

255 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#: <u>G005862/JPL Groundwater Monitoring</u>

Alpha Analytical Number: BMI09073103-02A Client I.D. Number: MW-24-3 Attn:David ConnerPhone:(818) 393-2808Fax:(614) 458-6641

Sampled: 07/30/09 Received: 07/31/09

Analyzed: 08/05/09

Volatile Organics by GC/MS

	Compound	Concentration	Reporting	Limit		Compound	Concentration	Reporting L	imit
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1.1.2.2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	μg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	μg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	μg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	μg/L	56	4-isopropyitoluene	ND	0.50	μg/L
22	Benzene	ND	0.50	µg/L	57	1.2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1.2-Dibromo-3-chloropropane (DBC)) ND	2.5	µg/L
25	Trichloroethene	ND	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

Kandy Dantner

Walter Arihm

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.



Report Date Page 1 of 1



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

ANA	LYTICAL REPORT
Battelle Memorial Institute	Attn: David Conner
3990 Old Town Ave	Phone: (818) 393-2808
San Diego, CA 92110	Fax: (614) 458-6641
Job#: G005862/JPL Groundwater Monitoring	
Alpha Analytical Number: BMI09073103-03A	Sampled: 07/30/09
Client I.D. Number: MW-24-2	Received: 07/31/09
	Analyzed: 08/05/09

Volatile Organics by GC/MS

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

Kandy Sandmen

Walter Aridmon

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.

8/13/09

Report Date



255 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

Alpha Analytical Number: BMI09073103-04A Client I.D. Number: MW-24-1 Attn:David ConnerPhone:(818) 393-2808Fax:(614) 458-6641

Sampled: 07/30/09 Received: 07/31/09

Analyzed: 08/05/09

Volatile Organics by GC/MS

	Compound	Concentration	Reporting	Limit		Compound	Concentration	Reporting L	imit
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1.1.1.2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m.p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND .	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2 Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	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 (DBC	P) 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

Kandy Daulmer

Walter Ainhow

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.



Report Date Page 1 of 1



255 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 G005862/JPL Groundwater Monitoring Job#:

Alpha Analytical Number: BMI09073103-05A Client I.D. Number: EB-8-7/30/09

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

Sampled: 07/30/09 Received: 07/31/09

Analyzed: 08/05/09

Volatile Organics by GC/MS

	Compound	Concentration	Reporting	Limit		Compound	Concentration	Reporting L	imit
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1.1.1.2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	μg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xvlene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCI	P) ND	2.5	µg/L
25	Trichloroethene	ND	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

Kanda Santner

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.

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

8/13/09

Report Date



255 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

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

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

Sampled: 07/30/09 Received: 07/31/09

Analyzed: 08/05/09

Volatile Organics by GC/MS

	Compound	Concentration	Reporting	Limit		Compound	Concentration	Reporting L	imit
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xvlene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12		ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14		ND	0.50	µg/L	49	2-Chiorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	.,= =	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	~ ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCI	P) ND	2.5	µg/L
25	Trichloroethene	ND	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

Rogen Scholl

Kandy Sandner

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.

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

8/13/09





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

8/13/09 Report Date



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

Date: 13-Aug-09	(QC Si	ummar	y Repor	t				Work Ord 0907310	-
Method Blank File ID: 17 Sample ID: MB-22448 Analyte	Units : mg/ L Result	Type M	Ba Run ID: IC	est Code: EF atch ID: 2244 _2_090731 <i>A</i> SpkRefVal	18A		Analy Prep I	Date:	07/31/2009 12:35 07/31/2009 Val %RPD(Limit)	Qual
Nitrite (NO2) - N Nitrate (NO3) - N Phosphate, ortho - P	ND ND ND	0.25 0.25 0.25								
Laboratory Fortified Blank		Type L	FB Te	est Code: El	PA Me	thod 300.0	/ 9056			
File ID: 18 Sample ID: LFB-22448 Analyte	Units : mg/L Result	PQL	Run ID: IC	atch ID: 224 4 _ 2_090731 # SpkRefVal	•	CLCL(ME)	Prep I	Date:	07/31/2009 12:53 07/31/2009 Val %RPD(Limit)	Qual
Nitrite (NO2) - N Nitrate (NO3) - N Phosphate, ortho - P	1.21 1.26 1.98	0.25 0.25 0.25	1.25 1.25	•	97 101 158	90 90 90	110 110 110			L51
Sample Matrix Spike File ID: 30		Type L		est Code: Ef		thod 300.0		sis Date:	07/31/2009 16:36	
Sample ID: 09073102-04ALFM Analyte	Units : mg/L Result			_2_090731			Prep (07/31/2009 Val %RPD(Limit)	Qual
Nitrite (NO2) - N Nitrate (NO3) - N Phosphate, ortho - P	1.28 2.27 1.56	PQL 0.25 0.25 0.25	1.25 1.25	0 0.9932 0	103 102 125	80 80 80 80	120 120 120 120			M1
Sample Matrix Spike Duplicate		Type L	FMD Te	est Code: El	PA Me	thod 300.0	/ 9056			
File ID: 31				atch ID: 2244			,		07/31/2009 16:54	
Sample ID: 09073102-04ALFMD Analyte	Units : mg/L Result	PQL		_2_0907314 SpkRefVal		CLCL(ME)	Prep UCL(ME)		07/31/2009 Val %RPD(Limit)	Qual
Nitrite (NO2) - N Nitrate (NO3) - N Phosphate, ortho - P	1.29 2.21 1.56	0.25 0.25 0.25	1.25 1.25	0 0.9932 0	103 97 125	80 80 80	120 120 120	1.28 2.26 1.56	2 0.5(10) 9 2.8(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.



