Alpha Analytical, Inc.

255 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: BMI09073103-02A
Client I.D. Number: MW-24-3

Sampled: 07/30/09
Received: 07/31/09
Analyzed: 08/05/09

Volatile Organics by GC/MS

	Compound	Concentration	Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/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	2.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	87	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	110	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	99	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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

8/13/09
Report Date

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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI09073103-03A
Client I.D. Number: MW-24-2

Sampled: 07/30/09
Received: 07/31/09
Analyzed: 08/05/09

Volatile Organics by GC/MS

	Compound	Concentration	Reporting Limit		Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37 Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38 Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39 m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40 Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41 Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42 o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44 1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45 Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46 Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47 n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48 4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49 2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50 1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51 tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52 1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53 sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54 1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55 1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56 4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57 1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58 n-Butylbenzene	ND	0.50	µg/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	2.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62 Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63 1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64 Surr: 1,2-Dichloroethane-d4	85	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65 Surr: Toluene-d8	115	(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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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: BMI09073103-04A
Client I.D. Number: MW-24-1

Sampled: 07/30/09
Received: 07/31/09
Analyzed: 08/05/09

Volatile Organics by GC/MS

	Compound	Concentration	Reporting Limit		Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37 Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38 Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39 m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40 Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41 Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42 o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44 1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45 Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46 Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47 n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48 4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49 2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50 1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	4.0	0.50	µg/L	51 tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52 1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53 sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54 1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55 1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56 4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57 1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58 n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5	µg/L
25	Trichloroethene	ND	0.50	µg/L	60 1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	0.93	0.50	µg/L	61 Naphthalene	ND	2.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62 Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63 1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64 Surr: 1,2-Dichloroethane-d4	85	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65 Surr: Toluene-d8	111	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66 Surr: 4-Bromofluorobenzene	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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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: BMI09073103-05A
Client I.D. Number: EB-8-7/30/09

Sampled: 07/30/09
Received: 07/31/09
Analyzed: 08/05/09

Volatile Organics by GC/MS

	Compound	Concentration	Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/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	2.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	89	(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					

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: BMI09073103-06A
Client I.D. Number: TB-8-7/30/09

Sampled: 07/30/09
Received: 07/31/09
Analyzed: 08/05/09

Volatile Organics by GC/MS

	Compound	Concentration	Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/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	2.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	87	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	113	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	99	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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

8/13/09
Report Date

Alpha Analytical, Inc.

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

VOC Sample Preservation Report

Work Order: BMI09073103 **Project:** G005862/JPL Groundwater Monitoring

Alpha's Sample ID	Client's Sample ID	Matrix	pH
09073103-02A	MW-24-3	Aqueous	2
09073103-03A	MW-24-2	Aqueous	2
09073103-04A	MW-24-1	Aqueous	2
09073103-05A	EB-8-7/30/09	Aqueous	2
09073103-06A	TB-8-7/30/09	Aqueous	2

8/13/09
Report Date

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Date: *13-Aug-09*

QC Summary Report

Work Order: 09073103

Method Blank

Type **MBLK** Test Code: **EPA Method 300.0 / 9056**

File ID: **17** Batch ID: **22448A** Analysis Date: **07/31/2009 12:35**

Sample ID: **MB-22448** Units : **mg/L** Run ID: **IC_2_090731A** Prep Date: **07/31/2009**

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

Laboratory Fortified Blank

Type **LFB** Test Code: **EPA Method 300.0 / 9056**

File ID: **18** Batch ID: **22448A** Analysis Date: **07/31/2009 12:53**

Sample ID: **LFB-22448** Units : **mg/L** Run ID: **IC_2_090731A** Prep Date: **07/31/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Nitrite (NO2) - N	1.21	0.25	1.25		97	90	110			
Nitrate (NO3) - N	1.26	0.25	1.25		101	90	110			
Phosphate, ortho - P	1.98	0.25	1.25		158	90	110			L51

Sample Matrix Spike

Type **LFM** Test Code: **EPA Method 300.0 / 9056**

File ID: **30** Batch ID: **22448A** Analysis Date: **07/31/2009 16:36**

Sample ID: **09073102-04ALFM** Units : **mg/L** Run ID: **IC_2_090731A** Prep Date: **07/31/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Nitrite (NO2) - N	1.28	0.25	1.25	0	103	80	120			
Nitrate (NO3) - N	2.27	0.25	1.25	0.9932	102	80	120			
Phosphate, ortho - P	1.56	0.25	1.25	0	125	80	120			M1

Sample Matrix Spike Duplicate

Type **LFMD** Test Code: **EPA Method 300.0 / 9056**

File ID: **31** Batch ID: **22448A** Analysis Date: **07/31/2009 16:54**

Sample ID: **09073102-04ALFMD** Units : **mg/L** Run ID: **IC_2_090731A** Prep Date: **07/31/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Nitrite (NO2) - N	1.29	0.25	1.25	0	103	80	120	1.282	0.5(10)	
Nitrate (NO3) - N	2.21	0.25	1.25	0.9932	97	80	120	2.269	2.8(10)	
Phosphate, ortho - P	1.56	0.25	1.25	0	125	80	120	1.563	0.3(10)	M1

Comments:

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

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

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

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

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Date: 13-Aug-09

QC Summary Report

Work Order: 09073103

Method Blank

Type **MBLK** Test Code: **EPA Method 300.0 / 9056**

File ID: **17** Batch ID: **22448B** Analysis Date: **07/31/2009 12:35**

Sample ID: **MB-22448** Units : **mg/L** Run ID: **IC_2_090731A** Prep Date: **07/31/2009**

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

Laboratory Fortified Blank

Type **LFB** Test Code: **EPA Method 300.0 / 9056**

File ID: **18** Batch ID: **22448B** Analysis Date: **07/31/2009 12:53**

Sample ID: **LFB-22448** Units : **mg/L** Run ID: **IC_2_090731A** Prep Date: **07/31/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sulfate (SO4)	10.1	0.5	10		101	90	110			

Sample Matrix Spike

Type **LFM** Test Code: **EPA Method 300.0 / 9056**

File ID: **30** Batch ID: **22448B** Analysis Date: **07/31/2009 16:36**

Sample ID: **09073102-04ALFM** Units : **mg/L** Run ID: **IC_2_090731A** Prep Date: **07/31/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sulfate (SO4)	64.3	0.5	10	55.25	90	80	120			

Sample Matrix Spike Duplicate

Type **LFMD** Test Code: **EPA Method 300.0 / 9056**

File ID: **31** Batch ID: **22448B** Analysis Date: **07/31/2009 16:54**

Sample ID: **09073102-04ALFMD** Units : **mg/L** Run ID: **IC_2_090731A** Prep Date: **07/31/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sulfate (SO4)	65.1	0.5	10	55.25	98	80	120	64.27	1.3(10)	

Comments:

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

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Date: *13-Aug-09*

QC Summary Report

Work Order: 09073103

Method Blank

Type **MBLK** Test Code: **EPA Method 300.0 / 9056**

File ID: **17** Batch ID: **22448C** Analysis Date: **07/31/2009 12:35**

Sample ID: **MB-22448** Units : **mg/L** Run ID: **IC_2_090731A** Prep Date: **07/31/2009**

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

Laboratory Fortified Blank

Type **LFB** Test Code: **EPA Method 300.0 / 9056**

File ID: **18** Batch ID: **22448C** Analysis Date: **07/31/2009 12:53**

Sample ID: **LFB-22448** Units : **mg/L** Run ID: **IC_2_090731A** Prep Date: **07/31/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	4.52	0.5	5		90	90	110			

Sample Matrix Spike

Type **LFM** Test Code: **EPA Method 300.0 / 9056**

File ID: **30** Batch ID: **22448C** Analysis Date: **07/31/2009 16:36**

Sample ID: **09073102-04ALFM** Units : **mg/L** Run ID: **IC_2_090731A** Prep Date: **07/31/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	27.7	0.5	5	23.53	84	80	120			

Sample Matrix Spike Duplicate

Type **LFMD** Test Code: **EPA Method 300.0 / 9056**

File ID: **31** Batch ID: **22448C** Analysis Date: **07/31/2009 16:54**

Sample ID: **09073102-04ALFMD** Units : **mg/L** Run ID: **IC_2_090731A** Prep Date: **07/31/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	28	0.5	5	23.53	89	80	120	27.73	1.0(10)	

Comments:

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Date: *12-Aug-09*

QC Summary Report

Work Order: 09073103

Method Blank

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

File ID: **44** Batch ID: **22493** Analysis Date: **08/07/2009 00:50**

Sample ID: **MBLK-22493** Units : **µg/L** Run ID: **IC_3_090807A** Prep Date: **08/06/2009**

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: **45** Batch ID: **22493** Analysis Date: **08/07/2009 01:08**

Sample ID: **LFB-22493** Units : **µg/L** Run ID: **IC_3_090807A** Prep Date: **08/06/2009**

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

Sample Matrix Spike

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

File ID: **49** Batch ID: **22493** Analysis Date: **08/07/2009 02:22**

Sample ID: **09073103-03ALFM** Units : **µg/L** Run ID: **IC_3_090807A** Prep Date: **08/06/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	34.2	2	25	10.16	96	80	120			

Sample Matrix Spike Duplicate

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

File ID: **50** Batch ID: **22493** Analysis Date: **08/07/2009 02:40**

Sample ID: **09073103-03ALFMD** Units : **µg/L** Run ID: **IC_3_090807A** Prep Date: **08/06/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	35.7	2	25	10.16	102	80	120	34.21	4.3(15)	

Comments:

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

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Date: *14-Aug-09*

QC Summary Report

Work Order: 09073103

Method Blank

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

File ID: **081209.B\115SMPL.D** Batch ID: **22456K** Analysis Date: **08/12/2009 22:48**

Sample ID: **MB-22456** Units : **mg/L** Run ID: **ICP/MS_090812E** Prep Date: **08/03/2009**

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

Laboratory Control Spike

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

File ID: **081209.B\116_LCS.D** Batch ID: **22456K** Analysis Date: **08/12/2009 22:54**

Sample ID: **LCS-22456** Units : **mg/L** Run ID: **ICP/MS_090812E** Prep Date: **08/03/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0512	0.005	0.05		102	80	120			

Sample Matrix Spike

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

File ID: **081209.B\120SMPL.D** Batch ID: **22456K** Analysis Date: **08/12/2009 23:16**

Sample ID: **09073103-03AMS** Units : **mg/L** Run ID: **ICP/MS_090812E** Prep Date: **08/03/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.051	0.005	0.05	0	102	80	120			

Sample Matrix Spike Duplicate

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

File ID: **081209.B\121SMPL.D** Batch ID: **22456K** Analysis Date: **08/12/2009 23:22**

Sample ID: **09073103-03AMSD** Units : **mg/L** Run ID: **ICP/MS_090812E** Prep Date: **08/03/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0488	0.005	0.05	0	98	80	120	0.05098	4.4(20)	

Comments:

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

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Date: 12-Aug-09

QC Summary Report

Work Order: 09073103

Method Blank Type **MBLK** Test Code: _____

File ID: **09073142.D** Batch ID: **MS15W0804N** Analysis Date: **08/05/2009 00:27**

Sample ID: **MBLK MS15W0804N** Units : **µg/L** Run ID: **MSD_15_090804C** Prep Date: **08/05/2009**

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	8.77		10		88	70	130			
Surr: Toluene-d8	10.9		10		109	70	130			

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Date: *12-Aug-09*

QC Summary Report

Work Order: 09073103

Surr: 4-Bromofluorobenzene	9.66		10	97	70	130

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

File ID: **09073138.D** Batch ID: **MS15W0804N** Analysis Date: **08/04/2009 22:57**

Sample ID: **LCS MS15W0804N** Units : **µg/L** Run ID: **MSD_15_090804C** Prep Date: **08/04/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	12.4	1	10		124	70	130			
Chloromethane	10.4	2	10		104	70	130			
Vinyl chloride	9.32	1	10		93	70	130			
Chloroethane	9.05	1	10		91	70	130			
Bromomethane	8.06	2	10		81	70	130			
Trichlorofluoromethane	10.6	1	10		106	70	130			
1,1-Dichloroethene	10.5	1	10		105	70	130			
Dichloromethane	9.71	2	10		97	70	130			
trans-1,2-Dichloroethene	10.9	1	10		109	70	130			
Methyl tert-butyl ether (MTBE)	10.1	0.5	10		101	70	130			
1,1-Dichloroethane	10.4	1	10		104	70	130			
cis-1,2-Dichloroethene	10.9	1	10		109	70	130			
Bromochloromethane	10.5	1	10		105	70	130			
Chloroform	10.4	1	10		104	70	130			
2,2-Dichloropropane	9.34	1	10		93	70	130			
1,2-Dichloroethane	9.47	1	10		95	70	130			
1,1,1-Trichloroethane	10.5	1	10		105	70	130			
1,1-Dichloropropene	10.8	1	10		108	70	130			
Carbon tetrachloride	10.2	1	10		102	70	130			
Benzene	10.4	0.5	10		104	70	130			
Dibromomethane	9.88	1	10		99	70	130			
1,2-Dichloropropane	10.9	1	10		109	70	130			
Trichloroethene	11.1	1	10		111	70	130			
Bromodichloromethane	9.22	1	10		92	70	130			
cis-1,3-Dichloropropene	9.32	1	10		93	70	130			
trans-1,3-Dichloropropene	8.48	1	10		85	70	130			
1,1,2-Trichloroethane	10.2	1	10		102	70	130			
Toluene	10.3	0.5	10		103	70	130			
1,3-Dichloropropane	10.5	1	10		105	70	130			
Dibromochloromethane	9.06	1	10		91	70	130			
1,2-Dibromoethane (EDB)	19.7	2	20		98	70	130			
Tetrachloroethene	10.8	1	10		108	70	130			
1,1,1,2-Tetrachloroethane	10.3	1	10		103	70	130			
Chlorobenzene	10.2	1	10		102	70	130			
Ethylbenzene	10.7	0.5	10		107	70	130			
m,p-Xylene	11.2	0.5	10		112	70	130			
Bromoform	8.07	1	10		81	70	130			
Styrene	7.34	1	10		73	70	130			
o-Xylene	10.9	0.5	10		109	70	130			
1,1,2,2-Tetrachloroethane	9.75	1	10		98	70	130			
1,2,3-Trichloropropane	20.2	2	20		101	70	130			
Isopropylbenzene	11.1	1	10		111	70	130			
Bromobenzene	10.1	1	10		101	70	130			
n-Propylbenzene	11	1	10		110	70	130			
4-Chlorotoluene	10.7	1	10		107	70	130			
2-Chlorotoluene	10.6	1	10		106	70	130			
1,3,5-Trimethylbenzene	10.6	1	10		106	70	130			
tert-Butylbenzene	10.6	1	10		106	70	130			
1,2,4-Trimethylbenzene	10.7	1	10		107	70	130			
sec-Butylbenzene	10.8	1	10		108	70	130			
1,3-Dichlorobenzene	10.5	1	10		105	70	130			
1,4-Dichlorobenzene	10	1	10		100	70	130			
4-Isopropyltoluene	10.8	1	10		108	70	130			
1,2-Dichlorobenzene	10.1	1	10		101	70	130			
n-Butylbenzene	11.7	1	10		117	70	130			
1,2-Dibromo-3-chloropropane (DBCP)	46.5	3	50		93	70	130			
1,2,4-Trichlorobenzene	9.37	2	10		94	70	130			
Naphthalene	8.8	2	10		88	70	130			
Hexachlorobutadiene	18.7	2	20		93	70	130			
1,2,3-Trichlorobenzene	9.15	2	10		92	70	130			
Surr: 1,2-Dichloroethane-d4	8.75		10		88	70	130			
Surr: Toluene-d8	10.3		10		103	70	130			
Surr: 4-Bromofluorobenzene	9.85		10		99	70	130			

Alpha Analytical, Inc.

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

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

Date: 12-Aug-09

QC Summary Report

Work Order: 09073103

Sample Matrix Spike Type **MS** Test Code: _____

File ID: **09073143.D** Batch ID: **MS15W0804N** Analysis Date: **08/05/2009 00:50**

Sample ID: **09073103-03AMS** Units : **µg/L** Run ID: **MSD_15_090804C** Prep Date: **08/05/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	48.9	2.5	50	0	98	13	167			
Chloromethane	45.3	10	50	0	91	28	145			
Vinyl chloride	48.5	2.5	50	0	97	43	134			
Chloroethane	40.8	2.5	50	0	82	39	154			
Bromomethane	38.7	10	50	0	77	19	176			
Trichlorofluoromethane	49.9	2.5	50	0	99.8	34	160			
1,1-Dichloroethene	46.8	2.5	50	0	94	60	130			
Dichloromethane	45.5	10	50	0	91	68	130			
trans-1,2-Dichloroethene	49.9	2.5	50	0	99.8	63	130			
Methyl tert-butyl ether (MTBE)	49.5	1.3	50	0	99	56	141			
1,1-Dichloroethane	47.9	2.5	50	0	96	61	130			
cis-1,2-Dichloroethene	50.7	2.5	50	0	101	70	130			
Bromochloromethane	50.8	2.5	50	0	102	70	130			
Chloroform	47	2.5	50	0	94	67	130			
2,2-Dichloropropane	41.3	2.5	50	0	83	30	152			
1,2-Dichloroethane	44.7	2.5	50	0	89	60	135			
1,1,1-Trichloroethane	47.7	2.5	50	0	95	59	137			
1,1-Dichloropropene	49.4	2.5	50	0	99	63	130			
Carbon tetrachloride	47.7	2.5	50	0	95	50	147			
Benzene	48.1	1.3	50	0	96	67	130			
Dibromomethane	48.1	2.5	50	0	96	69	133			
1,2-Dichloropropane	49.9	2.5	50	0	99.8	69	130			
Trichloroethene	49.4	2.5	50	0	99	69	130			
Bromodichloromethane	43.4	2.5	50	0	87	66	134			
cis-1,3-Dichloropropene	41.6	2.5	50	0	83	63	130			
trans-1,3-Dichloropropene	41.3	2.5	50	0	83	66	131			
1,1,2-Trichloroethane	48.7	2.5	50	0	97	68	130			
Toluene	47.4	1.3	50	0	95	66	130			
1,3-Dichloropropane	50.5	2.5	50	0	101	70	130			
Dibromochloromethane	44.2	2.5	50	0	88	70	130			
1,2-Dibromoethane (EDB)	96.9	10	100	0	97	70	130			
Tetrachloroethene	48.3	2.5	50	0	97	61	134			
1,1,1,2-Tetrachloroethane	48.5	2.5	50	0	97	70	130			
Chlorobenzene	47.8	2.5	50	0	96	70	130			
Ethylbenzene	48.7	1.3	50	0	97	68	130			
m,p-Xylene	50.8	1.3	50	0	102	64	130			
Bromoform	40	2.5	50	0	80	64	138			
Styrene	34.7	2.5	50	0	69	69	130			
o-Xylene	51.3	1.3	50	0	103	70	130			
1,1,2,2-Tetrachloroethane	52.5	2.5	50	0	105	65	131			
1,2,3-Trichloropropane	100	10	100	0	100	70	130			
Isopropylbenzene	50.3	2.5	50	0	101	64	138			
Bromobenzene	46.8	2.5	50	0	94	70	130			
n-Propylbenzene	49.4	2.5	50	0	99	66	132			
4-Chlorotoluene	49.9	2.5	50	0	99.8	70	130			
2-Chlorotoluene	49	2.5	50	0	98	70	130			
1,3,5-Trimethylbenzene	48.3	2.5	50	0	97	66	136			
tert-Butylbenzene	48	2.5	50	0	96	65	137			
1,2,4-Trimethylbenzene	49.1	2.5	50	0	98	65	137			
sec-Butylbenzene	49.5	2.5	50	0	99	66	134			
1,3-Dichlorobenzene	49.9	2.5	50	0	99.8	70	130			
1,4-Dichlorobenzene	47.1	2.5	50	0	94	70	130			
4-Isopropyltoluene	49.3	2.5	50	0	99	66	137			
1,2-Dichlorobenzene	48.3	2.5	50	0	97	70	130			
n-Butylbenzene	53	2.5	50	0	106	60	142			
1,2-Dibromo-3-chloropropane (DBCP)	237	15	250	0	95	67	130			
1,2,4-Trichlorobenzene	43.2	10	50	0	86	61	137			
Naphthalene	40.9	10	50	0	82	40	167			
Hexachlorobutadiene	86.9	10	100	0	87	61	130			
1,2,3-Trichlorobenzene	41.8	10	50	0	84	51	144			
Surr: 1,2-Dichloroethane-d4	43.8		50		88	70	130			
Surr: Toluene-d8	51.4		50		103	70	130			
Surr: 4-Bromofluorobenzene	49.1		50		98	70	130			

Alpha Analytical, Inc.

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

Date: 12-Aug-09

QC Summary Report

Work Order: 09073103

Sample Matrix Spike Duplicate Type **MSD** Test Code: _____

File ID: **09073144.D** Batch ID: **MS15W0804N** Analysis Date: **08/05/2009 01:12**

Sample ID: **09073103-03AMSD** Units : **µg/L** Run ID: **MSD_15_090804C** Prep Date: **08/05/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	50.1	2.5	50	0	100	13	167	48.85	2.6(20)	
Chloromethane	48.2	10	50	0	96	28	145	45.25	6.3(20)	
Vinyl chloride	53.4	2.5	50	0	107	43	134	48.51	9.6(20)	
Chloroethane	43.3	2.5	50	0	87	39	154	40.82	5.8(20)	
Bromomethane	40.8	10	50	0	82	19	176	38.71	5.3(20)	
Trichlorofluoromethane	52.9	2.5	50	0	106	34	160	49.91	5.7(20)	
1,1-Dichloroethene	48.3	2.5	50	0	97	60	130	46.83	3.0(20)	
Dichloromethane	44.5	10	50	0	89	68	130	45.48	2.1(20)	
trans-1,2-Dichloroethene	51.1	2.5	50	0	102	63	130	49.91	2.3(20)	
Methyl tert-butyl ether (MTBE)	48.8	1.3	50	0	98	56	141	49.49	1.5(20)	
1,1-Dichloroethane	47.7	2.5	50	0	95	61	130	47.88	0.5(20)	
cis-1,2-Dichloroethene	48.6	2.5	50	0	97	70	130	50.7	4.2(20)	
Bromochloromethane	51.5	2.5	50	0	103	70	130	50.8	1.3(20)	
Chloroform	48.5	2.5	50	0	97	67	130	47	3.2(20)	
2,2-Dichloropropane	42.5	2.5	50	0	85	30	152	41.25	2.9(20)	
1,2-Dichloroethane	44.7	2.5	50	0	89	60	135	44.7	0.1(20)	
1,1,1-Trichloroethane	49.7	2.5	50	0	99	59	137	47.67	4.1(20)	
1,1-Dichloropropene	49.9	2.5	50	0	99.8	63	130	49.35	1.2(20)	
Carbon tetrachloride	48.6	2.5	50	0	97	50	147	47.7	1.9(20)	
Benzene	48.3	1.3	50	0	97	67	130	48.08	0.5(20)	
Dibromomethane	47.7	2.5	50	0	95	69	133	48.09	0.9(20)	
1,2-Dichloropropane	50.1	2.5	50	0	100	69	130	49.91	0.4(20)	
Trichloroethene	48.8	2.5	50	0	98	69	130	49.38	1.2(20)	
Bromodichloromethane	42.9	2.5	50	0	86	66	134	43.36	1.2(20)	
cis-1,3-Dichloropropene	40.5	2.5	50	0	81	63	130	41.6	2.8(20)	
trans-1,3-Dichloropropene	40.8	2.5	50	0	82	66	131	41.29	1.3(20)	
1,1,2-Trichloroethane	48.3	2.5	50	0	97	68	130	48.7	0.8(20)	
Toluene	47.1	1.3	50	0	94	66	130	47.41	0.7(20)	
1,3-Dichloropropane	49.5	2.5	50	0	99	70	130	50.49	2.1(20)	
Dibromochloromethane	44.7	2.5	50	0	89	70	130	44.22	1.0(20)	
1,2-Dibromoethane (EDB)	94.6	10	100	0	95	70	130	96.85	2.3(20)	
Tetrachloroethene	48.8	2.5	50	0	98	61	134	48.32	1.1(20)	
1,1,1,2-Tetrachloroethane	48.2	2.5	50	0	96	70	130	48.5	0.7(20)	
Chlorobenzene	47.3	2.5	50	0	95	70	130	47.78	1.0(20)	
Ethylbenzene	48.9	1.3	50	0	98	68	130	48.71	0.3(20)	
m,p-Xylene	50.7	1.3	50	0	101	64	130	50.84	0.3(20)	
Bromoform	40.3	2.5	50	0	81	64	138	39.98	0.7(20)	
Styrene	34.1	2.5	50	0	68	69	130	34.73	1.9(20)	M2
o-Xylene	51.2	1.3	50	0	102	70	130	51.3	0.2(20)	
1,1,2,2-Tetrachloroethane	50.8	2.5	50	0	102	65	131	52.52	3.3(20)	
1,2,3-Trichloropropane	98.6	10	100	0	99	70	130	100.1	1.5(20)	
Isopropylbenzene	50.8	2.5	50	0	102	64	138	50.29	1.0(20)	
Bromobenzene	46.1	2.5	50	0	92	70	130	46.75	1.3(20)	
n-Propylbenzene	51.4	2.5	50	0	103	66	132	49.39	4.1(20)	
4-Chlorotoluene	50.2	2.5	50	0	100	70	130	49.91	0.6(20)	
2-Chlorotoluene	49.6	2.5	50	0	99	70	130	48.96	1.3(20)	
1,3,5-Trimethylbenzene	49	2.5	50	0	98	66	136	48.27	1.5(20)	
tert-Butylbenzene	48.8	2.5	50	0	98	65	137	48.01	1.5(20)	
1,2,4-Trimethylbenzene	48.9	2.5	50	0	98	65	137	49.11	0.4(20)	
sec-Butylbenzene	50.7	2.5	50	0	101	66	134	49.46	2.4(20)	
1,3-Dichlorobenzene	49.4	2.5	50	0	99	70	130	49.89	0.9(20)	
1,4-Dichlorobenzene	46.4	2.5	50	0	93	70	130	47.07	1.5(20)	
4-Isopropyltoluene	50	2.5	50	0	100	66	137	49.31	1.4(20)	
1,2-Dichlorobenzene	47.8	2.5	50	0	96	70	130	48.25	0.9(20)	
n-Butylbenzene	54.7	2.5	50	0	109	60	142	53.04	3.1(20)	
1,2-Dibromo-3-chloropropane (DBCP)	238	15	250	0	95	67	130	236.5	0.8(20)	
1,2,4-Trichlorobenzene	44.3	10	50	0	89	61	137	43.24	2.5(20)	
Naphthalene	41.9	10	50	0	84	40	167	40.88	2.4(20)	
Hexachlorobutadiene	91.1	10	100	0	91	61	130	86.9	4.7(20)	
1,2,3-Trichlorobenzene	43.4	10	50	0	87	51	144	41.83	3.7(20)	
Surr: 1,2-Dichloroethane-d4	43.9		50		88	70	130			
Surr: Toluene-d8	51.8		50		104	70	130			
Surr: 4-Bromofluorobenzene	49.7		50		99	70	130			

Alpha Analytical, Inc.

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

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

Date: *12-Aug-09*

QC Summary Report

Work Order: 09073103

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.

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 : BMIS09073103

Report Due By : 5:00 PM On : 14-Aug-2009

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

PO : 218013

Client's COC # : 25738 Job : G005862/JPL Groundwater Monitoring

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

EDD Required : **Yes**

Sampled by : Client

Cooler Temp	Samples Received	Date Printed
2 °C	31-Jul-2009	**31-Jul-2009**

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

Alpha Sample ID	Client Sample ID	Matrix	Collection Date	No. of Bottles Alpha	Sub	TAT	Requested Tests 300_0(A)_W	300_0(B)_W	300_0(C)_W	314_W	METALS_DW	VOC_TIC_W	VOC_W		Sample Remarks
BMI09073103-01A	MW-24-4	AQ	07/30/09 07:45	1	0	10					Cr				
BMI09073103-02A	MW-24-3	AQ	07/30/09 08:10	5	0	10				Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria		
BMI09073103-03A	MW-24-2	AQ	07/30/09 08:45	10	0	10				Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria		MS/MSD Level IV QC
BMI09073103-04A	MW-24-1	AQ	07/30/09 09:24	5	0	10	NO2, NO3, PO4, SO4, Cl	NO2, NO3, PO4, SO4, Cl	NO2, NO3, PO4, SO4, Cl	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria		
BMI09073103-05A	EB-8-7/30/09	AQ	07/30/09 09:10	5	0	10				Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria		
BMI09073103-06A	TB-8-7/30/09	AQ	07/30/09 00:00	1	0	10						VOC by 524 Criteria	VOC by 524 Criteria		Reno Trip Blank 6/22/09

Comments: No security seals. Frozen ice. Temp Blank #7280 received @ 2°C. Perchlorate RL of 1.0 ug/L. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). :

	Signature	Print Name	Company	Date/Time
Logged in by:	Elizabeth Adcox	Elizabeth Adcox	**Alpha Analytical, Inc.**	7-31-09 1247

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 ___

25738

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 / Lab ID Number (Office Use Only)	Report Attention / Sample Description	TAT	Field Filtered	Total and type of containers ** See below	VOC (5242)	Total C (2320.B)	Cl04 - (314.0) Cl-, SO4, NO3, NO2, PO43 (300.0)				REMARKS
745	7/30/09	AQ	BMI09073103-01	MW-24-4	NORM		P/1		X					
810			-02	MW-24-3			VP/5	X	X	X				
845			-03	MW-24-2			VP/10	X	X	X				MS/MSD / LEVEL IV QC
924			-04	MW-24-1			VP/5	X	X	X	X			
910			-05	EB-8-7/30/09				X	X	X				EQUIP. BLANK
—			-06	TB-8-7/30/09			V/2	X						TRIP BLANK

ADDITIONAL INSTRUCTIONS:

	Signature	Print Name	Company	Date	Time
Relinquished by		MARCO MENDOZA	INSIGHT EEC	7/30/09	1300
Received by	Elizabeth Adcox	Elizabeth Adcox	Alpha	7-31-09	1247
Relinquished by					
Received by					
Relinquished by					
Received by					

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

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

Alpha Analytical, Inc.

