134	50.33	2.0(20)	
cis-1,3-Dichloropropene	46.8	2.5	50	0	94	63	130	45.74	2.3(20)	
trans-1,3-Dichloropropene	52.9	2.5	50	0	106	66	131	51.74	2.2(20)	
1,1,2-Trichloroethane	47.5	2.5	50	0	95	68	130	46.76	1.5(20)	
Toluene	49	1.3	50	0	98	66	130	47.13	3.9(20)	
1,3-Dichloropropane	48.8	2.5	50	0	98	70	130	47.43	2.9(20)	
Dibromochloromethane	44.5	2.5	50	0	89	70	130	43.19	3.0(20)	
1,2-Dibromoethane (EDB)	92.1	5	100	0	92	70	130	88.58	3.9(20)	
Tetrachloroethene	47.6	2.5	50	0	95	61	134	46.1	3.2(20)	
1,1,1,2-Tetrachloroethane	45.8	2.5	50	0	92	70	130	44.2	3.5(20)	
Chlorobenzene	46.6	2.5	50	0	93	70	130	45.31	2.8(20)	
Ethylbenzene	50.8	1.3	50	0	102	68	130	48.91	3.8(20)	
m,p-Xylene	49.6	1.3	50	0	99	64	130	47.45	4.3(20)	
Bromoform	44.2	2.5	50	0	88	64	138	43.04	2.6(20)	
Styrene	51	2.5	50	0	102	69	130	48.84	4.3(20)	
o-Xylene	51.3	1.3	50	0	103	70	130	49.09	4.5(20)	
1,1,2,2-Tetrachloroethane	41.8	2.5	50	0	84	65	131	40.41	3.5(20)	
1,2,3-Trichloropropane	92.6	10	100	0	93	70	130	89.5	3.4(20)	
Isopropylbenzene	50.5	2.5	50	0	101	64	138	49.61	1.7(20)	
Bromobenzene	43.1	2.5	50	0	86	70	130	42.33	1.8(20)	
n-Propylbenzene	47.3	2.5	50	0	95	66	132	46.45	1.8(20)	
4-Chlorotoluene	47.6	2.5	50	0	95	70	130	46.38	2.6(20)	
2-Chlorotoluene	47.8	2.5	50	0	96	70	130	46.82	2.2(20)	
1,3,5-Trimethylbenzene	47.6	2.5	50	0	95	66	136	46.39	2.5(20)	
tert-Butylbenzene	48.1	2.5	50	0	96	65	137	47.05	2.2(20)	
1,2,4-Trimethylbenzene	47.6	2.5	50	0	95	65	137	45.88	3.6(20)	
sec-Butylbenzene	47.7	2.5	50	0	95	66	134	46.5	2.6(20)	
1,3-Dichlorobenzene	43.5	2.5	50	0	87	70	130	41.53	4.7(20)	
1,4-Dichlorobenzene	43.1	2.5	50	0	86	70	130	41.99	2.7(20)	
4-Isopropyltoluene	49.3	2.5	50	0	99	66	137	48.04	2.6(20)	
1,2-Dichlorobenzene	40.8	2.5	50	0	82	70	130	39.29	3.7(20)	
n-Butylbenzene	53.2	2.5	50	0	106	60	142	51.12	3.9(20)	
1,2-Dibromo-3-chloropropane (DBCP)	191	15	250	0	76	67	130	180.2	5.7(20)	
1,2,4-Trichlorobenzene	44.4	10	50	0	89	61	137	41.58	6.6(20)	
Naphthalene	45.2	10	50	0	90	40	167	41.55	8.3(20)	
Hexachlorobutadiene	93.1	10	100	0	93	61	130	88.45	5.1(20)	
1,2,3-Trichlorobenzene	43.2	10	50	0	86	51	144	40.27	7.0(20)	
Surr: 1,2-Dichloroethane-d4	53.5		50		107	70	130			
Surr: Toluene-d8	48.2		50		96	70	130			
Surr: 4-Bromofluorobenzene	47.2		50		94	70	130			

Alpha Analytical, Inc.

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

Date: *11-May-10*

QC Summary Report

Work Order: 10042944

Comments:

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

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

L51 = Analyte recovery was above acceptance limits for the LCS, but was acceptable in the MS/MSD.

Billing Information :

CHAIN-OF-CUSTODY RECORD

AMENDED

CA

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

WorkOrder : BMIS10042944

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

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

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

EDD Required : **Yes**

Sampled by : David Loera

PO : 218013

Client's COC # : 30800 Job : G005862/JPL Groundwater Monitoring

Cooler Temp	Samples Received	Date Printed
4 °C	29-Apr-2010	03-May-2010

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

Alpha Sample ID	Client Sample ID	Matrix	Collection Date	No. of Bottles Alpha	Sub	TAT	Requested Tests 300_0_W	314_W	ALKALINITY_W	METALS_DW	PH_W	TDS_W	VOC_TIC_W	VOC_W	Sample Remarks
BMI10042944-01A	MW-16	AQ	04/28/10 10:28	7	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Ca, Mg, K, Na, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	

Comments: Security seals intact. Frozen ice. Temp Blank #8668 received @ 4°C. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). Logged in metals by 200.8, per previous workorder. : Amended 5/3/10 @ 8:28: Per email from David Conner added PO# 218013. EA

	Signature	Print Name	Company	Date/Time
Logged in by:	Elizabeth Adcox	Elizabeth Adcox	**Alpha Analytical, Inc.**	5/3/10 8:28

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 : BMIS10042944

Report Due By : 5:00 PM On : 13-May-10

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

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

EDD Required : **Yes**

Sampled by : David Loera

PO : 214375

Client's COC # : 30800 Job : G005862/JPL Groundwater Monitoring

Cooler Temp	Samples Received	Date Printed
4 °C	29-Apr-10	**29-Apr-10**

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

Alpha Sample ID	Client Sample ID	Matrix	Collection Date	No. of Bottles Alpha	Sub	TAT	Requested Tests 300_0_W	314_W	ALKALINITY_W	METALS_DW	PH_W	TDS_W	VOC_TIC_W	VOC_W	Sample Remarks
BMI10042944-01A	MW-16	AQ	04/28/10 10:28	7	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Ca, Mg, K, Na, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	

Comments: Security seals intact. Frozen ice. Temp Blank #8668 received @ 4°C. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). Logged in metals by 200.8, per previous workorder. :

	Signature	Print Name	Company	Date/Time
Logged in by:	Tina Dickinson	Tina Dickinson	**Alpha Analytical, Inc.**	4/29/10 1130

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

30800

Billing Information:
Company Name Battelle
Attn: Jerry Tomkins
Address 505 King Ave
City, State, Zip Columbus OH 43201
Phone Number 614-424-4849 Fax 614-424-3667

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

Samples Collected From Which State?
AZ ____ CA X NV ____ WA ____ DOD Site ____
ID ____ OR ____ OTHER ____ Page # 1 of 1

Consultant / Client Name David Conner
Address
City, State, Zip
Job # 214375
Job Name G005862/JPL GWM
Report Attention / Project Manager
Name: David Conner
Email: connerd@battelle.org
Phone: 614-726-811 Mobile:
P.O. # 214375

Data Validation Level: (III) or IV
EDD/EDF? YES X NO ____
Global ID # ____

Time Sampled	Date Sampled	Matrix* See Key Below	Lab ID Number (Office Use Only)	Sample Description	TAT	Field Filtered	# Containers**	VOCs (524.2)	Perchlorate (CADHS EPA 314.0)	Total Cr, Pb, As, Ca, Mg, K, Na (200.8)	Fe (200.8)	Alk, Cl, NO2, NO3, SO4 Ortho-PTDS, pH	Carbonate Bicarbonate (SM2320B)		REMARKS
1028	4/28/10	AQ	3MII1004294401	MW-16	10			X	X	X	X	X	X		

FOR LAB USE ONLY

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 Loera

Relinquished by: (Signature/Affiliation)	Received by: (Signature/Affiliation)	Date	Time
David L / Battelle	/ INSIGHT	4/28/10	1140
/ INSIGHT	/ Alpha Analytical	4/28/10	1200
/ Alpha Analytical	/ Alpha 4/29/10 11:24	4/28/10	1300

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

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

Alpha Analytical, Inc.

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

Date: *12-May-10*

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

CASE NARRATIVE

Job: G005862/JPL Groundwater Monitoring
Work Order: BMI10043041 **Cooler Temp:** 4 °C

Alpha's Sample ID	Client's Sample ID	Matrix
10043041-01A	MW-8	Aqueous
10043041-02A	MW-15	Aqueous
10043041-03A	MW-24-5	Aqueous
10043041-04A	MW-24-4	Aqueous
10043041-05A	MW-24-3	Aqueous
10043041-06A	MW-24-2	Aqueous
10043041-07A	MW-24-1	Aqueous
10043041-08A	EB-03-04/29/10	Aqueous
10043041-09A	TB-03-04/29/10	Aqueous

Manually Integrated Analytes

Alpha's Sample ID	Test Reference	Analyte
10043041-04A	EPA Method 314.0	Perchlorate

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

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

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

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 04/30/10

Job: G005862/JPL Groundwater Monitoring

Anions by IC
EPA Method 300.0

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-8**				
Lab ID : BMI10043041-01A Chloride	14	0.50 mg/L	04/30/10 13:22	04/30/10 15:49
Date Sampled 04/29/10 09:33 Nitrite (NO2) - N	ND	0.25 mg/L	04/30/10 13:22	04/30/10 15:49
Nitrate (NO3) - N	1.3	0.25 mg/L	04/30/10 13:22	04/30/10 15:49
Phosphate, ortho - P	ND	0.50 mg/L	04/30/10 13:22	04/30/10 15:49
Sulfate (SO4)	45	0.50 mg/L	04/30/10 13:22	04/30/10 15:49
Client ID: **MW-15**				
Lab ID : BMI10043041-02A Chloride	6.5	0.50 mg/L	04/30/10 13:22	04/30/10 16:45
Date Sampled 04/29/10 11:40 Nitrite (NO2) - N	ND	0.25 mg/L	04/30/10 13:22	04/30/10 16:45
Nitrate (NO3) - N	2.8	0.25 mg/L	04/30/10 13:22	04/30/10 16:45
Sulfate (SO4)	20	0.50 mg/L	04/30/10 13:22	04/30/10 16:45
Client ID: **MW-24-5**				
Lab ID : BMI10043041-03A Chloride	8.8	0.50 mg/L	04/30/10 13:22	04/30/10 17:03
Date Sampled 04/29/10 08:29 Nitrite (NO2) - N	ND	0.25 mg/L	04/30/10 13:22	04/30/10 17:03
Nitrate (NO3) - N	1.2	0.25 mg/L	04/30/10 13:22	04/30/10 17:03
Sulfate (SO4)	20	0.50 mg/L	04/30/10 13:22	04/30/10 17:03
Client ID: **MW-24-4**				
Lab ID : BMI10043041-04A Chloride	18	0.50 mg/L	04/30/10 13:22	04/30/10 17:22
Date Sampled 04/29/10 09:08 Nitrite (NO2) - N	ND	0.25 mg/L	04/30/10 13:22	04/30/10 17:22
Nitrate (NO3) - N	ND	0.25 mg/L	04/30/10 13:22	04/30/10 17:22
Sulfate (SO4)	2.2	0.50 mg/L	04/30/10 13:22	04/30/10 17:22
Client ID: **MW-24-3**				
Lab ID : BMI10043041-05A Chloride	17	0.50 mg/L	04/30/10 13:22	04/30/10 17:40
Date Sampled 04/29/10 09:38 Nitrite (NO2) - N	ND	0.25 mg/L	04/30/10 13:22	04/30/10 17:40
Nitrate (NO3) - N	ND	0.25 mg/L	04/30/10 13:22	04/30/10 17:40
Sulfate (SO4)	15	0.50 mg/L	04/30/10 13:22	04/30/10 17:40
Client ID: **MW-24-2**				
Lab ID : BMI10043041-06A Chloride	44	0.50 mg/L	04/30/10 13:22	04/30/10 17:59
Date Sampled 04/29/10 10:21 Nitrite (NO2) - N	ND	0.25 mg/L	04/30/10 13:22	04/30/10 17:59
Nitrate (NO3) - N	1.8	0.25 mg/L	04/30/10 13:22	04/30/10 17:59
Sulfate (SO4)	26	0.50 mg/L	04/30/10 13:22	04/30/10 17:59
Client ID: **MW-24-1**				
Lab ID : BMI10043041-07A Chloride	83	0.50 mg/L	04/30/10 13:22	04/30/10 18:17
Date Sampled 04/29/10 11:12 Nitrite (NO2) - N	ND	0.25 mg/L	04/30/10 13:22	04/30/10 18:17
Nitrate (NO3) - N	1.2	0.25 mg/L	04/30/10 13:22	04/30/10 18:17
Sulfate (SO4)	49	0.50 mg/L	04/30/10 13:22	04/30/10 18:17

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Client ID: **EB-03-04/29/10**

Lab ID : BM110043041-08A	Chloride	ND	0.50 mg/L	04/30/10 13:22	04/30/10 18:36
Date Sampled 04/29/10 10:54	Nitrite (NO2) - N	ND	0.25 mg/L	04/30/10 13:22	04/30/10 18:36
	Nitrate (NO3) - N	ND	0.25 mg/L	04/30/10 13:22	04/30/10 18:36
	Sulfate (SO4)	ND	0.50 mg/L	04/30/10 13:22	04/30/10 18:36

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.

5/13/10

Report Date

Alpha Analytical, Inc.

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ANALYTICAL REPORT

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 04/30/10

Job: G005862/JPL Groundwater Monitoring

Perchlorate by Ion Chromatography
EPA Method 314.0

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-8**				
Lab ID : BMI10043041-01A Perchlorate	5.47	1.00 µg/L	05/03/10 10:51	05/03/10 13:41
Date Sampled 04/29/10 09:33				
Client ID: **MW-15**				
Lab ID : BMI10043041-02A Perchlorate	ND	1.00 µg/L	05/03/10 10:51	05/03/10 13:59
Date Sampled 04/29/10 11:40				
Client ID: **MW-24-5**				
Lab ID : BMI10043041-03A Perchlorate	ND	1.00 µg/L	05/03/10 10:51	05/03/10 17:22
Date Sampled 04/29/10 08:29				
Client ID: **MW-24-4**				
Lab ID : BMI10043041-04A Perchlorate	1.28	1.00 µg/L	05/03/10 10:51	05/03/10 14:36
Date Sampled 04/29/10 09:08				
Client ID: **MW-24-3**				
Lab ID : BMI10043041-05A Perchlorate	ND	1.00 µg/L	05/03/10 10:51	05/03/10 14:54
Date Sampled 04/29/10 09:38				
Client ID: **MW-24-2**				
Lab ID : BMI10043041-06A Perchlorate	8.56	1.00 µg/L	05/03/10 10:51	05/03/10 15:50
Date Sampled 04/29/10 10:21				
Client ID: **MW-24-1**				
Lab ID : BMI10043041-07A Perchlorate	1.58	1.00 µg/L	05/03/10 10:51	05/03/10 16:08
Date Sampled 04/29/10 11:12				
Client ID: **EB-03-04/29/10**				
Lab ID : BMI10043041-08A Perchlorate	ND	1.00 µg/L	05/03/10 10:51	05/03/10 17:03
Date Sampled 04/29/10 10:54				

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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5/13/10
Report Date

Alpha Analytical, Inc.

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ANALYTICAL REPORT

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 04/30/10

Job: G005862/JPL Groundwater Monitoring

Alkalinity
SM2320B

Parameter		Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-8**					
Lab ID : BMI10043041-01A	Alkalinity, Bicarbonate (As CaCO3)	190	10 mg/L	04/30/10 15:07	04/30/10 15:07
Date Sampled 04/29/10 09:33	Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	04/30/10 15:07	04/30/10 15:07
	Alkalinity, Total (As CaCO3 at pH 4.5)	190	10 mg/L	04/30/10 15:07	04/30/10 15:07
Client ID: **MW-15**					
Lab ID : BMI10043041-02A	Alkalinity, Bicarbonate (As CaCO3)	170	10 mg/L	04/30/10 15:13	04/30/10 15:13
Date Sampled 04/29/10 11:40	Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	04/30/10 15:13	04/30/10 15:13
	Alkalinity, Total (As CaCO3 at pH 4.5)	170	10 mg/L	04/30/10 15:13	04/30/10 15:13
Client ID: **MW-24-5**					
Lab ID : BMI10043041-03A	Alkalinity, Bicarbonate (As CaCO3)	170	10 mg/L	04/30/10 15:16	04/30/10 15:16
Date Sampled 04/29/10 08:29	Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	04/30/10 15:16	04/30/10 15:16
	Alkalinity, Total (As CaCO3 at pH 4.5)	170	10 mg/L	04/30/10 15:16	04/30/10 15:16
Client ID: **MW-24-4**					
Lab ID : BMI10043041-04A	Alkalinity, Bicarbonate (As CaCO3)	20	10 mg/L	04/30/10 15:19	04/30/10 15:19
Date Sampled 04/29/10 09:08	Alkalinity, Carbonate (As CaCO3)	82	10 mg/L	04/30/10 15:19	04/30/10 15:19
	Alkalinity, Total (As CaCO3 at pH 4.5)	100	10 mg/L	04/30/10 15:19	04/30/10 15:19
Client ID: **MW-24-3**					
Lab ID : BMI10043041-05A	Alkalinity, Bicarbonate (As CaCO3)	170	10 mg/L	04/30/10 15:23	04/30/10 15:23
Date Sampled 04/29/10 09:38	Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	04/30/10 15:23	04/30/10 15:23
	Alkalinity, Total (As CaCO3 at pH 4.5)	170	10 mg/L	04/30/10 15:23	04/30/10 15:23
Client ID: **MW-24-2**					
Lab ID : BMI10043041-06A	Alkalinity, Bicarbonate (As CaCO3)	170	10 mg/L	04/30/10 15:27	04/30/10 15:27
Date Sampled 04/29/10 10:21	Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	04/30/10 15:27	04/30/10 15:27
	Alkalinity, Total (As CaCO3 at pH 4.5)	170	10 mg/L	04/30/10 15:27	04/30/10 15:27
Client ID: **MW-24-1**					
Lab ID : BMI10043041-07A	Alkalinity, Bicarbonate (As CaCO3)	190	10 mg/L	04/30/10 15:31	04/30/10 15:31
Date Sampled 04/29/10 11:12	Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	04/30/10 15:31	04/30/10 15:31
	Alkalinity, Total (As CaCO3 at pH 4.5)	190	10 mg/L	04/30/10 15:31	04/30/10 15:31
Client ID: **EB-03-04/29/10**					
Lab ID : BMI10043041-08A	Alkalinity, Bicarbonate (As CaCO3)	ND	10 mg/L	04/30/10 15:42	04/30/10 15:42
Date Sampled 04/29/10 10:54	Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	04/30/10 15:42	04/30/10 15:42
	Alkalinity, Total (As CaCO3 at pH 4.5)	ND	10 mg/L	04/30/10 15:42	04/30/10 15:42

Alpha Analytical, Inc.

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ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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

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5/13/10

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
3990 Old Town Ave
San Diego, CA 92110

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 04/30/10

Job: G005862/JPL Groundwater Monitoring

Metals by ICPMS
EPA Method 200.8

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-8**				
Lab ID : BMI10043041-01A Sodium (Na)	19	0.50 mg/L	05/07/10 08:27	05/10/10 17:50
Date Sampled 04/29/10 09:33 Magnesium (Mg)	16	0.50 mg/L	05/07/10 08:27	05/10/10 17:50
Potassium (K)	2.7	0.50 mg/L	05/07/10 08:27	05/10/10 17:50
Calcium (Ca)	56	0.50 mg/L	05/07/10 08:27	05/10/10 17:50
Chromium (Cr)	ND	0.0050 mg/L	05/07/10 08:27	05/10/10 17:50
Iron (Fe)	0.16	0.10 mg/L	05/07/10 08:27	05/10/10 17:50
Arsenic (As)	ND	0.0020 mg/L	05/07/10 08:27	05/10/10 17:50
Lead (Pb)	ND	0.0050 mg/L	05/07/10 08:27	05/10/10 17:50
Client ID: **MW-15**				
Lab ID : BMI10043041-02A Sodium (Na)	24	0.50 mg/L	05/07/10 08:27	05/10/10 18:13
Date Sampled 04/29/10 11:40 Magnesium (Mg)	13	0.50 mg/L	05/07/10 08:27	05/10/10 18:13
Potassium (K)	2.6	0.50 mg/L	05/07/10 08:27	05/10/10 18:13
Calcium (Ca)	43	0.50 mg/L	05/07/10 08:27	05/10/10 18:13
Chromium (Cr)	ND	0.0050 mg/L	05/07/10 08:27	05/10/10 18:13
Iron (Fe)	0.13	0.10 mg/L	05/07/10 08:27	05/10/10 18:13
Arsenic (As)	ND	0.0020 mg/L	05/07/10 08:27	05/10/10 18:13
Lead (Pb)	ND	0.0050 mg/L	05/07/10 08:27	05/10/10 18:13
Client ID: **MW-24-5**				
Lab ID : BMI10043041-03A Sodium (Na)	37	0.50 mg/L	05/07/10 08:27	05/10/10 18:18
Date Sampled 04/29/10 08:29 Magnesium (Mg)	8.8	0.50 mg/L	05/07/10 08:27	05/10/10 18:18
Potassium (K)	1.8	0.50 mg/L	05/07/10 08:27	05/10/10 18:18
Calcium (Ca)	36	0.50 mg/L	05/07/10 08:27	05/10/10 18:18
Chromium (Cr)	ND	0.0050 mg/L	05/07/10 08:27	05/10/10 18:18
Iron (Fe)	0.11	0.10 mg/L	05/07/10 08:27	05/10/10 18:18
Arsenic (As)	0.0030	0.0020 mg/L	05/07/10 08:27	05/11/10 11:48
Lead (Pb)	ND	0.0050 mg/L	05/07/10 08:27	05/10/10 18:18
Client ID: **MW-24-4**				
Lab ID : BMI10043041-04A Sodium (Na)	36	0.50 mg/L	05/07/10 08:27	05/10/10 18:24
Date Sampled 04/29/10 09:08 Magnesium (Mg)	5.3	0.50 mg/L	05/07/10 08:27	05/10/10 18:24
Potassium (K)	1.9	0.50 mg/L	05/07/10 08:27	05/10/10 18:24
Calcium (Ca)	5.2	0.50 mg/L	05/07/10 08:27	05/10/10 18:24
Chromium (Cr)	ND	0.0050 mg/L	05/07/10 08:27	05/10/10 18:24
Iron (Fe)	ND	0.10 mg/L	05/07/10 08:27	05/10/10 18:24
Arsenic (As)	ND	0.0020 mg/L	05/07/10 08:27	05/10/10 18:24
Lead (Pb)	ND	0.0050 mg/L	05/07/10 08:27	05/10/10 18:24

Alpha Analytical, Inc.

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Client ID: **MW-24-3**					
Lab ID : BMI10043041-05A	Sodium (Na)	37	0.50 mg/L	05/07/10 08:27	05/10/10 18:30
Date Sampled 04/29/10 09:38	Magnesium (Mg)	11	0.50 mg/L	05/07/10 08:27	05/10/10 18:30
	Potassium (K)	1.9	0.50 mg/L	05/07/10 08:27	05/10/10 18:30
	Calcium (Ca)	29	0.50 mg/L	05/07/10 08:27	05/10/10 18:30
	Chromium (Cr)	ND	0.0050 mg/L	05/07/10 08:27	05/10/10 18:30
	Iron (Fe)	0.11	0.10 mg/L	05/07/10 08:27	05/10/10 18:30
	Arsenic (As)	0.0025	0.0020 mg/L	05/07/10 08:27	05/10/10 18:30
	Lead (Pb)	ND	0.0050 mg/L	05/07/10 08:27	05/10/10 18:30
Client ID: **MW-24-2**					
Lab ID : BMI10043041-06A	Sodium (Na)	41	0.50 mg/L	05/07/10 08:27	05/10/10 18:35
Date Sampled 04/29/10 10:21	Magnesium (Mg)	13	0.50 mg/L	05/07/10 08:27	05/10/10 18:35
	Potassium (K)	2.9	0.50 mg/L	05/07/10 08:27	05/10/10 18:35
	Calcium (Ca)	43	0.50 mg/L	05/07/10 08:27	05/10/10 18:35
	Chromium (Cr)	ND	0.0050 mg/L	05/07/10 08:27	05/10/10 18:35
	Iron (Fe)	0.18	0.10 mg/L	05/07/10 08:27	05/10/10 18:35
	Arsenic (As)	0.0023	0.0020 mg/L	05/07/10 08:27	05/10/10 18:35
	Lead (Pb)	ND	0.0050 mg/L	05/07/10 08:27	05/10/10 18:35
Client ID: **MW-24-1**					
Lab ID : BMI10043041-07A	Sodium (Na)	29	0.50 mg/L	05/07/10 08:27	05/10/10 18:41
Date Sampled 04/29/10 11:12	Magnesium (Mg)	21	0.50 mg/L	05/07/10 08:27	05/10/10 18:41
	Potassium (K)	3.3	0.50 mg/L	05/07/10 08:27	05/10/10 18:41
	Calcium (Ca)	77	0.50 mg/L	05/07/10 08:27	05/10/10 18:41
	Chromium (Cr)	0.012	0.0050 mg/L	05/07/10 08:27	05/10/10 18:41
	Iron (Fe)	0.86	0.10 mg/L	05/07/10 08:27	05/10/10 18:41
	Arsenic (As)	ND	0.0020 mg/L	05/07/10 08:27	05/10/10 18:41
	Lead (Pb)	ND	0.0050 mg/L	05/07/10 08:27	05/10/10 18:41
Client ID: **EB-03-04/29/10**					
Lab ID : BMI10043041-08A	Sodium (Na)	ND	0.50 mg/L	05/07/10 08:27	05/10/10 18:47
Date Sampled 04/29/10 10:54	Magnesium (Mg)	ND	0.50 mg/L	05/07/10 08:27	05/10/10 18:47
	Potassium (K)	ND	0.50 mg/L	05/07/10 08:27	05/10/10 18:47
	Calcium (Ca)	ND	0.50 mg/L	05/07/10 08:27	05/10/10 18:47
	Chromium (Cr)	ND	0.0050 mg/L	05/07/10 08:27	05/10/10 18:47
	Iron (Fe)	ND	0.10 mg/L	05/07/10 08:27	05/10/10 18:47
	Arsenic (As)	ND	0.0020 mg/L	05/07/10 08:27	05/10/10 18:47
	Lead (Pb)	ND	0.0050 mg/L	05/07/10 08:27	05/10/10 18:47

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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✓

5/13/10

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
3990 Old Town Ave
San Diego, CA 92110

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 04/30/10

Job: G005862/JPL Groundwater Monitoring

pH (Range 1.7 to 12.4)
EPA Method 150.2 / SM4500HB / SW9040C

Parameter		Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-8**					
Lab ID : BMI10043041-01A	pH	7.1	1.7 pH Units	04/30/10 15:07	04/30/10 15:07
Date Sampled 04/29/10 09:33	pH - Temperature	18	1.0 °C	04/30/10 15:07	04/30/10 15:07
Client ID: **MW-15**					
Lab ID : BMI10043041-02A	pH	7.3	1.7 pH Units	04/30/10 15:13	04/30/10 15:13
Date Sampled 04/29/10 11:40	pH - Temperature	18	1.0 °C	04/30/10 15:13	04/30/10 15:13
Client ID: **MW-24-5**					
Lab ID : BMI10043041-03A	pH	8.0	1.7 pH Units	04/30/10 15:16	04/30/10 15:16
Date Sampled 04/29/10 08:29	pH - Temperature	17	1.0 °C	04/30/10 15:16	04/30/10 15:16
Client ID: **MW-24-4**					
Lab ID : BMI10043041-04A	pH	9.4	1.7 pH Units	04/30/10 15:18	04/30/10 15:18
Date Sampled 04/29/10 09:08	pH - Temperature	17	1.0 °C	04/30/10 15:18	04/30/10 15:18
Client ID: **MW-24-3**					
Lab ID : BMI10043041-05A	pH	8.3	1.7 pH Units	04/30/10 15:20	04/30/10 15:20
Date Sampled 04/29/10 09:38	pH - Temperature	18	1.0 °C	04/30/10 15:20	04/30/10 15:20
Client ID: **MW-24-2**					
Lab ID : BMI10043041-06A	pH	7.8	1.7 pH Units	04/30/10 15:23	04/30/10 15:23
Date Sampled 04/29/10 10:21	pH - Temperature	17	1.0 °C	04/30/10 15:23	04/30/10 15:23
Client ID: **MW-24-1**					
Lab ID : BMI10043041-07A	pH	7.3	1.7 pH Units	04/30/10 15:25	04/30/10 15:25
Date Sampled 04/29/10 11:12	pH - Temperature	18	1.0 °C	04/30/10 15:25	04/30/10 15:25
Client ID: **EB-03-04/29/10**					
Lab ID : BMI10043041-08A	pH	6.2	1.7 pH Units	04/30/10 15:29	04/30/10 15:29
Date Sampled 04/29/10 10:54	pH - Temperature	18	1.0 °C	04/30/10 15:29	04/30/10 15:29

The EPA has established an analytical holding time of 15 minutes for this method as documented in the Methods Update Rule, Federal Register, Vol 72, No 47, March 2007. This holding time will always be exceeded, unless samples are analyzed in the field.
The laboratory performed this analysis in the shortest practical holding time after sample receipt.

Roger Scholl Randy Gardner Walter Hinchman

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

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ANALYTICAL REPORT

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 04/30/10

Job: G005862/JPL Groundwater Monitoring

Total Dissolved Solids (TDS)
SM2540C

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-8**				
Lab ID : BMI10043041-01A Solids, Total Dissolved (TDS)	240	10 mg/L	05/04/10	05/04/10
Date Sampled 04/29/10 09:33				
Client ID: **MW-15**				
Lab ID : BMI10043041-02A Solids, Total Dissolved (TDS)	210	10 mg/L	05/04/10	05/04/10
Date Sampled 04/29/10 11:40				
Client ID: **MW-24-5**				
Lab ID : BMI10043041-03A Solids, Total Dissolved (TDS)	230	10 mg/L	05/04/10	05/04/10
Date Sampled 04/29/10 08:29				
Client ID: **MW-24-4**				
Lab ID : BMI10043041-04A Solids, Total Dissolved (TDS)	120	10 mg/L	05/04/10	05/04/10
Date Sampled 04/29/10 09:08				
Client ID: **MW-24-3**				
Lab ID : BMI10043041-05A Solids, Total Dissolved (TDS)	210	10 mg/L	05/05/10	05/05/10
Date Sampled 04/29/10 09:38				
Client ID: **MW-24-2**				
Lab ID : BMI10043041-06A Solids, Total Dissolved (TDS)	260	10 mg/L	05/05/10	05/05/10
Date Sampled 04/29/10 10:21				
Client ID: **MW-24-1**				
Lab ID : BMI10043041-07A Solids, Total Dissolved (TDS)	380	10 mg/L	05/04/10	05/04/10
Date Sampled 04/29/10 11:12				
Client ID: **EB-03-04/29/10**				
Lab ID : BMI10043041-08A Solids, Total Dissolved (TDS)	13	10 mg/L	05/05/10	05/05/10
Date Sampled 04/29/10 10:54				

Roger Scholl Randy Gardner Walter Hinchman

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ANALYTICAL REPORT

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

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

Tentatively Identified Compounds - Volatile Organics by GC/MS

	Parameter	Estimated Concentration	Estimated Reporting Limit	Date Extracted	Date Analyzed
Client ID : **MW-8**					
Lab ID : BMI10043041-01A	*** None Found ***	ND	2.0 µg/L	05/04/10 01:36	05/04/10 01:36
Date Received : 04/30/10					
Date Sampled : 04/29/10 09:33					
Client ID : **MW-15**					
Lab ID : BMI10043041-02A	*** None Found ***	ND	2.0 µg/L	05/04/10 01:59	05/04/10 01:59
Date Received : 04/30/10					
Date Sampled : 04/29/10 11:40					
Client ID : **MW-24-5**					
Lab ID : BMI10043041-03A	*** None Found ***	ND	2.0 µg/L	05/04/10 02:22	05/04/10 02:22
Date Received : 04/30/10					
Date Sampled : 04/29/10 08:29					
Client ID : **MW-24-4**					
Lab ID : BMI10043041-04A	*** None Found ***	ND	2.0 µg/L	05/04/10 02:45	05/04/10 02:45
Date Received : 04/30/10					
Date Sampled : 04/29/10 09:08					
Client ID : **MW-24-3**					
Lab ID : BMI10043041-05A	*** None Found ***	ND	2.0 µg/L	05/04/10 03:08	05/04/10 03:08
Date Received : 04/30/10					
Date Sampled : 04/29/10 09:38					
Client ID : **MW-24-2**					
Lab ID : BMI10043041-06A	*** None Found ***	ND	2.0 µg/L	05/04/10 03:31	05/04/10 03:31
Date Received : 04/30/10					
Date Sampled : 04/29/10 10:21					
Client ID : **MW-24-1**					
Lab ID : BMI10043041-07A	*** None Found ***	ND	2.0 µg/L	05/04/10 03:53	05/04/10 03:53
Date Received : 04/30/10					
Date Sampled : 04/29/10 11:12					
Client ID : **EB-03-04/29/10**					
Lab ID : BMI10043041-08A	*** None Found ***	ND	2.0 µg/L	05/03/10 21:24	05/03/10 21:24
Date Received : 04/30/10					
Date Sampled : 04/29/10 10:54					
Client ID : **TB-03-04/29/10**					
Lab ID : BMI10043041-09A	*** None Found ***	ND	2.0 µg/L	05/03/10 21:47	05/03/10 21:47
Date Received : 04/30/10					
Date Sampled : 04/29/10 07:00					

Alpha Analytical, Inc.

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Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10043041-01A
Client I.D. Number: MW-8

Sampled: 04/29/10 09:33
Received: 04/30/10
Extracted: 05/04/10 01:36
Analyzed: 05/04/10 01:36

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	Q	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	Q	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	Q	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND		0.50	µg/L
18	1,2-Dichloroethane	ND		0.50	µg/L	53	sec-Butylbenzene	ND		0.50	µg/L
19	1,1,1-Trichloroethane	ND		0.50	µg/L	54	1,3-Dichlorobenzene	ND		0.50	µg/L
20	1,1-Dichloropropene	ND		0.50	µg/L	55	1,4-Dichlorobenzene	ND		0.50	µg/L
21	Carbon tetrachloride	ND		0.50	µg/L	56	4-Isopropyltoluene	ND		0.50	µg/L
22	Benzene	ND		0.50	µg/L	57	1,2-Dichlorobenzene	ND		0.50	µg/L
23	Dibromomethane	ND		0.50	µg/L	58	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	97		(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	97		(70-130)	%REC
32	1,3-Dichloropropane	ND		0.50	µg/L						
33	Dibromochloromethane	ND		0.50	µg/L						
34	1,2-Dibromoethane (EDB)	ND		1.0	µg/L						
35	Tetrachloroethene	ND		0.50	µg/L						

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10043041-02A
Client I.D. Number: MW-15

Sampled: 04/29/10 11:40
Received: 04/30/10
Extracted: 05/04/10 01:59
Analyzed: 05/04/10 01:59

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration		Reporting Limit	
1	Dichlorodifluoromethane	ND		0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND		0.50	µg/L
2	Chloromethane	ND		1.0	µg/L	37	Chlorobenzene	ND		0.50	µg/L
3	Vinyl chloride	ND		0.50	µg/L	38	Ethylbenzene	ND		0.50	µg/L
4	Chloroethane	ND		0.50	µg/L	39	m,p-Xylene	ND		0.50	µg/L
5	Bromomethane	ND		1.0	µg/L	40	Bromoform	ND		0.50	µg/L
6	Trichlorofluoromethane	ND		0.50	µg/L	41	Styrene	ND	Q	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	Q	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	Q	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND		0.50	µg/L
18	1,2-Dichloroethane	ND		0.50	µg/L	53	sec-Butylbenzene	ND		0.50	µg/L
19	1,1,1-Trichloroethane	ND		0.50	µg/L	54	1,3-Dichlorobenzene	ND		0.50	µg/L
20	1,1-Dichloropropene	ND		0.50	µg/L	55	1,4-Dichlorobenzene	ND		0.50	µg/L
21	Carbon tetrachloride	ND		0.50	µg/L	56	4-Isopropyltoluene	ND		0.50	µg/L
22	Benzene	ND		0.50	µg/L	57	1,2-Dichlorobenzene	ND		0.50	µg/L
23	Dibromomethane	ND		0.50	µg/L	58	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	97		(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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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10043041-03A
Client I.D. Number: MW-24-5

Sampled: 04/29/10 08:29
Received: 04/30/10
Extracted: 05/04/10 02:22
Analyzed: 05/04/10 02:22

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	Q	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	Q	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	Q	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND		0.50	µg/L
18	1,2-Dichloroethane	ND		0.50	µg/L	53	sec-Butylbenzene	ND		0.50	µg/L
19	1,1,1-Trichloroethane	ND		0.50	µg/L	54	1,3-Dichlorobenzene	ND		0.50	µg/L
20	1,1-Dichloropropene	ND		0.50	µg/L	55	1,4-Dichlorobenzene	ND		0.50	µg/L
21	Carbon tetrachloride	ND		0.50	µg/L	56	4-Isopropyltoluene	ND		0.50	µg/L
22	Benzene	ND		0.50	µg/L	57	1,2-Dichlorobenzene	ND		0.50	µg/L
23	Dibromomethane	ND		0.50	µg/L	58	n-Butylbenzene	ND		0.50	µg/L
24	1,2-Dichloropropane	ND		0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND		2.5	µg/L
25	Trichloroethene	ND		0.50	µg/L	60	1,2,4-Trichlorobenzene	ND		1.0	µg/L
26	Bromodichloromethane	ND		0.50	µg/L	61	Naphthalene	ND		1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND		2.5	µg/L	62	Hexachlorobutadiene	ND		1.0	µg/L
28	cis-1,3-Dichloropropene	ND		0.50	µg/L	63	1,2,3-Trichlorobenzene	ND		1.0	µg/L
29	trans-1,3-Dichloropropene	ND		0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	108		(70-130)	%REC
30	1,1,2-Trichloroethane	ND		0.50	µg/L	65	Surr: Toluene-d8	98		(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	98		(70-130)	%REC
32	1,3-Dichloropropane	ND		0.50	µg/L						
33	Dibromochloromethane	ND		0.50	µg/L						
34	1,2-Dibromoethane (EDB)	ND		1.0	µg/L						
35	Tetrachloroethene	ND		0.50	µg/L						

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

Roger Scholl 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.

5/13/10
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI10043041-04A
Client I.D. Number: MW-24-4

Sampled: 04/29/10 09:08
Received: 04/30/10
Extracted: 05/04/10 02:45
Analyzed: 05/04/10 02:45

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration		Reporting Limit	
1	Dichlorodifluoromethane	ND		0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND		0.50	µg/L
2	Chloromethane	ND		1.0	µg/L	37	Chlorobenzene	ND		0.50	µg/L
3	Vinyl chloride	ND		0.50	µg/L	38	Ethylbenzene	ND		0.50	µg/L
4	Chloroethane	ND		0.50	µg/L	39	m,p-Xylene	ND		0.50	µg/L
5	Bromomethane	ND		1.0	µg/L	40	Bromoform	ND		0.50	µg/L
6	Trichlorofluoromethane	ND		0.50	µg/L	41	Styrene	ND	Q	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	Q	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	Q	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND		0.50	µg/L
18	1,2-Dichloroethane	ND		0.50	µg/L	53	sec-Butylbenzene	ND		0.50	µg/L
19	1,1,1-Trichloroethane	ND		0.50	µg/L	54	1,3-Dichlorobenzene	ND		0.50	µg/L
20	1,1-Dichloropropene	ND		0.50	µg/L	55	1,4-Dichlorobenzene	ND		0.50	µg/L
21	Carbon tetrachloride	ND		0.50	µg/L	56	4-Isopropyltoluene	ND		0.50	µg/L
22	Benzene	ND		0.50	µg/L	57	1,2-Dichlorobenzene	ND		0.50	µg/L
23	Dibromomethane	ND		0.50	µg/L	58	n-Butylbenzene	ND		0.50	µg/L
24	1,2-Dichloropropane	ND		0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND		2.5	µg/L
25	Trichloroethene	ND		0.50	µg/L	60	1,2,4-Trichlorobenzene	ND		1.0	µg/L
26	Bromodichloromethane	ND		0.50	µg/L	61	Naphthalene	ND		1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND		2.5	µg/L	62	Hexachlorobutadiene	ND		1.0	µg/L
28	cis-1,3-Dichloropropene	ND		0.50	µg/L	63	1,2,3-Trichlorobenzene	ND		1.0	µg/L
29	trans-1,3-Dichloropropene	ND		0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	111		(70-130)	%REC
30	1,1,2-Trichloroethane	ND		0.50	µg/L	65	Surr: Toluene-d8	97		(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	96		(70-130)	%REC
32	1,3-Dichloropropane	ND		0.50	µg/L						
33	Dibromochloromethane	ND		0.50	µg/L						
34	1,2-Dibromoethane (EDB)	ND		1.0	µg/L						
35	Tetrachloroethene	ND		0.50	µg/L						

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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5/13/10
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI10043041-05A
Client I.D. Number: MW-24-3

Sampled: 04/29/10 09:38
Received: 04/30/10
Extracted: 05/04/10 03:08
Analyzed: 05/04/10 03:08

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration		Reporting Limit	
1	Dichlorodifluoromethane	ND		0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND		0.50	µg/L
2	Chloromethane	ND		1.0	µg/L	37	Chlorobenzene	ND		0.50	µg/L
3	Vinyl chloride	ND		0.50	µg/L	38	Ethylbenzene	ND		0.50	µg/L
4	Chloroethane	ND		0.50	µg/L	39	m,p-Xylene	ND		0.50	µg/L
5	Bromomethane	ND		1.0	µg/L	40	Bromoform	ND		0.50	µg/L
6	Trichlorofluoromethane	ND		0.50	µg/L	41	Styrene	ND	Q	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	Q	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	Q	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND		0.50	µg/L
18	1,2-Dichloroethane	ND		0.50	µg/L	53	sec-Butylbenzene	ND		0.50	µg/L
19	1,1,1-Trichloroethane	ND		0.50	µg/L	54	1,3-Dichlorobenzene	ND		0.50	µg/L
20	1,1-Dichloropropene	ND		0.50	µg/L	55	1,4-Dichlorobenzene	ND		0.50	µg/L
21	Carbon tetrachloride	ND		0.50	µg/L	56	4-Isopropyltoluene	ND		0.50	µg/L
22	Benzene	ND		0.50	µg/L	57	1,2-Dichlorobenzene	ND		0.50	µg/L
23	Dibromomethane	ND		0.50	µg/L	58	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	98		(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	95		(70-130)	%REC
32	1,3-Dichloropropane	ND		0.50	µg/L						
33	Dibromochloromethane	ND		0.50	µg/L						
34	1,2-Dibromoethane (EDB)	ND		1.0	µg/L						
35	Tetrachloroethene	ND		0.50	µg/L						

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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

5/13/10
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI10043041-06A
Client I.D. Number: MW-24-2

Sampled: 04/29/10 10:21
Received: 04/30/10
Extracted: 05/04/10 03:31
Analyzed: 05/04/10 03:31

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	Q	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	Q	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	Q	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND		0.50	µg/L
18	1,2-Dichloroethane	ND		0.50	µg/L	53	sec-Butylbenzene	ND		0.50	µg/L
19	1,1,1-Trichloroethane	ND		0.50	µg/L	54	1,3-Dichlorobenzene	ND		0.50	µg/L
20	1,1-Dichloropropene	ND		0.50	µg/L	55	1,4-Dichlorobenzene	ND		0.50	µg/L
21	Carbon tetrachloride	ND		0.50	µg/L	56	4-Isopropyltoluene	ND		0.50	µg/L
22	Benzene	ND		0.50	µg/L	57	1,2-Dichlorobenzene	ND		0.50	µg/L
23	Dibromomethane	ND		0.50	µg/L	58	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	97		(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	95		(70-130)	%REC
32	1,3-Dichloropropane	ND		0.50	µg/L						
33	Dibromochloromethane	ND		0.50	µg/L						
34	1,2-Dibromoethane (EDB)	ND		1.0	µg/L						
35	Tetrachloroethene	ND		0.50	µg/L						

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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5/13/10
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI10043041-07A
Client I.D. Number: MW-24-1

Sampled: 04/29/10 11:12
Received: 04/30/10
Extracted: 05/04/10 03:53
Analyzed: 05/04/10 03:53

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	Q	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	Q	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	Q	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND		0.50	µg/L
18	1,2-Dichloroethane	ND		0.50	µg/L	53	sec-Butylbenzene	ND		0.50	µg/L
19	1,1,1-Trichloroethane	ND		0.50	µg/L	54	1,3-Dichlorobenzene	ND		0.50	µg/L
20	1,1-Dichloropropene	ND		0.50	µg/L	55	1,4-Dichlorobenzene	ND		0.50	µg/L
21	Carbon tetrachloride	ND		0.50	µg/L	56	4-Isopropyltoluene	ND		0.50	µg/L
22	Benzene	ND		0.50	µg/L	57	1,2-Dichlorobenzene	ND		0.50	µg/L
23	Dibromomethane	ND		0.50	µg/L	58	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	96		(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

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.

5/13/10
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI10043041-08A
Client I.D. Number: EB-03-04/29/10

Sampled: 04/29/10 10:54
Received: 04/30/10
Extracted: 05/03/10 21:24
Analyzed: 05/03/10 21:24

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	Q	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	Q	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	Q	0.50	µg/L	52 1,2,4-Trimethylbenzene	ND		0.50	µg/L
18	1,2-Dichloroethane	ND		0.50	µg/L	53 sec-Butylbenzene	ND		0.50	µg/L
19	1,1,1-Trichloroethane	ND		0.50	µg/L	54 1,3-Dichlorobenzene	ND		0.50	µg/L
20	1,1-Dichloropropene	ND		0.50	µg/L	55 1,4-Dichlorobenzene	ND		0.50	µg/L
21	Carbon tetrachloride	ND		0.50	µg/L	56 4-Isopropyltoluene	ND		0.50	µg/L
22	Benzene	ND		0.50	µg/L	57 1,2-Dichlorobenzene	ND		0.50	µg/L
23	Dibromomethane	ND		0.50	µg/L	58 n-Butylbenzene	ND		0.50	µg/L
24	1,2-Dichloropropane	ND		0.50	µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND		2.5	µg/L
25	Trichloroethene	ND		0.50	µg/L	60 1,2,4-Trichlorobenzene	ND		1.0	µg/L
26	Bromodichloromethane	ND		0.50	µg/L	61 Naphthalene	ND		1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND		2.5	µg/L	62 Hexachlorobutadiene	ND		1.0	µg/L
28	cis-1,3-Dichloropropene	ND		0.50	µg/L	63 1,2,3-Trichlorobenzene	ND		1.0	µg/L
29	trans-1,3-Dichloropropene	ND		0.50	µg/L	64 Surr: 1,2-Dichloroethane-d4	108		(70-130)	%REC
30	1,1,2-Trichloroethane	ND		0.50	µg/L	65 Surr: Toluene-d8	97		(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66 Surr: 4-Bromofluorobenzene	95		(70-130)	%REC
32	1,3-Dichloropropane	ND		0.50	µg/L					
33	Dibromochloromethane	ND		0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND		1.0	µg/L					
35	Tetrachloroethene	ND		0.50	µg/L					

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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5/13/10
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI10043041-09A
Client I.D. Number: TB-03-04/29/10

Sampled: 04/29/10 07:00
Received: 04/30/10
Extracted: 05/03/10 21:47
Analyzed: 05/03/10 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	Q	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	Q	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	Q	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND		0.50	µg/L
18	1,2-Dichloroethane	ND		0.50	µg/L	53	sec-Butylbenzene	ND		0.50	µg/L
19	1,1,1-Trichloroethane	ND		0.50	µg/L	54	1,3-Dichlorobenzene	ND		0.50	µg/L
20	1,1-Dichloropropene	ND		0.50	µg/L	55	1,4-Dichlorobenzene	ND		0.50	µg/L
21	Carbon tetrachloride	ND		0.50	µg/L	56	4-Isopropyltoluene	ND		0.50	µg/L
22	Benzene	ND		0.50	µg/L	57	1,2-Dichlorobenzene	ND		0.50	µg/L
23	Dibromomethane	ND		0.50	µg/L	58	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	97		(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	97		(70-130)	%REC
32	1,3-Dichloropropane	ND		0.50	µg/L						
33	Dibromochloromethane	ND		0.50	µg/L						
34	1,2-Dibromoethane (EDB)	ND		1.0	µg/L						
35	Tetrachloroethene	ND		0.50	µg/L						

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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

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5/13/10
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: BMI10043041 **Job:** G005862/JPL Groundwater Monitoring

Alpha's Sample ID	Client's Sample ID	Matrix	pH
10043041-01A	MW-8	Aqueous	2
10043041-02A	MW-15	Aqueous	2
10043041-03A	MW-24-5	Aqueous	2
10043041-04A	MW-24-4	Aqueous	2
10043041-05A	MW-24-3	Aqueous	2
10043041-06A	MW-24-2	Aqueous	2
10043041-07A	MW-24-1	Aqueous	2
10043041-08A	EB-03-04/29/10	Aqueous	2
10043041-09A	TB-03-04/29/10	Aqueous	2

5/13/10

Report Date

Alpha Analytical, Inc.

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

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

Date: *11-May-10*

QC Summary Report

Work Order: 10043041

Method Blank

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

File ID: **34** Batch ID: **24106** Analysis Date: **04/30/2010 14:53**

Sample ID: **MB-24106** Units : **mg/L** Run ID: **IC_1_100430B** Prep Date: **04/30/2010 13:22**

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: **35** Batch ID: **24106** Analysis Date: **04/30/2010 15:12**

Sample ID: **LFB-24106** Units : **mg/L** Run ID: **IC_1_100430B** Prep Date: **04/30/2010 13:22**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	52.3	0.5	50		105	90	110			
Nitrite (NO2) - N	5.25	0.25	5		105	90	110			
Nitrate (NO3) - N	5.26	0.25	5		105	90	110			
Phosphate, ortho - P	4.96	0.5	5		99	90	110			
Sulfate (SO4)	107	0.5	100		107	90	110			

Sample Matrix Spike

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

File ID: **38** Batch ID: **24106** Analysis Date: **04/30/2010 16:08**

Sample ID: **10043041-01ALFM** Units : **mg/L** Run ID: **IC_1_100430B** Prep Date: **04/30/2010 13:22**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	119	0.5	100	13.71	105	80	120			
Nitrite (NO2) - N	10.4	0.25	10	0	104	80	120			
Nitrate (NO3) - N	12.1	0.25	10	1.256	108	80	120			
Phosphate, ortho - P	10.2	0.5	10	0	102	80	120			
Sulfate (SO4)	243	0.5	200	44.94	99	80	120			

Sample Matrix Spike Duplicate

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

File ID: **39** Batch ID: **24106** Analysis Date: **04/30/2010 16:26**

Sample ID: **10043041-01ALFMD** Units : **mg/L** Run ID: **IC_1_100430B** Prep Date: **04/30/2010 13:22**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	120	0.5	100	13.71	106	80	120	119	0.7(15)	
Nitrite (NO2) - N	9.86	0.25	10	0	99	80	120	10.37	5.0(15)	
Nitrate (NO3) - N	12	0.25	10	1.256	108	80	120	12.06	0.2(15)	
Phosphate, ortho - P	9.54	0.5	10	0	95	80	120	10.23	7.0(15)	
Sulfate (SO4)	243	0.5	200	44.94	99	80	120	242.7	0.2(15)	

Comments:

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

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-May-10*

QC Summary Report

Work Order: 10043041

Method Blank

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

File ID: **14** Batch ID: **24124** Analysis Date: **05/03/2010 11:50**

Sample ID: **MB-24124** Units : **µg/L** Run ID: **IC_3_100503A** Prep Date: **05/03/2010 10:51**

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: **24124** Analysis Date: **05/03/2010 12:09**

Sample ID: **LFB-24124** Units : **µg/L** Run ID: **IC_3_100503A** Prep Date: **05/03/2010 10:51**

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

Sample Matrix Spike

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

File ID: **33** Batch ID: **24124** Analysis Date: **05/03/2010 17:40**

Sample ID: **10043041-05ALFM** Units : **µg/L** Run ID: **IC_3_100503A** Prep Date: **05/03/2010 10:51**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	24.1	2	25	0	96	80	120			

Sample Matrix Spike Duplicate

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

File ID: **34** Batch ID: **24124** Analysis Date: **05/03/2010 17:59**

Sample ID: **10043041-05ALFMD** Units : **µg/L** Run ID: **IC_3_100503A** Prep Date: **05/03/2010 10:51**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	25.5	2	25	0	102	80	120	24.05	5.7(15)	

Comments:

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

Alpha Analytical, Inc.

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Date: *10-May-10*

QC Summary Report

Work Order: 10043041

Laboratory Control Spike Type **LCS** Test Code: **SM2320B**

File ID: Batch ID: **W0430ALB** Analysis Date: **04/30/2010 15:00**

Sample ID: **LCS-W0430ALB** Units : **mg/L** Run ID: **WETLAB_100430B** Prep Date: **04/30/2010 15:00**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Alkalinity, Bicarbonate (As CaCO3)	243.7	10	250		97	80	120			
Alkalinity, Carbonate (As CaCO3)	243.7	10	250		97	80	120			
Alkalinity, Total (As CaCO3 at pH 4.5)	244	10	250		97	80	120			

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: 12-May-10

QC Summary Report

Work Order: 10043041

Method Blank

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

File ID: **051010.B\020SMPL.D** Batch ID: **24188K** Analysis Date: **05/10/2010 17:28**

Sample ID: **MB-24188** Units : **mg/L** Run ID: **ICP/MS_100510A** Prep Date: **05/07/2010 08:27**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sodium (Na)	ND	0.5								
Magnesium (Mg)	ND	0.5								
Potassium (K)	ND	0.5								
Calcium (Ca)	ND	0.5								
Chromium (Cr)	ND	0.005								
Iron (Fe)	ND	0.1								
Arsenic (As)	ND	0.002								
Lead (Pb)	ND	0.005								

Laboratory Control Spike

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

File ID: **051010.B\021_LCS.D** Batch ID: **24188K** Analysis Date: **05/10/2010 17:33**

Sample ID: **LCS-24188** Units : **mg/L** Run ID: **ICP/MS_100510A** Prep Date: **05/07/2010 08:27**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sodium (Na)	5.06	0.5	5		101	80	120			
Magnesium (Mg)	5.1	0.5	5		102	80	120			
Potassium (K)	5.21	0.5	5		104	80	120			
Calcium (Ca)	4.88	0.5	5		98	80	120			
Chromium (Cr)	0.0461	0.005	0.05		92	80	120			
Iron (Fe)	4.72	0.1	5		94	80	120			
Arsenic (As)	0.0479	0.002	0.05		96	80	120			
Lead (Pb)	0.0465	0.005	0.05		93	80	120			

Sample Matrix Spike

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

File ID: **051010.B\025SMPL.D** Batch ID: **24188K** Analysis Date: **05/10/2010 17:56**

Sample ID: **10043041-01AMS** Units : **mg/L** Run ID: **ICP/MS_100510A** Prep Date: **05/07/2010 08:27**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sodium (Na)	24.5	0.5	5	18.72	115	80	120			
Magnesium (Mg)	21.7	0.5	5	16.59	102	80	120			
Potassium (K)	8.34	0.5	5	2.747	112	80	120			
Calcium (Ca)	58	0.5	5	56.22	36	80	120			M3
Chromium (Cr)	0.0461	0.005	0.05	0	92	80	120			
Iron (Fe)	5.06	0.1	5	0.1649	98	80	120			
Arsenic (As)	0.0497	0.002	0.05	0	99	80	120			
Lead (Pb)	0.0471	0.005	0.05	0	94	80	120			

Sample Matrix Spike Duplicate

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

File ID: **051010.B\026SMPL.D** Batch ID: **24188K** Analysis Date: **05/10/2010 18:02**

Sample ID: **10043041-01AMSD** Units : **mg/L** Run ID: **ICP/MS_100510A** Prep Date: **05/07/2010 08:27**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sodium (Na)	23	0.5	5	18.72	85	80	120	24.45	6.3(20)	
Magnesium (Mg)	20.9	0.5	5	16.59	86	80	120	21.68	3.7(20)	
Potassium (K)	7.54	0.5	5	2.747	96	80	120	8.343	10.1(20)	
Calcium (Ca)	61.3	0.5	5	56.22	102	80	120	58.04	5.5(20)	
Chromium (Cr)	0.0499	0.005	0.05	0	99.7	80	120	0.0461	7.8(20)	
Iron (Fe)	4.61	0.1	5	0.1649	89	80	120	5.063	9.3(20)	
Arsenic (As)	0.05	0.002	0.05	0	99.9	80	120	0.04972	0.5(20)	
Lead (Pb)	0.0468	0.005	0.05	0	94	80	120	0.04713	0.8(20)	

Comments:

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

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

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: *10-May-10*

QC Summary Report

Work Order: 10043041

Laboratory Control Spike Type **LCS** Test Code: **EPA Method 150.2 / SM4500HB / SW9040C**

File ID: Batch ID: **W0430PH** Analysis Date: **04/30/2010 15:04**

Sample ID: **LCS-W0430PH** Units : **pH Units** Run ID: **WETLAB_100430C** Prep Date: **04/30/2010 15:04**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
pH	4.96	1.7	5		99	90	110			

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-May-10*

QC Summary Report

Work Order: 10043041

Method Blank

Type **MBLK** Test Code: **SM2540C**

File ID: Batch ID: **W0503DS** Analysis Date: **05/04/2010 00:00**

Sample ID: **MBLK-W0503DS** Units : **mg/L** Run ID: **WETLAB_100503C** Prep Date: **05/04/2010 00:00**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Solids, Total Dissolved (TDS)	ND	10								

Laboratory Control Spike

Type **LCS** Test Code: **SM2540C**

File ID: Batch ID: **W0503DS** Analysis Date: **05/04/2010 00:00**

Sample ID: **LCS-W0503DS** Units : **mg/L** Run ID: **WETLAB_100503C** Prep Date: **05/04/2010 00:00**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Solids, Total Dissolved (TDS)	101	10	100		101	80	120			

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: *12-May-2010*

QC Summary Report

Work Order: 10043041

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

File ID: **C:\HPCHEM\MS07\DATA\100503\10050307.D** Batch ID: **MS07W0503M** Analysis Date: **05/03/2010 19:08**

Sample ID: **MBLK MS07W0503M** Units : **µg/L** Run ID: **MSD_07_100503B** Prep Date: **05/03/2010 19:08**

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	10.8		10		108	70	130			
Surr: Toluene-d8	9.74		10		97	70	130			

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Date: *12-May-2010*

QC Summary Report

Work Order: 10043041

Surr: 4-Bromofluorobenzene	9.77		10	98	70	130			

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

File ID: **C:\HPCHEM\MS07\DATA\100503\10050304.D** Batch ID: **MS07W0503M** Analysis Date: **05/03/2010 17:58**

Sample ID: **LCS MS07W0503M** Units : **µg/L** Run ID: **MSD_07_100503B** Prep Date: **05/03/2010 17:58**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	9.35	1	10		94	70	130			
Chloromethane	10.8	2	10		108	70	130			
Vinyl chloride	11.5	1	10		115	70	130			
Chloroethane	11.8	1	10		118	70	130			
Bromomethane	10.7	2	10		107	70	130			
Trichlorofluoromethane	10.5	1	10		105	70	130			
1,1-Dichloroethene	11.9	1	10		119	70	130			
Dichloromethane	10.5	2	10		105	70	130			
trans-1,2-Dichloroethene	11.5	1	10		115	70	130			
Methyl tert-butyl ether (MTBE)	11.6	0.5	10		116	70	130			
1,1-Dichloroethane	11.7	1	10		117	70	130			
cis-1,2-Dichloroethene	11.4	1	10		114	70	130			
Bromochloromethane	10.7	1	10		107	70	130			
Chloroform	11.1	1	10		111	70	130			
2,2-Dichloropropane	13.5	1	10		135	70	130(130)			L51
1,2-Dichloroethane	11.9	1	10		119	70	130			
1,1,1-Trichloroethane	11.9	1	10		119	70	130			
1,1-Dichloropropene	12	1	10		120	70	130			
Carbon tetrachloride	11.5	1	10		115	70	130			
Benzene	11.2	0.5	10		112	70	130			
Dibromomethane	11	1	10		110	70	130			
1,2-Dichloropropane	12	1	10		120	70	130			
Trichloroethene	11.1	1	10		111	70	130			
Bromodichloromethane	11.8	1	10		118	70	130			
cis-1,3-Dichloropropene	11.9	1	10		119	70	130			
trans-1,3-Dichloropropene	12.2	1	10		122	70	130			
1,1,2-Trichloroethane	10.7	1	10		107	70	130			
Toluene	10.5	0.5	10		105	70	130			
1,3-Dichloropropane	10.5	1	10		105	70	130			
Dibromochloromethane	10.7	1	10		107	70	130			
1,2-Dibromoethane (EDB)	20.1	2	20		101	70	130			
Tetrachloroethene	10.3	1	10		103	70	130			
1,1,1,2-Tetrachloroethane	10.1	1	10		101	70	130			
Chlorobenzene	10	1	10		100	70	130			
Ethylbenzene	10.8	0.5	10		108	70	130			
m,p-Xylene	10.6	0.5	10		106	70	130			
Bromoform	10.8	1	10		108	70	130			
Styrene	14.7	1	10		147	70	130(130)			L51
o-Xylene	10.9	0.5	10		109	70	130			
1,1,2,2-Tetrachloroethane	9.03	1	10		90	70	130			
1,2,3-Trichloropropane	21.3	2	20		107	70	130			
Isopropylbenzene	11	1	10		110	70	130			
Bromobenzene	9.37	1	10		94	70	130			
n-Propylbenzene	10.2	1	10		102	70	130			
4-Chlorotoluene	10.3	1	10		103	70	130			
2-Chlorotoluene	10.3	1	10		103	70	130			
1,3,5-Trimethylbenzene	10.4	1	10		104	70	130			
tert-Butylbenzene	10.4	1	10		104	70	130			
1,2,4-Trimethylbenzene	10.4	1	10		104	70	130			
sec-Butylbenzene	10.3	1	10		103	70	130			
1,3-Dichlorobenzene	9.22	1	10		92	70	130			
1,4-Dichlorobenzene	9.28	1	10		93	70	130			
4-Isopropyltoluene	10.8	1	10		108	70	130			
1,2-Dichlorobenzene	8.75	1	10		88	70	130			
n-Butylbenzene	11.6	1	10		116	70	130			
1,2-Dibromo-3-chloropropane (DBCP)	43.1	3	50		86	70	130			
1,2,4-Trichlorobenzene	9.34	2	10		93	70	130			
Naphthalene	9.7	2	10		97	70	130			
Hexachlorobutadiene	20.7	2	20		104	70	130			
1,2,3-Trichlorobenzene	9.1	2	10		91	70	130			
Surr: 1,2-Dichloroethane-d4	11.1		10		111	70	130			
Surr: Toluene-d8	9.51		10		95	70	130			
Surr: 4-Bromofluorobenzene	9.44		10		94	70	130			

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Date: 12-May-2010

QC Summary Report

Work Order: 10043041

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

File ID: **C:\HPCHEM\MS07\DATA\100503\10050308.D** Batch ID: **MS07W0503M** Analysis Date: **05/03/2010 19:31**

Sample ID: **10042923-03AMS** Units : **µg/L** Run ID: **MSD_07_100503B** Prep Date: **05/03/2010 19:31**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	24.9	2.5	50	0	50	13	167			
Chloromethane	40.8	10	50	0	82	28	145			
Vinyl chloride	44.9	2.5	50	0	90	43	134			
Chloroethane	44.9	2.5	50	0	90	39	154			
Bromomethane	45.4	10	50	0	91	19	176			
Trichlorofluoromethane	43.5	2.5	50	0	87	34	160			
1,1-Dichloroethene	50.4	2.5	50	0	101	60	130			
Dichloromethane	45.4	10	50	0	91	68	130			
trans-1,2-Dichloroethene	49.6	2.5	50	0	99	63	130			
Methyl tert-butyl ether (MTBE)	49.9	1.3	50	0	99.8	56	141			
1,1-Dichloroethane	51	2.5	50	0	102	61	130			
cis-1,2-Dichloroethene	49.4	2.5	50	0	99	70	130			
Bromochloromethane	46.3	2.5	50	0	93	70	130			
Chloroform	49.1	2.5	50	0	98	67	130			
2,2-Dichloropropane	53.8	2.5	50	0	108	30	152			
1,2-Dichloroethane	51.6	2.5	50	0	103	60	135			
1,1,1-Trichloroethane	51.6	2.5	50	0	103	59	137			
1,1-Dichloropropene	52	2.5	50	0	104	63	130			
Carbon tetrachloride	50.9	2.5	50	0	102	50	147			
Benzene	49.5	1.3	50	0	99	67	130			
Dibromomethane	47.6	2.5	50	0	95	69	133			
1,2-Dichloropropane	53.8	2.5	50	0	108	69	130			
Trichloroethene	49.3	2.5	50	0	99	69	130			
Bromodichloromethane	50.3	2.5	50	0	101	66	134			
cis-1,3-Dichloropropene	45.7	2.5	50	0	91	63	130			
trans-1,3-Dichloropropene	51.7	2.5	50	0	103	66	131			
1,1,2-Trichloroethane	46.8	2.5	50	0	94	68	130			
Toluene	47.1	1.3	50	0	94	66	130			
1,3-Dichloropropane	47.4	2.5	50	0	95	70	130			
Dibromochloromethane	43.2	2.5	50	0	86	70	130			
1,2-Dibromoethane (EDB)	88.6	5	100	0	89	70	130			
Tetrachloroethene	46.1	2.5	50	0	92	61	134			
1,1,1,2-Tetrachloroethane	44.2	2.5	50	0	88	70	130			
Chlorobenzene	45.3	2.5	50	0	91	70	130			
Ethylbenzene	48.9	1.3	50	0	98	68	130			
m,p-Xylene	47.5	1.3	50	0	95	64	130			
Bromoform	43	2.5	50	0	86	64	138			
Styrene	48.8	2.5	50	0	98	69	130			
o-Xylene	49.1	1.3	50	0	98	70	130			
1,1,2,2-Tetrachloroethane	40.4	2.5	50	0	81	65	131			
1,2,3-Trichloropropane	89.5	10	100	0	90	70	130			
Isopropylbenzene	49.6	2.5	50	0	99	64	138			
Bromobenzene	42.3	2.5	50	0	85	70	130			
n-Propylbenzene	46.5	2.5	50	0	93	66	132			
4-Chlorotoluene	46.4	2.5	50	0	93	70	130			
2-Chlorotoluene	46.8	2.5	50	0	94	70	130			
1,3,5-Trimethylbenzene	46.4	2.5	50	0	93	66	136			
tert-Butylbenzene	47.1	2.5	50	0	94	65	137			
1,2,4-Trimethylbenzene	45.9	2.5	50	0	92	65	137			
sec-Butylbenzene	46.5	2.5	50	0	93	66	134			
1,3-Dichlorobenzene	41.5	2.5	50	0	83	70	130			
1,4-Dichlorobenzene	42	2.5	50	0	84	70	130			
4-Isopropyltoluene	48	2.5	50	0	96	66	137			
1,2-Dichlorobenzene	39.3	2.5	50	0	79	70	130			
n-Butylbenzene	51.1	2.5	50	0	102	60	142			
1,2-Dibromo-3-chloropropane (DBCP)	180	15	250	0	72	67	130			
1,2,4-Trichlorobenzene	41.6	10	50	0	83	61	137			
Naphthalene	41.6	10	50	0	83	40	167			
Hexachlorobutadiene	88.5	10	100	0	88	61	130			
1,2,3-Trichlorobenzene	40.3	10	50	0	81	51	144			
Surr: 1,2-Dichloroethane-d4	54.5		50		109	70	130			
Surr: Toluene-d8	47.5		50		95	70	130			
Surr: 4-Bromofluorobenzene	47.9		50		96	70	130			

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Date: *12-May-2010*

QC Summary Report

Work Order: 10043041

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

File ID: **C:\HPCHEM\MS07\DATA\100503\10050309.D** Batch ID: **MS07W0503M** Analysis Date: **05/03/2010 19:53**

Sample ID: **10042923-03AMSD** Units : **µg/L** Run ID: **MSD_07_100503B** Prep Date: **05/03/2010 19:53**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	25.9	2.5	50	0	52	13	167	24.89	4.1(20)	
Chloromethane	43.3	10	50	0	87	28	145	40.76	6.0(20)	
Vinyl chloride	48.4	2.5	50	0	97	43	134	44.85	7.5(20)	
Chloroethane	49.3	2.5	50	0	99	39	154	44.85	9.4(20)	
Bromomethane	55	10	50	0	110	19	176	45.39	19.2(20)	
Trichlorofluoromethane	45.1	2.5	50	0	90	34	160	43.52	3.6(20)	
1,1-Dichloroethene	45.6	2.5	50	0	91	60	130	50.35	9.8(20)	
Dichloromethane	46.9	10	50	0	94	68	130	45.35	3.3(20)	
trans-1,2-Dichloroethene	51.6	2.5	50	0	103	63	130	49.56	4.0(20)	
Methyl tert-butyl ether (MTBE)	52.6	1.3	50	0	105	56	141	49.88	5.2(20)	
1,1-Dichloroethane	52.7	2.5	50	0	105	61	130	51	3.3(20)	
cis-1,2-Dichloroethene	51.3	2.5	50	0	103	70	130	49.4	3.8(20)	
Bromochloromethane	48.2	2.5	50	0	96	70	130	46.25	4.0(20)	
Chloroform	50.2	2.5	50	0	100	67	130	49.14	2.1(20)	
2,2-Dichloropropane	54.8	2.5	50	0	110	30	152	53.77	2.0(20)	
1,2-Dichloroethane	52.7	2.5	50	0	105	60	135	51.61	2.1(20)	
1,1,1-Trichloroethane	53.3	2.5	50	0	107	59	137	51.58	3.2(20)	
1,1-Dichloropropene	53.6	2.5	50	0	107	63	130	51.97	3.2(20)	
Carbon tetrachloride	52.2	2.5	50	0	104	50	147	50.93	2.5(20)	
Benzene	51	1.3	50	0	102	67	130	49.49	3.0(20)	
Dibromomethane	48.6	2.5	50	0	97	69	133	47.64	2.0(20)	
1,2-Dichloropropane	56.3	2.5	50	0	113	69	130	53.81	4.5(20)	
Trichloroethene	50.6	2.5	50	0	101	69	130	49.33	2.5(20)	
Bromodichloromethane	51.3	2.5	50	0	103	66	134	50.33	2.0(20)	
cis-1,3-Dichloropropene	46.8	2.5	50	0	94	63	130	45.74	2.3(20)	
trans-1,3-Dichloropropene	52.9	2.5	50	0	106	66	131	51.74	2.2(20)	
1,1,2-Trichloroethane	47.5	2.5	50	0	95	68	130	46.76	1.5(20)	
Toluene	49	1.3	50	0	98	66	130	47.13	3.9(20)	
1,3-Dichloropropane	48.8	2.5	50	0	98	70	130	47.43	2.9(20)	
Dibromochloromethane	44.5	2.5	50	0	89	70	130	43.19	3.0(20)	
1,2-Dibromoethane (EDB)	92.1	5	100	0	92	70	130	88.58	3.9(20)	
Tetrachloroethene	47.6	2.5	50	0	95	61	134	46.1	3.2(20)	
1,1,1,2-Tetrachloroethane	45.8	2.5	50	0	92	70	130	44.2	3.5(20)	
Chlorobenzene	46.6	2.5	50	0	93	70	130	45.31	2.8(20)	
Ethylbenzene	50.8	1.3	50	0	102	68	130	48.91	3.8(20)	
m,p-Xylene	49.6	1.3	50	0	99	64	130	47.45	4.3(20)	
Bromoform	44.2	2.5	50	0	88	64	138	43.04	2.6(20)	
Styrene	51	2.5	50	0	102	69	130	48.84	4.3(20)	
o-Xylene	51.3	1.3	50	0	103	70	130	49.09	4.5(20)	
1,1,2,2-Tetrachloroethane	41.8	2.5	50	0	84	65	131	40.41	3.5(20)	
1,2,3-Trichloropropane	92.6	10	100	0	93	70	130	89.5	3.4(20)	
Isopropylbenzene	50.5	2.5	50	0	101	64	138	49.61	1.7(20)	
Bromobenzene	43.1	2.5	50	0	86	70	130	42.33	1.8(20)	
n-Propylbenzene	47.3	2.5	50	0	95	66	132	46.45	1.8(20)	
4-Chlorotoluene	47.6	2.5	50	0	95	70	130	46.38	2.6(20)	
2-Chlorotoluene	47.8	2.5	50	0	96	70	130	46.82	2.2(20)	
1,3,5-Trimethylbenzene	47.6	2.5	50	0	95	66	136	46.39	2.5(20)	
tert-Butylbenzene	48.1	2.5	50	0	96	65	137	47.05	2.2(20)	
1,2,4-Trimethylbenzene	47.6	2.5	50	0	95	65	137	45.88	3.6(20)	
sec-Butylbenzene	47.7	2.5	50	0	95	66	134	46.5	2.6(20)	
1,3-Dichlorobenzene	43.5	2.5	50	0	87	70	130	41.53	4.7(20)	
1,4-Dichlorobenzene	43.1	2.5	50	0	86	70	130	41.99	2.7(20)	
4-Isopropyltoluene	49.3	2.5	50	0	99	66	137	48.04	2.6(20)	
1,2-Dichlorobenzene	40.8	2.5	50	0	82	70	130	39.29	3.7(20)	
n-Butylbenzene	53.2	2.5	50	0	106	60	142	51.12	3.9(20)	
1,2-Dibromo-3-chloropropane (DBCP)	191	15	250	0	76	67	130	180.2	5.7(20)	
1,2,4-Trichlorobenzene	44.4	10	50	0	89	61	137	41.58	6.6(20)	
Naphthalene	45.2	10	50	0	90	40	167	41.55	8.3(20)	
Hexachlorobutadiene	93.1	10	100	0	93	61	130	88.45	5.1(20)	
1,2,3-Trichlorobenzene	43.2	10	50	0	86	51	144	40.27	7.0(20)	
Surr: 1,2-Dichloroethane-d4	53.5		50		107	70	130			
Surr: Toluene-d8	48.2		50		96	70	130			
Surr: 4-Bromofluorobenzene	47.2		50		94	70	130			

Alpha Analytical, Inc.