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

Date: *17-Aug-09*

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

CASE NARRATIVE

Project: G005862/JPL Groundwater Monitoring
Work Order: BMI09080404 **Cooler Temp:** 4 °C

Alpha's Sample ID	Client's Sample ID	Matrix
09080404-01A	MW-22-3	Aqueous
09080404-02A	MW-22-2	Aqueous
09080404-03A	MW-22-1	Aqueous
09080404-04A	EB-9-7/31/09	Aqueous
09080404-05A	TB-9-7/31/09	Aqueous
09080404-06A	MW-12-5	Aqueous
09080404-07A	MW-12-4	Aqueous
09080404-08A	MW-12-3	Aqueous
09080404-09A	MW-12-2	Aqueous
09080404-10A	MW-12-1	Aqueous
09080404-11A	DUPE-7-3Q09	Aqueous
09080404-12A	EB-10-8/3/09	Aqueous
09080404-13A	TB-10-8/3/09	Aqueous

Manually Integrated Analytes

Alpha's Sample ID	Test Reference	Analyte
09080404-01A	EPA Method 314.0	Perchlorate
09080404-02A	EPA Method 314.0	Perchlorate
09080404-06A	EPA Method 314.0	Perchlorate
09080404-07A	EPA Method 314.0	Perchlorate
09080404-09A	EPA Method 314.0	Perchlorate
09080404-11A	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 : 08/04/09

Job#: G005862/JPL Groundwater Monitoring

Perchlorate by Ion Chromatography
EPA Method 314.0

		Parameter	Concentration	Reporting Limit	Date Sampled	Date Analyzed
Client ID :	**MW-22-3**					
Lab ID :	BMI09080404-01A	Perchlorate	2.54	1.00 µg/L	07/31/09	08/07/09
Client ID :	**MW-22-2**					
Lab ID :	BMI09080404-02A	Perchlorate	1.99	1.00 µg/L	07/31/09	08/07/09
Client ID :	**MW-22-1**					
Lab ID :	BMI09080404-03A	Perchlorate	2.40	1.00 µg/L	07/31/09	08/07/09
Client ID :	**EB-9-7/31/09**					
Lab ID :	BMI09080404-04A	Perchlorate	ND	1.00 µg/L	07/31/09	08/07/09
Client ID :	**MW-12-5**					
Lab ID :	BMI09080404-06A	Perchlorate	1.65	1.00 µg/L	08/03/09	08/07/09
Client ID :	**MW-12-4**					
Lab ID :	BMI09080404-07A	Perchlorate	2.71	1.00 µg/L	08/03/09	08/07/09
Client ID :	**MW-12-3**					
Lab ID :	BMI09080404-08A	Perchlorate	ND	1.00 µg/L	08/03/09	08/07/09
Client ID :	**MW-12-2**					
Lab ID :	BMI09080404-09A	Perchlorate	2.77	1.00 µg/L	08/03/09	08/07/09
Client ID :	**MW-12-1**					
Lab ID :	BMI09080404-10A	Perchlorate	1.35	1.00 µg/L	08/03/09	08/07/09
Client ID :	**DUPE-7-3Q09**					
Lab ID :	BMI09080404-11A	Perchlorate	2.66	1.00 µg/L	08/03/09	08/07/09
Client ID :	**EB-10-8/3/09**					
Lab ID :	BMI09080404-12A	Perchlorate	ND	1.00 µg/L	08/03/09	08/07/09

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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

8/17/09
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 08/04/09

Job#: G005862/JPL Groundwater Monitoring

Metals by ICPMS
EPA Method 200.8

		Parameter	Concentration	Reporting Limit	Date Sampled	Date Analyzed
Client ID :	**MW-22-3**					
Lab ID :	BMI09080404-01A	Chromium (Cr)	ND	0.0050 mg/L	07/31/09	08/14/09
Client ID :	**MW-22-2**					
Lab ID :	BMI09080404-02A	Chromium (Cr)	ND	0.0050 mg/L	07/31/09	08/14/09
Client ID :	**MW-22-1**					
Lab ID :	BMI09080404-03A	Chromium (Cr)	ND	0.0050 mg/L	07/31/09	08/14/09
Client ID :	**EB-9-7/31/09**					
Lab ID :	BMI09080404-04A	Chromium (Cr)	ND	0.0050 mg/L	07/31/09	08/14/09
Client ID :	**MW-12-3**					
Lab ID :	BMI09080404-08A	Chromium (Cr)	ND	0.0050 mg/L	08/03/09	08/14/09
Client ID :	**MW-12-2**					
Lab ID :	BMI09080404-09A	Chromium (Cr)	ND	0.0050 mg/L	08/03/09	08/14/09
Client ID :	**MW-12-1**					
Lab ID :	BMI09080404-10A	Chromium (Cr)	ND	0.0050 mg/L	08/03/09	08/14/09
Client ID :	**DUPE-7-3Q09**					
Lab ID :	BMI09080404-11A	Chromium (Cr)	ND	0.0050 mg/L	08/03/09	08/14/09
Client ID :	**EB-10-8/3/09**					
Lab ID :	BMI09080404-12A	Chromium (Cr)	ND	0.0050 mg/L	08/03/09	08/14/09

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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8/17/09
Report Date

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ANALYTICAL REPORT

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

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

Tentatively Identified Compounds - Volatile Organics by GC/MS

		Parameter	Estimated Concentration	Estimated Reporting Limit	Date Received	Date Sampled	Date Analyzed
Client ID :	**MW-22-3**						
Lab ID :	BMI09080404-01A	*** None Found ***	ND	2.0 µg/L	08/04/09	07/31/09	08/06/09
Client ID :	**MW-22-2**						
Lab ID :	BMI09080404-02A	*** None Found ***	ND	2.0 µg/L	08/04/09	07/31/09	08/06/09
Client ID :	**MW-22-1**						
Lab ID :	BMI09080404-03A	*** None Found ***	ND	2.0 µg/L	08/04/09	07/31/09	08/06/09
Client ID :	**EB-9-7/31/09**						
Lab ID :	BMI09080404-04A	*** None Found ***	ND	2.0 µg/L	08/04/09	07/31/09	08/05/09
Client ID :	**TB-9-7/31/09**						
Lab ID :	BMI09080404-05A	*** None Found ***	ND	2.0 µg/L	08/04/09	07/31/09	08/05/09
Client ID :	**MW-12-5**						
Lab ID :	BMI09080404-06A	Sulfur dioxide	2.4	2.0 µg/L	08/04/09	08/03/09	08/06/09
Client ID :	**MW-12-4**						
Lab ID :	BMI09080404-07A	Sulfur dioxide	6.9	2.0 µg/L	08/04/09	08/03/09	08/06/09
Client ID :	**MW-12-3**						
Lab ID :	BMI09080404-08A	Sulfur dioxide	5.2	2.0 µg/L	08/04/09	08/03/09	08/06/09
Client ID :	**MW-12-2**						
Lab ID :	BMI09080404-09A	Sulfur dioxide	7.1	2.0 µg/L	08/04/09	08/03/09	08/06/09
Client ID :	**MW-12-1**						
Lab ID :	BMI09080404-10A	*** None Found ***	ND	2.0 µg/L	08/04/09	08/03/09	08/06/09
Client ID :	**DUPE-7-3Q09**						
Lab ID :	BMI09080404-11A	Sulfur dioxide	6.2	2.0 µg/L	08/04/09	08/03/09	08/06/09
Client ID :	**EB-10-8/3/09**						
Lab ID :	BMI09080404-12A	*** None Found ***	ND	2.0 µg/L	08/04/09	08/03/09	08/05/09
Client ID :	**TB-10-8/3/09**						
Lab ID :	BMI09080404-13A	*** None Found ***	ND	2.0 µg/L	08/04/09	08/03/09	08/05/09

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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8/17/09

Report Date

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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI09080404-01A
Client I.D. Number: MW-22-3

Sampled: 07/31/09
Received: 08/04/09
Analyzed: 08/06/09

Volatile Organics by GC/MS

	Compound	Concentration	Reporting Limit		Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37 Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38 Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39 m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40 Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41 Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42 o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44 1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45 Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46 Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47 n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48 4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49 2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50 1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51 tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52 1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53 sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54 1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55 1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56 4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57 1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58 n-Butylbenzene	ND	0.50	µg/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	2.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62 Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63 1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64 Surr: 1,2-Dichloroethane-d4	90	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65 Surr: Toluene-d8	112	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66 Surr: 4-Bromofluorobenzene	93	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L				
33	Dibromochloromethane	ND	0.50	µg/L				
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L				
35	Tetrachloroethene	ND	0.50	µg/L				

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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

8/17/08
Report 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: BMI09080404-02A
Client I.D. Number: MW-22-2

Sampled: 07/31/09
Received: 08/04/09
Analyzed: 08/06/09

Volatile Organics by GC/MS

	Compound	Concentration	Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/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	2.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	92	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	112	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	91	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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8/17/08
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: BMI09080404-03A
Client I.D. Number: MW-22-1

Sampled: 07/31/09
Received: 08/04/09
Analyzed: 08/06/09

Volatile Organics by GC/MS

	Compound	Concentration	Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	0.51	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5	µg/L
25	Trichloroethene	0.95	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	2.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	91	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	112	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	95	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	2.0	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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8/17/08

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: BMI09080404-04A
Client I.D. Number: EB-9-7/31/09

Sampled: 07/31/09
Received: 08/04/09
Analyzed: 08/05/09

Volatile Organics by GC/MS

	Compound	Concentration	Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/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	2.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	86	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	113	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	98	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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

8/17/08
Report 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: BMI09080404-05A
Client I.D. Number: TB-9-7/31/09

Sampled: 07/31/09
Received: 08/04/09
Analyzed: 08/05/09

Volatile Organics by GC/MS

	Compound	Concentration	Reporting Limit		Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37 Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38 Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39 m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40 Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41 Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42 o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44 1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45 Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46 Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47 n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48 4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49 2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50 1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51 tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52 1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53 sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54 1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55 1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56 4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57 1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58 n-Butylbenzene	ND	0.50	µg/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	2.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62 Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63 1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64 Surr: 1,2-Dichloroethane-d4	86	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65 Surr: Toluene-d8	113	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66 Surr: 4-Bromofluorobenzene	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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Report Date

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

ANALYTICAL REPORT

Battelle Memorial Institute
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: BMI09080404-06A
Client I.D. Number: MW-12-5

Sampled: 08/03/09
Received: 08/04/09
Analyzed: 08/06/09

Volatile Organics by GC/MS

	Compound	Concentration	Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	0.72	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/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	2.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	88	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	112	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	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

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

8/17/09
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI09080404-07A
Client I.D. Number: MW-12-4

Sampled: 08/03/09
Received: 08/04/09
Analyzed: 08/06/09

Volatile Organics by GC/MS

	Compound	Concentration	Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	0.76	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	1.6	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (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	2.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	91	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	111	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	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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Report 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: BMI09080404-08A
Client I.D. Number: MW-12-3

Sampled: 08/03/09
Received: 08/04/09
Analyzed: 08/06/09

Volatile Organics by GC/MS

	Compound	Concentration	Reporting Limit		Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37 Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38 Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39 m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40 Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41 Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42 o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44 1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45 Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46 Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47 n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48 4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49 2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50 1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51 tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52 1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53 sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54 1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55 1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56 4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57 1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58 n-Butylbenzene	ND	0.50	µg/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	2.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62 Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63 1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64 Surr: 1,2-Dichloroethane-d4	91	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65 Surr: Toluene-d8	111	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66 Surr: 4-Bromofluorobenzene	91	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L				
33	Dibromochloromethane	ND	0.50	µg/L				
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L				
35	Tetrachloroethene	ND	0.50	µg/L				

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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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: BMI09080404-09A
Client I.D. Number: MW-12-2

Sampled: 08/03/09
Received: 08/04/09
Analyzed: 08/06/09

Volatile Organics by GC/MS

	Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L
3	Vinyl chloride	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L
9	Freon-113	ND	0.50	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L
25	Trichloroethene	ND	0.50	µg/L
26	Bromodichloromethane	ND	0.50	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L
30	1,1,2-Trichloroethane	ND	0.50	µg/L
31	Toluene	ND	0.50	µg/L
32	1,3-Dichloropropane	ND	0.50	µg/L
33	Dibromochloromethane	ND	0.50	µg/L
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L
35	Tetrachloroethene	ND	0.50	µg/L
36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
37	Chlorobenzene	ND	0.50	µg/L
38	Ethylbenzene	ND	0.50	µg/L
39	m,p-Xylene	ND	0.50	µg/L
40	Bromoform	ND	0.50	µg/L
41	Styrene	ND	0.50	µg/L
42	o-Xylene	ND	0.50	µg/L
43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
44	1,2,3-Trichloropropane	ND	1.0	µg/L
45	Isopropylbenzene	ND	0.50	µg/L
46	Bromobenzene	ND	0.50	µg/L
47	n-Propylbenzene	ND	0.50	µg/L
48	4-Chlorotoluene	ND	0.50	µg/L
49	2-Chlorotoluene	ND	0.50	µg/L
50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
51	tert-Butylbenzene	ND	0.50	µg/L
52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
53	sec-Butylbenzene	ND	0.50	µg/L
54	1,3-Dichlorobenzene	ND	0.50	µg/L
55	1,4-Dichlorobenzene	ND	0.50	µg/L
56	4-Isopropyltoluene	ND	0.50	µg/L
57	1,2-Dichlorobenzene	ND	0.50	µg/L
58	n-Butylbenzene	ND	0.50	µg/L
59	1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5	µg/L
60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
61	Naphthalene	ND	2.0	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	87	(70-130)	%REC
65	Surr: Toluene-d8	114	(70-130)	%REC
66	Surr: 4-Bromofluorobenzene	89	(70-130)	%REC

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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

8/17/08
Report 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: BMI09080404-10A
Client I.D. Number: MW-12-1

Sampled: 08/03/09
Received: 08/04/09
Analyzed: 08/06/09

Volatile Organics by GC/MS

	Compound	Concentration	Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/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	2.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	90	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	112	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	100	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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8/17/08
Report 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: BMI09080404-11A
Client I.D. Number: DUPE-7-3Q09

Sampled: 08/03/09
Received: 08/04/09
Analyzed: 08/06/09

Volatile Organics by GC/MS

	Compound	Concentration	Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/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	2.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-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	110	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	94	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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

8/17/08
Report 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: BMI09080404-12A
Client I.D. Number: EB-10-8/3/09

Sampled: 08/03/09
Received: 08/04/09
Analyzed: 08/05/09

Volatile Organics by GC/MS

	Compound	Concentration	Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/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	2.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	89	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	113	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	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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Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.

8/17/08

Report 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: BMI09080404-13A
Client I.D. Number: TB-10-8/3/09

Sampled: 08/03/09
Received: 08/04/09
Analyzed: 08/05/09

Volatile Organics by GC/MS

	Compound	Concentration	Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/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	2.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	85	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	112	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	94	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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

8/17/08
Report 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: BMI09080404 **Project:** G005862/JPL Groundwater Monitoring

Alpha's Sample ID	Client's Sample ID	Matrix	pH
09080404-01A	MW-22-3	Aqueous	2
09080404-02A	MW-22-2	Aqueous	2
09080404-03A	MW-22-1	Aqueous	2
09080404-04A	EB-9-7/31/09	Aqueous	2
09080404-05A	TB-9-7/31/09	Aqueous	2
09080404-06A	MW-12-5	Aqueous	2
09080404-07A	MW-12-4	Aqueous	2
09080404-08A	MW-12-3	Aqueous	2
09080404-09A	MW-12-2	Aqueous	2
09080404-10A	MW-12-1	Aqueous	2
09080404-11A	DUPE-7-3Q09	Aqueous	2
09080404-12A	EB-10-8/3/09	Aqueous	2
09080404-13A	TB-10-8/3/09	Aqueous	2

8/17/09

Report Date

Alpha Analytical, Inc.

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Date: *14-Aug-09*

QC Summary Report

Work Order: 09080404

Method Blank

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

File ID: **44** Batch ID: **22493** Analysis Date: **08/07/2009 00:50**

Sample ID: **MBLK-22493** Units : **µg/L** Run ID: **IC_3_090807A** Prep Date: **08/06/2009**

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: **45** Batch ID: **22493** Analysis Date: **08/07/2009 01:08**

Sample ID: **LFB-22493** Units : **µg/L** Run ID: **IC_3_090807A** Prep Date: **08/06/2009**

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

Sample Matrix Spike

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

File ID: **49** Batch ID: **22493** Analysis Date: **08/07/2009 02:22**

Sample ID: **09073103-03ALFM** Units : **µg/L** Run ID: **IC_3_090807A** Prep Date: **08/06/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	34.2	2	25	10.16	96	80	120			

Sample Matrix Spike Duplicate

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

File ID: **50** Batch ID: **22493** Analysis Date: **08/07/2009 02:40**

Sample ID: **09073103-03ALFMD** Units : **µg/L** Run ID: **IC_3_090807A** Prep Date: **08/06/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	35.7	2	25	10.16	102	80	120	34.21	4.3(15)	

Comments:

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

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Date: *18-Aug-09*

QC Summary Report

Work Order: 09080404

Method Blank

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

File ID: **081309.B\087SMPL.D** Batch ID: **22512K** Analysis Date: **08/13/2009 22:44**

Sample ID: **MB-22512** Units : **mg/L** Run ID: **ICP/MS_090813C** Prep Date: **08/10/2009**

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

Laboratory Control Spike

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

File ID: **081309.B\088_LCS.D** Batch ID: **22512K** Analysis Date: **08/13/2009 22:49**

Sample ID: **LCS-22512** Units : **mg/L** Run ID: **ICP/MS_090813C** Prep Date: **08/10/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0457	0.005	0.05		91	80	120			

Sample Matrix Spike

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

File ID: **081309.B\092SMPL.D** Batch ID: **22512K** Analysis Date: **08/13/2009 23:12**

Sample ID: **09080502-03AMS** Units : **mg/L** Run ID: **ICP/MS_090813C** Prep Date: **08/10/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0531	0.005	0.05	0	106	80	120			

Sample Matrix Spike Duplicate

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

File ID: **081309.B\093SMPL.D** Batch ID: **22512K** Analysis Date: **08/13/2009 23:17**

Sample ID: **09080502-03AMSD** Units : **mg/L** Run ID: **ICP/MS_090813C** Prep Date: **08/10/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0618	0.005	0.05	0	124	80	120	0.05313	15.1(20)	M1

Comments:

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

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

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

Alpha Analytical, Inc.

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Date: 14-Aug-09

QC Summary Report

Work Order: 09080404

Method Blank Type **MBLK** Test Code: _____

File ID: **09080531.D** Batch ID: **MS15W0805N** Analysis Date: **08/05/2009 21:11**

Sample ID: **MBLK MS15W0805N** Units : **µg/L** Run ID: **MSD_15_090805B** Prep Date: **08/05/2009**

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	8.72		10		87	70	130			
Surr: Toluene-d8	10.9		10		109	70	130			

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Date: *14-Aug-09*

QC Summary Report

Work Order: 09080404

Surr: 4-Bromofluorobenzene	9.44		10	94	70	130

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

File ID: **09080527.D** Batch ID: **MS15W0805N** Analysis Date: **08/05/2009 19:42**

Sample ID: **LCS MS15W0805N** Units : **µg/L** Run ID: **MSD_15_090805B** Prep Date: **08/05/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	12.9	1	10		129	70	130			
Chloromethane	9.27	2	10		93	70	130			
Vinyl chloride	9.8	1	10		98	70	130			
Chloroethane	9.75	1	10		98	70	130			
Bromomethane	8.54	2	10		85	70	130			
Trichlorofluoromethane	12.5	1	10		125	70	130			
1,1-Dichloroethene	11	1	10		110	70	130			
Dichloromethane	9.31	2	10		93	70	130			
trans-1,2-Dichloroethene	10.9	1	10		109	70	130			
Methyl tert-butyl ether (MTBE)	9.52	0.5	10		95	70	130			
1,1-Dichloroethane	10	1	10		100	70	130			
cis-1,2-Dichloroethene	10.7	1	10		107	70	130			
Bromochloromethane	10.9	1	10		109	70	130			
Chloroform	10.4	1	10		104	70	130			
2,2-Dichloropropane	10.4	1	10		104	70	130			
1,2-Dichloroethane	9.69	1	10		97	70	130			
1,1,1-Trichloroethane	11.4	1	10		114	70	130			
1,1-Dichloropropene	11.1	1	10		111	70	130			
Carbon tetrachloride	11.5	1	10		115	70	130			
Benzene	9.97	0.5	10		99.7	70	130			
Dibromomethane	9.87	1	10		99	70	130			
1,2-Dichloropropane	9.98	1	10		99.8	70	130			
Trichloroethene	11.1	1	10		111	70	130			
Bromodichloromethane	9.28	1	10		93	70	130			
cis-1,3-Dichloropropene	9.01	1	10		90	70	130			
trans-1,3-Dichloropropene	8.81	1	10		88	70	130			
1,1,2-Trichloroethane	9.79	1	10		98	70	130			
Toluene	10.3	0.5	10		103	70	130			
1,3-Dichloropropane	10.1	1	10		101	70	130			
Dibromochloromethane	9.57	1	10		96	70	130			
1,2-Dibromoethane (EDB)	19.7	2	20		98	70	130			
Tetrachloroethene	11.8	1	10		118	70	130			
1,1,1,2-Tetrachloroethane	11	1	10		110	70	130			
Chlorobenzene	10.3	1	10		103	70	130			
Ethylbenzene	10.8	0.5	10		108	70	130			
m,p-Xylene	11.5	0.5	10		115	70	130			
Bromoform	8.72	1	10		87	70	130			
Styrene	7.48	1	10		75	70	130			
o-Xylene	11.3	0.5	10		113	70	130			
1,1,2,2-Tetrachloroethane	10.3	1	10		103	70	130			
1,2,3-Trichloropropane	20.7	2	20		103	70	130			
Isopropylbenzene	10.9	1	10		109	70	130			
Bromobenzene	9.8	1	10		98	70	130			
n-Propylbenzene	10.9	1	10		109	70	130			
4-Chlorotoluene	10.5	1	10		105	70	130			
2-Chlorotoluene	10.4	1	10		104	70	130			
1,3,5-Trimethylbenzene	10.4	1	10		104	70	130			
tert-Butylbenzene	10.5	1	10		105	70	130			
1,2,4-Trimethylbenzene	10.5	1	10		105	70	130			
sec-Butylbenzene	11	1	10		110	70	130			
1,3-Dichlorobenzene	10.5	1	10		105	70	130			
1,4-Dichlorobenzene	10.2	1	10		102	70	130			
4-Isopropyltoluene	10.8	1	10		108	70	130			
1,2-Dichlorobenzene	10.2	1	10		102	70	130			
n-Butylbenzene	11.7	1	10		117	70	130			
1,2-Dibromo-3-chloropropane (DBCP)	45.6	3	50		91	70	130			
1,2,4-Trichlorobenzene	9.85	2	10		99	70	130			
Naphthalene	8.72	2	10		87	70	130			
Hexachlorobutadiene	20.2	2	20		101	70	130			
1,2,3-Trichlorobenzene	9.42	2	10		94	70	130			
Surr: 1,2-Dichloroethane-d4	8.92		10		89	70	130			
Surr: Toluene-d8	10.4		10		104	70	130			
Surr: 4-Bromofluorobenzene	9.45		10		95	70	130			

Alpha Analytical, Inc.

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Date: 14-Aug-09

QC Summary Report

Work Order: 09080404

Sample Matrix Spike Type **MS** Test Code: _____

File ID: **09080532.D** Batch ID: **MS15W0805N** Analysis Date: **08/05/2009 21:33**

Sample ID: **09080404-08AMS** Units : **µg/L** Run ID: **MSD_15_090805B** Prep Date: **08/05/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	56	2.5	50	0	112	13	167			
Chloromethane	41.8	10	50	0	84	28	145			
Vinyl chloride	54.2	2.5	50	0	108	43	134			
Chloroethane	45.1	2.5	50	0	90	39	154			
Bromomethane	40.1	10	50	0	80	19	176			
Trichlorofluoromethane	61.8	2.5	50	0	124	34	160			
1,1-Dichloroethene	51.6	2.5	50	0	103	60	130			
Dichloromethane	42.7	10	50	0	85	68	130			
trans-1,2-Dichloroethene	52.1	2.5	50	0	104	63	130			
Methyl tert-butyl ether (MTBE)	46.2	1.3	50	0	92	56	141			
1,1-Dichloroethane	46.4	2.5	50	0	93	61	130			
cis-1,2-Dichloroethene	50.6	2.5	50	0	101	70	130			
Bromochloromethane	50.4	2.5	50	0	101	70	130			
Chloroform	49.5	2.5	50	0	99	67	130			
2,2-Dichloropropane	45	2.5	50	0	90	30	152			
1,2-Dichloroethane	46.9	2.5	50	0	94	60	135			
1,1,1-Trichloroethane	55.4	2.5	50	0	111	59	137			
1,1-Dichloropropene	51.7	2.5	50	0	103	63	130			
Carbon tetrachloride	54.8	2.5	50	0	110	50	147			
Benzene	46.7	1.3	50	0	93	67	130			
Dibromomethane	47.5	2.5	50	0	95	69	133			
1,2-Dichloropropane	45	2.5	50	0	90	69	130			
Trichloroethene	52.9	2.5	50	0	106	69	130			
Bromodichloromethane	43.7	2.5	50	0	87	66	134			
cis-1,3-Dichloropropene	39.1	2.5	50	0	78	63	130			
trans-1,3-Dichloropropene	39.5	2.5	50	0	79	66	131			
1,1,2-Trichloroethane	46.4	2.5	50	0	93	68	130			
Toluene	47	1.3	50	0	94	66	130			
1,3-Dichloropropane	46.4	2.5	50	0	93	70	130			
Dibromochloromethane	44.8	2.5	50	0	90	70	130			
1,2-Dibromoethane (EDB)	93.1	10	100	0	93	70	130			
Tetrachloroethene	54.6	2.5	50	0	109	61	134			
1,1,1,2-Tetrachloroethane	49.7	2.5	50	0	99	70	130			
Chlorobenzene	47.4	2.5	50	0	95	70	130			
Ethylbenzene	49.5	1.3	50	0	99	68	130			
m,p-Xylene	52.1	1.3	50	0	104	64	130			
Bromoform	40.8	2.5	50	0	82	64	138			
Styrene	34.5	2.5	50	0	69	69	130			
o-Xylene	51.6	1.3	50	0	103	70	130			
1,1,2,2-Tetrachloroethane	49.1	2.5	50	0	98	65	131			
1,2,3-Trichloropropane	97.1	10	100	0	97	70	130			
Isopropylbenzene	50.2	2.5	50	0	100	64	138			
Bromobenzene	44.1	2.5	50	0	88	70	130			
n-Propylbenzene	49.9	2.5	50	0	99.7	66	132			
4-Chlorotoluene	49.2	2.5	50	0	98	70	130			
2-Chlorotoluene	47.8	2.5	50	0	96	70	130			
1,3,5-Trimethylbenzene	47.4	2.5	50	0	95	66	136			
tert-Butylbenzene	49	2.5	50	0	98	65	137			
1,2,4-Trimethylbenzene	47.8	2.5	50	0	96	65	137			
sec-Butylbenzene	50.5	2.5	50	0	101	66	134			
1,3-Dichlorobenzene	48.1	2.5	50	0	96	70	130			
1,4-Dichlorobenzene	46.1	2.5	50	0	92	70	130			
4-Isopropyltoluene	50.6	2.5	50	0	101	66	137			
1,2-Dichlorobenzene	46.6	2.5	50	0	93	70	130			
n-Butylbenzene	53.3	2.5	50	0	107	60	142			
1,2-Dibromo-3-chloropropane (DBCP)	211	15	250	0	85	67	130			
1,2,4-Trichlorobenzene	41.7	10	50	0	83	61	137			
Naphthalene	35.7	10	50	0	71	40	167			
Hexachlorobutadiene	94.5	10	100	0	95	61	130			
1,2,3-Trichlorobenzene	39.9	10	50	0	80	51	144			
Surr: 1,2-Dichloroethane-d4	46.6		50		93	70	130			
Surr: Toluene-d8	51.9		50		104	70	130			
Surr: 4-Bromofluorobenzene	47.5		50		95	70	130			

Alpha Analytical, Inc.