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

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

Date: *12-May-2010*

QC Summary Report

Work Order: 10043041

Comments:

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

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

L51 = Analyte recovery was above acceptance limits for the LCS, but was acceptable in the MS/MSD.

Billing Information :

CHAIN-OF-CUSTODY RECORD

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

CA

WorkOrder : BMIS10043041

Report Due By : 5:00 PM On : 14-May-10

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

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

EDD Required : **Yes**

Sampled by : Brogdon, David Loera

PO : 218013

Client's COC # : 29840, 29486 Job : G005862/JPL Groundwater Monitoring

Cooler Temp	Samples Received	Date Printed
4 °C	30-Apr-10	**30-Apr-10**

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

Alpha Sample ID	Client Sample ID	Matrix	Collection Date	No. of Bottles Alpha	Sub	TAT	Requested Tests 300_0_W	314_W	ALKALINITY_W	METALS_DW	PH_W	TDS_W	VOC_TIC_W	VOC_W	Sample Remarks
BMI10043041-01A	MW-8	AQ	04/29/10 09:33	7	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Ca, Mg, K, Na, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10043041-02A	MW-15	AQ	04/29/10 11:40	6	0	10	NO2, NO3, SO4, Cl	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Ca, Mg, K, Na, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	One perchlorate voa rec'd broken
BMI10043041-03A	MW-24-5	AQ	04/29/10 08:29	5	0	10	NO2, NO3, SO4, Cl	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Ca, Mg, K, Na, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10043041-04A	MW-24-4	AQ	04/29/10 09:08	5	0	10	NO2, NO3, SO4, Cl	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Ca, Mg, K, Na, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10043041-05A	MW-24-3	AQ	04/29/10 09:38	5	0	10	NO2, NO3, SO4, Cl	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Ca, Mg, K, Na, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	Level IV QC
BMI10043041-06A	MW-24-2	AQ	04/29/10 10:21	5	0	10	NO2, NO3, SO4, Cl	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Ca, Mg, K, Na, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10043041-07A	MW-24-1	AQ	04/29/10 11:12	5	0	10	NO2, NO3, SO4, Cl	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Ca, Mg, K, Na, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10043041-08A	EB-03-04/29/10	AQ	04/29/10 10:54	5	0	10	NO2, NO3, SO4, Cl	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Ca, Mg, K, Na, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10043041-09A	TB-03-04/29/10	AQ	04/29/10 07:00	1	0	10							VOC by 524 Criteria	VOC by 524 Criteria	Reno TB, 12/31/09

Comments: Security seals intact. Frozen ice. Temp Blank #8648 received @ 4°C. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). Logged in metals by 200.8, per previous workorder. :

	Signature	Print Name	Company	Date/Time
Logged in by:	Tara Jickinson	Tara Jickinson	**Alpha Analytical, Inc.**	4/30/10 1047

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 Jerry Tomkins
Address 505 King Ave
City, State, Zip Columbus OH 43201
Phone Number 614 424 4849 Fax 614 424-3667

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

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

29486

Page # 1 of 1

Client Name David Conner
Address
City, State, Zip
P.O. # ~~214375~~ 218013
EMail Address connerd@battelle.org
Phone # 614 726-7311
Job # 60058G2/JPL 6604
Fax # 614 458-6641
Report Attention David Conner
Sampled by David Loera

Required QC Level? I II III IV

EDD? YES X NO

Global ID # ___

Time Sampled	Date Sampled	Matrix* See Key Below	Lab ID Number (Office Use Only)	Sample Description	TAT	Field Filtered	Total and type of containers ** See below	VOCs (524.2)	Perchlorate (CA DHS EPA 314.0)	Total Cr, Pb, As, Ca, Mg, K, Na, Fe (200.8)	Alk, Cl-, NO2, NO3, SO4, Ortho-P, TDS, pH	Carbonate (SM2320B) Bicarbonate			REMARKS
0933	4/29/10	AQ	BATT10043541-01	MW-8	10		5V, 2P	X	X	X	X	X			
1140	4/29/10	AQ	-02	MW-15	10		5V, 2P	X	X	X	X	X			Do not analyze ortho-P

ADDITIONAL INSTRUCTIONS:

	Signature	Print Name	Company	Date	Time
Relinquished by	David L	David Loera	Battelle	4-29-10	1220
Received by		CHASE BROGDON	INSIGHT CCCL	4-29-10	1223
Relinquished by		CHASE BROGDON	INSIGHT CCCL	4-29-10	1300
Received by		~~Alpha~~ as. Anthony Hart	Alpha Analytical	4-29-10	1700
Relinquished by		Anthony Stark	" "	4-29-10	1600
Received by	Jana Jackson	Jana Jackson	Alpha	4/30/10	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 / BATTELLE
Address 505 KING AVE.
City, State, Zip COLUMBUS OH 43201
Phone Number _____ Fax _____

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

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

28940

Page # 1 of 1

Client Name: BATTELLE / DAVID CONNER
P.O. #: 218013
Job #: 60058B2
Address: 3990 OLD TOWN AVE. C-205
EMail Address:
City, State, Zip: SAN DIEGO CA 92110
Phone #: (619) 726-7311
Fax #:

Sampled by: CHASE BRADDON

Time Sampled	Date Sampled	Matrix* See Key Below	Lab ID Number (Office Use Only)	Sample Description	TAT	Field Filtered	Total and type of containers ** See below	VOC (524.2)	TOTAL Cr, LEAD ARSENIC (200.8)	GEN. CHEM. (Na, K, Ca, Mg, Fe) (200.7)	Cl04 - (314.0)	GEN. CHEM. (300.0 310.1 160.1 150.1)			REMARKS
0825	4/29/10	AQ	BMI10043041-03	MW-24-5	NORM		5	X	X	X	X	X			
0908			-04	MW-24-4			5	X	X	X	X	X			
0939			-05	MW-24-3			5	X	X	X	X	X			LEVEL IV QC
1021			-06	MW-24-2			5	X	X	X	X	X			
1112			-07	MW-24-1			5	X	X	X	X	X			
1054			-08	EB-03-04 /29/10			5	X	X	X	X	X			EQUIPMENT BLANK
0700			-09	TB-03-04 /29/10			1	X							TRIP BLANK

Required QC Level? I II III IV

EDD / EDF? YES ___ NO ___

Global ID # _____

ADDITIONAL INSTRUCTIONS:

	Signature	Print Name	Company	Date	Time
Relinquished by		CHASE BRADDON	BATTELLE ECCI	4/29/10	1300
Received by		Anthony Stark	Alpha Analytical	4/29/10	1300
Relinquished by		Anthony Stark	" "	4/29/10	1600
Received by	Tara Dickinson	Tara Dickinson	Alpha	4/30/10	1045
Relinquished by					
Received by					

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

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

Alpha Analytical, Inc.

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

Date: *12-May-2010*

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

CASE NARRATIVE

Job: G005862/JPL Groundwater Monitoring
Work Order: BMI10050402 **Cooler Temp:** 4 °C

Alpha's Sample ID	Client's Sample ID	Matrix
10050402-01A	MW-4-5	Aqueous
10050402-02A	MW-4-4	Aqueous
10050402-03A	MW-4-3	Aqueous
10050402-04A	MW-4-2	Aqueous
10050402-05A	MW-4-1	Aqueous
10050402-06A	DUPE-02-2Q10	Aqueous
10050402-07A	EB-04-05/03/10	Aqueous
10050402-08A	TB-04-05/03/10	Aqueous
10050402-09A	MW-13	Aqueous

Manually Integrated Analytes

Alpha's Sample ID	Test Reference	Analyte
NONE		

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

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

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

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 05/04/10

Job: G005862/JPL Groundwater Monitoring

Anions by IC
EPA Method 300.0

	Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-4-5**					
Lab ID : BMI10050402-01A	Chloride	14	0.50 mg/L	05/04/10 10:34	05/04/10 12:09
Date Sampled 05/03/10 08:21	Nitrite (NO2) - N	ND	0.25 mg/L	05/04/10 10:34	05/04/10 12:09
	Nitrate (NO3) - N	ND	0.25 mg/L	05/04/10 10:34	05/04/10 12:09
	Phosphate, ortho - P	ND	0.50 mg/L	05/04/10 10:34	05/04/10 12:09
	Sulfate (SO4)	ND	0.50 mg/L	05/04/10 10:34	05/04/10 12:09
Client ID: **MW-4-4**					
Lab ID : BMI10050402-02A	Chloride	14	0.50 mg/L	05/04/10 10:34	05/04/10 13:05
Date Sampled 05/03/10 08:53	Nitrite (NO2) - N	ND	0.25 mg/L	05/04/10 10:34	05/04/10 13:05
	Nitrate (NO3) - N	ND	0.25 mg/L	05/04/10 10:34	05/04/10 13:05
	Phosphate, ortho - P	ND	0.50 mg/L	05/04/10 10:34	05/04/10 13:05
	Sulfate (SO4)	3.2	0.50 mg/L	05/04/10 10:34	05/04/10 13:05
Client ID: **MW-4-3**					
Lab ID : BMI10050402-03A	Chloride	15	0.50 mg/L	05/04/10 10:34	05/04/10 13:23
Date Sampled 05/03/10 09:43	Nitrite (NO2) - N	ND	0.25 mg/L	05/04/10 10:34	05/04/10 13:23
	Nitrate (NO3) - N	ND	0.25 mg/L	05/04/10 10:34	05/04/10 13:23
	Phosphate, ortho - P	ND	0.50 mg/L	05/04/10 10:34	05/04/10 13:23
	Sulfate (SO4)	ND	0.50 mg/L	05/04/10 10:34	05/04/10 13:23
Client ID: **MW-4-2**					
Lab ID : BMI10050402-04A	Chloride	110	50 mg/L	05/04/10 10:34	05/04/10 13:42
Date Sampled 05/03/10 10:13	Nitrite (NO2) - N	ND	0.25 mg/L	05/04/10 10:34	05/04/10 13:42
	Nitrate (NO3) - N	11	0.25 mg/L	05/04/10 10:34	05/04/10 13:42
	Phosphate, ortho - P	ND	0.50 mg/L	05/04/10 10:34	05/04/10 13:42
	Sulfate (SO4)	140	75 mg/L	05/04/10 10:34	05/04/10 13:42
Client ID: **MW-4-1**					
Lab ID : BMI10050402-05A	Chloride	6.6	0.50 mg/L	05/04/10 10:34	05/04/10 14:00
Date Sampled 05/03/10 11:00	Nitrite (NO2) - N	ND	0.25 mg/L	05/04/10 10:34	05/04/10 14:00
	Nitrate (NO3) - N	0.81	0.25 mg/L	05/04/10 10:34	05/04/10 14:00
	Phosphate, ortho - P	ND	0.50 mg/L	05/04/10 10:34	05/04/10 14:00
	Sulfate (SO4)	26	0.50 mg/L	05/04/10 10:34	05/04/10 14:00
Client ID: **DUPE-02-2Q10**					
Lab ID : BMI10050402-06A	Chloride	15	0.50 mg/L	05/04/10 10:34	05/04/10 14:19
Date Sampled 05/03/10 00:00	Nitrite (NO2) - N	ND	0.25 mg/L	05/04/10 10:34	05/04/10 14:19
	Nitrate (NO3) - N	ND	0.25 mg/L	05/04/10 10:34	05/04/10 14:19
	Phosphate, ortho - P	ND	0.50 mg/L	05/04/10 10:34	05/04/10 14:19
	Sulfate (SO4)	3.7	0.50 mg/L	05/04/10 10:34	05/04/10 14:19

Alpha Analytical, Inc.

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Client ID: **EB-04-05/03/10**					
Lab ID : BMI10050402-07A	Chloride	ND	0.50 mg/L	05/04/10 10:34	05/04/10 14:37
Date Sampled 05/03/10 10:33	Nitrite (NO2) - N	ND	0.25 mg/L	05/04/10 10:34	05/04/10 14:37
	Nitrate (NO3) - N	ND	0.25 mg/L	05/04/10 10:34	05/04/10 14:37
	Phosphate, ortho - P	ND	0.50 mg/L	05/04/10 10:34	05/04/10 14:37
	Sulfate (SO4)	ND	0.50 mg/L	05/04/10 10:34	05/04/10 14:37
Client ID: **MW-13**					
Lab ID : BMI10050402-09A	Chloride	45	0.50 mg/L	05/04/10 10:34	05/04/10 14:56
Date Sampled 05/03/10 10:08	Nitrite (NO2) - N	ND	0.25 mg/L	05/04/10 10:34	05/04/10 14:56
	Nitrate (NO3) - N	6.5	0.25 mg/L	05/04/10 10:34	05/04/10 14:56
	Phosphate, ortho - P	ND	0.50 mg/L	05/04/10 10:34	05/04/10 14:56
	Sulfate (SO4)	54	0.50 mg/L	05/04/10 10:34	05/04/10 14:56

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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

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

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

5/17/10

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
3990 Old Town Ave
San Diego, CA 92110

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 05/04/10

Job: G005862/JPL Groundwater Monitoring

Perchlorate by Ion Chromatography
EPA Method 314.0

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-4-5**				
Lab ID : BMI10050402-01A Perchlorate	ND	1.00 µg/L	05/07/10 10:34	05/07/10 17:05
Date Sampled 05/03/10 08:21				
Client ID: **MW-4-4**				
Lab ID : BMI10050402-02A Perchlorate	ND	1.00 µg/L	05/07/10 10:34	05/07/10 17:24
Date Sampled 05/03/10 08:53				
Client ID: **MW-4-3**				
Lab ID : BMI10050402-03A Perchlorate	ND	1.00 µg/L	05/07/10 10:34	05/07/10 17:42
Date Sampled 05/03/10 09:43				
Client ID: **MW-4-2**				
Lab ID : BMI10050402-04A Perchlorate	2.92	1.00 µg/L	05/07/10 10:34	05/07/10 18:00
Date Sampled 05/03/10 10:13				
Client ID: **MW-4-1**				
Lab ID : BMI10050402-05A Perchlorate	ND	1.00 µg/L	05/07/10 10:34	05/07/10 18:19
Date Sampled 05/03/10 11:00				
Client ID: **DUPE-02-2Q10**				
Lab ID : BMI10050402-06A Perchlorate	ND	1.00 µg/L	05/07/10 10:34	05/07/10 18:37
Date Sampled 05/03/10 00:00				
Client ID: **EB-04-05/03/10**				
Lab ID : BMI10050402-07A Perchlorate	ND	1.00 µg/L	05/07/10 10:34	05/07/10 18:56
Date Sampled 05/03/10 10:33				
Client ID: **MW-13**				
Lab ID : BMI10050402-09A Perchlorate	1,200	100 µg/L	05/07/10 10:34	05/14/10 13:02
Date Sampled 05/03/10 10:08				

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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5/17/10
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
3990 Old Town Ave
San Diego, CA 92110

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 05/04/10

Job: G005862/JPL Groundwater Monitoring

Alkalinity
SM2320B

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-4-5**				
Lab ID : BMI10050402-01A Alkalinity, Bicarbonate (As CaCO3)	220	10 mg/L	05/04/10 13:36	05/04/10 13:36
Date Sampled 05/03/10 08:21 Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	05/04/10 13:36	05/04/10 13:36
Alkalinity, Total (As CaCO3 at pH 4.5)	220	10 mg/L	05/04/10 13:36	05/04/10 13:36
Client ID: **MW-4-4**				
Lab ID : BMI10050402-02A Alkalinity, Bicarbonate (As CaCO3)	190	10 mg/L	05/04/10 13:46	05/04/10 13:46
Date Sampled 05/03/10 08:53 Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	05/04/10 13:46	05/04/10 13:46
Alkalinity, Total (As CaCO3 at pH 4.5)	190	10 mg/L	05/04/10 13:46	05/04/10 13:46
Client ID: **MW-4-3**				
Lab ID : BMI10050402-03A Alkalinity, Bicarbonate (As CaCO3)	180	10 mg/L	05/04/10 13:51	05/04/10 13:51
Date Sampled 05/03/10 09:43 Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	05/04/10 13:51	05/04/10 13:51
Alkalinity, Total (As CaCO3 at pH 4.5)	180	10 mg/L	05/04/10 13:51	05/04/10 13:51
Client ID: **MW-4-2**				
Lab ID : BMI10050402-04A Alkalinity, Bicarbonate (As CaCO3)	230	10 mg/L	05/04/10 13:55	05/04/10 13:55
Date Sampled 05/03/10 10:13 Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	05/04/10 13:55	05/04/10 13:55
Alkalinity, Total (As CaCO3 at pH 4.5)	230	10 mg/L	05/04/10 13:55	05/04/10 13:55
Client ID: **MW-4-1**				
Lab ID : BMI10050402-05A Alkalinity, Bicarbonate (As CaCO3)	210	10 mg/L	05/04/10 14:00	05/04/10 14:00
Date Sampled 05/03/10 11:00 Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	05/04/10 14:00	05/04/10 14:00
Alkalinity, Total (As CaCO3 at pH 4.5)	210	10 mg/L	05/04/10 14:00	05/04/10 14:00
Client ID: **DUPE-02-2Q10**				
Lab ID : BMI10050402-06A Alkalinity, Bicarbonate (As CaCO3)	180	10 mg/L	05/04/10 14:06	05/04/10 14:06
Date Sampled 05/03/10 00:00 Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	05/04/10 14:06	05/04/10 14:06
Alkalinity, Total (As CaCO3 at pH 4.5)	180	10 mg/L	05/04/10 14:06	05/04/10 14:06
Client ID: **EB-04-05/03/10**				
Lab ID : BMI10050402-07A Alkalinity, Bicarbonate (As CaCO3)	ND	10 mg/L	05/04/10 14:10	05/04/10 14:10
Date Sampled 05/03/10 10:33 Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	05/04/10 14:10	05/04/10 14:10
Alkalinity, Total (As CaCO3 at pH 4.5)	ND	10 mg/L	05/04/10 14:10	05/04/10 14:10
Client ID: **MW-13**				
Lab ID : BMI10050402-09A Alkalinity, Bicarbonate (As CaCO3)	180	10 mg/L	05/04/10 14:14	05/04/10 14:14
Date Sampled 05/03/10 10:08 Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	05/04/10 14:14	05/04/10 14:14
Alkalinity, Total (As CaCO3 at pH 4.5)	180	10 mg/L	05/04/10 14:14	05/04/10 14:14

Alpha Analytical, Inc.

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ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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5/17/10

Report Date

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ANALYTICAL REPORT

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 05/04/10

Job: G005862/JPL Groundwater Monitoring

Metals by ICPMS
EPA Method 200.8

	Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-4-5**					
Lab ID : BMI10050402-01A	Sodium (Na)	35	0.50 mg/L	05/07/10 08:20	05/11/10 00:03
Date Sampled 05/03/10 08:21	Magnesium (Mg)	13	0.50 mg/L	05/07/10 08:20	05/11/10 00:03
	Potassium (K)	1.9	0.50 mg/L	05/07/10 08:20	05/11/10 00:03
	Calcium (Ca)	34	0.50 mg/L	05/07/10 08:20	05/11/10 00:03
	Chromium (Cr)	0.0094	0.0050 mg/L	05/07/10 08:20	05/11/10 00:03
	Iron (Fe)	23	0.10 mg/L	05/07/10 08:20	05/11/10 00:03
	Arsenic (As)	0.0022	0.0020 mg/L	05/07/10 08:20	05/11/10 00:03
	Lead (Pb)	ND	0.0050 mg/L	05/07/10 08:20	05/11/10 00:03
Client ID: **MW-4-4**					
Lab ID : BMI10050402-02A	Sodium (Na)	33	0.50 mg/L	05/07/10 08:20	05/11/10 00:08
Date Sampled 05/03/10 08:53	Magnesium (Mg)	12	0.50 mg/L	05/07/10 08:20	05/11/10 00:08
	Potassium (K)	1.8	0.50 mg/L	05/07/10 08:20	05/11/10 00:08
	Calcium (Ca)	36	0.50 mg/L	05/07/10 08:20	05/11/10 00:08
	Chromium (Cr)	ND	0.0050 mg/L	05/07/10 08:20	05/11/10 00:08
	Iron (Fe)	3.1	0.10 mg/L	05/07/10 08:20	05/11/10 00:08
	Arsenic (As)	ND	0.0020 mg/L	05/07/10 08:20	05/11/10 00:08
	Lead (Pb)	ND	0.0050 mg/L	05/07/10 08:20	05/11/10 00:08
Client ID: **MW-4-3**					
Lab ID : BMI10050402-03A	Sodium (Na)	39	0.50 mg/L	05/07/10 08:20	05/11/10 00:36
Date Sampled 05/03/10 09:43	Magnesium (Mg)	15	0.50 mg/L	05/07/10 08:20	05/11/10 00:36
	Potassium (K)	2.3	0.50 mg/L	05/07/10 08:20	05/11/10 00:36
	Calcium (Ca)	21	0.50 mg/L	05/07/10 08:20	05/11/10 00:36
	Chromium (Cr)	ND	0.0050 mg/L	05/07/10 08:20	05/11/10 00:36
	Iron (Fe)	0.93	0.10 mg/L	05/07/10 08:20	05/11/10 00:36
	Arsenic (As)	ND	0.0020 mg/L	05/07/10 08:20	05/11/10 00:36
	Lead (Pb)	ND	0.0050 mg/L	05/07/10 08:20	05/11/10 00:36
Client ID: **MW-4-2**					
Lab ID : BMI10050402-04A	Sodium (Na)	34	0.50 mg/L	05/07/10 08:20	05/11/10 00:42
Date Sampled 05/03/10 10:13	Magnesium (Mg)	41	0.50 mg/L	05/07/10 08:20	05/11/10 00:42
	Potassium (K)	3.0	0.50 mg/L	05/07/10 08:20	05/11/10 00:42
	Calcium (Ca)	130	0.50 mg/L	05/07/10 08:20	05/11/10 00:42
	Chromium (Cr)	ND	0.0050 mg/L	05/07/10 08:20	05/11/10 00:42
	Iron (Fe)	0.60	0.10 mg/L	05/07/10 08:20	05/11/10 00:42
	Arsenic (As)	ND	0.0020 mg/L	05/07/10 08:20	05/11/10 00:42
	Lead (Pb)	ND	0.0050 mg/L	05/07/10 08:20	05/11/10 00:42

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Client ID: **MW-4-1**					
Lab ID : BMI10050402-05A	Sodium (Na)	21	0.50 mg/L	05/07/10 08:20	05/11/10 00:47
Date Sampled 05/03/10 11:00	Magnesium (Mg)	17	0.50 mg/L	05/07/10 08:20	05/11/10 00:47
	Potassium (K)	3.1	0.50 mg/L	05/07/10 08:20	05/11/10 00:47
	Calcium (Ca)	61	0.50 mg/L	05/07/10 08:20	05/11/10 00:47
	Chromium (Cr)	ND	0.0050 mg/L	05/07/10 08:20	05/11/10 00:47
	Iron (Fe)	0.37	0.10 mg/L	05/07/10 08:20	05/11/10 00:47
	Arsenic (As)	ND	0.0020 mg/L	05/07/10 08:20	05/11/10 00:47
	Lead (Pb)	ND	0.0050 mg/L	05/07/10 08:20	05/11/10 00:47
Client ID: **DUPE-02-2Q10**					
Lab ID : BMI10050402-06A	Sodium (Na)	33	0.50 mg/L	05/07/10 08:20	05/11/10 00:53
Date Sampled 05/03/10 00:00	Magnesium (Mg)	12	0.50 mg/L	05/07/10 08:20	05/11/10 00:53
	Potassium (K)	1.8	0.50 mg/L	05/07/10 08:20	05/11/10 00:53
	Calcium (Ca)	37	0.50 mg/L	05/07/10 08:20	05/11/10 00:53
	Chromium (Cr)	ND	0.0050 mg/L	05/07/10 08:20	05/11/10 00:53
	Iron (Fe)	2.9	0.10 mg/L	05/07/10 08:20	05/11/10 00:53
	Arsenic (As)	ND	0.0020 mg/L	05/07/10 08:20	05/11/10 00:53
	Lead (Pb)	ND	0.0050 mg/L	05/07/10 08:20	05/11/10 00:53
Client ID: **EB-04-05/03/10**					
Lab ID : BMI10050402-07A	Sodium (Na)	ND	0.50 mg/L	05/07/10 08:20	05/11/10 00:59
Date Sampled 05/03/10 10:33	Magnesium (Mg)	ND	0.50 mg/L	05/07/10 08:20	05/11/10 00:59
	Potassium (K)	ND	0.50 mg/L	05/07/10 08:20	05/11/10 00:59
	Calcium (Ca)	ND	0.50 mg/L	05/07/10 08:20	05/11/10 00:59
	Chromium (Cr)	ND	0.0050 mg/L	05/07/10 08:20	05/11/10 00:59
	Iron (Fe)	ND	0.10 mg/L	05/07/10 08:20	05/11/10 00:59
	Arsenic (As)	ND	0.0020 mg/L	05/07/10 08:20	05/11/10 00:59
	Lead (Pb)	ND	0.0050 mg/L	05/07/10 08:20	05/11/10 00:59
Client ID: **MW-13**					
Lab ID : BMI10050402-09A	Sodium (Na)	30	0.50 mg/L	05/07/10 08:20	05/11/10 01:05
Date Sampled 05/03/10 10:08	Magnesium (Mg)	22	0.50 mg/L	05/07/10 08:20	05/11/10 01:05
	Potassium (K)	3.1	0.50 mg/L	05/07/10 08:20	05/11/10 01:05
	Calcium (Ca)	75	0.50 mg/L	05/07/10 08:20	05/11/10 01:05
	Chromium (Cr)	0.022	0.0050 mg/L	05/07/10 08:20	05/11/10 01:05
	Iron (Fe)	0.24	0.10 mg/L	05/07/10 08:20	05/11/10 01:05
	Arsenic (As)	ND	0.0020 mg/L	05/07/10 08:20	05/11/10 01:05
	Lead (Pb)	ND	0.0050 mg/L	05/07/10 08:20	05/11/10 01:05

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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ANALYTICAL REPORT

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 05/04/10

Job: G005862/JPL Groundwater Monitoring

pH (Range 1.7 to 12.4)
EPA Method 150.2 / SM4500HB / SW9040C

Parameter		Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-4-5**					
Lab ID : BMI10050402-01A	pH	7.5	1.7 pH Units	05/04/10 14:53	05/04/10 14:53
Date Sampled 05/03/10 08:21	pH - Temperature	19	1.0 °C	05/04/10 14:53	05/04/10 14:53
Client ID: **MW-4-4**					
Lab ID : BMI10050402-02A	pH	7.8	1.7 pH Units	05/04/10 14:57	05/04/10 14:57
Date Sampled 05/03/10 08:53	pH - Temperature	18	1.0 °C	05/04/10 14:57	05/04/10 14:57
Client ID: **MW-4-3**					
Lab ID : BMI10050402-03A	pH	8.2	1.7 pH Units	05/04/10 14:58	05/04/10 14:58
Date Sampled 05/03/10 09:43	pH - Temperature	18	1.0 °C	05/04/10 14:58	05/04/10 14:58
Client ID: **MW-4-2**					
Lab ID : BMI10050402-04A	pH	6.8	1.7 pH Units	05/04/10 15:00	05/04/10 15:00
Date Sampled 05/03/10 10:13	pH - Temperature	18	1.0 °C	05/04/10 15:00	05/04/10 15:00
Client ID: **MW-4-1**					
Lab ID : BMI10050402-05A	pH	7.1	1.7 pH Units	05/04/10 15:02	05/04/10 15:02
Date Sampled 05/03/10 11:00	pH - Temperature	19	1.0 °C	05/04/10 15:02	05/04/10 15:02
Client ID: **DUPE-02-2Q10**					
Lab ID : BMI10050402-06A	pH	7.7	1.7 pH Units	05/04/10 15:04	05/04/10 15:04
Date Sampled 05/03/10 00:00	pH - Temperature	19	1.0 °C	05/04/10 15:04	05/04/10 15:04
Client ID: **EB-04-05/03/10**					
Lab ID : BMI10050402-07A	pH	6.2	1.7 pH Units	05/04/10 15:06	05/04/10 15:06
Date Sampled 05/03/10 10:33	pH - Temperature	19	1.0 °C	05/04/10 15:06	05/04/10 15:06
Client ID: **MW-13**					
Lab ID : BMI10050402-09A	pH	6.9	1.7 pH Units	05/04/10 15:10	05/04/10 15:10
Date Sampled 05/03/10 10:08	pH - Temperature	19	1.0 °C	05/04/10 15:10	05/04/10 15:10

The EPA has established an analytical holding time of 15 minutes for this method as documented in the Methods Update Rule, Federal Register, Vol 72, No 47, March 2007. This holding time will always be exceeded, unless samples are analyzed in the field.
The laboratory performed this analysis in the shortest practical holding time after sample receipt.

Roger Scholl Randy Gardner Walter Hinchman

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ANALYTICAL REPORT

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 05/04/10

Job: G005862/JPL Groundwater Monitoring

Total Dissolved Solids (TDS)
SM2540C

Parameter		Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-4-5**					
Lab ID : BMI10050402-01A	Solids, Total Dissolved (TDS)	190	10 mg/L	05/05/10	05/05/10
Date Sampled 05/03/10 08:21					
Client ID: **MW-4-4**					
Lab ID : BMI10050402-02A	Solids, Total Dissolved (TDS)	220	10 mg/L	05/06/10	05/06/10
Date Sampled 05/03/10 08:53					
Client ID: **MW-4-3**					
Lab ID : BMI10050402-03A	Solids, Total Dissolved (TDS)	160	10 mg/L	05/05/10	05/05/10
Date Sampled 05/03/10 09:43					
Client ID: **MW-4-2**					
Lab ID : BMI10050402-04A	Solids, Total Dissolved (TDS)	680	10 mg/L	05/05/10	05/05/10
Date Sampled 05/03/10 10:13					
Client ID: **MW-4-1**					
Lab ID : BMI10050402-05A	Solids, Total Dissolved (TDS)	250	10 mg/L	05/05/10	05/05/10
Date Sampled 05/03/10 11:00					
Client ID: **DUPE-02-2Q10**					
Lab ID : BMI10050402-06A	Solids, Total Dissolved (TDS)	170	10 mg/L	05/05/10	05/05/10
Date Sampled 05/03/10 00:00					
Client ID: **EB-04-05/03/10**					
Lab ID : BMI10050402-07A	Solids, Total Dissolved (TDS)	ND	10 mg/L	05/05/10	05/05/10
Date Sampled 05/03/10 10:33					
Client ID: **MW-13**					
Lab ID : BMI10050402-09A	Solids, Total Dissolved (TDS)	400	10 mg/L	05/05/10	05/05/10
Date Sampled 05/03/10 10:08					

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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ANALYTICAL REPORT

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

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

Tentatively Identified Compounds - Volatile Organics by GC/MS

	Parameter	Estimated Concentration	Estimated Reporting Limit	Date Extracted	Date Analyzed
Client ID : **MW-4-5**					
Lab ID : BMI10050402-01A	* * * None Found * * *	ND	2.0 µg/L	05/07/10 01:20	05/07/10 01:20
Date Received : 05/04/10					
Date Sampled : 05/03/10 08:21					
Client ID : **MW-4-4**					
Lab ID : BMI10050402-02A	* * * None Found * * *	ND	2.0 µg/L	05/07/10 01:42	05/07/10 01:42
Date Received : 05/04/10					
Date Sampled : 05/03/10 08:53					
Client ID : **MW-4-3**					
Lab ID : BMI10050402-03A	* * * None Found * * *	ND	2.0 µg/L	05/07/10 02:04	05/07/10 02:04
Date Received : 05/04/10					
Date Sampled : 05/03/10 09:43					
Client ID : **MW-4-2**					
Lab ID : BMI10050402-04A	* * * None Found * * *	ND	2.0 µg/L	05/07/10 02:27	05/07/10 02:27
Date Received : 05/04/10					
Date Sampled : 05/03/10 10:13					
Client ID : **MW-4-1**					
Lab ID : BMI10050402-05A	* * * None Found * * *	ND	2.0 µg/L	05/07/10 02:49	05/07/10 02:49
Date Received : 05/04/10					
Date Sampled : 05/03/10 11:00					
Client ID : **DUPE-02-2Q10**					
Lab ID : BMI10050402-06A	* * * None Found * * *	ND	2.0 µg/L	05/07/10 03:12	05/07/10 03:12
Date Received : 05/04/10					
Date Sampled : 05/03/10 00:00					
Client ID : **EB-04-05/03/10**					
Lab ID : BMI10050402-07A	Acetone	12	10 µg/L	05/07/10 00:57	05/07/10 00:57
Date Received : 05/04/10					
Date Sampled : 05/03/10 10:33					
Client ID : **TB-04-05/03/10**					
Lab ID : BMI10050402-08A	* * * None Found * * *	ND	2.0 µg/L	05/07/10 00:35	05/07/10 00:35
Date Received : 05/04/10					
Date Sampled : 05/03/10 07:00					
Client ID : **MW-13**					
Lab ID : BMI10050402-09A	* * * None Found * * *	ND	2.0 µg/L	05/07/10 03:34	05/07/10 03:34
Date Received : 05/04/10					
Date Sampled : 05/03/10 10:08					

Alpha Analytical, Inc.

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

(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

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.

5/17/10

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

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

Alpha Analytical Number: BMI10050402-01A
Client I.D. Number: MW-4-5

Sampled: 05/03/10 08:21
Received: 05/04/10
Extracted: 05/07/10 01:20
Analyzed: 05/07/10 01:20

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5	µg/L
25	Trichloroethene	ND	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	105	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	97	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	94	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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5/17/10
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI10050402-02A
Client I.D. Number: MW-4-4

Sampled: 05/03/10 08:53
Received: 05/04/10
Extracted: 05/07/10 01:42
Analyzed: 05/07/10 01:42

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	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	106	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	98	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	95	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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5/17/10
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI10050402-03A
Client I.D. Number: MW-4-3

Sampled: 05/03/10 09:43
Received: 05/04/10
Extracted: 05/07/10 02:04
Analyzed: 05/07/10 02:04

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	1.1		0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND		0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND		0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	0.57	Q	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND		0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND		0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND		1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND		0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND		0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND		0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND		0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND		0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND		0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND		0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND		0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND		0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND		0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND		0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND		0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND		0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND		0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND		2.5	µg/L
25	Trichloroethene	ND	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND		1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND		1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND		1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND		1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	105		(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	98		(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	93		(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L						
33	Dibromochloromethane	ND	0.50	µg/L						
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L						
35	Tetrachloroethene	ND	0.50	µg/L						

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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5/17/10
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI10050402-04A
Client I.D. Number: MW-4-2

Sampled: 05/03/10 10:13
Received: 05/04/10
Extracted: 05/07/10 02:27
Analyzed: 05/07/10 02:27

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	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	0.63	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	105	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	98	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	94	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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5/17/10
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI10050402-05A
Client I.D. Number: MW-4-1

Sampled: 05/03/10 11:00
Received: 05/04/10
Extracted: 05/07/10 02:49
Analyzed: 05/07/10 02:49

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5	µg/L
25	Trichloroethene	ND	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	104	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	98	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	97	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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5/17/10
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI10050402-06A
Client I.D. Number: DUPE-02-2Q10

Sampled: 05/03/10 00:00
Received: 05/04/10
Extracted: 05/07/10 03:12
Analyzed: 05/07/10 03:12

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit		Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37 Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38 Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39 m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40 Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41 Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42 o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44 1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45 Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46 Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47 n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48 4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49 2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50 1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51 tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52 1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53 sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54 1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55 1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56 4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57 1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58 n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5	µg/L
25	Trichloroethene	ND	0.50	µg/L	60 1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61 Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62 Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63 1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64 Surr: 1,2-Dichloroethane-d4	105	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65 Surr: Toluene-d8	99	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66 Surr: 4-Bromofluorobenzene	96	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L				
33	Dibromochloromethane	ND	0.50	µg/L				
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L				
35	Tetrachloroethene	ND	0.50	µg/L				

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer
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5/17/10
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI10050402-07A
Client I.D. Number: EB-04-05/03/10

Sampled: 05/03/10 10:33
Received: 05/04/10
Extracted: 05/07/10 00:57
Analyzed: 05/07/10 00:57

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	98	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	97	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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5/17/10
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI10050402-08A
Client I.D. Number: TB-04-05/03/10

Sampled: 05/03/10 07:00
Received: 05/04/10
Extracted: 05/07/10 00:35
Analyzed: 05/07/10 00:35

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	107	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	97	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	97	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer
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5/17/10
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI10050402-09A
Client I.D. Number: MW-13

Sampled: 05/03/10 10:08
Received: 05/04/10
Extracted: 05/07/10 03:34
Analyzed: 05/07/10 03:34

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	3.9	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	0.97	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	0.53	0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	104	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	98	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	98	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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.

5/17/10
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: BMI10050402 **Job:** G005862/JPL Groundwater Monitoring

Alpha's Sample ID	Client's Sample ID	Matrix	pH
10050402-01A	MW-4-5	Aqueous	2
10050402-02A	MW-4-4	Aqueous	2
10050402-03A	MW-4-3	Aqueous	2
10050402-04A	MW-4-2	Aqueous	2
10050402-05A	MW-4-1	Aqueous	2
10050402-06A	DUPE-02-2Q10	Aqueous	2
10050402-07A	EB-04-05/03/10	Aqueous	2
10050402-08A	TB-04-05/03/10	Aqueous	2
10050402-09A	MW-13	Aqueous	2

5/17/10

Report Date

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Date: *12-May-10*

QC Summary Report

Work Order: 10050402

Method Blank

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

File ID: **21** Batch ID: **24135** Analysis Date: **05/04/2010 11:14**

Sample ID: **MB-24135** Units : **mg/L** Run ID: **IC_1_100504A** Prep Date: **05/04/2010 10:34**

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: **24135** Analysis Date: **05/04/2010 11:32**

Sample ID: **LFB-24135** Units : **mg/L** Run ID: **IC_1_100504A** Prep Date: **05/04/2010 10:34**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	51	0.5	50		102	90	110			
Nitrite (NO2) - N	5.11	0.25	5		102	90	110			
Nitrate (NO3) - N	5.33	0.25	5		107	90	110			
Phosphate, ortho - P	4.71	0.5	5		94	90	110			
Sulfate (SO4)	106	0.5	100		106	90	110			

Sample Matrix Spike

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

File ID: **25** Batch ID: **24135** Analysis Date: **05/04/2010 12:28**

Sample ID: **10050402-01ALFM** Units : **mg/L** Run ID: **IC_1_100504A** Prep Date: **05/04/2010 10:34**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	118	0.5	100	14.12	104	80	120			
Nitrite (NO2) - N	9.22	0.25	10	0	92	80	120			
Nitrate (NO3) - N	10.4	0.25	10	0	104	80	120			
Phosphate, ortho - P	9.07	0.5	10	0	91	80	120			
Sulfate (SO4)	201	0.5	200	0	100	80	120			

Sample Matrix Spike Duplicate

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

File ID: **26** Batch ID: **24135** Analysis Date: **05/04/2010 12:46**

Sample ID: **10050402-01ALFMD** Units : **mg/L** Run ID: **IC_1_100504A** Prep Date: **05/04/2010 10:34**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	119	0.5	100	14.12	105	80	120	118.4	0.9(15)	
Nitrite (NO2) - N	10.1	0.25	10	0	101	80	120	9.225	8.7(15)	
Nitrate (NO3) - N	10.4	0.25	10	0	104	80	120	10.38	0.5(15)	
Phosphate, ortho - P	10.5	0.5	10	0	105	80	120	9.066	14.3(15)	
Sulfate (SO4)	204	0.5	200	0	102	80	120	200.9	1.4(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.

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Date: *17-May-10*

QC Summary Report

Work Order: 10050402

Method Blank

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

File ID: **14** Batch ID: **24191** Analysis Date: **05/07/2010 11:34**

Sample ID: **MB-24191** Units : **µg/L** Run ID: **IC_3_100507A** Prep Date: **05/07/2010 10:34**

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: **24191** Analysis Date: **05/07/2010 11:52**

Sample ID: **LFB-24191** Units : **µg/L** Run ID: **IC_3_100507A** Prep Date: **05/07/2010 10:34**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	25.1	2	25		100	85	115			

Sample Matrix Spike

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

File ID: **22** Batch ID: **24191** Analysis Date: **05/07/2010 14:01**

Sample ID: **10050505-02ALFM** Units : **µg/L** Run ID: **IC_3_100507A** Prep Date: **05/07/2010 10:34**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	30	2	25	3.676	105	80	120			

Sample Matrix Spike Duplicate

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

File ID: **17** Batch ID: **24191** Analysis Date: **05/13/2010 13:46**

Sample ID: **10050505-02ALFMD** Units : **µg/L** Run ID: **IC_3_100507A** Prep Date: **05/07/2010 10:34**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	28	2	25	3.676	97	80	120	30.04	6.9(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: *12-May-10*

QC Summary Report

Work Order: 10050402

Laboratory Control Spike Type **LCS** Test Code: **SM2320B**

File ID: Batch ID: **W0504AL** Analysis Date: **05/04/2010 13:30**

Sample ID: **LCS-W0504AL** Units : **mg/L** Run ID: **WETLAB_100504B** Prep Date: **05/04/2010 13:30**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Alkalinity, Bicarbonate (As CaCO3)	250.4	10	250		100	80	120			
Alkalinity, Carbonate (As CaCO3)	250.4	10	250		100	80	120			
Alkalinity, Total (As CaCO3 at pH 4.5)	250	10	250		100	80	120			

Comments:

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

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Date: *13-May-10*

QC Summary Report

Work Order: 10050402

Method Blank

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

File ID: **051010.B\075SMPL.D** Batch ID: **24187K** Analysis Date: **05/10/2010 22:38**

Sample ID: **MB-24187** Units : **mg/L** Run ID: **ICP/MS_100510B** Prep Date: **05/07/2010 08:20**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sodium (Na)	ND	0.5								
Magnesium (Mg)	ND	0.5								
Potassium (K)	ND	0.5								
Calcium (Ca)	ND	0.5								
Chromium (Cr)	ND	0.005								
Iron (Fe)	ND	0.1								
Arsenic (As)	ND	0.002								
Lead (Pb)	ND	0.005								

Laboratory Control Spike

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

File ID: **051010.B\076_LCS.D** Batch ID: **24187K** Analysis Date: **05/10/2010 22:44**

Sample ID: **LCS-24187** Units : **mg/L** Run ID: **ICP/MS_100510B** Prep Date: **05/07/2010 08:20**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sodium (Na)	5.02	0.5	5		100	80	120			
Magnesium (Mg)	4.97	0.5	5		99	80	120			
Potassium (K)	5.04	0.5	5		101	80	120			
Calcium (Ca)	4.97	0.5	5		99	80	120			
Chromium (Cr)	0.0457	0.005	0.05		91	80	120			
Iron (Fe)	4.56	0.1	5		91	80	120			
Arsenic (As)	0.0474	0.002	0.05		95	80	120			
Lead (Pb)	0.0467	0.005	0.05		93	80	120			

Sample Matrix Spike

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

File ID: **051010.B\080SMPL.D** Batch ID: **24187K** Analysis Date: **05/10/2010 23:06**

Sample ID: **10050505-09AMS** Units : **mg/L** Run ID: **ICP/MS_100510B** Prep Date: **05/07/2010 08:20**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sodium (Na)	43.8	0.5	5	37.81	119	80	120			
Magnesium (Mg)	50.7	0.5	5	45.12	111	80	120			
Potassium (K)	7.75	0.5	5	2.481	105	80	120			
Calcium (Ca)	164	0.5	5	153.9	194	80	120			M3
Chromium (Cr)	0.0527	0.005	0.05	0	105	80	120			
Iron (Fe)	5.72	0.1	5	0.6453	102	80	120			
Arsenic (As)	0.0485	0.002	0.05	0	97	80	120			
Lead (Pb)	0.0473	0.005	0.05	0	95	80	120			

Sample Matrix Spike Duplicate

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

File ID: **051010.B\081SMPL.D** Batch ID: **24187K** Analysis Date: **05/10/2010 23:12**

Sample ID: **10050505-09AMSD** Units : **mg/L** Run ID: **ICP/MS_100510B** Prep Date: **05/07/2010 08:20**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sodium (Na)	45.7	0.5	5	37.81	159	80	120	43.76	4.4(20)	M3
Magnesium (Mg)	52.1	0.5	5	45.12	139	80	120	50.68	2.7(20)	M3
Potassium (K)	8.37	0.5	5	2.481	118	80	120	7.751	7.7(20)	
Calcium (Ca)	173	0.5	5	153.9	384	80	120	163.6	5.6(20)	M3
Chromium (Cr)	0.0541	0.005	0.05	0	108	80	120	0.05269	2.6(20)	
Iron (Fe)	5.66	0.1	5	0.6453	100	80	120	5.722	1.1(20)	
Arsenic (As)	0.049	0.002	0.05	0	98	80	120	0.04851	1.0(20)	
Lead (Pb)	0.0483	0.005	0.05	0	97	80	120	0.04733	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 uses descriptive data qualifier flags, which could be replaced with either a DOD Q or J flag.

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.

Alpha Analytical, Inc.

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Date: *12-May-10*

QC Summary Report

Work Order: 10050402

Laboratory Control Spike Type **LCS** Test Code: **EPA Method 150.2 / SM4500HB / SW9040C**

File ID: Batch ID: **W0504PH** Analysis Date: **05/04/2010 14:49**

Sample ID: **LCS-W0504PH** Units : **pH Units** Run ID: **WETLAB_100504C** Prep Date: **05/04/2010 14:49**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
pH	4.95	1.7	5		99	90	110			

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: *12-May-10*

QC Summary Report

Work Order: 10050402

Method Blank

Type **MBLK** Test Code: **SM2540C**

File ID: Batch ID: **W0503DS** Analysis Date: **05/04/2010 00:00**

Sample ID: **MBLK-W0503DS** Units : **mg/L** Run ID: **WETLAB_100503C** Prep Date: **05/04/2010 00:00**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Solids, Total Dissolved (TDS)	ND	10								

Laboratory Control Spike

Type **LCS** Test Code: **SM2540C**

File ID: Batch ID: **W0503DS** Analysis Date: **05/04/2010 00:00**

Sample ID: **LCS-W0503DS** Units : **mg/L** Run ID: **WETLAB_100503C** Prep Date: **05/04/2010 00:00**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Solids, Total Dissolved (TDS)	101	10	100		101	80	120			

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: *12-May-2010*

QC Summary Report

Work Order: 10050402

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

File ID: **C:\HPCHEM\MS07\DATA\100506\10050617.D** Batch ID: **MS07W0506M** Analysis Date: **05/06/2010 22:20**

Sample ID: **MBLK MS07W0506M** Units : **µg/L** Run ID: **MSD_07_100506B** Prep Date: **05/06/2010 22:20**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	ND	0.5								
Chloromethane	ND	1								
Vinyl chloride	ND	0.5								
Chloroethane	ND	0.5								
Bromomethane	ND	1								
Trichlorofluoromethane	ND	0.5								
1,1-Dichloroethene	ND	0.5								
Dichloromethane	ND	1								
Freon-113	ND	0.5								
trans-1,2-Dichloroethene	ND	0.5								
Methyl tert-butyl ether (MTBE)	ND	0.5								
1,1-Dichloroethane	ND	0.5								
2-Butanone (MEK)	ND	10								
cis-1,2-Dichloroethene	ND	0.5								
Bromochloromethane	ND	0.5								
Chloroform	ND	0.5								
2,2-Dichloropropane	ND	0.5								
1,2-Dichloroethane	ND	0.5								
1,1,1-Trichloroethane	ND	0.5								
1,1-Dichloropropene	ND	0.5								
Carbon tetrachloride	ND	0.5								
Benzene	ND	0.5								
Dibromomethane	ND	0.5								
1,2-Dichloropropane	ND	0.5								
Trichloroethene	ND	0.5								
Bromodichloromethane	ND	0.5								
4-Methyl-2-pentanone (MIBK)	ND	2.5								
cis-1,3-Dichloropropene	ND	0.5								
trans-1,3-Dichloropropene	ND	0.5								
1,1,2-Trichloroethane	ND	0.5								
Toluene	ND	0.5								
1,3-Dichloropropane	ND	0.5								
Dibromochloromethane	ND	0.5								
1,2-Dibromoethane (EDB)	ND	1								
Tetrachloroethene	ND	0.5								
1,1,1,2-Tetrachloroethane	ND	0.5								
Chlorobenzene	ND	0.5								
Ethylbenzene	ND	0.5								
m,p-Xylene	ND	0.5								
Bromoform	ND	0.5								
Styrene	ND	0.5								
o-Xylene	ND	0.5								
1,1,2,2-Tetrachloroethane	ND	0.5								
1,2,3-Trichloropropane	ND	1								
Isopropylbenzene	ND	0.5								
Bromobenzene	ND	0.5								
n-Propylbenzene	ND	0.5								
4-Chlorotoluene	ND	0.5								
2-Chlorotoluene	ND	0.5								
1,3,5-Trimethylbenzene	ND	0.5								
tert-Butylbenzene	ND	0.5								
1,2,4-Trimethylbenzene	ND	0.5								
sec-Butylbenzene	ND	0.5								
1,3-Dichlorobenzene	ND	0.5								
1,4-Dichlorobenzene	ND	0.5								
4-Isopropyltoluene	ND	0.5								
1,2-Dichlorobenzene	ND	0.5								
n-Butylbenzene	ND	0.5								
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5								
1,2,4-Trichlorobenzene	ND	1								
Naphthalene	ND	1								
Hexachlorobutadiene	ND	1								
1,2,3-Trichlorobenzene	ND	1								
Surr: 1,2-Dichloroethane-d4	10.7		10		107	70	130			
Surr: Toluene-d8	9.73		10		97	70	130			

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Date: *12-May-2010*

QC Summary Report

Work Order: 10050402

Surr: 4-Bromofluorobenzene	9.66		10		97	70	130		

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

File ID: **C:\HPCHEM\MS07\DATA\100506\10050614.D** Batch ID: **MS07W0506M** Analysis Date: **05/06/2010 21:13**

Sample ID: **LCS MS07W0506M** Units : **µg/L** Run ID: **MSD_07_100506B** Prep Date: **05/06/2010 21:13**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	7.5	1	10		75	70	130			
Chloromethane	7.42	2	10		74	70	130			
Vinyl chloride	9.53	1	10		95	70	130			
Chloroethane	10.4	1	10		104	70	130			
Bromomethane	8.35	2	10		84	70	130			
Trichlorofluoromethane	9.89	1	10		99	70	130			
1,1-Dichloroethene	9.81	1	10		98	70	130			
Dichloromethane	9.87	2	10		99	70	130			
trans-1,2-Dichloroethene	11	1	10		110	70	130			
Methyl tert-butyl ether (MTBE)	10.3	0.5	10		103	70	130			
1,1-Dichloroethane	10.8	1	10		108	70	130			
cis-1,2-Dichloroethene	10.8	1	10		108	70	130			
Bromochloromethane	10.3	1	10		103	70	130			
Chloroform	10.8	1	10		108	70	130			
2,2-Dichloropropane	12.8	1	10		128	70	130			
1,2-Dichloroethane	11.3	1	10		113	70	130			
1,1,1-Trichloroethane	11.3	1	10		113	70	130			
1,1-Dichloropropene	11.4	1	10		114	70	130			
Carbon tetrachloride	11.2	1	10		112	70	130			
Benzene	10.6	0.5	10		106	70	130			
Dibromomethane	10.5	1	10		105	70	130			
1,2-Dichloropropane	11.5	1	10		115	70	130			
Trichloroethene	10.8	1	10		108	70	130			
Bromodichloromethane	11.2	1	10		112	70	130			
cis-1,3-Dichloropropene	11.1	1	10		111	70	130			
trans-1,3-Dichloropropene	11.3	1	10		113	70	130			
1,1,2-Trichloroethane	10.3	1	10		103	70	130			
Toluene	10.2	0.5	10		102	70	130			
1,3-Dichloropropane	9.94	1	10		99	70	130			
Dibromochloromethane	10.4	1	10		104	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	9.91	1	10		99	70	130			
Chlorobenzene	9.73	1	10		97	70	130			
Ethylbenzene	10.5	0.5	10		105	70	130			
m,p-Xylene	10.5	0.5	10		105	70	130			
Bromoform	10.2	1	10		102	70	130			
Styrene	14.2	1	10		142	70	130(130)			L1
o-Xylene	10.7	0.5	10		107	70	130			
1,1,2,2-Tetrachloroethane	8.69	1	10		87	70	130			
1,2,3-Trichloropropane	19.8	2	20		99	70	130			
Isopropylbenzene	10.8	1	10		108	70	130			
Bromobenzene	9.06	1	10		91	70	130			
n-Propylbenzene	10	1	10		100	70	130			
4-Chlorotoluene	10.1	1	10		101	70	130			
2-Chlorotoluene	9.98	1	10		99.8	70	130			
1,3,5-Trimethylbenzene	10.2	1	10		102	70	130			
tert-Butylbenzene	10.2	1	10		102	70	130			
1,2,4-Trimethylbenzene	10	1	10		100	70	130			
sec-Butylbenzene	10.2	1	10		102	70	130			
1,3-Dichlorobenzene	9.06	1	10		91	70	130			
1,4-Dichlorobenzene	9.07	1	10		91	70	130			
4-Isopropyltoluene	10.5	1	10		105	70	130			
1,2-Dichlorobenzene	8.51	1	10		85	70	130			
n-Butylbenzene	11.1	1	10		111	70	130			
1,2-Dibromo-3-chloropropane (DBCP)	40.2	3	50		80	70	130			
1,2,4-Trichlorobenzene	9.05	2	10		91	70	130			
Naphthalene	8.76	2	10		88	70	130			
Hexachlorobutadiene	20.3	2	20		102	70	130			
1,2,3-Trichlorobenzene	8.68	2	10		87	70	130			
Surr: 1,2-Dichloroethane-d4	11		10		110	70	130			
Surr: Toluene-d8	9.68		10		97	70	130			
Surr: 4-Bromofluorobenzene	9.45		10		95	70	130			

Alpha Analytical, Inc.

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

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

Date: *12-May-2010*

QC Summary Report

Work Order: 10050402

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

File ID: **C:\HPCHEM\MS07\DATA\100506\10050618.D** Batch ID: **MS07W0506M** Analysis Date: **05/06/2010 22:42**

Sample ID: **10050402-01AMS** Units : **µg/L** Run ID: **MSD_07_100506B** Prep Date: **05/06/2010 22:42**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	49.3	2.5	50	0	99	13	167			
Chloromethane	41	10	50	0	82	28	145			
Vinyl chloride	50.8	2.5	50	0	102	43	134			
Chloroethane	50.5	2.5	50	0	101	39	154			
Bromomethane	42.8	10	50	0	86	19	176			
Trichlorofluoromethane	48.8	2.5	50	0	98	34	160			
1,1-Dichloroethene	47.8	2.5	50	0	96	60	130			
Dichloromethane	45.2	10	50	0	90	68	130			
trans-1,2-Dichloroethene	51.5	2.5	50	0	103	63	130			
Methyl tert-butyl ether (MTBE)	47.9	1.3	50	0	96	56	141			
1,1-Dichloroethane	50.4	2.5	50	0	101	61	130			
cis-1,2-Dichloroethene	50.1	2.5	50	0	100	70	130			
Bromochloromethane	47.8	2.5	50	0	96	70	130			
Chloroform	49	2.5	50	0	98	67	130			
2,2-Dichloropropane	46.9	2.5	50	0	94	30	152			
1,2-Dichloroethane	52	2.5	50	0	104	60	135			
1,1,1-Trichloroethane	52.9	2.5	50	0	106	59	137			
1,1-Dichloropropene	51.9	2.5	50	0	104	63	130			
Carbon tetrachloride	51.9	2.5	50	0	104	50	147			
Benzene	49.1	1.3	50	0	98	67	130			
Dibromomethane	48	2.5	50	0	96	69	133			
1,2-Dichloropropane	53.3	2.5	50	0	107	69	130			
Trichloroethene	48.9	2.5	50	0	98	69	130			
Bromodichloromethane	51.3	2.5	50	0	103	66	134			
cis-1,3-Dichloropropene	42.5	2.5	50	0	85	63	130			
trans-1,3-Dichloropropene	49.5	2.5	50	0	99	66	131			
1,1,2-Trichloroethane	46	2.5	50	0	92	68	130			
Toluene	46.5	1.3	50	0	93	66	130			
1,3-Dichloropropane	44	2.5	50	0	88	70	130			
Dibromochloromethane	45.5	2.5	50	0	91	70	130			
1,2-Dibromoethane (EDB)	88.2	5	100	0	88	70	130			
Tetrachloroethene	46.8	2.5	50	0	94	61	134			
1,1,1,2-Tetrachloroethane	45	2.5	50	0	90	70	130			
Chlorobenzene	44.7	2.5	50	0	89	70	130			
Ethylbenzene	48.5	1.3	50	0	97	68	130			
m,p-Xylene	47.3	1.3	50	0	95	64	130			
Bromoform	46.3	2.5	50	0	93	64	138			
Styrene	62.7	2.5	50	0	125	69	130			
o-Xylene	48.6	1.3	50	0	97	70	130			
1,1,2,2-Tetrachloroethane	41	2.5	50	0	82	65	131			
1,2,3-Trichloropropane	92	10	100	0	92	70	130			
Isopropylbenzene	48.6	2.5	50	0	97	64	138			
Bromobenzene	41.4	2.5	50	0	83	70	130			
n-Propylbenzene	45.2	2.5	50	0	90	66	132			
4-Chlorotoluene	45.7	2.5	50	0	91	70	130			
2-Chlorotoluene	45.3	2.5	50	0	91	70	130			
1,3,5-Trimethylbenzene	45.9	2.5	50	0	92	66	136			
tert-Butylbenzene	46.7	2.5	50	0	93	65	137			
1,2,4-Trimethylbenzene	45.4	2.5	50	0	91	65	137			
sec-Butylbenzene	46	2.5	50	0	92	66	134			
1,3-Dichlorobenzene	41.1	2.5	50	0	82	70	130			
1,4-Dichlorobenzene	40.9	2.5	50	0	82	70	130			
4-Isopropyltoluene	47.5	2.5	50	0	95	66	137			
1,2-Dichlorobenzene	38.8	2.5	50	0	78	70	130			
n-Butylbenzene	50.1	2.5	50	0	100	60	142			
1,2-Dibromo-3-chloropropane (DBCP)	183	15	250	0	73	67	130			
1,2,4-Trichlorobenzene	41.2	10	50	0	82	61	137			
Naphthalene	40.2	10	50	0	80	40	167			
Hexachlorobutadiene	89.9	10	100	0	90	61	130			
1,2,3-Trichlorobenzene	39.6	10	50	0	79	51	144			
Surr: 1,2-Dichloroethane-d4	54.1		50		108	70	130			
Surr: Toluene-d8	47.6		50		95	70	130			
Surr: 4-Bromofluorobenzene	46.4		50		93	70	130			

Alpha Analytical, Inc.

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

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

Date: 12-May-2010

QC Summary Report

Work Order: 10050402

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

File ID: **C:\HPCHEM\MS07\DATA\100506\10050619.D** Batch ID: **MS07W0506M** Analysis Date: **05/06/2010 23:05**

Sample ID: **10050402-01AMSD** Units : **µg/L** Run ID: **MSD_07_100506B** Prep Date: **05/06/2010 23:05**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	53.2	2.5	50	0	106	13	167	49.26	7.6(20)	
Chloromethane	46.1	10	50	0	92	28	145	40.95	11.8(20)	
Vinyl chloride	57	2.5	50	0	114	43	134	50.83	11.5(20)	
Chloroethane	56.4	2.5	50	0	113	39	154	50.49	11.1(20)	
Bromomethane	55.9	10	50	0	112	19	176	42.75	26.6(20)	R5
Trichlorofluoromethane	51.5	2.5	50	0	103	34	160	48.75	5.5(20)	
1,1-Dichloroethene	51.2	2.5	50	0	102	60	130	47.75	6.9(20)	
Dichloromethane	48.5	10	50	0	97	68	130	45.2	7.1(20)	
trans-1,2-Dichloroethene	54.1	2.5	50	0	108	63	130	51.47	5.0(20)	
Methyl tert-butyl ether (MTBE)	51.2	1.3	50	0	102	56	141	47.88	6.7(20)	
1,1-Dichloroethane	53.5	2.5	50	0	107	61	130	50.36	6.0(20)	
cis-1,2-Dichloroethene	52.7	2.5	50	0	105	70	130	50.07	5.1(20)	
Bromochloromethane	50.1	2.5	50	0	100	70	130	47.75	4.8(20)	
Chloroform	51.1	2.5	50	0	102	67	130	49.04	4.1(20)	
2,2-Dichloropropane	49.4	2.5	50	0	99	30	152	46.94	5.1(20)	
1,2-Dichloroethane	54	2.5	50	0	108	60	135	51.99	3.7(20)	
1,1,1-Trichloroethane	55.2	2.5	50	0	110	59	137	52.93	4.1(20)	
1,1-Dichloropropene	54.8	2.5	50	0	110	63	130	51.91	5.4(20)	
Carbon tetrachloride	54.6	2.5	50	0	109	50	147	51.88	5.1(20)	
Benzene	51.6	1.3	50	0	103	67	130	49.14	4.8(20)	
Dibromomethane	50.3	2.5	50	0	101	69	133	47.98	4.7(20)	
1,2-Dichloropropane	54.9	2.5	50	0	110	69	130	53.27	3.0(20)	
Trichloroethene	51.6	2.5	50	0	103	69	130	48.92	5.3(20)	
Bromodichloromethane	53.8	2.5	50	0	108	66	134	51.33	4.7(20)	
cis-1,3-Dichloropropene	45.1	2.5	50	0	90	63	130	42.51	5.8(20)	
trans-1,3-Dichloropropene	52.3	2.5	50	0	105	66	131	49.46	5.6(20)	
1,1,2-Trichloroethane	48.5	2.5	50	0	97	68	130	46.03	5.1(20)	
Toluene	49.3	1.3	50	0	99	66	130	46.5	5.8(20)	
1,3-Dichloropropane	47.6	2.5	50	0	95	70	130	44.03	7.8(20)	
Dibromochloromethane	48.7	2.5	50	0	97	70	130	45.46	6.9(20)	
1,2-Dibromoethane (EDB)	93.1	5	100	0	93	70	130	88.18	5.4(20)	
Tetrachloroethene	49.7	2.5	50	0	99	61	134	46.75	6.1(20)	
1,1,1,2-Tetrachloroethane	47.8	2.5	50	0	96	70	130	45	6.0(20)	
Chlorobenzene	46.8	2.5	50	0	94	70	130	44.72	4.5(20)	
Ethylbenzene	51	1.3	50	0	102	68	130	48.51	5.0(20)	
m,p-Xylene	50.1	1.3	50	0	100	64	130	47.32	5.8(20)	
Bromoform	49.4	2.5	50	0	99	64	138	46.28	6.5(20)	
Styrene	66.7	2.5	50	0	133	69	130	62.73	6.1(20)	M55
o-Xylene	51.7	1.3	50	0	103	70	130	48.63	6.1(20)	
1,1,2,2-Tetrachloroethane	43.4	2.5	50	0	87	65	131	40.99	5.8(20)	
1,2,3-Trichloropropane	108	10	100	0	108	70	130	92.01	15.6(20)	
Isopropylbenzene	51	2.5	50	0	102	64	138	48.62	4.8(20)	
Bromobenzene	43.1	2.5	50	0	86	70	130	41.36	4.1(20)	
n-Propylbenzene	47.1	2.5	50	0	94	66	132	45.17	4.1(20)	
4-Chlorotoluene	48.2	2.5	50	0	96	70	130	45.68	5.4(20)	
2-Chlorotoluene	47.2	2.5	50	0	94	70	130	45.34	4.0(20)	
1,3,5-Trimethylbenzene	48.2	2.5	50	0	96	66	136	45.9	4.8(20)	
tert-Butylbenzene	48.6	2.5	50	0	97	65	137	46.7	3.9(20)	
1,2,4-Trimethylbenzene	47.7	2.5	50	0	95	65	137	45.41	4.9(20)	
sec-Butylbenzene	48.4	2.5	50	0	97	66	134	46.01	5.0(20)	
1,3-Dichlorobenzene	43.1	2.5	50	0	86	70	130	41.14	4.7(20)	
1,4-Dichlorobenzene	43.4	2.5	50	0	87	70	130	40.91	5.9(20)	
4-Isopropyltoluene	49.8	2.5	50	0	99.7	66	137	47.52	4.8(20)	
1,2-Dichlorobenzene	40.7	2.5	50	0	81	70	130	38.76	5.0(20)	
n-Butylbenzene	52.2	2.5	50	0	104	60	142	50.09	4.1(20)	
1,2-Dibromo-3-chloropropane (DBCP)	198	15	250	0	79	67	130	183.5	7.6(20)	
1,2,4-Trichlorobenzene	44.5	10	50	0	89	61	137	41.23	7.7(20)	
Naphthalene	43.7	10	50	0	87	40	167	40.19	8.4(20)	
Hexachlorobutadiene	95.8	10	100	0	96	61	130	89.86	6.4(20)	
1,2,3-Trichlorobenzene	42.4	10	50	0	85	51	144	39.57	6.9(20)	
Surr: 1,2-Dichloroethane-d4	54.5		50		109	70	130			
Surr: Toluene-d8	47.6		50		95	70	130			
Surr: 4-Bromofluorobenzene	46.8		50		94	70	130			

Alpha Analytical, Inc.