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Date: *14-Aug-09*

QC Summary Report

Work Order: 09080404

Sample Matrix Spike Duplicate Type **MSD** Test Code: _____

File ID: **09080533.D** Batch ID: **MS15W0805N** Analysis Date: **08/05/2009 21:56**

Sample ID: **09080404-08AMSD** Units : **µg/L** Run ID: **MSD_15_090805B** Prep Date: **08/05/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	53.8	2.5	50	0	108	13	167	55.96	3.9(20)	
Chloromethane	45	10	50	0	90	28	145	41.76	7.5(20)	
Vinyl chloride	56.4	2.5	50	0	113	43	134	54.24	3.9(20)	
Chloroethane	46.2	2.5	50	0	92	39	154	45.09	2.4(20)	
Bromomethane	45.9	10	50	0	92	19	176	40.14	13.4(20)	
Trichlorofluoromethane	61.4	2.5	50	0	123	34	160	61.75	0.6(20)	
1,1-Dichloroethene	51	2.5	50	0	102	60	130	51.59	1.1(20)	
Dichloromethane	45.7	10	50	0	91	68	130	42.67	6.8(20)	
trans-1,2-Dichloroethene	52.9	2.5	50	0	106	63	130	52.08	1.5(20)	
Methyl tert-butyl ether (MTBE)	50.6	1.3	50	0	101	56	141	46.24	9.1(20)	
1,1-Dichloroethane	48.7	2.5	50	0	97	61	130	46.39	4.9(20)	
cis-1,2-Dichloroethene	52.4	2.5	50	0	105	70	130	50.59	3.5(20)	
Bromochloromethane	54.8	2.5	50	0	110	70	130	50.44	8.3(20)	
Chloroform	50.5	2.5	50	0	101	67	130	49.49	2.0(20)	
2,2-Dichloropropane	45.8	2.5	50	0	92	30	152	44.97	1.8(20)	
1,2-Dichloroethane	49	2.5	50	0	98	60	135	46.86	4.4(20)	
1,1,1-Trichloroethane	55.3	2.5	50	0	111	59	137	55.36	0.1(20)	
1,1-Dichloropropene	52.4	2.5	50	0	105	63	130	51.66	1.4(20)	
Carbon tetrachloride	55.8	2.5	50	0	112	50	147	54.77	1.8(20)	
Benzene	48.1	1.3	50	0	96	67	130	46.69	3.0(20)	
Dibromomethane	50.3	2.5	50	0	101	69	133	47.45	5.9(20)	
1,2-Dichloropropane	48.7	2.5	50	0	97	69	130	44.95	8.1(20)	
Trichloroethene	54	2.5	50	0	108	69	130	52.89	2.2(20)	
Bromodichloromethane	46.4	2.5	50	0	93	66	134	43.73	5.8(20)	
cis-1,3-Dichloropropene	41.5	2.5	50	0	83	63	130	39.1	5.9(20)	
trans-1,3-Dichloropropene	43.4	2.5	50	0	87	66	131	39.5	9.5(20)	
1,1,2-Trichloroethane	50.9	2.5	50	0	102	68	130	46.4	9.2(20)	
Toluene	48.1	1.3	50	0	96	66	130	46.99	2.3(20)	
1,3-Dichloropropane	49.4	2.5	50	0	99	70	130	46.38	6.2(20)	
Dibromochloromethane	47.7	2.5	50	0	95	70	130	44.84	6.1(20)	
1,2-Dibromoethane (EDB)	99.4	10	100	0	99	70	130	93.06	6.6(20)	
Tetrachloroethene	53.4	2.5	50	0	107	61	134	54.55	2.1(20)	
1,1,1,2-Tetrachloroethane	53.5	2.5	50	0	107	70	130	49.72	7.2(20)	
Chlorobenzene	48.9	2.5	50	0	98	70	130	47.42	3.0(20)	
Ethylbenzene	50.2	1.3	50	0	100	68	130	49.53	1.3(20)	
m,p-Xylene	53	1.3	50	0	106	64	130	52.05	1.9(20)	
Bromoform	43.9	2.5	50	0	88	64	138	40.83	7.3(20)	
Styrene	35.6	2.5	50	0	71	69	130	34.47	3.3(20)	
o-Xylene	53.7	1.3	50	0	107	70	130	51.64	3.9(20)	
1,1,2,2-Tetrachloroethane	52.5	2.5	50	0	105	65	131	49.09	6.6(20)	
1,2,3-Trichloropropane	104	10	100	0	104	70	130	97.12	6.9(20)	
Isopropylbenzene	49.7	2.5	50	0	99	64	138	50.22	1.1(20)	
Bromobenzene	45.6	2.5	50	0	91	70	130	44.07	3.4(20)	
n-Propylbenzene	49.6	2.5	50	0	99	66	132	49.86	0.5(20)	
4-Chlorotoluene	49.5	2.5	50	0	99	70	130	49.21	0.6(20)	
2-Chlorotoluene	48.2	2.5	50	0	96	70	130	47.84	0.7(20)	
1,3,5-Trimethylbenzene	47.4	2.5	50	0	95	66	136	47.39	0.0(20)	
tert-Butylbenzene	48.5	2.5	50	0	97	65	137	48.97	1.0(20)	
1,2,4-Trimethylbenzene	48	2.5	50	0	96	65	137	47.76	0.4(20)	
sec-Butylbenzene	49.6	2.5	50	0	99	66	134	50.47	1.7(20)	
1,3-Dichlorobenzene	49.4	2.5	50	0	99	70	130	48.1	2.6(20)	
1,4-Dichlorobenzene	47.8	2.5	50	0	96	70	130	46.11	3.5(20)	
4-Isopropyltoluene	49.9	2.5	50	0	99.8	66	137	50.57	1.4(20)	
1,2-Dichlorobenzene	48.2	2.5	50	0	96	70	130	46.6	3.4(20)	
n-Butylbenzene	52.7	2.5	50	0	105	60	142	53.3	1.2(20)	
1,2-Dibromo-3-chloropropane (DBCP)	234	15	250	0	94	67	130	211.5	10.3(20)	
1,2,4-Trichlorobenzene	44	10	50	0	88	61	137	41.69	5.4(20)	
Naphthalene	39.4	10	50	0	79	40	167	35.68	10.0(20)	
Hexachlorobutadiene	93.9	10	100	0	94	61	130	94.51	0.7(20)	
1,2,3-Trichlorobenzene	42.4	10	50	0	85	51	144	39.91	6.1(20)	
Surr: 1,2-Dichloroethane-d4	45.7		50		91	70	130			
Surr: Toluene-d8	51.8		50		104	70	130			
Surr: 4-Bromofluorobenzene	46.7		50		93	70	130			

Alpha Analytical, Inc.

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

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

Date: *14-Aug-09*

QC Summary Report

Work Order: 09080404

Comments:

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

Billing Information :

CHAIN-OF-CUSTODY RECORD

CA

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

WorkOrder : BMIS09080404

Report Due By : 5:00 PM On : 18-Aug-2009

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

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

EDD Required : **Yes**

Sampled by : Client

PO : 218013

Client's COC # : 25743, 25752 Job : G005862/JPL Groundwater Monitoring

Cooler Temp	Samples Received	Date Printed
4 °C	04-Aug-2009	**04-Aug-2009**

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

Alpha Sample ID	Client Sample ID	Matrix	Collection Date	No. of Bottles Alpha	Sub	TAT	Requested Tests 314_W	METALS_DW	VOC_TIC_W	VOC_W					Sample Remarks
BMI09080404-01A	MW-22-3	AQ	07/31/09 07:37	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI09080404-02A	MW-22-2	AQ	07/31/09 07:58	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI09080404-03A	MW-22-1	AQ	07/31/09 08:24	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI09080404-04A	EB-9-7/31/09	AQ	07/31/09 08:12	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI09080404-05A	TB-9-7/31/09	AQ	07/31/09 00:00	1	0	10			VOC by 524 Criteria	VOC by 524 Criteria					Reno Trip Blank 6/22/09
BMI09080404-06A	MW-12-5	AQ	08/03/09 07:49	4	0	10	Perchlorate		VOC by 524 Criteria	VOC by 524 Criteria					
BMI09080404-07A	MW-12-4	AQ	08/03/09 08:12	4	0	10	Perchlorate		VOC by 524 Criteria	VOC by 524 Criteria					Level IV QC
BMI09080404-08A	MW-12-3	AQ	08/03/09 08:48	10	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					MS/MSD
BMI09080404-09A	MW-12-2	AQ	08/03/09 09:25	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI09080404-10A	MW-12-1	AQ	08/03/09 09:58	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					

Comments: No security seals. Frozen ice. Temp Blank #7650 received @ 4°C. Perchlorate RL of 1.0 ug/L. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). :

	Signature	Print Name	Company	Date/Time
Logged in by:	Elizabeth Adcox	Elizabeth Adcox	**Alpha Analytical, Inc.**	8/4/09 1154

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

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

Billing Information :

CHAIN-OF-CUSTODY RECORD

CA

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

WorkOrder : BMIS09080404

Report Due By : 5:00 PM On : 18-Aug-2009

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

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

EDD Required : **Yes**

Sampled by : Client

PO : 218013

Client's COC # : 25743, 25752 Job : G005862/JPL Groundwater Monitoring

Cooler Temp	Samples Received	Date Printed
4 °C	04-Aug-2009	04-Aug-2009

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

Alpha Sample ID	Client Sample ID	Matrix	Collection Date	No. of Bottles Alpha	Sub	TAT	Requested Tests 314_W	METALS_DW	VOC_TIC_W	VOC_W					Sample Remarks
BMI09080404-11A	DUPE-7-3Q09	AQ	08/03/09 00:00	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					1 HCl voa received contains an air bubble > 6mm.
BMI09080404-12A	EB-10-8/3/09	AQ	08/03/09 09:41	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI09080404-13A	TB-10-8/3/09	AQ	08/03/09 00:00	1	0	10			VOC by 524 Criteria	VOC by 524 Criteria					Reno Trip Blank 6/22/09

Comments: No security seals. Frozen ice. Temp Blank #7650 received @ 4°C. Perchlorate RL of 1.0 ug/L. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). :

	Signature	Print Name	Company	Date/Time
Logged in by:	Elizabeth Adcox	Elizabeth Adcox	**Alpha Analytical, Inc.**	8-4-09 1154

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

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

Billing Information:
Name 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 ___

25743

Page # 1 of 1

Client Name	P.O. #	Job #
BATTELLE / DAVID CONNER	218013	GJ05862
Address: 3990 OLD TOWN AVE., C-205	EMail Address	
City, State, Zip: SAN DIEGO, CA 92110	Phone # (619) 726-7311	Fax #

Analyses Required: VOC (524.2); Total C (200.8); Clay - (340.0)

Required QC Level? I II III IV

EDD / EDF? YES ___ NO ___

Global ID # _____

Time Sampled	Date Sampled	Matrix* See Key Below	Sampled by / Lab ID Number (Office Use Only)	Sample Description	TAT	Field Filtered	Total and type of containers ** See below	VOC (524.2)	Total C (200.8)	Clay - (340.0)	REMARKS
737	7/31/09	AQ	BMT090804 04-01	MW-22-3	NORM		VP/5	X	X	X	
758			-02	MW-22-2				X	X	X	
824			-03	MW-22-1				X	X	X	
812			-04	EB-9-7/31/09				X	X	X	EQUIP. BLANK
—			-05	TB-9-7/31/09			V/1	X			TRIP BLANK

ADDITIONAL INSTRUCTIONS:

Signature	Print Name	Company	Date	Time
Relinquished by	MARCO MENDOZA	INSIGHT EEC	8/3/09	1230
Received by Elizabeth Adcox	Elizabeth Adcox	Alpha	8-4-09	1154
Relinquished by				
Received by				
Relinquished by				
Received by				

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

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

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

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

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

25752

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 / Lab ID Number (Office Use Only)	Sample Description	TAT	Field Filtered	Total and type of containers ** See below	VOC (624.2)	Total Cr (200.8)	CIO4 - (314.0)	REMARKS
749	8/3/09	AQ	-06	MW-12-5	NORM		VP / 4	X		X	
812			-07	MW-12-4			VP / 4	X		X	LEVEL IV QC
848			-08	MW-12-3			VP / 10	X	X	X	MS/MSD
925			-09	MW-12-2			VP / 5	X	X	X	
958			-10	MW-12-1				X	X	X	
—			-11	DUPE-7-3Q09				X	X	X	DUPLICATE
941			-12	EB-10-8/3/09				X	X	X	
—			-13	TB-10-8/3/09			V / 1	X			TRIP BLANK

ADDITIONAL INSTRUCTIONS:

	Signature	Print Name	Company	Date	Time
Relinquished by		MARCO MENDOZA	INSIGHT ENG INC	8/3/09	1230
Received by	Elizabeth Adcox	Elizabeth Adcox	Alpha	8-4-09	1154
Relinquished by					
Received by					
Relinquished by					
Received by					

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

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

Alpha Analytical, Inc.

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

Date: *17-Aug-09*

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

CASE NARRATIVE

Project: G005862/JPL Groundwater Monitoring
Work Order: BMI09080502 **Cooler Temp:** 4 °C

Alpha's Sample ID	Client's Sample ID	Matrix
09080502-01A	MW-25-5	Aqueous
09080502-02A	MW-25-4	Aqueous
09080502-03A	MW-25-3	Aqueous
09080502-04A	MW-25-2	Aqueous
09080502-05A	MW-25-1	Aqueous
09080502-06A	EB-11-8/4/09	Aqueous
09080502-07A	TB-11-8/4/09	Aqueous
09080502-08A	MW-26-2	Aqueous
09080502-09A	MW-26-1	Aqueous

Manually Integrated Analytes

Alpha's Sample ID	Test Reference	Analyte
09080502-02A	EPA Method 314.0	Perchlorate
09080502-03A	EPA Method 314.0	Perchlorate
09080502-04A	EPA Method 314.0	Perchlorate
09080502-05A	EPA Method 314.0	Perchlorate
09080502-09A	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 : 08/05/09

Job#: G005862/JPL Groundwater Monitoring

Perchlorate by Ion Chromatography
EPA Method 314.0

		Parameter	Concentration	Reporting Limit	Date Sampled	Date Analyzed
Client ID :	**MW-25-5**					
Lab ID :	BMI09080502-01A	Perchlorate	ND	1.00 µg/L	08/04/09	08/06/09
Client ID :	**MW-25-4**					
Lab ID :	BMI09080502-02A	Perchlorate	7.43	1.00 µg/L	08/04/09	08/06/09
Client ID :	**MW-25-3**					
Lab ID :	BMI09080502-03A	Perchlorate	9.11	1.00 µg/L	08/04/09	08/06/09
Client ID :	**MW-25-2**					
Lab ID :	BMI09080502-04A	Perchlorate	13.1	1.00 µg/L	08/04/09	08/06/09
Client ID :	**MW-25-1**					
Lab ID :	BMI09080502-05A	Perchlorate	9.54	1.00 µg/L	08/04/09	08/06/09
Client ID :	**EB-11-8/4/09**					
Lab ID :	BMI09080502-06A	Perchlorate	ND	1.00 µg/L	08/04/09	08/06/09
Client ID :	**MW-26-2**					
Lab ID :	BMI09080502-08A	Perchlorate	ND	1.00 µg/L	08/04/09	08/06/09
Client ID :	**MW-26-1**					
Lab ID :	BMI09080502-09A	Perchlorate	2.09	1.00 µg/L	08/04/09	08/06/09

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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

8/18/09
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 08/05/09

Job#: G005862/JPL Groundwater Monitoring

Metals by ICPMS
EPA Method 200.8

		Parameter	Concentration	Reporting Limit	Date Sampled	Date Analyzed
Client ID :	**MW-25-5**					
Lab ID :	BMI09080502-01A	Chromium (Cr)	ND	0.0050 mg/L	08/04/09	08/13/09
Client ID :	**MW-25-4**					
Lab ID :	BMI09080502-02A	Chromium (Cr)	ND	0.0050 mg/L	08/04/09	08/13/09
Client ID :	**MW-25-3**					
Lab ID :	BMI09080502-03A	Chromium (Cr)	ND	0.0050 mg/L	08/04/09	08/13/09
Client ID :	**MW-25-2**					
Lab ID :	BMI09080502-04A	Chromium (Cr)	ND	0.0050 mg/L	08/04/09	08/13/09
Client ID :	**MW-25-1**					
Lab ID :	BMI09080502-05A	Chromium (Cr)	ND	0.0050 mg/L	08/04/09	08/13/09
Client ID :	**EB-11-8/4/09**					
Lab ID :	BMI09080502-06A	Chromium (Cr)	ND	0.0050 mg/L	08/04/09	08/13/09
Client ID :	**MW-26-2**					
Lab ID :	BMI09080502-08A	Chromium (Cr)	ND	0.0050 mg/L	08/04/09	08/13/09
Client ID :	**MW-26-1**					
Lab ID :	BMI09080502-09A	Chromium (Cr)	ND	0.0050 mg/L	08/04/09	08/13/09

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

8/18/09
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Tentatively Identified Compounds - Volatile Organics by GC/MS

		Parameter	Estimated Concentration	Estimated Reporting Limit	Date Received	Date Sampled	Date Analyzed
Client ID :	**MW-25-5**						
Lab ID :	BMI09080502-01A	Sulfur dioxide	48	2.0 µg/L	08/05/09	08/04/09	08/14/09
Client ID :	**MW-25-4**						
Lab ID :	BMI09080502-02A	Sulfur dioxide	2.5	2.0 µg/L	08/05/09	08/04/09	08/14/09
Client ID :	**MW-25-3**						
Lab ID :	BMI09080502-03A	*** None Found ***	ND	2.0 µg/L	08/05/09	08/04/09	08/14/09
Client ID :	**MW-25-2**						
Lab ID :	BMI09080502-04A	*** None Found ***	ND	2.0 µg/L	08/05/09	08/04/09	08/14/09
Client ID :	**MW-25-1**						
Lab ID :	BMI09080502-05A	*** None Found ***	ND	2.0 µg/L	08/05/09	08/04/09	08/15/09
Client ID :	**EB-11-8/4/09**						
Lab ID :	BMI09080502-06A	*** None Found ***	ND	2.0 µg/L	08/05/09	08/04/09	08/14/09
Client ID :	**TB-11-8/4/09**						
Lab ID :	BMI09080502-07A	*** None Found ***	ND	2.0 µg/L	08/05/09	08/04/09	08/07/09
Client ID :	**MW-26-2**						
Lab ID :	BMI09080502-08A	*** None Found ***	ND	2.0 µg/L	08/05/09	08/04/09	08/15/09
Client ID :	**MW-26-1**						
Lab ID :	BMI09080502-09A	*** None Found ***	ND	2.0 µg/L	08/05/09	08/04/09	08/15/09

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

Roger Scholl Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / info@alpha-analytical.com
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8/18/09
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI09080502-01A
Client I.D. Number: MW-25-5

Sampled: 08/04/09
Received: 08/05/09
Analyzed: 08/14/09

Volatile Organics by GC/MS

	Compound	Concentration	Reporting Limit		Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37 Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38 Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39 m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40 Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41 Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42 o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44 1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45 Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46 Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47 n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48 4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49 2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50 1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51 tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52 1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53 sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54 1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55 1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56 4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57 1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58 n-Butylbenzene	ND	0.50	µg/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	2.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62 Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63 1,2,3-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	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

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

8/18/09
Report Date

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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI09080502-02A
Client I.D. Number: MW-25-4

Sampled: 08/04/09
Received: 08/05/09
Analyzed: 08/14/09

Volatile Organics by GC/MS

	Compound	Concentration	Reporting Limit		Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37 Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38 Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39 m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40 Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41 Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42 o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44 1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45 Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46 Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47 n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48 4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49 2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50 1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51 tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52 1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53 sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54 1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55 1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56 4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57 1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58 n-Butylbenzene	ND	0.50	µg/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	2.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62 Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63 1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64 Surr: 1,2-Dichloroethane-d4	106	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65 Surr: Toluene-d8	101	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66 Surr: 4-Bromofluorobenzene	86	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L				
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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8/18/09

Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI09080502-03A
Client I.D. Number: MW-25-3

Sampled: 08/04/09
Received: 08/05/09
Analyzed: 08/14/09

Volatile Organics by GC/MS

	Compound	Concentration	Reporting Limit		Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37 Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38 Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39 m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40 Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41 Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42 o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44 1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45 Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46 Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47 n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48 4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49 2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50 1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51 tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52 1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53 sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54 1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55 1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56 4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57 1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58 n-Butylbenzene	ND	0.50	µg/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	2.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62 Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63 1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64 Surr: 1,2-Dichloroethane-d4	188 S55	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65 Surr: Toluene-d8	92	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66 Surr: 4-Bromofluorobenzene	76	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L				
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.

S55 = Surrogate recovery was above laboratory acceptance limits.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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8/18/09
Report Date

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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI09080502-04A
Client I.D. Number: MW-25-2

Sampled: 08/04/09
Received: 08/05/09
Analyzed: 08/14/09

Volatile Organics by GC/MS

	Compound	Concentration	Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/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	2.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	106	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	101	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	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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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: BMI09080502-05A
Client I.D. Number: MW-25-1

Sampled: 08/04/09
Received: 08/05/09
Analyzed: 08/15/09

Volatile Organics by GC/MS

	Compound	Concentration	Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	0.62	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5	µg/L
25	Trichloroethene	1.2	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	2.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	111	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	101	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	87	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

8/18/09
Report Date

Alpha Analytical, Inc.

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

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI09080502-06A
Client I.D. Number: EB-11-8/4/09

Sampled: 08/04/09
Received: 08/05/09
Analyzed: 08/14/09

Volatile Organics by GC/MS

	Compound	Concentration	Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/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	2.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	104	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	100	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	92	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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

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

8/18/09

Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI09080502-07A
Client I.D. Number: TB-11-8/4/09

Sampled: 08/04/09
Received: 08/05/09
Analyzed: 08/07/09

Volatile Organics by GC/MS

	Compound	Concentration	Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/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	2.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	75	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	122	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	100	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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

8/18/09
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI09080502-08A
Client I.D. Number: MW-26-2

Sampled: 08/04/09
Received: 08/05/09
Analyzed: 08/15/09

Volatile Organics by GC/MS

	Compound	Concentration	Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/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	2.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	110	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	100	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	86	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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8/18/09
Report Date

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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI09080502-09A
Client I.D. Number: MW-26-1

Sampled: 08/04/09
Received: 08/05/09
Analyzed: 08/15/09

Volatile Organics by GC/MS

	Compound	Concentration	Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/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	2.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	106	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	101	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	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	0.53	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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

8/18/09
Report Date

Alpha Analytical, Inc.

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

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

VOC Sample Preservation Report

Work Order: BMI09080502 **Project:** G005862/JPL Groundwater Monitoring

Alpha's Sample ID	Client's Sample ID	Matrix	pH
09080502-01A	MW-25-5	Aqueous	2
09080502-02A	MW-25-4	Aqueous	2
09080502-03A	MW-25-3	Aqueous	2
09080502-04A	MW-25-2	Aqueous	2
09080502-05A	MW-25-1	Aqueous	2
09080502-06A	EB-11-8/4/09	Aqueous	2
09080502-07A	TB-11-8/4/09	Aqueous	2
09080502-08A	MW-26-2	Aqueous	2
09080502-09A	MW-26-1	Aqueous	2

8/18/09

Report Date

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Date: 17-Aug-09

QC Summary Report

Work Order: 09080502

Method Blank

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

File ID: **14** Batch ID: **22492** Analysis Date: **08/06/2009 15:38**

Sample ID: **MB-22492** Units : **µg/L** Run ID: **IC_3_090806A** Prep Date: **08/06/2009**

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: **22492** Analysis Date: **08/06/2009 15:56**

Sample ID: **LFB-22492** Units : **µg/L** Run ID: **IC_3_090806A** Prep Date: **08/06/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	24.8	2	25		99	85	115			

Sample Matrix Spike

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

File ID: **35** Batch ID: **22492** Analysis Date: **08/06/2009 22:04**

Sample ID: **09080502-03ALFM** Units : **µg/L** Run ID: **IC_3_090806A** Prep Date: **08/06/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	34.4	2	25	9.105	101	80	120			

Sample Matrix Spike Duplicate

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

File ID: **36** Batch ID: **22492** Analysis Date: **08/06/2009 22:22**

Sample ID: **09080502-03ALFMD** Units : **µg/L** Run ID: **IC_3_090806A** Prep Date: **08/06/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	34.7	2	25	9.105	102	80	120	34.43	0.8(15)	

Comments:

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

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Date: *17-Aug-09*

QC Summary Report

Work Order: 09080502

Method Blank

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

File ID: **081309.B\087SMPL.D** Batch ID: **22512K** Analysis Date: **08/13/2009 22:44**

Sample ID: **MB-22512** Units : **mg/L** Run ID: **ICP/MS_090813C** Prep Date: **08/10/2009**

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

Laboratory Control Spike

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

File ID: **081309.B\088_LCS.D** Batch ID: **22512K** Analysis Date: **08/13/2009 22:49**

Sample ID: **LCS-22512** Units : **mg/L** Run ID: **ICP/MS_090813C** Prep Date: **08/10/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0457	0.005	0.05		91	80	120			

Sample Matrix Spike

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

File ID: **081309.B\092SMPL.D** Batch ID: **22512K** Analysis Date: **08/13/2009 23:12**

Sample ID: **09080502-03AMS** Units : **mg/L** Run ID: **ICP/MS_090813C** Prep Date: **08/10/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0531	0.005	0.05	0	106	80	120			

Sample Matrix Spike Duplicate

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

File ID: **081309.B\093SMPL.D** Batch ID: **22512K** Analysis Date: **08/13/2009 23:17**

Sample ID: **09080502-03AMSD** Units : **mg/L** Run ID: **ICP/MS_090813C** Prep Date: **08/10/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0618	0.005	0.05	0	124	80	120	0.05313	15.1(20)	M1

Comments:

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

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

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

Alpha Analytical, Inc.