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

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

Date: *12-May-2010*

QC Summary Report

Work Order: 10050402

Comments:

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

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

L1 = The associated blank spike recovery was above laboratory acceptance limits.

M55 = Matrix spike recovery was above laboratory acceptance limits.

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

Billing Information :

CHAIN-OF-CUSTODY RECORD

AMENDED #2

CA

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

WorkOrder : BMIS10050402

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

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

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

EDD Required : **No**

Sampled by : David Loera, Chase Brogdon

PO : 218013

Client's COC # : 28939, 29487 Job : G005862/JPL Groundwater Monitoring

Cooler Temp	Samples Received	Date Printed
4 °C	04-May-2010	12-May-2010

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

Alpha Sample ID	Client Sample ID	Matrix	Collection Date	No. of Bottles Alpha	Sub	TAT	Requested Tests 300_0_W	314_W	ALKALINITY_W	METALS_DW	PH_W	TDS_W	VOC_TIC_W	VOC_W	Sample Remarks
BMI10050402-01A	MW-4-5	AQ	05/03/10 08:21	5	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10050402-02A	MW-4-4	AQ	05/03/10 08:53	5	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10050402-03A	MW-4-3	AQ	05/03/10 09:43	5	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10050402-04A	MW-4-2	AQ	05/03/10 10:13	5	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10050402-05A	MW-4-1	AQ	05/03/10 11:00	5	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10050402-06A	DUPE-02-2Q10	AQ	05/03/10 00:00	5	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10050402-07A	EB-04-05/03/10	AQ	05/03/10 10:33	5	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10050402-08A	TB-04-05/03/10	AQ	05/03/10 07:00	1	0	10							VOC by 524 Criteria	VOC by 524 Criteria	Reno Trip Blank 12/31/09
BMI10050402-09A	MW-13	AQ	05/03/10 10:08	7	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	

Comments: No security seals. Frozen ice. Temp Blank #7706 received @ 4°C. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). Amended 5/5/10 @ 11:36: To note that security seals were intact due to login error. EA : Amended 5/12/10 @ 13:28: Added Chase Brogdon as sampler due to login error. EA

	Signature	Print Name	Company	Date/Time
Logged in by:	Elizabeth Adcox	Elizabeth Adcox	**Alpha Analytical, Inc.**	5.12.10 1329

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

AMENDED

CA

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

WorkOrder : BMIS10050402

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

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

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

EDD Required : **Yes**

Sampled by : David Loera

PO : 218013

Client's COC # : 28939, 29487 Job : G005862/JPL Groundwater Monitoring

Cooler Temp	Samples Received	Date Printed
4 °C	04-May-2010	**05-May-2010**

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

Alpha Sample ID	Client Sample ID	Matrix	Collection Date	No. of Bottles Alpha	Sub	TAT	Requested Tests 300_0_W	314_W	ALKALINITY_W	METALS_DW	PH_W	TDS_W	VOC_TIC_W	VOC_W	Sample Remarks
BMI10050402-01A	MW-4-5	AQ	05/03/10 08:21	5	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10050402-02A	MW-4-4	AQ	05/03/10 08:53	5	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10050402-03A	MW-4-3	AQ	05/03/10 09:43	5	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10050402-04A	MW-4-2	AQ	05/03/10 10:13	5	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10050402-05A	MW-4-1	AQ	05/03/10 11:00	5	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10050402-06A	DUPE-02-2Q10	AQ	05/03/10 00:00	5	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10050402-07A	EB-04-05/03/10	AQ	05/03/10 10:33	5	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10050402-08A	TB-04-05/03/10	AQ	05/03/10 07:00	1	0	10							VOC by 524 Criteria	VOC by 524 Criteria	Reno Trip Blank 12/31/09
BMI10050402-09A	MW-13	AQ	05/03/10 10:08	7	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	

Comments: No security seals. Frozen ice. Temp Blank #7706 received @ 4°C. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). Amended 5/5/10 @ 11:36: To note that security seals were intact due to login error. EA :

	Signature	Print Name	Company	Date/Time
Logged in by:	Elizabeth Adcox	Elizabeth Adcox	**Alpha Analytical, Inc.**	5.5.10 1139

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 : BMIS10050402

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

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

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

EDD Required : **Yes**

Sampled by : David Loera

PO : 218013

Client's COC # : 28939 Job : G005862/JPL Groundwater Monitoring

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

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

Alpha Sample ID	Client Sample ID	Matrix	Collection Date	No. of Bottles Alpha	Sub	TAT	Requested Tests 300_0_W	314_W	ALKALINITY_W	METALS_DW	PH_W	TDS_W	VOC_TIC_W	VOC_W	Sample Remarks
BMI10050402-01A	MW-4-5	AQ	05/03/10 08:21	5	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10050402-02A	MW-4-4	AQ	05/03/10 08:53	5	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10050402-03A	MW-4-3	AQ	05/03/10 09:43	5	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10050402-04A	MW-4-2	AQ	05/03/10 10:13	5	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10050402-05A	MW-4-1	AQ	05/03/10 11:00	5	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10050402-06A	DUPE-02-2Q10	AQ	05/03/10 00:00	5	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10050402-07A	EB-04-05/03/10	AQ	05/03/10 10:33	5	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10050402-08A	TB-04-05/03/10	AQ	05/03/10 07:00	1	0	10							VOC by 524 Criteria	VOC by 524 Criteria	Reno Trip Blank 12/31/09
BMI10050402-09A	MW-13	AQ	05/03/10 10:08	7	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	

Comments: No security seals. Frozen ice. Temp Blank #7706 received @ 4°C. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). :

	Signature	Print Name	Company	Date/Time
Logged in by:	Elizabeth Adcox	Elizabeth Adcox	**Alpha Analytical, Inc.**	5.4.10 1030

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

Billing Information:

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

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

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

28939

Page # 1 of 1

Client Name	P.O. #	Job #
BATTELLE / DAVID CONNER	218013	6005862
Address	**EMail Address**	
3990 OLD TOWN AVE, C-205		
City, State, Zip	**Phone #**	**Fax #**
SAN DIEGO CA 92110	(619) 726-7311	

Analyses Required

Required QC Level? I II III IV

EDD / EDF? YES ___ NO ___

Global ID # _____

Time Sampled	Date Sampled	Matrix* See Key Below	Sampled by: CHASE BRUDON Lab ID Number (Office Use Only)	Report Attention Sample Description	TAT	Field Filtered	Total and type of containers ** See below	VOC (524.2) TOTAL CR, LEAD,	ARSENIC (200.8) GEN. CHEM. (NA, K, Ca, Mg, FE) (200.7)	CLO4 (314.0)	GEN. CHEM. (300.0 310.1, 160.1, 150.1			REMARKS
0821	5/3/10	AQ	BMI10050402 01	MW-4-5	NORM		5	X	X	X	X	X		
0853			-02	MW-4-4			5	X	X	X	X	X		
0943			-03	MW-4-3			5	X	X	X	X	X		
1013			-04	MW-4-2			5	X	X	X	X	X		
1100			-05	MW-4-1			5	X	X	X	X	X		
"			-06	DUPE-02-2010			5	X	X	X	X	X		DUPLICATE
1033			-07	EB-04-05/03/10			5	X	X	X	X	X		EQUIPMENT BLANK
0700			-08	TB-04-05/03/10			1	X						TRIP BLANK.

ADDITIONAL INSTRUCTIONS:

	Signature	Print Name	Company	Date	Time
Relinquished by		CHASE BRUDON	INSIGHT GEC, INC	05/03/10	1300
Received by		Anthy Stuller	Alpha Analytical Inc	5/3/10	1700
Relinquished by		" "	" "	5/3/10	1600
Received by	Elizabeth Adcox	Elizabeth Adcox	Alpha	5-4-10	1030
Relinquished by					
Received by					

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

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

Billing Information:
Name Battelle / Jerry Tompkins
Address 505 King Ave
City, State, Zip Columbus OH 43201
Phone Number 614-424-4849 Fax 614-424-3667

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

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

29487

Page # 1 of 1

Client Name	P.O. #	Job #
David Conner	218013	G005862/JPL 6WM
Address	EMail Address	
	connerd@battelle.org	
City, State, Zip	Phone # 614-726-7311	Fax # 614-458-6641

Report Attention: David Conner

Sampled by: David Loera

Required QC Level? I II (III) IV

EDD / EDF? YES X NO ___

Global ID # ___

Time Sampled	Date Sampled	Matrix* See Key Below	Lab ID Number (Office Use Only)	Sample Description	TAT	Field Filtered	Total and type of containers ** See below	VOCs (S24.2)	Perchlorate (CA 2H5 EPA 2H0)	Total Cr, Pb, As, Ca, Mg, Mn, K, Fe (6010B)	Alk, Cl-, NO2, NO3, SO4, Ortho-P, TDS, pH	Carbonate, Bicarbonate (SM 2320B)			REMARKS
1008	5/3/10	AQ	-09	MW-13	10		5V, 2P	X	X	X	X	X			

ADDITIONAL INSTRUCTIONS:

	Signature	Print Name	Company	Date	Time
Relinquished by	David L	David Loera	Battelle	5/3/10	1200
Received by		CHASE BRADDON	INSIGHT GEOTEK	5/3/10	1201
Relinquished by		CHASE BRADDON	INSIGHT GEOTEK	5/3/10	1300
Received by		Anthony Stark	Alpha Analytical	5/3/10	1700
Relinquished by			"	5/3/10	1600
Received by	Elizabeth Adcox	Elizabeth Adcox	Alpha	5-4-10	1030

*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: *18-May-10*

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

CASE NARRATIVE

Job: G005862/JPL Groundwater Monitoring
Work Order: BMI10050505 **Cooler Temp:** 4 °C

Alpha's Sample ID	Client's Sample ID	Matrix
10050505-01A	MW-12-5	Aqueous
10050505-02A	MW-12-4	Aqueous
10050505-03A	MW-12-3	Aqueous
10050505-04A	MW-12-2	Aqueous
10050505-05A	MW-12-1	Aqueous
10050505-06A	DUPE-03-2Q10	Aqueous
10050505-07A	EB-05-05/04/10	Aqueous
10050505-08A	TB-05-05/04/10	Aqueous
10050505-09A	MW-6	Aqueous

Manually Integrated Analytes

Alpha's Sample ID	Test Reference	Analyte
NONE		

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

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

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

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 05/05/10

Job: G005862/JPL Groundwater Monitoring

Anions by IC
EPA Method 300.0

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-12-5**				
Lab ID : BMI10050505-01A Chloride	16	0.50 mg/L	05/05/10 12:35	05/05/10 21:55
Date Sampled 05/04/10 08:27 Nitrite (NO2) - N	ND	0.25 mg/L	05/05/10 12:35	05/05/10 21:55
Nitrate (NO3) - N	1.3	0.25 mg/L	05/05/10 12:35	05/05/10 21:55
Phosphate, ortho - P	ND	0.50 mg/L	05/05/10 12:35	05/05/10 21:55
Sulfate (SO4)	27	0.50 mg/L	05/05/10 12:35	05/05/10 21:55
Client ID: **MW-12-4**				
Lab ID : BMI10050505-02A Chloride	15	0.50 mg/L	05/05/10 12:35	05/05/10 22:14
Date Sampled 05/04/10 09:06 Nitrite (NO2) - N	ND	0.25 mg/L	05/05/10 12:35	05/05/10 22:14
Nitrate (NO3) - N	1.3	0.25 mg/L	05/05/10 12:35	05/05/10 22:14
Phosphate, ortho - P	ND	0.50 mg/L	05/05/10 12:35	05/05/10 22:14
Sulfate (SO4)	35	0.50 mg/L	05/05/10 12:35	05/05/10 22:14
Client ID: **MW-12-3**				
Lab ID : BMI10050505-03A Chloride	16	0.50 mg/L	05/05/10 12:35	05/05/10 22:32
Date Sampled 05/04/10 10:05 Nitrite (NO2) - N	ND	0.25 mg/L	05/05/10 12:35	05/05/10 22:32
Nitrate (NO3) - N	0.48	0.25 mg/L	05/05/10 12:35	05/05/10 22:32
Phosphate, ortho - P	ND	0.50 mg/L	05/05/10 12:35	05/05/10 22:32
Sulfate (SO4)	31	0.50 mg/L	05/05/10 12:35	05/05/10 22:32
Client ID: **MW-12-2**				
Lab ID : BMI10050505-04A Chloride	23	0.50 mg/L	05/05/10 12:35	05/05/10 22:51
Date Sampled 05/04/10 10:42 Nitrite (NO2) - N	ND	0.25 mg/L	05/05/10 12:35	05/05/10 22:51
Nitrate (NO3) - N	1.8	0.25 mg/L	05/05/10 12:35	05/05/10 22:51
Phosphate, ortho - P	ND	0.50 mg/L	05/05/10 12:35	05/05/10 22:51
Sulfate (SO4)	46	0.50 mg/L	05/05/10 12:35	05/05/10 22:51
Client ID: **MW-12-1**				
Lab ID : BMI10050505-05A Chloride	28	0.50 mg/L	05/05/10 12:35	05/05/10 23:09
Date Sampled 05/04/10 11:37 Nitrite (NO2) - N	ND	0.25 mg/L	05/05/10 12:35	05/05/10 23:09
Nitrate (NO3) - N	1.0	0.25 mg/L	05/05/10 12:35	05/05/10 23:09
Phosphate, ortho - P	ND	0.50 mg/L	05/05/10 12:35	05/05/10 23:09
Sulfate (SO4)	50	0.50 mg/L	05/05/10 12:35	05/05/10 23:09
Client ID: **DUPE-03-2Q10**				
Lab ID : BMI10050505-06A Chloride	23	0.50 mg/L	05/05/10 12:35	05/05/10 23:28
Date Sampled 05/04/10 00:00 Nitrite (NO2) - N	ND	0.25 mg/L	05/05/10 12:35	05/05/10 23:28
Nitrate (NO3) - N	1.8	0.25 mg/L	05/05/10 12:35	05/05/10 23:28
Phosphate, ortho - P	ND	0.50 mg/L	05/05/10 12:35	05/05/10 23:28
Sulfate (SO4)	47	0.50 mg/L	05/05/10 12:35	05/05/10 23:28

Alpha Analytical, Inc.

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

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

Client ID: **EB-05-05/04/10**					
Lab ID : BMI10050505-07A	Chloride	ND	0.50 mg/L	05/05/10 12:35	05/05/10 23:46
Date Sampled 05/04/10 11:21	Nitrite (NO2) - N	ND	0.25 mg/L	05/05/10 12:35	05/05/10 23:46
	Nitrate (NO3) - N	ND	0.25 mg/L	05/05/10 12:35	05/05/10 23:46
	Phosphate, ortho - P	ND	0.50 mg/L	05/05/10 12:35	05/05/10 23:46
	Sulfate (SO4)	ND	0.50 mg/L	05/05/10 12:35	05/05/10 23:46
Client ID: **MW-6**					
Lab ID : BMI10050505-09A	Chloride	130	50 mg/L	05/05/10 12:35	05/06/10 00:05
Date Sampled 05/04/10 10:34	Nitrite (NO2) - N	ND	0.25 mg/L	05/05/10 12:35	05/06/10 00:05
	Nitrate (NO3) - N	15	0.25 mg/L	05/05/10 12:35	05/06/10 00:05
	Sulfate (SO4)	190	75 mg/L	05/05/10 12:35	05/06/10 00:05

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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

✓

5/18/10

Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 05/05/10

Job: G005862/JPL Groundwater Monitoring

Perchlorate by Ion Chromatography
EPA Method 314.0

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-12-5**				
Lab ID : BMI10050505-01A Perchlorate	2.71	1.00 µg/L	05/07/10 10:34	05/07/10 13:24
Date Sampled 05/04/10 08:27				
Client ID: **MW-12-4**				
Lab ID : BMI10050505-02A Perchlorate	3.68	1.00 µg/L	05/07/10 10:34	05/07/10 13:43
Date Sampled 05/04/10 09:06				
Client ID: **MW-12-3**				
Lab ID : BMI10050505-03A Perchlorate	4.28	1.00 µg/L	05/07/10 10:34	05/07/10 14:38
Date Sampled 05/04/10 10:05				
Client ID: **MW-12-2**				
Lab ID : BMI10050505-04A Perchlorate	4.84	1.00 µg/L	05/07/10 10:34	05/07/10 14:56
Date Sampled 05/04/10 10:42				
Client ID: **MW-12-1**				
Lab ID : BMI10050505-05A Perchlorate	2.86	1.00 µg/L	05/07/10 10:34	05/07/10 15:15
Date Sampled 05/04/10 11:37				
Client ID: **DUPE-03-2Q10**				
Lab ID : BMI10050505-06A Perchlorate	4.92	1.00 µg/L	05/07/10 10:34	05/07/10 15:33
Date Sampled 05/04/10 00:00				
Client ID: **EB-05-05/04/10**				
Lab ID : BMI10050505-07A Perchlorate	ND	1.00 µg/L	05/07/10 10:34	05/07/10 15:52
Date Sampled 05/04/10 11:21				
Client ID: **MW-6**				
Lab ID : BMI10050505-09A Perchlorate	2.99	1.00 µg/L	05/07/10 10:34	05/07/10 16:47
Date Sampled 05/04/10 10:34				

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.

5/18/10
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 05/05/10

Job: G005862/JPL Groundwater Monitoring

Alkalinity
SM2320B

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-12-5**				
Lab ID : BMI10050505-01A Alkalinity, Bicarbonate (As CaCO3)	220	10 mg/L	05/05/10 13:48	05/05/10 13:48
Date Sampled 05/04/10 08:27 Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	05/05/10 13:48	05/05/10 13:48
Alkalinity, Total (As CaCO3 at pH 4.5)	220	10 mg/L	05/05/10 13:48	05/05/10 13:48
Client ID: **MW-12-4**				
Lab ID : BMI10050505-02A Alkalinity, Bicarbonate (As CaCO3)	220	10 mg/L	05/05/10 13:57	05/05/10 13:57
Date Sampled 05/04/10 09:06 Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	05/05/10 13:57	05/05/10 13:57
Alkalinity, Total (As CaCO3 at pH 4.5)	220	10 mg/L	05/05/10 13:57	05/05/10 13:57
Client ID: **MW-12-3**				
Lab ID : BMI10050505-03A Alkalinity, Bicarbonate (As CaCO3)	190	10 mg/L	05/05/10 14:02	05/05/10 14:02
Date Sampled 05/04/10 10:05 Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	05/05/10 14:02	05/05/10 14:02
Alkalinity, Total (As CaCO3 at pH 4.5)	190	10 mg/L	05/05/10 14:02	05/05/10 14:02
Client ID: **MW-12-2**				
Lab ID : BMI10050505-04A Alkalinity, Bicarbonate (As CaCO3)	210	10 mg/L	05/05/10 14:07	05/05/10 14:07
Date Sampled 05/04/10 10:42 Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	05/05/10 14:07	05/05/10 14:07
Alkalinity, Total (As CaCO3 at pH 4.5)	210	10 mg/L	05/05/10 14:07	05/05/10 14:07
Client ID: **MW-12-1**				
Lab ID : BMI10050505-05A Alkalinity, Bicarbonate (As CaCO3)	200	10 mg/L	05/05/10 14:12	05/05/10 14:12
Date Sampled 05/04/10 11:37 Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	05/05/10 14:12	05/05/10 14:12
Alkalinity, Total (As CaCO3 at pH 4.5)	200	10 mg/L	05/05/10 14:12	05/05/10 14:12
Client ID: **DUPE-03-2Q10**				
Lab ID : BMI10050505-06A Alkalinity, Bicarbonate (As CaCO3)	200	10 mg/L	05/05/10 14:17	05/05/10 14:17
Date Sampled 05/04/10 00:00 Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	05/05/10 14:17	05/05/10 14:17
Alkalinity, Total (As CaCO3 at pH 4.5)	200	10 mg/L	05/05/10 14:17	05/05/10 14:17
Client ID: **EB-05-05/04/10**				
Lab ID : BMI10050505-07A Alkalinity, Bicarbonate (As CaCO3)	ND	10 mg/L	05/05/10 14:21	05/05/10 14:21
Date Sampled 05/04/10 11:21 Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	05/05/10 14:21	05/05/10 14:21
Alkalinity, Total (As CaCO3 at pH 4.5)	ND	10 mg/L	05/05/10 14:21	05/05/10 14:21
Client ID: **MW-6**				
Lab ID : BMI10050505-09A Alkalinity, Bicarbonate (As CaCO3)	230	10 mg/L	05/05/10 14:24	05/05/10 14:24
Date Sampled 05/04/10 10:34 Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	05/05/10 14:24	05/05/10 14:24
Alkalinity, Total (As CaCO3 at pH 4.5)	230	10 mg/L	05/05/10 14:24	05/05/10 14:24

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ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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5/18/10

Report Date

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ANALYTICAL REPORT

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 05/05/10

Job: G005862/JPL Groundwater Monitoring

Metals by ICPMS
EPA Method 200.8

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-12-5**				
Lab ID : BMI10050505-01A Sodium (Na)	36	0.50 mg/L	05/07/10 08:20	05/10/10 23:23
Date Sampled 05/04/10 08:27 Magnesium (Mg)	13	0.50 mg/L	05/07/10 08:20	05/10/10 23:23
Potassium (K)	2.4	0.50 mg/L	05/07/10 08:20	05/10/10 23:23
Calcium (Ca)	54	0.50 mg/L	05/07/10 08:20	05/10/10 23:23
Chromium (Cr)	ND	0.0050 mg/L	05/07/10 08:20	05/10/10 23:23
Iron (Fe)	0.24	0.10 mg/L	05/07/10 08:20	05/10/10 23:23
Arsenic (As)	0.0021	0.0020 mg/L	05/07/10 08:20	05/10/10 23:23
Lead (Pb)	ND	0.0050 mg/L	05/07/10 08:20	05/10/10 23:23
Client ID: **MW-12-4**				
Lab ID : BMI10050505-02A Sodium (Na)	25	0.50 mg/L	05/07/10 08:20	05/10/10 23:29
Date Sampled 05/04/10 09:06 Magnesium (Mg)	15	0.50 mg/L	05/07/10 08:20	05/10/10 23:29
Potassium (K)	2.6	0.50 mg/L	05/07/10 08:20	05/10/10 23:29
Calcium (Ca)	70	0.50 mg/L	05/07/10 08:20	05/10/10 23:29
Chromium (Cr)	ND	0.0050 mg/L	05/07/10 08:20	05/10/10 23:29
Iron (Fe)	0.22	0.10 mg/L	05/07/10 08:20	05/10/10 23:29
Arsenic (As)	ND	0.0020 mg/L	05/07/10 08:20	05/10/10 23:29
Lead (Pb)	ND	0.0050 mg/L	05/07/10 08:20	05/10/10 23:29
Client ID: **MW-12-3**				
Lab ID : BMI10050505-03A Sodium (Na)	26	0.50 mg/L	05/07/10 08:20	05/10/10 23:34
Date Sampled 05/04/10 10:05 Magnesium (Mg)	16	0.50 mg/L	05/07/10 08:20	05/10/10 23:34
Potassium (K)	3.2	0.50 mg/L	05/07/10 08:20	05/10/10 23:34
Calcium (Ca)	54	0.50 mg/L	05/07/10 08:20	05/10/10 23:34
Chromium (Cr)	ND	0.0050 mg/L	05/07/10 08:20	05/10/10 23:34
Iron (Fe)	0.19	0.10 mg/L	05/07/10 08:20	05/10/10 23:34
Arsenic (As)	ND	0.0020 mg/L	05/07/10 08:20	05/10/10 23:34
Lead (Pb)	ND	0.0050 mg/L	05/07/10 08:20	05/10/10 23:34
Client ID: **MW-12-2**				
Lab ID : BMI10050505-04A Sodium (Na)	25	0.50 mg/L	05/07/10 08:20	05/10/10 23:40
Date Sampled 05/04/10 10:42 Magnesium (Mg)	19	0.50 mg/L	05/07/10 08:20	05/10/10 23:40
Potassium (K)	3.5	0.50 mg/L	05/07/10 08:20	05/10/10 23:40
Calcium (Ca)	69	0.50 mg/L	05/07/10 08:20	05/10/10 23:40
Chromium (Cr)	ND	0.0050 mg/L	05/07/10 08:20	05/10/10 23:40
Iron (Fe)	0.49	0.10 mg/L	05/07/10 08:20	05/10/10 23:40
Arsenic (As)	ND	0.0020 mg/L	05/07/10 08:20	05/10/10 23:40
Lead (Pb)	ND	0.0050 mg/L	05/07/10 08:20	05/10/10 23:40

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Client ID: **MW-12-1**					
Lab ID : BMI10050505-05A	Sodium (Na)	27	0.50 mg/L	05/07/10 08:20	05/10/10 23:46
Date Sampled 05/04/10 11:37	Magnesium (Mg)	20	0.50 mg/L	05/07/10 08:20	05/10/10 23:46
	Potassium (K)	3.9	0.50 mg/L	05/07/10 08:20	05/10/10 23:46
	Calcium (Ca)	69	0.50 mg/L	05/07/10 08:20	05/10/10 23:46
	Chromium (Cr)	ND	0.0050 mg/L	05/07/10 08:20	05/10/10 23:46
	Iron (Fe)	1.2	0.10 mg/L	05/07/10 08:20	05/10/10 23:46
	Arsenic (As)	ND	0.0020 mg/L	05/07/10 08:20	05/10/10 23:46
	Lead (Pb)	ND	0.0050 mg/L	05/07/10 08:20	05/10/10 23:46
Client ID: **DUPE-03-2Q10**					
Lab ID : BMI10050505-06A	Sodium (Na)	25	0.50 mg/L	05/07/10 08:20	05/10/10 23:51
Date Sampled 05/04/10 00:00	Magnesium (Mg)	20	0.50 mg/L	05/07/10 08:20	05/10/10 23:51
	Potassium (K)	3.5	0.50 mg/L	05/07/10 08:20	05/10/10 23:51
	Calcium (Ca)	70	0.50 mg/L	05/07/10 08:20	05/10/10 23:51
	Chromium (Cr)	ND	0.0050 mg/L	05/07/10 08:20	05/10/10 23:51
	Iron (Fe)	0.46	0.10 mg/L	05/07/10 08:20	05/10/10 23:51
	Arsenic (As)	ND	0.0020 mg/L	05/07/10 08:20	05/10/10 23:51
	Lead (Pb)	ND	0.0050 mg/L	05/07/10 08:20	05/10/10 23:51
Client ID: **EB-05-05/04/10**					
Lab ID : BMI10050505-07A	Sodium (Na)	ND	0.50 mg/L	05/07/10 08:20	05/10/10 23:57
Date Sampled 05/04/10 11:21	Magnesium (Mg)	ND	0.50 mg/L	05/07/10 08:20	05/10/10 23:57
	Potassium (K)	ND	0.50 mg/L	05/07/10 08:20	05/10/10 23:57
	Calcium (Ca)	ND	0.50 mg/L	05/07/10 08:20	05/10/10 23:57
	Chromium (Cr)	ND	0.0050 mg/L	05/07/10 08:20	05/10/10 23:57
	Iron (Fe)	ND	0.10 mg/L	05/07/10 08:20	05/10/10 23:57
	Arsenic (As)	ND	0.0020 mg/L	05/07/10 08:20	05/10/10 23:57
	Lead (Pb)	ND	0.0050 mg/L	05/07/10 08:20	05/10/10 23:57
Client ID: **MW-6**					
Lab ID : BMI10050505-09A	Sodium (Na)	38	0.50 mg/L	05/07/10 08:20	05/10/10 23:01
Date Sampled 05/04/10 10:34	Magnesium (Mg)	45	0.50 mg/L	05/07/10 08:20	05/10/10 23:01
	Potassium (K)	2.5	0.50 mg/L	05/07/10 08:20	05/10/10 23:01
	Calcium (Ca)	150	0.50 mg/L	05/07/10 08:20	05/10/10 23:01
	Chromium (Cr)	ND	0.0050 mg/L	05/07/10 08:20	05/10/10 23:01
	Iron (Fe)	0.65	0.10 mg/L	05/07/10 08:20	05/10/10 23:01
	Arsenic (As)	ND	0.0020 mg/L	05/07/10 08:20	05/10/10 23:01
	Lead (Pb)	ND	0.0050 mg/L	05/07/10 08:20	05/10/10 23:01

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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Report Date

Alpha Analytical, Inc.

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ANALYTICAL REPORT

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 05/05/10

Job: G005862/JPL Groundwater Monitoring

pH (Range 1.7 to 12.4)
EPA Method 150.2 / SM4500HB / SW9040C

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-12-5**				
Lab ID : BMI10050505-01A pH	7.8	1.7 pH Units	05/05/10 14:34	05/05/10 14:34
Date Sampled 05/04/10 08:27 pH - Temperature	19	1.0 °C	05/05/10 14:34	05/05/10 14:34
Client ID: **MW-12-4**				
Lab ID : BMI10050505-02A pH	7.7	1.7 pH Units	05/05/10 14:38	05/05/10 14:38
Date Sampled 05/04/10 09:06 pH - Temperature	18	1.0 °C	05/05/10 14:38	05/05/10 14:38
Client ID: **MW-12-3**				
Lab ID : BMI10050505-03A pH	7.9	1.7 pH Units	05/05/10 14:47	05/05/10 14:47
Date Sampled 05/04/10 10:05 pH - Temperature	19	1.0 °C	05/05/10 14:47	05/05/10 14:47
Client ID: **MW-12-2**				
Lab ID : BMI10050505-04A pH	7.3	1.7 pH Units	05/05/10 14:49	05/05/10 14:49
Date Sampled 05/04/10 10:42 pH - Temperature	18	1.0 °C	05/05/10 14:49	05/05/10 14:49
Client ID: **MW-12-1**				
Lab ID : BMI10050505-05A pH	7.5	1.7 pH Units	05/05/10 14:51	05/05/10 14:51
Date Sampled 05/04/10 11:37 pH - Temperature	18	1.0 °C	05/05/10 14:51	05/05/10 14:51
Client ID: **DUPE-03-2Q10**				
Lab ID : BMI10050505-06A pH	7.2	1.7 pH Units	05/05/10 14:53	05/05/10 14:53
Date Sampled 05/04/10 00:00 pH - Temperature	18	1.0 °C	05/05/10 14:53	05/05/10 14:53
Client ID: **EB-05-05/04/10**				
Lab ID : BMI10050505-07A pH	6.1	1.7 pH Units	05/05/10 14:55	05/05/10 14:55
Date Sampled 05/04/10 11:21 pH - Temperature	18	1.0 °C	05/05/10 14:55	05/05/10 14:55
Client ID: **MW-6**				
Lab ID : BMI10050505-09A pH	6.7	1.7 pH Units	05/05/10 15:00	05/05/10 15:00
Date Sampled 05/04/10 10:34 pH - Temperature	19	1.0 °C	05/05/10 15:00	05/05/10 15:00

The EPA has established an analytical holding time of 15 minutes for this method as documented in the Methods Update Rule, Federal Register, Vol 72, No 47, March 2007. This holding time will always be exceeded, unless samples are analyzed in the field.
The laboratory performed this analysis in the shortest practical holding time after sample receipt.

Roger Scholl Randy Gardner Walter Hinchman

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ANALYTICAL REPORT

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 05/05/10

Job: G005862/JPL Groundwater Monitoring

Total Dissolved Solids (TDS)
SM2540C

	Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-12-5**					
Lab ID : BMI10050505-01A	Solids, Total Dissolved (TDS)	260	10 mg/L	05/10/10	05/10/10
Date Sampled 05/04/10 08:27					
Client ID: **MW-12-4**					
Lab ID : BMI10050505-02A	Solids, Total Dissolved (TDS)	300	10 mg/L	05/10/10	05/10/10
Date Sampled 05/04/10 09:06					
Client ID: **MW-12-3**					
Lab ID : BMI10050505-03A	Solids, Total Dissolved (TDS)	290	10 mg/L	05/10/10	05/10/10
Date Sampled 05/04/10 10:05					
Client ID: **MW-12-2**					
Lab ID : BMI10050505-04A	Solids, Total Dissolved (TDS)	330	10 mg/L	05/10/10	05/10/10
Date Sampled 05/04/10 10:42					
Client ID: **MW-12-1**					
Lab ID : BMI10050505-05A	Solids, Total Dissolved (TDS)	300	10 mg/L	05/10/10	05/10/10
Date Sampled 05/04/10 11:37					
Client ID: **DUPE-03-2Q10**					
Lab ID : BMI10050505-06A	Solids, Total Dissolved (TDS)	310	10 mg/L	05/10/10	05/10/10
Date Sampled 05/04/10 00:00					
Client ID: **EB-05-05/04/10**					
Lab ID : BMI10050505-07A	Solids, Total Dissolved (TDS)	ND	10 mg/L	05/10/10	05/10/10
Date Sampled 05/04/10 11:21					
Client ID: **MW-6**					
Lab ID : BMI10050505-09A	Solids, Total Dissolved (TDS)	770	10 mg/L	05/10/10	05/10/10
Date Sampled 05/04/10 10:34					

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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ANALYTICAL REPORT

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

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

Tentatively Identified Compounds - Volatile Organics by GC/MS

	Parameter	Estimated Concentration	Estimated Reporting Limit	Date Extracted	Date Analyzed
Client ID : **MW-12-5** Lab ID : BMI10050505-01A Date Received : 05/05/10 Date Sampled : 05/04/10 08:27	* * * None Found * * *	ND	2.0 µg/L	05/12/10 14:05	05/12/10 14:05
Client ID : **MW-12-4** Lab ID : BMI10050505-02A Date Received : 05/05/10 Date Sampled : 05/04/10 09:06	* * * None Found * * *	ND	2.0 µg/L	05/12/10 14:27	05/12/10 14:27
Client ID : **MW-12-3** Lab ID : BMI10050505-03A Date Received : 05/05/10 Date Sampled : 05/04/10 10:05	* * * None Found * * *	ND	2.0 µg/L	05/12/10 14:50	05/12/10 14:50
Client ID : **MW-12-2** Lab ID : BMI10050505-04A Date Received : 05/05/10 Date Sampled : 05/04/10 10:42	* * * None Found * * *	ND	2.0 µg/L	05/12/10 15:12	05/12/10 15:12
Client ID : **MW-12-1** Lab ID : BMI10050505-05A Date Received : 05/05/10 Date Sampled : 05/04/10 11:37	* * * None Found * * *	ND	2.0 µg/L	05/12/10 15:34	05/12/10 15:34
Client ID : **DUPE-03-2Q10** Lab ID : BMI10050505-06A Date Received : 05/05/10 Date Sampled : 05/04/10 00:00	* * * None Found * * *	ND	2.0 µg/L	05/12/10 15:57	05/12/10 15:57
Client ID : **EB-05-05/04/10** Lab ID : BMI10050505-07A Date Received : 05/05/10 Date Sampled : 05/04/10 11:21	* * * None Found * * *	ND	2.0 µg/L	05/12/10 12:58	05/12/10 12:58
Client ID : **TB-05-05/04/10** Lab ID : BMI10050505-08A Date Received : 05/05/10 Date Sampled : 05/04/10 07:00	* * * None Found * * *	ND	2.0 µg/L	05/12/10 12:36	05/12/10 12:36
Client ID : **MW-6** Lab ID : BMI10050505-09A Date Received : 05/05/10 Date Sampled : 05/04/10 10:34	* * * None Found * * *	ND	2.0 µg/L	05/12/10 16:19	05/12/10 16:19

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ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10050505-01A
Client I.D. Number: MW-12-5

Sampled: 05/04/10 08:27
Received: 05/05/10
Extracted: 05/12/10 14:05
Analyzed: 05/12/10 14:05

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	Q	10	µg/L	48	4-Chlorotoluene	ND		0.50	µg/L
14	cis-1,2-Dichloroethene	ND		0.50	µg/L	49	2-Chlorotoluene	ND		0.50	µg/L
15	Bromochloromethane	ND		0.50	µg/L	50	1,3,5-Trimethylbenzene	ND		0.50	µg/L
16	Chloroform	ND		0.50	µg/L	51	tert-Butylbenzene	ND		0.50	µg/L
17	2,2-Dichloropropane	ND		0.50	µg/L	52	1,2,4-Trimethylbenzene	ND		0.50	µg/L
18	1,2-Dichloroethane	ND		0.50	µg/L	53	sec-Butylbenzene	ND		0.50	µg/L
19	1,1,1-Trichloroethane	ND		0.50	µg/L	54	1,3-Dichlorobenzene	ND		0.50	µg/L
20	1,1-Dichloropropene	ND		0.50	µg/L	55	1,4-Dichlorobenzene	ND		0.50	µg/L
21	Carbon tetrachloride	ND		0.50	µg/L	56	4-Isopropyltoluene	ND		0.50	µg/L
22	Benzene	ND		0.50	µg/L	57	1,2-Dichlorobenzene	ND		0.50	µg/L
23	Dibromomethane	ND		0.50	µg/L	58	n-Butylbenzene	ND		0.50	µg/L
24	1,2-Dichloropropane	ND		0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND	Q	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	105		(70-130)	%REC
30	1,1,2-Trichloroethane	ND		0.50	µg/L	65	Surr: Toluene-d8	100		(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	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.

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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5/18/10
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10050505-02A
Client I.D. Number: MW-12-4

Sampled: 05/04/10 09:06
Received: 05/05/10
Extracted: 05/12/10 14:27
Analyzed: 05/12/10 14:27

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration		Reporting Limit	
1	Dichlorodifluoromethane	ND		0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND		0.50	µg/L
2	Chloromethane	ND		1.0	µg/L	37	Chlorobenzene	ND		0.50	µg/L
3	Vinyl chloride	ND		0.50	µg/L	38	Ethylbenzene	ND		0.50	µg/L
4	Chloroethane	ND	J	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	J	0.50	µg/L
7	1,1-Dichloroethene	ND		0.50	µg/L	42	o-Xylene	ND		0.50	µg/L
8	Dichloromethane	ND		1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND		0.50	µg/L
9	Freon-113	ND		0.50	µg/L	44	1,2,3-Trichloropropane	ND		1.0	µg/L
10	trans-1,2-Dichloroethene	ND		0.50	µg/L	45	Isopropylbenzene	ND		0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND		0.50	µg/L	46	Bromobenzene	ND		0.50	µg/L
12	1,1-Dichloroethane	ND		0.50	µg/L	47	n-Propylbenzene	ND		0.50	µg/L
13	2-Butanone (MEK)	ND	Q	10	µg/L	48	4-Chlorotoluene	ND		0.50	µg/L
14	cis-1,2-Dichloroethene	ND		0.50	µg/L	49	2-Chlorotoluene	ND		0.50	µg/L
15	Bromochloromethane	ND		0.50	µg/L	50	1,3,5-Trimethylbenzene	ND		0.50	µg/L
16	Chloroform	ND		0.50	µg/L	51	tert-Butylbenzene	ND		0.50	µg/L
17	2,2-Dichloropropane	ND		0.50	µg/L	52	1,2,4-Trimethylbenzene	ND		0.50	µg/L
18	1,2-Dichloroethane	ND		0.50	µg/L	53	sec-Butylbenzene	ND		0.50	µg/L
19	1,1,1-Trichloroethane	ND		0.50	µg/L	54	1,3-Dichlorobenzene	ND		0.50	µg/L
20	1,1-Dichloropropene	ND		0.50	µg/L	55	1,4-Dichlorobenzene	ND		0.50	µg/L
21	Carbon tetrachloride	ND		0.50	µg/L	56	4-Isopropyltoluene	ND		0.50	µg/L
22	Benzene	ND		0.50	µg/L	57	1,2-Dichlorobenzene	ND		0.50	µg/L
23	Dibromomethane	ND		0.50	µg/L	58	n-Butylbenzene	ND		0.50	µg/L
24	1,2-Dichloropropane	ND		0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND	Q	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	108		(70-130)	%REC
30	1,1,2-Trichloroethane	ND		0.50	µg/L	65	Surr: Toluene-d8	101		(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	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.

J=Estimated: The analyte was positively identified; the quanitation is an estimation.

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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5/18/10
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10050505-03A
Client I.D. Number: MW-12-3

Sampled: 05/04/10 10:05
Received: 05/05/10
Extracted: 05/12/10 14:50
Analyzed: 05/12/10 14:50

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration		Reporting Limit	
1	Dichlorodifluoromethane	ND		0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND		0.50	µg/L
2	Chloromethane	ND		1.0	µg/L	37	Chlorobenzene	ND		0.50	µg/L
3	Vinyl chloride	ND		0.50	µg/L	38	Ethylbenzene	ND		0.50	µg/L
4	Chloroethane	ND		0.50	µg/L	39	m,p-Xylene	ND		0.50	µg/L
5	Bromomethane	ND		1.0	µg/L	40	Bromoform	ND		0.50	µg/L
6	Trichlorofluoromethane	ND		0.50	µg/L	41	Styrene	ND		0.50	µg/L
7	1,1-Dichloroethene	ND		0.50	µg/L	42	o-Xylene	ND		0.50	µg/L
8	Dichloromethane	ND		1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND		0.50	µg/L
9	Freon-113	ND		0.50	µg/L	44	1,2,3-Trichloropropane	ND		1.0	µg/L
10	trans-1,2-Dichloroethene	ND		0.50	µg/L	45	Isopropylbenzene	ND		0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND		0.50	µg/L	46	Bromobenzene	ND		0.50	µg/L
12	1,1-Dichloroethane	ND		0.50	µg/L	47	n-Propylbenzene	ND		0.50	µg/L
13	2-Butanone (MEK)	ND	Q	10	µg/L	48	4-Chlorotoluene	ND		0.50	µg/L
14	cis-1,2-Dichloroethene	ND		0.50	µg/L	49	2-Chlorotoluene	ND		0.50	µg/L
15	Bromochloromethane	ND		0.50	µg/L	50	1,3,5-Trimethylbenzene	ND		0.50	µg/L
16	Chloroform	0.67		0.50	µg/L	51	tert-Butylbenzene	ND		0.50	µg/L
17	2,2-Dichloropropane	ND		0.50	µg/L	52	1,2,4-Trimethylbenzene	ND		0.50	µg/L
18	1,2-Dichloroethane	ND		0.50	µg/L	53	sec-Butylbenzene	ND		0.50	µg/L
19	1,1,1-Trichloroethane	ND		0.50	µg/L	54	1,3-Dichlorobenzene	ND		0.50	µg/L
20	1,1-Dichloropropene	ND		0.50	µg/L	55	1,4-Dichlorobenzene	ND		0.50	µg/L
21	Carbon tetrachloride	1.1		0.50	µg/L	56	4-Isopropyltoluene	ND		0.50	µg/L
22	Benzene	ND		0.50	µg/L	57	1,2-Dichlorobenzene	ND		0.50	µg/L
23	Dibromomethane	ND		0.50	µg/L	58	n-Butylbenzene	ND		0.50	µg/L
24	1,2-Dichloropropane	ND		0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND	Q	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	106		(70-130)	%REC
30	1,1,2-Trichloroethane	ND		0.50	µg/L	65	Surr: Toluene-d8	101		(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	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.

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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5/18/10
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10050505-04A
Client I.D. Number: MW-12-2

Sampled: 05/04/10 10:42
Received: 05/05/10
Extracted: 05/12/10 15:12
Analyzed: 05/12/10 15:12

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration		Reporting Limit	
1	Dichlorodifluoromethane	ND		0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND		0.50	µg/L
2	Chloromethane	ND		1.0	µg/L	37	Chlorobenzene	ND		0.50	µg/L
3	Vinyl chloride	ND		0.50	µg/L	38	Ethylbenzene	ND		0.50	µg/L
4	Chloroethane	ND		0.50	µg/L	39	m,p-Xylene	ND		0.50	µg/L
5	Bromomethane	ND		1.0	µg/L	40	Bromoform	ND		0.50	µg/L
6	Trichlorofluoromethane	ND		0.50	µg/L	41	Styrene	ND		0.50	µg/L
7	1,1-Dichloroethene	ND		0.50	µg/L	42	o-Xylene	ND		0.50	µg/L
8	Dichloromethane	ND		1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND		0.50	µg/L
9	Freon-113	ND		0.50	µg/L	44	1,2,3-Trichloropropane	ND		1.0	µg/L
10	trans-1,2-Dichloroethene	ND		0.50	µg/L	45	Isopropylbenzene	ND		0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND		0.50	µg/L	46	Bromobenzene	ND		0.50	µg/L
12	1,1-Dichloroethane	ND		0.50	µg/L	47	n-Propylbenzene	ND		0.50	µg/L
13	2-Butanone (MEK)	ND	Q	10	µg/L	48	4-Chlorotoluene	ND		0.50	µg/L
14	cis-1,2-Dichloroethene	ND		0.50	µg/L	49	2-Chlorotoluene	ND		0.50	µg/L
15	Bromochloromethane	ND		0.50	µg/L	50	1,3,5-Trimethylbenzene	ND		0.50	µg/L
16	Chloroform	ND		0.50	µg/L	51	tert-Butylbenzene	ND		0.50	µg/L
17	2,2-Dichloropropane	ND		0.50	µg/L	52	1,2,4-Trimethylbenzene	ND		0.50	µg/L
18	1,2-Dichloroethane	ND		0.50	µg/L	53	sec-Butylbenzene	ND		0.50	µg/L
19	1,1,1-Trichloroethane	ND		0.50	µg/L	54	1,3-Dichlorobenzene	ND		0.50	µg/L
20	1,1-Dichloropropene	ND		0.50	µg/L	55	1,4-Dichlorobenzene	ND		0.50	µg/L
21	Carbon tetrachloride	ND		0.50	µg/L	56	4-Isopropyltoluene	ND		0.50	µg/L
22	Benzene	ND		0.50	µg/L	57	1,2-Dichlorobenzene	ND		0.50	µg/L
23	Dibromomethane	ND		0.50	µg/L	58	n-Butylbenzene	ND		0.50	µg/L
24	1,2-Dichloropropane	ND		0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND	Q	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	108		(70-130)	%REC
30	1,1,2-Trichloroethane	ND		0.50	µg/L	65	Surr: Toluene-d8	99		(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	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.

Q = One or more quality control criteria failed.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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5/18/10
Report Date

Alpha Analytical, Inc.

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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10050505-05A
Client I.D. Number: MW-12-1

Sampled: 05/04/10 11:37
Received: 05/05/10
Extracted: 05/12/10 15:34
Analyzed: 05/12/10 15:34

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	Q	10	µg/L	48	4-Chlorotoluene	ND		0.50	µg/L
14	cis-1,2-Dichloroethene	ND		0.50	µg/L	49	2-Chlorotoluene	ND		0.50	µg/L
15	Bromochloromethane	ND		0.50	µg/L	50	1,3,5-Trimethylbenzene	ND		0.50	µg/L
16	Chloroform	ND		0.50	µg/L	51	tert-Butylbenzene	ND		0.50	µg/L
17	2,2-Dichloropropane	ND		0.50	µg/L	52	1,2,4-Trimethylbenzene	ND		0.50	µg/L
18	1,2-Dichloroethane	ND		0.50	µg/L	53	sec-Butylbenzene	ND		0.50	µg/L
19	1,1,1-Trichloroethane	ND		0.50	µg/L	54	1,3-Dichlorobenzene	ND		0.50	µg/L
20	1,1-Dichloropropene	ND		0.50	µg/L	55	1,4-Dichlorobenzene	ND		0.50	µg/L
21	Carbon tetrachloride	ND		0.50	µg/L	56	4-Isopropyltoluene	ND		0.50	µg/L
22	Benzene	ND		0.50	µg/L	57	1,2-Dichlorobenzene	ND		0.50	µg/L
23	Dibromomethane	ND		0.50	µg/L	58	n-Butylbenzene	ND		0.50	µg/L
24	1,2-Dichloropropane	ND		0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND	Q	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	106		(70-130)	%REC
30	1,1,2-Trichloroethane	ND		0.50	µg/L	65	Surr: Toluene-d8	98		(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	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.

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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5/18/10
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10050505-06A
Client I.D. Number: DUPE-03-2Q10

Sampled: 05/04/10 00:00
Received: 05/05/10
Extracted: 05/12/10 15:57
Analyzed: 05/12/10 15:57

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	Q	10	µg/L	48	4-Chlorotoluene	ND		0.50	µg/L
14	cis-1,2-Dichloroethene	ND		0.50	µg/L	49	2-Chlorotoluene	ND		0.50	µg/L
15	Bromochloromethane	ND		0.50	µg/L	50	1,3,5-Trimethylbenzene	ND		0.50	µg/L
16	Chloroform	ND		0.50	µg/L	51	tert-Butylbenzene	ND		0.50	µg/L
17	2,2-Dichloropropane	ND		0.50	µg/L	52	1,2,4-Trimethylbenzene	ND		0.50	µg/L
18	1,2-Dichloroethane	ND		0.50	µg/L	53	sec-Butylbenzene	ND		0.50	µg/L
19	1,1,1-Trichloroethane	ND		0.50	µg/L	54	1,3-Dichlorobenzene	ND		0.50	µg/L
20	1,1-Dichloropropene	ND		0.50	µg/L	55	1,4-Dichlorobenzene	ND		0.50	µg/L
21	Carbon tetrachloride	ND		0.50	µg/L	56	4-Isopropyltoluene	ND		0.50	µg/L
22	Benzene	ND		0.50	µg/L	57	1,2-Dichlorobenzene	ND		0.50	µg/L
23	Dibromomethane	ND		0.50	µg/L	58	n-Butylbenzene	ND		0.50	µg/L
24	1,2-Dichloropropane	ND		0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND	Q	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	106		(70-130)	%REC
30	1,1,2-Trichloroethane	ND		0.50	µg/L	65	Surr: Toluene-d8	101		(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	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.

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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5/18/10
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10050505-07A
Client I.D. Number: EB-05-05/04/10

Sampled: 05/04/10 11:21
Received: 05/05/10
Extracted: 05/12/10 12:58
Analyzed: 05/12/10 12:58

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	Q	10	µg/L	48	4-Chlorotoluene	ND		0.50	µg/L
14	cis-1,2-Dichloroethene	ND		0.50	µg/L	49	2-Chlorotoluene	ND		0.50	µg/L
15	Bromochloromethane	ND		0.50	µg/L	50	1,3,5-Trimethylbenzene	ND		0.50	µg/L
16	Chloroform	ND		0.50	µg/L	51	tert-Butylbenzene	ND		0.50	µg/L
17	2,2-Dichloropropane	ND		0.50	µg/L	52	1,2,4-Trimethylbenzene	ND		0.50	µg/L
18	1,2-Dichloroethane	ND		0.50	µg/L	53	sec-Butylbenzene	ND		0.50	µg/L
19	1,1,1-Trichloroethane	ND		0.50	µg/L	54	1,3-Dichlorobenzene	ND		0.50	µg/L
20	1,1-Dichloropropene	ND		0.50	µg/L	55	1,4-Dichlorobenzene	ND		0.50	µg/L
21	Carbon tetrachloride	ND		0.50	µg/L	56	4-Isopropyltoluene	ND		0.50	µg/L
22	Benzene	ND		0.50	µg/L	57	1,2-Dichlorobenzene	ND		0.50	µg/L
23	Dibromomethane	ND		0.50	µg/L	58	n-Butylbenzene	ND		0.50	µg/L
24	1,2-Dichloropropane	ND		0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND	Q	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	107		(70-130)	%REC
30	1,1,2-Trichloroethane	ND		0.50	µg/L	65	Surr: Toluene-d8	98		(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	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.

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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5/18/10
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10050505-08A
Client I.D. Number: TB-05-05/04/10

Sampled: 05/04/10 07:00
Received: 05/05/10
Extracted: 05/12/10 12:36
Analyzed: 05/12/10 12:36

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration		Reporting Limit	
1	Dichlorodifluoromethane	ND		0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND		0.50	µg/L
2	Chloromethane	ND		1.0	µg/L	37	Chlorobenzene	ND		0.50	µg/L
3	Vinyl chloride	ND		0.50	µg/L	38	Ethylbenzene	ND		0.50	µg/L
4	Chloroethane	ND		0.50	µg/L	39	m,p-Xylene	ND		0.50	µg/L
5	Bromomethane	ND		1.0	µg/L	40	Bromoform	ND		0.50	µg/L
6	Trichlorofluoromethane	ND		0.50	µg/L	41	Styrene	ND		0.50	µg/L
7	1,1-Dichloroethene	ND		0.50	µg/L	42	o-Xylene	ND		0.50	µg/L
8	Dichloromethane	ND		1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND		0.50	µg/L
9	Freon-113	ND		0.50	µg/L	44	1,2,3-Trichloropropane	ND		1.0	µg/L
10	trans-1,2-Dichloroethene	ND		0.50	µg/L	45	Isopropylbenzene	ND		0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND		0.50	µg/L	46	Bromobenzene	ND		0.50	µg/L
12	1,1-Dichloroethane	ND		0.50	µg/L	47	n-Propylbenzene	ND		0.50	µg/L
13	2-Butanone (MEK)	ND	Q	10	µg/L	48	4-Chlorotoluene	ND		0.50	µg/L
14	cis-1,2-Dichloroethene	ND		0.50	µg/L	49	2-Chlorotoluene	ND		0.50	µg/L
15	Bromochloromethane	ND		0.50	µg/L	50	1,3,5-Trimethylbenzene	ND		0.50	µg/L
16	Chloroform	ND		0.50	µg/L	51	tert-Butylbenzene	ND		0.50	µg/L
17	2,2-Dichloropropane	ND		0.50	µg/L	52	1,2,4-Trimethylbenzene	ND		0.50	µg/L
18	1,2-Dichloroethane	ND		0.50	µg/L	53	sec-Butylbenzene	ND		0.50	µg/L
19	1,1,1-Trichloroethane	ND		0.50	µg/L	54	1,3-Dichlorobenzene	ND		0.50	µg/L
20	1,1-Dichloropropene	ND		0.50	µg/L	55	1,4-Dichlorobenzene	ND		0.50	µg/L
21	Carbon tetrachloride	ND		0.50	µg/L	56	4-Isopropyltoluene	ND		0.50	µg/L
22	Benzene	ND		0.50	µg/L	57	1,2-Dichlorobenzene	ND		0.50	µg/L
23	Dibromomethane	ND		0.50	µg/L	58	n-Butylbenzene	ND		0.50	µg/L
24	1,2-Dichloropropane	ND		0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND	Q	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	108		(70-130)	%REC
30	1,1,2-Trichloroethane	ND		0.50	µg/L	65	Surr: Toluene-d8	100		(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	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.

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ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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5/18/10
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10050505-09A
Client I.D. Number: MW-6

Sampled: 05/04/10 10:34
Received: 05/05/10
Extracted: 05/12/10 16:19
Analyzed: 05/12/10 16:19

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	J	0.50	µg/L	39	m,p-Xylene	ND		0.50	µg/L
5	Bromomethane	ND	J	1.0	µg/L	40	Bromoform	ND		0.50	µg/L
6	Trichlorofluoromethane	ND		0.50	µg/L	41	Styrene	ND	J	0.50	µg/L
7	1,1-Dichloroethene	ND		0.50	µg/L	42	o-Xylene	ND		0.50	µg/L
8	Dichloromethane	ND		1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND		0.50	µg/L
9	Freon-113	ND		0.50	µg/L	44	1,2,3-Trichloropropane	ND		1.0	µg/L
10	trans-1,2-Dichloroethene	ND		0.50	µg/L	45	Isopropylbenzene	ND		0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND		0.50	µg/L	46	Bromobenzene	ND		0.50	µg/L
12	1,1-Dichloroethane	ND		0.50	µg/L	47	n-Propylbenzene	ND		0.50	µg/L
13	2-Butanone (MEK)	ND	Q	10	µg/L	48	4-Chlorotoluene	ND		0.50	µg/L
14	cis-1,2-Dichloroethene	ND		0.50	µg/L	49	2-Chlorotoluene	ND		0.50	µg/L
15	Bromochloromethane	ND		0.50	µg/L	50	1,3,5-Trimethylbenzene	ND		0.50	µg/L
16	Chloroform	ND		0.50	µg/L	51	tert-Butylbenzene	ND		0.50	µg/L
17	2,2-Dichloropropane	ND		0.50	µg/L	52	1,2,4-Trimethylbenzene	ND		0.50	µg/L
18	1,2-Dichloroethane	ND		0.50	µg/L	53	sec-Butylbenzene	ND		0.50	µg/L
19	1,1,1-Trichloroethane	ND		0.50	µg/L	54	1,3-Dichlorobenzene	ND		0.50	µg/L
20	1,1-Dichloropropene	ND		0.50	µg/L	55	1,4-Dichlorobenzene	ND		0.50	µg/L
21	Carbon tetrachloride	ND		0.50	µg/L	56	4-Isopropyltoluene	ND		0.50	µg/L
22	Benzene	ND		0.50	µg/L	57	1,2-Dichlorobenzene	ND		0.50	µg/L
23	Dibromomethane	ND		0.50	µg/L	58	n-Butylbenzene	ND		0.50	µg/L
24	1,2-Dichloropropane	ND		0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND	QJ	2.5	µg/L
25	Trichloroethene	4.3		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	Q	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	95		(70-130)	%REC
32	1,3-Dichloropropane	ND		0.50	µg/L						
33	Dibromochloromethane	ND		0.50	µg/L						
34	1,2-Dibromoethane (EDB)	ND		1.0	µg/L						
35	Tetrachloroethene	1.1		0.50	µg/L						

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

J=Estimated: The analyte was positively identified; the quanitation is an estimation.

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.

5/18/10
Report Date

Alpha Analytical, Inc.

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

VOC Sample Preservation Report

Work Order: BMI10050505 **Job:** G005862/JPL Groundwater Monitoring

Alpha's Sample ID	Client's Sample ID	Matrix	pH
10050505-01A	MW-12-5	Aqueous	2
10050505-02A	MW-12-4	Aqueous	2
10050505-03A	MW-12-3	Aqueous	2
10050505-04A	MW-12-2	Aqueous	2
10050505-05A	MW-12-1	Aqueous	2
10050505-06A	DUPE-03-2Q10	Aqueous	2
10050505-07A	EB-05-05/04/10	Aqueous	2
10050505-08A	TB-05-05/04/10	Aqueous	2
10050505-09A	MW-6	Aqueous	2

5/18/10
Report Date

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Date: *13-May-10*

QC Summary Report

Work Order: 10050505

Method Blank

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

File ID: **54** Batch ID: **24165** Analysis Date: **05/05/2010 21:00**

Sample ID: **MB-24165** Units : **mg/L** Run ID: **IC_1_100505B** Prep Date: **05/05/2010 12:35**

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: **55** Batch ID: **24165** Analysis Date: **05/05/2010 21:18**

Sample ID: **LFB-24165** Units : **mg/L** Run ID: **IC_1_100505B** Prep Date: **05/05/2010 12:35**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	51.3	0.5	50		103	90	110			
Nitrite (NO2) - N	4.99	0.25	5		99.8	90	110			
Nitrate (NO3) - N	5.39	0.25	5		108	90	110			
Phosphate, ortho - P	5.2	0.5	5		104	90	110			
Sulfate (SO4)	107	0.5	100		107	90	110			

Sample Matrix Spike

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

File ID: **65** Batch ID: **24165** Analysis Date: **05/06/2010 00:23**

Sample ID: **10050505-09ALFM** Units : **mg/L** Run ID: **IC_1_100505B** Prep Date: **05/05/2010 12:35**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	216	0.5	100	125.9	90	80	120			
Nitrite (NO2) - N	10.5	0.25	10	0	105	80	120			
Nitrate (NO3) - N	25.7	0.25	10	14.64	111	80	120			
Phosphate, ortho - P	10.9	0.5	10	0	109	80	120			
Sulfate (SO4)	377	0.5	200	192.3	92	80	120			

Sample Matrix Spike Duplicate

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

File ID: **66** Batch ID: **24165** Analysis Date: **05/06/2010 00:42**

Sample ID: **10050505-09ALFMD** Units : **mg/L** Run ID: **IC_1_100505B** Prep Date: **05/05/2010 12:35**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	220	0.5	100	125.9	94	80	120	215.8	1.9(15)	
Nitrite (NO2) - N	10.6	0.25	10	0	106	80	120	10.47	1.2(15)	
Nitrate (NO3) - N	24.9	0.25	10	14.64	103	80	120	25.75	3.2(15)	
Phosphate, ortho - P	11	0.5	10	0	110	80	120	10.95	0.1(15)	
Sulfate (SO4)	287	0.5	200	192.3	47	80	120	376.6	27.2(15)	M2 R58

Comments:

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

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

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

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

Alpha Analytical, Inc.

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Date: *18-May-10*

QC Summary Report

Work Order: 10050505

Method Blank

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

File ID: **14** Batch ID: **24191** Analysis Date: **05/07/2010 11:34**

Sample ID: **MB-24191** Units : **µg/L** Run ID: **IC_3_100507A** Prep Date: **05/07/2010 10:34**

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: **24191** Analysis Date: **05/07/2010 11:52**

Sample ID: **LFB-24191** Units : **µg/L** Run ID: **IC_3_100507A** Prep Date: **05/07/2010 10:34**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	25.1	2	25		100	85	115			

Sample Matrix Spike

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

File ID: **22** Batch ID: **24191** Analysis Date: **05/07/2010 14:01**

Sample ID: **10050505-02ALFM** Units : **µg/L** Run ID: **IC_3_100507A** Prep Date: **05/07/2010 10:34**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	30	2	25	3.676	105	80	120			

Sample Matrix Spike Duplicate

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

File ID: **17** Batch ID: **24191** Analysis Date: **05/13/2010 13:46**

Sample ID: **10050505-02ALFMD** Units : **µg/L** Run ID: **IC_3_100507A** Prep Date: **05/07/2010 10:34**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	28	2	25	3.676	97	80	120	30.04	6.9(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: *13-May-10*

QC Summary Report

Work Order: 10050505

Laboratory Control Spike Type **LCS** Test Code: **SM2320B**

File ID: Batch ID: **W0505AL** Analysis Date: **05/05/2010 13:43**

Sample ID: **LCS-W0505AL** Units : **mg/L** Run ID: **WETLAB_100505G** Prep Date: **05/05/2010 13:43**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Alkalinity, Bicarbonate (As CaCO3)	244.5	10	250		98	80	120			
Alkalinity, Carbonate (As CaCO3)	244.5	10	250		98	80	120			
Alkalinity, Total (As CaCO3 at pH 4.5)	245	10	250		98	80	120			

Comments:

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

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Date: *13-May-10*

QC Summary Report

Work Order: 10050505

Method Blank

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

File ID: **051010.B\075SMPL.D** Batch ID: **24187K** Analysis Date: **05/10/2010 22:38**

Sample ID: **MB-24187** Units : **mg/L** Run ID: **ICP/MS_100510B** Prep Date: **05/07/2010 08:20**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sodium (Na)	ND	0.5								
Magnesium (Mg)	ND	0.5								
Potassium (K)	ND	0.5								
Calcium (Ca)	ND	0.5								
Chromium (Cr)	ND	0.005								
Iron (Fe)	ND	0.1								
Arsenic (As)	ND	0.002								
Lead (Pb)	ND	0.005								

Laboratory Control Spike

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

File ID: **051010.B\076_LCS.D** Batch ID: **24187K** Analysis Date: **05/10/2010 22:44**

Sample ID: **LCS-24187** Units : **mg/L** Run ID: **ICP/MS_100510B** Prep Date: **05/07/2010 08:20**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sodium (Na)	5.02	0.5	5		100	80	120			
Magnesium (Mg)	4.97	0.5	5		99	80	120			
Potassium (K)	5.04	0.5	5		101	80	120			
Calcium (Ca)	4.97	0.5	5		99	80	120			
Chromium (Cr)	0.0457	0.005	0.05		91	80	120			
Iron (Fe)	4.56	0.1	5		91	80	120			
Arsenic (As)	0.0474	0.002	0.05		95	80	120			
Lead (Pb)	0.0467	0.005	0.05		93	80	120			

Sample Matrix Spike

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

File ID: **051010.B\080SMPL.D** Batch ID: **24187K** Analysis Date: **05/10/2010 23:06**

Sample ID: **10050505-09AMS** Units : **mg/L** Run ID: **ICP/MS_100510B** Prep Date: **05/07/2010 08:20**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sodium (Na)	43.8	0.5	5	37.81	119	80	120			
Magnesium (Mg)	50.7	0.5	5	45.12	111	80	120			
Potassium (K)	7.75	0.5	5	2.481	105	80	120			
Calcium (Ca)	164	0.5	5	153.9	194	80	120			M3
Chromium (Cr)	0.0527	0.005	0.05	0	105	80	120			
Iron (Fe)	5.72	0.1	5	0.6453	102	80	120			
Arsenic (As)	0.0485	0.002	0.05	0	97	80	120			
Lead (Pb)	0.0473	0.005	0.05	0	95	80	120			

Sample Matrix Spike Duplicate

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

File ID: **051010.B\081SMPL.D** Batch ID: **24187K** Analysis Date: **05/10/2010 23:12**

Sample ID: **10050505-09AMSD** Units : **mg/L** Run ID: **ICP/MS_100510B** Prep Date: **05/07/2010 08:20**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sodium (Na)	45.7	0.5	5	37.81	159	80	120	43.76	4.4(20)	M3
Magnesium (Mg)	52.1	0.5	5	45.12	139	80	120	50.68	2.7(20)	M3
Potassium (K)	8.37	0.5	5	2.481	118	80	120	7.751	7.7(20)	
Calcium (Ca)	173	0.5	5	153.9	384	80	120	163.6	5.6(20)	M3
Chromium (Cr)	0.0541	0.005	0.05	0	108	80	120	0.05269	2.6(20)	
Iron (Fe)	5.66	0.1	5	0.6453	100	80	120	5.722	1.1(20)	
Arsenic (As)	0.049	0.002	0.05	0	98	80	120	0.04851	1.0(20)	
Lead (Pb)	0.0483	0.005	0.05	0	97	80	120	0.04733	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 uses descriptive data qualifier flags, which could be replaced with either a DOD Q or J flag.

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.

Alpha Analytical, Inc.

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Date: *13-May-10*

QC Summary Report

Work Order: 10050505

Laboratory Control Spike Type **LCS** Test Code: **EPA Method 150.2 / SM4500HB / SW9040C**

File ID: Batch ID: **W0505PH** Analysis Date: **05/05/2010 14:32**

Sample ID: **LCS-W0505PH** Units : **pH Units** Run ID: **WETLAB_100505A** Prep Date: **05/05/2010 14:32**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
pH	4.91	1.7	5		98	90	110			

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: *14-May-10*

QC Summary Report

Work Order: 10050505

Method Blank

Type: **MBLK** Test Code: **SM2540C**

File ID: Batch ID: **W0506DS** Analysis Date: **05/10/2010 00:00**

Sample ID: **MBLK-W0506DS** Units : **mg/L** Run ID: **WETLAB_100506K** Prep Date: **05/10/2010 00:00**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Solids, Total Dissolved (TDS)	ND	10								

Laboratory Control Spike

Type: **LCS** Test Code: **SM2540C**

File ID: Batch ID: **W0506DS** Analysis Date: **05/10/2010 00:00**

Sample ID: **LCS-W0506DS** Units : **mg/L** Run ID: **WETLAB_100506K** Prep Date: **05/10/2010 00:00**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Solids, Total Dissolved (TDS)	96	10	100		96	80	120			

Comments:

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

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Date: *18-May-10*

QC Summary Report

Work Order: 10050505

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

File ID: **10051206.D** Batch ID: **MS15W0512M** Analysis Date: **05/12/2010 10:21**

Sample ID: **MBLK MS15W0512M** Units : **µg/L** Run ID: **MSD_15_100512B** Prep Date: **05/12/2010 10:21**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	ND	0.5								
Chloromethane	ND	1								
Vinyl chloride	ND	0.5								
Chloroethane	ND	0.5								
Bromomethane	ND	1								
Trichlorofluoromethane	ND	0.5								
1,1-Dichloroethene	ND	0.5								
Dichloromethane	ND	1								
Freon-113	ND	0.5								
trans-1,2-Dichloroethene	ND	0.5								
Methyl tert-butyl ether (MTBE)	ND	0.5								
1,1-Dichloroethane	ND	0.5								
2-Butanone (MEK)	ND	10								
cis-1,2-Dichloroethene	ND	0.5								
Bromochloromethane	ND	0.5								
Chloroform	ND	0.5								
2,2-Dichloropropane	ND	0.5								
1,2-Dichloroethane	ND	0.5								
1,1,1-Trichloroethane	ND	0.5								
1,1-Dichloropropene	ND	0.5								
Carbon tetrachloride	ND	0.5								
Benzene	ND	0.5								
Dibromomethane	ND	0.5								
1,2-Dichloropropane	ND	0.5								
Trichloroethene	ND	0.5								
Bromodichloromethane	ND	0.5								
4-Methyl-2-pentanone (MIBK)	ND	2.5								
cis-1,3-Dichloropropene	ND	0.5								
trans-1,3-Dichloropropene	ND	0.5								
1,1,2-Trichloroethane	ND	0.5								
Toluene	ND	0.5								
1,3-Dichloropropane	ND	0.5								
Dibromochloromethane	ND	0.5								
1,2-Dibromoethane (EDB)	ND	1								
Tetrachloroethene	ND	0.5								
1,1,1,2-Tetrachloroethane	ND	0.5								
Chlorobenzene	ND	0.5								
Ethylbenzene	ND	0.5								
m,p-Xylene	ND	0.5								
Bromoform	ND	0.5								
Styrene	ND	0.5								
o-Xylene	ND	0.5								
1,1,2,2-Tetrachloroethane	ND	0.5								
1,2,3-Trichloropropane	ND	1								
Isopropylbenzene	ND	0.5								
Bromobenzene	ND	0.5								
n-Propylbenzene	ND	0.5								
4-Chlorotoluene	ND	0.5								
2-Chlorotoluene	ND	0.5								
1,3,5-Trimethylbenzene	ND	0.5								
tert-Butylbenzene	ND	0.5								
1,2,4-Trimethylbenzene	ND	0.5								
sec-Butylbenzene	ND	0.5								
1,3-Dichlorobenzene	ND	0.5								
1,4-Dichlorobenzene	ND	0.5								
4-Isopropyltoluene	ND	0.5								
1,2-Dichlorobenzene	ND	0.5								
n-Butylbenzene	ND	0.5								
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5								
1,2,4-Trichlorobenzene	ND	1								
Naphthalene	ND	1								
Hexachlorobutadiene	ND	1								
1,2,3-Trichlorobenzene	ND	1								
Surr: 1,2-Dichloroethane-d4	10.3		10		103	70	130			
Surr: Toluene-d8	9.95		10		100	70	130			

Alpha Analytical, Inc.

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Date: *18-May-10*

QC Summary Report

Work Order: 10050505

Surr: 4-Bromofluorobenzene	9.85	10	99	70	130	

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Date: *18-May-10*

QC Summary Report

Work Order: 10050505

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

File ID: **10051203.D** Batch ID: **MS15W0512M** Analysis Date: **05/12/2010 09:07**

Sample ID: **LCS MS15W0512M** Units : **µg/L** Run ID: **MSD_15_100512B** Prep Date: **05/12/2010 09:07**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	7.61	1	10		76	70	130			
Chloromethane	8.24	2	10		82	70	130			
Vinyl chloride	11.4	1	10		114	70	130			
Chloroethane	16.2	1	10		162	70	130(130)			L1
Bromomethane	14	2	10		140	70	130(130)			L51
Trichlorofluoromethane	13.7	1	10		137	70	130(130)			L51
1,1-Dichloroethene	11.1	1	10		111	70	130			
Dichloromethane	9.43	2	10		94	70	130			
trans-1,2-Dichloroethene	11.4	1	10		114	70	130			
Methyl tert-butyl ether (MTBE)	8.27	0.5	10		83	70	130			
1,1-Dichloroethane	10.7	1	10		107	70	130			
cis-1,2-Dichloroethene	10.7	1	10		107	70	130			
Bromochloromethane	10.5	1	10		105	70	130			
Chloroform	10.1	1	10		101	70	130			
2,2-Dichloropropane	8.22	1	10		82	70	130			
1,2-Dichloroethane	9.37	1	10		94	70	130			
1,1,1-Trichloroethane	11.4	1	10		114	70	130			
1,1-Dichloropropene	10.6	1	10		106	70	130			
Carbon tetrachloride	11.7	1	10		117	70	130			
Benzene	10.5	0.5	10		105	70	130			
Dibromomethane	8.98	1	10		90	70	130			
1,2-Dichloropropane	9.55	1	10		96	70	130			
Trichloroethene	10.5	1	10		105	70	130			
Bromodichloromethane	10.4	1	10		104	70	130			
cis-1,3-Dichloropropene	9.35	1	10		94	70	130			
trans-1,3-Dichloropropene	8.27	1	10		83	70	130			
1,1,2-Trichloroethane	9.03	1	10		90	70	130			
Toluene	9.23	0.5	10		92	70	130			
1,3-Dichloropropane	7.62	1	10		76	70	130			
Dibromochloromethane	9.32	1	10		93	70	130			
1,2-Dibromoethane (EDB)	16.6	2	20		83	70	130			
Tetrachloroethene	10.6	1	10		106	70	130			
1,1,1,2-Tetrachloroethane	10.2	1	10		102	70	130			
Chlorobenzene	9.94	1	10		99	70	130			
Ethylbenzene	10.6	0.5	10		106	70	130			
m,p-Xylene	9.94	0.5	10		99	70	130			
Bromoform	9.47	1	10		95	70	130			
Styrene	14.4	1	10		144	70	130(130)			L1
o-Xylene	10.1	0.5	10		101	70	130			
1,1,2,2-Tetrachloroethane	7.87	1	10		79	70	130			
1,2,3-Trichloropropane	17.8	2	20		89	70	130			
Isopropylbenzene	9.25	1	10		93	70	130			
Bromobenzene	9.31	1	10		93	70	130			
n-Propylbenzene	9.25	1	10		93	70	130			
4-Chlorotoluene	9.07	1	10		91	70	130			
2-Chlorotoluene	9.12	1	10		91	70	130			
1,3,5-Trimethylbenzene	9.62	1	10		96	70	130			
tert-Butylbenzene	9.49	1	10		95	70	130			
1,2,4-Trimethylbenzene	9.46	1	10		95	70	130			
sec-Butylbenzene	8.91	1	10		89	70	130			
1,3-Dichlorobenzene	9	1	10		90	70	130			
1,4-Dichlorobenzene	8.92	1	10		89	70	130			
4-Isopropyltoluene	9.35	1	10		94	70	130			
1,2-Dichlorobenzene	8.42	1	10		84	70	130			
n-Butylbenzene	9.34	1	10		93	70	130			
1,2-Dibromo-3-chloropropane (DBCP)	30.8	3	50		62	70(70)	130			L2
1,2,4-Trichlorobenzene	7.56	2	10		76	70	130			
Naphthalene	4.53	2	10		45	70(70)	130			L50
Hexachlorobutadiene	16	2	20		80	70	130			
1,2,3-Trichlorobenzene	6.26	2	10		63	70(70)	130			L50
Surr: 1,2-Dichloroethane-d4	9.95		10		100	70	130			
Surr: Toluene-d8	9.27		10		93	70	130			
Surr: 4-Bromofluorobenzene	10.3		10		103	70	130			

Alpha Analytical, Inc.

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Date: *18-May-10*

QC Summary Report

Work Order: 10050505

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

File ID: **10051207.D** Batch ID: **MS15W0512M** Analysis Date: **05/12/2010 10:43**

Sample ID: **10050505-02AMS** Units : **µg/L** Run ID: **MSD_15_100512B** Prep Date: **05/12/2010 10:43**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	34.4	2.5	50	0	69	13	167			
Chloromethane	42.6	10	50	0	85	28	145			
Vinyl chloride	55.6	2.5	50	0	111	43	134			
Chloroethane	80.2	2.5	50	0	160	39	154			M55
Bromomethane	62.6	10	50	0	125	19	176			
Trichlorofluoromethane	68.8	2.5	50	0	138	34	160			
1,1-Dichloroethene	56.1	2.5	50	0	112	60	130			
Dichloromethane	48.1	10	50	0	96	68	130			
trans-1,2-Dichloroethene	57.4	2.5	50	0	115	63	130			
Methyl tert-butyl ether (MTBE)	46.7	1.3	50	0	93	56	141			
1,1-Dichloroethane	54.1	2.5	50	0	108	61	130			
cis-1,2-Dichloroethene	55.1	2.5	50	0	110	70	130			
Bromochloromethane	55.2	2.5	50	0	110	70	130			
Chloroform	52.2	2.5	50	0	104	67	130			
2,2-Dichloropropane	50	2.5	50	0	99.9	30	152			
1,2-Dichloroethane	51.2	2.5	50	0	102	60	135			
1,1,1-Trichloroethane	57.5	2.5	50	0	115	59	137			
1,1-Dichloropropene	53.9	2.5	50	0	108	63	130			
Carbon tetrachloride	59.8	2.5	50	0	120	50	147			
Benzene	53.2	1.3	50	0	106	67	130			
Dibromomethane	49.8	2.5	50	0	99.6	69	133			
1,2-Dichloropropane	49.3	2.5	50	0	99	69	130			
Trichloroethene	52.8	2.5	50	0	106	69	130			
Bromodichloromethane	53.9	2.5	50	0	108	66	134			
cis-1,3-Dichloropropene	48.1	2.5	50	0	96	63	130			
trans-1,3-Dichloropropene	45.1	2.5	50	0	90	66	131			
1,1,2-Trichloroethane	47.8	2.5	50	0	96	68	130			
Toluene	45.3	1.3	50	0	91	66	130			
1,3-Dichloropropane	39.6	2.5	50	0	79	70	130			
Dibromochloromethane	47.8	2.5	50	0	96	70	130			
1,2-Dibromoethane (EDB)	87.3	5	100	0	87	70	130			
Tetrachloroethene	51.1	2.5	50	0	102	61	134			
1,1,1,2-Tetrachloroethane	51.1	2.5	50	0	102	70	130			
Chlorobenzene	49.1	2.5	50	0	98	70	130			
Ethylbenzene	52.1	1.3	50	0	104	68	130			
m,p-Xylene	49.1	1.3	50	0	98	64	130			
Bromoform	50.2	2.5	50	0	100	64	138			
Styrene	71.4	2.5	50	0	143	69	130			M55
o-Xylene	50	1.3	50	0	100	70	130			
1,1,2,2-Tetrachloroethane	41.7	2.5	50	0	83	65	131			
1,2,3-Trichloropropane	98	10	100	0	98	70	130			
Isopropylbenzene	44.6	2.5	50	0	89	64	138			
Bromobenzene	46.5	2.5	50	0	93	70	130			
n-Propylbenzene	44.7	2.5	50	0	89	66	132			
4-Chlorotoluene	43.9	2.5	50	0	88	70	130			
2-Chlorotoluene	44.2	2.5	50	0	88	70	130			
1,3,5-Trimethylbenzene	46.1	2.5	50	0	92	66	136			
tert-Butylbenzene	45.5	2.5	50	0	91	65	137			
1,2,4-Trimethylbenzene	45.5	2.5	50	0	91	65	137			
sec-Butylbenzene	43	2.5	50	0	86	66	134			
1,3-Dichlorobenzene	43.5	2.5	50	0	87	70	130			
1,4-Dichlorobenzene	43.5	2.5	50	0	87	70	130			
4-Isopropyltoluene	45.5	2.5	50	0	91	66	137			
1,2-Dichlorobenzene	41.9	2.5	50	0	84	70	130			
n-Butylbenzene	45.4	2.5	50	0	91	60	142			
1,2-Dibromo-3-chloropropane (DBCP)	164	15	250	0	66	67	130			M57
1,2,4-Trichlorobenzene	38.5	10	50	0	77	61	137			
Naphthalene	25.1	10	50	0	50	40	167			
Hexachlorobutadiene	80.7	10	100	0	81	61	130			
1,2,3-Trichlorobenzene	32.1	10	50	0	64	51	144			
Surr: 1,2-Dichloroethane-d4	51.1		50		102	70	130			
Surr: Toluene-d8	45.1		50		90	70	130			
Surr: 4-Bromofluorobenzene	50.4		50		101	70	130			

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Date: *18-May-10*

QC Summary Report

Work Order: 10050505

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

File ID: **10051209.D** Batch ID: **MS15W0512M** Analysis Date: **05/12/2010 11:28**

Sample ID: **10050505-09AMS** Units : **µg/L** Run ID: **MSD_15_100512B** Prep Date: **05/12/2010 11:28**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	32.7	2.5	50	0	65	13	167			
Chloromethane	41.9	10	50	0	84	28	145			
Vinyl chloride	51.8	2.5	50	0	104	43	134			
Chloroethane	66.9	2.5	50	0	134	39	154			
Bromomethane	65.8	10	50	0	132	19	176			
Trichlorofluoromethane	61.1	2.5	50	0	122	34	160			
1,1-Dichloroethene	52	2.5	50	0	104	60	130			
Dichloromethane	46.2	10	50	0	92	68	130			
trans-1,2-Dichloroethene	54.5	2.5	50	0	109	63	130			
Methyl tert-butyl ether (MTBE)	46.3	1.3	50	0	93	56	141			
1,1-Dichloroethane	51.9	2.5	50	0	104	61	130			
cis-1,2-Dichloroethene	52.2	2.5	50	0	104	70	130			
Bromochloromethane	51	2.5	50	0	102	70	130			
Chloroform	48	2.5	50	0	96	67	130			
2,2-Dichloropropane	42.7	2.5	50	0	85	30	152			
1,2-Dichloroethane	49.1	2.5	50	0	98	60	135			
1,1,1-Trichloroethane	54.4	2.5	50	0	109	59	137			
1,1-Dichloropropene	51.4	2.5	50	0	103	63	130			
Carbon tetrachloride	56.3	2.5	50	0	113	50	147			
Benzene	50.1	1.3	50	0	100	67	130			
Dibromomethane	48.3	2.5	50	0	97	69	133			
1,2-Dichloropropane	47.7	2.5	50	0	95	69	130			
Trichloroethene	52.7	2.5	50	4.25	97	69	130			
Bromodichloromethane	51.8	2.5	50	0	104	66	134			
cis-1,3-Dichloropropene	45.8	2.5	50	0	92	63	130			
trans-1,3-Dichloropropene	42	2.5	50	0	84	66	131			
1,1,2-Trichloroethane	47.1	2.5	50	0	94	68	130			
Toluene	43.2	1.3	50	0	86	66	130			
1,3-Dichloropropane	38.4	2.5	50	0	77	70	130			
Dibromochloromethane	46.2	2.5	50	0	92	70	130			
1,2-Dibromoethane (EDB)	85.1	5	100	0	85	70	130			
Tetrachloroethene	48.8	2.5	50	1.14	95	61	134			
1,1,1,2-Tetrachloroethane	47.6	2.5	50	0	95	70	130			
Chlorobenzene	46	2.5	50	0	92	70	130			
Ethylbenzene	49.1	1.3	50	0	98	68	130			
m,p-Xylene	47	1.3	50	0	94	64	130			
Bromoform	48.3	2.5	50	0	97	64	138			
Styrene	67.8	2.5	50	0	136	69	130			M55
o-Xylene	47.2	1.3	50	0	94	70	130			
1,1,2,2-Tetrachloroethane	42	2.5	50	0	84	65	131			
1,2,3-Trichloropropane	92.3	10	100	0	92	70	130			
Isopropylbenzene	41.5	2.5	50	0	83	64	138			
Bromobenzene	44.4	2.5	50	0	89	70	130			
n-Propylbenzene	41.5	2.5	50	0	83	66	132			
4-Chlorotoluene	40.7	2.5	50	0	81	70	130			
2-Chlorotoluene	41.7	2.5	50	0	83	70	130			
1,3,5-Trimethylbenzene	43.5	2.5	50	0	87	66	136			
tert-Butylbenzene	43	2.5	50	0	86	65	137			
1,2,4-Trimethylbenzene	43.4	2.5	50	0	87	65	137			
sec-Butylbenzene	40.2	2.5	50	0	80	66	134			
1,3-Dichlorobenzene	41.7	2.5	50	0	83	70	130			
1,4-Dichlorobenzene	41.4	2.5	50	0	83	70	130			
4-Isopropyltoluene	42.4	2.5	50	0	85	66	137			
1,2-Dichlorobenzene	40.4	2.5	50	0	81	70	130			
n-Butylbenzene	43.3	2.5	50	0	87	60	142			
1,2-Dibromo-3-chloropropane (DBCP)	165	15	250	0	66	67	130			M57
1,2,4-Trichlorobenzene	38.9	10	50	0	78	61	137			
Naphthalene	28.6	10	50	0	57	40	167			
Hexachlorobutadiene	79.5	10	100	0	79	61	130			
1,2,3-Trichlorobenzene	35.1	10	50	0	70	51	144			
Surr: 1,2-Dichloroethane-d4	53.1		50		106	70	130			
Surr: Toluene-d8	45		50		90	70	130			
Surr: 4-Bromofluorobenzene	50.8		50		102	70	130			

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Date: *18-May-10*

QC Summary Report

Work Order: 10050505

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

File ID: **10051208.D** Batch ID: **MS15W0512M** Analysis Date: **05/12/2010 11:05**

Sample ID: **10050505-02AMSD** Units : **µg/L** Run ID: **MSD_15_100512B** Prep Date: **05/12/2010 11:05**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	35.4	2.5	50	0	71	13	167	34.39	3.0(20)	
Chloromethane	45.7	10	50	0	91	28	145	42.57	7.1(20)	
Vinyl chloride	57.2	2.5	50	0	114	43	134	55.59	2.8(20)	
Chloroethane	76.9	2.5	50	0	154	39	154	80.24	4.3(20)	
Bromomethane	70.6	10	50	0	141	19	176	62.63	11.9(20)	
Trichlorofluoromethane	69.5	2.5	50	0	139	34	160	68.84	1.0(20)	
1,1-Dichloroethene	57.2	2.5	50	0	114	60	130	56.06	2.1(20)	
Dichloromethane	49.3	10	50	0	99	68	130	48.05	2.6(20)	
trans-1,2-Dichloroethene	59.1	2.5	50	0	118	63	130	57.42	2.9(20)	
Methyl tert-butyl ether (MTBE)	49.3	1.3	50	0	99	56	141	46.7	5.3(20)	
1,1-Dichloroethane	56.3	2.5	50	0	113	61	130	54.07	4.0(20)	
cis-1,2-Dichloroethene	56.5	2.5	50	0	113	70	130	55.05	2.6(20)	
Bromochloromethane	56.8	2.5	50	0	114	70	130	55.18	2.8(20)	
Chloroform	53.7	2.5	50	0	107	67	130	52.21	2.8(20)	
2,2-Dichloropropane	39.2	2.5	50	0	78	30	152	49.95	24.1(20)	R5
1,2-Dichloroethane	53.1	2.5	50	0	106	60	135	51.23	3.6(20)	
1,1,1-Trichloroethane	60	2.5	50	0	120	59	137	57.52	4.2(20)	
1,1-Dichloropropene	55.8	2.5	50	0	112	63	130	53.89	3.4(20)	
Carbon tetrachloride	60.9	2.5	50	0	122	50	147	59.78	1.8(20)	
Benzene	54.8	1.3	50	0	110	67	130	53.18	3.1(20)	
Dibromomethane	51.7	2.5	50	0	103	69	133	49.82	3.8(20)	
1,2-Dichloropropane	50.9	2.5	50	0	102	69	130	49.3	3.1(20)	
Trichloroethene	53.6	2.5	50	0	107	69	130	52.83	1.5(20)	
Bromodichloromethane	56	2.5	50	0	112	66	134	53.92	3.8(20)	
cis-1,3-Dichloropropene	48.4	2.5	50	0	97	63	130	48.13	0.6(20)	
trans-1,3-Dichloropropene	45.3	2.5	50	0	91	66	131	45.13	0.4(20)	
1,1,2-Trichloroethane	51.1	2.5	50	0	102	68	130	47.77	6.7(20)	
Toluene	46.4	1.3	50	0	93	66	130	45.33	2.3(20)	
1,3-Dichloropropane	40.8	2.5	50	0	82	70	130	39.56	3.1(20)	
Dibromochloromethane	49.4	2.5	50	0	99	70	130	47.81	3.3(20)	
1,2-Dibromoethane (EDB)	89.3	5	100	0	89	70	130	87.29	2.3(20)	
Tetrachloroethene	52.3	2.5	50	0	105	61	134	51.08	2.4(20)	
1,1,1,2-Tetrachloroethane	51.1	2.5	50	0	102	70	130	51.1	0.0(20)	
Chlorobenzene	49.9	2.5	50	0	99.7	70	130	49.12	1.5(20)	
Ethylbenzene	53.4	1.3	50	0	107	68	130	52.12	2.5(20)	
m,p-Xylene	50.2	1.3	50	0	100	64	130	49.14	2.2(20)	
Bromoform	51.9	2.5	50	0	104	64	138	50.22	3.3(20)	
Styrene	73.4	2.5	50	0	147	69	130	71.37	2.8(20)	M55
o-Xylene	50.4	1.3	50	0	101	70	130	49.99	0.7(20)	
1,1,2,2-Tetrachloroethane	44.3	2.5	50	0	89	65	131	41.7	6.0(20)	
1,2,3-Trichloropropane	100	10	100	0	100	70	130	97.96	2.3(20)	
Isopropylbenzene	45.6	2.5	50	0	91	64	138	44.57	2.2(20)	
Bromobenzene	47.9	2.5	50	0	96	70	130	46.48	2.9(20)	
n-Propylbenzene	45.7	2.5	50	0	91	66	132	44.74	2.2(20)	
4-Chlorotoluene	44.5	2.5	50	0	89	70	130	43.9	1.3(20)	
2-Chlorotoluene	45.2	2.5	50	0	90	70	130	44.17	2.4(20)	
1,3,5-Trimethylbenzene	47.2	2.5	50	0	94	66	136	46.07	2.4(20)	
tert-Butylbenzene	46.6	2.5	50	0	93	65	137	45.54	2.4(20)	
1,2,4-Trimethylbenzene	46.4	2.5	50	0	93	65	137	45.46	2.1(20)	
sec-Butylbenzene	44.3	2.5	50	0	89	66	134	43.03	2.9(20)	
1,3-Dichlorobenzene	45.2	2.5	50	0	90	70	130	43.52	3.8(20)	
1,4-Dichlorobenzene	45	2.5	50	0	90	70	130	43.54	3.2(20)	
4-Isopropyltoluene	47.1	2.5	50	0	94	66	137	45.52	3.3(20)	
1,2-Dichlorobenzene	43.8	2.5	50	0	88	70	130	41.87	4.4(20)	
n-Butylbenzene	47.9	2.5	50	0	96	60	142	45.38	5.5(20)	
1,2-Dibromo-3-chloropropane (DBCP)	176	15	250	0	70	67	130	164.1	7.0(20)	
1,2,4-Trichlorobenzene	42.1	10	50	0	84	61	137	38.53	8.9(20)	
Naphthalene	31.3	10	50	0	63	40	167	25.1	22.0(20)	R58
Hexachlorobutadiene	87.2	10	100	0	87	61	130	80.73	7.7(20)	
1,2,3-Trichlorobenzene	37.9	10	50	0	76	51	144	32.11	16.6(20)	
Surr: 1,2-Dichloroethane-d4	53.4		50		107	70	130			
Surr: Toluene-d8	45.1		50		90	70	130			
Surr: 4-Bromofluorobenzene	50.8		50		102	70	130			

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Date: *18-May-10*

QC Summary Report

Work Order: 10050505

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

File ID: **10051210.D** Batch ID: **MS15W0512M** Analysis Date: **05/12/2010 11:50**

Sample ID: **10050505-09AMSD** Units : **µg/L** Run ID: **MSD_15_100512B** Prep Date: **05/12/2010 11:50**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	35.3	2.5	50	0	71	13	167	32.73	7.6(20)	
Chloromethane	46.1	10	50	0	92	28	145	41.93	9.5(20)	
Vinyl chloride	55.7	2.5	50	0	111	43	134	51.83	7.2(20)	
Chloroethane	75.9	2.5	50	0	152	39	154	66.9	12.7(20)	
Bromomethane	73.7	10	50	0	147	19	176	65.77	11.4(20)	
Trichlorofluoromethane	67.1	2.5	50	0	134	34	160	61.13	9.2(20)	
1,1-Dichloroethene	55.4	2.5	50	0	111	60	130	51.97	6.5(20)	
Dichloromethane	48.4	10	50	0	97	68	130	46.22	4.7(20)	
trans-1,2-Dichloroethene	57.2	2.5	50	0	114	63	130	54.51	4.8(20)	
Methyl tert-butyl ether (MTBE)	48.5	1.3	50	0	97	56	141	46.31	4.7(20)	
1,1-Dichloroethane	54.9	2.5	50	0	110	61	130	51.88	5.7(20)	
cis-1,2-Dichloroethene	55.6	2.5	50	0	111	70	130	52.22	6.3(20)	
Bromochloromethane	54	2.5	50	0	108	70	130	51.02	5.6(20)	
Chloroform	52.3	2.5	50	0	105	67	130	47.96	8.6(20)	
2,2-Dichloropropane	50.5	2.5	50	0	101	30	152	42.65	16.8(20)	
1,2-Dichloroethane	51.4	2.5	50	0	103	60	135	49.1	4.5(20)	
1,1,1-Trichloroethane	59.4	2.5	50	0	119	59	137	54.35	8.8(20)	
1,1-Dichloropropene	55.2	2.5	50	0	110	63	130	51.36	7.2(20)	
Carbon tetrachloride	61.4	2.5	50	0	123	50	147	56.32	8.6(20)	
Benzene	53.9	1.3	50	0	108	67	130	50.13	7.2(20)	
Dibromomethane	50.3	2.5	50	0	101	69	133	48.33	3.9(20)	
1,2-Dichloropropane	49.9	2.5	50	0	99.7	69	130	47.71	4.4(20)	
Trichloroethene	56.2	2.5	50	4.25	104	69	130	52.66	6.5(20)	
Bromodichloromethane	55.2	2.5	50	0	110	66	134	51.81	6.3(20)	
cis-1,3-Dichloropropene	49.6	2.5	50	0	99	63	130	45.77	8.0(20)	
trans-1,3-Dichloropropene	46.2	2.5	50	0	92	66	131	41.97	9.5(20)	
1,1,2-Trichloroethane	48.2	2.5	50	0	96	68	130	47.08	2.4(20)	
Toluene	45.8	1.3	50	0	92	66	130	43.18	5.8(20)	
1,3-Dichloropropane	40.4	2.5	50	0	81	70	130	38.4	5.0(20)	
Dibromochloromethane	48.1	2.5	50	0	96	70	130	46.19	4.0(20)	
1,2-Dibromoethane (EDB)	87.9	5	100	0	88	70	130	85.12	3.2(20)	
Tetrachloroethene	51.4	2.5	50	1.14	101	61	134	48.77	5.3(20)	
1,1,1,2-Tetrachloroethane	50.9	2.5	50	0	102	70	130	47.63	6.6(20)	
Chlorobenzene	49.2	2.5	50	0	98	70	130	46.01	6.7(20)	
Ethylbenzene	52.3	1.3	50	0	105	68	130	49.1	6.2(20)	
m,p-Xylene	49.7	1.3	50	0	99	64	130	47.03	5.5(20)	
Bromoform	51.2	2.5	50	0	102	64	138	48.29	5.8(20)	
Styrene	72	2.5	50	0	144	69	130	67.83	5.9(20)	M55
o-Xylene	49.8	1.3	50	0	99.5	70	130	47.19	5.3(20)	
1,1,2,2-Tetrachloroethane	43.2	2.5	50	0	86	65	131	42	2.7(20)	
1,2,3-Trichloropropane	99	10	100	0	99	70	130	92.32	7.0(20)	
Isopropylbenzene	44.7	2.5	50	0	89	64	138	41.52	7.4(20)	
Bromobenzene	46.2	2.5	50	0	92	70	130	44.4	4.0(20)	
n-Propylbenzene	44.8	2.5	50	0	90	66	132	41.46	7.8(20)	
4-Chlorotoluene	43.4	2.5	50	0	87	70	130	40.69	6.4(20)	
2-Chlorotoluene	44.9	2.5	50	0	90	70	130	41.74	7.3(20)	
1,3,5-Trimethylbenzene	46.5	2.5	50	0	93	66	136	43.47	6.7(20)	
tert-Butylbenzene	46.2	2.5	50	0	92	65	137	43.04	7.0(20)	
1,2,4-Trimethylbenzene	46.2	2.5	50	0	92	65	137	43.43	6.2(20)	
sec-Butylbenzene	44.4	2.5	50	0	89	66	134	40.18	10.0(20)	
1,3-Dichlorobenzene	44.1	2.5	50	0	88	70	130	41.7	5.7(20)	
1,4-Dichlorobenzene	44.4	2.5	50	0	89	70	130	41.41	7.0(20)	
4-Isopropyltoluene	46.3	2.5	50	0	93	66	137	42.35	8.8(20)	
1,2-Dichlorobenzene	42.4	2.5	50	0	85	70	130	40.44	4.8(20)	
n-Butylbenzene	46.7	2.5	50	0	93	60	142	43.33	7.4(20)	
1,2-Dibromo-3-chloropropane (DBCP)	173	15	250	0	69	67	130	165.2	4.6(20)	
1,2,4-Trichlorobenzene	40.9	10	50	0	82	61	137	38.87	5.1(20)	
Naphthalene	30.2	10	50	0	60	40	167	28.64	5.2(20)	
Hexachlorobutadiene	85.3	10	100	0	85	61	130	79.45	7.1(20)	
1,2,3-Trichlorobenzene	36.7	10	50	0	73	51	144	35.14	4.2(20)	
Surr: 1,2-Dichloroethane-d4	52.8		50		106	70	130			
Surr: Toluene-d8	45.1		50		90	70	130			
Surr: 4-Bromofluorobenzene	51.4		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: *18-May-10*

QC Summary Report

Work Order: 10050505

Comments:

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

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

L1 = The associated blank spike recovery was above laboratory acceptance limits.

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.

L51 = Analyte recovery was above acceptance limits for the LCS, but was acceptable in the MS/MSD.

M55 = Matrix spike recovery was above laboratory acceptance limits.

M57 = Matrix spike recovery was below laboratory acceptance limits.

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

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 : BMIS10050505

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

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

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

EDD Required : **Yes**

Sampled by : Chase Brogdon, David Loera

PO : 218013

Client's COC # : 28924, 29482 Job : G005862/JPL Groundwater Monitoring

Cooler Temp	Samples Received	Date Printed
4 °C	05-May-2010	**05-May-2010**

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

Alpha Sample ID	Client Sample ID	Matrix	Collection Date	No. of Bottles Alpha	Sub	TAT	Requested Tests 300_0_W	314_W	ALKALINITY_W	METALS_DW	PH_W	TDS_W	VOC_TIC_W	VOC_W	Sample Remarks
BMI10050505-01A	MW-12-5	AQ	05/04/10 08:27	5	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10050505-02A	MW-12-4	AQ	05/04/10 09:06	10	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	Level IV QC. MS/MSD
BMI10050505-03A	MW-12-3	AQ	05/04/10 10:05	5	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10050505-04A	MW-12-2	AQ	05/04/10 10:42	5	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10050505-05A	MW-12-1	AQ	05/04/10 11:37	5	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10050505-06A	DUPE-03-2Q10	AQ	05/04/10 00:00	5	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10050505-07A	EB-05-05/04/10	AQ	05/04/10 11:21	5	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10050505-08A	TB-05-05/04/10	AQ	05/04/10 07:00	1	0	10							VOC by 524 Criteria	VOC by 524 Criteria	Reno Trip Blank 12/31/09
BMI10050505-09A	MW-6	AQ	05/04/10 10:34	21	0	10	NO2, NO3, SO4, Cl	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	MS/MSD

Comments: Security seals intact. Frozen ice. Temp Blank #7570 received @ 4°C. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). :

	Signature	Print Name	Company	Date/Time
Logged in by:	Elizabeth Adcox	Elizabeth Adcox	**Alpha Analytical, Inc.**	5.5.10 1142

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 TOMKINS / BATTELLE
Address 505 KING AVE
City, State, Zip COLUMBUS, OH 43201
Phone Number _____ Fax _____

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

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

28924

Page # 1 of 1

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

Sampled by: CHASE BRADDON

Time Sampled	Date Sampled	Matrix* See Key Below	Lab ID Number (Office Use Only)	Sample Description	TAT	Field Filtered	Total and type of containers ** See below	VOC (524.2)	TOTAL OR, LEAD, ARSENIC (200.8)	GEN CHEM (Na, K, Ca, Mg, Fe) (200.7)	ClO4 - (314.0)	GEN CHEM (300.0, 310.1, 160.1, 150.1)			REMARKS
0827	5/4/10	AQ	BMI1005050501	MW-12-5	NORM		5	X	X	X	X	X			
0906			-02	MW-12-4			10	X	X	X	X	X			MS/MSD - LEVEL IV QC
1005			-03	MW-12-3			5	X	X	X	X	X			
1042			-04	MW-12-2			5	X	X	X	X	X			
1137			-05	MW-12-1			5	X	X	X	X	X			
++			-06	DUPE -03-2Q10			5	X	X	X	X	X			DUPLICATE
1121			-07	EB -05-05/04/10			5	X	X	X	X	X			EQUIPMENT BLANK
0700			-08	TB -05-05/04/10				X	[redacted]						TRIP BLANK

Analyses Required

Required QC Level? I II III IV

EDD / EDF? YES ___ NO ___

Global ID # _____

ADDITIONAL INSTRUCTIONS:

	Signature	Print Name	Company	Date	Time
Relinquished by	[signature]	CHASE BRADDON	INSIGHT ECCIN	05/04/10	1300
Received by	[signature]	Anthony Stark	Alpha Analytical	5/4/10	1300
Relinquished by	[signature]	"	"	"	1600
Received by	Elizabeth Adcox	Elizabeth Adcox	Alpha	5-5-10	1142
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 Jerry Tompkins
Address 505 King Ave
City, State, Zip Columbus OH 43201
Phone Number 614 424 4849 Fax 614 424-3667

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

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

29482

Page # 1 of 1

Client Name	P.O. #	Job #
David Conner	218013	60058621JPL GWM
Address	EMail Address	
	connerd@battelle.org	
City, State, Zip	Phone #	Fax #
	614 726-7311	614 458-5489

Analyses Required

Required QC Level? I II III IV

EDD EDF? YES X NO ___

Global ID # ___

Time Sampled	Date Sampled	Matrix* See Key Below	Sampled by David Loera / Lab ID Number (Office Use Only)	Report Attention David Conner / Sample Description	TAT	Field Filtered	Total and type of containers ** See below	VOCs (524.2)	Perchlorate (314.0)	* 200.8	** 300.0	*** SM2320B	TDS (SM2540C)	pH (150.2)	REMARKS
1034	5/4/10	AQ	-09	MW-6	10		5V 2P	X	X	X	X	X	X	X	
1036	5/4/10	AQ	-09	MW-6-MS	10		5V 2P	X	X	X	X	X	X	X	
1038	5/4/10	AQ	-09	MW-6-MSD	10		5V 2P	X	X	X	X	X	X	X	

ADDITIONAL INSTRUCTIONS: * Total Cr, Pb, As, Ca, Mg, K, Na, Fe ** Cl⁻, NO₂, NO₃, SO₄ *** Alk, Bicarbonate, Carbonate

	Signature	Print Name	Company	Date	Time
Relinquished by		David Loera	Battelle	5/4/10	1200
Received by		Chase Brandon	Insight Effect	5/4/10	1200
Relinquished by		Chase Brandon	Insight Effect	5/4/10	1300
Received by		Anthony Stark	Alpha Analytical	5/4/10	1700
Relinquished by		"	"		1500
Received by	Elizabeth Adcox	Elizabeth Adcox	Alpha	5.5.10	1142

*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-May-10*

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

CASE NARRATIVE

Job: G005862/JPL Groundwater Monitoring

Work Order: BMI10050603 **Cooler Temp:** 4 °C

Alpha's Sample ID	Client's Sample ID	Matrix
10050603-01A	MW-23-5	Aqueous
10050603-02A	MW-23-4	Aqueous
10050603-03A	MW-23-3	Aqueous
10050603-04A	MW-23-2	Aqueous
10050603-05A	MW-23-1	Aqueous
10050603-06A	EB-06-05/05/10	Aqueous
10050603-07A	TB-06-05/05/10	Aqueous
10050603-08A	MW-5	Aqueous
10050603-09A	MW-10	Aqueous

Manually Integrated Analytes

Alpha's Sample ID	Test Reference	Analyte
10050603-09A	EPA Method 314.0	Perchlorate

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

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

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

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 05/06/10

Job: G005862/JPL Groundwater Monitoring

Anions by IC
EPA Method 300.0

	Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-23-5**					
Lab ID : BMI10050603-01A	Chloride	11	0.50 mg/L	05/06/10 12:25	05/06/10 13:33
Date Sampled 05/05/10 08:09	Nitrite (NO2) - N	ND	0.25 mg/L	05/06/10 12:25	05/06/10 13:33
	Nitrate (NO3) - N	ND	0.25 mg/L	05/06/10 12:25	05/06/10 13:33
	Phosphate, ortho - P	ND	0.50 mg/L	05/06/10 12:25	05/06/10 13:33
	Sulfate (SO4)	ND	0.50 mg/L	05/06/10 12:25	05/06/10 13:33
Client ID: **MW-23-4**					
Lab ID : BMI10050603-02A	Chloride	13	0.50 mg/L	05/06/10 12:25	05/06/10 14:28
Date Sampled 05/05/10 08:50	Nitrite (NO2) - N	ND	0.25 mg/L	05/06/10 12:25	05/06/10 14:28
	Nitrate (NO3) - N	5.3	0.25 mg/L	05/06/10 12:25	05/06/10 14:28
	Phosphate, ortho - P	ND	0.50 mg/L	05/06/10 12:25	05/06/10 14:28
	Sulfate (SO4)	7.0	0.50 mg/L	05/06/10 12:25	05/06/10 14:28
Client ID: **MW-23-3**					
Lab ID : BMI10050603-03A	Chloride	14	0.50 mg/L	05/06/10 12:25	05/06/10 14:47
Date Sampled 05/05/10 09:30	Nitrite (NO2) - N	ND	0.25 mg/L	05/06/10 12:25	05/06/10 14:47
	Nitrate (NO3) - N	5.2	0.25 mg/L	05/06/10 12:25	05/06/10 14:47
	Phosphate, ortho - P	ND	0.50 mg/L	05/06/10 12:25	05/06/10 14:47
	Sulfate (SO4)	10	0.50 mg/L	05/06/10 12:25	05/06/10 14:47
Client ID: **MW-23-2**					
Lab ID : BMI10050603-04A	Chloride	100	50 mg/L	05/06/10 12:25	05/06/10 15:05
Date Sampled 05/05/10 10:06	Nitrite (NO2) - N	ND	0.25 mg/L	05/06/10 12:25	05/06/10 15:05
	Nitrate (NO3) - N	14	0.25 mg/L	05/06/10 12:25	05/06/10 15:05
	Phosphate, ortho - P	ND	0.50 mg/L	05/06/10 12:25	05/06/10 15:05
	Sulfate (SO4)	140	75 mg/L	05/06/10 12:25	05/06/10 15:05
Client ID: **MW-23-1**					
Lab ID : BMI10050603-05A	Chloride	120	50 mg/L	05/06/10 12:25	05/06/10 15:24
Date Sampled 05/05/10 10:46	Nitrite (NO2) - N	ND	0.25 mg/L	05/06/10 12:25	05/06/10 15:24
	Nitrate (NO3) - N	13	0.25 mg/L	05/06/10 12:25	05/06/10 15:24
	Phosphate, ortho - P	ND	0.50 mg/L	05/06/10 12:25	05/06/10 15:24
	Sulfate (SO4)	170	75 mg/L	05/06/10 12:25	05/06/10 15:24
Client ID: **EB-06-05/05/10**					
Lab ID : BMI10050603-06A	Chloride	ND	0.50 mg/L	05/06/10 12:25	05/06/10 15:42
Date Sampled 05/05/10 10:30	Nitrite (NO2) - N	ND	0.25 mg/L	05/06/10 12:25	05/06/10 15:42
	Nitrate (NO3) - N	ND	0.25 mg/L	05/06/10 12:25	05/06/10 15:42
	Phosphate, ortho - P	ND	0.50 mg/L	05/06/10 12:25	05/06/10 15:42
	Sulfate (SO4)	ND	0.50 mg/L	05/06/10 12:25	05/06/10 15:42

Alpha Analytical, Inc.

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Client ID: **MW-5**					
Lab ID : BMI10050603-08A	Chloride	6.0	0.50 mg/L	05/06/10 12:25	05/06/10 16:01
Date Sampled 05/05/10 09:14	Nitrite (NO2) - N	ND	0.25 mg/L	05/06/10 12:25	05/06/10 16:01
	Nitrate (NO3) - N	ND	0.25 mg/L	05/06/10 12:25	05/06/10 16:01
	Sulfate (SO4)	14	0.50 mg/L	05/06/10 12:25	05/06/10 16:01
Client ID: **MW-10**					
Lab ID : BMI10050603-09A	Chloride	69	50 mg/L	05/06/10 12:25	05/06/10 17:15
Date Sampled 05/05/10 11:54	Nitrite (NO2) - N	ND	0.25 mg/L	05/06/10 12:25	05/06/10 17:15
	Nitrate (NO3) - N	10	0.25 mg/L	05/06/10 12:25	05/06/10 17:15
	Sulfate (SO4)	100	75 mg/L	05/06/10 12:25	05/06/10 17:15

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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

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5/19/10

Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 05/06/10

Job: G005862/JPL Groundwater Monitoring

Perchlorate by Ion Chromatography
EPA Method 314.0

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-23-5**				
Lab ID : BMI10050603-01A Perchlorate	1.23	1.00 µg/L	05/10/10 11:27	05/10/10 14:32
Date Sampled 05/05/10 08:09				
Client ID: **MW-23-4**				
Lab ID : BMI10050603-02A Perchlorate	1.34	1.00 µg/L	05/10/10 11:27	05/10/10 14:51
Date Sampled 05/05/10 08:50				
Client ID: **MW-23-3**				
Lab ID : BMI10050603-03A Perchlorate	1.20	1.00 µg/L	05/10/10 11:27	05/10/10 15:09
Date Sampled 05/05/10 09:30				
Client ID: **MW-23-2**				
Lab ID : BMI10050603-04A Perchlorate	4.85	1.00 µg/L	05/10/10 11:27	05/10/10 15:27
Date Sampled 05/05/10 10:06				
Client ID: **MW-23-1**				
Lab ID : BMI10050603-05A Perchlorate	3.31	1.00 µg/L	05/10/10 11:27	05/10/10 15:46
Date Sampled 05/05/10 10:46				
Client ID: **EB-06-05/05/10**				
Lab ID : BMI10050603-06A Perchlorate	ND	1.00 µg/L	05/10/10 11:27	05/10/10 16:04
Date Sampled 05/05/10 10:30				
Client ID: **MW-5**				
Lab ID : BMI10050603-08A Perchlorate	ND	1.00 µg/L	05/10/10 11:27	05/10/10 16:23
Date Sampled 05/05/10 09:14				
Client ID: **MW-10**				
Lab ID : BMI10050603-09A Perchlorate	43.9	1.00 µg/L	05/10/10 11:27	05/10/10 17:18
Date Sampled 05/05/10 11:54				

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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ANALYTICAL REPORT

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 05/06/10

Job: G005862/JPL Groundwater Monitoring

Alkalinity
SM2320B

Parameter		Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-23-5**					
Lab ID : BMI10050603-01A	Alkalinity, Bicarbonate (As CaCO3)	13	10 mg/L	05/10/10 11:13	05/10/10 11:13
Date Sampled 05/05/10 08:09	Alkalinity, Carbonate (As CaCO3)	240	10 mg/L	05/10/10 11:13	05/10/10 11:13
	Alkalinity, Total (As CaCO3 at pH 4.5)	260	10 mg/L	05/10/10 11:13	05/10/10 11:13
Client ID: **MW-23-4**					
Lab ID : BMI10050603-02A	Alkalinity, Bicarbonate (As CaCO3)	150	10 mg/L	05/10/10 11:21	05/10/10 11:21
Date Sampled 05/05/10 08:50	Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	05/10/10 11:21	05/10/10 11:21
	Alkalinity, Total (As CaCO3 at pH 4.5)	150	10 mg/L	05/10/10 11:21	05/10/10 11:21
Client ID: **MW-23-3**					
Lab ID : BMI10050603-03A	Alkalinity, Bicarbonate (As CaCO3)	160	10 mg/L	05/10/10 11:26	05/10/10 11:26
Date Sampled 05/05/10 09:30	Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	05/10/10 11:26	05/10/10 11:26
	Alkalinity, Total (As CaCO3 at pH 4.5)	160	10 mg/L	05/10/10 11:26	05/10/10 11:26
Client ID: **MW-23-2**					
Lab ID : BMI10050603-04A	Alkalinity, Bicarbonate (As CaCO3)	240	10 mg/L	05/10/10 11:31	05/10/10 11:31
Date Sampled 05/05/10 10:06	Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	05/10/10 11:31	05/10/10 11:31
	Alkalinity, Total (As CaCO3 at pH 4.5)	240	10 mg/L	05/10/10 11:31	05/10/10 11:31
Client ID: **MW-23-1**					
Lab ID : BMI10050603-05A	Alkalinity, Bicarbonate (As CaCO3)	270	10 mg/L	05/10/10 11:35	05/10/10 11:35
Date Sampled 05/05/10 10:46	Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	05/10/10 11:35	05/10/10 11:35
	Alkalinity, Total (As CaCO3 at pH 4.5)	270	10 mg/L	05/10/10 11:35	05/10/10 11:35
Client ID: **EB-06-05/05/10**					
Lab ID : BMI10050603-06A	Alkalinity, Bicarbonate (As CaCO3)	ND	10 mg/L	05/10/10 11:46	05/10/10 11:46
Date Sampled 05/05/10 10:30	Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	05/10/10 11:46	05/10/10 11:46
	Alkalinity, Total (As CaCO3 at pH 4.5)	ND	10 mg/L	05/10/10 11:46	05/10/10 11:46
Client ID: **MW-5**					
Lab ID : BMI10050603-08A	Alkalinity, Bicarbonate (As CaCO3)	170	10 mg/L	05/10/10 11:50	05/10/10 11:50
Date Sampled 05/05/10 09:14	Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	05/10/10 11:50	05/10/10 11:50
	Alkalinity, Total (As CaCO3 at pH 4.5)	170	10 mg/L	05/10/10 11:50	05/10/10 11:50
Client ID: **MW-10**					
Lab ID : BMI10050603-09A	Alkalinity, Bicarbonate (As CaCO3)	210	10 mg/L	05/10/10 11:54	05/10/10 11:54
Date Sampled 05/05/10 11:54	Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	05/10/10 11:54	05/10/10 11:54
	Alkalinity, Total (As CaCO3 at pH 4.5)	210	10 mg/L	05/10/10 11:54	05/10/10 11:54

Alpha Analytical, Inc.

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ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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5/19/10

Report Date

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ANALYTICAL REPORT

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 05/06/10

Job: G005862/JPL Groundwater Monitoring

Metals by ICPMS
EPA Method 200.8

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-23-5**				
Lab ID : BMI10050603-01A Sodium (Na)	88	0.50 mg/L	05/07/10 08:27	05/11/10 12:35
Date Sampled 05/05/10 08:09 Magnesium (Mg)	ND	0.50 mg/L	05/07/10 08:27	05/11/10 12:35
Potassium (K)	1.7	0.50 mg/L	05/07/10 08:27	05/11/10 12:35
Calcium (Ca)	5.9	0.50 mg/L	05/07/10 08:27	05/11/10 12:35
Chromium (Cr)	ND	0.0050 mg/L	05/07/10 08:27	05/11/10 12:35
Iron (Fe)	ND	0.10 mg/L	05/07/10 08:27	05/11/10 12:35
Arsenic (As)	0.0044	0.0020 mg/L	05/07/10 08:27	05/11/10 12:35
Lead (Pb)	ND	0.0050 mg/L	05/07/10 08:27	05/11/10 12:35
Client ID: **MW-23-4**				
Lab ID : BMI10050603-02A Sodium (Na)	29	0.50 mg/L	05/07/10 08:27	05/11/10 12:40
Date Sampled 05/05/10 08:50 Magnesium (Mg)	12	0.50 mg/L	05/07/10 08:27	05/11/10 12:40
Potassium (K)	1.9	0.50 mg/L	05/07/10 08:27	05/11/10 12:40
Calcium (Ca)	30	0.50 mg/L	05/07/10 08:27	05/11/10 12:40
Chromium (Cr)	ND	0.0050 mg/L	05/07/10 08:27	05/11/10 12:40
Iron (Fe)	0.16	0.10 mg/L	05/07/10 08:27	05/11/10 12:40
Arsenic (As)	ND	0.0020 mg/L	05/07/10 08:27	05/11/10 12:40
Lead (Pb)	ND	0.0050 mg/L	05/07/10 08:27	05/11/10 12:40
Client ID: **MW-23-3**				
Lab ID : BMI10050603-03A Sodium (Na)	24	0.50 mg/L	05/07/10 08:27	05/10/10 19:26
Date Sampled 05/05/10 09:30 Magnesium (Mg)	11	0.50 mg/L	05/07/10 08:27	05/10/10 19:26
Potassium (K)	1.5	0.50 mg/L	05/07/10 08:27	05/10/10 19:26
Calcium (Ca)	38	0.50 mg/L	05/07/10 08:27	05/10/10 19:26
Chromium (Cr)	ND	0.0050 mg/L	05/07/10 08:27	05/10/10 19:26
Iron (Fe)	0.17	0.10 mg/L	05/07/10 08:27	05/10/10 19:26
Arsenic (As)	ND	0.0020 mg/L	05/07/10 08:27	05/10/10 19:26
Lead (Pb)	ND	0.0050 mg/L	05/07/10 08:27	05/10/10 19:26
Client ID: **MW-23-2**				
Lab ID : BMI10050603-04A Sodium (Na)	34	0.50 mg/L	05/07/10 08:27	05/10/10 19:31
Date Sampled 05/05/10 10:06 Magnesium (Mg)	41	0.50 mg/L	05/07/10 08:27	05/10/10 19:31
Potassium (K)	2.7	0.50 mg/L	05/07/10 08:27	05/10/10 19:31
Calcium (Ca)	130	0.50 mg/L	05/07/10 08:27	05/10/10 19:31
Chromium (Cr)	ND	0.0050 mg/L	05/07/10 08:27	05/10/10 19:31
Iron (Fe)	0.47	0.10 mg/L	05/07/10 08:27	05/10/10 19:31
Arsenic (As)	ND	0.0020 mg/L	05/07/10 08:27	05/10/10 19:31
Lead (Pb)	ND	0.0050 mg/L	05/07/10 08:27	05/10/10 19:31

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Client ID: **MW-23-1**					
Lab ID : BMI10050603-05A	Sodium (Na)	33	0.50 mg/L	05/07/10 08:27	05/10/10 19:37
Date Sampled 05/05/10 10:46	Magnesium (Mg)	49	0.50 mg/L	05/07/10 08:27	05/10/10 19:37
	Potassium (K)	2.8	0.50 mg/L	05/07/10 08:27	05/10/10 19:37
	Calcium (Ca)	150	0.50 mg/L	05/07/10 08:27	05/10/10 19:37
	Chromium (Cr)	ND	0.0050 mg/L	05/07/10 08:27	05/10/10 19:37
	Iron (Fe)	0.68	0.10 mg/L	05/07/10 08:27	05/10/10 19:37
	Arsenic (As)	ND	0.0020 mg/L	05/07/10 08:27	05/10/10 19:37
	Lead (Pb)	ND	0.0050 mg/L	05/07/10 08:27	05/10/10 19:37
Client ID: **EB-06-05/05/10**					
Lab ID : BMI10050603-06A	Sodium (Na)	ND	0.50 mg/L	05/07/10 08:27	05/10/10 19:42
Date Sampled 05/05/10 10:30	Magnesium (Mg)	ND	0.50 mg/L	05/07/10 08:27	05/10/10 19:42
	Potassium (K)	ND	0.50 mg/L	05/07/10 08:27	05/10/10 19:42
	Calcium (Ca)	ND	0.50 mg/L	05/07/10 08:27	05/10/10 19:42
	Chromium (Cr)	ND	0.0050 mg/L	05/07/10 08:27	05/10/10 19:42
	Iron (Fe)	ND	0.10 mg/L	05/07/10 08:27	05/10/10 19:42
	Arsenic (As)	ND	0.0020 mg/L	05/07/10 08:27	05/10/10 19:42
	Lead (Pb)	ND	0.0050 mg/L	05/07/10 08:27	05/10/10 19:42
Client ID: **MW-5**					
Lab ID : BMI10050603-08A	Sodium (Na)	17	0.50 mg/L	05/07/10 08:27	05/10/10 19:48
Date Sampled 05/05/10 09:14	Magnesium (Mg)	12	0.50 mg/L	05/07/10 08:27	05/10/10 19:48
	Potassium (K)	2.8	0.50 mg/L	05/07/10 08:27	05/10/10 19:48
	Calcium (Ca)	44	0.50 mg/L	05/07/10 08:27	05/10/10 19:48
	Chromium (Cr)	ND	0.0050 mg/L	05/07/10 08:27	05/10/10 19:48
	Iron (Fe)	0.15	0.10 mg/L	05/07/10 08:27	05/10/10 19:48
	Arsenic (As)	ND	0.0020 mg/L	05/07/10 08:27	05/10/10 19:48
	Lead (Pb)	ND	0.0050 mg/L	05/07/10 08:27	05/10/10 19:48
Client ID: **MW-10**					
Lab ID : BMI10050603-09A	Sodium (Na)	28	0.50 mg/L	05/07/10 08:27	05/10/10 19:54
Date Sampled 05/05/10 11:54	Magnesium (Mg)	29	0.50 mg/L	05/07/10 08:27	05/10/10 19:54
	Potassium (K)	3.2	0.50 mg/L	05/07/10 08:27	05/10/10 19:54
	Calcium (Ca)	95	0.50 mg/L	05/07/10 08:27	05/10/10 19:54
	Chromium (Cr)	0.0055	0.0050 mg/L	05/07/10 08:27	05/10/10 19:54
	Iron (Fe)	0.32	0.10 mg/L	05/07/10 08:27	05/10/10 19:54
	Arsenic (As)	ND	0.0020 mg/L	05/07/10 08:27	05/10/10 19:54
	Lead (Pb)	ND	0.0050 mg/L	05/07/10 08:27	05/10/10 19:54

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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5/19/10
Report Date

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ANALYTICAL REPORT

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 05/06/10

Job: G005862/JPL Groundwater Monitoring

pH (Range 1.7 to 12.4)
EPA Method 150.2 / SM4500HB / SW9040C

Parameter		Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-23-5**					
Lab ID : BMI10050603-01A	pH	9.5	1.7 pH Units	05/06/10 14:43	05/06/10 14:43
Date Sampled 05/05/10 08:09	pH - Temperature	22	1.0 °C	05/06/10 14:43	05/06/10 14:43
Client ID: **MW-23-4**					
Lab ID : BMI10050603-02A	pH	8.2	1.7 pH Units	05/06/10 14:47	05/06/10 14:47
Date Sampled 05/05/10 08:50	pH - Temperature	21	1.0 °C	05/06/10 14:47	05/06/10 14:47
Client ID: **MW-23-3**					
Lab ID : BMI10050603-03A	pH	7.7	1.7 pH Units	05/06/10 14:48	05/06/10 14:48
Date Sampled 05/05/10 09:30	pH - Temperature	21	1.0 °C	05/06/10 14:48	05/06/10 14:48
Client ID: **MW-23-2**					
Lab ID : BMI10050603-04A	pH	7.3	1.7 pH Units	05/06/10 14:50	05/06/10 14:50
Date Sampled 05/05/10 10:06	pH - Temperature	21	1.0 °C	05/06/10 14:50	05/06/10 14:50
Client ID: **MW-23-1**					
Lab ID : BMI10050603-05A	pH	6.7	1.7 pH Units	05/06/10 14:53	05/06/10 14:53
Date Sampled 05/05/10 10:46	pH - Temperature	21	1.0 °C	05/06/10 14:53	05/06/10 14:53
Client ID: **EB-06-05/05/10**					
Lab ID : BMI10050603-06A	pH	6.1	1.7 pH Units	05/06/10 14:54	05/06/10 14:54
Date Sampled 05/05/10 10:30	pH - Temperature	21	1.0 °C	05/06/10 14:54	05/06/10 14:54
Client ID: **MW-5**					
Lab ID : BMI10050603-08A	pH	6.7	1.7 pH Units	05/06/10 14:57	05/06/10 14:57
Date Sampled 05/05/10 09:14	pH - Temperature	21	1.0 °C	05/06/10 14:57	05/06/10 14:57
Client ID: **MW-10**					
Lab ID : BMI10050603-09A	pH	6.7	1.7 pH Units	05/06/10 15:00	05/06/10 15:00
Date Sampled 05/05/10 11:54	pH - Temperature	21	1.0 °C	05/06/10 15:00	05/06/10 15:00

The EPA has established an analytical holding time of 15 minutes for this method as documented in the Methods Update Rule, Federal Register, Vol 72, No 47, March 2007. This holding time will always be exceeded, unless samples are analyzed in the field.
The laboratory performed this analysis in the shortest practical holding time after sample receipt.

Roger Scholl Randy Gardner Walter Hinchman

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ANALYTICAL REPORT

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 05/06/10

Job: G005862/JPL Groundwater Monitoring

Total Dissolved Solids (TDS)
SM2540C

Parameter		Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-23-5**					
Lab ID : BMI10050603-01A	Solids, Total Dissolved (TDS)	200	10 mg/L	05/10/10	05/10/10
Date Sampled 05/05/10 08:09					
Client ID: **MW-23-4**					
Lab ID : BMI10050603-02A	Solids, Total Dissolved (TDS)	210	10 mg/L	05/10/10	05/10/10
Date Sampled 05/05/10 08:50					
Client ID: **MW-23-3**					
Lab ID : BMI10050603-03A	Solids, Total Dissolved (TDS)	170	10 mg/L	05/10/10	05/10/10
Date Sampled 05/05/10 09:30					
Client ID: **MW-23-2**					
Lab ID : BMI10050603-04A	Solids, Total Dissolved (TDS)	660	10 mg/L	05/10/10	05/10/10
Date Sampled 05/05/10 10:06					
Client ID: **MW-23-1**					
Lab ID : BMI10050603-05A	Solids, Total Dissolved (TDS)	750	10 mg/L	05/10/10	05/10/10
Date Sampled 05/05/10 10:46					
Client ID: **EB-06-05/05/10**					
Lab ID : BMI10050603-06A	Solids, Total Dissolved (TDS)	ND	10 mg/L	05/10/10	05/10/10
Date Sampled 05/05/10 10:30					
Client ID: **MW-5**					
Lab ID : BMI10050603-08A	Solids, Total Dissolved (TDS)	210	10 mg/L	05/10/10	05/10/10
Date Sampled 05/05/10 09:14					
Client ID: **MW-10**					
Lab ID : BMI10050603-09A	Solids, Total Dissolved (TDS)	520	10 mg/L	05/10/10	05/10/10
Date Sampled 05/05/10 11:54					

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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ANALYTICAL REPORT

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

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

Tentatively Identified Compounds - Volatile Organics by GC/MS

	Parameter	Estimated Concentration	Estimated Reporting Limit	Date Extracted	Date Analyzed
Client ID : **MW-23-5**					
Lab ID : BMI10050603-01A	* * * None Found * * *	ND	2.0 µg/L	05/12/10 16:41	05/12/10 16:41
Date Received : 05/06/10					
Date Sampled : 05/05/10 08:09					
Client ID : **MW-23-4**					
Lab ID : BMI10050603-02A	* * * None Found * * *	ND	2.0 µg/L	05/12/10 17:04	05/12/10 17:04
Date Received : 05/06/10					
Date Sampled : 05/05/10 08:50					
Client ID : **MW-23-3**					
Lab ID : BMI10050603-03A	* * * None Found * * *	ND	2.0 µg/L	05/12/10 17:26	05/12/10 17:26
Date Received : 05/06/10					
Date Sampled : 05/05/10 09:30					
Client ID : **MW-23-2**					
Lab ID : BMI10050603-04A	* * * None Found * * *	ND	2.0 µg/L	05/12/10 17:48	05/12/10 17:48
Date Received : 05/06/10					
Date Sampled : 05/05/10 10:06					
Client ID : **MW-23-1**					
Lab ID : BMI10050603-05A	* * * None Found * * *	ND	2.0 µg/L	05/12/10 18:11	05/12/10 18:11
Date Received : 05/06/10					
Date Sampled : 05/05/10 10:46					
Client ID : **EB-06-05/05/10**					
Lab ID : BMI10050603-06A	* * * None Found * * *	ND	2.0 µg/L	05/12/10 13:43	05/12/10 13:43
Date Received : 05/06/10					
Date Sampled : 05/05/10 10:30					
Client ID : **TB-06-05/05/10**					
Lab ID : BMI10050603-07A	* * * None Found * * *	ND	2.0 µg/L	05/12/10 13:20	05/12/10 13:20
Date Received : 05/06/10					
Date Sampled : 05/05/10 07:00					
Client ID : **MW-5**					
Lab ID : BMI10050603-08A	* * * None Found * * *	ND	2.0 µg/L	05/12/10 18:33	05/12/10 18:33
Date Received : 05/06/10					
Date Sampled : 05/05/10 09:14					
Client ID : **MW-10**					
Lab ID : BMI10050603-09A	* * * None Found * * *	ND	2.0 µg/L	05/12/10 18:55	05/12/10 18:55
Date Received : 05/06/10					
Date Sampled : 05/05/10 11:54					

Alpha Analytical, Inc.

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

(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

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

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5/19/10

Report Date

Alpha Analytical, Inc.

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

Date *18-May-10*

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

CASE NARRATIVE

Job: G005862/JPL Groundwater Monitoring

Work Order: BMI10050603 **Cooler Temp:** 4 °C

Alpha's Sample ID	Client's Sample ID	Matrix
10050603-01A	MW-23-5	Aqueous
10050603-02A	MW-23-4	Aqueous
10050603-03A	MW-23-3	Aqueous
10050603-04A	MW-23-2	Aqueous
10050603-05A	MW-23-1	Aqueous
10050603-06A	EB-06-05/05/10	Aqueous
10050603-07A	TB-06-05/05/10	Aqueous
10050603-08A	MW-5	Aqueous
10050603-09A	MW-10	Aqueous

Manually Integrated Analytes

Alpha's Sample ID	Test Reference	Analyte
NONE		

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

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

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

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10050603-01A
Client I.D. Number: MW-23-5

Sampled: 05/05/10 08:09
Received: 05/06/10
Extracted: 05/12/10 16:41
Analyzed: 05/12/10 16:41

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	0.54	Q	0.50	µg/L
7	1,1-Dichloroethene	ND		0.50	µg/L	42	o-Xylene	ND		0.50	µg/L
8	Dichloromethane	ND		1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND		0.50	µg/L
9	Freon-113	ND		0.50	µg/L	44	1,2,3-Trichloropropane	ND		1.0	µg/L
10	trans-1,2-Dichloroethene	ND		0.50	µg/L	45	Isopropylbenzene	ND		0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND		0.50	µg/L	46	Bromobenzene	ND		0.50	µg/L
12	1,1-Dichloroethane	ND		0.50	µg/L	47	n-Propylbenzene	ND		0.50	µg/L
13	2-Butanone (MEK)	ND	Q	10	µg/L	48	4-Chlorotoluene	ND		0.50	µg/L
14	cis-1,2-Dichloroethene	ND		0.50	µg/L	49	2-Chlorotoluene	ND		0.50	µg/L
15	Bromochloromethane	ND		0.50	µg/L	50	1,3,5-Trimethylbenzene	ND		0.50	µg/L
16	Chloroform	ND		0.50	µg/L	51	tert-Butylbenzene	ND		0.50	µg/L
17	2,2-Dichloropropane	ND		0.50	µg/L	52	1,2,4-Trimethylbenzene	ND		0.50	µg/L
18	1,2-Dichloroethane	ND		0.50	µg/L	53	sec-Butylbenzene	ND		0.50	µg/L
19	1,1,1-Trichloroethane	ND		0.50	µg/L	54	1,3-Dichlorobenzene	ND		0.50	µg/L
20	1,1-Dichloropropene	ND		0.50	µg/L	55	1,4-Dichlorobenzene	ND		0.50	µg/L
21	Carbon tetrachloride	ND		0.50	µg/L	56	4-Isopropyltoluene	ND		0.50	µg/L
22	Benzene	ND		0.50	µg/L	57	1,2-Dichlorobenzene	ND		0.50	µg/L
23	Dibromomethane	ND		0.50	µg/L	58	n-Butylbenzene	ND		0.50	µg/L
24	1,2-Dichloropropane	ND		0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND	Q	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	100		(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	93		(70-130)	%REC
32	1,3-Dichloropropane	ND		0.50	µg/L						
33	Dibromochloromethane	ND		0.50	µg/L						
34	1,2-Dibromoethane (EDB)	ND		1.0	µg/L						
35	Tetrachloroethene	ND		0.50	µg/L						

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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5/19/10
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI10050603-02A
Client I.D. Number: MW-23-4

Sampled: 05/05/10 08:50
Received: 05/06/10
Extracted: 05/12/10 17:04
Analyzed: 05/12/10 17:04

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	Q	10	µg/L	48	4-Chlorotoluene	ND		0.50	µg/L
14	cis-1,2-Dichloroethene	ND		0.50	µg/L	49	2-Chlorotoluene	ND		0.50	µg/L
15	Bromochloromethane	ND		0.50	µg/L	50	1,3,5-Trimethylbenzene	ND		0.50	µg/L
16	Chloroform	ND		0.50	µg/L	51	tert-Butylbenzene	ND		0.50	µg/L
17	2,2-Dichloropropane	ND		0.50	µg/L	52	1,2,4-Trimethylbenzene	ND		0.50	µg/L
18	1,2-Dichloroethane	ND		0.50	µg/L	53	sec-Butylbenzene	ND		0.50	µg/L
19	1,1,1-Trichloroethane	ND		0.50	µg/L	54	1,3-Dichlorobenzene	ND		0.50	µg/L
20	1,1-Dichloropropene	ND		0.50	µg/L	55	1,4-Dichlorobenzene	ND		0.50	µg/L
21	Carbon tetrachloride	ND		0.50	µg/L	56	4-Isopropyltoluene	ND		0.50	µg/L
22	Benzene	ND		0.50	µg/L	57	1,2-Dichlorobenzene	ND		0.50	µg/L
23	Dibromomethane	ND		0.50	µg/L	58	n-Butylbenzene	ND		0.50	µg/L
24	1,2-Dichloropropane	ND		0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND	Q	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	106		(70-130)	%REC
30	1,1,2-Trichloroethane	ND		0.50	µg/L	65	Surr: Toluene-d8	100		(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	92		(70-130)	%REC
32	1,3-Dichloropropane	ND		0.50	µg/L						
33	Dibromochloromethane	ND		0.50	µg/L						
34	1,2-Dibromoethane (EDB)	ND		1.0	µg/L						
35	Tetrachloroethene	ND		0.50	µg/L						

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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5/19/10
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Alpha Analytical, Inc.

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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10050603-03A
Client I.D. Number: MW-23-3

Sampled: 05/05/10 09:30
Received: 05/06/10
Extracted: 05/12/10 17:26
Analyzed: 05/12/10 17:26

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	Q	10	µg/L	48	4-Chlorotoluene	ND		0.50	µg/L
14	cis-1,2-Dichloroethene	ND		0.50	µg/L	49	2-Chlorotoluene	ND		0.50	µg/L
15	Bromochloromethane	ND		0.50	µg/L	50	1,3,5-Trimethylbenzene	ND		0.50	µg/L
16	Chloroform	ND		0.50	µg/L	51	tert-Butylbenzene	ND		0.50	µg/L
17	2,2-Dichloropropane	ND		0.50	µg/L	52	1,2,4-Trimethylbenzene	ND		0.50	µg/L
18	1,2-Dichloroethane	ND		0.50	µg/L	53	sec-Butylbenzene	ND		0.50	µg/L
19	1,1,1-Trichloroethane	ND		0.50	µg/L	54	1,3-Dichlorobenzene	ND		0.50	µg/L
20	1,1-Dichloropropene	ND		0.50	µg/L	55	1,4-Dichlorobenzene	ND		0.50	µg/L
21	Carbon tetrachloride	ND		0.50	µg/L	56	4-Isopropyltoluene	ND		0.50	µg/L
22	Benzene	ND		0.50	µg/L	57	1,2-Dichlorobenzene	ND		0.50	µg/L
23	Dibromomethane	ND		0.50	µg/L	58	n-Butylbenzene	ND		0.50	µg/L
24	1,2-Dichloropropane	ND		0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND	Q	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	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	92		(70-130)	%REC
32	1,3-Dichloropropane	ND		0.50	µg/L						
33	Dibromochloromethane	ND		0.50	µg/L						
34	1,2-Dibromoethane (EDB)	ND		1.0	µg/L						
35	Tetrachloroethene	ND		0.50	µg/L						

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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5/19/10
Report Date

Alpha Analytical, Inc.