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Date: 18-Aug-09

QC Summary Report

Work Order: 09080502

Method Blank Type **MBLK** Test Code: _____

File ID: **09081411.D** Batch ID: **MS15W0814M** Analysis Date: **08/14/2009 15:40**

Sample ID: **MBLK MS15W0814M** Units : **µg/L** Run ID: **MSD_15_090814A** Prep Date: **08/14/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	ND	0.5								
Chloromethane	ND	1								
Vinyl chloride	ND	0.5								
Chloroethane	ND	0.5								
Bromomethane	ND	1								
Trichlorofluoromethane	ND	0.5								
1,1-Dichloroethene	ND	0.5								
Dichloromethane	ND	1								
Freon-113	ND	0.5								
trans-1,2-Dichloroethene	ND	0.5								
Methyl tert-butyl ether (MTBE)	ND	0.5								
1,1-Dichloroethane	ND	0.5								
2-Butanone (MEK)	ND	10								
cis-1,2-Dichloroethene	ND	0.5								
Bromochloromethane	ND	0.5								
Chloroform	ND	0.5								
2,2-Dichloropropane	ND	0.5								
1,2-Dichloroethane	ND	0.5								
1,1,1-Trichloroethane	ND	0.5								
1,1-Dichloropropene	ND	0.5								
Carbon tetrachloride	ND	0.5								
Benzene	ND	0.5								
Dibromomethane	ND	0.5								
1,2-Dichloropropane	ND	0.5								
Trichloroethene	ND	0.5								
Bromodichloromethane	ND	0.5								
4-Methyl-2-pentanone (MIBK)	ND	2.5								
cis-1,3-Dichloropropene	ND	0.5								
trans-1,3-Dichloropropene	ND	0.5								
1,1,2-Trichloroethane	ND	0.5								
Toluene	ND	0.5								
1,3-Dichloropropane	ND	0.5								
Dibromochloromethane	ND	0.5								
1,2-Dibromoethane (EDB)	ND	1								
Tetrachloroethene	ND	0.5								
1,1,1,2-Tetrachloroethane	ND	0.5								
Chlorobenzene	ND	0.5								
Ethylbenzene	ND	0.5								
m,p-Xylene	ND	0.5								
Bromoform	ND	0.5								
Styrene	ND	0.5								
o-Xylene	ND	0.5								
1,1,2,2-Tetrachloroethane	ND	0.5								
1,2,3-Trichloropropane	ND	1								
Isopropylbenzene	ND	0.5								
Bromobenzene	ND	0.5								
n-Propylbenzene	ND	0.5								
4-Chlorotoluene	ND	0.5								
2-Chlorotoluene	ND	0.5								
1,3,5-Trimethylbenzene	ND	0.5								
tert-Butylbenzene	ND	0.5								
1,2,4-Trimethylbenzene	ND	0.5								
sec-Butylbenzene	ND	0.5								
1,3-Dichlorobenzene	ND	0.5								
1,4-Dichlorobenzene	ND	0.5								
4-Isopropyltoluene	ND	0.5								
1,2-Dichlorobenzene	ND	0.5								
n-Butylbenzene	ND	0.5								
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5								
1,2,4-Trichlorobenzene	ND	1								
Naphthalene	ND	1								
Hexachlorobutadiene	ND	1								
1,2,3-Trichlorobenzene	ND	1								
Surr: 1,2-Dichloroethane-d4	10.3		10		103	70	130			
Surr: Toluene-d8	10		10		100	70	130			

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Date: 18-Aug-09

QC Summary Report

Work Order: 09080502

Surr: 4-Bromofluorobenzene	8.93		10	89	70	130			

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

File ID: **09081408.D** Batch ID: **MS15W0814M** Analysis Date: **08/14/2009 14:16**

Sample ID: **LCS MS15W0814M** Units : **µg/L** Run ID: **MSD_15_090814A** Prep Date: **08/14/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	12.5	1	10		125	70	130			
Chloromethane	10.8	2	10		108	70	130			
Vinyl chloride	11.4	1	10		114	70	130			
Chloroethane	11.2	1	10		112	70	130			
Bromomethane	13.2	2	10		132	70	130(130)			L51
Trichlorofluoromethane	12	1	10		120	70	130			
1,1-Dichloroethene	11	1	10		110	70	130			
Dichloromethane	10.6	2	10		106	70	130			
trans-1,2-Dichloroethene	11.4	1	10		114	70	130			
Methyl tert-butyl ether (MTBE)	11	0.5	10		110	70	130			
1,1-Dichloroethane	10.9	1	10		109	70	130			
cis-1,2-Dichloroethene	11.2	1	10		112	70	130			
Bromochloromethane	11.4	1	10		114	70	130			
Chloroform	10.6	1	10		106	70	130			
2,2-Dichloropropane	12.5	1	10		125	70	130			
1,2-Dichloroethane	10.7	1	10		107	70	130			
1,1,1-Trichloroethane	11.5	1	10		115	70	130			
1,1-Dichloropropene	11.2	1	10		112	70	130			
Carbon tetrachloride	11.7	1	10		117	70	130			
Benzene	11.1	0.5	10		111	70	130			
Dibromomethane	11.2	1	10		112	70	130			
1,2-Dichloropropane	11.1	1	10		111	70	130			
Trichloroethene	11	1	10		110	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	10.2	1	10		102	70	130			
1,1,2-Trichloroethane	10.4	1	10		104	70	130			
Toluene	10.4	0.5	10		104	70	130			
1,3-Dichloropropane	10.2	1	10		102	70	130			
Dibromochloromethane	9.95	1	10		100	70	130			
1,2-Dibromoethane (EDB)	22.3	2	20		111	70	130			
Tetrachloroethene	10.8	1	10		108	70	130			
1,1,1,2-Tetrachloroethane	11.2	1	10		112	70	130			
Chlorobenzene	10.1	1	10		101	70	130			
Ethylbenzene	10.2	0.5	10		102	70	130			
m,p-Xylene	10.4	0.5	10		104	70	130			
Bromoform	9.13	1	10		91	70	130			
Styrene	8.52	1	10		85	70	130			
o-Xylene	10.7	0.5	10		107	70	130			
1,1,2,2-Tetrachloroethane	9.66	1	10		97	70	130			
1,2,3-Trichloropropane	19.2	2	20		96	70	130			
Isopropylbenzene	9.84	1	10		98	70	130			
Bromobenzene	9.88	1	10		99	70	130			
n-Propylbenzene	9.97	1	10		99.7	70	130			
4-Chlorotoluene	9.91	1	10		99	70	130			
2-Chlorotoluene	9.87	1	10		99	70	130			
1,3,5-Trimethylbenzene	9.54	1	10		95	70	130			
tert-Butylbenzene	9.53	1	10		95	70	130			
1,2,4-Trimethylbenzene	9.21	1	10		92	70	130			
sec-Butylbenzene	9.6	1	10		96	70	130			
1,3-Dichlorobenzene	9.99	1	10		99.9	70	130			
1,4-Dichlorobenzene	9.79	1	10		98	70	130			
4-Isopropyltoluene	9.59	1	10		96	70	130			
1,2-Dichlorobenzene	9.45	1	10		95	70	130			
n-Butylbenzene	9.5	1	10		95	70	130			
1,2-Dibromo-3-chloropropane (DBCP)	48.7	3	50		97	70	130			
1,2,4-Trichlorobenzene	9.72	2	10		97	70	130			
Naphthalene	9.75	2	10		98	70	130			
Hexachlorobutadiene	19.3	2	20		96	70	130			
1,2,3-Trichlorobenzene	9.41	2	10		94	70	130			
Surr: 1,2-Dichloroethane-d4	9.97		10		99.7	70	130			
Surr: Toluene-d8	10		10		100	70	130			
Surr: 4-Bromofluorobenzene	9.75		10		98	70	130			

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Date: 18-Aug-09

QC Summary Report

Work Order: 09080502

Sample Matrix Spike Type **MS** Test Code: _____

File ID: **09081414.D** Batch ID: **MS15W0814M** Analysis Date: **08/14/2009 16:47**

Sample ID: **09080502-03AMS** Units : **µg/L** Run ID: **MSD_15_090814A** Prep Date: **08/14/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	47.3	2.5	50	0	95	13	167			
Chloromethane	53.6	10	50	0	107	28	145			
Vinyl chloride	59.7	2.5	50	0	119	43	134			
Chloroethane	53.4	2.5	50	0	107	39	154			
Bromomethane	62.3	10	50	0	125	19	176			
Trichlorofluoromethane	56.7	2.5	50	0	113	34	160			
1,1-Dichloroethene	50.2	2.5	50	0	100	60	130			
Dichloromethane	51.4	10	50	0	103	68	130			
trans-1,2-Dichloroethene	52.4	2.5	50	0	105	63	130			
Methyl tert-butyl ether (MTBE)	56.9	1.3	50	0	114	56	141			
1,1-Dichloroethane	51.4	2.5	50	0	103	61	130			
cis-1,2-Dichloroethene	53.1	2.5	50	0	106	70	130			
Bromochloromethane	56.6	2.5	50	0	113	70	130			
Chloroform	50.5	2.5	50	0	101	67	130			
2,2-Dichloropropane	55.5	2.5	50	0	111	30	152			
1,2-Dichloroethane	52.8	2.5	50	0	106	60	135			
1,1,1-Trichloroethane	53.4	2.5	50	0	107	59	137			
1,1-Dichloropropene	51.5	2.5	50	0	103	63	130			
Carbon tetrachloride	53.9	2.5	50	0	108	50	147			
Benzene	52.2	1.3	50	0	104	67	130			
Dibromomethane	56.6	2.5	50	0	113	69	133			
1,2-Dichloropropane	53.1	2.5	50	0	106	69	130			
Trichloroethene	50.7	2.5	50	0	101	69	130			
Bromodichloromethane	54.3	2.5	50	0	109	66	134			
cis-1,3-Dichloropropene	53	2.5	50	0	106	63	130			
trans-1,3-Dichloropropene	49.7	2.5	50	0	99	66	131			
1,1,2-Trichloroethane	53.5	2.5	50	0	107	68	130			
Toluene	47.9	1.3	50	0	96	66	130			
1,3-Dichloropropane	50.6	2.5	50	0	101	70	130			
Dibromochloromethane	48.8	2.5	50	0	98	70	130			
1,2-Dibromoethane (EDB)	110	10	100	0	110	70	130			
Tetrachloroethene	49.6	2.5	50	0	99	61	134			
1,1,1,2-Tetrachloroethane	52.5	2.5	50	0	105	70	130			
Chlorobenzene	47.9	2.5	50	0	96	70	130			
Ethylbenzene	47.1	1.3	50	0	94	68	130			
m,p-Xylene	48.5	1.3	50	0	97	64	130			
Bromoform	46.3	2.5	50	0	93	64	138			
Styrene	40.1	2.5	50	0	80	69	130			
o-Xylene	49.9	1.3	50	0	99.8	70	130			
1,1,2,2-Tetrachloroethane	50.2	2.5	50	0	100	65	131			
1,2,3-Trichloropropane	97.4	10	100	0	97	70	130			
Isopropylbenzene	45.1	2.5	50	0	90	64	138			
Bromobenzene	48.2	2.5	50	0	96	70	130			
n-Propylbenzene	45.8	2.5	50	0	92	66	132			
4-Chlorotoluene	46.7	2.5	50	0	93	70	130			
2-Chlorotoluene	46	2.5	50	0	92	70	130			
1,3,5-Trimethylbenzene	44.6	2.5	50	0	89	66	136			
tert-Butylbenzene	44.3	2.5	50	0	89	65	137			
1,2,4-Trimethylbenzene	43.6	2.5	50	0	87	65	137			
sec-Butylbenzene	44.5	2.5	50	0	89	66	134			
1,3-Dichlorobenzene	48.1	2.5	50	0	96	70	130			
1,4-Dichlorobenzene	47.4	2.5	50	0	95	70	130			
4-Isopropyltoluene	45	2.5	50	0	90	66	137			
1,2-Dichlorobenzene	46.8	2.5	50	0	94	70	130			
n-Butylbenzene	44.3	2.5	50	0	89	60	142			
1,2-Dibromo-3-chloropropane (DBCP)	252	15	250	0	101	67	130			
1,2,4-Trichlorobenzene	49.5	10	50	0	99	61	137			
Naphthalene	51.4	10	50	0	103	40	167			
Hexachlorobutadiene	90.8	10	100	0	91	61	130			
1,2,3-Trichlorobenzene	49.1	10	50	0	98	51	144			
Surr: 1,2-Dichloroethane-d4	50.4		50		101	70	130			
Surr: Toluene-d8	48.8		50		98	70	130			
Surr: 4-Bromofluorobenzene	48		50		96	70	130			

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Date: 18-Aug-09

QC Summary Report

Work Order: 09080502

Sample Matrix Spike Duplicate Type **MSD** Test Code: _____

File ID: **09081415.D** Batch ID: **MS15W0814M** Analysis Date: **08/14/2009 17:09**

Sample ID: **09080502-03AMSD** Units : **µg/L** Run ID: **MSD_15_090814A** Prep Date: **08/14/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	46.1	2.5	50	0	92	13	167	47.27	2.4(20)	
Chloromethane	54.1	10	50	0	108	28	145	53.57	1.0(20)	
Vinyl chloride	56.2	2.5	50	0	112	43	134	59.71	6.0(20)	
Chloroethane	50.8	2.5	50	0	102	39	154	53.43	5.1(20)	
Bromomethane	60.9	10	50	0	122	19	176	62.33	2.3(20)	
Trichlorofluoromethane	53.4	2.5	50	0	107	34	160	56.71	6.0(20)	
1,1-Dichloroethene	47.3	2.5	50	0	95	60	130	50.16	5.9(20)	
Dichloromethane	50.8	10	50	0	102	68	130	51.43	1.2(20)	
trans-1,2-Dichloroethene	49.3	2.5	50	0	99	63	130	52.41	6.1(20)	
Methyl tert-butyl ether (MTBE)	58	1.3	50	0	116	56	141	56.91	2.0(20)	
1,1-Dichloroethane	49.7	2.5	50	0	99	61	130	51.36	3.3(20)	
cis-1,2-Dichloroethene	53	2.5	50	0	106	70	130	53.1	0.1(20)	
Bromochloromethane	55.7	2.5	50	0	111	70	130	56.57	1.5(20)	
Chloroform	49.4	2.5	50	0	99	67	130	50.54	2.3(20)	
2,2-Dichloropropane	52.3	2.5	50	0	105	30	152	55.48	5.8(20)	
1,2-Dichloroethane	52.2	2.5	50	0	104	60	135	52.84	1.2(20)	
1,1,1-Trichloroethane	51	2.5	50	0	102	59	137	53.39	4.7(20)	
1,1-Dichloropropene	49.1	2.5	50	0	98	63	130	51.47	4.7(20)	
Carbon tetrachloride	51.3	2.5	50	0	103	50	147	53.88	4.9(20)	
Benzene	50.5	1.3	50	0	101	67	130	52.22	3.4(20)	
Dibromomethane	57	2.5	50	0	114	69	133	56.64	0.6(20)	
1,2-Dichloropropane	53.2	2.5	50	0	106	69	130	53.09	0.2(20)	
Trichloroethene	48	2.5	50	0	96	69	130	50.65	5.5(20)	
Bromodichloromethane	54.1	2.5	50	0	108	66	134	54.3	0.4(20)	
cis-1,3-Dichloropropene	52.3	2.5	50	0	105	63	130	52.98	1.4(20)	
trans-1,3-Dichloropropene	49.2	2.5	50	0	98	66	131	49.69	1.1(20)	
1,1,2-Trichloroethane	52.6	2.5	50	0	105	68	130	53.47	1.7(20)	
Toluene	45.5	1.3	50	0	91	66	130	47.89	5.2(20)	
1,3-Dichloropropane	50.5	2.5	50	0	101	70	130	50.56	0.2(20)	
Dibromochloromethane	48.6	2.5	50	0	97	70	130	48.75	0.3(20)	
1,2-Dibromoethane (EDB)	111	10	100	0	111	70	130	109.6	1.7(20)	
Tetrachloroethene	47	2.5	50	0	94	61	134	49.64	5.4(20)	
1,1,1,2-Tetrachloroethane	51	2.5	50	0	102	70	130	52.53	3.0(20)	
Chlorobenzene	45.7	2.5	50	0	91	70	130	47.94	4.8(20)	
Ethylbenzene	44.9	1.3	50	0	90	68	130	47.06	4.8(20)	
m,p-Xylene	45.6	1.3	50	0	91	64	130	48.51	6.3(20)	
Bromoform	45.7	2.5	50	0	91	64	138	46.28	1.2(20)	
Styrene	38.4	2.5	50	0	77	69	130	40.13	4.4(20)	
o-Xylene	47.7	1.3	50	0	95	70	130	49.88	4.4(20)	
1,1,2,2-Tetrachloroethane	50.8	2.5	50	0	102	65	131	50.22	1.2(20)	
1,2,3-Trichloropropane	98.5	10	100	0	98	70	130	97.35	1.1(20)	
Isopropylbenzene	42.4	2.5	50	0	85	64	138	45.11	6.1(20)	
Bromobenzene	46.2	2.5	50	0	92	70	130	48.18	4.1(20)	
n-Propylbenzene	43	2.5	50	0	86	66	132	45.81	6.4(20)	
4-Chlorotoluene	44.5	2.5	50	0	89	70	130	46.73	4.8(20)	
2-Chlorotoluene	43.8	2.5	50	0	88	70	130	45.95	4.8(20)	
1,3,5-Trimethylbenzene	41.9	2.5	50	0	84	66	136	44.58	6.3(20)	
tert-Butylbenzene	41.5	2.5	50	0	83	65	137	44.26	6.5(20)	
1,2,4-Trimethylbenzene	41.2	2.5	50	0	82	65	137	43.57	5.5(20)	
sec-Butylbenzene	41.9	2.5	50	0	84	66	134	44.47	6.1(20)	
1,3-Dichlorobenzene	45.7	2.5	50	0	91	70	130	48.12	5.2(20)	
1,4-Dichlorobenzene	45.2	2.5	50	0	90	70	130	47.37	4.6(20)	
4-Isopropyltoluene	41.8	2.5	50	0	84	66	137	45.02	7.3(20)	
1,2-Dichlorobenzene	45.4	2.5	50	0	91	70	130	46.84	3.1(20)	
n-Butylbenzene	42.2	2.5	50	0	84	60	142	44.28	4.9(20)	
1,2-Dibromo-3-chloropropane (DBCP)	258	15	250	0	103	67	130	251.5	2.7(20)	
1,2,4-Trichlorobenzene	48.7	10	50	0	97	61	137	49.48	1.6(20)	
Naphthalene	51.5	10	50	0	103	40	167	51.4	0.1(20)	
Hexachlorobutadiene	86.6	10	100	0	87	61	130	90.8	4.7(20)	
1,2,3-Trichlorobenzene	48.8	10	50	0	98	51	144	49.07	0.5(20)	
Surr: 1,2-Dichloroethane-d4	52.1		50		104	70	130			
Surr: Toluene-d8	47.7		50		95	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: *18-Aug-09*

QC Summary Report

Work Order: 09080502

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.

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

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

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

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 : BMIS09080502

Report Due By : 5:00 PM On : 19-Aug-2009

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

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

EDD Required : **Yes**

Sampled by : Client

PO : 218013

Client's COC # : 24115 Job : G005862/JPL Groundwater Monitoring

Cooler Temp	Samples Received	Date Printed
4 °C	05-Aug-2009	**05-Aug-2009**

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

Alpha Sample ID	Client Sample ID	Matrix	Collection Date	No. of Bottles Alpha	Sub	TAT	Requested Tests 314_W	METALS_DW	VOC_TIC_W	VOC_W					Sample Remarks
BMI09080502-01A	MW-25-5	AQ	08/04/09 07:57	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI09080502-02A	MW-25-4	AQ	08/04/09 08:23	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI09080502-03A	MW-25-3	AQ	08/04/09 08:59	10	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					MS/MSD
BMI09080502-04A	MW-25-2	AQ	08/04/09 09:25	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI09080502-05A	MW-25-1	AQ	08/04/09 09:50	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI09080502-06A	EB-11-8/4/09	AQ	08/04/09 09:37	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI09080502-07A	TB-11-8/4/09	AQ	08/04/09 00:00	1	0	10			VOC by 524 Criteria	VOC by 524 Criteria					Reno Trip Blank 6/22/09
BMI09080502-08A	MW-26-2	AQ	08/04/09 11:16	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI09080502-09A	MW-26-1	AQ	08/04/09 11:35	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					

Comments: No security seals. Frozen ice. Temp Blank #7197 received @ 4°C. Perchlorate RL of 1.0 ug/L. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). :

	Signature	Print Name	Company	Date/Time
Logged in by:	Elizabeth Adcox	Elizabeth Adcox	**Alpha Analytical, Inc.**	8.5.09 9:46

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

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

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

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

24115

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 #

Analyses Required: VOC (524.2); Total Cr (200.8); ClO4- (314.0)

Required QC Level? I II III IV

EDD / EDF? YES ___ NO ___

Global ID # _____

Time Sampled	Date Sampled	Matrix* See Key Below	Sampled by / Lab ID Number (Office Use Only)	Report Attention / Sample Description	TAT	Field Filtered	Total and type of containers ** See below	VOC (524.2)	Total Cr (200.8)	ClO4- (314.0)	REMARKS
757	8/4/09	AQ	BMI0908050201	MW-25-5	NORM		VP/5	X	X	X	
823			-02	MW-25-4			1	X	X	X	
859			-03	MW-25-3			VP/10	X	X	X	MS/MSD
925			-04	MW-25-2			VP/5	X	X	X	
950			-05	MW-25-1			1	X	X	X	
937			-06	EB-11-8/4/09			1	X	X	X	EQUIP. BLANK
—			-07	TB-11-8/4/09			V/1	X			TRIP BLANK

ADDITIONAL INSTRUCTIONS:

Signature	Print Name	Company	Date	Time
Relinquished by	MARCO MENDOZA	INSIGHT EEC	8/4/09	
Received by Elizabeth Adcox	Elizabeth Adcox	Alpha	8-5-09	9:46
Relinquished by				
Received by				
Relinquished by				
Received by				

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

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

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

026290

Page # 1 of 1

Client Name	P.O. #	Job #
DAVID CONNER	218013	6005862
Address: 3990 OLD TOWN AVE C205	EMail Address:	
City, State, Zip: SANDIEGO, CA 92110	Phone #: 619-726-7311	Fax #:

Required QC Level? I II (III) IV

EDD / EDF? YES ___ NO ___

Global ID # _____

Time Sampled	Date Sampled	Matrix* See Key Below	Sampled by / Lab ID Number (Office Use Only)	Sample Description	TAT	Field Filtered	Total and type of containers ** See below	VOC (524.2)	TOTAL Cr (200.8)	Cl04 - (314.0)	REMARKS
1116	8/4/09	AQ	-08	MW-26-2	NORM		VP/5	X	X	X	
1135	1	1	-09	MW-26-1	1		1	X	X	X	

ADDITIONAL INSTRUCTIONS:

Signature	Print Name	Company	Date	Time
Relinquished by	MARC MENDOZA	INSIGHT GEC	8/4/09	1300
Received by Elizabeth Adcox	Elizabeth Adcox	Alpha	8-5-09	9:46
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: *18-Aug-09*

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

CASE NARRATIVE

Project: G005862/JPL Groundwater Monitoring
Work Order: BMI09080602 **Cooler Temp:** 4 °C

Alpha's Sample ID	Client's Sample ID	Matrix
09080602-01A	MW-7	Aqueous
09080602-02A	MW-16	Aqueous
09080602-03A	TB-12-8/5/09	Aqueous

Manually Integrated Analytes

Alpha's Sample ID	Test Reference	Analyte
NONE		

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

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

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

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

Alpha Analytical, Inc.

255 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 : 08/06/09

Job#: G005862/JPL Groundwater Monitoring

Anions by IC
EPA Method 300.0 / 9056

	Parameter	Concentration	Reporting Limit	Date / Time Sampled	Date / Time Analyzed
Client ID : **MW-7**	Nitrite (NO2) - N	ND	0.25 mg/L	08/05/09 08:41	08/06/09 16:08
Lab ID : BMI09080602-01A	Nitrate (NO3) - N	1.3	0.25 mg/L	08/05/09 08:41	08/06/09 16:08
	Phosphate, ortho - P	ND	0.25 mg/L	08/05/09 08:41	08/06/09 16:08
Client ID : **MW-16**	Nitrite (NO2) - N	ND	0.25 mg/L	08/05/09 10:29	08/06/09 16:26
Lab ID : BMI09080602-02A	Nitrate (NO3) - N	1.3	0.25 mg/L	08/05/09 10:29	08/06/09 16:26
	Phosphate, ortho - P	ND	0.25 mg/L	08/05/09 10:29	08/06/09 16:26

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

8/19/09
Report Date

Alpha Analytical, Inc.

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ANALYTICAL REPORT

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 08/06/09

Job#: G005862/JPL Groundwater Monitoring

Anions by IC
EPA Method 300.0 / 9056

		Parameter	Concentration	Reporting Limit	Date Sampled	Date Analyzed
Client ID :	**MW-7**					
Lab ID :	BMI09080602-01A	Chloride	85	0.50 mg/L	08/05/09	08/06/09
		Sulfate (SO4)	50	0.50 mg/L	08/05/09	08/06/09
Client ID :	**MW-16**					
Lab ID :	BMI09080602-02A	Chloride	80	0.50 mg/L	08/05/09	08/06/09
		Sulfate (SO4)	50	0.50 mg/L	08/05/09	08/06/09

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 : 08/06/09

Job#: G005862/JPL Groundwater Monitoring

Perchlorate by Ion Chromatography
EPA Method 314.0

		Parameter	Concentration	Reporting Limit	Date Sampled	Date Analyzed
Client ID :	**MW-7**					
Lab ID :	BMI09080602-01A	Perchlorate	ND	1.00 µg/L	08/05/09	08/07/09
Client ID :	**MW-16**					
Lab ID :	BMI09080602-02A	Perchlorate	ND	1.00 µg/L	08/05/09	08/07/09

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

8/19/09
Report Date

Alpha Analytical, Inc.

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ANALYTICAL REPORT

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 08/06/09

Job#: G005862/JPL Groundwater Monitoring

Metals by ICPMS
EPA Method 200.8

		Parameter	Concentration	Reporting Limit	Date Sampled	Date Analyzed
Client ID :	**MW-7**					
Lab ID :	BMI09080602-01A	Chromium (Cr)	0.011	0.0050 mg/L	08/05/09	08/14/09
Client ID :	**MW-16**					
Lab ID :	BMI09080602-02A	Chromium (Cr)	0.016	0.0050 mg/L	08/05/09	08/14/09

Roger Scholl Randy Gardner Walter Hinchman

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

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8/19/09
Report Date

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ANALYTICAL REPORT

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

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

Tentatively Identified Compounds - Volatile Organics by GC/MS

		Parameter	Estimated Concentration	Estimated Reporting Limit	Date Received	Date Sampled	Date Analyzed
Client ID :	**MW-7**						
Lab ID :	BMI09080602-01A	*** None Found ***	ND	2.0 µg/L	08/06/09	08/05/09	08/14/09
Client ID :	**MW-16**						
Lab ID :	BMI09080602-02A	*** None Found ***	ND	2.0 µg/L	08/06/09	08/05/09	08/14/09
Client ID :	**TB-12-8/5/09**						
Lab ID :	BMI09080602-03A	*** None Found ***	ND	2.0 µg/L	08/06/09	08/05/09	08/14/09

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

Roger Scholl Randy Gardner Walter Hinchman

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

8/19/09
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: BMI09080602-01A
Client I.D. Number: MW-7

Sampled: 08/05/09
Received: 08/06/09
Analyzed: 08/14/09

Volatile Organics by GC/MS

	Compound	Concentration	Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	4.4	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	2.8	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	99	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	91	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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

8/19/09
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI09080602-02A
Client I.D. Number: MW-16

Sampled: 08/05/09
Received: 08/06/09
Analyzed: 08/14/09

Volatile Organics by GC/MS

	Compound	Concentration	Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	8.1	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	3.2	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	1.6	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (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	5.1	0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	106	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	99	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	89	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	7.8	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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8/19/09
Report Date

Alpha Analytical, Inc.

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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI09080602-03A
Client I.D. Number: TB-12-8/5/09

Sampled: 08/05/09
Received: 08/06/09
Analyzed: 08/14/09

Volatile Organics by GC/MS

	Compound	Concentration	Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5	µg/L
25	Trichloroethene	ND	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	105	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	100	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	92	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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

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

8/19/09
Report Date

Alpha Analytical, Inc.

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

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

VOC Sample Preservation Report

Work Order: BMI09080602 **Project:** G005862/JPL Groundwater Monitoring

Alpha's Sample ID	Client's Sample ID	Matrix	pH
09080602-01A	MW-7	Aqueous	2
09080602-02A	MW-16	Aqueous	2
09080602-03A	TB-12-8/5/09	Aqueous	2

8/19/09

Report Date

Alpha Analytical, Inc.

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

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

Date: *18-Aug-09*

QC Summary Report

Work Order: 09080602

Method Blank

Type **MBLK** Test Code: **EPA Method 300.0 / 9056**

File ID: **17** Batch ID: **22491A** Analysis Date: **08/06/2009 15:12**

Sample ID: **MB-22491** Units : **mg/L** Run ID: **IC_2_090806A** Prep Date: **08/06/2009**

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

Laboratory Fortified Blank

Type **LFB** Test Code: **EPA Method 300.0 / 9056**

File ID: **18** Batch ID: **22491A** Analysis Date: **08/06/2009 15:31**

Sample ID: **LFB-22491** Units : **mg/L** Run ID: **IC_2_090806A** Prep Date: **08/06/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Nitrite (NO2) - N	1.21	0.25	1.25		97	90	110			
Nitrate (NO3) - N	1.24	0.25	1.25		99.6	90	110			
Phosphate, ortho - P	1.24	0.25	1.25		99	90	110			

Sample Matrix Spike

Type **LFM** Test Code: **EPA Method 300.0 / 9056**

File ID: **24** Batch ID: **22491A** Analysis Date: **08/06/2009 17:22**

Sample ID: **09080602-02ALFM** Units : **mg/L** Run ID: **IC_2_090806A** Prep Date: **08/06/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Nitrite (NO2) - N	1.29	0.25	1.25	0	104	80	120			
Nitrate (NO3) - N	2.5	0.25	1.25	1.346	92	80	120			
Phosphate, ortho - P	1.24	0.25	1.25	0	99	80	120			

Sample Matrix Spike Duplicate

Type **LFMD** Test Code: **EPA Method 300.0 / 9056**

File ID: **25** Batch ID: **22491A** Analysis Date: **08/06/2009 17:40**

Sample ID: **09080602-02ALFMD** Units : **mg/L** Run ID: **IC_2_090806A** Prep Date: **08/06/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Nitrite (NO2) - N	1.39	0.25	1.25	0	111	80	120	1.295	7.1(10)	
Nitrate (NO3) - N	2.52	0.25	1.25	1.346	94	80	120	2.496	0.8(10)	
Phosphate, ortho - P	1.03	0.25	1.25	0	82	80	120	1.24	18.6(10)	R5

Comments:

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

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

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

Alpha Analytical, Inc.

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

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

Date: *18-Aug-09*

QC Summary Report

Work Order: 09080602

Method Blank

Type **MBLK** Test Code: **EPA Method 300.0 / 9056**

File ID: **17** Batch ID: **22491B** Analysis Date: **08/06/2009 15:12**

Sample ID: **MB-22491** Units : **mg/L** Run ID: **IC_2_090806A** Prep Date: **08/06/2009**

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

Laboratory Fortified Blank

Type **LFB** Test Code: **EPA Method 300.0 / 9056**

File ID: **18** Batch ID: **22491B** Analysis Date: **08/06/2009 15:31**

Sample ID: **LFB-22491** Units : **mg/L** Run ID: **IC_2_090806A** Prep Date: **08/06/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sulfate (SO4)	10.3	0.5	10		103	90	110			

Sample Matrix Spike

Type **LFM** Test Code: **EPA Method 300.0 / 9056**

File ID: **24** Batch ID: **22491B** Analysis Date: **08/06/2009 17:22**

Sample ID: **09080602-02ALFM** Units : **mg/L** Run ID: **IC_2_090806A** Prep Date: **08/06/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sulfate (SO4)	58.1	0.5	10	49.52	85	80	120			

Sample Matrix Spike Duplicate

Type **LFMD** Test Code: **EPA Method 300.0 / 9056**

File ID: **25** Batch ID: **22491B** Analysis Date: **08/06/2009 17:40**

Sample ID: **09080602-02ALFMD** Units : **mg/L** Run ID: **IC_2_090806A** Prep Date: **08/06/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sulfate (SO4)	59.1	0.5	10	49.52	96	80	120	58.06	1.8(10)	

Comments:

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

Alpha Analytical, Inc.