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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10050603-04A
Client I.D. Number: MW-23-2

Sampled: 05/05/10 10:06
Received: 05/06/10
Extracted: 05/12/10 17:48
Analyzed: 05/12/10 17:48

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	Q	10	µg/L	48 4-Chlorotoluene	ND		0.50	µg/L
14	cis-1,2-Dichloroethene	ND		0.50	µg/L	49 2-Chlorotoluene	ND		0.50	µg/L
15	Bromochloromethane	ND		0.50	µg/L	50 1,3,5-Trimethylbenzene	ND		0.50	µg/L
16	Chloroform	ND		0.50	µg/L	51 tert-Butylbenzene	ND		0.50	µg/L
17	2,2-Dichloropropane	ND		0.50	µg/L	52 1,2,4-Trimethylbenzene	ND		0.50	µg/L
18	1,2-Dichloroethane	ND		0.50	µg/L	53 sec-Butylbenzene	ND		0.50	µg/L
19	1,1,1-Trichloroethane	ND		0.50	µg/L	54 1,3-Dichlorobenzene	ND		0.50	µg/L
20	1,1-Dichloropropene	ND		0.50	µg/L	55 1,4-Dichlorobenzene	ND		0.50	µg/L
21	Carbon tetrachloride	ND		0.50	µg/L	56 4-Isopropyltoluene	ND		0.50	µg/L
22	Benzene	ND		0.50	µg/L	57 1,2-Dichlorobenzene	ND		0.50	µg/L
23	Dibromomethane	ND		0.50	µg/L	58 n-Butylbenzene	ND		0.50	µg/L
24	1,2-Dichloropropane	ND		0.50	µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	Q	2.5	µg/L
25	Trichloroethene	0.89		0.50	µg/L	60 1,2,4-Trichlorobenzene	ND		1.0	µg/L
26	Bromodichloromethane	ND		0.50	µg/L	61 Naphthalene	ND	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	103		(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66 Surr: 4-Bromofluorobenzene	92		(70-130)	%REC
32	1,3-Dichloropropane	ND		0.50	µg/L					
33	Dibromochloromethane	ND		0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND		1.0	µg/L					
35	Tetrachloroethene	ND		0.50	µg/L					

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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

5/19/10
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10050603-05A
Client I.D. Number: MW-23-1

Sampled: 05/05/10 10:46
Received: 05/06/10
Extracted: 05/12/10 18:11
Analyzed: 05/12/10 18:11

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration		Reporting Limit	
1	Dichlorodifluoromethane	ND		0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND		0.50	µg/L
2	Chloromethane	ND		1.0	µg/L	37	Chlorobenzene	ND		0.50	µg/L
3	Vinyl chloride	ND		0.50	µg/L	38	Ethylbenzene	ND		0.50	µg/L
4	Chloroethane	ND		0.50	µg/L	39	m,p-Xylene	ND		0.50	µg/L
5	Bromomethane	ND		1.0	µg/L	40	Bromoform	ND		0.50	µg/L
6	Trichlorofluoromethane	ND		0.50	µg/L	41	Styrene	ND		0.50	µg/L
7	1,1-Dichloroethene	ND		0.50	µg/L	42	o-Xylene	ND		0.50	µg/L
8	Dichloromethane	ND		1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND		0.50	µg/L
9	Freon-113	ND		0.50	µg/L	44	1,2,3-Trichloropropane	ND		1.0	µg/L
10	trans-1,2-Dichloroethene	ND		0.50	µg/L	45	Isopropylbenzene	ND		0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND		0.50	µg/L	46	Bromobenzene	ND		0.50	µg/L
12	1,1-Dichloroethane	ND		0.50	µg/L	47	n-Propylbenzene	ND		0.50	µg/L
13	2-Butanone (MEK)	ND	Q	10	µg/L	48	4-Chlorotoluene	ND		0.50	µg/L
14	cis-1,2-Dichloroethene	ND		0.50	µg/L	49	2-Chlorotoluene	ND		0.50	µg/L
15	Bromochloromethane	ND		0.50	µg/L	50	1,3,5-Trimethylbenzene	ND		0.50	µg/L
16	Chloroform	ND		0.50	µg/L	51	tert-Butylbenzene	ND		0.50	µg/L
17	2,2-Dichloropropane	ND		0.50	µg/L	52	1,2,4-Trimethylbenzene	ND		0.50	µg/L
18	1,2-Dichloroethane	ND		0.50	µg/L	53	sec-Butylbenzene	ND		0.50	µg/L
19	1,1,1-Trichloroethane	ND		0.50	µg/L	54	1,3-Dichlorobenzene	ND		0.50	µg/L
20	1,1-Dichloropropene	ND		0.50	µg/L	55	1,4-Dichlorobenzene	ND		0.50	µg/L
21	Carbon tetrachloride	ND		0.50	µg/L	56	4-Isopropyltoluene	ND		0.50	µg/L
22	Benzene	ND		0.50	µg/L	57	1,2-Dichlorobenzene	ND		0.50	µg/L
23	Dibromomethane	ND		0.50	µg/L	58	n-Butylbenzene	ND		0.50	µg/L
24	1,2-Dichloropropane	ND		0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND	Q	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	105		(70-130)	%REC
30	1,1,2-Trichloroethane	ND		0.50	µg/L	65	Surr: Toluene-d8	100		(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	93		(70-130)	%REC
32	1,3-Dichloropropane	ND		0.50	µg/L						
33	Dibromochloromethane	ND		0.50	µg/L						
34	1,2-Dibromoethane (EDB)	ND		1.0	µg/L						
35	Tetrachloroethene	0.63		0.50	µg/L						

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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

5/19/10
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10050603-06A
Client I.D. Number: EB-06-05/05/10

Sampled: 05/05/10 10:30
Received: 05/06/10
Extracted: 05/12/10 13:43
Analyzed: 05/12/10 13:43

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	Q	10	µg/L	48	4-Chlorotoluene	ND		0.50	µg/L
14	cis-1,2-Dichloroethene	ND		0.50	µg/L	49	2-Chlorotoluene	ND		0.50	µg/L
15	Bromochloromethane	ND		0.50	µg/L	50	1,3,5-Trimethylbenzene	ND		0.50	µg/L
16	Chloroform	ND		0.50	µg/L	51	tert-Butylbenzene	ND		0.50	µg/L
17	2,2-Dichloropropane	ND		0.50	µg/L	52	1,2,4-Trimethylbenzene	ND		0.50	µg/L
18	1,2-Dichloroethane	ND		0.50	µg/L	53	sec-Butylbenzene	ND		0.50	µg/L
19	1,1,1-Trichloroethane	ND		0.50	µg/L	54	1,3-Dichlorobenzene	ND		0.50	µg/L
20	1,1-Dichloropropene	ND		0.50	µg/L	55	1,4-Dichlorobenzene	ND		0.50	µg/L
21	Carbon tetrachloride	ND		0.50	µg/L	56	4-Isopropyltoluene	ND		0.50	µg/L
22	Benzene	ND		0.50	µg/L	57	1,2-Dichlorobenzene	ND		0.50	µg/L
23	Dibromomethane	ND		0.50	µg/L	58	n-Butylbenzene	ND		0.50	µg/L
24	1,2-Dichloropropane	ND		0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND	Q	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	107		(70-130)	%REC
30	1,1,2-Trichloroethane	ND		0.50	µg/L	65	Surr: Toluene-d8	97		(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	98		(70-130)	%REC
32	1,3-Dichloropropane	ND		0.50	µg/L						
33	Dibromochloromethane	ND		0.50	µg/L						
34	1,2-Dibromoethane (EDB)	ND		1.0	µg/L						
35	Tetrachloroethene	ND		0.50	µg/L						

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

Roger Scholl 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.

5/19/10
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10050603-07A
Client I.D. Number: TB-06-05/05/10

Sampled: 05/05/10 07:00
Received: 05/06/10
Extracted: 05/12/10 13:20
Analyzed: 05/12/10 13:20

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration		Reporting Limit	
1	Dichlorodifluoromethane	ND		0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND		0.50	µg/L
2	Chloromethane	ND		1.0	µg/L	37	Chlorobenzene	ND		0.50	µg/L
3	Vinyl chloride	ND		0.50	µg/L	38	Ethylbenzene	ND		0.50	µg/L
4	Chloroethane	ND		0.50	µg/L	39	m,p-Xylene	ND		0.50	µg/L
5	Bromomethane	ND		1.0	µg/L	40	Bromoform	ND		0.50	µg/L
6	Trichlorofluoromethane	ND		0.50	µg/L	41	Styrene	ND		0.50	µg/L
7	1,1-Dichloroethene	ND		0.50	µg/L	42	o-Xylene	ND		0.50	µg/L
8	Dichloromethane	ND		1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND		0.50	µg/L
9	Freon-113	ND		0.50	µg/L	44	1,2,3-Trichloropropane	ND		1.0	µg/L
10	trans-1,2-Dichloroethene	ND		0.50	µg/L	45	Isopropylbenzene	ND		0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND		0.50	µg/L	46	Bromobenzene	ND		0.50	µg/L
12	1,1-Dichloroethane	ND		0.50	µg/L	47	n-Propylbenzene	ND		0.50	µg/L
13	2-Butanone (MEK)	ND	Q	10	µg/L	48	4-Chlorotoluene	ND		0.50	µg/L
14	cis-1,2-Dichloroethene	ND		0.50	µg/L	49	2-Chlorotoluene	ND		0.50	µg/L
15	Bromochloromethane	ND		0.50	µg/L	50	1,3,5-Trimethylbenzene	ND		0.50	µg/L
16	Chloroform	ND		0.50	µg/L	51	tert-Butylbenzene	ND		0.50	µg/L
17	2,2-Dichloropropane	ND		0.50	µg/L	52	1,2,4-Trimethylbenzene	ND		0.50	µg/L
18	1,2-Dichloroethane	ND		0.50	µg/L	53	sec-Butylbenzene	ND		0.50	µg/L
19	1,1,1-Trichloroethane	ND		0.50	µg/L	54	1,3-Dichlorobenzene	ND		0.50	µg/L
20	1,1-Dichloropropene	ND		0.50	µg/L	55	1,4-Dichlorobenzene	ND		0.50	µg/L
21	Carbon tetrachloride	ND		0.50	µg/L	56	4-Isopropyltoluene	ND		0.50	µg/L
22	Benzene	ND		0.50	µg/L	57	1,2-Dichlorobenzene	ND		0.50	µg/L
23	Dibromomethane	ND		0.50	µg/L	58	n-Butylbenzene	ND		0.50	µg/L
24	1,2-Dichloropropane	ND		0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND	Q	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	107		(70-130)	%REC
30	1,1,2-Trichloroethane	ND		0.50	µg/L	65	Surr: Toluene-d8	99		(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	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 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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5/19/10
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI10050603-08A
Client I.D. Number: MW-5

Sampled: 05/05/10 09:14
Received: 05/06/10
Extracted: 05/12/10 18:33
Analyzed: 05/12/10 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		1.0	µg/L	37	Chlorobenzene	ND		0.50	µg/L
3	Vinyl chloride	ND		0.50	µg/L	38	Ethylbenzene	ND		0.50	µg/L
4	Chloroethane	ND		0.50	µg/L	39	m,p-Xylene	ND		0.50	µg/L
5	Bromomethane	ND		1.0	µg/L	40	Bromoform	ND		0.50	µg/L
6	Trichlorofluoromethane	ND		0.50	µg/L	41	Styrene	ND		0.50	µg/L
7	1,1-Dichloroethene	ND		0.50	µg/L	42	o-Xylene	ND		0.50	µg/L
8	Dichloromethane	ND		1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND		0.50	µg/L
9	Freon-113	ND		0.50	µg/L	44	1,2,3-Trichloropropane	ND		1.0	µg/L
10	trans-1,2-Dichloroethene	ND		0.50	µg/L	45	Isopropylbenzene	ND		0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND		0.50	µg/L	46	Bromobenzene	ND		0.50	µg/L
12	1,1-Dichloroethane	ND		0.50	µg/L	47	n-Propylbenzene	ND		0.50	µg/L
13	2-Butanone (MEK)	ND	Q	10	µg/L	48	4-Chlorotoluene	ND		0.50	µg/L
14	cis-1,2-Dichloroethene	ND		0.50	µg/L	49	2-Chlorotoluene	ND		0.50	µg/L
15	Bromochloromethane	ND		0.50	µg/L	50	1,3,5-Trimethylbenzene	ND		0.50	µg/L
16	Chloroform	ND		0.50	µg/L	51	tert-Butylbenzene	ND		0.50	µg/L
17	2,2-Dichloropropane	ND		0.50	µg/L	52	1,2,4-Trimethylbenzene	ND		0.50	µg/L
18	1,2-Dichloroethane	ND		0.50	µg/L	53	sec-Butylbenzene	ND		0.50	µg/L
19	1,1,1-Trichloroethane	ND		0.50	µg/L	54	1,3-Dichlorobenzene	ND		0.50	µg/L
20	1,1-Dichloropropene	ND		0.50	µg/L	55	1,4-Dichlorobenzene	ND		0.50	µg/L
21	Carbon tetrachloride	ND		0.50	µg/L	56	4-Isopropyltoluene	ND		0.50	µg/L
22	Benzene	ND		0.50	µg/L	57	1,2-Dichlorobenzene	ND		0.50	µg/L
23	Dibromomethane	ND		0.50	µg/L	58	n-Butylbenzene	ND		0.50	µg/L
24	1,2-Dichloropropane	ND		0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND	Q	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	105		(70-130)	%REC
30	1,1,2-Trichloroethane	ND		0.50	µg/L	65	Surr: Toluene-d8	102		(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	91		(70-130)	%REC
32	1,3-Dichloropropane	ND		0.50	µg/L						
33	Dibromochloromethane	ND		0.50	µg/L						
34	1,2-Dibromoethane (EDB)	ND		1.0	µg/L						
35	Tetrachloroethene	ND		0.50	µg/L						

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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.

5/19/10
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10050603-09A
Client I.D. Number: MW-10

Sampled: 05/05/10 11:54
Received: 05/06/10
Extracted: 05/12/10 18:55
Analyzed: 05/12/10 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	Q	10	µg/L	48	4-Chlorotoluene	ND		0.50	µg/L
14	cis-1,2-Dichloroethene	ND		0.50	µg/L	49	2-Chlorotoluene	ND		0.50	µg/L
15	Bromochloromethane	ND		0.50	µg/L	50	1,3,5-Trimethylbenzene	ND		0.50	µg/L
16	Chloroform	0.71		0.50	µg/L	51	tert-Butylbenzene	ND		0.50	µg/L
17	2,2-Dichloropropane	ND		0.50	µg/L	52	1,2,4-Trimethylbenzene	ND		0.50	µg/L
18	1,2-Dichloroethane	ND		0.50	µg/L	53	sec-Butylbenzene	ND		0.50	µg/L
19	1,1,1-Trichloroethane	ND		0.50	µg/L	54	1,3-Dichlorobenzene	ND		0.50	µg/L
20	1,1-Dichloropropene	ND		0.50	µg/L	55	1,4-Dichlorobenzene	ND		0.50	µg/L
21	Carbon tetrachloride	ND		0.50	µg/L	56	4-Isopropyltoluene	ND		0.50	µg/L
22	Benzene	ND		0.50	µg/L	57	1,2-Dichlorobenzene	ND		0.50	µg/L
23	Dibromomethane	ND		0.50	µg/L	58	n-Butylbenzene	ND		0.50	µg/L
24	1,2-Dichloropropane	ND		0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND	Q	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	Q	1.0	µg/L
29	trans-1,3-Dichloropropene	ND		0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	106		(70-130)	%REC
30	1,1,2-Trichloroethane	ND		0.50	µg/L	65	Surr: Toluene-d8	102		(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	92		(70-130)	%REC
32	1,3-Dichloropropane	ND		0.50	µg/L						
33	Dibromochloromethane	ND		0.50	µg/L						
34	1,2-Dibromoethane (EDB)	ND		1.0	µg/L						
35	Tetrachloroethene	0.67		0.50	µg/L						

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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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.

5/19/10
Report Date

Alpha Analytical, Inc.

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

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

VOC Sample Preservation Report

Work Order: BMI10050603 **Job:** G005862/JPL Groundwater Monitoring

Alpha's Sample ID	Client's Sample ID	Matrix	pH
10050603-01A	MW-23-5	Aqueous	2
10050603-02A	MW-23-4	Aqueous	2
10050603-03A	MW-23-3	Aqueous	2
10050603-04A	MW-23-2	Aqueous	2
10050603-05A	MW-23-1	Aqueous	2
10050603-06A	EB-06-05/05/10	Aqueous	2
10050603-07A	TB-06-05/05/10	Aqueous	2
10050603-08A	MW-5	Aqueous	2
10050603-09A	MW-10	Aqueous	2

5/19/10

Report Date

Alpha Analytical, Inc.

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Date: *17-May-10*

QC Summary Report

Work Order: 10050603

Method Blank

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

File ID: **24** Batch ID: **24178** Analysis Date: **05/06/2010 12:37**

Sample ID: **MB-24178** Units : **mg/L** Run ID: **IC_1_100506B** Prep Date: **05/06/2010 12:25**

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: **25** Batch ID: **24178** Analysis Date: **05/06/2010 12:56**

Sample ID: **LFB-24178** Units : **mg/L** Run ID: **IC_1_100506B** Prep Date: **05/06/2010 12:25**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	53	0.5	50		106	90	110			
Nitrite (NO2) - N	5.2	0.25	5		104	90	110			
Nitrate (NO3) - N	5.14	0.25	5		103	90	110			
Phosphate, ortho - P	4.69	0.5	5		94	90	110			
Sulfate (SO4)	109	0.5	100		109	90	110			

Sample Matrix Spike

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

File ID: **28** Batch ID: **24178** Analysis Date: **05/06/2010 13:51**

Sample ID: **10050603-01ALFM** Units : **mg/L** Run ID: **IC_1_100506B** Prep Date: **05/06/2010 12:25**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	118	0.5	100	11.35	106	80	120			
Nitrite (NO2) - N	10.2	0.25	10	0	102	80	120			
Nitrate (NO3) - N	10.2	0.25	10	0	102	80	120			
Phosphate, ortho - P	11.5	0.5	10	0	115	80	120			
Sulfate (SO4)	201	0.5	200	0	101	80	120			

Sample Matrix Spike Duplicate

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

File ID: **29** Batch ID: **24178** Analysis Date: **05/06/2010 14:10**

Sample ID: **10050603-01ALFMD** Units : **mg/L** Run ID: **IC_1_100506B** Prep Date: **05/06/2010 12:25**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	119	0.5	100	11.35	107	80	120	117.8	0.8(15)	
Nitrite (NO2) - N	10.4	0.25	10	0	104	80	120	10.16	2.6(15)	
Nitrate (NO3) - N	10	0.25	10	0	100	80	120	10.16	1.1(15)	
Phosphate, ortho - P	10.2	0.5	10	0	102	80	120	11.52	12.1(15)	
Sulfate (SO4)	203	0.5	200	0	101	80	120	201.3	0.6(15)	

Comments:

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

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Date: *17-May-10*

QC Summary Report

Work Order: 10050603

Method Blank

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

File ID: **14** Batch ID: **24211** Analysis Date: **05/10/2010 12:23**

Sample ID: **MB-24211** Units : **µg/L** Run ID: **IC_3_100510A** Prep Date: **05/10/2010 11:27**

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: **24211** Analysis Date: **05/10/2010 13:00**

Sample ID: **LFB-24211** Units : **µg/L** Run ID: **IC_3_100510A** Prep Date: **05/10/2010 11:27**

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

Sample Matrix Spike

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

File ID: **35** Batch ID: **24211** Analysis Date: **05/10/2010 18:50**

Sample ID: **10050703-04ALFM** Units : **µg/L** Run ID: **IC_3_100510A** Prep Date: **05/10/2010 11:27**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	28.6	2	25	0	114	80	120			

Sample Matrix Spike Duplicate

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

File ID: **36** Batch ID: **24211** Analysis Date: **05/10/2010 19:08**

Sample ID: **10050703-04ALFMD** Units : **µg/L** Run ID: **IC_3_100510A** Prep Date: **05/10/2010 11:27**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	26.3	2	25	0	105	80	120	28.57	8.4(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.

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Date: *17-May-10*

QC Summary Report

Work Order: 10050603

Laboratory Control Spike Type **LCS** Test Code: **SM2320B**

File ID: Batch ID: **W0510AL** Analysis Date: **05/10/2010 11:10**

Sample ID: **LCS-W0510AL** Units : **mg/L** Run ID: **WETLAB_100510E** Prep Date: **05/10/2010 11:10**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Alkalinity, Bicarbonate (As CaCO3)	243.8	10	250		98	80	120			
Alkalinity, Carbonate (As CaCO3)	243.8	10	250		98	80	120			
Alkalinity, Total (As CaCO3 at pH 4.5)	244	10	250		98	80	120			

Comments:

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

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Date: *13-May-2010*

QC Summary Report

Work Order: 10050603

Method Blank

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

File ID: **051010.B\020SMPL.D** Batch ID: **24188K** Analysis Date: **05/10/2010 17:28**

Sample ID: **MB-24188** Units : **mg/L** Run ID: **ICP/MS_100510A** Prep Date: **05/07/2010 08:27**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sodium (Na)	ND	0.5								
Magnesium (Mg)	ND	0.5								
Potassium (K)	ND	0.5								
Calcium (Ca)	ND	0.5								
Chromium (Cr)	ND	0.005								
Iron (Fe)	ND	0.1								
Arsenic (As)	ND	0.002								
Lead (Pb)	ND	0.005								

Laboratory Control Spike

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

File ID: **051010.B\021_LCS.D** Batch ID: **24188K** Analysis Date: **05/10/2010 17:33**

Sample ID: **LCS-24188** Units : **mg/L** Run ID: **ICP/MS_100510A** Prep Date: **05/07/2010 08:27**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sodium (Na)	5.06	0.5	5		101	80	120			
Magnesium (Mg)	5.1	0.5	5		102	80	120			
Potassium (K)	5.21	0.5	5		104	80	120			
Calcium (Ca)	4.88	0.5	5		98	80	120			
Chromium (Cr)	0.0461	0.005	0.05		92	80	120			
Iron (Fe)	4.72	0.1	5		94	80	120			
Arsenic (As)	0.0479	0.002	0.05		96	80	120			
Lead (Pb)	0.0465	0.005	0.05		93	80	120			

Sample Matrix Spike

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

File ID: **051010.B\025SMPL.D** Batch ID: **24188K** Analysis Date: **05/10/2010 17:56**

Sample ID: **10043041-01AMS** Units : **mg/L** Run ID: **ICP/MS_100510A** Prep Date: **05/07/2010 08:27**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sodium (Na)	24.5	0.5	5	18.72	115	80	120			
Magnesium (Mg)	21.7	0.5	5	16.59	102	80	120			
Potassium (K)	8.34	0.5	5	2.747	112	80	120			
Calcium (Ca)	58	0.5	5	56.22	36	80	120			M3
Chromium (Cr)	0.0461	0.005	0.05	0	92	80	120			
Iron (Fe)	5.06	0.1	5	0.1649	98	80	120			
Arsenic (As)	0.0497	0.002	0.05	0	99	80	120			
Lead (Pb)	0.0471	0.005	0.05	0	94	80	120			

Sample Matrix Spike Duplicate

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

File ID: **051010.B\026SMPL.D** Batch ID: **24188K** Analysis Date: **05/10/2010 18:02**

Sample ID: **10043041-01AMSD** Units : **mg/L** Run ID: **ICP/MS_100510A** Prep Date: **05/07/2010 08:27**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sodium (Na)	23	0.5	5	18.72	85	80	120	24.45	6.3(20)	
Magnesium (Mg)	20.9	0.5	5	16.59	86	80	120	21.68	3.7(20)	
Potassium (K)	7.54	0.5	5	2.747	96	80	120	8.343	10.1(20)	
Calcium (Ca)	61.3	0.5	5	56.22	102	80	120	58.04	5.5(20)	
Chromium (Cr)	0.0499	0.005	0.05	0	99.7	80	120	0.0461	7.8(20)	
Iron (Fe)	4.61	0.1	5	0.1649	89	80	120	5.063	9.3(20)	
Arsenic (As)	0.05	0.002	0.05	0	99.9	80	120	0.04972	0.5(20)	
Lead (Pb)	0.0468	0.005	0.05	0	94	80	120	0.04713	0.8(20)	

Comments:

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

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

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.

Alpha Analytical, Inc.

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Date: *17-May-10*

QC Summary Report

Work Order: 10050603

Laboratory Control Spike Type **LCS** Test Code: **EPA Method 150.2 / SM4500HB / SW9040C**

File ID: Batch ID: **W0506PH** Analysis Date: **05/06/2010 14:40**

Sample ID: **LCS-W0506PH** Units : **pH Units** Run ID: **WETLAB_100506E** Prep Date: **05/06/2010 14:40**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
pH	4.96	1.7	5		99	90	110			

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: *14-May-10*

QC Summary Report

Work Order: 10050603

Method Blank

Type **MBLK** Test Code: **SM2540C**

File ID: Batch ID: **W0506DS** Analysis Date: **05/10/2010 00:00**

Sample ID: **MBLK-W0506DS** Units : **mg/L** Run ID: **WETLAB_100506K** Prep Date: **05/10/2010 00:00**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Solids, Total Dissolved (TDS)	ND	10								

Laboratory Control Spike

Type **LCS** Test Code: **SM2540C**

File ID: Batch ID: **W0506DS** Analysis Date: **05/10/2010 00:00**

Sample ID: **LCS-W0506DS** Units : **mg/L** Run ID: **WETLAB_100506K** Prep Date: **05/10/2010 00:00**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Solids, Total Dissolved (TDS)	96	10	100		96	80	120			

Comments:

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

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Date: *18-May-10*

QC Summary Report

Work Order: 10050603

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

File ID: **10051206.D** Batch ID: **MS15W0512M** Analysis Date: **05/12/2010 10:21**

Sample ID: **MBLK MS15W0512M** Units : **µg/L** Run ID: **MSD_15_100512B** Prep Date: **05/12/2010 10:21**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	ND	0.5								
Chloromethane	ND	1								
Vinyl chloride	ND	0.5								
Chloroethane	ND	0.5								
Bromomethane	ND	1								
Trichlorofluoromethane	ND	0.5								
1,1-Dichloroethene	ND	0.5								
Dichloromethane	ND	1								
Freon-113	ND	0.5								
trans-1,2-Dichloroethene	ND	0.5								
Methyl tert-butyl ether (MTBE)	ND	0.5								
1,1-Dichloroethane	ND	0.5								
2-Butanone (MEK)	ND	10								
cis-1,2-Dichloroethene	ND	0.5								
Bromochloromethane	ND	0.5								
Chloroform	ND	0.5								
2,2-Dichloropropane	ND	0.5								
1,2-Dichloroethane	ND	0.5								
1,1,1-Trichloroethane	ND	0.5								
1,1-Dichloropropene	ND	0.5								
Carbon tetrachloride	ND	0.5								
Benzene	ND	0.5								
Dibromomethane	ND	0.5								
1,2-Dichloropropane	ND	0.5								
Trichloroethene	ND	0.5								
Bromodichloromethane	ND	0.5								
4-Methyl-2-pentanone (MIBK)	ND	2.5								
cis-1,3-Dichloropropene	ND	0.5								
trans-1,3-Dichloropropene	ND	0.5								
1,1,2-Trichloroethane	ND	0.5								
Toluene	ND	0.5								
1,3-Dichloropropane	ND	0.5								
Dibromochloromethane	ND	0.5								
1,2-Dibromoethane (EDB)	ND	1								
Tetrachloroethene	ND	0.5								
1,1,1,2-Tetrachloroethane	ND	0.5								
Chlorobenzene	ND	0.5								
Ethylbenzene	ND	0.5								
m,p-Xylene	ND	0.5								
Bromoform	ND	0.5								
Styrene	ND	0.5								
o-Xylene	ND	0.5								
1,1,2,2-Tetrachloroethane	ND	0.5								
1,2,3-Trichloropropane	ND	1								
Isopropylbenzene	ND	0.5								
Bromobenzene	ND	0.5								
n-Propylbenzene	ND	0.5								
4-Chlorotoluene	ND	0.5								
2-Chlorotoluene	ND	0.5								
1,3,5-Trimethylbenzene	ND	0.5								
tert-Butylbenzene	ND	0.5								
1,2,4-Trimethylbenzene	ND	0.5								
sec-Butylbenzene	ND	0.5								
1,3-Dichlorobenzene	ND	0.5								
1,4-Dichlorobenzene	ND	0.5								
4-Isopropyltoluene	ND	0.5								
1,2-Dichlorobenzene	ND	0.5								
n-Butylbenzene	ND	0.5								
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5								
1,2,4-Trichlorobenzene	ND	1								
Naphthalene	ND	1								
Hexachlorobutadiene	ND	1								
1,2,3-Trichlorobenzene	ND	1								
Surr: 1,2-Dichloroethane-d4	10.3		10		103	70	130			
Surr: Toluene-d8	9.95		10		100	70	130			

Alpha Analytical, Inc.

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Date: *18-May-10*

QC Summary Report

Work Order: 10050603

Surr: 4-Bromofluorobenzene	9.85	10	99	70	130	

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Date: 18-May-10

QC Summary Report

Work Order: 10050603

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

File ID: **10051203.D** Batch ID: **MS15W0512M** Analysis Date: **05/12/2010 09:07**

Sample ID: **LCS MS15W0512M** Units : **µg/L** Run ID: **MSD_15_100512B** Prep Date: **05/12/2010 09:07**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	7.61	1	10		76	70	130			
Chloromethane	8.24	2	10		82	70	130			
Vinyl chloride	11.4	1	10		114	70	130			
Chloroethane	16.2	1	10		162	70	130(130)			L1
Bromomethane	14	2	10		140	70	130(130)			L51
Trichlorofluoromethane	13.7	1	10		137	70	130(130)			L51
1,1-Dichloroethene	11.1	1	10		111	70	130			
Dichloromethane	9.43	2	10		94	70	130			
trans-1,2-Dichloroethene	11.4	1	10		114	70	130			
Methyl tert-butyl ether (MTBE)	8.27	0.5	10		83	70	130			
1,1-Dichloroethane	10.7	1	10		107	70	130			
cis-1,2-Dichloroethene	10.7	1	10		107	70	130			
Bromochloromethane	10.5	1	10		105	70	130			
Chloroform	10.1	1	10		101	70	130			
2,2-Dichloropropane	8.22	1	10		82	70	130			
1,2-Dichloroethane	9.37	1	10		94	70	130			
1,1,1-Trichloroethane	11.4	1	10		114	70	130			
1,1-Dichloropropene	10.6	1	10		106	70	130			
Carbon tetrachloride	11.7	1	10		117	70	130			
Benzene	10.5	0.5	10		105	70	130			
Dibromomethane	8.98	1	10		90	70	130			
1,2-Dichloropropane	9.55	1	10		96	70	130			
Trichloroethene	10.5	1	10		105	70	130			
Bromodichloromethane	10.4	1	10		104	70	130			
cis-1,3-Dichloropropene	9.35	1	10		94	70	130			
trans-1,3-Dichloropropene	8.27	1	10		83	70	130			
1,1,2-Trichloroethane	9.03	1	10		90	70	130			
Toluene	9.23	0.5	10		92	70	130			
1,3-Dichloropropane	7.62	1	10		76	70	130			
Dibromochloromethane	9.32	1	10		93	70	130			
1,2-Dibromoethane (EDB)	16.6	2	20		83	70	130			
Tetrachloroethene	10.6	1	10		106	70	130			
1,1,1,2-Tetrachloroethane	10.2	1	10		102	70	130			
Chlorobenzene	9.94	1	10		99	70	130			
Ethylbenzene	10.6	0.5	10		106	70	130			
m,p-Xylene	9.94	0.5	10		99	70	130			
Bromoform	9.47	1	10		95	70	130			
Styrene	14.4	1	10		144	70	130(130)			L1
o-Xylene	10.1	0.5	10		101	70	130			
1,1,2,2-Tetrachloroethane	7.87	1	10		79	70	130			
1,2,3-Trichloropropane	17.8	2	20		89	70	130			
Isopropylbenzene	9.25	1	10		93	70	130			
Bromobenzene	9.31	1	10		93	70	130			
n-Propylbenzene	9.25	1	10		93	70	130			
4-Chlorotoluene	9.07	1	10		91	70	130			
2-Chlorotoluene	9.12	1	10		91	70	130			
1,3,5-Trimethylbenzene	9.62	1	10		96	70	130			
tert-Butylbenzene	9.49	1	10		95	70	130			
1,2,4-Trimethylbenzene	9.46	1	10		95	70	130			
sec-Butylbenzene	8.91	1	10		89	70	130			
1,3-Dichlorobenzene	9	1	10		90	70	130			
1,4-Dichlorobenzene	8.92	1	10		89	70	130			
4-Isopropyltoluene	9.35	1	10		94	70	130			
1,2-Dichlorobenzene	8.42	1	10		84	70	130			
n-Butylbenzene	9.34	1	10		93	70	130			
1,2-Dibromo-3-chloropropane (DBCP)	30.8	3	50		62	70(70)	130			L2
1,2,4-Trichlorobenzene	7.56	2	10		76	70	130			
Naphthalene	4.53	2	10		45	70(70)	130			L50
Hexachlorobutadiene	16	2	20		80	70	130			
1,2,3-Trichlorobenzene	6.26	2	10		63	70(70)	130			L50
Surr: 1,2-Dichloroethane-d4	9.95		10		100	70	130			
Surr: Toluene-d8	9.27		10		93	70	130			
Surr: 4-Bromofluorobenzene	10.3		10		103	70	130			

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Date: 18-May-10

QC Summary Report

Work Order: 10050603

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

File ID: **10051207.D** Batch ID: **MS15W0512M** Analysis Date: **05/12/2010 10:43**

Sample ID: **10050505-02AMS** Units : **µg/L** Run ID: **MSD_15_100512B** Prep Date: **05/12/2010 10:43**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	34.4	2.5	50	0	69	13	167			
Chloromethane	42.6	10	50	0	85	28	145			
Vinyl chloride	55.6	2.5	50	0	111	43	134			
Chloroethane	80.2	2.5	50	0	160	39	154			M55
Bromomethane	62.6	10	50	0	125	19	176			
Trichlorofluoromethane	68.8	2.5	50	0	138	34	160			
1,1-Dichloroethene	56.1	2.5	50	0	112	60	130			
Dichloromethane	48.1	10	50	0	96	68	130			
trans-1,2-Dichloroethene	57.4	2.5	50	0	115	63	130			
Methyl tert-butyl ether (MTBE)	46.7	1.3	50	0	93	56	141			
1,1-Dichloroethane	54.1	2.5	50	0	108	61	130			
cis-1,2-Dichloroethene	55.1	2.5	50	0	110	70	130			
Bromochloromethane	55.2	2.5	50	0	110	70	130			
Chloroform	52.2	2.5	50	0	104	67	130			
2,2-Dichloropropane	50	2.5	50	0	99.9	30	152			
1,2-Dichloroethane	51.2	2.5	50	0	102	60	135			
1,1,1-Trichloroethane	57.5	2.5	50	0	115	59	137			
1,1-Dichloropropene	53.9	2.5	50	0	108	63	130			
Carbon tetrachloride	59.8	2.5	50	0	120	50	147			
Benzene	53.2	1.3	50	0	106	67	130			
Dibromomethane	49.8	2.5	50	0	99.6	69	133			
1,2-Dichloropropane	49.3	2.5	50	0	99	69	130			
Trichloroethene	52.8	2.5	50	0	106	69	130			
Bromodichloromethane	53.9	2.5	50	0	108	66	134			
cis-1,3-Dichloropropene	48.1	2.5	50	0	96	63	130			
trans-1,3-Dichloropropene	45.1	2.5	50	0	90	66	131			
1,1,2-Trichloroethane	47.8	2.5	50	0	96	68	130			
Toluene	45.3	1.3	50	0	91	66	130			
1,3-Dichloropropane	39.6	2.5	50	0	79	70	130			
Dibromochloromethane	47.8	2.5	50	0	96	70	130			
1,2-Dibromoethane (EDB)	87.3	5	100	0	87	70	130			
Tetrachloroethene	51.1	2.5	50	0	102	61	134			
1,1,1,2-Tetrachloroethane	51.1	2.5	50	0	102	70	130			
Chlorobenzene	49.1	2.5	50	0	98	70	130			
Ethylbenzene	52.1	1.3	50	0	104	68	130			
m,p-Xylene	49.1	1.3	50	0	98	64	130			
Bromoform	50.2	2.5	50	0	100	64	138			
Styrene	71.4	2.5	50	0	143	69	130			M55
o-Xylene	50	1.3	50	0	100	70	130			
1,1,2,2-Tetrachloroethane	41.7	2.5	50	0	83	65	131			
1,2,3-Trichloropropane	98	10	100	0	98	70	130			
Isopropylbenzene	44.6	2.5	50	0	89	64	138			
Bromobenzene	46.5	2.5	50	0	93	70	130			
n-Propylbenzene	44.7	2.5	50	0	89	66	132			
4-Chlorotoluene	43.9	2.5	50	0	88	70	130			
2-Chlorotoluene	44.2	2.5	50	0	88	70	130			
1,3,5-Trimethylbenzene	46.1	2.5	50	0	92	66	136			
tert-Butylbenzene	45.5	2.5	50	0	91	65	137			
1,2,4-Trimethylbenzene	45.5	2.5	50	0	91	65	137			
sec-Butylbenzene	43	2.5	50	0	86	66	134			
1,3-Dichlorobenzene	43.5	2.5	50	0	87	70	130			
1,4-Dichlorobenzene	43.5	2.5	50	0	87	70	130			
4-Isopropyltoluene	45.5	2.5	50	0	91	66	137			
1,2-Dichlorobenzene	41.9	2.5	50	0	84	70	130			
n-Butylbenzene	45.4	2.5	50	0	91	60	142			
1,2-Dibromo-3-chloropropane (DBCP)	164	15	250	0	66	67	130			M57
1,2,4-Trichlorobenzene	38.5	10	50	0	77	61	137			
Naphthalene	25.1	10	50	0	50	40	167			
Hexachlorobutadiene	80.7	10	100	0	81	61	130			
1,2,3-Trichlorobenzene	32.1	10	50	0	64	51	144			
Surr: 1,2-Dichloroethane-d4	51.1		50		102	70	130			
Surr: Toluene-d8	45.1		50		90	70	130			
Surr: 4-Bromofluorobenzene	50.4		50		101	70	130			

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Date: *18-May-10*

QC Summary Report

Work Order: 10050603

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

File ID: **10051209.D** Batch ID: **MS15W0512M** Analysis Date: **05/12/2010 11:28**

Sample ID: **10050505-09AMS** Units : **µg/L** Run ID: **MSD_15_100512B** Prep Date: **05/12/2010 11:28**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	32.7	2.5	50	0	65	13	167			
Chloromethane	41.9	10	50	0	84	28	145			
Vinyl chloride	51.8	2.5	50	0	104	43	134			
Chloroethane	66.9	2.5	50	0	134	39	154			
Bromomethane	65.8	10	50	0	132	19	176			
Trichlorofluoromethane	61.1	2.5	50	0	122	34	160			
1,1-Dichloroethene	52	2.5	50	0	104	60	130			
Dichloromethane	46.2	10	50	0	92	68	130			
trans-1,2-Dichloroethene	54.5	2.5	50	0	109	63	130			
Methyl tert-butyl ether (MTBE)	46.3	1.3	50	0	93	56	141			
1,1-Dichloroethane	51.9	2.5	50	0	104	61	130			
cis-1,2-Dichloroethene	52.2	2.5	50	0	104	70	130			
Bromochloromethane	51	2.5	50	0	102	70	130			
Chloroform	48	2.5	50	0	96	67	130			
2,2-Dichloropropane	42.7	2.5	50	0	85	30	152			
1,2-Dichloroethane	49.1	2.5	50	0	98	60	135			
1,1,1-Trichloroethane	54.4	2.5	50	0	109	59	137			
1,1-Dichloropropene	51.4	2.5	50	0	103	63	130			
Carbon tetrachloride	56.3	2.5	50	0	113	50	147			
Benzene	50.1	1.3	50	0	100	67	130			
Dibromomethane	48.3	2.5	50	0	97	69	133			
1,2-Dichloropropane	47.7	2.5	50	0	95	69	130			
Trichloroethene	52.7	2.5	50	4.25	97	69	130			
Bromodichloromethane	51.8	2.5	50	0	104	66	134			
cis-1,3-Dichloropropene	45.8	2.5	50	0	92	63	130			
trans-1,3-Dichloropropene	42	2.5	50	0	84	66	131			
1,1,2-Trichloroethane	47.1	2.5	50	0	94	68	130			
Toluene	43.2	1.3	50	0	86	66	130			
1,3-Dichloropropane	38.4	2.5	50	0	77	70	130			
Dibromochloromethane	46.2	2.5	50	0	92	70	130			
1,2-Dibromoethane (EDB)	85.1	5	100	0	85	70	130			
Tetrachloroethene	48.8	2.5	50	1.14	95	61	134			
1,1,1,2-Tetrachloroethane	47.6	2.5	50	0	95	70	130			
Chlorobenzene	46	2.5	50	0	92	70	130			
Ethylbenzene	49.1	1.3	50	0	98	68	130			
m,p-Xylene	47	1.3	50	0	94	64	130			
Bromoform	48.3	2.5	50	0	97	64	138			
Styrene	67.8	2.5	50	0	136	69	130			M55
o-Xylene	47.2	1.3	50	0	94	70	130			
1,1,2,2-Tetrachloroethane	42	2.5	50	0	84	65	131			
1,2,3-Trichloropropane	92.3	10	100	0	92	70	130			
Isopropylbenzene	41.5	2.5	50	0	83	64	138			
Bromobenzene	44.4	2.5	50	0	89	70	130			
n-Propylbenzene	41.5	2.5	50	0	83	66	132			
4-Chlorotoluene	40.7	2.5	50	0	81	70	130			
2-Chlorotoluene	41.7	2.5	50	0	83	70	130			
1,3,5-Trimethylbenzene	43.5	2.5	50	0	87	66	136			
tert-Butylbenzene	43	2.5	50	0	86	65	137			
1,2,4-Trimethylbenzene	43.4	2.5	50	0	87	65	137			
sec-Butylbenzene	40.2	2.5	50	0	80	66	134			
1,3-Dichlorobenzene	41.7	2.5	50	0	83	70	130			
1,4-Dichlorobenzene	41.4	2.5	50	0	83	70	130			
4-Isopropyltoluene	42.4	2.5	50	0	85	66	137			
1,2-Dichlorobenzene	40.4	2.5	50	0	81	70	130			
n-Butylbenzene	43.3	2.5	50	0	87	60	142			
1,2-Dibromo-3-chloropropane (DBCP)	165	15	250	0	66	67	130			M57
1,2,4-Trichlorobenzene	38.9	10	50	0	78	61	137			
Naphthalene	28.6	10	50	0	57	40	167			
Hexachlorobutadiene	79.5	10	100	0	79	61	130			
1,2,3-Trichlorobenzene	35.1	10	50	0	70	51	144			
Surr: 1,2-Dichloroethane-d4	53.1		50		106	70	130			
Surr: Toluene-d8	45		50		90	70	130			
Surr: 4-Bromofluorobenzene	50.8		50		102	70	130			

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Date: 18-May-10

QC Summary Report

Work Order: 10050603

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

File ID: **10051208.D** Batch ID: **MS15W0512M** Analysis Date: **05/12/2010 11:05**

Sample ID: **10050505-02AMSD** Units : **µg/L** Run ID: **MSD_15_100512B** Prep Date: **05/12/2010 11:05**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	35.4	2.5	50	0	71	13	167	34.39	3.0(20)	
Chloromethane	45.7	10	50	0	91	28	145	42.57	7.1(20)	
Vinyl chloride	57.2	2.5	50	0	114	43	134	55.59	2.8(20)	
Chloroethane	76.9	2.5	50	0	154	39	154	80.24	4.3(20)	
Bromomethane	70.6	10	50	0	141	19	176	62.63	11.9(20)	
Trichlorofluoromethane	69.5	2.5	50	0	139	34	160	68.84	1.0(20)	
1,1-Dichloroethene	57.2	2.5	50	0	114	60	130	56.06	2.1(20)	
Dichloromethane	49.3	10	50	0	99	68	130	48.05	2.6(20)	
trans-1,2-Dichloroethene	59.1	2.5	50	0	118	63	130	57.42	2.9(20)	
Methyl tert-butyl ether (MTBE)	49.3	1.3	50	0	99	56	141	46.7	5.3(20)	
1,1-Dichloroethane	56.3	2.5	50	0	113	61	130	54.07	4.0(20)	
cis-1,2-Dichloroethene	56.5	2.5	50	0	113	70	130	55.05	2.6(20)	
Bromochloromethane	56.8	2.5	50	0	114	70	130	55.18	2.8(20)	
Chloroform	53.7	2.5	50	0	107	67	130	52.21	2.8(20)	
2,2-Dichloropropane	39.2	2.5	50	0	78	30	152	49.95	24.1(20)	R5
1,2-Dichloroethane	53.1	2.5	50	0	106	60	135	51.23	3.6(20)	
1,1,1-Trichloroethane	60	2.5	50	0	120	59	137	57.52	4.2(20)	
1,1-Dichloropropene	55.8	2.5	50	0	112	63	130	53.89	3.4(20)	
Carbon tetrachloride	60.9	2.5	50	0	122	50	147	59.78	1.8(20)	
Benzene	54.8	1.3	50	0	110	67	130	53.18	3.1(20)	
Dibromomethane	51.7	2.5	50	0	103	69	133	49.82	3.8(20)	
1,2-Dichloropropane	50.9	2.5	50	0	102	69	130	49.3	3.1(20)	
Trichloroethene	53.6	2.5	50	0	107	69	130	52.83	1.5(20)	
Bromodichloromethane	56	2.5	50	0	112	66	134	53.92	3.8(20)	
cis-1,3-Dichloropropene	48.4	2.5	50	0	97	63	130	48.13	0.6(20)	
trans-1,3-Dichloropropene	45.3	2.5	50	0	91	66	131	45.13	0.4(20)	
1,1,2-Trichloroethane	51.1	2.5	50	0	102	68	130	47.77	6.7(20)	
Toluene	46.4	1.3	50	0	93	66	130	45.33	2.3(20)	
1,3-Dichloropropane	40.8	2.5	50	0	82	70	130	39.56	3.1(20)	
Dibromochloromethane	49.4	2.5	50	0	99	70	130	47.81	3.3(20)	
1,2-Dibromoethane (EDB)	89.3	5	100	0	89	70	130	87.29	2.3(20)	
Tetrachloroethene	52.3	2.5	50	0	105	61	134	51.08	2.4(20)	
1,1,1,2-Tetrachloroethane	51.1	2.5	50	0	102	70	130	51.1	0.0(20)	
Chlorobenzene	49.9	2.5	50	0	99.7	70	130	49.12	1.5(20)	
Ethylbenzene	53.4	1.3	50	0	107	68	130	52.12	2.5(20)	
m,p-Xylene	50.2	1.3	50	0	100	64	130	49.14	2.2(20)	
Bromoform	51.9	2.5	50	0	104	64	138	50.22	3.3(20)	
Styrene	73.4	2.5	50	0	147	69	130	71.37	2.8(20)	M55
o-Xylene	50.4	1.3	50	0	101	70	130	49.99	0.7(20)	
1,1,2,2-Tetrachloroethane	44.3	2.5	50	0	89	65	131	41.7	6.0(20)	
1,2,3-Trichloropropane	100	10	100	0	100	70	130	97.96	2.3(20)	
Isopropylbenzene	45.6	2.5	50	0	91	64	138	44.57	2.2(20)	
Bromobenzene	47.9	2.5	50	0	96	70	130	46.48	2.9(20)	
n-Propylbenzene	45.7	2.5	50	0	91	66	132	44.74	2.2(20)	
4-Chlorotoluene	44.5	2.5	50	0	89	70	130	43.9	1.3(20)	
2-Chlorotoluene	45.2	2.5	50	0	90	70	130	44.17	2.4(20)	
1,3,5-Trimethylbenzene	47.2	2.5	50	0	94	66	136	46.07	2.4(20)	
tert-Butylbenzene	46.6	2.5	50	0	93	65	137	45.54	2.4(20)	
1,2,4-Trimethylbenzene	46.4	2.5	50	0	93	65	137	45.46	2.1(20)	
sec-Butylbenzene	44.3	2.5	50	0	89	66	134	43.03	2.9(20)	
1,3-Dichlorobenzene	45.2	2.5	50	0	90	70	130	43.52	3.8(20)	
1,4-Dichlorobenzene	45	2.5	50	0	90	70	130	43.54	3.2(20)	
4-Isopropyltoluene	47.1	2.5	50	0	94	66	137	45.52	3.3(20)	
1,2-Dichlorobenzene	43.8	2.5	50	0	88	70	130	41.87	4.4(20)	
n-Butylbenzene	47.9	2.5	50	0	96	60	142	45.38	5.5(20)	
1,2-Dibromo-3-chloropropane (DBCP)	176	15	250	0	70	67	130	164.1	7.0(20)	
1,2,4-Trichlorobenzene	42.1	10	50	0	84	61	137	38.53	8.9(20)	
Naphthalene	31.3	10	50	0	63	40	167	25.1	22.0(20)	R58
Hexachlorobutadiene	87.2	10	100	0	87	61	130	80.73	7.7(20)	
1,2,3-Trichlorobenzene	37.9	10	50	0	76	51	144	32.11	16.6(20)	
Surr: 1,2-Dichloroethane-d4	53.4		50		107	70	130			
Surr: Toluene-d8	45.1		50		90	70	130			
Surr: 4-Bromofluorobenzene	50.8		50		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: *18-May-10*

QC Summary Report

Work Order: 10050603

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

File ID: **10051210.D** Batch ID: **MS15W0512M** Analysis Date: **05/12/2010 11:50**

Sample ID: **10050505-09AMSD** Units : **µg/L** Run ID: **MSD_15_100512B** Prep Date: **05/12/2010 11:50**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	35.3	2.5	50	0	71	13	167	32.73	7.6(20)	
Chloromethane	46.1	10	50	0	92	28	145	41.93	9.5(20)	
Vinyl chloride	55.7	2.5	50	0	111	43	134	51.83	7.2(20)	
Chloroethane	75.9	2.5	50	0	152	39	154	66.9	12.7(20)	
Bromomethane	73.7	10	50	0	147	19	176	65.77	11.4(20)	
Trichlorofluoromethane	67.1	2.5	50	0	134	34	160	61.13	9.2(20)	
1,1-Dichloroethene	55.4	2.5	50	0	111	60	130	51.97	6.5(20)	
Dichloromethane	48.4	10	50	0	97	68	130	46.22	4.7(20)	
trans-1,2-Dichloroethene	57.2	2.5	50	0	114	63	130	54.51	4.8(20)	
Methyl tert-butyl ether (MTBE)	48.5	1.3	50	0	97	56	141	46.31	4.7(20)	
1,1-Dichloroethane	54.9	2.5	50	0	110	61	130	51.88	5.7(20)	
cis-1,2-Dichloroethene	55.6	2.5	50	0	111	70	130	52.22	6.3(20)	
Bromochloromethane	54	2.5	50	0	108	70	130	51.02	5.6(20)	
Chloroform	52.3	2.5	50	0	105	67	130	47.96	8.6(20)	
2,2-Dichloropropane	50.5	2.5	50	0	101	30	152	42.65	16.8(20)	
1,2-Dichloroethane	51.4	2.5	50	0	103	60	135	49.1	4.5(20)	
1,1,1-Trichloroethane	59.4	2.5	50	0	119	59	137	54.35	8.8(20)	
1,1-Dichloropropene	55.2	2.5	50	0	110	63	130	51.36	7.2(20)	
Carbon tetrachloride	61.4	2.5	50	0	123	50	147	56.32	8.6(20)	
Benzene	53.9	1.3	50	0	108	67	130	50.13	7.2(20)	
Dibromomethane	50.3	2.5	50	0	101	69	133	48.33	3.9(20)	
1,2-Dichloropropane	49.9	2.5	50	0	99.7	69	130	47.71	4.4(20)	
Trichloroethene	56.2	2.5	50	4.25	104	69	130	52.66	6.5(20)	
Bromodichloromethane	55.2	2.5	50	0	110	66	134	51.81	6.3(20)	
cis-1,3-Dichloropropene	49.6	2.5	50	0	99	63	130	45.77	8.0(20)	
trans-1,3-Dichloropropene	46.2	2.5	50	0	92	66	131	41.97	9.5(20)	
1,1,2-Trichloroethane	48.2	2.5	50	0	96	68	130	47.08	2.4(20)	
Toluene	45.8	1.3	50	0	92	66	130	43.18	5.8(20)	
1,3-Dichloropropane	40.4	2.5	50	0	81	70	130	38.4	5.0(20)	
Dibromochloromethane	48.1	2.5	50	0	96	70	130	46.19	4.0(20)	
1,2-Dibromoethane (EDB)	87.9	5	100	0	88	70	130	85.12	3.2(20)	
Tetrachloroethene	51.4	2.5	50	1.14	101	61	134	48.77	5.3(20)	
1,1,1,2-Tetrachloroethane	50.9	2.5	50	0	102	70	130	47.63	6.6(20)	
Chlorobenzene	49.2	2.5	50	0	98	70	130	46.01	6.7(20)	
Ethylbenzene	52.3	1.3	50	0	105	68	130	49.1	6.2(20)	
m,p-Xylene	49.7	1.3	50	0	99	64	130	47.03	5.5(20)	
Bromoform	51.2	2.5	50	0	102	64	138	48.29	5.8(20)	
Styrene	72	2.5	50	0	144	69	130	67.83	5.9(20)	M55
o-Xylene	49.8	1.3	50	0	99.5	70	130	47.19	5.3(20)	
1,1,2,2-Tetrachloroethane	43.2	2.5	50	0	86	65	131	42	2.7(20)	
1,2,3-Trichloropropane	99	10	100	0	99	70	130	92.32	7.0(20)	
Isopropylbenzene	44.7	2.5	50	0	89	64	138	41.52	7.4(20)	
Bromobenzene	46.2	2.5	50	0	92	70	130	44.4	4.0(20)	
n-Propylbenzene	44.8	2.5	50	0	90	66	132	41.46	7.8(20)	
4-Chlorotoluene	43.4	2.5	50	0	87	70	130	40.69	6.4(20)	
2-Chlorotoluene	44.9	2.5	50	0	90	70	130	41.74	7.3(20)	
1,3,5-Trimethylbenzene	46.5	2.5	50	0	93	66	136	43.47	6.7(20)	
tert-Butylbenzene	46.2	2.5	50	0	92	65	137	43.04	7.0(20)	
1,2,4-Trimethylbenzene	46.2	2.5	50	0	92	65	137	43.43	6.2(20)	
sec-Butylbenzene	44.4	2.5	50	0	89	66	134	40.18	10.0(20)	
1,3-Dichlorobenzene	44.1	2.5	50	0	88	70	130	41.7	5.7(20)	
1,4-Dichlorobenzene	44.4	2.5	50	0	89	70	130	41.41	7.0(20)	
4-Isopropyltoluene	46.3	2.5	50	0	93	66	137	42.35	8.8(20)	
1,2-Dichlorobenzene	42.4	2.5	50	0	85	70	130	40.44	4.8(20)	
n-Butylbenzene	46.7	2.5	50	0	93	60	142	43.33	7.4(20)	
1,2-Dibromo-3-chloropropane (DBCP)	173	15	250	0	69	67	130	165.2	4.6(20)	
1,2,4-Trichlorobenzene	40.9	10	50	0	82	61	137	38.87	5.1(20)	
Naphthalene	30.2	10	50	0	60	40	167	28.64	5.2(20)	
Hexachlorobutadiene	85.3	10	100	0	85	61	130	79.45	7.1(20)	
1,2,3-Trichlorobenzene	36.7	10	50	0	73	51	144	35.14	4.2(20)	
Surr: 1,2-Dichloroethane-d4	52.8		50		106	70	130			
Surr: Toluene-d8	45.1		50		90	70	130			
Surr: 4-Bromofluorobenzene	51.4		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: *18-May-10*

QC Summary Report

Work Order: 10050603

Comments:

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

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

L1 = The associated blank spike recovery was above laboratory acceptance limits.

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.

L51 = Analyte recovery was above acceptance limits for the LCS, but was acceptable in the MS/MSD.

M55 = Matrix spike recovery was above laboratory acceptance limits.

M57 = Matrix spike recovery was below laboratory acceptance limits.

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

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 : BMIS10050603

Report Due By : 5:00 PM On : 20-May-2010

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

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

EDD Required : **Yes**

Sampled by : Chase Brogdon, David Loera

PO : 218013

Client's COC # : 28933, 28980 Job : G005862/JPL Groundwater Monitoring

Cooler Temp	Samples Received	Date Printed
4 °C	06-May-2010	**06-May-2010**

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

Alpha Sample ID	Client Sample ID	Matrix	Collection Date	No. of Bottles Alpha	Sub	TAT	Requested Tests 300_0_W	314_W	ALKALINITY_W	METALS_DW	PH_W	TDS_W	VOC_TIC_W	VOC_W	Sample Remarks
BMI10050603-01A	MW-23-5	AQ	05/05/10 08:09	5	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10050603-02A	MW-23-4	AQ	05/05/10 08:50	5	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10050603-03A	MW-23-3	AQ	05/05/10 09:30	5	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10050603-04A	MW-23-2	AQ	05/05/10 10:06	5	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	Level IV QC
BMI10050603-05A	MW-23-1	AQ	05/05/10 10:46	5	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10050603-06A	EB-06-05/05/10	AQ	05/05/10 10:30	5	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10050603-07A	TB-06-05/05/10	AQ	05/05/10 07:00	1	0	10							VOC by 524 Criteria	VOC by 524 Criteria	Reno Trip Blank 12/31/09
BMI10050603-08A	MW-5	AQ	05/05/10 09:14	7	0	10	NO2, NO3, SO4, Cl	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10050603-09A	MW-10	AQ	05/05/10 11:54	7	0	10	NO2, NO3, SO4, Cl	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	

Comments: Security seals intact. Frozen ice. Temp Blank #8464 received @ 4°C. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). :

	Signature	Print Name	Company	Date/Time
Logged in by:	Elizabeth Adcox	Elizabeth Adcox	**Alpha Analytical, Inc.**	5.6.10 1051

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

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

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

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

28933

Page # 1 of 1

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

Required QC Level? I II (III) IV

EDD / EDF? YES ___ NO ___

Global ID # ___

Time Sampled	Date Sampled	Matrix* See Key Below	Sampled by CHASE BRADDON / Lab ID Number (Office Use Only)	Report Attention / Sample Description	TAT	Field Filtered	Total and type of containers ** See below	VOC (524.2)	TOTAL CR, LEAD, ARSENIC (200.8)	GEN CHEM (NO3, K, Ca, Mg, FE) (200.7)	CL04 - (314.0)	GEN CHEM (300.0, 310.1, 160.1, 150.1)			REMARKS
0809	5/5/10	AQ	BMI10050003 01	mw-23-5	NORM		5	X	X	X	X	X			
0850			-02	mw-23-4			5	X	X	X	X	X			
0930			-03	mw-23-3			5	X	X	X	X	X			
1006			-04	mw-23-2			5	X	X	X	X	X			LEVEL IV QC
1046			-05	mw-23-1			5	X	X	X	X	X			
1030			-06	EB-06-05/05/10			5	X	X	X	X	X			EQUIPMENT BLANK
0700	▼	▼	-07	TB-06-05/05/10	▼		1	X							TRIP BLANK

ADDITIONAL INSTRUCTIONS:

	Signature	Print Name	Company	Date	Time
Relinquished by		CHASE BRADDON	INSIGHT GEOTEC	5/05/10	1300
Received by		Anthony Stark	Alpha Analytical Inc	5/5/10	1300
Relinquished by		"	" "	5/5/10	1300
Received by	Elizabeth Adcox	Elizabeth Adcox	Alpha	5.6.10	1051
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 Jerry Tompkins
Address 505 King Ave
City, State, Zip Columbus OH 43201
Phone Number 614 424-4849 Fax 614 424-3667

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

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

28980

Page # 1 of 1

Client Name	David Conner	P.O. # 218013	Job # 60058621JPL GW4
Address		EMail Address conners@battelle.org	
City, State, Zip		Phone # 614 726-7311	Fax # 614 458-5489

Sampled by David Loera
Report Attention David Conner

Time Sampled	Date Sampled	Matrix* See Key Below	Lab ID Number (Office Use Only)	Sample Description	TAT	Field Filtered	Total and type of containers ** See below	VOCs (524.2)	Perchlorate (314.0)	* 200.8	** 200.0	*** SM3203	TDS (2540C)	pH (150.2)	REMARKS
0914	5/5/10	AQ	-08	MW-5	10		5V 2P	X	X	X	X	X	X	X	
1154	5/5/10	AQ	-09	MW-10	10		5V2P	X	X	X	X	X	X	X	

Analyses Required

Required QC Level? I II (III) IV

EDD? EDF? YES X NO ___

Global ID # ___

ADDITIONAL INSTRUCTIONS: * Total Cr, Pb, As, Ca, Mg, K, Na, Fe ** Cl⁻, NO2, NO3, SO4 *** Alk, Bicarbonate, Carbonate

	Signature	Print Name	Company	Date	Time
Relinquished by	David Loera	David Loera	Battelle	5/5/10	1230
Received by		Chase Bradshaw	Insight CEC, Inc	5/5/10	1235
Relinquished by		Chase Bradshaw	Insight CEC, Inc	5/5/10	1300
Received by		Anthony Stark	Alpha Analytical Inc.	5/5/10	1300
Relinquished by		"	"	5/5/10	1300
Received by	Elizabeth Adcox	Elizabeth Adcox	Alpha	5/6/10	1051

*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: *19-May-10*

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

CASE NARRATIVE

Job: G005862/JPL Groundwater Monitoring
Work Order: BMI10050703 **Cooler Temp:** 4 °C

Alpha's Sample ID	Client's Sample ID	Matrix
10050703-01A	MW-11-5	Aqueous
10050703-02A	MW-11-4	Aqueous
10050703-03A	MW-11-3	Aqueous
10050703-04A	MW-11-2	Aqueous
10050703-05A	MW-11-1	Aqueous
10050703-06A	EB-07-05/06/10	Aqueous
10050703-07A	TB-07-05/06/10	Aqueous
10050703-08A	MW-9	Aqueous
10050703-09A	MW-1	Aqueous
10050703-10A	DUPE-8-2Q10	Aqueous

Manually Integrated Analytes

Alpha's Sample ID	Test Reference	Analyte
10050703-05A	EPA Method 314.0	Perchlorate

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

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

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

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 05/07/10

Job: G005862/JPL Groundwater Monitoring

Anions by IC
EPA Method 300.0

	Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-11-5**					
Lab ID : BMI10050703-01A	Chloride	12	0.50 mg/L	05/07/10 12:30	05/07/10 15:35
Date Sampled 05/06/10 08:20	Nitrite (NO2) - N	ND	0.25 mg/L	05/07/10 12:30	05/07/10 15:35
	Nitrate (NO3) - N	ND	0.25 mg/L	05/07/10 12:30	05/07/10 15:35
	Phosphate, ortho - P	ND	0.50 mg/L	05/07/10 12:30	05/07/10 15:35
	Sulfate (SO4)	17	0.50 mg/L	05/07/10 12:30	05/07/10 15:35
Client ID: **MW-11-4**					
Lab ID : BMI10050703-02A	Chloride	11	0.50 mg/L	05/07/10 12:30	05/07/10 15:53
Date Sampled 05/06/10 09:15	Nitrite (NO2) - N	ND	0.25 mg/L	05/07/10 12:30	05/07/10 15:53
	Nitrate (NO3) - N	ND	0.25 mg/L	05/07/10 12:30	05/07/10 15:53
	Phosphate, ortho - P	ND	0.50 mg/L	05/07/10 12:30	05/07/10 15:53
	Sulfate (SO4)	ND	0.50 mg/L	05/07/10 12:30	05/07/10 15:53
Client ID: **MW-11-3**					
Lab ID : BMI10050703-03A	Chloride	11	0.50 mg/L	05/07/10 12:30	05/07/10 16:12
Date Sampled 05/06/10 09:54	Nitrite (NO2) - N	ND	0.25 mg/L	05/07/10 12:30	05/07/10 16:12
	Nitrate (NO3) - N	ND	0.25 mg/L	05/07/10 12:30	05/07/10 16:12
	Phosphate, ortho - P	ND	0.50 mg/L	05/07/10 12:30	05/07/10 16:12
	Sulfate (SO4)	24	0.50 mg/L	05/07/10 12:30	05/07/10 16:12
Client ID: **MW-11-2**					
Lab ID : BMI10050703-04A	Chloride	16	0.50 mg/L	05/07/10 12:30	05/07/10 16:30
Date Sampled 05/06/10 10:30	Nitrite (NO2) - N	ND	0.25 mg/L	05/07/10 12:30	05/07/10 16:30
	Nitrate (NO3) - N	ND	0.25 mg/L	05/07/10 12:30	05/07/10 16:30
	Phosphate, ortho - P	ND	0.50 mg/L	05/07/10 12:30	05/07/10 16:30
	Sulfate (SO4)	39	0.50 mg/L	05/07/10 12:30	05/07/10 16:30
Client ID: **MW-11-1**					
Lab ID : BMI10050703-05A	Chloride	25	0.50 mg/L	05/07/10 12:30	05/07/10 17:26
Date Sampled 05/06/10 11:30	Nitrite (NO2) - N	ND	0.25 mg/L	05/07/10 12:30	05/07/10 17:26
	Nitrate (NO3) - N	1.0	0.25 mg/L	05/07/10 12:30	05/07/10 17:26
	Phosphate, ortho - P	ND	0.50 mg/L	05/07/10 12:30	05/07/10 17:26
	Sulfate (SO4)	57	0.50 mg/L	05/07/10 12:30	05/07/10 17:26
Client ID: **EB-07-05/06/10**					
Lab ID : BMI10050703-06A	Chloride	ND	0.50 mg/L	05/07/10 12:30	05/07/10 17:44
Date Sampled 05/06/10 11:15	Nitrite (NO2) - N	ND	0.25 mg/L	05/07/10 12:30	05/07/10 17:44
	Nitrate (NO3) - N	ND	0.25 mg/L	05/07/10 12:30	05/07/10 17:44
	Phosphate, ortho - P	ND	0.50 mg/L	05/07/10 12:30	05/07/10 17:44
	Sulfate (SO4)	ND	0.50 mg/L	05/07/10 12:30	05/07/10 17:44

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Client ID: **MW-9**					
Lab ID : BMI10050703-08A	Chloride	8.9	0.50 mg/L	05/07/10 12:30	05/07/10 18:03
Date Sampled 05/06/10 11:11	Nitrite (NO2) - N	ND	0.25 mg/L	05/07/10 12:30	05/07/10 18:03
	Nitrate (NO3) - N	10	0.25 mg/L	05/07/10 12:30	05/07/10 18:03
	Sulfate (SO4)	32	0.50 mg/L	05/07/10 12:30	05/07/10 18:03
Client ID: **MW-1**					
Lab ID : BMI10050703-09A	Chloride	28	0.50 mg/L	05/07/10 12:30	05/07/10 19:17
Date Sampled 05/06/10 14:53	Nitrite (NO2) - N	ND	0.25 mg/L	05/07/10 12:30	05/07/10 19:17
	Nitrate (NO3) - N	0.86	0.25 mg/L	05/07/10 12:30	05/07/10 19:17
	Sulfate (SO4)	60	0.50 mg/L	05/07/10 12:30	05/07/10 19:17
Client ID: **DUPE-8-2Q10**					
Lab ID : BMI10050703-10A	Chloride	28	0.50 mg/L	05/07/10 12:30	05/07/10 19:35
Date Sampled 05/06/10 14:54	Nitrite (NO2) - N	ND	0.25 mg/L	05/07/10 12:30	05/07/10 19:35
	Nitrate (NO3) - N	0.85	0.25 mg/L	05/07/10 12:30	05/07/10 19:35
	Sulfate (SO4)	61	0.50 mg/L	05/07/10 12:30	05/07/10 19:35

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.

5/20/10

Report Date

Alpha Analytical, Inc.

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ANALYTICAL REPORT

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 05/07/10

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 : BMI10050703-01A Perchlorate	10.5	1.00 µg/L	05/10/10 11:27	05/10/10 17:36
Date Sampled 05/06/10 08:20				
Client ID: **MW-11-4**				
Lab ID : BMI10050703-02A Perchlorate	1.25	1.00 µg/L	05/10/10 11:27	05/10/10 17:55
Date Sampled 05/06/10 09:15				
Client ID: **MW-11-3**				
Lab ID : BMI10050703-03A Perchlorate	ND	1.00 µg/L	05/10/10 11:27	05/10/10 18:13
Date Sampled 05/06/10 09:54				
Client ID: **MW-11-2**				
Lab ID : BMI10050703-04A Perchlorate	ND	1.00 µg/L	05/10/10 11:27	05/10/10 18:31
Date Sampled 05/06/10 10:30				
Client ID: **MW-11-1**				
Lab ID : BMI10050703-05A Perchlorate	1.02	1.00 µg/L	05/10/10 11:27	05/10/10 19:27
Date Sampled 05/06/10 11:30				
Client ID: **EB-07-05/06/10**				
Lab ID : BMI10050703-06A Perchlorate	ND	1.00 µg/L	05/10/10 11:27	05/10/10 19:45
Date Sampled 05/06/10 11:15				
Client ID: **MW-9**				
Lab ID : BMI10050703-08A Perchlorate	ND	1.00 µg/L	05/10/10 11:27	05/10/10 20:03
Date Sampled 05/06/10 11:11				
Client ID: **MW-1**				
Lab ID : BMI10050703-09A Perchlorate	ND	1.00 µg/L	05/10/10 11:27	05/10/10 20:22
Date Sampled 05/06/10 14:53				
Client ID: **DUPE-8-2Q10**				
Lab ID : BMI10050703-10A Perchlorate	ND	1.00 µg/L	05/10/10 11:27	05/10/10 20:40
Date Sampled 05/06/10 14:54				

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ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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5/20/10

Report Date

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ANALYTICAL REPORT

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 05/07/10

Job: G005862/JPL Groundwater Monitoring

Alkalinity
SM2320B

	Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-11-5**					
Lab ID : BMI10050703-01A	Alkalinity, Bicarbonate (As CaCO3)	130	10 mg/L	05/10/10 13:36	05/10/10 13:36
Date Sampled 05/06/10 08:20	Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	05/10/10 13:36	05/10/10 13:36
	Alkalinity, Total (As CaCO3 at pH 4.5)	130	10 mg/L	05/10/10 13:36	05/10/10 13:36
Client ID: **MW-11-4**					
Lab ID : BMI10050703-02A	Alkalinity, Bicarbonate (As CaCO3)	36	10 mg/L	05/10/10 13:43	05/10/10 13:43
Date Sampled 05/06/10 09:15	Alkalinity, Carbonate (As CaCO3)	68	10 mg/L	05/10/10 13:43	05/10/10 13:43
	Alkalinity, Total (As CaCO3 at pH 4.5)	100	10 mg/L	05/10/10 13:43	05/10/10 13:43
Client ID: **MW-11-3**					
Lab ID : BMI10050703-03A	Alkalinity, Bicarbonate (As CaCO3)	180	10 mg/L	05/10/10 13:47	05/10/10 13:47
Date Sampled 05/06/10 09:54	Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	05/10/10 13:47	05/10/10 13:47
	Alkalinity, Total (As CaCO3 at pH 4.5)	180	10 mg/L	05/10/10 13:47	05/10/10 13:47
Client ID: **MW-11-2**					
Lab ID : BMI10050703-04A	Alkalinity, Bicarbonate (As CaCO3)	200	10 mg/L	05/10/10 13:51	05/10/10 13:51
Date Sampled 05/06/10 10:30	Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	05/10/10 13:51	05/10/10 13:51
	Alkalinity, Total (As CaCO3 at pH 4.5)	200	10 mg/L	05/10/10 13:51	05/10/10 13:51
Client ID: **MW-11-1**					
Lab ID : BMI10050703-05A	Alkalinity, Bicarbonate (As CaCO3)	230	10 mg/L	05/10/10 13:55	05/10/10 13:55
Date Sampled 05/06/10 11:30	Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	05/10/10 13:55	05/10/10 13:55
	Alkalinity, Total (As CaCO3 at pH 4.5)	230	10 mg/L	05/10/10 13:55	05/10/10 13:55
Client ID: **EB-07-05/06/10**					
Lab ID : BMI10050703-06A	Alkalinity, Bicarbonate (As CaCO3)	ND	10 mg/L	05/10/10 14:06	05/10/10 14:06
Date Sampled 05/06/10 11:15	Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	05/10/10 14:06	05/10/10 14:06
	Alkalinity, Total (As CaCO3 at pH 4.5)	ND	10 mg/L	05/10/10 14:06	05/10/10 14:06
Client ID: **MW-9**					
Lab ID : BMI10050703-08A	Alkalinity, Bicarbonate (As CaCO3)	180	10 mg/L	05/10/10 14:10	05/10/10 14:10
Date Sampled 05/06/10 11:11	Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	05/10/10 14:10	05/10/10 14:10
	Alkalinity, Total (As CaCO3 at pH 4.5)	180	10 mg/L	05/10/10 14:10	05/10/10 14:10
Client ID: **MW-1**					
Lab ID : BMI10050703-09A	Alkalinity, Bicarbonate (As CaCO3)	210	10 mg/L	05/10/10 14:14	05/10/10 14:14
Date Sampled 05/06/10 14:53	Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	05/10/10 14:14	05/10/10 14:14
	Alkalinity, Total (As CaCO3 at pH 4.5)	210	10 mg/L	05/10/10 14:14	05/10/10 14:14
Client ID: **DUPE-8-2Q10**					
Lab ID : BMI10050703-10A	Alkalinity, Bicarbonate (As CaCO3)	210	10 mg/L	05/10/10 14:19	05/10/10 14:19
Date Sampled 05/06/10 14:54	Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	05/10/10 14:19	05/10/10 14:19
	Alkalinity, Total (As CaCO3 at pH 4.5)	210	10 mg/L	05/10/10 14:19	05/10/10 14:19

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ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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5/20/10

Report Date

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ANALYTICAL REPORT

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 05/07/10

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 : BMI10050703-01A	Sodium (Na)	47	0.50 mg/L	05/12/10 10:52	05/13/10 18:26
Date Sampled 05/06/10 08:20	Magnesium (Mg)	2.0	0.50 mg/L	05/12/10 10:52	05/13/10 18:26
	Potassium (K)	1.1	0.50 mg/L	05/12/10 10:52	05/13/10 18:26
	Calcium (Ca)	18	0.50 mg/L	05/12/10 10:52	05/13/10 18:26
	Chromium (Cr)	ND	0.0050 mg/L	05/12/10 10:52	05/13/10 18:26
	Iron (Fe)	0.27	0.10 mg/L	05/12/10 10:52	05/13/10 18:26
	Arsenic (As)	0.0050	0.0020 mg/L	05/12/10 10:52	05/13/10 18:26
	Lead (Pb)	ND	0.0050 mg/L	05/12/10 10:52	05/13/10 18:26
Client ID: **MW-11-4**					
Lab ID : BMI10050703-02A	Sodium (Na)	25	0.50 mg/L	05/12/10 10:52	05/13/10 18:32
Date Sampled 05/06/10 09:15	Magnesium (Mg)	6.5	0.50 mg/L	05/12/10 10:52	05/13/10 18:32
	Potassium (K)	1.7	0.50 mg/L	05/12/10 10:52	05/13/10 18:32
	Calcium (Ca)	7.7	0.50 mg/L	05/12/10 10:52	05/13/10 18:32
	Chromium (Cr)	ND	0.0050 mg/L	05/12/10 10:52	05/13/10 18:32
	Iron (Fe)	ND	0.10 mg/L	05/12/10 10:52	05/13/10 18:32
	Arsenic (As)	ND	0.0020 mg/L	05/12/10 10:52	05/13/10 18:32
	Lead (Pb)	ND	0.0050 mg/L	05/12/10 10:52	05/13/10 18:32
Client ID: **MW-11-3**					
Lab ID : BMI10050703-03A	Sodium (Na)	24	0.50 mg/L	05/12/10 10:52	05/13/10 18:38
Date Sampled 05/06/10 09:54	Magnesium (Mg)	12	0.50 mg/L	05/12/10 10:52	05/13/10 18:38
	Potassium (K)	2.0	0.50 mg/L	05/12/10 10:52	05/13/10 18:38
	Calcium (Ca)	37	0.50 mg/L	05/12/10 10:52	05/13/10 18:38
	Chromium (Cr)	ND	0.0050 mg/L	05/12/10 10:52	05/13/10 18:38
	Iron (Fe)	0.60	0.10 mg/L	05/12/10 10:52	05/13/10 18:38
	Arsenic (As)	ND	0.0020 mg/L	05/12/10 10:52	05/13/10 18:38
	Lead (Pb)	ND	0.0050 mg/L	05/12/10 10:52	05/13/10 18:38
Client ID: **MW-11-2**					
Lab ID : BMI10050703-04A	Sodium (Na)	23	0.50 mg/L	05/12/10 10:52	05/13/10 18:04
Date Sampled 05/06/10 10:30	Magnesium (Mg)	18	0.50 mg/L	05/12/10 10:52	05/13/10 18:04
	Potassium (K)	3.1	0.50 mg/L	05/12/10 10:52	05/13/10 18:04
	Calcium (Ca)	55	0.50 mg/L	05/12/10 10:52	05/13/10 18:04
	Chromium (Cr)	ND	0.0050 mg/L	05/12/10 10:52	05/13/10 18:04
	Iron (Fe)	0.54	0.10 mg/L	05/12/10 10:52	05/13/10 18:04
	Arsenic (As)	ND	0.0020 mg/L	05/12/10 10:52	05/13/10 18:04
	Lead (Pb)	ND	0.0050 mg/L	05/12/10 10:52	05/13/10 18:04

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Client ID: **MW-11-1**						
Lab ID : BMI10050703-05A	Sodium (Na)	25	0.50 mg/L	05/12/10 10:52	05/13/10 18:43
Date Sampled 05/06/10 11:30	Magnesium (Mg)	20	0.50 mg/L	05/12/10 10:52	05/13/10 18:43
	Potassium (K)	3.2	0.50 mg/L	05/12/10 10:52	05/13/10 18:43
	Calcium (Ca)	66	0.50 mg/L	05/12/10 10:52	05/13/10 18:43
	Chromium (Cr)	ND	0.0050 mg/L	05/12/10 10:52	05/13/10 18:43
	Iron (Fe)	0.20	0.10 mg/L	05/12/10 10:52	05/13/10 18:43
	Arsenic (As)	ND	0.0020 mg/L	05/12/10 10:52	05/13/10 18:43
	Lead (Pb)	ND	0.0050 mg/L	05/12/10 10:52	05/13/10 18:43
Client ID: **EB-07-05/06/10**						
Lab ID : BMI10050703-06A	Sodium (Na)	ND	0.50 mg/L.	05/12/10 10:52	05/13/10 18:49
Date Sampled 05/06/10 11:15	Magnesium (Mg)	ND	0.50 mg/L	05/12/10 10:52	05/13/10 18:49
	Potassium (K)	ND	0.50 mg/L	05/12/10 10:52	05/13/10 18:49
	Calcium (Ca)	ND	0.50 mg/L	05/12/10 10:52	05/13/10 18:49
	Chromium (Cr)	ND	0.0050 mg/L	05/12/10 10:52	05/13/10 18:49
	Iron (Fe)	ND	0.10 mg/L	05/12/10 10:52	05/13/10 18:49
	Arsenic (As)	ND	0.0020 mg/L	05/12/10 10:52	05/13/10 18:49
	Lead (Pb)	ND	0.0050 mg/L	05/12/10 10:52	05/13/10 18:49
Client ID: **MW-9**						
Lab ID : BMI10050703-08A	Sodium (Na)	21	0.50 mg/L	05/12/10 10:52	05/13/10 18:55
Date Sampled 05/06/10 11:11	Magnesium (Mg)	15	0.50 mg/L	05/12/10 10:52	05/13/10 18:55
	Potassium (K)	3.0	0.50 mg/L	05/12/10 10:52	05/13/10 18:55
	Calcium (Ca)	54	0.50 mg/L	05/12/10 10:52	05/13/10 18:55
	Chromium (Cr)	ND	0.0050 mg/L	05/12/10 10:52	05/13/10 18:55
	Iron (Fe)	0.16	0.10 mg/L	05/12/10 10:52	05/13/10 18:55
	Arsenic (As)	ND	0.0020 mg/L	05/12/10 10:52	05/13/10 18:55
	Lead (Pb)	ND	0.0050 mg/L	05/12/10 10:52	05/13/10 18:55
Client ID: **MW-1**						
Lab ID : BMI10050703-09A	Sodium (Na)	30	0.50 mg/L	05/12/10 10:52	05/13/10 19:00
Date Sampled 05/06/10 14:53	Magnesium (Mg)	19	0.50 mg/L	05/12/10 10:52	05/13/10 19:00
	Potassium (K)	3.3	0.50 mg/L	05/12/10 10:52	05/13/10 19:00
	Calcium (Ca)	65	0.50 mg/L	05/12/10 10:52	05/13/10 19:00
	Chromium (Cr)	ND	0.0050 mg/L	05/12/10 10:52	05/13/10 19:00
	Iron (Fe)	0.19	0.10 mg/L	05/12/10 10:52	05/13/10 19:00
	Arsenic (As)	ND	0.0020 mg/L	05/12/10 10:52	05/13/10 19:00
	Lead (Pb)	ND	0.0050 mg/L	05/12/10 10:52	05/13/10 19:00
Client ID: **DUPE-8-2Q10**						
Lab ID : BMI10050703-10A	Sodium (Na)	29	0.50 mg/L	05/12/10 10:52	05/13/10 19:06
Date Sampled 05/06/10 14:54	Magnesium (Mg)	18	0.50 mg/L	05/12/10 10:52	05/13/10 19:06
	Potassium (K)	3.2	0.50 mg/L	05/12/10 10:52	05/13/10 19:06
	Calcium (Ca)	64	0.50 mg/L	05/12/10 10:52	05/13/10 19:06
	Chromium (Cr)	ND	0.0050 mg/L	05/12/10 10:52	05/13/10 19:06
	Iron (Fe)	0.18	0.10 mg/L	05/12/10 10:52	05/13/10 19:06
	Arsenic (As)	ND	0.0020 mg/L	05/12/10 10:52	05/13/10 19:06
	Lead (Pb)	ND	0.0050 mg/L	05/12/10 10:52	05/13/10 19:06

Alpha Analytical, Inc.

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

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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

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5/20/10

Report Date

Alpha Analytical, Inc.

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ANALYTICAL REPORT

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 05/07/10

Job: G005862/JPL Groundwater Monitoring

pH (Range 1.7 to 12.4)
EPA Method 150.2 / SM4500HB / SW9040C

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-11-5**				
Lab ID : BMI10050703-01A pH	8.3	1.7 pH Units	05/07/10 14:20	05/07/10 14:20
Date Sampled 05/06/10 08:20 pH - Temperature	22	1.0 °C	05/07/10 14:20	05/07/10 14:20
Client ID: **MW-11-4**				
Lab ID : BMI10050703-02A pH	9.1	1.7 pH Units	05/07/10 14:23	05/07/10 14:23
Date Sampled 05/06/10 09:15 pH - Temperature	21	1.0 °C	05/07/10 14:23	05/07/10 14:23
Client ID: **MW-11-3**				
Lab ID : BMI10050703-03A pH	7.9	1.7 pH Units	05/07/10 14:25	05/07/10 14:25
Date Sampled 05/06/10 09:54 pH - Temperature	21	1.0 °C	05/07/10 14:25	05/07/10 14:25
Client ID: **MW-11-2**				
Lab ID : BMI10050703-04A pH	7.9	1.7 pH Units	05/07/10 14:26	05/07/10 14:26
Date Sampled 05/06/10 10:30 pH - Temperature	21	1.0 °C	05/07/10 14:26	05/07/10 14:26
Client ID: **MW-11-1**				
Lab ID : BMI10050703-05A pH	7.5	1.7 pH Units	05/07/10 14:28	05/07/10 14:28
Date Sampled 05/06/10 11:30 pH - Temperature	21	1.0 °C	05/07/10 14:28	05/07/10 14:28
Client ID: **EB-07-05/06/10**				
Lab ID : BMI10050703-06A pH	6.2	1.7 pH Units	05/07/10 14:30	05/07/10 14:30
Date Sampled 05/06/10 11:15 pH - Temperature	20	1.0 °C	05/07/10 14:30	05/07/10 14:30
Client ID: **MW-9**				
Lab ID : BMI10050703-08A pH	6.8	1.7 pH Units	05/07/10 14:39	05/07/10 14:39
Date Sampled 05/06/10 11:11 pH - Temperature	21	1.0 °C	05/07/10 14:39	05/07/10 14:39
Client ID: **MW-1**				
Lab ID : BMI10050703-09A pH	7.3	1.7 pH Units	05/07/10 14:43	05/07/10 14:43
Date Sampled 05/06/10 14:53 pH - Temperature	21	1.0 °C	05/07/10 14:43	05/07/10 14:43
Client ID: **DUPE-8-2Q10**				
Lab ID : BMI10050703-10A pH	7.3	1.7 pH Units	05/07/10 14:45	05/07/10 14:45
Date Sampled 05/06/10 14:54 pH - Temperature	22	1.0 °C	05/07/10 14:45	05/07/10 14:45

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The EPA has established an analytical holding time of 15 minutes for this method as documented in the Methods Update Rule, Federal Register, Vol 72, No 47, March 2007. This holding time will always be exceeded, unless samples are analyzed in the field.

The laboratory performed this analysis in the shortest practical holding time after sample receipt.

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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✓ **5/20/10**

Report Date

Alpha Analytical, Inc.

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ANALYTICAL REPORT

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 05/07/10

Job: G005862/JPL Groundwater Monitoring

Total Dissolved Solids (TDS)
SM2540C

Parameter		Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-11-5**					
Lab ID : BMI10050703-01A	Solids, Total Dissolved (TDS)	160	10 mg/L	05/13/10	05/13/10
Date Sampled 05/06/10 08:20					
Client ID: **MW-11-4**					
Lab ID : BMI10050703-02A	Solids, Total Dissolved (TDS)	96	10 mg/L	05/13/10	05/13/10
Date Sampled 05/06/10 09:15					
Client ID: **MW-11-3**					
Lab ID : BMI10050703-03A	Solids, Total Dissolved (TDS)	220	10 mg/L	05/13/10	05/13/10
Date Sampled 05/06/10 09:54					
Client ID: **MW-11-2**					
Lab ID : BMI10050703-04A	Solids, Total Dissolved (TDS)	250	10 mg/L	05/13/10	05/13/10
Date Sampled 05/06/10 10:30					
Client ID: **MW-11-1**					
Lab ID : BMI10050703-05A	Solids, Total Dissolved (TDS)	330	10 mg/L	05/13/10	05/13/10
Date Sampled 05/06/10 11:30					
Client ID: **EB-07-05/06/10**					
Lab ID : BMI10050703-06A	Solids, Total Dissolved (TDS)	ND	10 mg/L	05/13/10	05/13/10
Date Sampled 05/06/10 11:15					
Client ID: **MW-9**					
Lab ID : BMI10050703-08A	Solids, Total Dissolved (TDS)	300	10 mg/L	05/13/10	05/13/10
Date Sampled 05/06/10 11:11					
Client ID: **MW-1**					
Lab ID : BMI10050703-09A	Solids, Total Dissolved (TDS)	330	10 mg/L	05/13/10	05/13/10
Date Sampled 05/06/10 14:53					
Client ID: **DUPE-8-2Q10**					
Lab ID : BMI10050703-10A	Solids, Total Dissolved (TDS)	340	10 mg/L	05/13/10	05/13/10
Date Sampled 05/06/10 14:54					

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ND = Not Detected

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Report Date

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ANALYTICAL REPORT

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

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

Tentatively Identified Compounds - Volatile Organics by GC/MS

	Parameter	Estimated Concentration	Estimated Reporting Limit	Date Extracted	Date Analyzed
Client ID : **MW-11-5** Lab ID : BMI10050703-01A Date Received : 05/07/10 Date Sampled : 05/06/10 08:20	* * * None Found * * *	ND	2.0 µg/L	05/14/10 15:50	05/14/10 15:50
Client ID : **MW-11-4** Lab ID : BMI10050703-02A Date Received : 05/07/10 Date Sampled : 05/06/10 09:15	* * * None Found * * *	ND	2.0 µg/L	05/14/10 16:13	05/14/10 16:13
Client ID : **MW-11-3** Lab ID : BMI10050703-03A Date Received : 05/07/10 Date Sampled : 05/06/10 09:54	* * * None Found * * *	ND	2.0 µg/L	05/14/10 16:35	05/14/10 16:35
Client ID : **MW-11-2** Lab ID : BMI10050703-04A Date Received : 05/07/10 Date Sampled : 05/06/10 10:30	* * * None Found * * *	ND	2.0 µg/L	05/14/10 16:57	05/14/10 16:57
Client ID : **MW-11-1** Lab ID : BMI10050703-05A Date Received : 05/07/10 Date Sampled : 05/06/10 11:30	* * * None Found * * *	ND	2.0 µg/L	05/14/10 17:19	05/14/10 17:19
Client ID : **EB-07-05/06/10** Lab ID : BMI10050703-06A Date Received : 05/07/10 Date Sampled : 05/06/10 11:15	* * * None Found * * *	ND	2.0 µg/L	05/14/10 15:28	05/14/10 15:28
Client ID : **TB-07-05/06/10** Lab ID : BMI10050703-07A Date Received : 05/07/10 Date Sampled : 05/06/10 07:00	* * * None Found * * *	ND	2.0 µg/L	05/14/10 15:06	05/14/10 15:06
Client ID : **MW-9** Lab ID : BMI10050703-08A Date Received : 05/07/10 Date Sampled : 05/06/10 11:11	* * * None Found * * *	ND	2.0 µg/L	05/14/10 17:42	05/14/10 17:42
Client ID : **MW-1** Lab ID : BMI10050703-09A Date Received : 05/07/10 Date Sampled : 05/06/10 14:53	* * * None Found * * *	ND	2.0 µg/L	05/14/10 18:08	05/14/10 18:08

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Client ID : **DUPE-8-2Q10**

Lab ID :	BMI10050703-10A	* * * None Found * * *	ND	2.0 µg/L	05/14/10 18:26	05/14/10 18:26

Date Received : 05/07/10

Date Sampled : 05/06/10 14:54

ND = Not Detected

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Report Date

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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10050703-01A
Client I.D. Number: MW-11-5

Sampled: 05/06/10 08:20
Received: 05/07/10
Extracted: 05/14/10 15:50
Analyzed: 05/14/10 15:50

Volatile Organics by GC/MS
EPA Method SW8260B

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

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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Report Date

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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10050703-02A
Client I.D. Number: MW-11-4

Sampled: 05/06/10 09:15
Received: 05/07/10
Extracted: 05/14/10 16:13
Analyzed: 05/14/10 16:13

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5	µg/L
25	Trichloroethene	ND	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	102	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	106	(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					

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10050703-03A
Client I.D. Number: MW-11-3

Sampled: 05/06/10 09:54
Received: 05/07/10
Extracted: 05/14/10 16:35
Analyzed: 05/14/10 16:35

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5	µg/L
25	Trichloroethene	ND	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	102	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	108	(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					

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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5/20/10
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI10050703-04A
Client I.D. Number: MW-11-2

Sampled: 05/06/10 10:30
Received: 05/07/10
Extracted: 05/14/10 16:57
Analyzed: 05/14/10 16:57

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	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	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					

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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5/20/10
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI10050703-05A
Client I.D. Number: MW-11-1

Sampled: 05/06/10 11:30
Received: 05/07/10
Extracted: 05/14/10 17:19
Analyzed: 05/14/10 17:19

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	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	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					

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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5/20/10
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI10050703-06A
Client I.D. Number: EB-07-05/06/10

Sampled: 05/06/10 11:15
Received: 05/07/10
Extracted: 05/14/10 15:28
Analyzed: 05/14/10 15:28

Volatile Organics by GC/MS
EPA Method SW8260B

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

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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5/20/10
Report Date

Alpha Analytical, Inc.

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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10050703-07A
Client I.D. Number: TB-07-05/06/10

Sampled: 05/06/10 07:00
Received: 05/07/10
Extracted: 05/14/10 15:06
Analyzed: 05/14/10 15:06

Volatile Organics by GC/MS
EPA Method SW8260B

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

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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5/20/10
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI10050703-08A
Client I.D. Number: MW-9

Sampled: 05/06/10 11:11
Received: 05/07/10
Extracted: 05/14/10 17:42
Analyzed: 05/14/10 17:42

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	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	107	(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					

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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5/20/10
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI10050703-09A
Client I.D. Number: MW-1

Sampled: 05/06/10 14:53
Received: 05/07/10
Extracted: 05/14/10 18:04
Analyzed: 05/14/10 18:04

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	98	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	108	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	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					

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.

5/20/10
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI10050703-10A
Client I.D. Number: DUPE-8-2Q10

Sampled: 05/06/10 14:54
Received: 05/07/10
Extracted: 05/14/10 18:26
Analyzed: 05/14/10 18:26

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	101	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	108	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	96	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

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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5/20/10
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: BMI10050703 **Job:** G005862/JPL Groundwater Monitoring

Alpha's Sample ID	Client's Sample ID	Matrix	pH
10050703-01A	MW-11-5	Aqueous	2
10050703-02A	MW-11-4	Aqueous	2
10050703-03A	MW-11-3	Aqueous	2
10050703-04A	MW-11-2	Aqueous	2
10050703-05A	MW-11-1	Aqueous	2
10050703-06A	EB-07-05/06/10	Aqueous	2
10050703-07A	TB-07-05/06/10	Aqueous	2
10050703-08A	MW-9	Aqueous	2
10050703-09A	MW-1	Aqueous	2
10050703-10A	DUPE-8-2Q10	Aqueous	2

5/20/10

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: *17-May-10*

QC Summary Report

Work Order: 10050703

Method Blank

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

File ID: **28** Batch ID: **24198** Analysis Date: **05/07/2010 14:39**

Sample ID: **MB-24198** Units : **mg/L** Run ID: **IC_1_100507B** Prep Date: **05/07/2010 12:30**

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: **29** Batch ID: **24198** Analysis Date: **05/07/2010 14:58**

Sample ID: **LFB-24198** Units : **mg/L** Run ID: **IC_1_100507B** Prep Date: **05/07/2010 12:30**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	52.9	0.5	50		106	90	110			
Nitrite (NO2) - N	5.33	0.25	5		107	90	110			
Nitrate (NO3) - N	5.2	0.25	5		104	90	110			
Phosphate, ortho - P	5.13	0.5	5		103	90	110			
Sulfate (SO4)	108	0.5	100		108	90	110			

Sample Matrix Spike

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

File ID: **35** Batch ID: **24198** Analysis Date: **05/07/2010 16:49**

Sample ID: **10050703-04ALFM** Units : **mg/L** Run ID: **IC_1_100507B** Prep Date: **05/07/2010 12:30**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	123	0.5	100	16.24	107	80	120			
Nitrite (NO2) - N	10.9	0.25	10	0	109	80	120			
Nitrate (NO3) - N	10.5	0.25	10	0	105	80	120			
Phosphate, ortho - P	9.46	0.5	10	0	95	80	120			
Sulfate (SO4)	236	0.5	200	39	99	80	120			

Sample Matrix Spike Duplicate

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

File ID: **36** Batch ID: **24198** Analysis Date: **05/07/2010 17:07**

Sample ID: **10050703-04ALFMD** Units : **mg/L** Run ID: **IC_1_100507B** Prep Date: **05/07/2010 12:30**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	124	0.5	100	16.24	108	80	120	122.9	0.7(15)	
Nitrite (NO2) - N	11.1	0.25	10	0	111	80	120	10.94	1.8(15)	
Nitrate (NO3) - N	11	0.25	10	0	110	80	120	10.52	4.7(15)	
Phosphate, ortho - P	8.99	0.5	10	0	90	80	120	9.46	5.1(15)	
Sulfate (SO4)	238	0.5	200	39	99	80	120	236.1	0.6(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.

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

Date: *14-May-2010*

QC Summary Report

Work Order: 10050703

Method Blank

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

File ID: **14** Batch ID: **24211** Analysis Date: **05/10/2010 12:23**

Sample ID: **MB-24211** Units : **µg/L** Run ID: **IC_3_100510A** Prep Date: **05/10/2010 11:27**

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: **24211** Analysis Date: **05/10/2010 13:00**

Sample ID: **LFB-24211** Units : **µg/L** Run ID: **IC_3_100510A** Prep Date: **05/10/2010 11:27**

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

Sample Matrix Spike

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

File ID: **35** Batch ID: **24211** Analysis Date: **05/10/2010 18:50**

Sample ID: **10050703-04ALFM** Units : **µg/L** Run ID: **IC_3_100510A** Prep Date: **05/10/2010 11:27**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	28.6	2	25	0	114	80	120			

Sample Matrix Spike Duplicate

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

File ID: **36** Batch ID: **24211** Analysis Date: **05/10/2010 19:08**

Sample ID: **10050703-04ALFMD** Units : **µg/L** Run ID: **IC_3_100510A** Prep Date: **05/10/2010 11:27**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	26.3	2	25	0	105	80	120	28.57	8.4(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.

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Date: *19-May-10*

QC Summary Report

Work Order: 10050703

Laboratory Control Spike Type: **LCS** Test Code: **SM2320B**

File ID: Batch ID: **W0510ALA** Analysis Date: **05/10/2010 13:32**

Sample ID: **LCS-W0510ALA** Units : **mg/L** Run ID: **WETLAB_100510F** Prep Date: **05/10/2010 13:32**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Alkalinity, Bicarbonate (As CaCO3)	251.5	10	250		101	80	120			
Alkalinity, Carbonate (As CaCO3)	251.5	10	250		101	80	120			
Alkalinity, Total (As CaCO3 at pH 4.5)	252	10	250		101	80	120			

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: *19-May-10*

QC Summary Report

Work Order: 10050703

Method Blank

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

File ID: **051310.B\020SMPL.D** Batch ID: **24239K** Analysis Date: **05/13/2010 17:41**

Sample ID: **MB-24239** Units : **mg/L** Run ID: **ICP/MS_100513B** Prep Date: **05/12/2010 10:52**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sodium (Na)	ND	0.5								
Magnesium (Mg)	ND	0.5								
Potassium (K)	ND	0.5								
Calcium (Ca)	ND	0.5								
Chromium (Cr)	ND	0.005								
Iron (Fe)	ND	0.1								
Arsenic (As)	ND	0.002								
Lead (Pb)	ND	0.005								

Laboratory Control Spike

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

File ID: **051310.B\021_LCS.D** Batch ID: **24239K** Analysis Date: **05/13/2010 17:47**

Sample ID: **LCS-24239** Units : **mg/L** Run ID: **ICP/MS_100513B** Prep Date: **05/12/2010 10:52**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sodium (Na)	5.28	0.5	5		106	80	120			
Magnesium (Mg)	4.94	0.5	5		99	80	120			
Potassium (K)	4.97	0.5	5		99	80	120			
Calcium (Ca)	4.96	0.5	5		99	80	120			
Chromium (Cr)	0.0497	0.005	0.05		99	80	120			
Iron (Fe)	4.73	0.1	5		95	80	120			
Arsenic (As)	0.0468	0.002	0.05		94	80	120			
Lead (Pb)	0.0449	0.005	0.05		90	80	120			

Sample Matrix Spike

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

File ID: **051310.B\025SMPL.D** Batch ID: **24239K** Analysis Date: **05/13/2010 18:09**

Sample ID: **10050703-04AMS** Units : **mg/L** Run ID: **ICP/MS_100513B** Prep Date: **05/12/2010 10:52**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sodium (Na)	26	0.5	5	22.58	69	80	120			M3
Magnesium (Mg)	21.5	0.5	5	17.95	70	80	120			M2
Potassium (K)	7.85	0.5	5	3.148	94	80	120			
Calcium (Ca)	56.2	0.5	5	54.95	25	80	120			M3
Chromium (Cr)	0.0497	0.005	0.05	0	99	80	120			
Iron (Fe)	5.17	0.1	5	0.5441	93	80	120			
Arsenic (As)	0.0478	0.002	0.05	0	96	80	120			
Lead (Pb)	0.0444	0.005	0.05	0	89	80	120			

Sample Matrix Spike Duplicate

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

File ID: **051310.B\026SMPL.D** Batch ID: **24239K** Analysis Date: **05/13/2010 18:15**

Sample ID: **10050703-04AMSD** Units : **mg/L** Run ID: **ICP/MS_100513B** Prep Date: **05/12/2010 10:52**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sodium (Na)	26.3	0.5	5	22.58	74	80	120	26.01	1.0(20)	M3
Magnesium (Mg)	21.4	0.5	5	17.95	69	80	120	21.45	0.3(20)	M2
Potassium (K)	7.92	0.5	5	3.148	95	80	120	7.845	0.9(20)	
Calcium (Ca)	56.7	0.5	5	54.95	35	80	120	56.19	0.9(20)	M3
Chromium (Cr)	0.051	0.005	0.05	0	102	80	120	0.04966	2.6(20)	
Iron (Fe)	5.34	0.1	5	0.5441	96	80	120	5.174	3.1(20)	
Arsenic (As)	0.0488	0.002	0.05	0	98	80	120	0.04781	2.1(20)	
Lead (Pb)	0.0475	0.005	0.05	0	95	80	120	0.04439	6.7(20)	

Comments:

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

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

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: *19-May-10*

QC Summary Report

Work Order: 10050703

Laboratory Control Spike Type: **LCS** Test Code: **EPA Method 150.2 / SM4500HB / SW9040C**

File ID: Batch ID: **W0507PH** Analysis Date: **05/07/2010 14:17**

Sample ID: **LCS-W0507PH** Units : **pH Units** Run ID: **WETLAB_100507D** Prep Date: **05/07/2010 14:17**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
pH	4.95	1.7	5		99	90	110			

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: *19-May-10*

QC Summary Report

Work Order: 10050703

Method Blank

Type: **MBLK** Test Code: **SM2540C**

File ID: Batch ID: **W0511DS** Analysis Date: **05/13/2010 00:00**

Sample ID: **MBLK-W0511DS** Units : **mg/L** Run ID: **WETLAB_100511C** Prep Date: **05/13/2010 00:00**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Solids, Total Dissolved (TDS)	ND	10								

Laboratory Control Spike

Type: **LCS** Test Code: **SM2540C**

File ID: Batch ID: **W0511DS** Analysis Date: **05/13/2010 00:00**

Sample ID: **LCS-W0511DS** Units : **mg/L** Run ID: **WETLAB_100511C** Prep Date: **05/13/2010 00:00**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Solids, Total Dissolved (TDS)	97	10	100		97	80	120			

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: *19-May-10*

QC Summary Report

Work Order: 10050703

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

File ID: **10051406.D** Batch ID: **MS15W0514M** Analysis Date: **05/14/2010 10:38**

Sample ID: **MBLK MS15W0514M** Units : **µg/L** Run ID: **MSD_15_100514C** Prep Date: **05/14/2010 10:38**

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

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Date: *19-May-10*

QC Summary Report

Work Order: 10050703

Surr: 4-Bromofluorobenzene	10.4		10	104	70	130	

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

File ID: **10051403.D** Batch ID: **MS15W0514M** Analysis Date: **05/14/2010 09:21**

Sample ID: **LCS MS15W0514M** Units : **µg/L** Run ID: **MSD_15_100514C** Prep Date: **05/14/2010 09:21**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	11.3	1	10		113	70	130			
Chloromethane	9.25	2	10		93	70	130			
Vinyl chloride	11.3	1	10		113	70	130			
Chloroethane	8.96	1	10		90	70	130			
Bromomethane	11.9	2	10		119	70	130			
Trichlorofluoromethane	8.83	1	10		88	70	130			
1,1-Dichloroethene	11.4	1	10		114	70	130			
Dichloromethane	9.62	2	10		96	70	130			
trans-1,2-Dichloroethene	11.1	1	10		111	70	130			
Methyl tert-butyl ether (MTBE)	9.77	0.5	10		98	70	130			
1,1-Dichloroethane	11.1	1	10		111	70	130			
cis-1,2-Dichloroethene	10.7	1	10		107	70	130			
Bromochloromethane	9.98	1	10		99.8	70	130			
Chloroform	10.5	1	10		105	70	130			
2,2-Dichloropropane	11.2	1	10		112	70	130			
1,2-Dichloroethane	10.2	1	10		102	70	130			
1,1,1-Trichloroethane	11.4	1	10		114	70	130			
1,1-Dichloropropene	11.6	1	10		116	70	130			
Carbon tetrachloride	10.7	1	10		107	70	130			
Benzene	10.6	0.5	10		106	70	130			
Dibromomethane	9.72	1	10		97	70	130			
1,2-Dichloropropane	9.86	1	10		99	70	130			
Trichloroethene	10.2	1	10		102	70	130			
Bromodichloromethane	10.3	1	10		103	70	130			
cis-1,3-Dichloropropene	10.5	1	10		105	70	130			
trans-1,3-Dichloropropene	10.4	1	10		104	70	130			
1,1,2-Trichloroethane	9.51	1	10		95	70	130			
Toluene	9.76	0.5	10		98	70	130			
1,3-Dichloropropane	9.28	1	10		93	70	130			
Dibromochloromethane	9.46	1	10		95	70	130			
1,2-Dibromoethane (EDB)	18.8	2	20		94	70	130			
Tetrachloroethene	9.92	1	10		99	70	130			
1,1,1,2-Tetrachloroethane	9.86	1	10		99	70	130			
Chlorobenzene	9.57	1	10		96	70	130			
Ethylbenzene	9.89	0.5	10		99	70	130			
m,p-Xylene	9.75	0.5	10		98	70	130			
Bromoform	8.83	1	10		88	70	130			
Styrene	10.2	1	10		102	70	130			
o-Xylene	9.62	0.5	10		96	70	130			
1,1,2,2-Tetrachloroethane	8.56	1	10		86	70	130			
1,2,3-Trichloropropane	17	2	20		85	70	130			
Isopropylbenzene	11.3	1	10		113	70	130			
Bromobenzene	10.6	1	10		106	70	130			
n-Propylbenzene	11.5	1	10		115	70	130			
4-Chlorotoluene	11.2	1	10		112	70	130			
2-Chlorotoluene	11.1	1	10		111	70	130			
1,3,5-Trimethylbenzene	11.7	1	10		117	70	130			
tert-Butylbenzene	11	1	10		110	70	130			
1,2,4-Trimethylbenzene	11.4	1	10		114	70	130			
sec-Butylbenzene	10.8	1	10		108	70	130			
1,3-Dichlorobenzene	10.7	1	10		107	70	130			
1,4-Dichlorobenzene	10	1	10		100	70	130			
4-Isopropyltoluene	11.3	1	10		113	70	130			
1,2-Dichlorobenzene	9.85	1	10		99	70	130			
n-Butylbenzene	11.6	1	10		116	70	130			
1,2-Dibromo-3-chloropropane (DBCP)	47.4	3	50		95	70	130			
1,2,4-Trichlorobenzene	10.5	2	10		105	70	130			
Naphthalene	8.28	2	10		83	70	130			
Hexachlorobutadiene	19.5	2	20		98	70	130			
1,2,3-Trichlorobenzene	9.04	2	10		90	70	130			
Surr: 1,2-Dichloroethane-d4	9.79		10		98	70	130			
Surr: Toluene-d8	9.74		10		97	70	130			
Surr: 4-Bromofluorobenzene	10.9		10		109	70	130			

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Date: *19-May-10*

QC Summary Report

Work Order: 10050703

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

File ID: **10051407.D** Batch ID: **MS15W0514M** Analysis Date: **05/14/2010 11:00**

Sample ID: **10050703-04AMS** Units : **µg/L** Run ID: **MSD_15_100514C** Prep Date: **05/14/2010 11:00**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	43.3	2.5	50	0	87	13	167			
Chloromethane	42.5	10	50	0	85	28	145			
Vinyl chloride	48.6	2.5	50	0	97	43	134			
Chloroethane	35.1	2.5	50	0	70	39	154			
Bromomethane	45.5	10	50	0	91	19	176			
Trichlorofluoromethane	38.4	2.5	50	0	77	34	160			
1,1-Dichloroethene	52.1	2.5	50	0	104	60	130			
Dichloromethane	47	10	50	0	94	68	130			
trans-1,2-Dichloroethene	53.1	2.5	50	0	106	63	130			
Methyl tert-butyl ether (MTBE)	52.2	1.3	50	0	104	56	141			
1,1-Dichloroethane	53.2	2.5	50	0	106	61	130			
cis-1,2-Dichloroethene	51.4	2.5	50	0	103	70	130			
Bromochloromethane	50.4	2.5	50	0	101	70	130			
Chloroform	51	2.5	50	0	102	67	130			
2,2-Dichloropropane	53.9	2.5	50	0	108	30	152			
1,2-Dichloroethane	51.9	2.5	50	0	104	60	135			
1,1,1-Trichloroethane	54.5	2.5	50	0	109	59	137			
1,1-Dichloropropene	56.1	2.5	50	0	112	63	130			
Carbon tetrachloride	50.4	2.5	50	0	101	50	147			
Benzene	50.7	1.3	50	0	101	67	130			
Dibromomethane	51	2.5	50	0	102	69	133			
1,2-Dichloropropane	48.5	2.5	50	0	97	69	130			
Trichloroethene	48.4	2.5	50	0	97	69	130			
Bromodichloromethane	49.6	2.5	50	0	99	66	134			
cis-1,3-Dichloropropene	51.9	2.5	50	0	104	63	130			
trans-1,3-Dichloropropene	52.4	2.5	50	0	105	66	131			
1,1,2-Trichloroethane	49.2	2.5	50	0	98	68	130			
Toluene	45.3	1.3	50	0	91	66	130			
1,3-Dichloropropane	46.8	2.5	50	0	94	70	130			
Dibromochloromethane	46.6	2.5	50	0	93	70	130			
1,2-Dibromoethane (EDB)	94.1	5	100	0	94	70	130			
Tetrachloroethene	46.5	2.5	50	0	93	61	134			
1,1,1,2-Tetrachloroethane	46.5	2.5	50	0	93	70	130			
Chlorobenzene	45.3	2.5	50	0	91	70	130			
Ethylbenzene	45.8	1.3	50	0	92	68	130			
m,p-Xylene	45.8	1.3	50	0	92	64	130			
Bromoform	44	2.5	50	0	88	64	138			
Styrene	48.4	2.5	50	0	97	69	130			
o-Xylene	45	1.3	50	0	90	70	130			
1,1,2,2-Tetrachloroethane	44.1	2.5	50	0	88	65	131			
1,2,3-Trichloropropane	86.8	10	100	0	87	70	130			
Isopropylbenzene	49.9	2.5	50	0	99.7	64	138			
Bromobenzene	48.5	2.5	50	0	97	70	130			
n-Propylbenzene	51.7	2.5	50	0	103	66	132			
4-Chlorotoluene	49.8	2.5	50	0	99.7	70	130			
2-Chlorotoluene	50.1	2.5	50	0	100	70	130			
1,3,5-Trimethylbenzene	52.4	2.5	50	0	105	66	136			
tert-Butylbenzene	49.2	2.5	50	0	98	65	137			
1,2,4-Trimethylbenzene	51.2	2.5	50	0	102	65	137			
sec-Butylbenzene	49.1	2.5	50	0	98	66	134			
1,3-Dichlorobenzene	48	2.5	50	0	96	70	130			
1,4-Dichlorobenzene	45.8	2.5	50	0	92	70	130			
4-Isopropyltoluene	50.9	2.5	50	0	102	66	137			
1,2-Dichlorobenzene	45	2.5	50	0	90	70	130			
n-Butylbenzene	53.7	2.5	50	0	107	60	142			
1,2-Dibromo-3-chloropropane (DBCP)	228	15	250	0	91	67	130			
1,2,4-Trichlorobenzene	48.2	10	50	0	96	61	137			
Naphthalene	42.7	10	50	0	85	40	167			
Hexachlorobutadiene	94.7	10	100	0	95	61	130			
1,2,3-Trichlorobenzene	44.7	10	50	0	89	51	144			
Surr: 1,2-Dichloroethane-d4	50.9		50		102	70	130			
Surr: Toluene-d8	47.6		50		95	70	130			
Surr: 4-Bromofluorobenzene	52.3		50		105	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: *19-May-10*

QC Summary Report

Work Order: 10050703

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

File ID: **10051408.D** Batch ID: **MS15W0514M** Analysis Date: **05/14/2010 11:23**

Sample ID: **10050703-04AMSD** Units : **µg/L** Run ID: **MSD_15_100514C** Prep Date: **05/14/2010 11:23**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	45.5	2.5	50	0	91	13	167	43.34	4.9(20)	
Chloromethane	47	10	50	0	94	28	145	42.47	10.1(20)	
Vinyl chloride	51.5	2.5	50	0	103	43	134	48.6	5.9(20)	
Chloroethane	40.2	2.5	50	0	80	39	154	35.08	13.5(20)	
Bromomethane	54.3	10	50	0	109	19	176	45.53	17.6(20)	
Trichlorofluoromethane	41.8	2.5	50	0	84	34	160	38.37	8.6(20)	
1,1-Dichloroethene	53.5	2.5	50	0	107	60	130	52.13	2.7(20)	
Dichloromethane	49.3	10	50	0	99	68	130	47.04	4.6(20)	
trans-1,2-Dichloroethene	54.9	2.5	50	0	110	63	130	53.08	3.4(20)	
Methyl tert-butyl ether (MTBE)	56	1.3	50	0	112	56	141	52.24	7.0(20)	
1,1-Dichloroethane	55.7	2.5	50	0	111	61	130	53.21	4.6(20)	
cis-1,2-Dichloroethene	54.1	2.5	50	0	108	70	130	51.39	5.2(20)	
Bromochloromethane	52.9	2.5	50	0	106	70	130	50.39	4.9(20)	
Chloroform	52.8	2.5	50	0	106	67	130	51.04	3.4(20)	
2,2-Dichloropropane	48	2.5	50	0	96	30	152	53.92	11.6(20)	
1,2-Dichloroethane	55.4	2.5	50	0	111	60	135	51.89	6.5(20)	
1,1,1-Trichloroethane	56.8	2.5	50	0	114	59	137	54.5	4.0(20)	
1,1-Dichloropropene	58.9	2.5	50	0	118	63	130	56.09	4.8(20)	
Carbon tetrachloride	53	2.5	50	0	106	50	147	50.35	5.1(20)	
Benzene	53.2	1.3	50	0	106	67	130	50.69	4.9(20)	
Dibromomethane	53.1	2.5	50	0	106	69	133	50.97	4.2(20)	
1,2-Dichloropropane	50.6	2.5	50	0	101	69	130	48.46	4.4(20)	
Trichloroethene	50.7	2.5	50	0	101	69	130	48.36	4.7(20)	
Bromodichloromethane	53.2	2.5	50	0	106	66	134	49.58	7.0(20)	
cis-1,3-Dichloropropene	53.9	2.5	50	0	108	63	130	51.94	3.8(20)	
trans-1,3-Dichloropropene	53.6	2.5	50	0	107	66	131	52.36	2.4(20)	
1,1,2-Trichloroethane	52.7	2.5	50	0	105	68	130	49.18	6.8(20)	
Toluene	48.2	1.3	50	0	96	66	130	45.32	6.2(20)	
1,3-Dichloropropane	50.6	2.5	50	0	101	70	130	46.77	7.8(20)	
Dibromochloromethane	49.9	2.5	50	0	99.9	70	130	46.6	6.9(20)	
1,2-Dibromoethane (EDB)	102	5	100	0	102	70	130	94.06	7.9(20)	
Tetrachloroethene	49	2.5	50	0	98	61	134	46.51	5.2(20)	
1,1,1,2-Tetrachloroethane	50.4	2.5	50	0	101	70	130	46.47	8.1(20)	
Chlorobenzene	48.5	2.5	50	0	97	70	130	45.33	6.8(20)	
Ethylbenzene	48.7	1.3	50	0	97	68	130	45.81	6.1(20)	
m,p-Xylene	48.7	1.3	50	0	97	64	130	45.82	6.0(20)	
Bromoform	49.7	2.5	50	0	99	64	138	44.02	12.0(20)	
Styrene	51.9	2.5	50	0	104	69	130	48.35	7.1(20)	
o-Xylene	48.4	1.3	50	0	97	70	130	44.95	7.3(20)	
1,1,2,2-Tetrachloroethane	48.3	2.5	50	0	97	65	131	44.09	9.1(20)	
1,2,3-Trichloropropane	95	10	100	0	95	70	130	86.82	9.0(20)	
Isopropylbenzene	52.9	2.5	50	0	106	64	138	49.87	5.8(20)	
Bromobenzene	51.5	2.5	50	0	103	70	130	48.45	6.0(20)	
n-Propylbenzene	53.8	2.5	50	0	108	66	132	51.67	4.0(20)	
4-Chlorotoluene	52.7	2.5	50	0	105	70	130	49.84	5.6(20)	
2-Chlorotoluene	53.3	2.5	50	0	107	70	130	50.11	6.1(20)	
1,3,5-Trimethylbenzene	55.6	2.5	50	0	111	66	136	52.43	5.8(20)	
tert-Butylbenzene	52.1	2.5	50	0	104	65	137	49.19	5.8(20)	
1,2,4-Trimethylbenzene	54.8	2.5	50	0	110	65	137	51.23	6.6(20)	
sec-Butylbenzene	52	2.5	50	0	104	66	134	49.12	5.8(20)	
1,3-Dichlorobenzene	51.7	2.5	50	0	103	70	130	47.95	7.6(20)	
1,4-Dichlorobenzene	48.7	2.5	50	0	97	70	130	45.83	6.0(20)	
4-Isopropyltoluene	53.6	2.5	50	0	107	66	137	50.93	5.2(20)	
1,2-Dichlorobenzene	48.9	2.5	50	0	98	70	130	45.01	8.2(20)	
n-Butylbenzene	57.8	2.5	50	0	116	60	142	53.66	7.4(20)	
1,2-Dibromo-3-chloropropane (DBCP)	258	15	250	0	103	67	130	228.5	12.2(20)	
1,2,4-Trichlorobenzene	54.9	10	50	0	110	61	137	48.16	13.0(20)	
Naphthalene	50.8	10	50	0	102	40	167	42.68	17.3(20)	
Hexachlorobutadiene	104	10	100	0	104	61	130	94.72	9.0(20)	
1,2,3-Trichlorobenzene	51.9	10	50	0	104	51	144	44.72	14.9(20)	
Surr: 1,2-Dichloroethane-d4	51		50		102	70	130			
Surr: Toluene-d8	48.1		50		96	70	130			
Surr: 4-Bromofluorobenzene	51.5		50		103	70	130			

Alpha Analytical, Inc.

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

Date: *19-May-10*

QC Summary Report

Work Order: 10050703

Comments:

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

AMENDED

Billing Information :

CHAIN-OF-CUSTODY RECORD

CA

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

WorkOrder : BMIS10050703

Report Due By : 5:00 PM On : 21-May-2010

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

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

EDD Required : **No**

Sampled by : Chase Brogdon, David Loera

PO : 218013

Client's COC # : 28925, 28979 Job : G005862/JPL Groundwater Monitoring

Cooler Temp	Samples Received	Date Printed
4 °C	07-May-2010	12-May-2010

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

Alpha Sample ID	Client Sample ID	Matrix	Collection Date	No. of Bottles Alpha	Sub	TAT	Requested Tests 300_0_W	314_W	ALKALINITY_W	METALS_DW	PH_W	TDS_W	VOC_TIC_W	VOC_W	Sample Remarks
BMI10050703-01A	MW-11-5	AQ	05/06/10 08:20	5	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10050703-02A	MW-11-4	AQ	05/06/10 09:15	5	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10050703-03A	MW-11-3	AQ	05/06/10 09:54	5	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10050703-04A	MW-11-2	AQ	05/06/10 10:30	10	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	MS/MSD
BMI10050703-05A	MW-11-1	AQ	05/06/10 11:30	5	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10050703-06A	EB-07-05/06/10	AQ	05/06/10 11:15	5	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10050703-07A	TB-07-05/06/10	AQ	05/06/10 07:00	1	0	10							VOC by 524 Criteria	VOC by 524 Criteria	Reno Trip Blank 3/10/10
BMI10050703-08A	MW-9	AQ	05/06/10 11:11	7	0	10	NO2, NO3, SO4, Cl	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10050703-09A	MW-1	AQ	05/06/10 14:53	7	0	10	NO2, NO3, SO4, Cl	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	

Comments: Security seals intact. Frozen ice. Temp Blank #7771 received @ 4°C. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). Amended 5/12/10 @ 12:51: Added sample time to sample -07A due to login error. EA :

	Signature	Print Name	Company	Date/Time
Logged in by:	Elizabeth Adcox	Elizabeth Adcox	**Alpha Analytical, Inc.**	5/12/10 1253

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

AMENDED

Billing Information :

CHAIN-OF-CUSTODY RECORD

CA

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

WorkOrder : BMIS10050703

Report Due By : 5:00 PM On : 21-May-2010

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

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

EDD Required : **No**

Sampled by : Chase Brogdon, David Loera

PO : 218013

Client's COC # : 28925, 28979 Job : G005862/JPL Groundwater Monitoring

Cooler Temp	Samples Received	Date Printed
4 °C	07-May-2010	12-May-2010

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

Alpha Sample ID	Client Sample ID	Matrix	Collection Date	No. of Bottles Alpha	Sub	TAT	Requested Tests 300_0_W	314_W	ALKALINITY_W	METALS_DW	PH_W	TDS_W	VOC_TIC_W	VOC_W	Sample Remarks
BMI10050703-10A	DUPE-8-2Q10	AQ	05/06/10 14:54	7	0	10	NO2, NO3, SO4, Cl	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	

Comments: Security seals intact. Frozen ice. Temp Blank #7771 received @ 4°C. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). Amended 5/12/10 @ 12:51: Added sample time to sample -07A due to login error. EA :

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Logged in by:	Elizabeth Adcox	Elizabeth Adcox	**Alpha Analytical, Inc.**	5/12/10 1253

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Billing Information :

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CA

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Report Due By : 5:00 PM On : 21-May-2010

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San Diego, CA 92110

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

EDD Required : **Yes**

Sampled by : Chase Brogdon, David Loera

PO : 218013

Client's COC # : 28925, 28979 Job : G005862/JPL Groundwater Monitoring

Cooler Temp	Samples Received	Date Printed
4 °C	07-May-2010	**07-May-2010**

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

Alpha Sample ID	Client Sample ID	Matrix	Collection Date	No. of Bottles Alpha	Sub	TAT	Requested Tests 300_0_W	314_W	ALKALINITY_W	METALS_DW	PH_W	TDS_W	VOC_TIC_W	VOC_W	Sample Remarks
BMI10050703-01A	MW-11-5	AQ	05/06/10 08:20	5	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10050703-02A	MW-11-4	AQ	05/06/10 09:15	5	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10050703-03A	MW-11-3	AQ	05/06/10 09:54	5	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10050703-04A	MW-11-2	AQ	05/06/10 10:30	10	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	MS/MSD
BMI10050703-05A	MW-11-1	AQ	05/06/10 11:30	5	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10050703-06A	EB-07-05/06/10	AQ	05/06/10 11:15	5	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10050703-07A	TB-07-05/06/10	AQ	05/06/10 00:00	1	0	10							VOC by 524 Criteria	VOC by 524 Criteria	Reno Trip Blank 3/10/10
BMI10050703-08A	MW-9	AQ	05/06/10 11:11	7	0	10	NO2, NO3, SO4, Cl	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10050703-09A	MW-1	AQ	05/06/10 14:53	7	0	10	NO2, NO3, SO4, Cl	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	

Comments: Security seals intact. Frozen ice. Temp Blank #7771 received @ 4°C. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). :

	Signature	Print Name	Company	Date/Time
Logged in by:	Elizabeth Adcox	Elizabeth Adcox	**Alpha Analytical, Inc.**	5.7.10 1029

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

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

Billing Information :

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 : BMIS10050703

Report Due By : 5:00 PM On : 21-May-2010

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

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

EDD Required : **Yes**

Sampled by : Chase Brogdon, David Loera

PO : 218013

Client's COC # : 28925, 28979 Job : G005862/JPL Groundwater Monitoring

Cooler Temp	Samples Received	Date Printed
4 °C	07-May-2010	**07-May-2010**

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

Alpha Sample ID	Client Sample ID	Matrix	Collection Date	No. of Bottles Alpha	Sub	TAT	Requested Tests 300_0_W	314_W	ALKALINITY_W	METALS_DW	PH_W	TDS_W	VOC_TIC_W	VOC_W	Sample Remarks
BMI10050703-10A	DUPE-8-2Q10	AQ	05/06/10 14:54	7	0	10	NO2, NO3, SO4, Cl	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	

Comments: Security seals intact. Frozen ice. Temp Blank #7771 received @ 4°C. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). :

	Signature	Print Name	Company	Date/Time
Logged in by:	Elizabeth Adcox	Elizabeth Adcox	**Alpha Analytical, Inc.**	5.7.10 1029

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.
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Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

Billing Information:

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

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

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

28925

Page # 1 of 1

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

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

Time Sampled	Date Sampled	Matrix* See Key Below	Sampled by: CHASE BRADSON / Lab ID Number (Office Use Only)	Report Attention / Sample Description	TAT	Field Filtered	Total and type of containers ** See below	VOC (524.2)	TOTAL Ca, LEAD	ARSENIC (200.8)	GEN CHEM (Na, K, Ca, Mg, Fe)(200.7)	ClO_4 - (314.0)	GEN CHEM (300.0, 310.1, 160.1, 150.1)	REMARKS
0820	5/6/10	AQ	BMI1005070301	MW - 11 - 5	NORM		5	X	X	X	X	X		
0915			-02	MW - 11 - 4			5	X	X	X	X	X		
0954			-03	MW - 11 - 3			5	X	X	X	X	X		
1030			-04	MW - 11 - 2			10	X	X	X	X	X		MS/MSD
1130			-05	MW - 11 - 1			5	X	X	X	X	X		
1115			-06	EB - 07 - 05/06/10			5	X	X	X	X	X		EQUIPMENT BLANK
0700			-07	TB - 07 - 05/06/10			1	X						TRIP BLANK

ADDITIONAL INSTRUCTIONS:

	Signature	Print Name	Company	Date	Time
Relinquished by		CHASE BRADSON	INSIGHT CONSULTING	05/06/10	1500
Received by	Yacov Cohen	Yacov Cohen	Alpha Analytical	5/6/10	1520
Relinquished by	Yacov Cohen	"	Alpha Analytical	5/6/10	1520
Received by	Elizabeth Adcox	Elizabeth Adcox	Alpha	5.7.10	1029
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 Jerry Tompkins
Address 505 King Ave
City, State, Zip Columbus OH 43201
Phone Number 614 424-4849 Fax 614 424-3667

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

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

28979

Page # 1 of 1

Client Name	P.O. #	Job #
David Conner	218013	605862/JPL BWM
Address	EMail Address	
	connerd@battelle.org	
City, State, Zip	Phone # 614 726-8311	Fax # 614 458-6641

Report Attention: David Conner

Sampled by: David Loera

Required QC Level? I II III IV

EDD? YES X NO ___

Global ID # ___

Time Sampled	Date Sampled	Matrix* See Key Below	Lab ID Number (Office Use Only)	Sample Description	TAT	Field Filtered	Total and type of containers ** See below	VOCs (SW8260B)	Perchlorate (314.0)	* 200.8	** 300.0	*** SM2320B	TDS (2540C)	pH (150.2)	REMARKS
1111	5/6/10	AQ	-08	MW-9	10		5V 2P	X	X	X	X	X	X	X	
1453	5/6/10	AQ	-09	MW-1	10		5V2P	X	X	X	X	X	X	X	
1454	5/6/10	AQ	-10	DUPE-8-2010	10		5V2P	X	X	X	X	X	X	X	

ADDITIONAL INSTRUCTIONS: * Total Cr, Pb, As, Ca, Mg, K, Na, Fe ** Cl⁻, NO₂, NO₃, SO₄ *** Alk, Bicarbonate, Carbonate

	Signature	Print Name	Company	Date	Time
Relinquished by	David L	David Loera	Battelle	5-6-10	1500
Received by	Yacov Cohen	Yacov Cohen	Alpha Analytical	5/6/10	1520
Relinquished by	Yacov Cohen	"	Alpha Analytical	5/6/10	1520
Received by	Elizabeth Pdcox	Elizabeth Pdcox	Alpha	5-7-10	1029
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: *20-May-10*

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

CASE NARRATIVE

Job: G005862/JPL Groundwater Monitoring
Work Order: BMI10051141 **Cooler Temp:** 4 °C

Alpha's Sample ID	Client's Sample ID	Matrix
10051141-01A	MW-20-5	Aqueous
10051141-02A	MW-20-4	Aqueous
10051141-03A	MW-20-3	Aqueous
10051141-04A	MW-20-2	Aqueous
10051141-05A	MW-20-1	Aqueous
10051141-06A	DUPE-04-2Q10	Aqueous
10051141-07A	EB-08-05/10/10	Aqueous
10051141-08A	TB-08-05/10/10	Aqueous

Manually Integrated Analytes

Alpha's Sample ID	Test Reference	Analyte
10051141-02A	EPA Method 314.0	Perchlorate

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

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

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

Alpha Analytical, Inc.

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ANALYTICAL REPORT

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 05/11/10

Job: G005862/JPL Groundwater Monitoring

Anions by IC
EPA Method 300.0

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-20-5**				
Lab ID : BMI10051141-01A Chloride	8.8	0.50 mg/L	05/11/10 11:16	05/11/10 13:14
Date Sampled 05/10/10 08:30 Nitrite (NO2) - N	ND	0.25 mg/L	05/11/10 11:16	05/11/10 13:14
Nitrate (NO3) - N	ND	0.25 mg/L	05/11/10 11:16	05/11/10 13:14
Phosphate, ortho - P	ND	0.50 mg/L	05/11/10 11:16	05/11/10 13:14
Sulfate (SO4)	4.2	0.50 mg/L	05/11/10 11:16	05/11/10 13:14
Client ID: **MW-20-4**				
Lab ID : BMI10051141-02A Chloride	10	0.50 mg/L	05/11/10 11:16	05/11/10 14:10
Date Sampled 05/10/10 09:10 Nitrite (NO2) - N	ND	0.25 mg/L	05/11/10 11:16	05/11/10 14:10
Nitrate (NO3) - N	ND	0.25 mg/L	05/11/10 11:16	05/11/10 14:10
Phosphate, ortho - P	ND	0.50 mg/L	05/11/10 11:16	05/11/10 14:10
Sulfate (SO4)	14	0.50 mg/L	05/11/10 11:16	05/11/10 14:10
Client ID: **MW-20-3**				
Lab ID : BMI10051141-03A Chloride	37	0.50 mg/L	05/11/10 11:16	05/11/10 14:28
Date Sampled 05/10/10 09:45 Nitrite (NO2) - N	ND	0.25 mg/L	05/11/10 11:16	05/11/10 14:28
Nitrate (NO3) - N	ND	0.25 mg/L	05/11/10 11:16	05/11/10 14:28
Phosphate, ortho - P	ND	0.50 mg/L	05/11/10 11:16	05/11/10 14:28
Sulfate (SO4)	32	0.50 mg/L	05/11/10 11:16	05/11/10 14:28
Client ID: **MW-20-2**				
Lab ID : BMI10051141-04A Chloride	33	0.50 mg/L	05/11/10 11:16	05/11/10 14:47
Date Sampled 05/10/10 10:19 Nitrite (NO2) - N	ND	0.25 mg/L	05/11/10 11:16	05/11/10 14:47
Nitrate (NO3) - N	3.9	0.25 mg/L	05/11/10 11:16	05/11/10 14:47
Phosphate, ortho - P	ND	0.50 mg/L	05/11/10 11:16	05/11/10 14:47
Sulfate (SO4)	55	0.50 mg/L	05/11/10 11:16	05/11/10 14:47
Client ID: **MW-20-1**				
Lab ID : BMI10051141-05A Chloride	15	0.50 mg/L	05/11/10 11:16	05/11/10 15:05
Date Sampled 05/10/10 11:18 Nitrite (NO2) - N	ND	0.25 mg/L	05/11/10 11:16	05/11/10 15:05
Nitrate (NO3) - N	1.4	0.25 mg/L	05/11/10 11:16	05/11/10 15:05
Phosphate, ortho - P	ND	0.50 mg/L	05/11/10 11:16	05/11/10 15:05
Sulfate (SO4)	35	0.50 mg/L	05/11/10 11:16	05/11/10 15:05
Client ID: **DUPE-04-2Q10**				
Lab ID : BMI10051141-06A Chloride	32	0.50 mg/L	05/11/10 11:16	05/11/10 15:24
Date Sampled 05/10/10 00:00 Nitrite (NO2) - N	ND	0.25 mg/L	05/11/10 11:16	05/11/10 15:24
Nitrate (NO3) - N	4.0	0.25 mg/L	05/11/10 11:16	05/11/10 15:24
Phosphate, ortho - P	ND	0.50 mg/L	05/11/10 11:16	05/11/10 15:24
Sulfate (SO4)	57	0.50 mg/L	05/11/10 11:16	05/11/10 15:24

Alpha Analytical, Inc.

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Client ID: **EB-08-05/10/10**

Lab ID : BMI10051141-07A

Date Sampled 05/10/10 11:04

Chloride	ND	0.50 mg/L	05/11/10 11:16	05/11/10 15:42
Nitrite (NO2) - N	ND	0.25 mg/L	05/11/10 11:16	05/11/10 15:42
Nitrate (NO3) - N	ND	0.25 mg/L	05/11/10 11:16	05/11/10 15:42
Phosphate, ortho - P	ND	0.50 mg/L	05/11/10 11:16	05/11/10 15:42
Sulfate (SO4)	ND	0.50 mg/L	05/11/10 11:16	05/11/10 15:42

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.

e
5/24/10
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
3990 Old Town Ave
San Diego, CA 92110

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 05/11/10

Job: G005862/JPL Groundwater Monitoring

Perchlorate by Ion Chromatography
EPA Method 314.0

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-20-5**				
Lab ID : BMI10051141-01A Perchlorate	11.5	1.00 µg/L	05/13/10 11:54	05/13/10 14:05
Date Sampled 05/10/10 08:30				
Client ID: **MW-20-4**				
Lab ID : BMI10051141-02A Perchlorate	37.3	1.00 µg/L	05/13/10 11:54	05/13/10 14:23
Date Sampled 05/10/10 09:10				
Client ID: **MW-20-3**				
Lab ID : BMI10051141-03A Perchlorate	1.65	1.00 µg/L	05/13/10 11:54	05/13/10 14:41
Date Sampled 05/10/10 09:45				
Client ID: **MW-20-2**				
Lab ID : BMI10051141-04A Perchlorate	2.85	1.00 µg/L	05/13/10 11:54	05/13/10 15:00
Date Sampled 05/10/10 10:19				
Client ID: **MW-20-1**				
Lab ID : BMI10051141-05A Perchlorate	ND	1.00 µg/L	05/13/10 11:54	05/13/10 15:18
Date Sampled 05/10/10 11:18				
Client ID: **DUPE-04-2Q10**				
Lab ID : BMI10051141-06A Perchlorate	2.89	1.00 µg/L	05/13/10 11:54	05/13/10 15:37
Date Sampled 05/10/10 00:00				
Client ID: **EB-08-05/10/10**				
Lab ID : BMI10051141-07A Perchlorate	ND	1.00 µg/L	05/13/10 11:54	05/13/10 15:55
Date Sampled 05/10/10 11:04				

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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5/24/10
Report Date

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ANALYTICAL REPORT

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 05/11/10

Job: G005862/JPL Groundwater Monitoring

Alkalinity
SM2320B

Parameter		Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-20-5**					
Lab ID : BMI10051141-01A	Alkalinity, Bicarbonate (As CaCO3)	83	10 mg/L	05/12/10 03:21	05/12/10 03:21
Date Sampled 05/10/10 08:30	Alkalinity, Carbonate (As CaCO3)	52	10 mg/L	05/12/10 03:21	05/12/10 03:21
	Alkalinity, Total (As CaCO3 at pH 4.5)	140	10 mg/L	05/12/10 03:21	05/12/10 03:21
Client ID: **MW-20-4**					
Lab ID : BMI10051141-02A	Alkalinity, Bicarbonate (As CaCO3)	94	10 mg/L	05/12/10 15:24	05/12/10 15:24
Date Sampled 05/10/10 09:10	Alkalinity, Carbonate (As CaCO3)	44	10 mg/L	05/12/10 15:24	05/12/10 15:24
	Alkalinity, Total (As CaCO3 at pH 4.5)	140	10 mg/L	05/12/10 15:24	05/12/10 15:24
Client ID: **MW-20-3**					
Lab ID : BMI10051141-03A	Alkalinity, Bicarbonate (As CaCO3)	160	10 mg/L	05/12/10 15:27	05/12/10 15:27
Date Sampled 05/10/10 09:45	Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	05/12/10 15:27	05/12/10 15:27
	Alkalinity, Total (As CaCO3 at pH 4.5)	170	10 mg/L	05/12/10 15:27	05/12/10 15:27
Client ID: **MW-20-2**					
Lab ID : BMI10051141-04A	Alkalinity, Bicarbonate (As CaCO3)	180	10 mg/L	05/12/10 15:31	05/12/10 15:31
Date Sampled 05/10/10 10:19	Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	05/12/10 15:31	05/12/10 15:31
	Alkalinity, Total (As CaCO3 at pH 4.5)	180	10 mg/L	05/12/10 15:31	05/12/10 15:31
Client ID: **MW-20-1**					
Lab ID : BMI10051141-05A	Alkalinity, Bicarbonate (As CaCO3)	180	10 mg/L	05/12/10 15:36	05/12/10 15:36
Date Sampled 05/10/10 11:18	Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	05/12/10 15:36	05/12/10 15:36
	Alkalinity, Total (As CaCO3 at pH 4.5)	180	10 mg/L	05/12/10 15:36	05/12/10 15:36
Client ID: **DUPE-04-2Q10**					
Lab ID : BMI10051141-06A	Alkalinity, Bicarbonate (As CaCO3)	170	10 mg/L	05/12/10 15:40	05/12/10 15:40
Date Sampled 05/10/10 00:00	Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	05/12/10 15:40	05/12/10 15:40
	Alkalinity, Total (As CaCO3 at pH 4.5)	170	10 mg/L	05/12/10 15:40	05/12/10 15:40
Client ID: **EB-08-05/10/10**					
Lab ID : BMI10051141-07A	Alkalinity, Bicarbonate (As CaCO3)	ND	10 mg/L	05/12/10 15:43	05/12/10 15:43
Date Sampled 05/10/10 11:04	Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	05/12/10 15:43	05/12/10 15:43
	Alkalinity, Total (As CaCO3 at pH 4.5)	ND	10 mg/L	05/12/10 15:43	05/12/10 15:43

Alpha Analytical, Inc.