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Date: *18-Aug-09*

QC Summary Report

Work Order: 09080602

Method Blank

Type **MBLK** Test Code: **EPA Method 300.0 / 9056**

File ID: **17** Batch ID: **22491C** Analysis Date: **08/06/2009 15:12**

Sample ID: **MB-22491** Units : **mg/L** Run ID: **IC_2_090806A** Prep Date: **08/06/2009**

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

Laboratory Fortified Blank

Type **LFB** Test Code: **EPA Method 300.0 / 9056**

File ID: **18** Batch ID: **22491C** Analysis Date: **08/06/2009 15:31**

Sample ID: **LFB-22491** Units : **mg/L** Run ID: **IC_2_090806A** Prep Date: **08/06/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	4.56	0.5	5		91	90	110			

Sample Matrix Spike

Type **LFM** Test Code: **EPA Method 300.0 / 9056**

File ID: **24** Batch ID: **22491C** Analysis Date: **08/06/2009 17:22**

Sample ID: **09080602-02ALFM** Units : **mg/L** Run ID: **IC_2_090806A** Prep Date: **08/06/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	82	0.5	5	80.06	39	80	120			M2

Sample Matrix Spike Duplicate

Type **LFMD** Test Code: **EPA Method 300.0 / 9056**

File ID: **25** Batch ID: **22491C** Analysis Date: **08/06/2009 17:40**

Sample ID: **09080602-02ALFMD** Units : **mg/L** Run ID: **IC_2_090806A** Prep Date: **08/06/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	83.3	0.5	5	80.06	65	80	120	82.01	1.6(10)	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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(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date: *18-Aug-09*

QC Summary Report

Work Order: 09080602

Method Blank

Type **MBLK** Test Code: **EPA Method 314.0**
File ID: **44** Batch ID: **22493** Analysis Date: **08/07/2009 00:50**
Sample ID: **MBLK-22493** Units : **µg/L** Run ID: **IC_3_090807A** Prep Date: **08/06/2009**

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: **45** Batch ID: **22493** Analysis Date: **08/07/2009 01:08**
Sample ID: **LFB-22493** Units : **µg/L** Run ID: **IC_3_090807A** Prep Date: **08/06/2009**

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

Sample Matrix Spike

Type **LFM** Test Code: **EPA Method 314.0**
File ID: **49** Batch ID: **22493** Analysis Date: **08/07/2009 02:22**
Sample ID: **09073103-03ALFM** Units : **µg/L** Run ID: **IC_3_090807A** Prep Date: **08/06/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	34.2	2	25	10.16	96	80	120			

Sample Matrix Spike Duplicate

Type **LFMD** Test Code: **EPA Method 314.0**
File ID: **50** Batch ID: **22493** Analysis Date: **08/07/2009 02:40**
Sample ID: **09073103-03ALFMD** Units : **µg/L** Run ID: **IC_3_090807A** Prep Date: **08/06/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	35.7	2	25	10.16	102	80	120	34.21	4.3(15)	

Comments:

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

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Date: *18-Aug-09*

QC Summary Report

Work Order: 09080602

Method Blank

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

File ID: **081309.B\087SMPL.D** Batch ID: **22512K** Analysis Date: **08/13/2009 22:44**

Sample ID: **MB-22512** Units : **mg/L** Run ID: **ICP/MS_090813C** Prep Date: **08/10/2009**

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

Laboratory Control Spike

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

File ID: **081309.B\088_LCS.D** Batch ID: **22512K** Analysis Date: **08/13/2009 22:49**

Sample ID: **LCS-22512** Units : **mg/L** Run ID: **ICP/MS_090813C** Prep Date: **08/10/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0457	0.005	0.05		91	80	120			

Sample Matrix Spike

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

File ID: **081309.B\092SMPL.D** Batch ID: **22512K** Analysis Date: **08/13/2009 23:12**

Sample ID: **09080502-03AMS** Units : **mg/L** Run ID: **ICP/MS_090813C** Prep Date: **08/10/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0531	0.005	0.05	0	106	80	120			

Sample Matrix Spike Duplicate

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

File ID: **081309.B\093SMPL.D** Batch ID: **22512K** Analysis Date: **08/13/2009 23:17**

Sample ID: **09080502-03AMSD** Units : **mg/L** Run ID: **ICP/MS_090813C** Prep Date: **08/10/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0618	0.005	0.05	0	124	80	120	0.05313	15.1(20)	M1

Comments:

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

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

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

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Date: *18-Aug-09*

QC Summary Report

Work Order: 09080602

Method Blank Type **MBLK** Test Code: _____

File ID: **09081411.D** Batch ID: **MS15W0814M** Analysis Date: **08/14/2009 15:40**

Sample ID: **MBLK MS15W0814M** Units : **µg/L** Run ID: **MSD_15_090814A** Prep Date: **08/14/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	ND	0.5								
Chloromethane	ND	1								
Vinyl chloride	ND	0.5								
Chloroethane	ND	0.5								
Bromomethane	ND	1								
Trichlorofluoromethane	ND	0.5								
1,1-Dichloroethene	ND	0.5								
Dichloromethane	ND	1								
Freon-113	ND	0.5								
trans-1,2-Dichloroethene	ND	0.5								
Methyl tert-butyl ether (MTBE)	ND	0.5								
1,1-Dichloroethane	ND	0.5								
2-Butanone (MEK)	ND	10								
cis-1,2-Dichloroethene	ND	0.5								
Bromochloromethane	ND	0.5								
Chloroform	ND	0.5								
2,2-Dichloropropane	ND	0.5								
1,2-Dichloroethane	ND	0.5								
1,1,1-Trichloroethane	ND	0.5								
1,1-Dichloropropene	ND	0.5								
Carbon tetrachloride	ND	0.5								
Benzene	ND	0.5								
Dibromomethane	ND	0.5								
1,2-Dichloropropane	ND	0.5								
Trichloroethene	ND	0.5								
Bromodichloromethane	ND	0.5								
4-Methyl-2-pentanone (MIBK)	ND	2.5								
cis-1,3-Dichloropropene	ND	0.5								
trans-1,3-Dichloropropene	ND	0.5								
1,1,2-Trichloroethane	ND	0.5								
Toluene	ND	0.5								
1,3-Dichloropropane	ND	0.5								
Dibromochloromethane	ND	0.5								
1,2-Dibromoethane (EDB)	ND	1								
Tetrachloroethene	ND	0.5								
1,1,1,2-Tetrachloroethane	ND	0.5								
Chlorobenzene	ND	0.5								
Ethylbenzene	ND	0.5								
m,p-Xylene	ND	0.5								
Bromoform	ND	0.5								
Styrene	ND	0.5								
o-Xylene	ND	0.5								
1,1,2,2-Tetrachloroethane	ND	0.5								
1,2,3-Trichloropropane	ND	1								
Isopropylbenzene	ND	0.5								
Bromobenzene	ND	0.5								
n-Propylbenzene	ND	0.5								
4-Chlorotoluene	ND	0.5								
2-Chlorotoluene	ND	0.5								
1,3,5-Trimethylbenzene	ND	0.5								
tert-Butylbenzene	ND	0.5								
1,2,4-Trimethylbenzene	ND	0.5								
sec-Butylbenzene	ND	0.5								
1,3-Dichlorobenzene	ND	0.5								
1,4-Dichlorobenzene	ND	0.5								
4-Isopropyltoluene	ND	0.5								
1,2-Dichlorobenzene	ND	0.5								
n-Butylbenzene	ND	0.5								
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5								
1,2,4-Trichlorobenzene	ND	1								
Naphthalene	ND	1								
Hexachlorobutadiene	ND	1								
1,2,3-Trichlorobenzene	ND	1								
Surr: 1,2-Dichloroethane-d4	10.3		10		103	70	130			
Surr: Toluene-d8	10		10		100	70	130			

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Date: 18-Aug-09

QC Summary Report

Work Order: 09080602

Surr: 4-Bromofluorobenzene	8.93		10	89	70	130			

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

File ID: **09081408.D** Batch ID: **MS15W0814M** Analysis Date: **08/14/2009 14:16**

Sample ID: **LCS MS15W0814M** Units : **µg/L** Run ID: **MSD_15_090814A** Prep Date: **08/14/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	12.5	1	10		125	70	130			
Chloromethane	10.8	2	10		108	70	130			
Vinyl chloride	11.4	1	10		114	70	130			
Chloroethane	11.2	1	10		112	70	130			
Bromomethane	13.2	2	10		132	70	130(130)			L51
Trichlorofluoromethane	12	1	10		120	70	130			
1,1-Dichloroethene	11	1	10		110	70	130			
Dichloromethane	10.6	2	10		106	70	130			
trans-1,2-Dichloroethene	11.4	1	10		114	70	130			
Methyl tert-butyl ether (MTBE)	11	0.5	10		110	70	130			
1,1-Dichloroethane	10.9	1	10		109	70	130			
cis-1,2-Dichloroethene	11.2	1	10		112	70	130			
Bromochloromethane	11.4	1	10		114	70	130			
Chloroform	10.6	1	10		106	70	130			
2,2-Dichloropropane	12.5	1	10		125	70	130			
1,2-Dichloroethane	10.7	1	10		107	70	130			
1,1,1-Trichloroethane	11.5	1	10		115	70	130			
1,1-Dichloropropene	11.2	1	10		112	70	130			
Carbon tetrachloride	11.7	1	10		117	70	130			
Benzene	11.1	0.5	10		111	70	130			
Dibromomethane	11.2	1	10		112	70	130			
1,2-Dichloropropane	11.1	1	10		111	70	130			
Trichloroethene	11	1	10		110	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	10.2	1	10		102	70	130			
1,1,2-Trichloroethane	10.4	1	10		104	70	130			
Toluene	10.4	0.5	10		104	70	130			
1,3-Dichloropropane	10.2	1	10		102	70	130			
Dibromochloromethane	9.95	1	10		100	70	130			
1,2-Dibromoethane (EDB)	22.3	2	20		111	70	130			
Tetrachloroethene	10.8	1	10		108	70	130			
1,1,1,2-Tetrachloroethane	11.2	1	10		112	70	130			
Chlorobenzene	10.1	1	10		101	70	130			
Ethylbenzene	10.2	0.5	10		102	70	130			
m,p-Xylene	10.4	0.5	10		104	70	130			
Bromoform	9.13	1	10		91	70	130			
Styrene	8.52	1	10		85	70	130			
o-Xylene	10.7	0.5	10		107	70	130			
1,1,2,2-Tetrachloroethane	9.66	1	10		97	70	130			
1,2,3-Trichloropropane	19.2	2	20		96	70	130			
Isopropylbenzene	9.84	1	10		98	70	130			
Bromobenzene	9.88	1	10		99	70	130			
n-Propylbenzene	9.97	1	10		99.7	70	130			
4-Chlorotoluene	9.91	1	10		99	70	130			
2-Chlorotoluene	9.87	1	10		99	70	130			
1,3,5-Trimethylbenzene	9.54	1	10		95	70	130			
tert-Butylbenzene	9.53	1	10		95	70	130			
1,2,4-Trimethylbenzene	9.21	1	10		92	70	130			
sec-Butylbenzene	9.6	1	10		96	70	130			
1,3-Dichlorobenzene	9.99	1	10		99.9	70	130			
1,4-Dichlorobenzene	9.79	1	10		98	70	130			
4-Isopropyltoluene	9.59	1	10		96	70	130			
1,2-Dichlorobenzene	9.45	1	10		95	70	130			
n-Butylbenzene	9.5	1	10		95	70	130			
1,2-Dibromo-3-chloropropane (DBCP)	48.7	3	50		97	70	130			
1,2,4-Trichlorobenzene	9.72	2	10		97	70	130			
Naphthalene	9.75	2	10		98	70	130			
Hexachlorobutadiene	19.3	2	20		96	70	130			
1,2,3-Trichlorobenzene	9.41	2	10		94	70	130			
Surr: 1,2-Dichloroethane-d4	9.97		10		99.7	70	130			
Surr: Toluene-d8	10		10		100	70	130			
Surr: 4-Bromofluorobenzene	9.75		10		98	70	130			

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Date: 18-Aug-09

QC Summary Report

Work Order: 09080602

Sample Matrix Spike Type **MS** Test Code: _____

File ID: **09081412.D** Batch ID: **MS15W0814M** Analysis Date: **08/14/2009 16:02**

Sample ID: **09080602-02AMS** Units : **µg/L** Run ID: **MSD_15_090814A** Prep Date: **08/14/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	43.8	2.5	50	0	88	13	167			
Chloromethane	43.5	10	50	0	87	28	145			
Vinyl chloride	44.2	2.5	50	0	88	43	134			
Chloroethane	46.9	2.5	50	0	94	39	154			
Bromomethane	49.9	10	50	0	99.8	19	176			
Trichlorofluoromethane	47.3	2.5	50	0	95	34	160			
1,1-Dichloroethene	44.4	2.5	50	0	89	60	130			
Dichloromethane	46.7	10	50	0	93	68	130			
trans-1,2-Dichloroethene	47.1	2.5	50	0	94	63	130			
Methyl tert-butyl ether (MTBE)	51.7	1.3	50	0	103	56	141			
1,1-Dichloroethane	46.8	2.5	50	0	94	61	130			
cis-1,2-Dichloroethene	49.7	2.5	50	0	99	70	130			
Bromochloromethane	52.1	2.5	50	0	104	70	130			
Chloroform	49.6	2.5	50	3.23	93	67	130			
2,2-Dichloropropane	33.6	2.5	50	0	67	30	152			
1,2-Dichloroethane	49	2.5	50	0	98	60	135			
1,1,1-Trichloroethane	47.6	2.5	50	0	95	59	137			
1,1-Dichloropropene	46.4	2.5	50	0	93	63	130			
Carbon tetrachloride	49	2.5	50	1.56	95	50	147			
Benzene	47.8	1.3	50	0	96	67	130			
Dibromomethane	51.8	2.5	50	0	104	69	133			
1,2-Dichloropropane	48.7	2.5	50	0	97	69	130			
Trichloroethene	46.1	2.5	50	0	92	69	130			
Bromodichloromethane	54.8	2.5	50	5.05	99	66	134			
cis-1,3-Dichloropropene	43.9	2.5	50	0	88	63	130			
trans-1,3-Dichloropropene	41.8	2.5	50	0	84	66	131			
1,1,2-Trichloroethane	48.4	2.5	50	0	97	68	130			
Toluene	43.5	1.3	50	0	87	66	130			
1,3-Dichloropropane	46.4	2.5	50	0	93	70	130			
Dibromochloromethane	52	2.5	50	7.81	88	70	130			
1,2-Dibromoethane (EDB)	99.8	10	100	0	99.8	70	130			
Tetrachloroethene	43.5	2.5	50	0	87	61	134			
1,1,1,2-Tetrachloroethane	47.7	2.5	50	0	95	70	130			
Chlorobenzene	43.3	2.5	50	0	87	70	130			
Ethylbenzene	42.4	1.3	50	0	85	68	130			
m,p-Xylene	43.9	1.3	50	0	88	64	130			
Bromoform	48.1	2.5	50	8.14	80	64	138			
Styrene	35.8	2.5	50	0	72	69	130			
o-Xylene	45.1	1.3	50	0	90	70	130			
1,1,2,2-Tetrachloroethane	45.5	2.5	50	0	91	65	131			
1,2,3-Trichloropropane	89.3	10	100	0	89	70	130			
Isopropylbenzene	40.2	2.5	50	0	80	64	138			
Bromobenzene	43.4	2.5	50	0	87	70	130			
n-Propylbenzene	40.1	2.5	50	0	80	66	132			
4-Chlorotoluene	41.6	2.5	50	0	83	70	130			
2-Chlorotoluene	41.5	2.5	50	0	83	70	130			
1,3,5-Trimethylbenzene	39.6	2.5	50	0	79	66	136			
tert-Butylbenzene	39.8	2.5	50	0	80	65	137			
1,2,4-Trimethylbenzene	38.7	2.5	50	0	77	65	137			
sec-Butylbenzene	39.2	2.5	50	0	78	66	134			
1,3-Dichlorobenzene	42.3	2.5	50	0	85	70	130			
1,4-Dichlorobenzene	42.1	2.5	50	0	84	70	130			
4-Isopropyltoluene	39.2	2.5	50	0	78	66	137			
1,2-Dichlorobenzene	42.3	2.5	50	0	85	70	130			
n-Butylbenzene	38.1	2.5	50	0	76	60	142			
1,2-Dibromo-3-chloropropane (DBCP)	228	15	250	0	91	67	130			
1,2,4-Trichlorobenzene	43.7	10	50	0	87	61	137			
Naphthalene	47.1	10	50	0	94	40	167			
Hexachlorobutadiene	77.5	10	100	0	78	61	130			
1,2,3-Trichlorobenzene	44.4	10	50	0	89	51	144			
Surr: 1,2-Dichloroethane-d4	50.5		50		101	70	130			
Surr: Toluene-d8	48.8		50		98	70	130			
Surr: 4-Bromofluorobenzene	47.7		50		95	70	130			

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Date: 18-Aug-09

QC Summary Report

Work Order: 09080602

Sample Matrix Spike Duplicate Type **MSD** Test Code: _____

File ID: **09081413.D** Batch ID: **MS15W0814M** Analysis Date: **08/14/2009 16:24**

Sample ID: **09080602-02AMSD** Units : **µg/L** Run ID: **MSD_15_090814A** Prep Date: **08/14/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	38.7	2.5	50	0	77	13	167	47.27	20.0(20)	R5
Chloromethane	38	10	50	0	76	28	145	53.57	34.0(20)	R5
Vinyl chloride	39.7	2.5	50	0	79	43	134	59.71	40.3(20)	R5
Chloroethane	41.9	2.5	50	0	84	39	154	53.43	24.3(20)	R5
Bromomethane	49.3	10	50	0	99	19	176	62.33	23.3(20)	R58
Trichlorofluoromethane	44.3	2.5	50	0	89	34	160	56.71	24.5(20)	R5
1,1-Dichloroethene	40.8	2.5	50	0	82	60	130	50.16	20.5(20)	R5
Dichloromethane	45	10	50	0	90	68	130	51.43	13.3(20)	
trans-1,2-Dichloroethene	43.8	2.5	50	0	88	63	130	52.41	18.0(20)	
Methyl tert-butyl ether (MTBE)	53.2	1.3	50	0	106	56	141	56.91	6.7(20)	
1,1-Dichloroethane	44.1	2.5	50	0	88	61	130	51.36	15.3(20)	
cis-1,2-Dichloroethene	47.4	2.5	50	0	95	70	130	53.1	11.4(20)	
Bromochloromethane	52.6	2.5	50	0	105	70	130	56.57	7.3(20)	
Chloroform	46.9	2.5	50	3.23	87	67	130	50.54	7.6(20)	
2,2-Dichloropropane	30.3	2.5	50	0	61	30	152	55.48	58.6(20)	R5
1,2-Dichloroethane	48.5	2.5	50	0	97	60	135	52.84	8.5(20)	
1,1,1-Trichloroethane	43.9	2.5	50	0	88	59	137	53.39	19.5(20)	
1,1-Dichloropropene	42	2.5	50	0	84	63	130	51.47	20.3(20)	R5
Carbon tetrachloride	45.4	2.5	50	1.56	88	50	147	53.88	17.1(20)	
Benzene	45	1.3	50	0	90	67	130	52.22	14.8(20)	
Dibromomethane	51.9	2.5	50	0	104	69	133	56.64	8.7(20)	
1,2-Dichloropropane	47.1	2.5	50	0	94	69	130	53.09	12.1(20)	
Trichloroethene	42.6	2.5	50	0	85	69	130	50.65	17.3(20)	
Bromodichloromethane	54	2.5	50	5.05	98	66	134	54.3	0.6(20)	
cis-1,3-Dichloropropene	43.8	2.5	50	0	88	63	130	52.98	18.9(20)	
trans-1,3-Dichloropropene	41.6	2.5	50	0	83	66	131	49.69	17.6(20)	
1,1,2-Trichloroethane	49.5	2.5	50	0	99	68	130	53.47	7.8(20)	
Toluene	40.9	1.3	50	0	82	66	130	47.89	15.8(20)	
1,3-Dichloropropane	47.3	2.5	50	0	95	70	130	50.56	6.6(20)	
Dibromochloromethane	53.4	2.5	50	7.81	91	70	130	48.75	9.1(20)	
1,2-Dibromoethane (EDB)	103	10	100	0	103	70	130	109.6	6.0(20)	
Tetrachloroethene	40.4	2.5	50	0	81	61	134	49.64	20.6(20)	R5
1,1,1,2-Tetrachloroethane	47	2.5	50	0	94	70	130	52.53	11.1(20)	
Chlorobenzene	42	2.5	50	0	84	70	130	47.94	13.1(20)	
Ethylbenzene	40.1	1.3	50	0	80	68	130	47.06	15.9(20)	
m,p-Xylene	40.7	1.3	50	0	81	64	130	48.51	17.6(20)	
Bromoform	51.6	2.5	50	8.14	87	64	138	46.28	10.9(20)	
Styrene	34.6	2.5	50	0	69	69	130	40.13	14.9(20)	
o-Xylene	43.3	1.3	50	0	87	70	130	49.88	14.1(20)	
1,1,2,2-Tetrachloroethane	47.1	2.5	50	0	94	65	131	50.22	6.4(20)	
1,2,3-Trichloropropane	92	10	100	0	92	70	130	97.35	5.6(20)	
Isopropylbenzene	37.8	2.5	50	0	76	64	138	45.11	17.6(20)	
Bromobenzene	42.9	2.5	50	0	86	70	130	48.18	11.6(20)	
n-Propylbenzene	37.9	2.5	50	0	76	66	132	45.81	18.9(20)	
4-Chlorotoluene	39.5	2.5	50	0	79	70	130	46.73	16.7(20)	
2-Chlorotoluene	39.6	2.5	50	0	79	70	130	45.95	14.9(20)	
1,3,5-Trimethylbenzene	37.4	2.5	50	0	75	66	136	44.58	17.6(20)	
tert-Butylbenzene	37.2	2.5	50	0	74	65	137	44.26	17.3(20)	
1,2,4-Trimethylbenzene	36.8	2.5	50	0	74	65	137	43.57	16.7(20)	
sec-Butylbenzene	37	2.5	50	0	74	66	134	44.47	18.3(20)	
1,3-Dichlorobenzene	41.2	2.5	50	0	82	70	130	48.12	15.6(20)	
1,4-Dichlorobenzene	40.8	2.5	50	0	82	70	130	47.37	14.8(20)	
4-Isopropyltoluene	36.6	2.5	50	0	73	66	137	45.02	20.7(20)	R5
1,2-Dichlorobenzene	41.8	2.5	50	0	84	70	130	46.84	11.4(20)	
n-Butylbenzene	34.7	2.5	50	0	69	60	142	44.28	24.2(20)	R5
1,2-Dibromo-3-chloropropane (DBCP)	239	15	250	0	96	67	130	251.5	5.1(20)	
1,2,4-Trichlorobenzene	44.5	10	50	0	89	61	137	49.48	10.7(20)	
Naphthalene	49.1	10	50	0	98	40	167	51.4	4.5(20)	
Hexachlorobutadiene	76	10	100	0	76	61	130	90.8	17.8(20)	
1,2,3-Trichlorobenzene	47.2	10	50	0	94	51	144	49.07	3.8(20)	
Surr: 1,2-Dichloroethane-d4	51		50		102	70	130			
Surr: Toluene-d8	49		50		98	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: *18-Aug-09*

QC Summary Report

Work Order: 09080602

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.

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

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

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

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 : BMIS09080602

Report Due By : 5:00 PM On : 20-Aug-2009

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

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

EDD Required : **Yes**

Sampled by : Client

PO : 218013

Client's COC # : 25740 Job : G005862/JPL Groundwater Monitoring

Cooler Temp	Samples Received	Date Printed
4 °C	06-Aug-2009	**06-Aug-2009**

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

Alpha Sample ID	Client Sample ID	Matrix	Collection Date	No. of Bottles Alpha	Sub	TAT	Requested Tests 300_0(A)_W	300_0(B)_W	300_0(C)_W	314_W	METALS_DW	VOC_TIC_W	VOC_W		Sample Remarks
BMI09080602-01A	MW-7	AQ	08/05/09 08:41	5	0	10	NO2, NO3, PO4, SO4, Cl	NO2, NO3, PO4, SO4, Cl	NO2, NO3, PO4, SO4, Cl	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria		
BMI09080602-02A	MW-16	AQ	08/05/09 10:29	10	0	10	NO2, NO3, PO4, SO4, Cl	NO2, NO3, PO4, SO4, Cl	NO2, NO3, PO4, SO4, Cl	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria		MS/MSD
BMI09080602-03A	TB-12-8/5/09	AQ	08/05/09 00:00	1	0	10						VOC by 524 Criteria	VOC by 524 Criteria		Reno Trip Blank 6/22/09

Comments: No security seals. Frozen ice. Temp Blank #7833 received @ 4°C. Perchlorate RL of 1.0 ug/L. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). :

	Signature	Print Name	Company	Date/Time
Logged in by:	Elizabeth Adcox	Elizabeth Adcox	**Alpha Analytical, Inc.**	8.6.09 1115

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 ___

25740

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 / Lab ID Number (Office Use Only)	Sample Description	TAT	Field Filtered	Total and type of containers ** See below	VOC (524.2)	TOTAL Cr (200.8)	ClO4 - (314.0) Cl-, SO4, NO3, NO2, PO4 (300.0)				REMARKS
841	8/5/09	AQ	BMI090806022-01	MW-7	NORM		VP 5	X	X	X	X				
1029	"	"	-02	MW-16	"		VP 10	X	X	X	X				MS/MSD
—	"	"	-03	TB-12-8/5/09	"		V 1	X							TRIP BLANK

ADDITIONAL INSTRUCTIONS:

	Signature	Print Name	Company	Date	Time
Relinquished by		MARCO MENDOZA	INSIGHT EEC	8/5/09	1300
Received by	Elizabeth Adcox	Elizabeth Adcox	Alpha	8-6-09	1115
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: *19-Aug-09*

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

CASE NARRATIVE

Project: G005862/JPL Groundwater Monitoring
Work Order: BMI09080703 **Cooler Temp:** 4 °C

Alpha's Sample ID	Client's Sample ID	Matrix
09080703-01A	MW-13	Aqueous
09080703-02A	MW-8	Aqueous
09080703-03A	MW-6	Aqueous
09080703-04A	TB-13-8/6/09	Aqueous

Manually Integrated Analytes

Alpha's Sample ID	Test Reference	Analyte
09080703-01A	EPA Method 314.0	Perchlorate
09080703-02A	EPA Method 314.0	Perchlorate
09080703-03A	EPA Method 314.0	Perchlorate

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

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

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

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 08/07/09

Job#: G005862/JPL Groundwater Monitoring

Anions by IC
EPA Method 300.0 / 9056

	Parameter	Concentration	Reporting Limit	Date / Time Sampled	Date / Time Analyzed
Client ID : **MW-13**	Nitrite (NO2) - N	ND	0.25 mg/L	08/06/09 08:26	08/07/09 12:30
Lab ID : BMI09080703-01A	Nitrate (NO3) - N	6.7	0.25 mg/L	08/06/09 08:26	08/07/09 12:30
	Phosphate, ortho - P	ND	0.25 mg/L	08/06/09 08:26	08/07/09 12:30
Client ID : **MW-8**	Nitrite (NO2) - N	ND	0.25 mg/L	08/06/09 10:10	08/07/09 12:48
Lab ID : BMI09080703-02A	Nitrate (NO3) - N	3.7	0.25 mg/L	08/06/09 10:10	08/07/09 12:48
	Phosphate, ortho - P	ND	0.25 mg/L	08/06/09 10:10	08/07/09 12:48

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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

8/20/09
Report Date

Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778
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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 : 08/07/09

Job#: G005862/JPL Groundwater Monitoring

Anions by IC
EPA Method 300.0 / 9056

		Parameter	Concentration	Reporting Limit	Date Sampled	Date Analyzed
Client ID :	**MW-13**					
Lab ID :	BMI09080703-01A	Chloride	37	0.50 mg/L	08/06/09	08/07/09
		Sulfate (SO4)	53	0.50 mg/L	08/06/09	08/07/09
Client ID :	**MW-8**					
Lab ID :	BMI09080703-02A	Chloride	39	0.50 mg/L	08/06/09	08/07/09
		Sulfate (SO4)	77	0.50 mg/L	08/06/09	08/07/09

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 : 08/07/09

Job#: G005862/JPL Groundwater Monitoring

Perchlorate by Ion Chromatography
EPA Method 314.0

		Parameter	Concentration	Reporting Limit	Date Sampled	Date Analyzed
Client ID :	**MW-13**					
Lab ID :	BMI09080703-01A	Perchlorate	1,110	100 µg/L	08/06/09	08/07/09
Client ID :	**MW-8**					
Lab ID :	BMI09080703-02A	Perchlorate	186	10.0 µg/L	08/06/09	08/07/09
Client ID :	**MW-6**					
Lab ID :	BMI09080703-03A	Perchlorate	2.26	1.00 µg/L	08/06/09	08/07/09

Roger Scholl Randy Gardner Walter Hinchman

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8/20/09
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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 : 08/07/09

Job#: G005862/JPL Groundwater Monitoring

Metals by ICPMS
EPA Method 200.8

		Parameter	Concentration	Reporting Limit	Date Sampled	Date Analyzed
Client ID :	**MW-13**					
Lab ID :	BMI09080703-01A	Chromium (Cr)	0.031	0.0050 mg/L	08/06/09	08/13/09
Client ID :	**MW-8**					
Lab ID :	BMI09080703-02A	Chromium (Cr)	0.0053	0.0050 mg/L	08/06/09	08/13/09
Client ID :	**MW-6**					
Lab ID :	BMI09080703-03A	Chromium (Cr)	0.048	0.0050 mg/L	08/06/09	08/13/09

Roger Scholl Randy Gardner Walter Hinchman

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

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8/20/09
Report Date

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ANALYTICAL REPORT

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

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

Tentatively Identified Compounds - Volatile Organics by GC/MS

		Parameter	Estimated Concentration	Estimated Reporting Limit	Date Received	Date Sampled	Date Analyzed
Client ID :	**MW-13**						
Lab ID :	BMI09080703-01A	*** None Found ***	ND	2.0 µg/L	08/07/09	08/06/09	08/14/09
Client ID :	**MW-8**						
Lab ID :	BMI09080703-02A	*** None Found ***	ND	2.0 µg/L	08/07/09	08/06/09	08/14/09
Client ID :	**MW-6**						
Lab ID :	BMI09080703-03A	*** None Found ***	ND	2.0 µg/L	08/07/09	08/06/09	08/14/09
Client ID :	**TB-13-8/6/09**						
Lab ID :	BMI09080703-04A	*** None Found ***	ND	2.0 µg/L	08/07/09	08/06/09	08/14/09

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

Roger Scholl Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / info@alpha-analytical.com
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8/20/09
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: BMI09080703-01A
Client I.D. Number: MW-13

Sampled: 08/06/09
Received: 08/07/09
Analyzed: 08/14/09

Volatile Organics by GC/MS

	Compound	Concentration	Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	2.4	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5	µg/L
25	Trichloroethene	1.0	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	110	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	101	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	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

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

8/20/09
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI09080703-02A
Client I.D. Number: MW-8

Sampled: 08/06/09
Received: 08/07/09
Analyzed: 08/14/09

Volatile Organics by GC/MS

	Compound	Concentration	Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	1.3	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	0.64	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5	µg/L
25	Trichloroethene	ND	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	0.60	0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	104	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	101	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	91	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	0.60	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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

8/20/09
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI09080703-03A
Client I.D. Number: MW-6

Sampled: 08/06/09
Received: 08/07/09
Analyzed: 08/14/09

Volatile Organics by GC/MS

	Compound	Concentration	Reporting Limit		
1	Dichlorodifluoromethane	ND	0.50	µg/L	
2	Chloromethane	ND	1.0	µg/L	
3	Vinyl chloride	ND	0.50	µg/L	
4	Chloroethane	ND	0.50	µg/L	
5	Bromomethane	ND	1.0	µg/L	
6	Trichlorofluoromethane	ND	0.50	µg/L	
7	1,1-Dichloroethene	ND	0.50	µg/L	
8	Dichloromethane	ND	1.0	µg/L	
9	Freon-113	ND	0.50	µg/L	
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	
12	1,1-Dichloroethane	ND	0.50	µg/L	
13	2-Butanone (MEK)	ND	10	µg/L	
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	
15	Bromochloromethane	ND	0.50	µg/L	
16	Chloroform	ND	0.50	µg/L	
17	2,2-Dichloropropane	ND	0.50	µg/L	
18	1,2-Dichloroethane	ND	0.50	µg/L	
19	1,1,1-Trichloroethane	ND	0.50	µg/L	
20	1,1-Dichloropropene	ND	0.50	µg/L	
21	Carbon tetrachloride	ND	0.50	µg/L	
22	Benzene	ND	0.50	µg/L	
23	Dibromomethane	ND	0.50	µg/L	
24	1,2-Dichloropropane	ND	0.50	µg/L	
25	Trichloroethene	2.4	0.50	µg/L	
26	Bromodichloromethane	ND	0.50	µg/L	
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	
30	1,1,2-Trichloroethane	ND	0.50	µg/L	
31	Toluene	ND	0.50	µg/L	
32	1,3-Dichloropropane	ND	0.50	µg/L	
33	Dibromochloromethane	ND	0.50	µg/L	
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L	
35	Tetrachloroethene	1.2	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	108	(70-130)	%REC	
65	Surr: Toluene-d8	103	(70-130)	%REC	
66	Surr: 4-Bromofluorobenzene	89	(70-130)	%REC	

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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

8/20/09
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI09080703-04A
Client I.D. Number: TB-13-8/6/09

Sampled: 08/06/09
Received: 08/07/09
Analyzed: 08/14/09

Volatile Organics by GC/MS

	Compound	Concentration	Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5	µg/L
25	Trichloroethene	ND	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	106	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	100	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	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 / info@alpha-analytical.com

8/20/09
Report Date

Alpha Analytical, Inc.