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ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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

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✔ **5/24/10**

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
3990 Old Town Ave
San Diego, CA 92110

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 05/11/10

Job: G005862/JPL Groundwater Monitoring

Metals by ICPMS
EPA Method 200.8

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-20-5**				
Lab ID : BMI10051141-01A Sodium (Na)	54	0.50 mg/L	05/12/10 10:52	05/13/10 19:11
Date Sampled 05/10/10 08:30 Magnesium (Mg)	1.3	0.50 mg/L	05/12/10 10:52	05/13/10 19:11
Potassium (K)	1.3	0.50 mg/L	05/12/10 10:52	05/13/10 19:11
Calcium (Ca)	5.2	0.50 mg/L	05/12/10 10:52	05/13/10 19:11
Chromium (Cr)	ND	0.0050 mg/L	05/12/10 10:52	05/13/10 19:11
Iron (Fe)	ND	0.10 mg/L	05/12/10 10:52	05/13/10 19:11
Arsenic (As)	ND	0.0020 mg/L	05/12/10 10:52	05/13/10 19:11
Lead (Pb)	ND	0.0050 mg/L	05/12/10 10:52	05/13/10 19:11
Client ID: **MW-20-4**				
Lab ID : BMI10051141-02A Sodium (Na)	55	0.50 mg/L	05/12/10 10:52	05/13/10 19:39
Date Sampled 05/10/10 09:10 Magnesium (Mg)	3.6	0.50 mg/L	05/12/10 10:52	05/13/10 19:39
Potassium (K)	0.84	0.50 mg/L	05/12/10 10:52	05/13/10 19:39
Calcium (Ca)	10	0.50 mg/L	05/12/10 10:52	05/13/10 19:39
Chromium (Cr)	ND	0.0050 mg/L	05/12/10 10:52	05/13/10 19:39
Iron (Fe)	0.13	0.10 mg/L	05/12/10 10:52	05/13/10 19:39
Arsenic (As)	ND	0.0020 mg/L	05/12/10 10:52	05/13/10 19:39
Lead (Pb)	ND	0.0050 mg/L	05/12/10 10:52	05/13/10 19:39
Client ID: **MW-20-3**				
Lab ID : BMI10051141-03A Sodium (Na)	55	0.50 mg/L	05/12/10 10:52	05/13/10 19:45
Date Sampled 05/10/10 09:45 Magnesium (Mg)	15	0.50 mg/L	05/12/10 10:52	05/13/10 19:45
Potassium (K)	2.4	0.50 mg/L	05/12/10 10:52	05/13/10 19:45
Calcium (Ca)	23	0.50 mg/L	05/12/10 10:52	05/13/10 19:45
Chromium (Cr)	ND	0.0050 mg/L	05/12/10 10:52	05/13/10 19:45
Iron (Fe)	0.20	0.10 mg/L	05/12/10 10:52	05/13/10 19:45
Arsenic (As)	ND	0.0020 mg/L	05/12/10 10:52	05/13/10 19:45
Lead (Pb)	ND	0.0050 mg/L	05/12/10 10:52	05/13/10 19:45
Client ID: **MW-20-2**				
Lab ID : BMI10051141-04A Sodium (Na)	17	0.50 mg/L	05/12/10 10:52	05/13/10 19:50
Date Sampled 05/10/10 10:19 Magnesium (Mg)	22	0.50 mg/L	05/12/10 10:52	05/13/10 19:50
Potassium (K)	2.7	0.50 mg/L	05/12/10 10:52	05/13/10 19:50
Calcium (Ca)	56	0.50 mg/L	05/12/10 10:52	05/13/10 19:50
Chromium (Cr)	ND	0.0050 mg/L	05/12/10 10:52	05/13/10 19:50
Iron (Fe)	0.17	0.10 mg/L	05/12/10 10:52	05/13/10 19:50
Arsenic (As)	ND	0.0020 mg/L	05/12/10 10:52	05/13/10 19:50
Lead (Pb)	ND	0.0050 mg/L	05/12/10 10:52	05/13/10 19:50

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Client ID: **MW-20-1**					
Lab ID : BMI10051141-05A	Sodium (Na)	15	0.50 mg/L	05/12/10 10:52	05/13/10 19:56
Date Sampled 05/10/10 11:18	Magnesium (Mg)	15	0.50 mg/L	05/12/10 10:52	05/13/10 19:56
	Potassium (K)	2.2	0.50 mg/L	05/12/10 10:52	05/13/10 19:56
	Calcium (Ca)	48	0.50 mg/L	05/12/10 10:52	05/13/10 19:56
	Chromium (Cr)	ND	0.0050 mg/L	05/12/10 10:52	05/13/10 19:56
	Iron (Fe)	0.24	0.10 mg/L	05/12/10 10:52	05/13/10 19:56
	Arsenic (As)	ND	0.0020 mg/L	05/12/10 10:52	05/13/10 19:56
	Lead (Pb)	ND	0.0050 mg/L	05/12/10 10:52	05/13/10 19:56
Client ID: **DUPE-04-2Q10**					
Lab ID : BMI10051141-06A	Sodium (Na)	17	0.50 mg/L	05/12/10 10:52	05/13/10 20:02
Date Sampled 05/10/10 00:00	Magnesium (Mg)	22	0.50 mg/L	05/12/10 10:52	05/13/10 20:02
	Potassium (K)	2.5	0.50 mg/L	05/12/10 10:52	05/13/10 20:02
	Calcium (Ca)	53	0.50 mg/L	05/12/10 10:52	05/13/10 20:02
	Chromium (Cr)	ND	0.0050 mg/L	05/12/10 10:52	05/13/10 20:02
	Iron (Fe)	0.15	0.10 mg/L	05/12/10 10:52	05/13/10 20:02
	Arsenic (As)	ND	0.0020 mg/L	05/12/10 10:52	05/13/10 20:02
	Lead (Pb)	ND	0.0050 mg/L	05/12/10 10:52	05/13/10 20:02
Client ID: **EB-08-05/10/10**					
Lab ID : BMI10051141-07A	Sodium (Na)	ND	0.50 mg/L	05/12/10 10:52	05/13/10 20:07
Date Sampled 05/10/10 11:04	Magnesium (Mg)	ND	0.50 mg/L	05/12/10 10:52	05/13/10 20:07
	Potassium (K)	ND	0.50 mg/L	05/12/10 10:52	05/13/10 20:07
	Calcium (Ca)	ND	0.50 mg/L	05/12/10 10:52	05/13/10 20:07
	Chromium (Cr)	ND	0.0050 mg/L	05/12/10 10:52	05/13/10 20:07
	Iron (Fe)	ND	0.10 mg/L	05/12/10 10:52	05/13/10 20:07
	Arsenic (As)	ND	0.0020 mg/L	05/12/10 10:52	05/13/10 20:07
	Lead (Pb)	ND	0.0050 mg/L	05/12/10 10:52	05/13/10 20:07

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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

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5/24/10

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
3990 Old Town Ave
San Diego, CA 92110

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 05/11/10

Job: G005862/JPL Groundwater Monitoring

pH (Range 1.7 to 12.4)
EPA Method 150.2 / SM4500HB / SW9040C

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-20-5**				
Lab ID : BMI10051141-01A pH	9.0	1.7 pH Units	05/11/10 15:42	05/11/10 15:42
Date Sampled 05/10/10 08:30 pH - Temperature	18	1.0 °C	05/11/10 15:42	05/11/10 15:42
Client ID: **MW-20-4**				
Lab ID : BMI10051141-02A pH	8.9	1.7 pH Units	05/11/10 15:45	05/11/10 15:45
Date Sampled 05/10/10 09:10 pH - Temperature	18	1.0 °C	05/11/10 15:45	05/11/10 15:45
Client ID: **MW-20-3**				
Lab ID : BMI10051141-03A pH	8.5	1.7 pH Units	05/11/10 15:47	05/11/10 15:47
Date Sampled 05/10/10 09:45 pH - Temperature	18	1.0 °C	05/11/10 15:47	05/11/10 15:47
Client ID: **MW-20-2**				
Lab ID : BMI10051141-04A pH	8.0	1.7 pH Units	05/11/10 15:49	05/11/10 15:49
Date Sampled 05/10/10 10:19 pH - Temperature	18	1.0 °C	05/11/10 15:49	05/11/10 15:49
Client ID: **MW-20-1**				
Lab ID : BMI10051141-05A pH	7.5	1.7 pH Units	05/11/10 15:50	05/11/10 15:50
Date Sampled 05/10/10 11:18 pH - Temperature	18	1.0 °C	05/11/10 15:50	05/11/10 15:50
Client ID: **DUPE-04-2Q10**				
Lab ID : BMI10051141-06A pH	7.9	1.7 pH Units	05/11/10 15:52	05/11/10 15:52
Date Sampled 05/10/10 00:00 pH - Temperature	18	1.0 °C	05/11/10 15:52	05/11/10 15:52
Client ID: **EB-08-05/10/10**				
Lab ID : BMI10051141-07A pH	6.2	1.7 pH Units	05/11/10 15:54	05/11/10 15:54
Date Sampled 05/10/10 11:04 pH - Temperature	19	1.0 °C	05/11/10 15:54	05/11/10 15:54

The EPA has established an analytical holding time of 15 minutes for this method as documented in the Methods Update Rule, Federal Register, Vol 72, No 47, March 2007. This holding time will always be exceeded, unless samples are analyzed in the field.
The laboratory performed this analysis in the shortest practical holding time after sample receipt.

Roger Scholl Randy Gardner Walter Hinchman

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5/24/10
Report Date

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ANALYTICAL REPORT

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 05/11/10

Job: G005862/JPL Groundwater Monitoring

Total Dissolved Solids (TDS)
SM2540C

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-20-5**				
Lab ID : BMI10051141-01A Solids, Total Dissolved (TDS)	160	10 mg/L	05/13/10	05/13/10
Date Sampled 05/10/10 08:30				
Client ID: **MW-20-4**				
Lab ID : BMI10051141-02A Solids, Total Dissolved (TDS)	170	10 mg/L	05/13/10	05/13/10
Date Sampled 05/10/10 09:10				
Client ID: **MW-20-3**				
Lab ID : BMI10051141-03A Solids, Total Dissolved (TDS)	270	10 mg/L	05/13/10	05/13/10
Date Sampled 05/10/10 09:45				
Client ID: **MW-20-2**				
Lab ID : BMI10051141-04A Solids, Total Dissolved (TDS)	340	10 mg/L	05/13/10	05/13/10
Date Sampled 05/10/10 10:19				
Client ID: **MW-20-1**				
Lab ID : BMI10051141-05A Solids, Total Dissolved (TDS)	260	10 mg/L	05/13/10	05/13/10
Date Sampled 05/10/10 11:18				
Client ID: **DUPE-04-2Q10**				
Lab ID : BMI10051141-06A Solids, Total Dissolved (TDS)	330	10 mg/L	05/13/10	05/13/10
Date Sampled 05/10/10 00:00				
Client ID: **EB-08-05/10/10**				
Lab ID : BMI10051141-07A Solids, Total Dissolved (TDS)	ND	10 mg/L	05/13/10	05/13/10
Date Sampled 05/10/10 11:04				

ND = Not Detected

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Job: G005862/JPL Groundwater Monitoring

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

Tentatively Identified Compounds - Volatile Organics by GC/MS

	Parameter	Estimated Concentration	Estimated Reporting Limit	Date Extracted	Date Analyzed
Client ID : **MW-20-5**					
Lab ID : BMI10051141-01A	Sulfur dioxide	5.6	2.0 µg/L	05/14/10 14:35	05/14/10 14:35
Date Received : 05/11/10					
Date Sampled : 05/10/10 08:30					
Client ID : **MW-20-4**					
Lab ID : BMI10051141-02A	Sulfur dioxide	9.4	2.0 µg/L	05/14/10 14:58	05/14/10 14:58
Date Received : 05/11/10					
Date Sampled : 05/10/10 09:10					
Client ID : **MW-20-3**					
Lab ID : BMI10051141-03A	Sulfur dioxide	3.6	2.0 µg/L	05/14/10 15:22	05/14/10 15:22
Date Received : 05/11/10					
Date Sampled : 05/10/10 09:45					
Client ID : **MW-20-2**					
Lab ID : BMI10051141-04A	Sulfur dioxide	2.2	2.0 µg/L	05/14/10 15:45	05/14/10 15:45
Date Received : 05/11/10					
Date Sampled : 05/10/10 10:19					
Client ID : **MW-20-1**					
Lab ID : BMI10051141-05A	*** None Found ***	ND	2.0 µg/L	05/14/10 16:09	05/14/10 16:09
Date Received : 05/11/10					
Date Sampled : 05/10/10 11:18					
Client ID : **DUPE-04-2Q10**					
Lab ID : BMI10051141-06A	*** None Found ***	ND	2.0 µg/L	05/14/10 16:33	05/14/10 16:33
Date Received : 05/11/10					
Date Sampled : 05/10/10 00:00					
Client ID : **EB-08-05/10/10**					
Lab ID : BMI10051141-07A	Acetone	14	10 µg/L	05/14/10 13:24	05/14/10 13:24
Date Received : 05/11/10					
Date Sampled : 05/10/10 11:04					
Client ID : **TB-08-05/10/10**					
Lab ID : BMI10051141-08A	*** None Found ***	ND	2.0 µg/L	05/14/10 13:00	05/14/10 13:00
Date Received : 05/11/10					
Date Sampled : 05/10/10 07:00					

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Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10051141-01A
Client I.D. Number: MW-20-5

Sampled: 05/10/10 08:30
Received: 05/11/10
Extracted: 05/14/10 14:35
Analyzed: 05/14/10 14:35

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	110	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	99	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	89	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10051141-02A
Client I.D. Number: MW-20-4

Sampled: 05/10/10 09:10
Received: 05/11/10
Extracted: 05/14/10 14:58
Analyzed: 05/14/10 14:58

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	112	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	98	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	88	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
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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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10051141-03A
Client I.D. Number: MW-20-3

Sampled: 05/10/10 09:45
Received: 05/11/10
Extracted: 05/14/10 15:22
Analyzed: 05/14/10 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	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5	µg/L
25	Trichloroethene	ND	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	108	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	99	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	89	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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

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5/24/10

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

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

Alpha Analytical Number: BMI10051141-04A
Client I.D. Number: MW-20-2

Sampled: 05/10/10 10:19
Received: 05/11/10
Extracted: 05/14/10 15:45
Analyzed: 05/14/10 15:45

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5	µg/L
25	Trichloroethene	ND	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	111	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	98	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	88	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10051141-05A
Client I.D. Number: MW-20-1

Sampled: 05/10/10 11:18
Received: 05/11/10
Extracted: 05/14/10 16:09
Analyzed: 05/14/10 16:09

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5	µg/L
25	Trichloroethene	ND	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	111	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	99	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	88	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer
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5/24/10
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI10051141-06A
Client I.D. Number: DUPE-04-2Q10

Sampled: 05/10/10 00:00
Received: 05/11/10
Extracted: 05/14/10 16:33
Analyzed: 05/14/10 16:33

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5	µg/L
25	Trichloroethene	ND	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	107	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	100	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	90	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

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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5/24/10
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI10051141-07A
Client I.D. Number: EB-08-05/10/10

Sampled: 05/10/10 11:04
Received: 05/11/10
Extracted: 05/14/10 13:24
Analyzed: 05/14/10 13:24

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	111	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	99	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	90	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

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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5/24/10
Report Date

Alpha Analytical, Inc.

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ANALYTICAL REPORT

Battelle Memorial Institute
3990 Old Town Ave
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Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641

Alpha Analytical Number: BMI10051141-08A
Client I.D. Number: TB-08-05/10/10

Sampled: 05/10/10 07:00
Received: 05/11/10
Extracted: 05/14/10 13:00
Analyzed: 05/14/10 13:00

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5	µg/L
25	Trichloroethene	ND	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	110	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	99	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	89	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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.

5/24/10
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: BMI10051141 **Job:** G005862/JPL Groundwater Monitoring

Alpha's Sample ID	Client's Sample ID	Matrix	pH
10051141-01A	MW-20-5	Aqueous	2
10051141-02A	MW-20-4	Aqueous	2
10051141-03A	MW-20-3	Aqueous	2
10051141-04A	MW-20-2	Aqueous	2
10051141-05A	MW-20-1	Aqueous	2
10051141-06A	DUPE-04-2Q10	Aqueous	2
10051141-07A	EB-08-05/10/10	Aqueous	2
10051141-08A	TB-08-05/10/10	Aqueous	2

5/24/10

Report Date

Alpha Analytical, Inc.

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Date: *17-May-10*

QC Summary Report

Work Order: 10051141

Method Blank

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

File ID: **23** Batch ID: **24223** Analysis Date: **05/11/2010 12:19**

Sample ID: **MB-24223** Units : **mg/L** Run ID: **IC_1_100511A** Prep Date: **05/11/2010 11:16**

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: **24223** Analysis Date: **05/11/2010 12:37**

Sample ID: **LFB-24223** Units : **mg/L** Run ID: **IC_1_100511A** Prep Date: **05/11/2010 11:16**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	52.5	0.5	50		105	90	110			
Nitrite (NO2) - N	5.3	0.25	5		106	90	110			
Nitrate (NO3) - N	5.32	0.25	5		106	90	110			
Phosphate, ortho - P	4.74	0.5	5		95	90	110			
Sulfate (SO4)	106	0.5	100		106	90	110			

Sample Matrix Spike

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

File ID: **27** Batch ID: **24223** Analysis Date: **05/11/2010 13:33**

Sample ID: **10051141-01ALFM** Units : **mg/L** Run ID: **IC_1_100511A** Prep Date: **05/11/2010 11:16**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	116	0.5	100	8.753	107	80	120			
Nitrite (NO2) - N	10.3	0.25	10	0	103	80	120			
Nitrate (NO3) - N	10.5	0.25	10	0	105	80	120			
Phosphate, ortho - P	9.79	0.5	10	0	98	80	120			
Sulfate (SO4)	203	0.5	200	4.187	99	80	120			

Sample Matrix Spike Duplicate

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

File ID: **28** Batch ID: **24223** Analysis Date: **05/11/2010 13:51**

Sample ID: **10051141-01ALFMD** Units : **mg/L** Run ID: **IC_1_100511A** Prep Date: **05/11/2010 11:16**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	116	0.5	100	8.753	107	80	120	116	0.0(15)	
Nitrite (NO2) - N	10.2	0.25	10	0	102	80	120	10.3	0.6(15)	
Nitrate (NO3) - N	10.6	0.25	10	0	106	80	120	10.5	1.3(15)	
Phosphate, ortho - P	8.98	0.5	10	0	90	80	120	9.79	8.6(15)	
Sulfate (SO4)	202	0.5	200	4.187	99	80	120	202.9	0.2(15)	

Comments:

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

Alpha Analytical, Inc.

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Date: *17-May-10*

QC Summary Report

Work Order: 10051141

Method Blank

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

File ID: **14** Batch ID: **24249** Analysis Date: **05/13/2010 12:51**

Sample ID: **MB-24249** Units : **µg/L** Run ID: **IC_3_100513A** Prep Date: **05/13/2010 11:54**

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: **24249** Analysis Date: **05/13/2010 13:09**

Sample ID: **LFB-24249** Units : **µg/L** Run ID: **IC_3_100513A** Prep Date: **05/13/2010 11:54**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	28	2	25		112	85	115			

Sample Matrix Spike

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

File ID: **32** Batch ID: **24249** Analysis Date: **05/13/2010 18:22**

Sample ID: **10051201-05ALFM** Units : **µg/L** Run ID: **IC_3_100513A** Prep Date: **05/13/2010 11:54**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	28.8	2	25	2.817	104	80	120			

Sample Matrix Spike Duplicate

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

File ID: **33** Batch ID: **24249** Analysis Date: **05/13/2010 18:41**

Sample ID: **10051201-05ALFMD** Units : **µg/L** Run ID: **IC_3_100513A** Prep Date: **05/13/2010 11:54**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	29.1	2	25	2.817	105	80	120	28.78	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.

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Date: *18-May-10*

QC Summary Report

Work Order: 10051141

Laboratory Control Spike Type **LCS** Test Code: **SM2320B**

File ID: Batch ID: **W0512AL** Analysis Date: **05/12/2010 15:14**

Sample ID: **LCS-W0512AL** Units : **mg/L** Run ID: **WETLAB_100512B** Prep Date: **05/12/2010 15:14**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Alkalinity, Bicarbonate (As CaCO3)	257.5	10	250		103	80	120			
Alkalinity, Carbonate (As CaCO3)	257.5	10	250		103	80	120			
Alkalinity, Total (As CaCO3 at pH 4.5)	258	10	250		103	80	120			

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: *19-May-10*

QC Summary Report

Work Order: 10051141

Method Blank

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

File ID: **051310.B\020SMPL.D** Batch ID: **24239K** Analysis Date: **05/13/2010 17:41**

Sample ID: **MB-24239** Units : **mg/L** Run ID: **ICP/MS_100513B** Prep Date: **05/12/2010 10:52**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sodium (Na)	ND	0.5								
Magnesium (Mg)	ND	0.5								
Potassium (K)	ND	0.5								
Calcium (Ca)	ND	0.5								
Chromium (Cr)	ND	0.005								
Iron (Fe)	ND	0.1								
Arsenic (As)	ND	0.002								
Lead (Pb)	ND	0.005								

Laboratory Control Spike

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

File ID: **051310.B\021_LCS.D** Batch ID: **24239K** Analysis Date: **05/13/2010 17:47**

Sample ID: **LCS-24239** Units : **mg/L** Run ID: **ICP/MS_100513B** Prep Date: **05/12/2010 10:52**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sodium (Na)	5.28	0.5	5		106	80	120			
Magnesium (Mg)	4.94	0.5	5		99	80	120			
Potassium (K)	4.97	0.5	5		99	80	120			
Calcium (Ca)	4.96	0.5	5		99	80	120			
Chromium (Cr)	0.0497	0.005	0.05		99	80	120			
Iron (Fe)	4.73	0.1	5		95	80	120			
Arsenic (As)	0.0468	0.002	0.05		94	80	120			
Lead (Pb)	0.0449	0.005	0.05		90	80	120			

Sample Matrix Spike

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

File ID: **051310.B\025SMPL.D** Batch ID: **24239K** Analysis Date: **05/13/2010 18:09**

Sample ID: **10050703-04AMS** Units : **mg/L** Run ID: **ICP/MS_100513B** Prep Date: **05/12/2010 10:52**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sodium (Na)	26	0.5	5	22.58	69	80	120			M3
Magnesium (Mg)	21.5	0.5	5	17.95	70	80	120			M2
Potassium (K)	7.85	0.5	5	3.148	94	80	120			
Calcium (Ca)	56.2	0.5	5	54.95	25	80	120			M3
Chromium (Cr)	0.0497	0.005	0.05	0	99	80	120			
Iron (Fe)	5.17	0.1	5	0.5441	93	80	120			
Arsenic (As)	0.0478	0.002	0.05	0	96	80	120			
Lead (Pb)	0.0444	0.005	0.05	0	89	80	120			

Sample Matrix Spike Duplicate

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

File ID: **051310.B\026SMPL.D** Batch ID: **24239K** Analysis Date: **05/13/2010 18:15**

Sample ID: **10050703-04AMSD** Units : **mg/L** Run ID: **ICP/MS_100513B** Prep Date: **05/12/2010 10:52**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sodium (Na)	26.3	0.5	5	22.58	74	80	120	26.01	1.0(20)	M3
Magnesium (Mg)	21.4	0.5	5	17.95	69	80	120	21.45	0.3(20)	M2
Potassium (K)	7.92	0.5	5	3.148	95	80	120	7.845	0.9(20)	
Calcium (Ca)	56.7	0.5	5	54.95	35	80	120	56.19	0.9(20)	M3
Chromium (Cr)	0.051	0.005	0.05	0	102	80	120	0.04966	2.6(20)	
Iron (Fe)	5.34	0.1	5	0.5441	96	80	120	5.174	3.1(20)	
Arsenic (As)	0.0488	0.002	0.05	0	98	80	120	0.04781	2.1(20)	
Lead (Pb)	0.0475	0.005	0.05	0	95	80	120	0.04439	6.7(20)	

Comments:

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

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

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.

Alpha Analytical, Inc.

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Date: *18-May-10*

QC Summary Report

Work Order: 10051141

Laboratory Control Spike Type **LCS** Test Code: **EPA Method 150.2 / SM4500HB / SW9040C**

File ID: Batch ID: **W0511PH** Analysis Date: **05/11/2010 15:37**

Sample ID: **LCS-W0511PH** Units : **pH Units** Run ID: **WETLAB_100511B** Prep Date: **05/11/2010 15:37**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
pH	5	1.7	5		100	90	110			

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: *19-May-10*

QC Summary Report

Work Order: 10051141

Method Blank

Type **MBLK** Test Code: **SM2540C**

File ID: Batch ID: **W0511DS** Analysis Date: **05/13/2010 00:00**

Sample ID: **MBLK-W0511DS** Units : **mg/L** Run ID: **WETLAB_100511C** Prep Date: **05/13/2010 00:00**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Solids, Total Dissolved (TDS)	ND	10								

Laboratory Control Spike

Type **LCS** Test Code: **SM2540C**

File ID: Batch ID: **W0511DS** Analysis Date: **05/13/2010 00:00**

Sample ID: **LCS-W0511DS** Units : **mg/L** Run ID: **WETLAB_100511C** Prep Date: **05/13/2010 00:00**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Solids, Total Dissolved (TDS)	97	10	100		97	80	120			

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: 20-May-2010

QC Summary Report

Work Order: 10051141

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

File ID: **C:\HPCHEM\MS07\DATA\100514\10051410.D** Batch ID: **MS07W0514M** Analysis Date: **05/14/2010 11:26**

Sample ID: **MBLK MS07W0514M** Units : **µg/L** Run ID: **MSD_07_100514B** Prep Date: **05/14/2010 11:26**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	ND	0.5								
Chloromethane	ND	1								
Vinyl chloride	ND	0.5								
Chloroethane	ND	0.5								
Bromomethane	ND	1								
Trichlorofluoromethane	ND	0.5								
1,1-Dichloroethene	ND	0.5								
Dichloromethane	ND	1								
Freon-113	ND	0.5								
trans-1,2-Dichloroethene	ND	0.5								
Methyl tert-butyl ether (MTBE)	ND	0.5								
1,1-Dichloroethane	ND	0.5								
2-Butanone (MEK)	ND	10								
cis-1,2-Dichloroethene	ND	0.5								
Bromochloromethane	ND	0.5								
Chloroform	ND	0.5								
2,2-Dichloropropane	ND	0.5								
1,2-Dichloroethane	ND	0.5								
1,1,1-Trichloroethane	ND	0.5								
1,1-Dichloropropene	ND	0.5								
Carbon tetrachloride	ND	0.5								
Benzene	ND	0.5								
Dibromomethane	ND	0.5								
1,2-Dichloropropane	ND	0.5								
Trichloroethene	ND	0.5								
Bromodichloromethane	ND	0.5								
4-Methyl-2-pentanone (MIBK)	ND	2.5								
cis-1,3-Dichloropropene	ND	0.5								
trans-1,3-Dichloropropene	ND	0.5								
1,1,2-Trichloroethane	ND	0.5								
Toluene	ND	0.5								
1,3-Dichloropropane	ND	0.5								
Dibromochloromethane	ND	0.5								
1,2-Dibromoethane (EDB)	ND	1								
Tetrachloroethene	ND	0.5								
1,1,1,2-Tetrachloroethane	ND	0.5								
Chlorobenzene	ND	0.5								
Ethylbenzene	ND	0.5								
m,p-Xylene	ND	0.5								
Bromoform	ND	0.5								
Styrene	ND	0.5								
o-Xylene	ND	0.5								
1,1,2,2-Tetrachloroethane	ND	0.5								
1,2,3-Trichloropropane	ND	1								
Isopropylbenzene	ND	0.5								
Bromobenzene	ND	0.5								
n-Propylbenzene	ND	0.5								
4-Chlorotoluene	ND	0.5								
2-Chlorotoluene	ND	0.5								
1,3,5-Trimethylbenzene	ND	0.5								
tert-Butylbenzene	ND	0.5								
1,2,4-Trimethylbenzene	ND	0.5								
sec-Butylbenzene	ND	0.5								
1,3-Dichlorobenzene	ND	0.5								
1,4-Dichlorobenzene	ND	0.5								
4-Isopropyltoluene	ND	0.5								
1,2-Dichlorobenzene	ND	0.5								
n-Butylbenzene	ND	0.5								
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5								
1,2,4-Trichlorobenzene	ND	1								
Naphthalene	ND	1								
Hexachlorobutadiene	ND	1								
1,2,3-Trichlorobenzene	ND	1								
Surr: 1,2-Dichloroethane-d4	10.9		10		109	70	130			
Surr: Toluene-d8	9.85		10		99	70	130			

Alpha Analytical, Inc.

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Date: 20-May-2010

QC Summary Report

Work Order: 10051141

Surr: 4-Bromofluorobenzene	8.98		10	90	70	130			

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

File ID: **C:\HPCHEM\MS07\DATA\100514\10051406.D** Batch ID: **MS07W0514M** Analysis Date: **05/14/2010 09:52**

Sample ID: **LCS MS07W0514M** Units : **µg/L** Run ID: **MSD_07_100514B** Prep Date: **05/14/2010 09:52**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	7.68	1	10		77	70	130			
Chloromethane	8.51	2	10		85	70	130			
Vinyl chloride	9.54	1	10		95	70	130			
Chloroethane	10.6	1	10		106	70	130			
Bromomethane	15.7	2	10		157	70	130(130)			L1
Trichlorofluoromethane	10.6	1	10		106	70	130			
1,1-Dichloroethene	10.2	1	10		102	70	130			
Dichloromethane	9.56	2	10		96	70	130			
trans-1,2-Dichloroethene	10.9	1	10		109	70	130			
Methyl tert-butyl ether (MTBE)	9.84	0.5	10		98	70	130			
1,1-Dichloroethane	10.5	1	10		105	70	130			
cis-1,2-Dichloroethene	10.8	1	10		108	70	130			
Bromochloromethane	10.9	1	10		109	70	130			
Chloroform	10.6	1	10		106	70	130			
2,2-Dichloropropane	12.6	1	10		126	70	130			
1,2-Dichloroethane	11.6	1	10		116	70	130			
1,1,1-Trichloroethane	11.4	1	10		114	70	130			
1,1-Dichloropropene	11.4	1	10		114	70	130			
Carbon tetrachloride	11.7	1	10		117	70	130			
Benzene	10.6	0.5	10		106	70	130			
Dibromomethane	10.7	1	10		107	70	130			
1,2-Dichloropropane	11.9	1	10		119	70	130			
Trichloroethene	11.1	1	10		111	70	130			
Bromodichloromethane	11.7	1	10		117	70	130			
cis-1,3-Dichloropropene	11.2	1	10		112	70	130			
trans-1,3-Dichloropropene	11.8	1	10		118	70	130			
1,1,2-Trichloroethane	10.5	1	10		105	70	130			
Toluene	10.4	0.5	10		104	70	130			
1,3-Dichloropropane	10.1	1	10		101	70	130			
Dibromochloromethane	11.1	1	10		111	70	130			
1,2-Dibromoethane (EDB)	20.3	2	20		102	70	130			
Tetrachloroethene	11.1	1	10		111	70	130			
1,1,1,2-Tetrachloroethane	10.6	1	10		106	70	130			
Chlorobenzene	10.2	1	10		102	70	130			
Ethylbenzene	11	0.5	10		110	70	130			
m,p-Xylene	10.9	0.5	10		109	70	130			
Bromoform	11.6	1	10		116	70	130			
Styrene	15	1	10		150	70	130(130)			L1
o-Xylene	11.2	0.5	10		112	70	130			
1,1,2,2-Tetrachloroethane	9.42	1	10		94	70	130			
1,2,3-Trichloropropane	21.5	2	20		107	70	130			
Isopropylbenzene	10.3	1	10		103	70	130			
Bromobenzene	8.99	1	10		90	70	130			
n-Propylbenzene	9.74	1	10		97	70	130			
4-Chlorotoluene	9.96	1	10		99.6	70	130			
2-Chlorotoluene	9.81	1	10		98	70	130			
1,3,5-Trimethylbenzene	10	1	10		100	70	130			
tert-Butylbenzene	9.97	1	10		99.7	70	130			
1,2,4-Trimethylbenzene	9.98	1	10		99.8	70	130			
sec-Butylbenzene	10.1	1	10		101	70	130			
1,3-Dichlorobenzene	9.21	1	10		92	70	130			
1,4-Dichlorobenzene	9.29	1	10		93	70	130			
4-Isopropyltoluene	10.5	1	10		105	70	130			
1,2-Dichlorobenzene	8.66	1	10		87	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	9.89	2	10		99	70	130			
Naphthalene	9.88	2	10		99	70	130			
Hexachlorobutadiene	21.1	2	20		106	70	130			
1,2,3-Trichlorobenzene	9.57	2	10		96	70	130			
Surr: 1,2-Dichloroethane-d4	11.2		10		112	70	130			
Surr: Toluene-d8	9.69		10		97	70	130			
Surr: 4-Bromofluorobenzene	8.81		10		88	70	130			

Alpha Analytical, Inc.

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Date: 20-May-2010

QC Summary Report

Work Order: 10051141

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

File ID: **C:\HPCHEM\MS07\DATA\100514\10051411.D** Batch ID: **MS07W0514M** Analysis Date: **05/14/2010 11:50**

Sample ID: **10051201-05AMS** Units : **µg/L** Run ID: **MSD_07_100514B** Prep Date: **05/14/2010 11:50**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	49.3	2.5	50	0	99	13	167			
Chloromethane	48.9	10	50	0	98	28	145			
Vinyl chloride	54.4	2.5	50	0	109	43	134			
Chloroethane	58.9	2.5	50	0	118	39	154			
Bromomethane	87.3	10	50	0	175	19	176			
Trichlorofluoromethane	56.9	2.5	50	0	114	34	160			
1,1-Dichloroethene	54.1	2.5	50	0	108	60	130			
Dichloromethane	49.4	10	50	0	99	68	130			
trans-1,2-Dichloroethene	56.2	2.5	50	0	112	63	130			
Methyl tert-butyl ether (MTBE)	48.2	1.3	50	0	96	56	141			
1,1-Dichloroethane	53.6	2.5	50	0	107	61	130			
cis-1,2-Dichloroethene	54.4	2.5	50	0	109	70	130			
Bromochloromethane	54.5	2.5	50	0	109	70	130			
Chloroform	56.4	2.5	50	1.02	111	67	130			
2,2-Dichloropropane	63.4	2.5	50	0	127	30	152			
1,2-Dichloroethane	57.5	2.5	50	0	115	60	135			
1,1,1-Trichloroethane	58.4	2.5	50	0	117	59	137			
1,1-Dichloropropene	57.3	2.5	50	0	115	63	130			
Carbon tetrachloride	60	2.5	50	0	120	50	147			
Benzene	52.9	1.3	50	0	106	67	130			
Dibromomethane	52.1	2.5	50	0	104	69	133			
1,2-Dichloropropane	58.9	2.5	50	0	118	69	130			
Trichloroethene	55.4	2.5	50	0	111	69	130			
Bromodichloromethane	57.4	2.5	50	0	115	66	134			
cis-1,3-Dichloropropene	52.3	2.5	50	0	105	63	130			
trans-1,3-Dichloropropene	55.9	2.5	50	0	112	66	131			
1,1,2-Trichloroethane	48.7	2.5	50	0	97	68	130			
Toluene	51.1	1.3	50	0	102	66	130			
1,3-Dichloropropane	47.6	2.5	50	0	95	70	130			
Dibromochloromethane	53.1	2.5	50	0	106	70	130			
1,2-Dibromoethane (EDB)	97.7	5	100	0	98	70	130			
Tetrachloroethene	55.9	2.5	50	0	112	61	134			
1,1,1,2-Tetrachloroethane	51.8	2.5	50	0	104	70	130			
Chlorobenzene	50.1	2.5	50	0	100	70	130			
Ethylbenzene	54.5	1.3	50	0	109	68	130			
m,p-Xylene	54	1.3	50	0	108	64	130			
Bromoform	55.7	2.5	50	0	111	64	138			
Styrene	73.8	2.5	50	0	148	69	130			M55
o-Xylene	55.1	1.3	50	0	110	70	130			
1,1,2,2-Tetrachloroethane	45.6	2.5	50	0	91	65	131			
1,2,3-Trichloropropane	103	10	100	0	103	70	130			
Isopropylbenzene	50.4	2.5	50	0	101	64	138			
Bromobenzene	44.2	2.5	50	0	88	70	130			
n-Propylbenzene	48.1	2.5	50	0	96	66	132			
4-Chlorotoluene	48.9	2.5	50	0	98	70	130			
2-Chlorotoluene	48.2	2.5	50	0	96	70	130			
1,3,5-Trimethylbenzene	49.7	2.5	50	0	99	66	136			
tert-Butylbenzene	49.6	2.5	50	0	99	65	137			
1,2,4-Trimethylbenzene	49.5	2.5	50	0	99	65	137			
sec-Butylbenzene	50.6	2.5	50	0	101	66	134			
1,3-Dichlorobenzene	45.1	2.5	50	0	90	70	130			
1,4-Dichlorobenzene	45	2.5	50	0	90	70	130			
4-Isopropyltoluene	51.7	2.5	50	0	103	66	137			
1,2-Dichlorobenzene	42.3	2.5	50	0	85	70	130			
n-Butylbenzene	54.2	2.5	50	0	108	60	142			
1,2-Dibromo-3-chloropropane (DBCP)	206	15	250	0	82	67	130			
1,2,4-Trichlorobenzene	47.7	10	50	0	95	61	137			
Naphthalene	46.8	10	50	0	94	40	167			
Hexachlorobutadiene	104	10	100	0	104	61	130			
1,2,3-Trichlorobenzene	45.7	10	50	0	91	51	144			
Surr: 1,2-Dichloroethane-d4	56.1		50		112	70	130			
Surr: Toluene-d8	47.4		50		95	70	130			
Surr: 4-Bromofluorobenzene	43.4		50		87	70	130			

Alpha Analytical, Inc.

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Date: 20-May-2010

QC Summary Report

Work Order: 10051141

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

File ID: **C:\HPCHEM\MS07\DATA\100514\10051412.D** Batch ID: **MS07W0514M** Analysis Date: **05/14/2010 12:13**

Sample ID: **10051201-05AMSD** Units : **µg/L** Run ID: **MSD_07_100514B** Prep Date: **05/14/2010 12:13**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	48.3	2.5	50	0	97	13	167	49.3	2.1(20)	
Chloromethane	50.1	10	50	0	100	28	145	48.89	2.5(20)	
Vinyl chloride	56.2	2.5	50	0	112	43	134	54.36	3.3(20)	
Chloroethane	59.9	2.5	50	0	120	39	154	58.86	1.7(20)	
Bromomethane	90.7	10	50	0	181	19	176	87.3	3.8(20)	M55
Trichlorofluoromethane	55.7	2.5	50	0	111	34	160	56.89	2.2(20)	
1,1-Dichloroethene	54	2.5	50	0	108	60	130	54.11	0.2(20)	
Dichloromethane	48	10	50	0	96	68	130	49.37	2.9(20)	
trans-1,2-Dichloroethene	55.6	2.5	50	0	111	63	130	56.18	1.1(20)	
Methyl tert-butyl ether (MTBE)	47.7	1.3	50	0	95	56	141	48.16	1.1(20)	
1,1-Dichloroethane	52.5	2.5	50	0	105	61	130	53.58	2.1(20)	
cis-1,2-Dichloroethene	53.4	2.5	50	0	107	70	130	54.38	1.7(20)	
Bromochloromethane	52.7	2.5	50	0	105	70	130	54.54	3.5(20)	
Chloroform	54.7	2.5	50	1.02	107	67	130	56.42	3.1(20)	
2,2-Dichloropropane	61.6	2.5	50	0	123	30	152	63.37	2.8(20)	
1,2-Dichloroethane	55.1	2.5	50	0	110	60	135	57.48	4.3(20)	
1,1,1-Trichloroethane	57.4	2.5	50	0	115	59	137	58.37	1.6(20)	
1,1-Dichloropropene	55.5	2.5	50	0	111	63	130	57.3	3.2(20)	
Carbon tetrachloride	57.5	2.5	50	0	115	50	147	60.02	4.3(20)	
Benzene	51.2	1.3	50	0	102	67	130	52.86	3.2(20)	
Dibromomethane	49.9	2.5	50	0	99.8	69	133	52.1	4.3(20)	
1,2-Dichloropropane	56.1	2.5	50	0	112	69	130	58.85	4.8(20)	
Trichloroethene	53.6	2.5	50	0	107	69	130	55.44	3.4(20)	
Bromodichloromethane	54.9	2.5	50	0	110	66	134	57.36	4.4(20)	
cis-1,3-Dichloropropene	50.4	2.5	50	0	101	63	130	52.31	3.8(20)	
trans-1,3-Dichloropropene	53.8	2.5	50	0	108	66	131	55.92	3.8(20)	
1,1,2-Trichloroethane	46.7	2.5	50	0	93	68	130	48.73	4.2(20)	
Toluene	50	1.3	50	0	100	66	130	51.05	2.0(20)	
1,3-Dichloropropane	45.5	2.5	50	0	91	70	130	47.6	4.5(20)	
Dibromochloromethane	50	2.5	50	0	100	70	130	53.09	6.0(20)	
1,2-Dibromoethane (EDB)	92	5	100	0	92	70	130	97.65	5.9(20)	
Tetrachloroethene	54.1	2.5	50	0	108	61	134	55.94	3.3(20)	
1,1,1,2-Tetrachloroethane	50.1	2.5	50	0	100	70	130	51.82	3.4(20)	
Chlorobenzene	48.7	2.5	50	0	97	70	130	50.06	2.7(20)	
Ethylbenzene	52.9	1.3	50	0	106	68	130	54.48	2.9(20)	
m,p-Xylene	52.6	1.3	50	0	105	64	130	54.04	2.8(20)	
Bromoform	52.9	2.5	50	0	106	64	138	55.72	5.3(20)	
Styrene	71.4	2.5	50	0	143	69	130	73.79	3.3(20)	M55
o-Xylene	53.3	1.3	50	0	107	70	130	55.09	3.2(20)	
1,1,2,2-Tetrachloroethane	42.9	2.5	50	0	86	65	131	45.64	6.2(20)	
1,2,3-Trichloropropane	96.3	10	100	0	96	70	130	102.8	6.5(20)	
Isopropylbenzene	49	2.5	50	0	98	64	138	50.35	2.8(20)	
Bromobenzene	42.5	2.5	50	0	85	70	130	44.21	3.9(20)	
n-Propylbenzene	46.2	2.5	50	0	92	66	132	48.11	4.1(20)	
4-Chlorotoluene	47.8	2.5	50	0	96	70	130	48.87	2.3(20)	
2-Chlorotoluene	46.7	2.5	50	0	93	70	130	48.23	3.3(20)	
1,3,5-Trimethylbenzene	48.2	2.5	50	0	96	66	136	49.69	3.1(20)	
tert-Butylbenzene	48.5	2.5	50	0	97	65	137	49.63	2.3(20)	
1,2,4-Trimethylbenzene	48.2	2.5	50	0	96	65	137	49.45	2.6(20)	
sec-Butylbenzene	48.2	2.5	50	0	96	66	134	50.63	4.9(20)	
1,3-Dichlorobenzene	43.6	2.5	50	0	87	70	130	45.12	3.4(20)	
1,4-Dichlorobenzene	43.4	2.5	50	0	87	70	130	45.01	3.7(20)	
4-Isopropyltoluene	50.1	2.5	50	0	100	66	137	51.72	3.2(20)	
1,2-Dichlorobenzene	40.8	2.5	50	0	82	70	130	42.27	3.5(20)	
n-Butylbenzene	52.2	2.5	50	0	104	60	142	54.18	3.8(20)	
1,2-Dibromo-3-chloropropane (DBCP)	191	15	250	0	77	67	130	205.8	7.3(20)	
1,2,4-Trichlorobenzene	46.5	10	50	0	93	61	137	47.67	2.5(20)	
Naphthalene	45	10	50	0	90	40	167	46.77	3.9(20)	
Hexachlorobutadiene	101	10	100	0	101	61	130	103.5	2.7(20)	
1,2,3-Trichlorobenzene	44.7	10	50	0	89	51	144	45.74	2.3(20)	
Surr: 1,2-Dichloroethane-d4	55.1		50		110	70	130			
Surr: Toluene-d8	48		50		96	70	130			
Surr: 4-Bromofluorobenzene	43.5		50		87	70	130			

Alpha Analytical, Inc.

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Date: *20-May-2010*

QC Summary Report

Work Order: 10051141

Comments:

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

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

L1 = The associated blank spike recovery was above laboratory acceptance limits.

M55 = Matrix spike recovery was above laboratory acceptance limits.

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 : BMIS10051141

Report Due By : 5:00 PM On : 25-May-10

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

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

EDD Required : **Yes**

Sampled by : Chase Brogdon

PO : 218013

Client's COC # : 28932 Job : G005862/JPL Groundwater Monitoring

Cooler Temp	Samples Received	Date Printed
4 °C	11-May-10	11-May-10

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

Alpha Sample ID	Client Sample ID	Matrix	Collection Date	No. of Bottles Alpha	Sub	TAT	Requested Tests 300_0_W	314_W	ALKALINITY_W	METALS_DW	PH_W	TDS_W	VOC_TIC_W	VOC_W	Sample Remarks
BMI10051141-01A	MW-20-5	AQ	05/10/10 08:30	5	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10051141-02A	MW-20-4	AQ	05/10/10 09:10	5	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10051141-03A	MW-20-3	AQ	05/10/10 09:45	5	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10051141-04A	MW-20-2	AQ	05/10/10 10:19	5	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10051141-05A	MW-20-1	AQ	05/10/10 11:18	5	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10051141-06A	DUPE-04-2Q10	AQ	05/10/10 00:00	5	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10051141-07A	EB-08-05/10/10	AQ	05/10/10 11:04	5	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10051141-08A	TB-08-05/10/10	AQ	05/10/10 07:00	1	0	10							VOC by 524 Criteria	VOC by 524 Criteria	Reno TB, 3/10/10

Comments: Security seals intact. Frozen ice. Temp Blank #8801 received @ 4°C. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). :

	Signature	Print Name	Company	Date/Time
Logged in by:	Tara Dickinson	Tara Dickinson	**Alpha Analytical, Inc.**	5/11/10 10:11

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

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

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

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

28932

Page # 1 of 1

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

Required QC Level? I II III IV

EDD / EDF? YES ___ NO ___

Global ID # ___

Time Sampled	Date Sampled	Matrix* See Key Below	Sampled by: CHASE BROGDON Lab ID Number (Office Use Only)	Sample Description	TAT	Field Filtered	Total and type of containers ** See below	VOC (524.2)	TOTAL Cr, LEAD ARSENIC (200.8)	GEN CHEM (Na, K, Ca, Mg, Fe)(200.7)	C104 - (314.0)	GEN CHEM (300.0, 310.1, 160.1 TDS)			REMARKS
0830	5/10/10	AQ	BATTE10051141-01	MW-20-5	NORM		5	X	X	X	X	X			
0910			-02	MW-20-4			5	X	X	X	X	X			
0945			-03	MW-20-3			5	X	X	X	X	X			
1019			-04	MW-20-2			5	X	X	X	X	X			
1118			-05	MW-20-1			5	X	X	X	X	X			
"			-06	DUPE-04-2Q10			5	X	X	X	X	X			DUPLICATE
1104			-07	EB-08-05/10/10			5	X	X	X	X	X			EQUIPMENT BLANK
0700			-08	TB-08-05/10/10			1	X							TRIP BLANK

ADDITIONAL INSTRUCTIONS:

	Signature	Print Name	Company	Date	Time
Relinquished by		CHASE BROGDON	INSIGHT ECOTOX	5/10/10	1230
Received by		Anthony Stark	Alpha Analytical	5/10/10	1230
Relinquished by		Anthony Stark	Alpha Analytical	5/10/10	1230
Received by		TARA DICKINSON	Alpha	5/11/10	10:11
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: *21-May-2010*

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

CASE NARRATIVE

Job: G005862/JPL Groundwater Monitoring
Work Order: BMI10051201 **Cooler Temp:** 4 °C

Alpha's Sample ID	Client's Sample ID	Matrix
10051201-01A	MW-21-5	Aqueous
10051201-02A	MW-21-4	Aqueous
10051201-03A	MW-21-3	Aqueous
10051201-04A	MW-21-2	Aqueous
10051201-05A	MW-21-1	Aqueous
10051201-06A	EB-09-05/11/10	Aqueous
10051201-07A	TB-09-05/11/10	Aqueous

Manually Integrated Analytes

Alpha's Sample ID	Test Reference	Analyte
NONE		

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

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

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

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 05/12/10

Job: G005862/JPL Groundwater Monitoring

Anions by IC
EPA Method 300.0

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-21-5**				
Lab ID : BMI10051201-01A Chloride	77	50 mg/L	05/12/10 10:48	05/12/10 17:33
Date Sampled 05/11/10 08:08 Nitrite (NO2) - N	ND	0.25 mg/L	05/12/10 10:48	05/12/10 17:33
Nitrate (NO3) - N	8.8	0.25 mg/L	05/12/10 10:48	05/12/10 17:33
Phosphate, ortho - P	ND	0.50 mg/L	05/12/10 10:48	05/12/10 17:33
Sulfate (SO4)	130	75 mg/L	05/12/10 10:48	05/12/10 17:33
Client ID: **MW-21-4**				
Lab ID : BMI10051201-02A Chloride	75	50 mg/L	05/12/10 10:48	05/12/10 18:10
Date Sampled 05/11/10 08:41 Nitrite (NO2) - N	ND	0.25 mg/L	05/12/10 10:48	05/12/10 18:10
Nitrate (NO3) - N	5.0	0.25 mg/L	05/12/10 10:48	05/12/10 18:10
Phosphate, ortho - P	ND	0.50 mg/L	05/12/10 10:48	05/12/10 18:10
Sulfate (SO4)	120	75 mg/L	05/12/10 10:48	05/12/10 18:10
Client ID: **MW-21-3**				
Lab ID : BMI10051201-03A Chloride	110	50 mg/L	05/12/10 10:48	05/12/10 18:28
Date Sampled 05/11/10 09:14 Nitrite (NO2) - N	ND	0.25 mg/L	05/12/10 10:48	05/12/10 18:28
Nitrate (NO3) - N	10	0.25 mg/L	05/12/10 10:48	05/12/10 18:28
Phosphate, ortho - P	ND	0.50 mg/L	05/12/10 10:48	05/12/10 18:28
Sulfate (SO4)	160	75 mg/L	05/12/10 10:48	05/12/10 18:28
Client ID: **MW-21-2**				
Lab ID : BMI10051201-04A Chloride	130	50 mg/L	05/12/10 10:48	05/12/10 18:47
Date Sampled 05/11/10 09:47 Nitrite (NO2) - N	ND	0.25 mg/L	05/12/10 10:48	05/12/10 18:47
Nitrate (NO3) - N	9.2	0.25 mg/L	05/12/10 10:48	05/12/10 18:47
Phosphate, ortho - P	ND	0.50 mg/L	05/12/10 10:48	05/12/10 18:47
Sulfate (SO4)	180	75 mg/L	05/12/10 10:48	05/12/10 18:47
Client ID: **MW-21-1**				
Lab ID : BMI10051201-05A Chloride	130	50 mg/L	05/12/10 10:48	05/12/10 19:05
Date Sampled 05/11/10 10:25 Nitrite (NO2) - N	ND	0.25 mg/L	05/12/10 10:48	05/12/10 19:05
Nitrate (NO3) - N	17	0.25 mg/L	05/12/10 10:48	05/12/10 19:05
Phosphate, ortho - P	ND	0.50 mg/L	05/12/10 10:48	05/12/10 19:05
Sulfate (SO4)	210	75 mg/L	05/12/10 10:48	05/12/10 19:05
Client ID: **EB-09-05/11/10**				
Lab ID : BMI10051201-06A Chloride	ND	0.50 mg/L	05/12/10 10:48	05/12/10 19:24
Date Sampled 05/11/10 10:10 Nitrite (NO2) - N	ND	0.25 mg/L	05/12/10 10:48	05/12/10 19:24
Nitrate (NO3) - N	ND	0.25 mg/L	05/12/10 10:48	05/12/10 19:24
Phosphate, ortho - P	ND	0.50 mg/L	05/12/10 10:48	05/12/10 19:24
Sulfate (SO4)	ND	0.50 mg/L	05/12/10 10:48	05/12/10 19:24

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.

5/25/10

Report Date

Alpha Analytical, Inc.

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ANALYTICAL REPORT

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 05/12/10

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 : BMI10051201-01A Perchlorate	3.49	1.00 µg/L	05/13/10 11:54	05/13/10 16:13
Date Sampled 05/11/10 08:08				
Client ID: **MW-21-4**				
Lab ID : BMI10051201-02A Perchlorate	2.54	1.00 µg/L	05/13/10 11:54	05/13/10 16:32
Date Sampled 05/11/10 08:41				
Client ID: **MW-21-3**				
Lab ID : BMI10051201-03A Perchlorate	3.42	1.00 µg/L	05/13/10 11:54	05/13/10 16:50
Date Sampled 05/11/10 09:14				
Client ID: **MW-21-2**				
Lab ID : BMI10051201-04A Perchlorate	3.22	1.00 µg/L	05/13/10 11:54	05/13/10 17:45
Date Sampled 05/11/10 09:47				
Client ID: **MW-21-1**				
Lab ID : BMI10051201-05A Perchlorate	2.82	1.00 µg/L	05/13/10 11:54	05/13/10 18:04
Date Sampled 05/11/10 10:25				
Client ID: **EB-09-05/11/10**				
Lab ID : BMI10051201-06A Perchlorate	ND	1.00 µg/L	05/13/10 11:54	05/14/10 13:20
Date Sampled 05/11/10 10:10				

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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5/25/10
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ANALYTICAL REPORT

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 05/12/10

Job: G005862/JPL Groundwater Monitoring

Alkalinity
SM2320B

Parameter		Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-21-5**					
Lab ID : BMI10051201-01A	Alkalinity, Bicarbonate (As CaCO3)	220	10 mg/L	05/21/10 10:56	05/21/10 10:56
Date Sampled 05/11/10 08:08	Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	05/21/10 10:56	05/21/10 10:56
	Alkalinity, Total (As CaCO3 at pH 4.5)	220	10 mg/L	05/21/10 10:56	05/21/10 10:56
Client ID: **MW-21-4**					
Lab ID : BMI10051201-02A	Alkalinity, Bicarbonate (As CaCO3)	170	10 mg/L	05/21/10 11:05	05/21/10 11:05
Date Sampled 05/11/10 08:41	Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	05/21/10 11:05	05/21/10 11:05
	Alkalinity, Total (As CaCO3 at pH 4.5)	170	10 mg/L	05/21/10 11:05	05/21/10 11:05
Client ID: **MW-21-3**					
Lab ID : BMI10051201-03A	Alkalinity, Bicarbonate (As CaCO3)	310	10 mg/L	05/21/10 11:08	05/21/10 11:08
Date Sampled 05/11/10 09:14	Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	05/21/10 11:08	05/21/10 11:08
	Alkalinity, Total (As CaCO3 at pH 4.5)	310	10 mg/L	05/21/10 11:08	05/21/10 11:08
Client ID: **MW-21-2**					
Lab ID : BMI10051201-04A	Alkalinity, Bicarbonate (As CaCO3)	320	10 mg/L	05/21/10 11:13	05/21/10 11:13
Date Sampled 05/11/10 09:47	Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	05/21/10 11:13	05/21/10 11:13
	Alkalinity, Total (As CaCO3 at pH 4.5)	320	10 mg/L	05/21/10 11:13	05/21/10 11:13
Client ID: **MW-21-1**					
Lab ID : BMI10051201-05A	Alkalinity, Bicarbonate (As CaCO3)	270	10 mg/L	05/21/10 11:17	05/21/10 11:17
Date Sampled 05/11/10 10:25	Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	05/21/10 11:17	05/21/10 11:17
	Alkalinity, Total (As CaCO3 at pH 4.5)	270	10 mg/L	05/21/10 11:17	05/21/10 11:17
Client ID: **EB-09-05/11/10**					
Lab ID : BMI10051201-06A	Alkalinity, Bicarbonate (As CaCO3)	ND	10 mg/L	05/21/10 11:28	05/21/10 11:28
Date Sampled 05/11/10 10:10	Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	05/21/10 11:28	05/21/10 11:28
	Alkalinity, Total (As CaCO3 at pH 4.5)	ND	10 mg/L	05/21/10 11:28	05/21/10 11:28

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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5/25/10
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
3990 Old Town Ave
San Diego, CA 92110

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 05/12/10

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 : BMI10051201-01A Sodium (Na)	32	0.50 mg/L	05/13/10 16:42	05/14/10 01:20
Date Sampled 05/11/10 08:08 Magnesium (Mg)	29	0.50 mg/L	05/13/10 16:42	05/14/10 01:20
Potassium (K)	2.5	0.50 mg/L	05/13/10 16:42	05/14/10 01:20
Calcium (Ca)	100	0.50 mg/L	05/13/10 16:42	05/14/10 01:20
Chromium (Cr)	ND	0.0050 mg/L	05/13/10 16:42	05/14/10 01:20
Iron (Fe)	0.31	0.10 mg/L	05/13/10 16:42	05/14/10 01:20
Arsenic (As)	ND	0.0020 mg/L	05/13/10 16:42	05/14/10 01:20
Lead (Pb)	ND	0.0050 mg/L	05/13/10 16:42	05/14/10 01:20
Client ID: **MW-21-4**				
Lab ID : BMI10051201-02A Sodium (Na)	28	0.50 mg/L	05/13/10 16:42	05/14/10 01:25
Date Sampled 05/11/10 08:41 Magnesium (Mg)	25	0.50 mg/L	05/13/10 16:42	05/14/10 01:25
Potassium (K)	2.4	0.50 mg/L	05/13/10 16:42	05/14/10 01:25
Calcium (Ca)	89	0.50 mg/L	05/13/10 16:42	05/14/10 01:25
Chromium (Cr)	ND	0.0050 mg/L	05/13/10 16:42	05/14/10 01:25
Iron (Fe)	0.40	0.10 mg/L	05/13/10 16:42	05/14/10 01:25
Arsenic (As)	ND	0.0020 mg/L	05/13/10 16:42	05/14/10 01:25
Lead (Pb)	ND	0.0050 mg/L	05/13/10 16:42	05/14/10 01:25
Client ID: **MW-21-3**				
Lab ID : BMI10051201-03A Sodium (Na)	44	0.50 mg/L	05/13/10 16:42	05/14/10 01:31
Date Sampled 05/11/10 09:14 Magnesium (Mg)	40	0.50 mg/L	05/13/10 16:42	05/14/10 01:31
Potassium (K)	3.3	0.50 mg/L	05/13/10 16:42	05/14/10 01:31
Calcium (Ca)	140	0.50 mg/L	05/13/10 16:42	05/14/10 01:31
Chromium (Cr)	ND	0.0050 mg/L	05/13/10 16:42	05/14/10 01:31
Iron (Fe)	0.59	0.10 mg/L	05/13/10 16:42	05/14/10 01:31
Arsenic (As)	ND	0.0020 mg/L	05/13/10 16:42	05/14/10 01:31
Lead (Pb)	ND	0.0050 mg/L	05/13/10 16:42	05/14/10 01:31
Client ID: **MW-21-2**				
Lab ID : BMI10051201-04A Sodium (Na)	61	0.50 mg/L	05/13/10 16:42	05/14/10 01:59
Date Sampled 05/11/10 09:47 Magnesium (Mg)	43	0.50 mg/L	05/13/10 16:42	05/14/10 01:59
Potassium (K)	3.0	0.50 mg/L	05/13/10 16:42	05/14/10 01:59
Calcium (Ca)	140	0.50 mg/L	05/13/10 16:42	05/14/10 01:59
Chromium (Cr)	ND	0.0050 mg/L	05/13/10 16:42	05/14/10 01:59
Iron (Fe)	0.62	0.10 mg/L	05/13/10 16:42	05/14/10 01:59
Arsenic (As)	ND	0.0020 mg/L	05/13/10 16:42	05/14/10 01:59
Lead (Pb)	ND	0.0050 mg/L	05/13/10 16:42	05/14/10 01:59

Alpha Analytical, Inc.

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Client ID: **MW-21-1**					
Lab ID : BMI10051201-05A	Sodium (Na)	35	0.50 mg/L	05/13/10 16:42	05/14/10 02:05
Date Sampled 05/11/10 10:25	Magnesium (Mg)	46	0.50 mg/L	05/13/10 16:42	05/14/10 02:05
	Potassium (K)	2.5	0.50 mg/L	05/13/10 16:42	05/14/10 02:05
	Calcium (Ca)	160	0.50 mg/L	05/13/10 16:42	05/14/10 02:05
	Chromium (Cr)	ND	0.0050 mg/L	05/13/10 16:42	05/14/10 02:05
	Iron (Fe)	0.76	0.10 mg/L	05/13/10 16:42	05/14/10 02:05
	Arsenic (As)	ND	0.0020 mg/L	05/13/10 16:42	05/14/10 02:05
	Lead (Pb)	ND	0.0050 mg/L	05/13/10 16:42	05/14/10 02:05
Client ID: **EB-09-05/11/10**					
Lab ID : BMI10051201-06A	Sodium (Na)	ND	0.50 mg/L	05/13/10 16:42	05/14/10 02:10
Date Sampled 05/11/10 10:10	Magnesium (Mg)	ND	0.50 mg/L	05/13/10 16:42	05/14/10 02:10
	Potassium (K)	ND	0.50 mg/L	05/13/10 16:42	05/14/10 02:10
	Calcium (Ca)	ND	0.50 mg/L	05/13/10 16:42	05/14/10 02:10
	Chromium (Cr)	ND	0.0050 mg/L	05/13/10 16:42	05/14/10 02:10
	Iron (Fe)	ND	0.10 mg/L	05/13/10 16:42	05/14/10 02:10
	Arsenic (As)	ND	0.0020 mg/L	05/13/10 16:42	05/14/10 02:10
	Lead (Pb)	ND	0.0050 mg/L	05/13/10 16:42	05/14/10 02:10

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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5/25/10

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
3990 Old Town Ave
San Diego, CA 92110

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 05/12/10

Job: G005862/JPL Groundwater Monitoring

pH (Range 1.7 to 12.4)
EPA Method 150.2 / SM4500HB / SW9040C

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-21-5**				
Lab ID : BMI10051201-01A pH	7.7	1.7 pH Units	05/12/10 14:49	05/12/10 14:49
Date Sampled 05/11/10 08:08 pH - Temperature	22	1.0 °C	05/12/10 14:49	05/12/10 14:49
Client ID: **MW-21-4**				
Lab ID : BMI10051201-02A pH	7.5	1.7 pH Units	05/12/10 14:55	05/12/10 14:55
Date Sampled 05/11/10 08:41 pH - Temperature	20	1.0 °C	05/12/10 14:55	05/12/10 14:55
Client ID: **MW-21-3**				
Lab ID : BMI10051201-03A pH	7.4	1.7 pH Units	05/12/10 14:58	05/12/10 14:58
Date Sampled 05/11/10 09:14 pH - Temperature	21	1.0 °C	05/12/10 14:58	05/12/10 14:58
Client ID: **MW-21-2**				
Lab ID : BMI10051201-04A pH	7.3	1.7 pH Units	05/12/10 15:00	05/12/10 15:00
Date Sampled 05/11/10 09:47 pH - Temperature	21	1.0 °C	05/12/10 15:00	05/12/10 15:00
Client ID: **MW-21-1**				
Lab ID : BMI10051201-05A pH	7.1	1.7 pH Units	05/12/10 15:06	05/12/10 15:06
Date Sampled 05/11/10 10:25 pH - Temperature	21	1.0 °C	05/12/10 15:06	05/12/10 15:06
Client ID: **EB-09-05/11/10**				
Lab ID : BMI10051201-06A pH	6.3	1.7 pH Units	05/12/10 15:12	05/12/10 15:12
Date Sampled 05/11/10 10:10 pH - Temperature	21	1.0 °C	05/12/10 15:12	05/12/10 15:12

The EPA has established an analytical holding time of 15 minutes for this method as documented in the Methods Update Rule, Federal Register, Vol 72, No 47, March 2007. This holding time will always be exceeded, unless samples are analyzed in the field.
The laboratory performed this analysis in the shortest practical holding time after sample receipt.

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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5/25/10
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
3990 Old Town Ave
San Diego, CA 92110

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 05/12/10

Job: G005862/JPL Groundwater Monitoring

Total Dissolved Solids (TDS)
SM2540C

Parameter		Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-21-5**					
Lab ID : BMI10051201-01A	Solids, Total Dissolved (TDS)	540	10 mg/L	05/19/10	05/19/10
Date Sampled 05/11/10 08:08					
Client ID: **MW-21-4**					
Lab ID : BMI10051201-02A	Solids, Total Dissolved (TDS)	500	10 mg/L	05/19/10	05/19/10
Date Sampled 05/11/10 08:41					
Client ID: **MW-21-3**					
Lab ID : BMI10051201-03A	Solids, Total Dissolved (TDS)	750	10 mg/L	05/19/10	05/19/10
Date Sampled 05/11/10 09:14					
Client ID: **MW-21-2**					
Lab ID : BMI10051201-04A	Solids, Total Dissolved (TDS)	820	10 mg/L	05/19/10	05/19/10
Date Sampled 05/11/10 09:47					
Client ID: **MW-21-1**					
Lab ID : BMI10051201-05A	Solids, Total Dissolved (TDS)	880	10 mg/L	05/19/10	05/19/10
Date Sampled 05/11/10 10:25					
Client ID: **EB-09-05/11/10**					
Lab ID : BMI10051201-06A	Solids, Total Dissolved (TDS)	ND	10 mg/L	05/19/10	05/19/10
Date Sampled 05/11/10 10:10					

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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ANALYTICAL REPORT

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

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

Tentatively Identified Compounds - Volatile Organics by GC/MS

	Parameter	Estimated Concentration	Estimated Reporting Limit	Date Extracted	Date Analyzed
Client ID : **MW-21-5**					
Lab ID : BMI10051201-01A	*** None Found ***	ND	2.0 µg/L	05/14/10 16:56	05/14/10 16:56
Date Received : 05/12/10					
Date Sampled : 05/11/10 08:08					
Client ID : **MW-21-4**					
Lab ID : BMI10051201-02A	*** None Found ***	ND	2.0 µg/L	05/14/10 17:20	05/14/10 17:20
Date Received : 05/12/10					
Date Sampled : 05/11/10 08:41					
Client ID : **MW-21-3**					
Lab ID : BMI10051201-03A	*** None Found ***	ND	2.0 µg/L	05/14/10 17:43	05/14/10 17:43
Date Received : 05/12/10					
Date Sampled : 05/11/10 09:14					
Client ID : **MW-21-2**					
Lab ID : BMI10051201-04A	*** None Found ***	ND	2.0 µg/L	05/14/10 18:07	05/14/10 18:07
Date Received : 05/12/10					
Date Sampled : 05/11/10 09:47					
Client ID : **MW-21-1**					
Lab ID : BMI10051201-05A	*** None Found ***	ND	2.0 µg/L	05/14/10 18:31	05/14/10 18:31
Date Received : 05/12/10					
Date Sampled : 05/11/10 10:25					
Client ID : **EB-09-05/11/10**					
Lab ID : BMI10051201-06A	*** None Found ***	ND	2.0 µg/L	05/14/10 14:11	05/14/10 14:11
Date Received : 05/12/10					
Date Sampled : 05/11/10 10:10					
Client ID : **TB-09-05/11/10**					
Lab ID : BMI10051201-07A	*** None Found ***	ND	2.0 µg/L	05/14/10 13:48	05/14/10 13:48
Date Received : 05/12/10					
Date Sampled : 05/11/10 07:00					

Alpha Analytical, Inc.

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Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

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5/25/10

Report Date

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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10051201-01A
Client I.D. Number: MW-21-5

Sampled: 05/11/10 08:08
Received: 05/12/10
Extracted: 05/14/10 16:56
Analyzed: 05/14/10 16:56

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	3.4	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5	µg/L
25	Trichloroethene	ND	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	111	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	99	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	88	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	1.1	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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5/25/10
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI10051201-02A
Client I.D. Number: MW-21-4

Sampled: 05/11/10 08:41
Received: 05/12/10
Extracted: 05/14/10 17:20
Analyzed: 05/14/10 17:20

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit		Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37 Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38 Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39 m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40 Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41 Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42 o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44 1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45 Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46 Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47 n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48 4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49 2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50 1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	6.1	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	ND	0.50	µg/L	61 Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62 Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63 1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64 Surr: 1,2-Dichloroethane-d4	111	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65 Surr: Toluene-d8	99	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66 Surr: 4-Bromofluorobenzene	88	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L				
33	Dibromochloromethane	ND	0.50	µg/L				
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L				
35	Tetrachloroethene	0.94	0.50	µg/L				

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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Report Date

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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10051201-03A
Client I.D. Number: MW-21-3

Sampled: 05/11/10 09:14
Received: 05/12/10
Extracted: 05/14/10 17:43
Analyzed: 05/14/10 17:43

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	0.62	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	2.8	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5	µg/L
25	Trichloroethene	0.93	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	108	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	99	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	90	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	3.9	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer
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5/25/10
Report Date

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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10051201-04A
Client I.D. Number: MW-21-2

Sampled: 05/11/10 09:47
Received: 05/12/10
Extracted: 05/14/10 18:07
Analyzed: 05/14/10 18:07

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	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	1.0	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	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	97	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	88	(70-130)	%REC
32	1,3-Dichloropropane	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					

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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5/25/10
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI10051201-05A
Client I.D. Number: MW-21-1

Sampled: 05/11/10 10:25
Received: 05/12/10
Extracted: 05/14/10 18:31
Analyzed: 05/14/10 18:31

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit		Compound	Concentration		Reporting Limit	
1	Dichlorodifluoromethane	ND		0.50	µg/L	36 1,1,1,2-Tetrachloroethane	ND		0.50	µg/L
2	Chloromethane	ND		1.0	µg/L	37 Chlorobenzene	ND		0.50	µg/L
3	Vinyl chloride	ND		0.50	µg/L	38 Ethylbenzene	ND		0.50	µg/L
4	Chloroethane	ND		0.50	µg/L	39 m,p-Xylene	ND		0.50	µg/L
5	Bromomethane	ND	J	1.0	µg/L	40 Bromoform	ND		0.50	µg/L
6	Trichlorofluoromethane	ND		0.50	µg/L	41 Styrene	ND	J	0.50	µg/L
7	1,1-Dichloroethene	ND		0.50	µg/L	42 o-Xylene	ND		0.50	µg/L
8	Dichloromethane	ND		1.0	µg/L	43 1,1,2,2-Tetrachloroethane	ND		0.50	µg/L
9	Freon-113	ND		0.50	µg/L	44 1,2,3-Trichloropropane	ND		1.0	µg/L
10	trans-1,2-Dichloroethene	ND		0.50	µg/L	45 Isopropylbenzene	ND		0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND		0.50	µg/L	46 Bromobenzene	ND		0.50	µg/L
12	1,1-Dichloroethane	ND		0.50	µg/L	47 n-Propylbenzene	ND		0.50	µg/L
13	2-Butanone (MEK)	ND		10	µg/L	48 4-Chlorotoluene	ND		0.50	µg/L
14	cis-1,2-Dichloroethene	ND		0.50	µg/L	49 2-Chlorotoluene	ND		0.50	µg/L
15	Bromochloromethane	ND		0.50	µg/L	50 1,3,5-Trimethylbenzene	ND		0.50	µg/L
16	Chloroform	1.0		0.50	µg/L	51 tert-Butylbenzene	ND		0.50	µg/L
17	2,2-Dichloropropane	ND		0.50	µg/L	52 1,2,4-Trimethylbenzene	ND		0.50	µg/L
18	1,2-Dichloroethane	ND		0.50	µg/L	53 sec-Butylbenzene	ND		0.50	µg/L
19	1,1,1-Trichloroethane	ND		0.50	µg/L	54 1,3-Dichlorobenzene	ND		0.50	µg/L
20	1,1-Dichloropropene	ND		0.50	µg/L	55 1,4-Dichlorobenzene	ND		0.50	µg/L
21	Carbon tetrachloride	ND		0.50	µg/L	56 4-Isopropyltoluene	ND		0.50	µg/L
22	Benzene	ND		0.50	µg/L	57 1,2-Dichlorobenzene	ND		0.50	µg/L
23	Dibromomethane	ND		0.50	µg/L	58 n-Butylbenzene	ND		0.50	µg/L
24	1,2-Dichloropropane	ND		0.50	µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND		2.5	µg/L
25	Trichloroethene	ND		0.50	µg/L	60 1,2,4-Trichlorobenzene	ND		1.0	µg/L
26	Bromodichloromethane	ND		0.50	µg/L	61 Naphthalene	ND		1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND		2.5	µg/L	62 Hexachlorobutadiene	ND		1.0	µg/L
28	cis-1,3-Dichloropropene	ND		0.50	µg/L	63 1,2,3-Trichlorobenzene	ND		1.0	µg/L
29	trans-1,3-Dichloropropene	ND		0.50	µg/L	64 Surr: 1,2-Dichloroethane-d4	110		(70-130)	%REC
30	1,1,2-Trichloroethane	ND		0.50	µg/L	65 Surr: Toluene-d8	98		(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66 Surr: 4-Bromofluorobenzene	88		(70-130)	%REC
32	1,3-Dichloropropane	ND		0.50	µg/L					
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
J = Estimated: The analyte was positively identified; the quantitation is an estimation.

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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5/25/10
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI10051201-06A
Client I.D. Number: EB-09-05/11/10

Sampled: 05/11/10 10:10
Received: 05/12/10
Extracted: 05/14/10 14:11
Analyzed: 05/14/10 14:11

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit		Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37 Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38 Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39 m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40 Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41 Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42 o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44 1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45 Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46 Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47 n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48 4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49 2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50 1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51 tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52 1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53 sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54 1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55 1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56 4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57 1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58 n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5	µg/L
25	Trichloroethene	ND	0.50	µg/L	60 1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61 Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62 Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63 1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64 Surr: 1,2-Dichloroethane-d4	107	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65 Surr: Toluene-d8	100	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66 Surr: 4-Bromofluorobenzene	89	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L				
33	Dibromochloromethane	ND	0.50	µg/L				
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L				
35	Tetrachloroethene	ND	0.50	µg/L				

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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5/25/10
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Alpha Analytical Number: BMI10051201-07A
Client I.D. Number: TB-09-05/11/10

Sampled: 05/11/10 07:00
Received: 05/12/10
Extracted: 05/14/10 13:48
Analyzed: 05/14/10 13:48

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	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	112	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	99	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	89	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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5/25/10
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: BMI10051201 **Job:** G005862/JPL Groundwater Monitoring

Alpha's Sample ID	Client's Sample ID	Matrix	pH
10051201-01A	MW-21-5	Aqueous	2
10051201-02A	MW-21-4	Aqueous	2
10051201-03A	MW-21-3	Aqueous	2
10051201-04A	MW-21-2	Aqueous	2
10051201-05A	MW-21-1	Aqueous	2
10051201-06A	EB-09-05/11/10	Aqueous	2
10051201-07A	TB-09-05/11/10	Aqueous	2

5/25/10
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: *19-May-10*

QC Summary Report

Work Order: 10051201

Method Blank

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

File ID: **20** Batch ID: **24237** Analysis Date: **05/12/2010 11:41**

Sample ID: **MB-24237** Units : **mg/L** Run ID: **IC_1_100512A** Prep Date: **05/12/2010 10:48**

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

Laboratory Fortified Blank

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

File ID: **21** Batch ID: **24237** Analysis Date: **05/12/2010 11:59**

Sample ID: **LFB-24237** Units : **mg/L** Run ID: **IC_1_100512A** Prep Date: **05/12/2010 10:48**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	52.8	0.5	50		106	90	110			
Nitrite (NO2) - N	5.31	0.25	5		106	90	110			
Nitrate (NO3) - N	5.43	0.25	5		109	90	110			
Phosphate, ortho - P	4.92	0.5	5		98	90	110			
Sulfate (SO4)	107	0.5	100		107	90	110			

Sample Matrix Spike

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

File ID: **32** Batch ID: **24237** Analysis Date: **05/12/2010 15:23**

Sample ID: **10051202-01ALFM** Units : **mg/L** Run ID: **IC_1_100512A** Prep Date: **05/12/2010 10:48**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	57	0.5	50	3.37	107	80	120			
Nitrite (NO2) - N	4.82	0.25	5	0	96	80	120			
Nitrate (NO3) - N	5.89	0.25	5	0.3673	110	80	120			
Phosphate, ortho - P	4.65	0.5	5	0	93	80	120			
Sulfate (SO4)	120	0.5	100	26.92	93	80	120			

Sample Matrix Spike Duplicate

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

File ID: **33** Batch ID: **24237** Analysis Date: **05/12/2010 15:41**

Sample ID: **10051202-01ALFMD** Units : **mg/L** Run ID: **IC_1_100512A** Prep Date: **05/12/2010 10:48**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	57.3	0.5	50	3.37	108	80	120	57.02	0.5(15)	
Nitrite (NO2) - N	5.13	0.25	5	0	103	80	120	4.822	6.1(15)	
Nitrate (NO3) - N	5.87	0.25	5	0.3673	110	80	120	5.889	0.2(15)	
Phosphate, ortho - P	4.83	0.5	5	0	97	80	120	4.652	3.8(15)	
Sulfate (SO4)	121	0.5	100	26.92	94	80	120	119.9	0.7(15)	

Comments:

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

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Date: *19-May-10*

QC Summary Report

Work Order: 10051201

Method Blank

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

File ID: **14** Batch ID: **24249** Analysis Date: **05/13/2010 12:51**

Sample ID: **MB-24249** Units : **µg/L** Run ID: **IC_3_100513A** Prep Date: **05/13/2010 11:54**

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: **24249** Analysis Date: **05/13/2010 13:09**

Sample ID: **LFB-24249** Units : **µg/L** Run ID: **IC_3_100513A** Prep Date: **05/13/2010 11:54**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	28	2	25		112	85	115			

Sample Matrix Spike

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

File ID: **32** Batch ID: **24249** Analysis Date: **05/13/2010 18:22**

Sample ID: **10051201-05ALFM** Units : **µg/L** Run ID: **IC_3_100513A** Prep Date: **05/13/2010 11:54**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	28.8	2	25	2.817	104	80	120			

Sample Matrix Spike Duplicate

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

File ID: **33** Batch ID: **24249** Analysis Date: **05/13/2010 18:41**

Sample ID: **10051201-05ALFMD** Units : **µg/L** Run ID: **IC_3_100513A** Prep Date: **05/13/2010 11:54**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	29.1	2	25	2.817	105	80	120	28.78	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.

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Date: *25-May-10*

QC Summary Report

Work Order: 10051201

Laboratory Control Spike Type **LCS** Test Code: **SM2320B**

File ID: Batch ID: **W0521AL** Analysis Date: **05/21/2010 10:52**

Sample ID: **LCS-W0521AL** Units : **mg/L** Run ID: **WETLAB_100521B** Prep Date: **05/21/2010 10:52**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Alkalinity, Bicarbonate (As CaCO3)	236.4	10	250		95	80	120			
Alkalinity, Carbonate (As CaCO3)	236.4	10	250		95	80	120			
Alkalinity, Total (As CaCO3 at pH 4.5)	236	10	250		95	80	120			

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: *19-May-10*

QC Summary Report

Work Order: 10051201

Method Blank

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

File ID: **051310.B\087SMPL.D** Batch ID: **24250K** Analysis Date: **05/14/2010 00:00**

Sample ID: **MB-24250** Units : **mg/L** Run ID: **ICP/MS_100513A** Prep Date: **05/13/2010 16:42**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sodium (Na)	ND	0.5								
Magnesium (Mg)	ND	0.5								
Potassium (K)	ND	0.5								
Calcium (Ca)	ND	0.5								
Chromium (Cr)	ND	0.005								
Iron (Fe)	ND	0.1								
Arsenic (As)	ND	0.002								
Lead (Pb)	ND	0.005								

Laboratory Control Spike

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

File ID: **051310.B\088_LCS.D** Batch ID: **24250K** Analysis Date: **05/14/2010 00:06**

Sample ID: **LCS-24250** Units : **mg/L** Run ID: **ICP/MS_100513A** Prep Date: **05/13/2010 16:42**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sodium (Na)	4.79	0.5	5		96	80	120			
Magnesium (Mg)	4.88	0.5	5		98	80	120			
Potassium (K)	4.7	0.5	5		94	80	120			
Calcium (Ca)	4.7	0.5	5		94	80	120			
Chromium (Cr)	0.0465	0.005	0.05		93	80	120			
Iron (Fe)	4.31	0.1	5		86	80	120			
Arsenic (As)	0.049	0.002	0.05		98	80	120			
Lead (Pb)	0.0504	0.005	0.05		101	80	120			

Sample Matrix Spike

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

File ID: **051310.B\092SMPL.D** Batch ID: **24250K** Analysis Date: **05/14/2010 00:28**

Sample ID: **10051302-05AMS** Units : **mg/L** Run ID: **ICP/MS_100513A** Prep Date: **05/13/2010 16:42**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sodium (Na)	27.5	0.5	5	23.82	73	80	120			M3
Magnesium (Mg)	20.9	0.5	5	16.98	78	80	120			M2
Potassium (K)	7.26	0.5	5	2.941	86	80	120			
Calcium (Ca)	53.7	0.5	5	51.96	35	80	120			M3
Chromium (Cr)	0.045	0.005	0.05	0	90	80	120			
Iron (Fe)	4.57	0.1	5	0.3644	84	80	120			
Arsenic (As)	0.0483	0.002	0.05	0	97	80	120			
Lead (Pb)	0.0492	0.005	0.05	0	98	80	120			

Sample Matrix Spike Duplicate

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

File ID: **051310.B\093SMPL.D** Batch ID: **24250K** Analysis Date: **05/14/2010 00:34**

Sample ID: **10051302-05AMSD** Units : **mg/L** Run ID: **ICP/MS_100513A** Prep Date: **05/13/2010 16:42**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sodium (Na)	28.6	0.5	5	23.82	96	80	120	27.48	4.0(20)	
Magnesium (Mg)	21.7	0.5	5	16.98	94	80	120	20.88	3.8(20)	
Potassium (K)	7.7	0.5	5	2.941	95	80	120	7.262	5.9(20)	
Calcium (Ca)	56.1	0.5	5	51.96	82	80	120	53.7	4.3(20)	
Chromium (Cr)	0.048	0.005	0.05	0	96	80	120	0.04496	6.5(20)	
Iron (Fe)	4.84	0.1	5	0.3644	89	80	120	4.569	5.7(20)	
Arsenic (As)	0.05	0.002	0.05	0	100	80	120	0.04826	3.5(20)	
Lead (Pb)	0.0507	0.005	0.05	0	101	80	120	0.04916	3.2(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.

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.

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: *19-May-10*

QC Summary Report

Work Order: 10051201

Laboratory Control Spike Type **LCS** Test Code: **EPA Method 150.2 / SM4500HB / SW9040C**

File ID: Batch ID: **W0512PH** Analysis Date: **05/12/2010 14:46**

Sample ID: **LCS-W0512PH** Units : **pH Units** Run ID: **WETLAB_100512A** Prep Date: **05/12/2010 14:46**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
pH	4.97	1.7	5		99	90	110			

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: *20-May-10*

QC Summary Report

Work Order: 10051201

Method Blank

Type **MBLK** Test Code: **SM2540C**

File ID: Batch ID: **W0517DS** Analysis Date: **05/19/2010 00:00**

Sample ID: **MBLK-W0517DS** Units : **mg/L** Run ID: **WETLAB_100517A** Prep Date: **05/19/2010 00:00**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Solids, Total Dissolved (TDS)	ND	10								

Laboratory Control Spike

Type **LCS** Test Code: **SM2540C**

File ID: Batch ID: **W0517DS** Analysis Date: **05/19/2010 00:00**

Sample ID: **LCS-W0517DS** Units : **mg/L** Run ID: **WETLAB_100517A** Prep Date: **05/19/2010 00:00**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Solids, Total Dissolved (TDS)	93	10	100		93	80	120			

Comments:

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Date: 21-May-2010

QC Summary Report

Work Order: 10051201

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

File ID: **C:\HPCHEM\MS07\DATA\100514\10051410.D** Batch ID: **MS07W0514M** Analysis Date: **05/14/2010 11:26**

Sample ID: **MBLK MS07W0514M** Units : **µg/L** Run ID: **MSD_07_100514B** Prep Date: **05/14/2010 11:26**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	ND	0.5								
Chloromethane	ND	1								
Vinyl chloride	ND	0.5								
Chloroethane	ND	0.5								
Bromomethane	ND	1								
Trichlorofluoromethane	ND	0.5								
1,1-Dichloroethene	ND	0.5								
Dichloromethane	ND	1								
Freon-113	ND	0.5								
trans-1,2-Dichloroethene	ND	0.5								
Methyl tert-butyl ether (MTBE)	ND	0.5								
1,1-Dichloroethane	ND	0.5								
2-Butanone (MEK)	ND	10								
cis-1,2-Dichloroethene	ND	0.5								
Bromochloromethane	ND	0.5								
Chloroform	ND	0.5								
2,2-Dichloropropane	ND	0.5								
1,2-Dichloroethane	ND	0.5								
1,1,1-Trichloroethane	ND	0.5								
1,1-Dichloropropene	ND	0.5								
Carbon tetrachloride	ND	0.5								
Benzene	ND	0.5								
Dibromomethane	ND	0.5								
1,2-Dichloropropane	ND	0.5								
Trichloroethene	ND	0.5								
Bromodichloromethane	ND	0.5								
4-Methyl-2-pentanone (MIBK)	ND	2.5								
cis-1,3-Dichloropropene	ND	0.5								
trans-1,3-Dichloropropene	ND	0.5								
1,1,2-Trichloroethane	ND	0.5								
Toluene	ND	0.5								
1,3-Dichloropropane	ND	0.5								
Dibromochloromethane	ND	0.5								
1,2-Dibromoethane (EDB)	ND	1								
Tetrachloroethene	ND	0.5								
1,1,1,2-Tetrachloroethane	ND	0.5								
Chlorobenzene	ND	0.5								
Ethylbenzene	ND	0.5								
m,p-Xylene	ND	0.5								
Bromoform	ND	0.5								
Styrene	ND	0.5								
o-Xylene	ND	0.5								
1,1,2,2-Tetrachloroethane	ND	0.5								
1,2,3-Trichloropropane	ND	1								
Isopropylbenzene	ND	0.5								
Bromobenzene	ND	0.5								
n-Propylbenzene	ND	0.5								
4-Chlorotoluene	ND	0.5								
2-Chlorotoluene	ND	0.5								
1,3,5-Trimethylbenzene	ND	0.5								
tert-Butylbenzene	ND	0.5								
1,2,4-Trimethylbenzene	ND	0.5								
sec-Butylbenzene	ND	0.5								
1,3-Dichlorobenzene	ND	0.5								
1,4-Dichlorobenzene	ND	0.5								
4-Isopropyltoluene	ND	0.5								
1,2-Dichlorobenzene	ND	0.5								
n-Butylbenzene	ND	0.5								
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5								
1,2,4-Trichlorobenzene	ND	1								
Naphthalene	ND	1								
Hexachlorobutadiene	ND	1								
1,2,3-Trichlorobenzene	ND	1								
Surr: 1,2-Dichloroethane-d4	10.9		10		109	70	130			
Surr: Toluene-d8	9.85		10		99	70	130			

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Date: *21-May-2010*

QC Summary Report

Work Order: 10051201

Surr: 4-Bromofluorobenzene	8.98		10	90	70	130			

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

File ID: **C:\HPCHEM\MS07\DATA\100514\10051406.D** Batch ID: **MS07W0514M** Analysis Date: **05/14/2010 09:52**

Sample ID: **LCS MS07W0514M** Units : **µg/L** Run ID: **MSD_07_100514B** Prep Date: **05/14/2010 09:52**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	7.68	1	10		77	70	130			
Chloromethane	8.51	2	10		85	70	130			
Vinyl chloride	9.54	1	10		95	70	130			
Chloroethane	10.6	1	10		106	70	130			
Bromomethane	15.7	2	10		157	70	130(130)			L1
Trichlorofluoromethane	10.6	1	10		106	70	130			
1,1-Dichloroethene	10.2	1	10		102	70	130			
Dichloromethane	9.56	2	10		96	70	130			
trans-1,2-Dichloroethene	10.9	1	10		109	70	130			
Methyl tert-butyl ether (MTBE)	9.84	0.5	10		98	70	130			
1,1-Dichloroethane	10.5	1	10		105	70	130			
cis-1,2-Dichloroethene	10.8	1	10		108	70	130			
Bromochloromethane	10.9	1	10		109	70	130			
Chloroform	10.6	1	10		106	70	130			
2,2-Dichloropropane	12.6	1	10		126	70	130			
1,2-Dichloroethane	11.6	1	10		116	70	130			
1,1,1-Trichloroethane	11.4	1	10		114	70	130			
1,1-Dichloropropene	11.4	1	10		114	70	130			
Carbon tetrachloride	11.7	1	10		117	70	130			
Benzene	10.6	0.5	10		106	70	130			
Dibromomethane	10.7	1	10		107	70	130			
1,2-Dichloropropane	11.9	1	10		119	70	130			
Trichloroethene	11.1	1	10		111	70	130			
Bromodichloromethane	11.7	1	10		117	70	130			
cis-1,3-Dichloropropene	11.2	1	10		112	70	130			
trans-1,3-Dichloropropene	11.8	1	10		118	70	130			
1,1,2-Trichloroethane	10.5	1	10		105	70	130			
Toluene	10.4	0.5	10		104	70	130			
1,3-Dichloropropane	10.1	1	10		101	70	130			
Dibromochloromethane	11.1	1	10		111	70	130			
1,2-Dibromoethane (EDB)	20.3	2	20		102	70	130			
Tetrachloroethene	11.1	1	10		111	70	130			
1,1,1,2-Tetrachloroethane	10.6	1	10		106	70	130			
Chlorobenzene	10.2	1	10		102	70	130			
Ethylbenzene	11	0.5	10		110	70	130			
m,p-Xylene	10.9	0.5	10		109	70	130			
Bromoform	11.6	1	10		116	70	130			
Styrene	15	1	10		150	70	130(130)			L1
o-Xylene	11.2	0.5	10		112	70	130			
1,1,2,2-Tetrachloroethane	9.42	1	10		94	70	130			
1,2,3-Trichloropropane	21.5	2	20		107	70	130			
Isopropylbenzene	10.3	1	10		103	70	130			
Bromobenzene	8.99	1	10		90	70	130			
n-Propylbenzene	9.74	1	10		97	70	130			
4-Chlorotoluene	9.96	1	10		99.6	70	130			
2-Chlorotoluene	9.81	1	10		98	70	130			
1,3,5-Trimethylbenzene	10	1	10		100	70	130			
tert-Butylbenzene	9.97	1	10		99.7	70	130			
1,2,4-Trimethylbenzene	9.98	1	10		99.8	70	130			
sec-Butylbenzene	10.1	1	10		101	70	130			
1,3-Dichlorobenzene	9.21	1	10		92	70	130			
1,4-Dichlorobenzene	9.29	1	10		93	70	130			
4-Isopropyltoluene	10.5	1	10		105	70	130			
1,2-Dichlorobenzene	8.66	1	10		87	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	9.89	2	10		99	70	130			
Naphthalene	9.88	2	10		99	70	130			
Hexachlorobutadiene	21.1	2	20		106	70	130			
1,2,3-Trichlorobenzene	9.57	2	10		96	70	130			
Surr: 1,2-Dichloroethane-d4	11.2		10		112	70	130			
Surr: Toluene-d8	9.69		10		97	70	130			
Surr: 4-Bromofluorobenzene	8.81		10		88	70	130			

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Date: *21-May-2010*

QC Summary Report

Work Order: 10051201

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

File ID: **C:\HPCHEM\MS07\DATA\100514\10051411.D** Batch ID: **MS07W0514M** Analysis Date: **05/14/2010 11:50**

Sample ID: **10051201-05AMS** Units : **µg/L** Run ID: **MSD_07_100514B** Prep Date: **05/14/2010 11:50**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	49.3	2.5	50	0	99	13	167			
Chloromethane	48.9	10	50	0	98	28	145			
Vinyl chloride	54.4	2.5	50	0	109	43	134			
Chloroethane	58.9	2.5	50	0	118	39	154			
Bromomethane	87.3	10	50	0	175	19	176			
Trichlorofluoromethane	56.9	2.5	50	0	114	34	160			
1,1-Dichloroethene	54.1	2.5	50	0	108	60	130			
Dichloromethane	49.4	10	50	0	99	68	130			
trans-1,2-Dichloroethene	56.2	2.5	50	0	112	63	130			
Methyl tert-butyl ether (MTBE)	48.2	1.3	50	0	96	56	141			
1,1-Dichloroethane	53.6	2.5	50	0	107	61	130			
cis-1,2-Dichloroethene	54.4	2.5	50	0	109	70	130			
Bromochloromethane	54.5	2.5	50	0	109	70	130			
Chloroform	56.4	2.5	50	1.02	111	67	130			
2,2-Dichloropropane	63.4	2.5	50	0	127	30	152			
1,2-Dichloroethane	57.5	2.5	50	0	115	60	135			
1,1,1-Trichloroethane	58.4	2.5	50	0	117	59	137			
1,1-Dichloropropene	57.3	2.5	50	0	115	63	130			
Carbon tetrachloride	60	2.5	50	0	120	50	147			
Benzene	52.9	1.3	50	0	106	67	130			
Dibromomethane	52.1	2.5	50	0	104	69	133			
1,2-Dichloropropane	58.9	2.5	50	0	118	69	130			
Trichloroethene	55.4	2.5	50	0	111	69	130			
Bromodichloromethane	57.4	2.5	50	0	115	66	134			
cis-1,3-Dichloropropene	52.3	2.5	50	0	105	63	130			
trans-1,3-Dichloropropene	55.9	2.5	50	0	112	66	131			
1,1,2-Trichloroethane	48.7	2.5	50	0	97	68	130			
Toluene	51.1	1.3	50	0	102	66	130			
1,3-Dichloropropane	47.6	2.5	50	0	95	70	130			
Dibromochloromethane	53.1	2.5	50	0	106	70	130			
1,2-Dibromoethane (EDB)	97.7	5	100	0	98	70	130			
Tetrachloroethene	55.9	2.5	50	0	112	61	134			
1,1,1,2-Tetrachloroethane	51.8	2.5	50	0	104	70	130			
Chlorobenzene	50.1	2.5	50	0	100	70	130			
Ethylbenzene	54.5	1.3	50	0	109	68	130			
m,p-Xylene	54	1.3	50	0	108	64	130			
Bromoform	55.7	2.5	50	0	111	64	138			
Styrene	73.8	2.5	50	0	148	69	130			M55
o-Xylene	55.1	1.3	50	0	110	70	130			
1,1,2,2-Tetrachloroethane	45.6	2.5	50	0	91	65	131			
1,2,3-Trichloropropane	103	10	100	0	103	70	130			
Isopropylbenzene	50.4	2.5	50	0	101	64	138			
Bromobenzene	44.2	2.5	50	0	88	70	130			
n-Propylbenzene	48.1	2.5	50	0	96	66	132			
4-Chlorotoluene	48.9	2.5	50	0	98	70	130			
2-Chlorotoluene	48.2	2.5	50	0	96	70	130			
1,3,5-Trimethylbenzene	49.7	2.5	50	0	99	66	136			
tert-Butylbenzene	49.6	2.5	50	0	99	65	137			
1,2,4-Trimethylbenzene	49.5	2.5	50	0	99	65	137			
sec-Butylbenzene	50.6	2.5	50	0	101	66	134			
1,3-Dichlorobenzene	45.1	2.5	50	0	90	70	130			
1,4-Dichlorobenzene	45	2.5	50	0	90	70	130			
4-Isopropyltoluene	51.7	2.5	50	0	103	66	137			
1,2-Dichlorobenzene	42.3	2.5	50	0	85	70	130			
n-Butylbenzene	54.2	2.5	50	0	108	60	142			
1,2-Dibromo-3-chloropropane (DBCP)	206	15	250	0	82	67	130			
1,2,4-Trichlorobenzene	47.7	10	50	0	95	61	137			
Naphthalene	46.8	10	50	0	94	40	167			
Hexachlorobutadiene	104	10	100	0	104	61	130			
1,2,3-Trichlorobenzene	45.7	10	50	0	91	51	144			
Surr: 1,2-Dichloroethane-d4	56.1		50		112	70	130			
Surr: Toluene-d8	47.4		50		95	70	130			
Surr: 4-Bromofluorobenzene	43.4		50		87	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: *21-May-2010*

QC Summary Report

Work Order: 10051201

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

File ID: **C:\HPCHEM\MS07\DATA\100514\10051412.D** Batch ID: **MS07W0514M** Analysis Date: **05/14/2010 12:13**

Sample ID: **10051201-05AMSD** Units : **µg/L** Run ID: **MSD_07_100514B** Prep Date: **05/14/2010 12:13**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	48.3	2.5	50	0	97	13	167	49.3	2.1(20)	
Chloromethane	50.1	10	50	0	100	28	145	48.89	2.5(20)	
Vinyl chloride	56.2	2.5	50	0	112	43	134	54.36	3.3(20)	
Chloroethane	59.9	2.5	50	0	120	39	154	58.86	1.7(20)	
Bromomethane	90.7	10	50	0	181	19	176	87.3	3.8(20)	M55
Trichlorofluoromethane	55.7	2.5	50	0	111	34	160	56.89	2.2(20)	
1,1-Dichloroethene	54	2.5	50	0	108	60	130	54.11	0.2(20)	
Dichloromethane	48	10	50	0	96	68	130	49.37	2.9(20)	
trans-1,2-Dichloroethene	55.6	2.5	50	0	111	63	130	56.18	1.1(20)	
Methyl tert-butyl ether (MTBE)	47.7	1.3	50	0	95	56	141	48.16	1.1(20)	
1,1-Dichloroethane	52.5	2.5	50	0	105	61	130	53.58	2.1(20)	
cis-1,2-Dichloroethene	53.4	2.5	50	0	107	70	130	54.38	1.7(20)	
Bromochloromethane	52.7	2.5	50	0	105	70	130	54.54	3.5(20)	
Chloroform	54.7	2.5	50	1.02	107	67	130	56.42	3.1(20)	
2,2-Dichloropropane	61.6	2.5	50	0	123	30	152	63.37	2.8(20)	
1,2-Dichloroethane	55.1	2.5	50	0	110	60	135	57.48	4.3(20)	
1,1,1-Trichloroethane	57.4	2.5	50	0	115	59	137	58.37	1.6(20)	
1,1-Dichloropropene	55.5	2.5	50	0	111	63	130	57.3	3.2(20)	
Carbon tetrachloride	57.5	2.5	50	0	115	50	147	60.02	4.3(20)	
Benzene	51.2	1.3	50	0	102	67	130	52.86	3.2(20)	
Dibromomethane	49.9	2.5	50	0	99.8	69	133	52.1	4.3(20)	
1,2-Dichloropropane	56.1	2.5	50	0	112	69	130	58.85	4.8(20)	
Trichloroethene	53.6	2.5	50	0	107	69	130	55.44	3.4(20)	
Bromodichloromethane	54.9	2.5	50	0	110	66	134	57.36	4.4(20)	
cis-1,3-Dichloropropene	50.4	2.5	50	0	101	63	130	52.31	3.8(20)	
trans-1,3-Dichloropropene	53.8	2.5	50	0	108	66	131	55.92	3.8(20)	
1,1,2-Trichloroethane	46.7	2.5	50	0	93	68	130	48.73	4.2(20)	
Toluene	50	1.3	50	0	100	66	130	51.05	2.0(20)	
1,3-Dichloropropane	45.5	2.5	50	0	91	70	130	47.6	4.5(20)	
Dibromochloromethane	50	2.5	50	0	100	70	130	53.09	6.0(20)	
1,2-Dibromoethane (EDB)	92	5	100	0	92	70	130	97.65	5.9(20)	
Tetrachloroethene	54.1	2.5	50	0	108	61	134	55.94	3.3(20)	
1,1,1,2-Tetrachloroethane	50.1	2.5	50	0	100	70	130	51.82	3.4(20)	
Chlorobenzene	48.7	2.5	50	0	97	70	130	50.06	2.7(20)	
Ethylbenzene	52.9	1.3	50	0	106	68	130	54.48	2.9(20)	
m,p-Xylene	52.6	1.3	50	0	105	64	130	54.04	2.8(20)	
Bromoform	52.9	2.5	50	0	106	64	138	55.72	5.3(20)	
Styrene	71.4	2.5	50	0	143	69	130	73.79	3.3(20)	M55
o-Xylene	53.3	1.3	50	0	107	70	130	55.09	3.2(20)	
1,1,2,2-Tetrachloroethane	42.9	2.5	50	0	86	65	131	45.64	6.2(20)	
1,2,3-Trichloropropane	96.3	10	100	0	96	70	130	102.8	6.5(20)	
Isopropylbenzene	49	2.5	50	0	98	64	138	50.35	2.8(20)	
Bromobenzene	42.5	2.5	50	0	85	70	130	44.21	3.9(20)	
n-Propylbenzene	46.2	2.5	50	0	92	66	132	48.11	4.1(20)	
4-Chlorotoluene	47.8	2.5	50	0	96	70	130	48.87	2.3(20)	
2-Chlorotoluene	46.7	2.5	50	0	93	70	130	48.23	3.3(20)	
1,3,5-Trimethylbenzene	48.2	2.5	50	0	96	66	136	49.69	3.1(20)	
tert-Butylbenzene	48.5	2.5	50	0	97	65	137	49.63	2.3(20)	
1,2,4-Trimethylbenzene	48.2	2.5	50	0	96	65	137	49.45	2.6(20)	
sec-Butylbenzene	48.2	2.5	50	0	96	66	134	50.63	4.9(20)	
1,3-Dichlorobenzene	43.6	2.5	50	0	87	70	130	45.12	3.4(20)	
1,4-Dichlorobenzene	43.4	2.5	50	0	87	70	130	45.01	3.7(20)	
4-Isopropyltoluene	50.1	2.5	50	0	100	66	137	51.72	3.2(20)	
1,2-Dichlorobenzene	40.8	2.5	50	0	82	70	130	42.27	3.5(20)	
n-Butylbenzene	52.2	2.5	50	0	104	60	142	54.18	3.8(20)	
1,2-Dibromo-3-chloropropane (DBCP)	191	15	250	0	77	67	130	205.8	7.3(20)	
1,2,4-Trichlorobenzene	46.5	10	50	0	93	61	137	47.67	2.5(20)	
Naphthalene	45	10	50	0	90	40	167	46.77	3.9(20)	
Hexachlorobutadiene	101	10	100	0	101	61	130	103.5	2.7(20)	
1,2,3-Trichlorobenzene	44.7	10	50	0	89	51	144	45.74	2.3(20)	
Surr: 1,2-Dichloroethane-d4	55.1		50		110	70	130			
Surr: Toluene-d8	48		50		96	70	130			
Surr: 4-Bromofluorobenzene	43.5		50		87	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: *21-May-2010*

QC Summary Report

Work Order: 10051201

Comments:

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

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

L1 = The associated blank spike recovery was above laboratory acceptance limits.

M55 = Matrix spike recovery was above laboratory acceptance limits.

AMENDED

Billing Information :

CHAIN-OF-CUSTODY RECORD

CA

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

WorkOrder : BMIS10051201

Report Due By : 5:00 PM On : 26-May-2010

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

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

EDD Required : **No**

Sampled by : Chase Brogdon

PO : 218013

Client's COC # : 28930 Job : G005862/JPL Groundwater Monitoring

Cooler Temp	Samples Received	Date Printed
4 °C	12-May-2010	17-May-2010

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

Alpha Sample ID	Client Sample ID	Matrix	Collection Date	No. of Bottles Alpha	Sub	TAT	Requested Tests 300_0_W	314_W	ALKALINITY_W	METALS_DW	PH_W	TDS_W	VOC_TIC_W	VOC_W	Sample Remarks
BMI10051201-01A	MW-21-5	AQ	05/11/10 08:08	5	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10051201-02A	MW-21-4	AQ	05/11/10 08:41	5	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10051201-03A	MW-21-3	AQ	05/11/10 09:14	5	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10051201-04A	MW-21-2	AQ	05/11/10 09:47	5	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10051201-05A	MW-21-1	AQ	05/11/10 10:25	5	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	Level IV QC
BMI10051201-06A	EB-09-05/11/10	AQ	05/11/10 10:10	5	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10051201-07A	TB-09-05/11/10	AQ	05/11/10 07:00	1	0	10							VOC by 524 Criteria	VOC by 524 Criteria	Reno Trip Blank 3/10/10

Comments: Security seals intact. Frozen ice. Temp Blank #8541 received @ 4°C. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). Amended 5/17/10 @ 13:36: Added sample time to -07A due to login error. EA :

	Signature	Print Name	Company	Date/Time
Logged in by:	Elizabeth Adcox	Elizabeth Adcox	**Alpha Analytical, Inc.**	5-17-10 1335

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 : BMIS10051201

Report Due By : 5:00 PM On : 26-May-2010

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

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

EDD Required : **Yes**

Sampled by : Chase Brogdon

PO : 218013

Client's COC # : 28930 Job : G005862/JPL Groundwater Monitoring

Cooler Temp	Samples Received	Date Printed
4 °C	12-May-2010	**12-May-2010**

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

Alpha Sample ID	Client Sample ID	Matrix	Collection Date	No. of Bottles Alpha	Sub	TAT	Requested Tests 300_0_W	314_W	ALKALINITY_W	METALS_DW	PH_W	TDS_W	VOC_TIC_W	VOC_W	Sample Remarks
BMI10051201-01A	MW-21-5	AQ	05/11/10 08:08	5	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10051201-02A	MW-21-4	AQ	05/11/10 08:41	5	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10051201-03A	MW-21-3	AQ	05/11/10 09:14	5	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10051201-04A	MW-21-2	AQ	05/11/10 09:47	5	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10051201-05A	MW-21-1	AQ	05/11/10 10:25	5	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	Level IV QC
BMI10051201-06A	EB-09-05/11/10	AQ	05/11/10 10:10	5	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Alk (Bicarb, Carb, Total)	Cr, Pb, As, Na, K, Ca, Mg, Fe	pH	TDS	VOC by 524 Criteria	VOC by 524 Criteria	
BMI10051201-07A	TB-09-05/11/10	AQ	05/11/10 00:00	1	0	10							VOC by 524 Criteria	VOC by 524 Criteria	Reno Trip Blank 3/10/10

Comments: Security seals intact. Frozen ice. Temp Blank #8541 received @ 4°C. Level IV QC. Samples should be used as the control spike sample if possible (I.E.; MS/MSD). :

	Signature	Print Name	Company	Date/Time
Logged in by:	Elizabeth Adcox	Elizabeth Adcox	**Alpha Analytical, Inc.**	5.12.10 1017

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

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

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

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

28930

Page # 1 of 1

Client Name	P.O. #	Job #
BATTELLE / DAVID CONNER	218013	60005862
Address: 3990 OLD TOWN AVE, C-205	EMail Address	
City, State, Zip: SAN DIEGO CA 92110	Phone #: (619) 726 7311	Fax #:

Sampled by: CHASE BRADDON

Analyses Required: VOC (5242) TOTAL CR, LEAD; ARSENIC (200.8); GEN. CHEM (NO3, K, Ca, MnS, Fe) (200.7); ClO4 - (314.0); GEN. CHEM (300.0 310.1, 160.1, 150.1)

Required QC Level? I II III IV

EDD / EDF? YES ___ NO ___

Global ID # _____

Time Sampled	Date Sampled	Matrix* See Key Below	Lab ID Number (Office Use Only)	Sample Description	TAT	Field Filtered	Total and type of containers ** See below	VOC	TOTAL CR, LEAD	ARSENIC	GEN. CHEM	ClO4 -	GEN. CHEM	REMARKS
0808	05/11/10	AQ	BMI1005120-01	mw-21-5	NORM		5	X	X	X	X	X	X	
0841			-02	mw-21-4			5	X	X	X	X	X	X	
0914			-03	mw-21-3			5	X	X	X	X	X	X	
0947			-04	mw-21-2			5	X	X	X	X	X	X	
1025			-05	mw-21-1			5	X	X	X	X	X	X	LEVEL IV QC
1010			-06	EB-09-05 111 10			5	X	X	X	X	X	X	EQUIPMENT BLANK
0700			-07	TB-09-05 111 10			1	X						TRIP BLANK

ADDITIONAL INSTRUCTIONS:

	Signature	Print Name	Company	Date	Time
Relinquished by		CHASE BRADDON	INSIGHT ECC INC	05/11/10	1200
Received by		Anthony Stark	Alpha Analytical Inc.	5/11/10	1200
Relinquished by		Anthony Stark	" "	5/11/10	1600
Received by	Elizabeth Adcox	Elizabeth Alphaeca Adcox	Alpha	5-12-10	1017
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 *24-May-10*

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

CASE NARRATIVE

Job: G005862/JPL Groundwater Monitoring
Work Order: BMI10051302 **Cooler Temp:** 4 °C

Alpha's Sample ID	Client's Sample ID	Matrix
10051302-01A	MW-3-5	Aqueous
10051302-02A	MW-3-4	Aqueous
10051302-03A	MW-3-3	Aqueous
10051302-04A	MW-3-2	Aqueous
10051302-05A	MW-3-1	Aqueous
10051302-06A	DUPE-05-2Q10	Aqueous
10051302-07A	EB-10-05/12/10	Aqueous
10051302-08A	TB-10-05/12/10	Aqueous

Manually Integrated Analytes

Alpha's Sample ID	Test Reference	Analyte
NONE		

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

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

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

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 05/13/10

Job: G005862/JPL Groundwater Monitoring

Anions by IC
EPA Method 300.0

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-3-5**				
Lab ID : BMI10051302-01A Chloride	13	0.50 mg/L	05/13/10 11:08	05/13/10 17:13
Date Sampled 05/12/10 08:33 Nitrite (NO2) - N	ND	0.25 mg/L	05/13/10 11:08	05/13/10 17:13
Nitrate (NO3) - N	ND	0.25 mg/L	05/13/10 11:08	05/13/10 17:13
Phosphate, ortho - P	ND	0.50 mg/L	05/13/10 11:08	05/13/10 17:13
Sulfate (SO4)	ND	0.50 mg/L	05/13/10 11:08	05/13/10 17:13
Client ID: **MW-3-4**				
Lab ID : BMI10051302-02A Chloride	14	0.50 mg/L	05/13/10 11:08	05/13/10 18:08
Date Sampled 05/12/10 09:15 Nitrite (NO2) - N	ND	0.25 mg/L	05/13/10 11:08	05/13/10 18:08
Nitrate (NO3) - N	ND	0.25 mg/L	05/13/10 11:08	05/13/10 18:08
Phosphate, ortho - P	ND	0.50 mg/L	05/13/10 11:08	05/13/10 18:08
Sulfate (SO4)	2.4	0.50 mg/L	05/13/10 11:08	05/13/10 18:08
Client ID: **MW-3-3**				
Lab ID : BMI10051302-03A Chloride	21	0.50 mg/L	05/13/10 11:08	05/13/10 18:27
Date Sampled 05/12/10 09:57 Nitrite (NO2) - N	ND	0.25 mg/L	05/13/10 11:08	05/13/10 18:27
Nitrate (NO3) - N	ND	0.25 mg/L	05/13/10 11:08	05/13/10 18:27
Phosphate, ortho - P	ND	0.50 mg/L	05/13/10 11:08	05/13/10 18:27
Sulfate (SO4)	13	0.50 mg/L	05/13/10 11:08	05/13/10 18:27
Client ID: **MW-3-2**				
Lab ID : BMI10051302-04A Chloride	44	0.50 mg/L	05/13/10 11:08	05/13/10 18:45
Date Sampled 05/12/10 10:33 Nitrite (NO2) - N	ND	0.25 mg/L	05/13/10 11:08	05/13/10 18:45
Nitrate (NO3) - N	2.1	0.25 mg/L	05/13/10 11:08	05/13/10 18:45
Phosphate, ortho - P	ND	0.50 mg/L	05/13/10 11:08	05/13/10 18:45
Sulfate (SO4)	55	0.50 mg/L	05/13/10 11:08	05/13/10 18:45
Client ID: **MW-3-1**				
Lab ID : BMI10051302-05A Chloride	20	0.50 mg/L	05/13/10 11:08	05/13/10 19:04
Date Sampled 05/12/10 11:50 Nitrite (NO2) - N	ND	0.25 mg/L	05/13/10 11:08	05/13/10 19:04
Nitrate (NO3) - N	0.31	0.25 mg/L	05/13/10 11:08	05/13/10 19:04
Phosphate, ortho - P	ND	0.50 mg/L	05/13/10 11:08	05/13/10 19:04
Sulfate (SO4)	42	0.50 mg/L	05/13/10 11:08	05/13/10 19:04
Client ID: **DUPE-05-2Q10**				
Lab ID : BMI10051302-06A Chloride	45	0.50 mg/L	05/13/10 11:08	05/13/10 19:22
Date Sampled 05/12/10 00:00 Nitrite (NO2) - N	ND	0.25 mg/L	05/13/10 11:08	05/13/10 19:22
Nitrate (NO3) - N	2.1	0.25 mg/L	05/13/10 11:08	05/13/10 19:22
Phosphate, ortho - P	ND	0.50 mg/L	05/13/10 11:08	05/13/10 19:22
Sulfate (SO4)	55	0.50 mg/L	05/13/10 11:08	05/13/10 19:22

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Client ID: **EB-10-05/12/10**

Lab ID : BMI10051302-07A

Date Sampled 05/12/10 11:31

Chloride	ND	0.50 mg/L	05/13/10 11:08	05/13/10 19:41
Nitrite (NO2) - N	ND	0.25 mg/L	05/13/10 11:08	05/13/10 19:41
Nitrate (NO3) - N	ND	0.25 mg/L	05/13/10 11:08	05/13/10 19:41
Phosphate, ortho - P	ND	0.50 mg/L	05/13/10 11:08	05/13/10 19:41
Sulfate (SO4)	ND	0.50 mg/L	05/13/10 11:08	05/13/10 19:41

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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5/26/10

Report Date

Alpha Analytical, Inc.

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ANALYTICAL REPORT

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 05/13/10

Job: G005862/JPL Groundwater Monitoring

Perchlorate by Ion Chromatography
EPA Method 314.0

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-3-5**				
Lab ID : BMI10051302-01A Perchlorate	ND	1.00 µg/L	05/13/10 11:54	05/13/10 19:17
Date Sampled 05/12/10 08:33				
Client ID: **MW-3-4**				
Lab ID : BMI10051302-02A Perchlorate	5.09	1.00 µg/L	05/13/10 11:54	05/13/10 19:36
Date Sampled 05/12/10 09:15				
Client ID: **MW-3-3**				
Lab ID : BMI10051302-03A Perchlorate	3.07	1.00 µg/L	05/13/10 11:54	05/13/10 19:54
Date Sampled 05/12/10 09:57				
Client ID: **MW-3-2**				
Lab ID : BMI10051302-04A Perchlorate	173	10.0 µg/L	05/13/10 11:54	05/14/10 13:38
Date Sampled 05/12/10 10:33				
Client ID: **MW-3-1**				
Lab ID : BMI10051302-05A Perchlorate	ND	1.00 µg/L	05/13/10 11:54	05/13/10 20:31
Date Sampled 05/12/10 11:50				
Client ID: **DUPE-05-2Q10**				
Lab ID : BMI10051302-06A Perchlorate	175	10.0 µg/L	05/13/10 11:54	05/14/10 13:57
Date Sampled 05/12/10 00:00				
Client ID: **EB-10-05/12/10**				
Lab ID : BMI10051302-07A Perchlorate	ND	1.00 µg/L	05/13/10 11:54	05/13/10 21:08
Date Sampled 05/12/10 11:31				

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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5/26/10
Report Date

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ANALYTICAL REPORT

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 05/13/10

Job: G005862/JPL Groundwater Monitoring

Alkalinity
SM2320B

Parameter		Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-3-5**					
Lab ID : BMI10051302-01A	Alkalinity, Bicarbonate (As CaCO3)	230	10 mg/L	05/14/10 16:01	05/14/10 16:01
Date Sampled 05/12/10 08:33	Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	05/14/10 16:01	05/14/10 16:01
	Alkalinity, Total (As CaCO3 at pH 4.5)	230	10 mg/L	05/14/10 16:01	05/14/10 16:01
Client ID: **MW-3-4**					
Lab ID : BMI10051302-02A	Alkalinity, Bicarbonate (As CaCO3)	220	10 mg/L	05/14/10 16:11	05/14/10 16:11
Date Sampled 05/12/10 09:15	Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	05/14/10 16:11	05/14/10 16:11
	Alkalinity, Total (As CaCO3 at pH 4.5)	220	10 mg/L	05/14/10 16:11	05/14/10 16:11
Client ID: **MW-3-3**					
Lab ID : BMI10051302-03A	Alkalinity, Bicarbonate (As CaCO3)	150	10 mg/L	05/14/10 16:16	05/14/10 16:16
Date Sampled 05/12/10 09:57	Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	05/14/10 16:16	05/14/10 16:16
	Alkalinity, Total (As CaCO3 at pH 4.5)	150	10 mg/L	05/14/10 16:16	05/14/10 16:16
Client ID: **MW-3-2**					
Lab ID : BMI10051302-04A	Alkalinity, Bicarbonate (As CaCO3)	190	10 mg/L	05/14/10 16:20	05/14/10 16:20
Date Sampled 05/12/10 10:33	Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	05/14/10 16:20	05/14/10 16:20
	Alkalinity, Total (As CaCO3 at pH 4.5)	190	10 mg/L	05/14/10 16:20	05/14/10 16:20
Client ID: **MW-3-1**					
Lab ID : BMI10051302-05A	Alkalinity, Bicarbonate (As CaCO3)	200	10 mg/L	05/14/10 16:25	05/14/10 16:25
Date Sampled 05/12/10 11:50	Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	05/14/10 16:25	05/14/10 16:25
	Alkalinity, Total (As CaCO3 at pH 4.5)	200	10 mg/L	05/14/10 16:25	05/14/10 16:25
Client ID: **DUPE-05-2Q10**					
Lab ID : BMI10051302-06A	Alkalinity, Bicarbonate (As CaCO3)	180	10 mg/L	05/14/10 16:30	05/14/10 16:30
Date Sampled 05/12/10 00:00	Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	05/14/10 16:30	05/14/10 16:30
	Alkalinity, Total (As CaCO3 at pH 4.5)	180	10 mg/L	05/14/10 16:30	05/14/10 16:30
Client ID: **EB-10-05/12/10**					
Lab ID : BMI10051302-07A	Alkalinity, Bicarbonate (As CaCO3)	ND	10 mg/L	05/14/10 16:42	05/14/10 16:42
Date Sampled 05/12/10 11:31	Alkalinity, Carbonate (As CaCO3)	ND	10 mg/L	05/14/10 16:42	05/14/10 16:42
	Alkalinity, Total (As CaCO3 at pH 4.5)	ND	10 mg/L	05/14/10 16:42	05/14/10 16:42

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ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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5/26/10

Report Date

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ANALYTICAL REPORT

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 05/13/10

Job: G005862/JPL Groundwater Monitoring

Metals by ICPMS
EPA Method 200.8

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-3-5**				
Lab ID : BMI10051302-01A Sodium (Na)	48	0.50 mg/L	05/13/10 16:42	05/14/10 00:45
Date Sampled 05/12/10 08:33 Magnesium (Mg)	10	0.50 mg/L	05/13/10 16:42	05/14/10 00:45
Potassium (K)	2.4	0.50 mg/L	05/13/10 16:42	05/14/10 00:45
Calcium (Ca)	34	0.50 mg/L	05/13/10 16:42	05/14/10 00:45
Chromium (Cr)	ND	0.0050 mg/L	05/13/10 16:42	05/14/10 00:45
Iron (Fe)	4.7	0.10 mg/L	05/13/10 16:42	05/14/10 00:45
Arsenic (As)	ND	0.0020 mg/L	05/13/10 16:42	05/14/10 00:45
Lead (Pb)	ND	0.0050 mg/L	05/13/10 16:42	05/14/10 00:45
Client ID: **MW-3-4**				
Lab ID : BMI10051302-02A Sodium (Na)	46	0.50 mg/L	05/13/10 16:42	05/14/10 00:51
Date Sampled 05/12/10 09:15 Magnesium (Mg)	9.9	0.50 mg/L	05/13/10 16:42	05/14/10 00:51
Potassium (K)	2.1	0.50 mg/L	05/13/10 16:42	05/14/10 00:51
Calcium (Ca)	28	0.50 mg/L	05/13/10 16:42	05/14/10 00:51
Chromium (Cr)	ND	0.0050 mg/L	05/13/10 16:42	05/14/10 00:51
Iron (Fe)	0.39	0.10 mg/L	05/13/10 16:42	05/14/10 00:51
Arsenic (As)	0.0026	0.0020 mg/L	05/13/10 16:42	05/14/10 00:51
Lead (Pb)	ND	0.0050 mg/L	05/13/10 16:42	05/14/10 00:51
Client ID: **MW-3-3**				
Lab ID : BMI10051302-03A Sodium (Na)	34	0.50 mg/L	05/13/10 16:42	05/14/10 00:57
Date Sampled 05/12/10 09:57 Magnesium (Mg)	11	0.50 mg/L	05/13/10 16:42	05/14/10 00:57
Potassium (K)	2.4	0.50 mg/L	05/13/10 16:42	05/14/10 00:57
Calcium (Ca)	24	0.50 mg/L	05/13/10 16:42	05/14/10 00:57
Chromium (Cr)	ND	0.0050 mg/L	05/13/10 16:42	05/14/10 00:57
Iron (Fe)	0.18	0.10 mg/L	05/13/10 16:42	05/14/10 00:57
Arsenic (As)	ND	0.0020 mg/L	05/13/10 16:42	05/14/10 00:57
Lead (Pb)	ND	0.0050 mg/L	05/13/10 16:42	05/14/10 00:57
Client ID: **MW-3-2**				
Lab ID : BMI10051302-04A Sodium (Na)	19	0.50 mg/L	05/13/10 16:42	05/14/10 01:02
Date Sampled 05/12/10 10:33 Magnesium (Mg)	19	0.50 mg/L	05/13/10 16:42	05/14/10 01:02
Potassium (K)	2.8	0.50 mg/L	05/13/10 16:42	05/14/10 01:02
Calcium (Ca)	64	0.50 mg/L	05/13/10 16:42	05/14/10 01:02
Chromium (Cr)	ND	0.0050 mg/L	05/13/10 16:42	05/14/10 01:02
Iron (Fe)	0.43	0.10 mg/L	05/13/10 16:42	05/14/10 01:02
Arsenic (As)	ND	0.0020 mg/L	05/13/10 16:42	05/14/10 01:02
Lead (Pb)	ND	0.0050 mg/L	05/13/10 16:42	05/14/10 01:02

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Client ID: **MW-3-1**					
Lab ID : BMI10051302-05A	Sodium (Na)	24	0.50 mg/L	05/13/10 16:42	05/14/10 00:23
Date Sampled 05/12/10 11:50	Magnesium (Mg)	17	0.50 mg/L	05/13/10 16:42	05/14/10 00:23
	Potassium (K)	2.9	0.50 mg/L	05/13/10 16:42	05/14/10 00:23
	Calcium (Ca)	52	0.50 mg/L	05/13/10 16:42	05/14/10 00:23
	Chromium (Cr)	ND	0.0050 mg/L	05/13/10 16:42	05/14/10 00:23
	Iron (Fe)	0.36	0.10 mg/L	05/13/10 16:42	05/14/10 00:23
	Arsenic (As)	ND	0.0020 mg/L	05/13/10 16:42	05/14/10 00:23
	Lead (Pb)	ND	0.0050 mg/L	05/13/10 16:42	05/14/10 00:23
Client ID: **DUPE-05-2Q10**					
Lab ID : BMI10051302-06A	Sodium (Na)	20	0.50 mg/L	05/13/10 16:42	05/14/10 01:08
Date Sampled 05/12/10 00:00	Magnesium (Mg)	19	0.50 mg/L	05/13/10 16:42	05/14/10 01:08
	Potassium (K)	2.9	0.50 mg/L	05/13/10 16:42	05/14/10 01:08
	Calcium (Ca)	65	0.50 mg/L	05/13/10 16:42	05/14/10 01:08
	Chromium (Cr)	ND	0.0050 mg/L	05/13/10 16:42	05/14/10 01:08
	Iron (Fe)	0.47	0.10 mg/L	05/13/10 16:42	05/14/10 01:08
	Arsenic (As)	ND	0.0020 mg/L	05/13/10 16:42	05/14/10 01:08
	Lead (Pb)	ND	0.0050 mg/L	05/13/10 16:42	05/14/10 01:08
Client ID: **EB-10-05/12/10**					
Lab ID : BMI10051302-07A	Sodium (Na)	ND	0.50 mg/L	05/13/10 16:42	05/14/10 01:14
Date Sampled 05/12/10 11:31	Magnesium (Mg)	ND	0.50 mg/L	05/13/10 16:42	05/14/10 01:14
	Potassium (K)	ND	0.50 mg/L	05/13/10 16:42	05/14/10 01:14
	Calcium (Ca)	ND	0.50 mg/L	05/13/10 16:42	05/14/10 01:14
	Chromium (Cr)	ND	0.0050 mg/L	05/13/10 16:42	05/14/10 01:14
	Iron (Fe)	ND	0.10 mg/L	05/13/10 16:42	05/14/10 01:14
	Arsenic (As)	ND	0.0020 mg/L	05/13/10 16:42	05/14/10 01:14
	Lead (Pb)	ND	0.0050 mg/L	05/13/10 16:42	05/14/10 01:14

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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Report Date

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ANALYTICAL REPORT

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 05/13/10

Job: G005862/JPL Groundwater Monitoring

pH (Range 1.7 to 12.4)
EPA Method 150.2 / SM4500HB / SW9040C

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-3-5**				
Lab ID : BMI10051302-01A pH	7.6	1.7 pH Units	05/13/10 14:03	05/13/10 14:03
Date Sampled 05/12/10 08:33 pH - Temperature	18	1.0 °C	05/13/10 14:03	05/13/10 14:03
Client ID: **MW-3-4**				
Lab ID : BMI10051302-02A pH	7.9	1.7 pH Units	05/13/10 14:07	05/13/10 14:07
Date Sampled 05/12/10 09:15 pH - Temperature	17	1.0 °C	05/13/10 14:07	05/13/10 14:07
Client ID: **MW-3-3**				
Lab ID : BMI10051302-03A pH	8.4	1.7 pH Units	05/13/10 14:09	05/13/10 14:09
Date Sampled 05/12/10 09:57 pH - Temperature	17	1.0 °C	05/13/10 14:09	05/13/10 14:09
Client ID: **MW-3-2**				
Lab ID : BMI10051302-04A pH	7.7	1.7 pH Units	05/13/10 14:12	05/13/10 14:12
Date Sampled 05/12/10 10:33 pH - Temperature	17	1.0 °C	05/13/10 14:12	05/13/10 14:12
Client ID: **MW-3-1**				
Lab ID : BMI10051302-05A pH	7.7	1.7 pH Units	05/13/10 14:15	05/13/10 14:15
Date Sampled 05/12/10 11:50 pH - Temperature	17	1.0 °C	05/13/10 14:15	05/13/10 14:15
Client ID: **DUPE-05-2Q10**				
Lab ID : BMI10051302-06A pH	7.5	1.7 pH Units	05/13/10 14:17	05/13/10 14:17
Date Sampled 05/12/10 00:00 pH - Temperature	17	1.0 °C	05/13/10 14:17	05/13/10 14:17
Client ID: **EB-10-05/12/10**				
Lab ID : BMI10051302-07A pH	6.3	1.7 pH Units	05/13/10 14:24	05/13/10 14:24
Date Sampled 05/12/10 11:31 pH - Temperature	17	1.0 °C	05/13/10 14:24	05/13/10 14:24

The EPA has established an analytical holding time of 15 minutes for this method as documented in the Methods Update Rule, Federal Register, Vol 72, No 47, March 2007. This holding time will always be exceeded, unless samples are analyzed in the field.
The laboratory performed this analysis in the shortest practical holding time after sample receipt.

Roger Scholl Randy Gardner Walter Hinchman

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5/26/10
Report Date

Alpha Analytical, Inc.

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ANALYTICAL REPORT

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 05/13/10

Job: G005862/JPL Groundwater Monitoring

Total Dissolved Solids (TDS)
SM2540C

Parameter		Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-3-5**					
Lab ID : BMI10051302-01A	Solids, Total Dissolved (TDS)	260	10 mg/L	05/17/10	05/17/10
Date Sampled 05/12/10 08:33					
Client ID: **MW-3-4**					
Lab ID : BMI10051302-02A	Solids, Total Dissolved (TDS)	290	10 mg/L	05/17/10	05/17/10
Date Sampled 05/12/10 09:15					
Client ID: **MW-3-3**					
Lab ID : BMI10051302-03A	Solids, Total Dissolved (TDS)	200	10 mg/L	05/14/10	05/14/10
Date Sampled 05/12/10 09:57					
Client ID: **MW-3-2**					
Lab ID : BMI10051302-04A	Solids, Total Dissolved (TDS)	350	10 mg/L	05/14/10	05/14/10
Date Sampled 05/12/10 10:33					
Client ID: **MW-3-1**					
Lab ID : BMI10051302-05A	Solids, Total Dissolved (TDS)	300	10 mg/L	05/17/10	05/17/10
Date Sampled 05/12/10 11:50					
Client ID: **DUPE-05-2Q10**					
Lab ID : BMI10051302-06A	Solids, Total Dissolved (TDS)	330	10 mg/L	05/14/10	05/14/10
Date Sampled 05/12/10 00:00					
Client ID: **EB-10-05/12/10**					
Lab ID : BMI10051302-07A	Solids, Total Dissolved (TDS)	ND	10 mg/L	05/17/10	05/17/10
Date Sampled 05/12/10 11:31					

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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5/26/10
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
3990 Old Town Ave
San Diego, CA 92110
Job: G005862/JPL Groundwater Monitoring

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

Tentatively Identified Compounds - Volatile Organics by GC/MS

	Parameter	Estimated Concentration	Estimated Reporting Limit	Date Extracted	Date Analyzed
Client ID : **MW-3-5**					
Lab ID : BMI10051302-01A	* * * None Found * * *	ND	2.0 µg/L	05/15/10 00:01	05/15/10 00:01
Date Received : 05/13/10					
Date Sampled : 05/12/10 08:33					
Client ID : **MW-3-4**					
Lab ID : BMI10051302-02A	* * * None Found * * *	ND	2.0 µg/L	05/15/10 00:22	05/15/10 00:22
Date Received : 05/13/10					
Date Sampled : 05/12/10 09:15					
Client ID : **MW-3-3**					
Lab ID : BMI10051302-03A	* * * None Found * * *	ND	2.0 µg/L	05/15/10 00:45	05/15/10 00:45
Date Received : 05/13/10					
Date Sampled : 05/12/10 09:57					
Client ID : **MW-3-2**					
Lab ID : BMI10051302-04A	* * * None Found * * *	ND	2.0 µg/L	05/15/10 01:07	05/15/10 01:07
Date Received : 05/13/10					
Date Sampled : 05/12/10 10:33					
Client ID : **MW-3-1**					
Lab ID : BMI10051302-05A	* * * None Found * * *	ND	2.0 µg/L	05/15/10 01:29	05/15/10 01:29
Date Received : 05/13/10					
Date Sampled : 05/12/10 11:50					
Client ID : **DUPE-05-2Q10**					
Lab ID : BMI10051302-06A	* * * None Found * * *	ND	2.0 µg/L	05/15/10 01:51	05/15/10 01:51
Date Received : 05/13/10					
Date Sampled : 05/12/10 00:00					
Client ID : **EB-10-05/12/10**					
Lab ID : BMI10051302-07A	* * * None Found * * *	ND	2.0 µg/L	05/14/10 23:16	05/14/10 23:16
Date Received : 05/13/10					
Date Sampled : 05/12/10 11:31					
Client ID : **TB-10-05/12/10**					
Lab ID : BMI10051302-08A	* * * None Found * * *	ND	2.0 µg/L	05/14/10 22:53	05/14/10 22:53
Date Received : 05/13/10					
Date Sampled : 05/12/10 07:00					

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Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10051302-01A
Client I.D. Number: MW-3-5

Sampled: 05/12/10 08:33
Received: 05/13/10
Extracted: 05/15/10 00:01
Analyzed: 05/15/10 00:01

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	Q	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND		0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND		0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND		1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND		0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND		0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND		0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND		0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND		10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND		0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND		0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND		0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND		0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND		0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND		0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND		0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND		0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND		0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND		0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND		0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5	µg/L
25	Trichloroethene	ND		0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND		0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND		2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND		0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND		0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	96	(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	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 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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5/26/10
Report Date

Alpha Analytical, Inc.

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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10051302-02A
Client I.D. Number: MW-3-4

Sampled: 05/12/10 09:15
Received: 05/13/10
Extracted: 05/15/10 00:22
Analyzed: 05/15/10 00:22

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	Q	1.0	µg/L	40 Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND		0.50	µg/L	41 Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND		0.50	µg/L	42 o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND		1.0	µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND		0.50	µg/L	44 1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND		0.50	µg/L	45 Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND		0.50	µg/L	46 Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND		0.50	µg/L	47 n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND		10	µg/L	48 4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND		0.50	µg/L	49 2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND		0.50	µg/L	50 1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND		0.50	µg/L	51 tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND		0.50	µg/L	52 1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND		0.50	µg/L	53 sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND		0.50	µg/L	54 1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND		0.50	µg/L	55 1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND		0.50	µg/L	56 4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND		0.50	µg/L	57 1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND		0.50	µg/L	58 n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND		0.50	µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5	µg/L
25	Trichloroethene	ND		0.50	µg/L	60 1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND		0.50	µg/L	61 Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND		2.5	µg/L	62 Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND		0.50	µg/L	63 1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND		0.50	µg/L	64 Surr: 1,2-Dichloroethane-d4	95	(70-130)	%REC
30	1,1,2-Trichloroethane	ND		0.50	µg/L	65 Surr: Toluene-d8	106	(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66 Surr: 4-Bromofluorobenzene	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 Scholl Randy Gardner Walter Hinchman

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

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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10051302-03A
Client I.D. Number: MW-3-3

Sampled: 05/12/10 09:57
Received: 05/13/10
Extracted: 05/15/10 00:45
Analyzed: 05/15/10 00:45

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	Q	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND		0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND		0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND		1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND		0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND		0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND		0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND		0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND		10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND		0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND		0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND		0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND		0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND		0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND		0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND		0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND		0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND		0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND		0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND		0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5	µg/L
25	Trichloroethene	ND		0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND		0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND		2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND		0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND		0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	95	(70-130)	%REC
30	1,1,2-Trichloroethane	ND		0.50	µg/L	65	Surr: Toluene-d8	108	(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	96	(70-130)	%REC
32	1,3-Dichloropropane	ND		0.50	µg/L					
33	Dibromochloromethane	ND		0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND		1.0	µg/L					
35	Tetrachloroethene	ND		0.50	µg/L					

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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5/26/10
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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI10051302-04A
Client I.D. Number: MW-3-2

Sampled: 05/12/10 10:33
Received: 05/13/10
Extracted: 05/15/10 01:07
Analyzed: 05/15/10 01:07

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	Q	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND		0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND		0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND		1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND		0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND		0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND		0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND		0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND		10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND		0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND		0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	1.7		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	1.2		0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND		2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND		0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND		0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	94	(70-130)	%REC
30	1,1,2-Trichloroethane	ND		0.50	µg/L	65	Surr: Toluene-d8	108	(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	98	(70-130)	%REC
32	1,3-Dichloropropane	ND		0.50	µg/L					
33	Dibromochloromethane	ND		0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND		1.0	µg/L					
35	Tetrachloroethene	ND		0.50	µg/L					

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

5/26/10
Report Date