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

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

VOC Sample Preservation Report

Work Order: BMI09080703 **Project:** G005862/JPL Groundwater Monitoring

Alpha's Sample ID	Client's Sample ID	Matrix	pH
09080703-01A	MW-13	Aqueous	2
09080703-02A	MW-8	Aqueous	2
09080703-03A	MW-6	Aqueous	2
09080703-04A	TB-13-8/6/09	Aqueous	2

8/20/09

Report Date

Alpha Analytical, Inc.

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

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

Date: *18-Aug-09*

QC Summary Report

Work Order: 09080703

Method Blank

Type **MBLK** Test Code: **EPA Method 300.0 / 9056**

File ID: **17** Batch ID: **22498A** Analysis Date: **08/07/2009 11:34**

Sample ID: **MB-22498** Units : **mg/L** Run ID: **IC_2_090807A** Prep Date: **08/07/2009**

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

Laboratory Fortified Blank

Type **LFB** Test Code: **EPA Method 300.0 / 9056**

File ID: **18** Batch ID: **22498A** Analysis Date: **08/07/2009 11:53**

Sample ID: **LFB-22498** Units : **mg/L** Run ID: **IC_2_090807A** Prep Date: **08/07/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Nitrite (NO2) - N	1.16	0.25	1.25		93	90	110			
Nitrate (NO3) - N	1.37	0.25	1.25		110	90	110			
Phosphate, ortho - P	1.14	0.25	1.25		91	90	110			

Sample Matrix Spike

Type **LFM** Test Code: **EPA Method 300.0 / 9056**

File ID: **29** Batch ID: **22498A** Analysis Date: **08/07/2009 15:16**

Sample ID: **09080703-01ALFM** Units : **mg/L** Run ID: **IC_2_090807A** Prep Date: **08/07/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Nitrite (NO2) - N	1.12	0.25	1.25	0	89	80	120			
Nitrate (NO3) - N	7.8	0.25	1.25	6.689	89	80	120			
Phosphate, ortho - P	1.33	0.25	1.25	0	106	80	120			

Sample Matrix Spike Duplicate

Type **LFMD** Test Code: **EPA Method 300.0 / 9056**

File ID: **30** Batch ID: **22498A** Analysis Date: **08/07/2009 15:35**

Sample ID: **09080703-01ALFMD** Units : **mg/L** Run ID: **IC_2_090807A** Prep Date: **08/07/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Nitrite (NO2) - N	1.37	0.25	1.25	0	109	80	120	1.117	20.0(10)	R5
Nitrate (NO3) - N	7.92	0.25	1.25	6.689	99	80	120	7.803	1.5(10)	
Phosphate, ortho - P	1.21	0.25	1.25	0	97	80	120	1.329	9.0(10)	

Comments:

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

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

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

Alpha Analytical, Inc.

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

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

Date: *18-Aug-09*

QC Summary Report

Work Order: 09080703

Method Blank

Type **MBLK** Test Code: **EPA Method 300.0 / 9056**

File ID: **17** Batch ID: **22498B** Analysis Date: **08/07/2009 11:34**

Sample ID: **MB-22498** Units : **mg/L** Run ID: **IC_2_090807A** Prep Date: **08/07/2009**

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

Laboratory Fortified Blank

Type **LFB** Test Code: **EPA Method 300.0 / 9056**

File ID: **18** Batch ID: **22498B** Analysis Date: **08/07/2009 11:53**

Sample ID: **LFB-22498** Units : **mg/L** Run ID: **IC_2_090807A** Prep Date: **08/07/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sulfate (SO4)	10.2	0.5	10		102	90	110			

Sample Matrix Spike

Type **LFM** Test Code: **EPA Method 300.0 / 9056**

File ID: **29** Batch ID: **22498B** Analysis Date: **08/07/2009 15:16**

Sample ID: **09080703-01ALFM** Units : **mg/L** Run ID: **IC_2_090807A** Prep Date: **08/07/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sulfate (SO4)	62.2	0.5	10	53.12	90	80	120			

Sample Matrix Spike Duplicate

Type **LFMD** Test Code: **EPA Method 300.0 / 9056**

File ID: **30** Batch ID: **22498B** Analysis Date: **08/07/2009 15:35**

Sample ID: **09080703-01ALFMD** Units : **mg/L** Run ID: **IC_2_090807A** Prep Date: **08/07/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sulfate (SO4)	62.7	0.5	10	53.12	96	80	120	62.16	0.8(10)	

Comments:

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

Alpha Analytical, Inc.

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

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

Date: *18-Aug-09*

QC Summary Report

Work Order: 09080703

Method Blank

Type **MBLK** Test Code: **EPA Method 300.0 / 9056**

File ID: **17** Batch ID: **22498C** Analysis Date: **08/07/2009 11:34**

Sample ID: **MB-22498** Units : **mg/L** Run ID: **IC_2_090807A** Prep Date: **08/07/2009**

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

Laboratory Fortified Blank

Type **LFB** Test Code: **EPA Method 300.0 / 9056**

File ID: **18** Batch ID: **22498C** Analysis Date: **08/07/2009 11:53**

Sample ID: **LFB-22498** Units : **mg/L** Run ID: **IC_2_090807A** Prep Date: **08/07/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	4.48	0.5	5		90	90	110			

Sample Matrix Spike

Type **LFM** Test Code: **EPA Method 300.0 / 9056**

File ID: **29** Batch ID: **22498C** Analysis Date: **08/07/2009 15:16**

Sample ID: **09080703-01ALFM** Units : **mg/L** Run ID: **IC_2_090807A** Prep Date: **08/07/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	40.6	0.5	5	37.13	69	80	120			M2

Sample Matrix Spike Duplicate

Type **LFMD** Test Code: **EPA Method 300.0 / 9056**

File ID: **30** Batch ID: **22498C** Analysis Date: **08/07/2009 15:35**

Sample ID: **09080703-01ALFMD** Units : **mg/L** Run ID: **IC_2_090807A** Prep Date: **08/07/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	41.3	0.5	5	37.13	83	80	120	40.57	1.7(10)	

Comments:

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

Alpha 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.

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

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

Date: *19-Aug-09*

QC Summary Report

Work Order: 09080703

Method Blank

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

File ID: **14** Batch ID: **22496** Analysis Date: **08/07/2009 11:00**

Sample ID: **MB-22496** Units : **µg/L** Run ID: **IC_3_090807B** Prep Date: **08/07/2009**

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: **22496** Analysis Date: **08/07/2009 11:18**

Sample ID: **LFB-22496** Units : **µg/L** Run ID: **IC_3_090807B** Prep Date: **08/07/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	25.7	2	25		103	85	115			

Sample Matrix Spike

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

File ID: **28** Batch ID: **22496** Analysis Date: **08/07/2009 15:17**

Sample ID: **09080703-01ALFM** Units : **µg/L** Run ID: **IC_3_090807B** Prep Date: **08/07/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	3780	200	2500	1113	107	80	120			

Sample Matrix Spike Duplicate

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

File ID: **29** Batch ID: **22496** Analysis Date: **08/07/2009 15:36**

Sample ID: **09080703-01ALFMD** Units : **µg/L** Run ID: **IC_3_090807B** Prep Date: **08/07/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	3700	200	2500	1113	104	80	120	3777	2.0(15)	

Comments:

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

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Date: *19-Aug-09*

QC Summary Report

Work Order: 09080703

Method Blank

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

File ID: **081309.B\052SMPL.D** Batch ID: **22542K** Analysis Date: **08/13/2009 19:24**

Sample ID: **MB-22542** Units : **mg/L** Run ID: **ICP/MS_090813B** Prep Date: **08/13/2009**

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

Laboratory Control Spike

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

File ID: **081309.B\053_LCS.D** Batch ID: **22542K** Analysis Date: **08/13/2009 19:30**

Sample ID: **LCS-22542** Units : **mg/L** Run ID: **ICP/MS_090813B** Prep Date: **08/13/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0571	0.005	0.05		114	80	120			

Sample Matrix Spike

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

File ID: **081309.B\057SMPL.D** Batch ID: **22542K** Analysis Date: **08/13/2009 19:52**

Sample ID: **09080703-01AMS** Units : **mg/L** Run ID: **ICP/MS_090813B** Prep Date: **08/13/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0776	0.005	0.05	0.03121	93	80	120			

Sample Matrix Spike Duplicate

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

File ID: **081309.B\058SMPL.D** Batch ID: **22542K** Analysis Date: **08/13/2009 19:58**

Sample ID: **09080703-01AMSD** Units : **mg/L** Run ID: **ICP/MS_090813B** Prep Date: **08/13/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0789	0.005	0.05	0.03121	95	80	120	0.07759	1.6(20)	

Comments:

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

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Date: 19-Aug-09

QC Summary Report

Work Order: 09080703

Method Blank Type **MBLK** Test Code: _____

File ID: **09081411.D** Batch ID: **MS15W0814M** Analysis Date: **08/14/2009 15:40**

Sample ID: **MBLK MS15W0814M** Units : **µg/L** Run ID: **MSD_15_090814A** Prep Date: **08/14/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	ND	0.5								
Chloromethane	ND	1								
Vinyl chloride	ND	0.5								
Chloroethane	ND	0.5								
Bromomethane	ND	1								
Trichlorofluoromethane	ND	0.5								
1,1-Dichloroethene	ND	0.5								
Dichloromethane	ND	1								
Freon-113	ND	0.5								
trans-1,2-Dichloroethene	ND	0.5								
Methyl tert-butyl ether (MTBE)	ND	0.5								
1,1-Dichloroethane	ND	0.5								
2-Butanone (MEK)	ND	10								
cis-1,2-Dichloroethene	ND	0.5								
Bromochloromethane	ND	0.5								
Chloroform	ND	0.5								
2,2-Dichloropropane	ND	0.5								
1,2-Dichloroethane	ND	0.5								
1,1,1-Trichloroethane	ND	0.5								
1,1-Dichloropropene	ND	0.5								
Carbon tetrachloride	ND	0.5								
Benzene	ND	0.5								
Dibromomethane	ND	0.5								
1,2-Dichloropropane	ND	0.5								
Trichloroethene	ND	0.5								
Bromodichloromethane	ND	0.5								
4-Methyl-2-pentanone (MIBK)	ND	2.5								
cis-1,3-Dichloropropene	ND	0.5								
trans-1,3-Dichloropropene	ND	0.5								
1,1,2-Trichloroethane	ND	0.5								
Toluene	ND	0.5								
1,3-Dichloropropane	ND	0.5								
Dibromochloromethane	ND	0.5								
1,2-Dibromoethane (EDB)	ND	1								
Tetrachloroethene	ND	0.5								
1,1,1,2-Tetrachloroethane	ND	0.5								
Chlorobenzene	ND	0.5								
Ethylbenzene	ND	0.5								
m,p-Xylene	ND	0.5								
Bromoform	ND	0.5								
Styrene	ND	0.5								
o-Xylene	ND	0.5								
1,1,2,2-Tetrachloroethane	ND	0.5								
1,2,3-Trichloropropane	ND	1								
Isopropylbenzene	ND	0.5								
Bromobenzene	ND	0.5								
n-Propylbenzene	ND	0.5								
4-Chlorotoluene	ND	0.5								
2-Chlorotoluene	ND	0.5								
1,3,5-Trimethylbenzene	ND	0.5								
tert-Butylbenzene	ND	0.5								
1,2,4-Trimethylbenzene	ND	0.5								
sec-Butylbenzene	ND	0.5								
1,3-Dichlorobenzene	ND	0.5								
1,4-Dichlorobenzene	ND	0.5								
4-Isopropyltoluene	ND	0.5								
1,2-Dichlorobenzene	ND	0.5								
n-Butylbenzene	ND	0.5								
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5								
1,2,4-Trichlorobenzene	ND	1								
Naphthalene	ND	1								
Hexachlorobutadiene	ND	1								
1,2,3-Trichlorobenzene	ND	1								
Surr: 1,2-Dichloroethane-d4	10.3		10		103	70	130			
Surr: Toluene-d8	10		10		100	70	130			

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Date: 19-Aug-09

QC Summary Report

Work Order: 09080703

Surr: 4-Bromofluorobenzene	8.93		10		89	70	130			

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

File ID: **09081408.D** Batch ID: **MS15W0814M** Analysis Date: **08/14/2009 14:16**

Sample ID: **LCS MS15W0814M** Units : **µg/L** Run ID: **MSD_15_090814A** Prep Date: **08/14/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	12.5	1	10		125	70	130			
Chloromethane	10.8	2	10		108	70	130			
Vinyl chloride	11.4	1	10		114	70	130			
Chloroethane	11.2	1	10		112	70	130			
Bromomethane	13.2	2	10		132	70	130(130)			L51
Trichlorofluoromethane	12	1	10		120	70	130			
1,1-Dichloroethene	11	1	10		110	70	130			
Dichloromethane	10.6	2	10		106	70	130			
trans-1,2-Dichloroethene	11.4	1	10		114	70	130			
Methyl tert-butyl ether (MTBE)	11	0.5	10		110	70	130			
1,1-Dichloroethane	10.9	1	10		109	70	130			
cis-1,2-Dichloroethene	11.2	1	10		112	70	130			
Bromochloromethane	11.4	1	10		114	70	130			
Chloroform	10.6	1	10		106	70	130			
2,2-Dichloropropane	12.5	1	10		125	70	130			
1,2-Dichloroethane	10.7	1	10		107	70	130			
1,1,1-Trichloroethane	11.5	1	10		115	70	130			
1,1-Dichloropropene	11.2	1	10		112	70	130			
Carbon tetrachloride	11.7	1	10		117	70	130			
Benzene	11.1	0.5	10		111	70	130			
Dibromomethane	11.2	1	10		112	70	130			
1,2-Dichloropropane	11.1	1	10		111	70	130			
Trichloroethene	11	1	10		110	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	10.2	1	10		102	70	130			
1,1,2-Trichloroethane	10.4	1	10		104	70	130			
Toluene	10.4	0.5	10		104	70	130			
1,3-Dichloropropane	10.2	1	10		102	70	130			
Dibromochloromethane	9.95	1	10		100	70	130			
1,2-Dibromoethane (EDB)	22.3	2	20		111	70	130			
Tetrachloroethene	10.8	1	10		108	70	130			
1,1,1,2-Tetrachloroethane	11.2	1	10		112	70	130			
Chlorobenzene	10.1	1	10		101	70	130			
Ethylbenzene	10.2	0.5	10		102	70	130			
m,p-Xylene	10.4	0.5	10		104	70	130			
Bromoform	9.13	1	10		91	70	130			
Styrene	8.52	1	10		85	70	130			
o-Xylene	10.7	0.5	10		107	70	130			
1,1,2,2-Tetrachloroethane	9.66	1	10		97	70	130			
1,2,3-Trichloropropane	19.2	2	20		96	70	130			
Isopropylbenzene	9.84	1	10		98	70	130			
Bromobenzene	9.88	1	10		99	70	130			
n-Propylbenzene	9.97	1	10		99.7	70	130			
4-Chlorotoluene	9.91	1	10		99	70	130			
2-Chlorotoluene	9.87	1	10		99	70	130			
1,3,5-Trimethylbenzene	9.54	1	10		95	70	130			
tert-Butylbenzene	9.53	1	10		95	70	130			
1,2,4-Trimethylbenzene	9.21	1	10		92	70	130			
sec-Butylbenzene	9.6	1	10		96	70	130			
1,3-Dichlorobenzene	9.99	1	10		99.9	70	130			
1,4-Dichlorobenzene	9.79	1	10		98	70	130			
4-Isopropyltoluene	9.59	1	10		96	70	130			
1,2-Dichlorobenzene	9.45	1	10		95	70	130			
n-Butylbenzene	9.5	1	10		95	70	130			
1,2-Dibromo-3-chloropropane (DBCP)	48.7	3	50		97	70	130			
1,2,4-Trichlorobenzene	9.72	2	10		97	70	130			
Naphthalene	9.75	2	10		98	70	130			
Hexachlorobutadiene	19.3	2	20		96	70	130			
1,2,3-Trichlorobenzene	9.41	2	10		94	70	130			
Surr: 1,2-Dichloroethane-d4	9.97		10		99.7	70	130			
Surr: Toluene-d8	10		10		100	70	130			
Surr: 4-Bromofluorobenzene	9.75		10		98	70	130			

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Date: *19-Aug-09*

QC Summary Report

Work Order: 09080703

Sample Matrix Spike Type **MS** Test Code: _____

File ID: **09081414.D** Batch ID: **MS15W0814M** Analysis Date: **08/14/2009 16:47**

Sample ID: **09080502-03AMS** Units : **µg/L** Run ID: **MSD_15_090814A** Prep Date: **08/14/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	47.3	2.5	50	0	95	13	167			
Chloromethane	53.6	10	50	0	107	28	145			
Vinyl chloride	59.7	2.5	50	0	119	43	134			
Chloroethane	53.4	2.5	50	0	107	39	154			
Bromomethane	62.3	10	50	0	125	19	176			
Trichlorofluoromethane	56.7	2.5	50	0	113	34	160			
1,1-Dichloroethene	50.2	2.5	50	0	100	60	130			
Dichloromethane	51.4	10	50	0	103	68	130			
trans-1,2-Dichloroethene	52.4	2.5	50	0	105	63	130			
Methyl tert-butyl ether (MTBE)	56.9	1.3	50	0	114	56	141			
1,1-Dichloroethane	51.4	2.5	50	0	103	61	130			
cis-1,2-Dichloroethene	53.1	2.5	50	0	106	70	130			
Bromochloromethane	56.6	2.5	50	0	113	70	130			
Chloroform	50.5	2.5	50	0	101	67	130			
2,2-Dichloropropane	55.5	2.5	50	0	111	30	152			
1,2-Dichloroethane	52.8	2.5	50	0	106	60	135			
1,1,1-Trichloroethane	53.4	2.5	50	0	107	59	137			
1,1-Dichloropropene	51.5	2.5	50	0	103	63	130			
Carbon tetrachloride	53.9	2.5	50	0	108	50	147			
Benzene	52.2	1.3	50	0	104	67	130			
Dibromomethane	56.6	2.5	50	0	113	69	133			
1,2-Dichloropropane	53.1	2.5	50	0	106	69	130			
Trichloroethene	50.7	2.5	50	0	101	69	130			
Bromodichloromethane	54.3	2.5	50	0	109	66	134			
cis-1,3-Dichloropropene	53	2.5	50	0	106	63	130			
trans-1,3-Dichloropropene	49.7	2.5	50	0	99	66	131			
1,1,2-Trichloroethane	53.5	2.5	50	0	107	68	130			
Toluene	47.9	1.3	50	0	96	66	130			
1,3-Dichloropropane	50.6	2.5	50	0	101	70	130			
Dibromochloromethane	48.8	2.5	50	0	98	70	130			
1,2-Dibromoethane (EDB)	110	10	100	0	110	70	130			
Tetrachloroethene	49.6	2.5	50	0	99	61	134			
1,1,1,2-Tetrachloroethane	52.5	2.5	50	0	105	70	130			
Chlorobenzene	47.9	2.5	50	0	96	70	130			
Ethylbenzene	47.1	1.3	50	0	94	68	130			
m,p-Xylene	48.5	1.3	50	0	97	64	130			
Bromoform	46.3	2.5	50	0	93	64	138			
Styrene	40.1	2.5	50	0	80	69	130			
o-Xylene	49.9	1.3	50	0	99.8	70	130			
1,1,2,2-Tetrachloroethane	50.2	2.5	50	0	100	65	131			
1,2,3-Trichloropropane	97.4	10	100	0	97	70	130			
Isopropylbenzene	45.1	2.5	50	0	90	64	138			
Bromobenzene	48.2	2.5	50	0	96	70	130			
n-Propylbenzene	45.8	2.5	50	0	92	66	132			
4-Chlorotoluene	46.7	2.5	50	0	93	70	130			
2-Chlorotoluene	46	2.5	50	0	92	70	130			
1,3,5-Trimethylbenzene	44.6	2.5	50	0	89	66	136			
tert-Butylbenzene	44.3	2.5	50	0	89	65	137			
1,2,4-Trimethylbenzene	43.6	2.5	50	0	87	65	137			
sec-Butylbenzene	44.5	2.5	50	0	89	66	134			
1,3-Dichlorobenzene	48.1	2.5	50	0	96	70	130			
1,4-Dichlorobenzene	47.4	2.5	50	0	95	70	130			
4-Isopropyltoluene	45	2.5	50	0	90	66	137			
1,2-Dichlorobenzene	46.8	2.5	50	0	94	70	130			
n-Butylbenzene	44.3	2.5	50	0	89	60	142			
1,2-Dibromo-3-chloropropane (DBCP)	252	15	250	0	101	67	130			
1,2,4-Trichlorobenzene	49.5	10	50	0	99	61	137			
Naphthalene	51.4	10	50	0	103	40	167			
Hexachlorobutadiene	90.8	10	100	0	91	61	130			
1,2,3-Trichlorobenzene	49.1	10	50	0	98	51	144			
Surr: 1,2-Dichloroethane-d4	50.4		50		101	70	130			
Surr: Toluene-d8	48.8		50		98	70	130			
Surr: 4-Bromofluorobenzene	48		50		96	70	130			

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Date: 19-Aug-09

QC Summary Report

Work Order: 09080703

Sample Matrix Spike Duplicate Type **MSD** Test Code: _____

File ID: **09081415.D** Batch ID: **MS15W0814M** Analysis Date: **08/14/2009 17:09**

Sample ID: **09080502-03AMSD** Units : **µg/L** Run ID: **MSD_15_090814A** Prep Date: **08/14/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	46.1	2.5	50	0	92	13	167	47.27	2.4(20)	
Chloromethane	54.1	10	50	0	108	28	145	53.57	1.0(20)	
Vinyl chloride	56.2	2.5	50	0	112	43	134	59.71	6.0(20)	
Chloroethane	50.8	2.5	50	0	102	39	154	53.43	5.1(20)	
Bromomethane	60.9	10	50	0	122	19	176	62.33	2.3(20)	
Trichlorofluoromethane	53.4	2.5	50	0	107	34	160	56.71	6.0(20)	
1,1-Dichloroethene	47.3	2.5	50	0	95	60	130	50.16	5.9(20)	
Dichloromethane	50.8	10	50	0	102	68	130	51.43	1.2(20)	
trans-1,2-Dichloroethene	49.3	2.5	50	0	99	63	130	52.41	6.1(20)	
Methyl tert-butyl ether (MTBE)	58	1.3	50	0	116	56	141	56.91	2.0(20)	
1,1-Dichloroethane	49.7	2.5	50	0	99	61	130	51.36	3.3(20)	
cis-1,2-Dichloroethene	53	2.5	50	0	106	70	130	53.1	0.1(20)	
Bromochloromethane	55.7	2.5	50	0	111	70	130	56.57	1.5(20)	
Chloroform	49.4	2.5	50	0	99	67	130	50.54	2.3(20)	
2,2-Dichloropropane	52.3	2.5	50	0	105	30	152	55.48	5.8(20)	
1,2-Dichloroethane	52.2	2.5	50	0	104	60	135	52.84	1.2(20)	
1,1,1-Trichloroethane	51	2.5	50	0	102	59	137	53.39	4.7(20)	
1,1-Dichloropropene	49.1	2.5	50	0	98	63	130	51.47	4.7(20)	
Carbon tetrachloride	51.3	2.5	50	0	103	50	147	53.88	4.9(20)	
Benzene	50.5	1.3	50	0	101	67	130	52.22	3.4(20)	
Dibromomethane	57	2.5	50	0	114	69	133	56.64	0.6(20)	
1,2-Dichloropropane	53.2	2.5	50	0	106	69	130	53.09	0.2(20)	
Trichloroethene	48	2.5	50	0	96	69	130	50.65	5.5(20)	
Bromodichloromethane	54.1	2.5	50	0	108	66	134	54.3	0.4(20)	
cis-1,3-Dichloropropene	52.3	2.5	50	0	105	63	130	52.98	1.4(20)	
trans-1,3-Dichloropropene	49.2	2.5	50	0	98	66	131	49.69	1.1(20)	
1,1,2-Trichloroethane	52.6	2.5	50	0	105	68	130	53.47	1.7(20)	
Toluene	45.5	1.3	50	0	91	66	130	47.89	5.2(20)	
1,3-Dichloropropane	50.5	2.5	50	0	101	70	130	50.56	0.2(20)	
Dibromochloromethane	48.6	2.5	50	0	97	70	130	48.75	0.3(20)	
1,2-Dibromoethane (EDB)	111	10	100	0	111	70	130	109.6	1.7(20)	
Tetrachloroethene	47	2.5	50	0	94	61	134	49.64	5.4(20)	
1,1,1,2-Tetrachloroethane	51	2.5	50	0	102	70	130	52.53	3.0(20)	
Chlorobenzene	45.7	2.5	50	0	91	70	130	47.94	4.8(20)	
Ethylbenzene	44.9	1.3	50	0	90	68	130	47.06	4.8(20)	
m,p-Xylene	45.6	1.3	50	0	91	64	130	48.51	6.3(20)	
Bromoform	45.7	2.5	50	0	91	64	138	46.28	1.2(20)	
Styrene	38.4	2.5	50	0	77	69	130	40.13	4.4(20)	
o-Xylene	47.7	1.3	50	0	95	70	130	49.88	4.4(20)	
1,1,2,2-Tetrachloroethane	50.8	2.5	50	0	102	65	131	50.22	1.2(20)	
1,2,3-Trichloropropane	98.5	10	100	0	98	70	130	97.35	1.1(20)	
Isopropylbenzene	42.4	2.5	50	0	85	64	138	45.11	6.1(20)	
Bromobenzene	46.2	2.5	50	0	92	70	130	48.18	4.1(20)	
n-Propylbenzene	43	2.5	50	0	86	66	132	45.81	6.4(20)	
4-Chlorotoluene	44.5	2.5	50	0	89	70	130	46.73	4.8(20)	
2-Chlorotoluene	43.8	2.5	50	0	88	70	130	45.95	4.8(20)	
1,3,5-Trimethylbenzene	41.9	2.5	50	0	84	66	136	44.58	6.3(20)	
tert-Butylbenzene	41.5	2.5	50	0	83	65	137	44.26	6.5(20)	
1,2,4-Trimethylbenzene	41.2	2.5	50	0	82	65	137	43.57	5.5(20)	
sec-Butylbenzene	41.9	2.5	50	0	84	66	134	44.47	6.1(20)	
1,3-Dichlorobenzene	45.7	2.5	50	0	91	70	130	48.12	5.2(20)	
1,4-Dichlorobenzene	45.2	2.5	50	0	90	70	130	47.37	4.6(20)	
4-Isopropyltoluene	41.8	2.5	50	0	84	66	137	45.02	7.3(20)	
1,2-Dichlorobenzene	45.4	2.5	50	0	91	70	130	46.84	3.1(20)	
n-Butylbenzene	42.2	2.5	50	0	84	60	142	44.28	4.9(20)	
1,2-Dibromo-3-chloropropane (DBCP)	258	15	250	0	103	67	130	251.5	2.7(20)	
1,2,4-Trichlorobenzene	48.7	10	50	0	97	61	137	49.48	1.6(20)	
Naphthalene	51.5	10	50	0	103	40	167	51.4	0.1(20)	
Hexachlorobutadiene	86.6	10	100	0	87	61	130	90.8	4.7(20)	
1,2,3-Trichlorobenzene	48.8	10	50	0	98	51	144	49.07	0.5(20)	
Surr: 1,2-Dichloroethane-d4	52.1		50		104	70	130			
Surr: Toluene-d8	47.7		50		95	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: *19-Aug-09*

QC Summary Report

Work Order: 09080703

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

CA

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

WorkOrder : BMIS09080703

Report Due By : 5:00 PM On : 21-Aug-2009

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

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

EDD Required : **Yes**

Sampled by : Client

PO : 218013

Client's COC # : 24144 Job : G005862/JPL Groundwater Monitoring

Cooler Temp	Samples Received	Date Printed
4 °C	07-Aug-2009	**07-Aug-2009**

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

Alpha Sample ID	Client Sample ID	Matrix	Collection Date	No. of Bottles Alpha	Sub	TAT	Requested Tests 300_0(A)_W	300_0(B)_W	300_0(C)_W	314_W	METALS_DW	VOC_TIC_W	VOC_W		Sample Remarks
BMI09080703-01A	MW-13	AQ	08/06/09 08:26	5	0	10	NO2, NO3, PO4, SO4, Cl	NO2, NO3, PO4, SO4, Cl	NO2, NO3, PO4, SO4, Cl	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria		
BMI09080703-02A	MW-8	AQ	08/06/09 10:10	5	0	10	NO2, NO3, PO4, SO4, Cl	NO2, NO3, PO4, SO4, Cl	NO2, NO3, PO4, SO4, Cl	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria		
BMI09080703-03A	MW-6	AQ	08/06/09 11:58	5	0	10				Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria		
BMI09080703-04A	TB-13-8/6/09	AQ	08/06/09 00:00	1	0	10						VOC by 524 Criteria	VOC by 524 Criteria		Reno Trip Blank 6/22/09

Comments: No security seals. Frozen ice. Temp Blank #5041 received @ 4°C. Perchlorate RL of 1.0 ug/L. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). :

	Signature	Print Name	Company	Date/Time
Logged in by:	Elizabeth Adcox	Elizabeth Adcox	**Alpha Analytical, Inc.**	8-7-09 1035

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

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

Billing Information:
Name GERALD TOMPKINS
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 ___

24144

Page # 1 of 1

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

Required QC Level? I II III IV

EDD / EDF? YES ___ NO ___

Global ID # _____

Time Sampled	Date Sampled	Matrix* See Key Below	Sampled by / Lab ID Number (Office Use Only)	Sample Description	TAT	Field Filtered	Total and type of containers ** See below	VOC (624.2)	TOTAL Cr (200.8)	Cl04 - (314.0) Cl-, SO4, NO3, PO4-3 (300.0)				REMARKS
826	8/6/09	AQ	BMT0908070301	MW-13	NORM		VP/5	X	X	X	X				
1010	|	|	-02	MW-8	|		|	X	X	X	X				
1158	|	|	-03	MW-6	|		|	X	X	X					
—	|	|	-04	TB-13-8/6/09	|		V/1	X							TRIP BLANK

Analyses Required

ADDITIONAL INSTRUCTIONS:

Signature	Print Name	Company	Date	Time
Relinquished by	MARCO MENDOZA	INSIGHT ECC	8/6/09	1400
Received by Elizabeth Adcox	Elizabeth Adcox	Alpha	8-7-09	1035
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: *25-Aug-09*

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

CASE NARRATIVE

Project: G005862/JPL Groundwater Monitoring
Work Order: BMI09081341 **Cooler Temp:** 4 °C

Alpha's Sample ID	Client's Sample ID	Matrix
09081341-01A	MW-10	Aqueous
09081341-02A	MW-15	Aqueous
09081341-03A	TB-14-8/7/09	Aqueous
09081341-04A	SB-1-3Q09	Aqueous
09081341-05A	MW-5	Aqueous
09081341-06A	TB-15 8/12/09	Aqueous

Manually Integrated Analytes

Alpha's Sample ID	Test Reference	Analyte
0908134I-01A	EPA Method 314.0	Perchlorate
0908134I-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
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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 : 08/13/09

Job#: G005862/JPL Groundwater Monitoring

Perchlorate by Ion Chromatography
EPA Method 314.0

		Parameter	Concentration	Reporting Limit	Date Sampled	Date Analyzed
Client ID :	**MW-10**					
Lab ID :	BMI09081341-01A	Perchlorate	2.70	1.00 µg/L	08/07/09	08/13/09
Client ID :	**SB-1-3Q09**					
Lab ID :	BMI09081341-04A	Perchlorate	ND	1.00 µg/L	08/07/09	08/13/09
Client ID :	**MW-5**					
Lab ID :	BMI09081341-05A	Perchlorate	3.36	1.00 µg/L	08/12/09	08/13/09

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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

8/26/09
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

Attn: David Conner
Phone: (818) 393-2808
Fax: (614) 458-6641
Date Received : 08/13/09

Job#: G005862/JPL Groundwater Monitoring

Metals by ICPMS
EPA Method 200.8

		Parameter	Concentration	Reporting Limit	Date Sampled	Date Analyzed
Client ID :	**MW-10**					
Lab ID :	BMI09081341-01A	Chromium (Cr)	0.0066	0.0050 mg/L	08/07/09	08/13/09
Client ID :	**MW-15**					
Lab ID :	BMI09081341-02A	Chromium (Cr)	ND	0.0050 mg/L	08/07/09	08/13/09
Client ID :	**SB-1-3Q09**					
Lab ID :	BMI09081341-04A	Chromium (Cr)	ND	0.0050 mg/L	08/07/09	08/13/09
Client ID :	**MW-5**					
Lab ID :	BMI09081341-05A	Chromium (Cr)	ND	0.0050 mg/L	08/12/09	08/13/09

ND = 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

Tentatively Identified Compounds - Volatile Organics by GC/MS

		Parameter	Estimated Concentration	Estimated Reporting Limit	Date Received	Date Sampled	Date Analyzed
Client ID :	**MW-10**						
Lab ID :	BMI09081341-01A	* * * None Found * * *	ND	2.0 µg/L	08/13/09	08/07/09	08/14/09
Client ID :	**TB-14-8/7/09**						
Lab ID :	BMI09081341-03A	* * * None Found * * *	ND	2.0 µg/L	08/13/09	08/07/09	08/14/09
Client ID :	**SB-1-3Q09**						
Lab ID :	BMI09081341-04A	Tertiary Butyl Alcohol (TBA)	12	10 µg/L	08/13/09	08/07/09	08/14/09
Client ID :	**MW-5**						
Lab ID :	BMI09081341-05A	* * * None Found * * *	ND	2.0 µg/L	08/13/09	08/12/09	08/14/09
Client ID :	**TB-15 8/12/09**						
Lab ID :	BMI09081341-06A	* * * None Found * * *	ND	2.0 µg/L	08/13/09	08/12/09	08/14/09

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

Roger Scholl Randy Gardner Walter Hinchman

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

8/26/09
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: BMI09081341-01A
Client I.D. Number: MW-10

Sampled: 08/07/09
Received: 08/13/09
Analyzed: 08/14/09

Volatile Organics by GC/MS

	Compound	Concentration	Reporting Limit		
1	Dichlorodifluoromethane	ND	0.50	µg/L	
2	Chloromethane	ND	1.0	µg/L	
3	Vinyl chloride	ND	0.50	µg/L	
4	Chloroethane	ND	0.50	µg/L	
5	Bromomethane	ND	1.0	µg/L	
6	Trichlorofluoromethane	ND	0.50	µg/L	
7	1,1-Dichloroethene	ND	0.50	µg/L	
8	Dichloromethane	ND	1.0	µg/L	
9	Freon-113	ND	0.50	µg/L	
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	
12	1,1-Dichloroethane	ND	0.50	µg/L	
13	2-Butanone (MEK)	ND	10	µg/L	
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	
15	Bromochloromethane	ND	0.50	µg/L	
16	Chloroform	0.51	0.50	µg/L	
17	2,2-Dichloropropane	ND	0.50	µg/L	
18	1,2-Dichloroethane	ND	0.50	µg/L	
19	1,1,1-Trichloroethane	ND	0.50	µg/L	
20	1,1-Dichloropropene	ND	0.50	µg/L	
21	Carbon tetrachloride	ND	0.50	µg/L	
22	Benzene	ND	0.50	µg/L	
23	Dibromomethane	ND	0.50	µg/L	
24	1,2-Dichloropropane	ND	0.50	µg/L	
25	Trichloroethene	2.3	0.50	µg/L	
26	Bromodichloromethane	ND	0.50	µg/L	
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	
30	1,1,2-Trichloroethane	ND	0.50	µg/L	
31	Toluene	ND	0.50	µg/L	
32	1,3-Dichloropropane	ND	0.50	µg/L	
33	Dibromochloromethane	ND	0.50	µg/L	
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L	
35	Tetrachloroethene	0.85	0.50	µg/L	
36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L	
37	Chlorobenzene	ND	0.50	µg/L	
38	Ethylbenzene	ND	0.50	µg/L	
39	m,p-Xylene	ND	0.50	µg/L	
40	Bromoform	ND	0.50	µg/L	
41	Styrene	ND	0.50	µg/L	
42	o-Xylene	ND	0.50	µg/L	
43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	
44	1,2,3-Trichloropropane	ND	1.0	µg/L	
45	Isopropylbenzene	ND	0.50	µg/L	
46	Bromobenzene	ND	0.50	µg/L	
47	n-Propylbenzene	ND	0.50	µg/L	
48	4-Chlorotoluene	ND	0.50	µg/L	
49	2-Chlorotoluene	ND	0.50	µg/L	
50	1,3,5-Trimethylbenzene	ND	0.50	µg/L	
51	tert-Butylbenzene	ND	0.50	µg/L	
52	1,2,4-Trimethylbenzene	ND	0.50	µg/L	
53	sec-Butylbenzene	ND	0.50	µg/L	
54	1,3-Dichlorobenzene	ND	0.50	µg/L	
55	1,4-Dichlorobenzene	ND	0.50	µg/L	
56	4-Isopropyltoluene	ND	0.50	µg/L	
57	1,2-Dichlorobenzene	ND	0.50	µg/L	
58	n-Butylbenzene	ND	0.50	µg/L	
59	1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5	µg/L	
60	1,2,4-Trichlorobenzene	ND	1.0	µg/L	
61	Naphthalene	ND	1.0	µg/L	
62	Hexachlorobutadiene	ND	1.0	µg/L	
63	1,2,3-Trichlorobenzene	ND	1.0	µg/L	
64	Surr: 1,2-Dichloroethane-d4	110	(70-130)	%REC	
65	Surr: Toluene-d8	101	(70-130)	%REC	
66	Surr: 4-Bromofluorobenzene	90	(70-130)	%REC	

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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

8/26/09
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI09081341-03A
Client I.D. Number: TB-14-8/7/09

Sampled: 08/07/09
Received: 08/13/09
Analyzed: 08/14/09

Volatile Organics by GC/MS

	Compound	Concentration	Reporting Limit		Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37 Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38 Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39 m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40 Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41 Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42 o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44 1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45 Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46 Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47 n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48 4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49 2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50 1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51 tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52 1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53 sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54 1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55 1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56 4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57 1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58 n-Butylbenzene	ND	0.50	µg/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	92	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L				
33	Dibromochloromethane	ND	0.50	µg/L				
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L				
35	Tetrachloroethene	ND	0.50	µg/L				

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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

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

8/26/09
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI09081341-04A
Client I.D. Number: SB-1-3Q09

Sampled: 08/07/09
Received: 08/13/09
Analyzed: 08/14/09

Volatile Organics by GC/MS

	Compound	Concentration	Reporting Limit		
1	Dichlorodifluoromethane	ND	0.50	µg/L	
2	Chloromethane	ND	1.0	µg/L	
3	Vinyl chloride	ND	0.50	µg/L	
4	Chloroethane	ND	0.50	µg/L	
5	Bromomethane	ND	1.0	µg/L	
6	Trichlorofluoromethane	ND	0.50	µg/L	
7	1,1-Dichloroethene	ND	0.50	µg/L	
8	Dichloromethane	ND	1.0	µg/L	
9	Freon-113	ND	0.50	µg/L	
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	
12	1,1-Dichloroethane	ND	0.50	µg/L	
13	2-Butanone (MEK)	ND	10	µg/L	
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	
15	Bromochloromethane	ND	0.50	µg/L	
16	Chloroform	ND	0.50	µg/L	
17	2,2-Dichloropropane	ND	0.50	µg/L	
18	1,2-Dichloroethane	ND	0.50	µg/L	
19	1,1,1-Trichloroethane	ND	0.50	µg/L	
20	1,1-Dichloropropene	ND	0.50	µg/L	
21	Carbon tetrachloride	ND	0.50	µg/L	
22	Benzene	ND	0.50	µg/L	
23	Dibromomethane	ND	0.50	µg/L	
24	1,2-Dichloropropane	ND	0.50	µg/L	
25	Trichloroethene	ND	0.50	µg/L	
26	Bromodichloromethane	ND	0.50	µg/L	
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	
30	1,1,2-Trichloroethane	ND	0.50	µg/L	
31	Toluene	ND	0.50	µg/L	
32	1,3-Dichloropropane	ND	0.50	µg/L	
33	Dibromochloromethane	ND	0.50	µg/L	
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L	
35	Tetrachloroethene	ND	0.50	µg/L	
36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L	
37	Chlorobenzene	ND	0.50	µg/L	
38	Ethylbenzene	ND	0.50	µg/L	
39	m,p-Xylene	ND	0.50	µg/L	
40	Bromoform	ND	0.50	µg/L	
41	Styrene	ND	0.50	µg/L	
42	o-Xylene	ND	0.50	µg/L	
43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	
44	1,2,3-Trichloropropane	ND	1.0	µg/L	
45	Isopropylbenzene	ND	0.50	µg/L	
46	Bromobenzene	ND	0.50	µg/L	
47	n-Propylbenzene	ND	0.50	µg/L	
48	4-Chlorotoluene	ND	0.50	µg/L	
49	2-Chlorotoluene	ND	0.50	µg/L	
50	1,3,5-Trimethylbenzene	ND	0.50	µg/L	
51	tert-Butylbenzene	ND	0.50	µg/L	
52	1,2,4-Trimethylbenzene	ND	0.50	µg/L	
53	sec-Butylbenzene	ND	0.50	µg/L	
54	1,3-Dichlorobenzene	ND	0.50	µg/L	
55	1,4-Dichlorobenzene	ND	0.50	µg/L	
56	4-Isopropyltoluene	ND	0.50	µg/L	
57	1,2-Dichlorobenzene	ND	0.50	µg/L	
58	n-Butylbenzene	ND	0.50	µg/L	
59	1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5	µg/L	
60	1,2,4-Trichlorobenzene	ND	1.0	µg/L	
61	Naphthalene	ND	1.0	µg/L	
62	Hexachlorobutadiene	ND	1.0	µg/L	
63	1,2,3-Trichlorobenzene	ND	1.0	µg/L	
64	Surr: 1,2-Dichloroethane-d4	105	(70-130)	%REC	
65	Surr: Toluene-d8	100	(70-130)	%REC	
66	Surr: 4-Bromofluorobenzene	89	(70-130)	%REC	

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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

8/26/09
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI09081341-05A
Client I.D. Number: MW-5

Sampled: 08/12/09
Received: 08/13/09
Analyzed: 08/14/09

Volatile Organics by GC/MS

	Compound	Concentration	Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/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	103	(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 / info@alpha-analytical.com

8/26/09
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI09081341-06A
Client I.D. Number: TB-15 8/12/09

Sampled: 08/12/09
Received: 08/13/09
Analyzed: 08/14/09

Volatile Organics by GC/MS

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

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

8/26/09
Report Date

Alpha Analytical, Inc.

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

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

VOC Sample Preservation Report

Work Order: BMI09081341 **Project:** G005862/JPL Groundwater Monitoring

Alpha's Sample ID	Client's Sample ID	Matrix	pH
09081341-01A	MW-10	Aqueous	2
09081341-03A	TB-14-8/7/09	Aqueous	2
09081341-04A	SB-1-3Q09	Aqueous	2
09081341-05A	MW-5	Aqueous	2
09081341-06A	TB-15 8/12/09	Aqueous	2

8/26/09

Report Date

Alpha Analytical, Inc.

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

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

Date: *24-Aug-09*

QC Summary Report

Work Order: 09081341

Method Blank

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

File ID: **14** Batch ID: **22547** Analysis Date: **08/13/2009 16:15**

Sample ID: **MB-22547** Units : **µg/L** Run ID: **IC_3_090813A** Prep Date: **08/13/2009**

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: **22547** Analysis Date: **08/13/2009 16:33**

Sample ID: **LFB-22547** Units : **µg/L** Run ID: **IC_3_090813A** Prep Date: **08/13/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	25.1	2	25		101	85	115			

Sample Matrix Spike

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

File ID: **18** Batch ID: **22547** Analysis Date: **08/13/2009 17:29**

Sample ID: **09081303-05ALFM** Units : **µg/L** Run ID: **IC_3_090813A** Prep Date: **08/13/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	22.7	2	25	0	91	80	120			

Sample Matrix Spike Duplicate

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

File ID: **19** Batch ID: **22547** Analysis Date: **08/13/2009 17:47**

Sample ID: **09081303-05ALFMD** Units : **µg/L** Run ID: **IC_3_090813A** Prep Date: **08/13/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	24.4	2	25	0	98	80	120	22.71	7.3(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.

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

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Date: *20-Aug-09*

QC Summary Report

Work Order: 09081341

Method Blank

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

File ID: **081309.B\052SMPL.D** Batch ID: **22542** Analysis Date: **08/13/2009 19:24**

Sample ID: **MB-22542** Units : **mg/L** Run ID: **ICP/MS_090813A** Prep Date: **08/13/2009**

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

Laboratory Control Spike

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

File ID: **081309.B\053_LCS.D** Batch ID: **22542** Analysis Date: **08/13/2009 19:30**

Sample ID: **LCS-22542** Units : **mg/L** Run ID: **ICP/MS_090813A** Prep Date: **08/13/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0571	0.005	0.05		114	85	115			

Sample Matrix Spike

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

File ID: **081309.B\057SMPL.D** Batch ID: **22542** Analysis Date: **08/13/2009 19:52**

Sample ID: **09080703-01AMS** Units : **mg/L** Run ID: **ICP/MS_090813A** Prep Date: **08/13/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0776	0.005	0.05	0.03121	93	70	130			

Sample Matrix Spike Duplicate

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

File ID: **081309.B\058SMPL.D** Batch ID: **22542** Analysis Date: **08/13/2009 19:58**

Sample ID: **09080703-01AMSD** Units : **mg/L** Run ID: **ICP/MS_090813A** Prep Date: **08/13/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0789	0.005	0.05	0.03121	95	70	130	0.07759	1.6(20)	

Comments:

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

Alpha Analytical, Inc.

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

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

Date: 22-Aug-09

QC Summary Report

Work Order: 09081341

Method Blank Type **MBLK** Test Code: _____

File ID: **09081411.D** Batch ID: **MS15W0814M** Analysis Date: **08/14/2009 15:40**

Sample ID: **MBLK MS15W0814M** Units : **µg/L** Run ID: **MSD_15_090814A** Prep Date: **08/14/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	ND	0.5								
Chloromethane	ND	1								
Vinyl chloride	ND	0.5								
Chloroethane	ND	0.5								
Bromomethane	ND	1								
Trichlorofluoromethane	ND	0.5								
1,1-Dichloroethene	ND	0.5								
Dichloromethane	ND	1								
Freon-113	ND	0.5								
trans-1,2-Dichloroethene	ND	0.5								
Methyl tert-butyl ether (MTBE)	ND	0.5								
1,1-Dichloroethane	ND	0.5								
2-Butanone (MEK)	ND	10								
cis-1,2-Dichloroethene	ND	0.5								
Bromochloromethane	ND	0.5								
Chloroform	ND	0.5								
2,2-Dichloropropane	ND	0.5								
1,2-Dichloroethane	ND	0.5								
1,1,1-Trichloroethane	ND	0.5								
1,1-Dichloropropene	ND	0.5								
Carbon tetrachloride	ND	0.5								
Benzene	ND	0.5								
Dibromomethane	ND	0.5								
1,2-Dichloropropane	ND	0.5								
Trichloroethene	ND	0.5								
Bromodichloromethane	ND	0.5								
4-Methyl-2-pentanone (MIBK)	ND	2.5								
cis-1,3-Dichloropropene	ND	0.5								
trans-1,3-Dichloropropene	ND	0.5								
1,1,2-Trichloroethane	ND	0.5								
Toluene	ND	0.5								
1,3-Dichloropropane	ND	0.5								
Dibromochloromethane	ND	0.5								
1,2-Dibromoethane (EDB)	ND	1								
Tetrachloroethene	ND	0.5								
1,1,1,2-Tetrachloroethane	ND	0.5								
Chlorobenzene	ND	0.5								
Ethylbenzene	ND	0.5								
m,p-Xylene	ND	0.5								
Bromoform	ND	0.5								
Styrene	ND	0.5								
o-Xylene	ND	0.5								
1,1,2,2-Tetrachloroethane	ND	0.5								
1,2,3-Trichloropropane	ND	1								
Isopropylbenzene	ND	0.5								
Bromobenzene	ND	0.5								
n-Propylbenzene	ND	0.5								
4-Chlorotoluene	ND	0.5								
2-Chlorotoluene	ND	0.5								
1,3,5-Trimethylbenzene	ND	0.5								
tert-Butylbenzene	ND	0.5								
1,2,4-Trimethylbenzene	ND	0.5								
sec-Butylbenzene	ND	0.5								
1,3-Dichlorobenzene	ND	0.5								
1,4-Dichlorobenzene	ND	0.5								
4-Isopropyltoluene	ND	0.5								
1,2-Dichlorobenzene	ND	0.5								
n-Butylbenzene	ND	0.5								
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5								
1,2,4-Trichlorobenzene	ND	1								
Naphthalene	ND	1								
Hexachlorobutadiene	ND	1								
1,2,3-Trichlorobenzene	ND	1								
Surr: 1,2-Dichloroethane-d4	10.3		10		103	70	130			
Surr: Toluene-d8	10		10		100	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: 22-Aug-09

QC Summary Report

Work Order: 09081341

Surr: 4-Bromofluorobenzene	8.93		10	89	70	130			

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

File ID: **09081408.D** Batch ID: **MS15W0814M** Analysis Date: **08/14/2009 14:16**

Sample ID: **LCS MS15W0814M** Units : **µg/L** Run ID: **MSD_15_090814A** Prep Date: **08/14/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	12.5	1	10		125	70	130			
Chloromethane	10.8	2	10		108	70	130			
Vinyl chloride	11.4	1	10		114	70	130			
Chloroethane	11.2	1	10		112	70	130			
Bromomethane	13.2	2	10		132	70	130(130)			L51
Trichlorofluoromethane	12	1	10		120	70	130			
1,1-Dichloroethene	11	1	10		110	70	130			
Dichloromethane	10.6	2	10		106	70	130			
trans-1,2-Dichloroethene	11.4	1	10		114	70	130			
Methyl tert-butyl ether (MTBE)	11	0.5	10		110	70	130			
1,1-Dichloroethane	10.9	1	10		109	70	130			
cis-1,2-Dichloroethene	11.2	1	10		112	70	130			
Bromochloromethane	11.4	1	10		114	70	130			
Chloroform	10.6	1	10		106	70	130			
2,2-Dichloropropane	12.5	1	10		125	70	130			
1,2-Dichloroethane	10.7	1	10		107	70	130			
1,1,1-Trichloroethane	11.5	1	10		115	70	130			
1,1-Dichloropropene	11.2	1	10		112	70	130			
Carbon tetrachloride	11.7	1	10		117	70	130			
Benzene	11.1	0.5	10		111	70	130			
Dibromomethane	11.2	1	10		112	70	130			
1,2-Dichloropropane	11.1	1	10		111	70	130			
Trichloroethene	11	1	10		110	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	10.2	1	10		102	70	130			
1,1,2-Trichloroethane	10.4	1	10		104	70	130			
Toluene	10.4	0.5	10		104	70	130			
1,3-Dichloropropane	10.2	1	10		102	70	130			
Dibromochloromethane	9.95	1	10		100	70	130			
1,2-Dibromoethane (EDB)	22.3	2	20		111	70	130			
Tetrachloroethene	10.8	1	10		108	70	130			
1,1,1,2-Tetrachloroethane	11.2	1	10		112	70	130			
Chlorobenzene	10.1	1	10		101	70	130			
Ethylbenzene	10.2	0.5	10		102	70	130			
m,p-Xylene	10.4	0.5	10		104	70	130			
Bromoform	9.13	1	10		91	70	130			
Styrene	8.52	1	10		85	70	130			
o-Xylene	10.7	0.5	10		107	70	130			
1,1,2,2-Tetrachloroethane	9.66	1	10		97	70	130			
1,2,3-Trichloropropane	19.2	2	20		96	70	130			
Isopropylbenzene	9.84	1	10		98	70	130			
Bromobenzene	9.88	1	10		99	70	130			
n-Propylbenzene	9.97	1	10		99.7	70	130			
4-Chlorotoluene	9.91	1	10		99	70	130			
2-Chlorotoluene	9.87	1	10		99	70	130			
1,3,5-Trimethylbenzene	9.54	1	10		95	70	130			
tert-Butylbenzene	9.53	1	10		95	70	130			
1,2,4-Trimethylbenzene	9.21	1	10		92	70	130			
sec-Butylbenzene	9.6	1	10		96	70	130			
1,3-Dichlorobenzene	9.99	1	10		99.9	70	130			
1,4-Dichlorobenzene	9.79	1	10		98	70	130			
4-Isopropyltoluene	9.59	1	10		96	70	130			
1,2-Dichlorobenzene	9.45	1	10		95	70	130			
n-Butylbenzene	9.5	1	10		95	70	130			
1,2-Dibromo-3-chloropropane (DBCP)	48.7	3	50		97	70	130			
1,2,4-Trichlorobenzene	9.72	2	10		97	70	130			
Naphthalene	9.75	2	10		98	70	130			
Hexachlorobutadiene	19.3	2	20		96	70	130			
1,2,3-Trichlorobenzene	9.41	2	10		94	70	130			
Surr: 1,2-Dichloroethane-d4	9.97		10		99.7	70	130			
Surr: Toluene-d8	10		10		100	70	130			
Surr: 4-Bromofluorobenzene	9.75		10		98	70	130			

Alpha Analytical, Inc.

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Date: 22-Aug-09

QC Summary Report

Work Order: 09081341

Sample Matrix Spike Type **MS** Test Code: _____

File ID: **09081412.D** Batch ID: **MS15W0814M** Analysis Date: **08/14/2009 16:02**

Sample ID: **09080602-02AMS** Units : **µg/L** Run ID: **MSD_15_090814A** Prep Date: **08/14/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	43.8	2.5	50	0	88	13	167			
Chloromethane	43.5	10	50	0	87	28	145			
Vinyl chloride	44.2	2.5	50	0	88	43	134			
Chloroethane	46.9	2.5	50	0	94	39	154			
Bromomethane	49.9	10	50	0	99.8	19	176			
Trichlorofluoromethane	47.3	2.5	50	0	95	34	160			
1,1-Dichloroethene	44.4	2.5	50	0	89	60	130			
Dichloromethane	46.7	10	50	0	93	68	130			
trans-1,2-Dichloroethene	47.1	2.5	50	0	94	63	130			
Methyl tert-butyl ether (MTBE)	51.7	1.3	50	0	103	56	141			
1,1-Dichloroethane	46.8	2.5	50	0	94	61	130			
cis-1,2-Dichloroethene	49.7	2.5	50	0	99	70	130			
Bromochloromethane	52.1	2.5	50	0	104	70	130			
Chloroform	49.6	2.5	50	3.23	93	67	130			
2,2-Dichloropropane	33.6	2.5	50	0	67	30	152			
1,2-Dichloroethane	49	2.5	50	0	98	60	135			
1,1,1-Trichloroethane	47.6	2.5	50	0	95	59	137			
1,1-Dichloropropene	46.4	2.5	50	0	93	63	130			
Carbon tetrachloride	49	2.5	50	1.56	95	50	147			
Benzene	47.8	1.3	50	0	96	67	130			
Dibromomethane	51.8	2.5	50	0	104	69	133			
1,2-Dichloropropane	48.7	2.5	50	0	97	69	130			
Trichloroethene	46.1	2.5	50	0	92	69	130			
Bromodichloromethane	54.8	2.5	50	5.05	99	66	134			
cis-1,3-Dichloropropene	43.9	2.5	50	0	88	63	130			
trans-1,3-Dichloropropene	41.8	2.5	50	0	84	66	131			
1,1,2-Trichloroethane	48.4	2.5	50	0	97	68	130			
Toluene	43.5	1.3	50	0	87	66	130			
1,3-Dichloropropane	46.4	2.5	50	0	93	70	130			
Dibromochloromethane	52	2.5	50	7.81	88	70	130			
1,2-Dibromoethane (EDB)	99.8	10	100	0	99.8	70	130			
Tetrachloroethene	43.5	2.5	50	0	87	61	134			
1,1,1,2-Tetrachloroethane	47.7	2.5	50	0	95	70	130			
Chlorobenzene	43.3	2.5	50	0	87	70	130			
Ethylbenzene	42.4	1.3	50	0	85	68	130			
m,p-Xylene	43.9	1.3	50	0	88	64	130			
Bromoform	48.1	2.5	50	8.14	80	64	138			
Styrene	35.8	2.5	50	0	72	69	130			
o-Xylene	45.1	1.3	50	0	90	70	130			
1,1,2,2-Tetrachloroethane	45.5	2.5	50	0	91	65	131			
1,2,3-Trichloropropane	89.3	10	100	0	89	70	130			
Isopropylbenzene	40.2	2.5	50	0	80	64	138			
Bromobenzene	43.4	2.5	50	0	87	70	130			
n-Propylbenzene	40.1	2.5	50	0	80	66	132			
4-Chlorotoluene	41.6	2.5	50	0	83	70	130			
2-Chlorotoluene	41.5	2.5	50	0	83	70	130			
1,3,5-Trimethylbenzene	39.6	2.5	50	0	79	66	136			
tert-Butylbenzene	39.8	2.5	50	0	80	65	137			
1,2,4-Trimethylbenzene	38.7	2.5	50	0	77	65	137			
sec-Butylbenzene	39.2	2.5	50	0	78	66	134			
1,3-Dichlorobenzene	42.3	2.5	50	0	85	70	130			
1,4-Dichlorobenzene	42.1	2.5	50	0	84	70	130			
4-Isopropyltoluene	39.2	2.5	50	0	78	66	137			
1,2-Dichlorobenzene	42.3	2.5	50	0	85	70	130			
n-Butylbenzene	38.1	2.5	50	0	76	60	142			
1,2-Dibromo-3-chloropropane (DBCP)	228	15	250	0	91	67	130			
1,2,4-Trichlorobenzene	43.7	10	50	0	87	61	137			
Naphthalene	47.1	10	50	0	94	40	167			
Hexachlorobutadiene	77.5	10	100	0	78	61	130			
1,2,3-Trichlorobenzene	44.4	10	50	0	89	51	144			
Surr: 1,2-Dichloroethane-d4	50.5		50		101	70	130			
Surr: Toluene-d8	48.8		50		98	70	130			
Surr: 4-Bromofluorobenzene	47.7		50		95	70	130			

Alpha Analytical, Inc.

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

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Date: 22-Aug-09

QC Summary Report

Work Order: 09081341

Sample Matrix Spike Duplicate Type **MSD** Test Code: _____

File ID: **09081413.D** Batch ID: **MS15W0814M** Analysis Date: **08/14/2009 16:24**

Sample ID: **09080602-02AMSD** Units : **µg/L** Run ID: **MSD_15_090814A** Prep Date: **08/14/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	38.7	2.5	50	0	77	13	167	47.27	20.0(20)	R5
Chloromethane	38	10	50	0	76	28	145	53.57	34.0(20)	R5
Vinyl chloride	39.7	2.5	50	0	79	43	134	59.71	40.3(20)	R5
Chloroethane	41.9	2.5	50	0	84	39	154	53.43	24.3(20)	R5
Bromomethane	49.3	10	50	0	99	19	176	62.33	23.3(20)	R58
Trichlorofluoromethane	44.3	2.5	50	0	89	34	160	56.71	24.5(20)	R5
1,1-Dichloroethene	40.8	2.5	50	0	82	60	130	50.16	20.5(20)	R5
Dichloromethane	45	10	50	0	90	68	130	51.43	13.3(20)	
trans-1,2-Dichloroethene	43.8	2.5	50	0	88	63	130	52.41	18.0(20)	
Methyl tert-butyl ether (MTBE)	53.2	1.3	50	0	106	56	141	56.91	6.7(20)	
1,1-Dichloroethane	44.1	2.5	50	0	88	61	130	51.36	15.3(20)	
cis-1,2-Dichloroethene	47.4	2.5	50	0	95	70	130	53.1	11.4(20)	
Bromochloromethane	52.6	2.5	50	0	105	70	130	56.57	7.3(20)	
Chloroform	46.9	2.5	50	3.23	87	67	130	50.54	7.6(20)	
2,2-Dichloropropane	30.3	2.5	50	0	61	30	152	55.48	58.6(20)	R5
1,2-Dichloroethane	48.5	2.5	50	0	97	60	135	52.84	8.5(20)	
1,1,1-Trichloroethane	43.9	2.5	50	0	88	59	137	53.39	19.5(20)	
1,1-Dichloropropene	42	2.5	50	0	84	63	130	51.47	20.3(20)	R5
Carbon tetrachloride	45.4	2.5	50	1.56	88	50	147	53.88	17.1(20)	
Benzene	45	1.3	50	0	90	67	130	52.22	14.8(20)	
Dibromomethane	51.9	2.5	50	0	104	69	133	56.64	8.7(20)	
1,2-Dichloropropane	47.1	2.5	50	0	94	69	130	53.09	12.1(20)	
Trichloroethene	42.6	2.5	50	0	85	69	130	50.65	17.3(20)	
Bromodichloromethane	54	2.5	50	5.05	98	66	134	54.3	0.6(20)	
cis-1,3-Dichloropropene	43.8	2.5	50	0	88	63	130	52.98	18.9(20)	
trans-1,3-Dichloropropene	41.6	2.5	50	0	83	66	131	49.69	17.6(20)	
1,1,2-Trichloroethane	49.5	2.5	50	0	99	68	130	53.47	7.8(20)	
Toluene	40.9	1.3	50	0	82	66	130	47.89	15.8(20)	
1,3-Dichloropropane	47.3	2.5	50	0	95	70	130	50.56	6.6(20)	
Dibromochloromethane	53.4	2.5	50	7.81	91	70	130	48.75	9.1(20)	
1,2-Dibromoethane (EDB)	103	10	100	0	103	70	130	109.6	6.0(20)	
Tetrachloroethene	40.4	2.5	50	0	81	61	134	49.64	20.6(20)	R5
1,1,1,2-Tetrachloroethane	47	2.5	50	0	94	70	130	52.53	11.1(20)	
Chlorobenzene	42	2.5	50	0	84	70	130	47.94	13.1(20)	
Ethylbenzene	40.1	1.3	50	0	80	68	130	47.06	15.9(20)	
m,p-Xylene	40.7	1.3	50	0	81	64	130	48.51	17.6(20)	
Bromoform	51.6	2.5	50	8.14	87	64	138	46.28	10.9(20)	
Styrene	34.6	2.5	50	0	69	69	130	40.13	14.9(20)	
o-Xylene	43.3	1.3	50	0	87	70	130	49.88	14.1(20)	
1,1,2,2-Tetrachloroethane	47.1	2.5	50	0	94	65	131	50.22	6.4(20)	
1,2,3-Trichloropropane	92	10	100	0	92	70	130	97.35	5.6(20)	
Isopropylbenzene	37.8	2.5	50	0	76	64	138	45.11	17.6(20)	
Bromobenzene	42.9	2.5	50	0	86	70	130	48.18	11.6(20)	
n-Propylbenzene	37.9	2.5	50	0	76	66	132	45.81	18.9(20)	
4-Chlorotoluene	39.5	2.5	50	0	79	70	130	46.73	16.7(20)	
2-Chlorotoluene	39.6	2.5	50	0	79	70	130	45.95	14.9(20)	
1,3,5-Trimethylbenzene	37.4	2.5	50	0	75	66	136	44.58	17.6(20)	
tert-Butylbenzene	37.2	2.5	50	0	74	65	137	44.26	17.3(20)	
1,2,4-Trimethylbenzene	36.8	2.5	50	0	74	65	137	43.57	16.7(20)	
sec-Butylbenzene	37	2.5	50	0	74	66	134	44.47	18.3(20)	
1,3-Dichlorobenzene	41.2	2.5	50	0	82	70	130	48.12	15.6(20)	
1,4-Dichlorobenzene	40.8	2.5	50	0	82	70	130	47.37	14.8(20)	
4-Isopropyltoluene	36.6	2.5	50	0	73	66	137	45.02	20.7(20)	R5
1,2-Dichlorobenzene	41.8	2.5	50	0	84	70	130	46.84	11.4(20)	
n-Butylbenzene	34.7	2.5	50	0	69	60	142	44.28	24.2(20)	R5
1,2-Dibromo-3-chloropropane (DBCP)	239	15	250	0	96	67	130	251.5	5.1(20)	
1,2,4-Trichlorobenzene	44.5	10	50	0	89	61	137	49.48	10.7(20)	
Naphthalene	49.1	10	50	0	98	40	167	51.4	4.5(20)	
Hexachlorobutadiene	76	10	100	0	76	61	130	90.8	17.8(20)	
1,2,3-Trichlorobenzene	47.2	10	50	0	94	51	144	49.07	3.8(20)	
Surr: 1,2-Dichloroethane-d4	51		50		102	70	130			
Surr: Toluene-d8	49		50		98	70	130			
Surr: 4-Bromofluorobenzene	47.6		50		95	70	130			

Alpha Analytical, Inc.

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Date: *22-Aug-09*

QC Summary Report

Work Order: 09081341

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.

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

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

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

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 : BMIS09081341

Report Due By : 5:00 PM On : 27-Aug-09

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

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

EDD Required : **Yes**

Sampled by : Client

PO : 218013

Client's COC # : 25741/25742 Job : G005862/JPL Groundwater Monitoring

Cooler Temp	Samples Received	Date Printed
4 °C	13-Aug-09	**13-Aug-09**

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

Alpha Sample ID	Client Sample ID	Matrix	Collection Date	No. of Bottles Alpha	Sub	TAT	Requested Tests 314_W	METALS_DW	VOC_TIC_W	VOC_W					Sample Remarks
BMI09081341-01A	MW-10	AQ	08/07/09 07:27	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI09081341-02A	MW-15	AQ	08/07/09 08:33	1	0	10		Cr							
BMI09081341-03A	TB-14-8/7/09	AQ	08/07/09 00:00	1	0	10			VOC by 524 Criteria	VOC by 524 Criteria					Reno Trip Blank 6/22/09
BMI09081341-04A	SB-1-3Q09	AQ	08/07/09 09:12	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI09081341-05A	MW-5	AQ	08/12/09 07:32	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI09081341-06A	TB-15 8/12/09	AQ	08/12/09 00:00	1	0	10			VOC by 524 Criteria	VOC by 524 Criteria					Reno Trip Blank 6/22/09

Comments: No security seals. Frozen ice. Temp Blank #7771 received @ 4°C. Perchlorate RL of 1.0 ug/L. 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:	Latricia Edrosa	Latricia Edrosa	Alpha Analytical, Inc.	8/13/09 12:50

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 ___

25741

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 #

Analyses Required: VOC (5242) | TOTAL Cr (200.8) | ClO4 - (314.0)

Required QC Level? I II (III) IV

EDD / EDF? YES ___ NO ___

Global ID # _____

Time Sampled	Date Sampled	Matrix* See Key Below	Sampled by / Lab ID Number (Office Use Only)	Sample Description	TAT	Field Filtered	Total and type of containers ** See below	VOC (5242)	TOTAL Cr (200.8)	ClO4 - (314.0)	REMARKS
727	8/7/09	AQ	BM1090813 41-01	MW-10	NORM		VP/5	X	X	X	
833	"	"	-02	MW-15	"		P/1		X		
—	"	"	-03	TB-14-8/7/09	"		V/1	X			TRIP BLANK
912	"	"	-04	SB-1-3009	"		VP/5	X	X	X	SOURCE BLANK

ADDITIONAL INSTRUCTIONS:

Signature	Print Name	Company	Date	Time
Relinquished by	MARCO MENDOZA	INSIGHT EEC	8/7/09	1200
Received by Patricia Edrosa	Patricia Edrosa	Alpha	8/13/09	12:50
Relinquished by				
Received by				
Relinquished by				
Received by				

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

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

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

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

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

25742

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 / Lab ID Number (Office Use Only)	Sample Description	TAT	Field Filtered	Total and type of containers ** See below	Analyses Required: 1/2L (524.2)	TTHM (in (200.8)	CLO4 - (314.0)	REMARKS
732	8/12/09	AQ	Bm1090813 41-05	MW-5	NORM		VP/5	X	X	X	
				MW-6				X	X	X	
			-06	TB-15-8/12/09	NORM		V/1	X			TRIP BLANK

ADDITIONAL INSTRUCTIONS:

Signature	Print Name	Company	Date	Time
Relinquished by	MARCO MENDOZA	INSIGHT EEC	8/12/09	1200
Received by Patricia Edrosa	Patricia Edrosa	Alpha	8/13/09	12:50
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.

2655 Park Center Drive, Suite A Simi Valley, California 93065 (805) 526-7161 (805) 526-7270 fax

Columbia Analytical Services INC.
An Employee - Owned Company

CAS SR #P0902483

Table of Contents

2655 Park Center Drive, Suite A Simi Valley, California 93065 (805) 526-7161 (805) 526-7270 fax

Columbia Analytical Services INC.
An Employee - Owned Company

LABORATORY REPORT

July 27, 2009

David Conner
Battelle
3990 Old Town Ave., Suite C-205
San Diego, CA 92110

RE: JPL GW Mon 3Q09 / G486090

Dear David:

Enclosed are the results of the samples submitted to our laboratory on July 22, 2009. For your reference, these analyses have been assigned our service request number P0902483.

All analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.caslab.com. Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein. Your report contains 23 pages.

Columbia Analytical Services, Inc. is certified by the California Department of Health Services, NELAP Laboratory Certificate No. 02115CA; Arizona Department of Health Services, Certificate No. AZ0694; Florida Department of Health, NELAP Certification E871020; New Jersey Department of Environmental Protection, NELAP Laboratory Certification ID #CA009; New York State Department of Health, NELAP NY Lab ID No: 11221; Oregon Environmental Laboratory Accreditation Program, NELAP ID: CA20007; The American Industrial Hygiene Association, Laboratory #101661; Department of the Navy (NFESC); Pennsylvania Registration No. 68-03307; TX Commission of Environmental Quality, NELAP ID T104704413-08-TX. Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact me for information corresponding to a particular certification.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

Columbia Analytical Services, Inc.

Sue Anderson
Project Manager

2655 Park Center Drive, Suite A Simi Valley, California 93065 (805) 526-7161 (805) 526-7270 fax

Columbia Analytical Services INC.
An Employee - Owned Company

Client: Battelle
Project: JPL GW Mon 3Q09 / G486090

CAS Project No: P0902483

CASE NARRATIVE

The samples were received intact under chain of custody on July 22, 2009 and were stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the samples at the time of sample receipt.

Hexavalent Chromium by EPA Method 7196A

No anomalies were encountered during this analysis.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for utilization of less than the complete report.

Client: Battelle
Project: JPL GW Mon 3Q09/G486090

Service Request: P0902483

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
P0902483-001	MW-14-3	7/22/09	08:50
P0902483-002	MW-14-2	7/22/09	09:20
P0902483-003	MW-14-1	7/22/09	10:15
P0902483-004	DUPE-2-3Q09	7/22/09	00:00
P0902483-005	EB-2-7/22/09	7/22/09	09:40

3

Columbia Analytical Services, Inc.

Acronyms

CA LUFT	California DHS LUFT Method
ASTM	American Society for Testing and Materials
BTEX	Benzene/Toluene/Ethylbenzene/Xylenes
CAS Number	Chemical Abstract Service Registry Number
CFC	Chlorofluorocarbon
CRDL	Contract Required Detection Limit
DLCS	Duplicate Laboratory Control Sample
DMS	Duplicate Matrix Spike
DOH or DHS	Department of Health Services
EPA	U.S. Environmental Protection Agency
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
IC	Ion Chromatography
ICB	Initial Calibration Blank
ICV	Initial Calibration Verification
LCS	Laboratory Control Sample
LUFT	Leaking Underground Fuel Tank
M	Modified Method
MDL	Method Detection Limit
MRL	Method Reporting Limit
MS	Matrix Spike
MTBE	Methyl *tert*-Butyl Ether
NA	Not Applicable
NC	Not Calculated
ND	None Detected at or above the Method Reporting/Detection Limit (MRL/MDL)
NTU	Nephelometric Turbidity Units
ppb	Parts Per Billion
ppm	Parts Per Million
PQL	Practical Quantitation Limit
QA/QC	Quality Assurance/Quality Control
RCRA	Resource Conservation and Recovery Act
RPD	Relative Percent Difference
SIM	Selected Ion Monitoring
SM	*Standard Methods for the Examination of Water and Wastewater*, 19th Ed., 1995.
SW	*Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, SW-846, Third Edition, 1986 and as amended by Updates I, II, IIA, and IIB.
TDS	Total Dissolved Solids
TPH	Total Petroleum Hydrocarbons
TSS	Total Suspended Solids
TTLC	Total Threshold Limit Concentration
VOA	Volatile Organic Analyte(s)
VOC	Volatile Organic Compound(s)

Qualifiers

U	The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
J	The result is an estimated concentration that is less than the MRL (PQL), but greater than or equal to the MDL.
B	Analyte detected in the method blank above MRL (PQL).
E	Estimated; result based on response which exceeded the instrument calibration range.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
D	The reported result is from a dilution.
X	See case narrative.

Water & Soil - Chain of Custody Record & Analytical Service Request

Page 1 of 1

Columbia Analytical Services INC.
An Employee - Owned Company

2655 Park Center Drive, Suite A
Simi Valley, California 93065
Phone (805) 526-7161
Fax (805) 526-7270

Requested Turnaround Time in Business Days (Surcharges) please circle
1 Day (100%) 2 Day (75%) 3 Day (50%) 4 Day (35%) 5 Day (25%) 10 Day - Standard

CAS Project No. 0909985

CAS Contact:

Company Name & Address (Reporting Information)	Project Name
BATTELLE 3990 OLD TOWN AVE, C-205 SAN DIEGO, CA 92110	JPL GW MON 3Q09 Project Number G486090
Project Manager DAVID CONNER	P.O. # / Billing Information 214319 / BATTELLE ATTN: GERALD TOMPKINS 505 KING AVE COLUMBUS, OH 43201
Phone (619) 726-7311	Fax
Email Address for Result Reporting	Sampler (Print & Sign)

Analysis Method and/or Analytes

Preservative Code

Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Matrix	Number of Containers	Volatile Organics GC/MS 624 ☐ 8260B ☐ Oxygenates ☐ TPH Gas ☐	TPH Gas 8015B ☐ BTEX 8021B ☐ MTBE 8021B ☐	TPH Diesel 8015B ☐ (Subcontracted)	TPH Diesel Low Level 8015B ☐ (Subcontracted)	TPH FC ☐ 8015M (Subcontracted)	Semi-Volatile Organics GC/MS 625 ☐ 8270C ☐ (Subcontracted)	0 Cr VI (7196)	Remarks
MW-14-3		7/22/09	850	W	1							X	
MW-14-2		"	920	"	"							X	
MW-14-1		"	1015	"	"							X	
DUPE-2-3Q09		"	—	"	"							X	DUPLICATE
EB-2-7/22/09		"	940	"	"							X	EQUIP. BLANK

Preservative Key

0	None
1	HCL
2	HNO3
3	H2SO4
4	NaOH
5	Zn Acetate
6	Asc Acid
7	Other

Report Tier Levels - please select

Tier I - (Results/Default if not specified) ____
Tier II - (Results + QC) ____
Tier III - (Data Validation Package) 10% Surcharge ____
Tier V - (client specified) ____

MRL required Yes / No
MDL / PQL / J required Yes / No
EDD required Yes / No
Type: ____

Project Requirements (MRLs, QAPP)

Relinquished by: (Signature)		Date: 7/22/09	Time: 1600	Received by: (Signature)		Date: 7/22/09	Time: 1600
Relinquished by: (Signature)		Date: 7/23/09	Time: 1140	Received by: (Signature)		Date: 7/23/09	Time: 1140
Relinquished by: (Signature)		Date:	Time:	Received by: (Signature)		Date:	Time:

Cooler / Blank / Ice / No Ice

Temperature ____ °C

Columbia Analytical Services, Inc.
Chain of Custody Report

Client: Battelle
Project: JPL GW Mon 3Q09/G486090

Service Request: P0902483

Bottle ID	Tests	Date	Time	Sample Location / User	Disposed On
P0902483-001.01					
	7196A				
		7/22/09	1148	SMO / SSTAPLES	
		7/22/09	1149	P-37 / SSTAPLES	
		7/22/09	1225	In Lab / SANDERSON	
		7/22/09	1440	P-37 / SANDERSON	
P0902483-002.01					
	7196A				
		7/22/09	1148	SMO / SSTAPLES	
		7/22/09	1149	P-37 / SSTAPLES	
		7/22/09	1225	In Lab / SANDERSON	
		7/22/09	1440	P-37 / SANDERSON	
P0902483-003.01					
	7196A				
		7/22/09	1148	SMO / SSTAPLES	
		7/22/09	1149	P-37 / SSTAPLES	
		7/22/09	1225	In Lab / SANDERSON	
		7/22/09	1440	P-37 / SANDERSON	
P0902483-004.01					
	7196A				
		7/22/09	1148	SMO / SSTAPLES	
		7/22/09	1149	P-37 / SSTAPLES	
		7/22/09	1225	In Lab / SANDERSON	
		7/22/09	1440	P-37 / SANDERSON	
P0902483-005.01					
	7196A				
		7/22/09	1148	SMO / SSTAPLES	
		7/22/09	1149	P-37 / SSTAPLES	
		7/22/09	1225	In Lab / SANDERSON	
		7/22/09	1440	P-37 / SANDERSON	

Columbia Analytical Services, Inc.
Sample Acceptance Check Form

Client: Battelle Work order: P0902483

Project: JPL GW Mon 3Q09 / G486090

Sample(s) received on: 07/22/09 Date opened: 07/22/09 by: SSTAPLES

Note: This form is used for all samples received by CAS. The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity. Thermal preservation and pH will only be evaluated either at the request of the client and/or as required by the method/SOP.

		Yes	No	N/A
1	Were **sample containers** properly marked with client sample ID?	☒	☐	☐
2	Container(s) **supplied by CAS**?	☒	☐	☐
3	Did **sample containers** arrive in good condition?	☒	☐	☐
4	Was a **chain-of-custody** provided?	☒	☐	☐
5	Was the **chain-of-custody** properly completed?	☒	☐	☐
6	Did **sample container labels** and/or tags agree with custody papers?	☒	☐	☐
7	Was **sample volume** received adequate for analysis?	☒	☐	☐
8	Are samples within specified holding times?	☒	☐	☐
9	Was proper **temperature** (thermal preservation) of cooler at receipt adhered to?	☒	☐	☐
	Cooler Temperature _____ °C Blank Temperature 3 °C			
10	Was a **trip blank** received?	☐	☐	☒
	Trip blank supplied by CAS: _____			
11	Were **custody seals** on outside of cooler/Box?	☐	☒	☐
	Location of seal(s)? _____ Sealing Lid?	☐	☐	☒
	Were signature and date included?	☐	☐	☒
	Were seals intact?	☐	☐	☒
	Were custody seals on outside of sample container?	☐	☒	☐
	Location of seal(s)? _____ Sealing Lid?	☐	☐	☒
	Were signature and date included?	☐	☐	☒
	Were seals intact?	☐	☐	☒
12	Do containers have appropriate **preservation**, according to method/SOP or Client specified information?	☒	☐	☐
	Is there a client indication that the submitted samples are **pH** preserved?	☐	☐	☒
	Were **VOA vials** checked for presence/absence of air bubbles?	☐	☐	☒
	Does the client/method/SOP require that the analyst check the sample pH and if necessary alter it?	☐	☐	☒
13	**Tubes:** Are the tubes capped and intact?	☐	☐	☒
	Do they contain moisture?	☐	☐	☒
14	**Badges:** Are the badges properly capped and intact?	☐	☐	☒
	Are dual bed badges separated and individually capped and intact?	☐	☐	☒

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P0902483-001.01	125mL Plastic NP					
P0902483-002.01	125mL Plastic NP					
P0902483-003.01	125mL Plastic NP					
P0902483-004.01	125mL Plastic NP					
P0902483-005.01	125mL Plastic NP					

Explain any discrepancies: (include lab sample ID numbers): _____

*Required pH: Phenols/COD/NH3/TOC/TOX/NO3+NO2/TKN/T.PHOS, H2SO4 (pH<2); Metals, HNO3 (pH<2); CN (NaOH or NaOH/Asc Acid) (pH>12); Diss. Sulfide, NaOH (pH>12); T. Sulfide, NaOH/ZnAc (pH>12); RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH 5-8); Sulfur (pH>4)

DIVIDER SHEET

ANALYTICAL DATA FOR

Hexavalent Chromium

ANALYSIS

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : Battelle
Project Name : JPL GW Mon 3Q09
Project Number : G486090
Sample Matrix : WATER

Service Request : P0902483
Date Collected : 07/22/09
Date Received : 07/22/09

Chromium, Hexavalent

Prep Method : None
Analysis Method : 7196A
Test Notes :

Units : mg/L (ppm)
Basis : NA

Sample Name	Lab Code	PQL	MDL	Dilution Factor	Date Extracted	Date/Time Analyzed	Result	Result Notes
MW-14-3	P0902483-001	0.010	0.003	1	NA	07/22/09 13:40	ND	
MW-14-2	P0902483-002	0.010	0.003	1	NA	07/22/09 13:40	ND	
MW-14-1	P0902483-003	0.010	0.003	1	NA	07/22/09 13:40	ND	
DUPE-2-3Q09	P0902483-004	0.010	0.003	1	NA	07/22/09 13:40	ND	
EB-2-7/22/09	P0902483-005	0.010	0.003	1	NA	07/22/09 13:40	ND	
Method Blank	P0902483-MB	0.010	0.003	1	NA	07/22/09 13:40	ND	

Approved By Karen Ryan Date : 7/23/09

Report By:SAnderson

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Battelle
Project: JPL GW Mon 3Q09 / G486090

Service Request: P0902483
Date Analyzed: 07/22/09

Title: Initial and Continuing Calibration Blank (ICB and CCB) Summary
Analyte: Chromium, Hexavalent
Method: 7196A
Units: mg/L (ppm)

Sample Name	PQL	MDL	Result
ICB	0.010	0.003	ND
CCB1	0.010	0.003	ND

Approved By: Karen Rya Date: 7/23/09

ICCBMDL/120594

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Battelle
Project: JPL GW Mon 3Q09 / G486090

Service Request: P0902483
Date Analyzed: 07/22/09

Title: Initial and Continuing Calibration Verification (ICV and CCV) Summary
Analyte: Chromium, Hexavalent
Method: 7196A
Units: mg/L (ppm)

Sample Name	True Value	Result	Percent Recovery	Acceptance Criteria
ICV	0.0579	0.0560	97	90-110
CCV1	0.0579	0.0550	95	90-110

Approved By: Karen Ryan Date: 7/23/09

CCV1A/120594

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client :	Battelle	**Service Request :**	P0902483
Project Name :	JPL GW Mon 3Q09	**Date Collected :**	NA
Project Number :	G486090	**Date Received :**	NA
Sample Matrix :	WATER	**Date Extracted :**	NA
		Date Analyzed :	07/22/09

Laboratory Control Sample Summary
Inorganic Parameters

Sample Name :	Laboratory Control Sample	Units :	mg/L (ppm)
Lab Code :	P0902483-LCS	Basis :	NA
Test Notes :			

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Chromium, Hexavalent	None	7196A	0.0400	0.0395	99	86-114	

Approved By Karen Ryan Date : 7/23/09

Report By:SAnderson