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

Date: 13-Aug-09		Ç	QC S	ummar	y Repor	t				Work Ord 09073103	
Method Blank File ID: 17	ζ.		Туре 🛚		est Code: El atch ID: 224		hod 300.0		vsis Date:	07/31/2009 12:35	
Sample ID:	MB-22448	Units : mg/L			_2_0907314			•	Date:	07/31/200 9	
Analyte		Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRef	Val %RPD(Limit)	Qua
Sulfate (SO4)	_	ND	0.5	5							
Laboratory F	ortified Blank		Type L	.FB T	est Code: El	PA Met	thod 300.0				
File ID: 18				В	atch ID: 224	48B		Analy	sis Date:	07/31/2009 12:53	
Sample ID: I	LFB-22448	Units : mg/L			_2_0907314				Date:	07/31/2009	
Analyte		Result	PQL	SpkVal	SpkRefVal	%REC	CLCL(ME)	UCL(ME)	RPDRef	Val %RPD(Limit)	Qua
Sulfate (SO4)		10.1	0.5	5 10		101	9 0	110			
Sample Matri	x Spike		Type L	FM T	est Code: El	PA Met	thod 300.0	/ 9056			
File ID: 30				В	atch ID: 224	48B		Analy	sis Date:	07/31/2009 16:36	
Sample ID:	09073102-04ALFM	Units : mg/L		Run ID: IC	_2_090731	A		Prep	Date:	07/31/2009	
Analyte		Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRef	Val %RPD(Limit)	Qua
Sulfate (SO4)		64.3	0.5	5 10	55.25	90	80	120			
Sample Matri	x Spike Duplicate		Type L	FMD T	est Code: El	PA Met	thod 300.0	/ 9056			
File ID: 31				В	atch ID: 224	48B		Analy	sis Date:	07/31/2009 16:54	
Sample ID: (09073102-04ALFMD	Units : mg/L		Run ID: IC	_2_090731	4		Prep	Date:	07/31/2009	
Analyte		Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRef	Val %RPD(Limit)	Qua
Sulfate (SO4)		65.1	0.8			98	80	120	64.2		

Comments:



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

Date: 13-Aug-09		Work Order: 0907 <u>3103</u>										
Method Blank File ID: 17	<u> </u>		Type N	IBLK	-	est Code: EF		thod 300.0		alysis Date:	07/31/2009 12:35	1
Sample ID: MB	-22448	Units : mg/L		Run ID	: IC_	_2_090731A	1		Pre	p Date:	07/31/2009	
Analyte		Result	PQL	Spk	Val	SpkRefVal	%REC	LCL(ME)	UCL(M	E) RPDRef	Val %RPD(Limit)	Qua
Chloride		ND	0.5	5								
Laboratory Fort	ified Blank		Type L	.FB	Те	est Code: EF	PA Met	thod 300.0	/ 9056			
File ID: 18					Ba	tch ID: 2244	18C		Ana	alysis Date:	07/31/2009 12:53	
Sample ID: LF	3-22448	Units : mg/L		Run ID	: IC_	_2_090731 <i>A</i>	۱		Pre	p Date:	07/31/2009	
Analyte		Result	PQL	Spk'	Val	SpkRefVal	%REC	LCL(ME)	UCL(M	E) RPDRef	Val %RPD(Limit)	Qua
Chloride		4.52	0.5	5	5		90	90	110			
Sample Matrix S	spike		Type L	.FM	Те	est Code: EF	PA Met	thod 300.0	/ 9056			
File ID: 30					Ba	tch ID: 2244	18C		Ana	alysis Date:	07/31/2009 16:36	
Sample ID: 090	73102-04ALFM	Units : mg/L		Run ID	: IC_	_2_090731A	•		Pre	p Date:	07/31/2009	
Analyte		Result	PQL	Spk	Val	SpkRefVal	%REC	LCL(ME)	UCL(M	E) RPDRef	Val %RPD(Limit)	Qua
Chloride		27.7	0.5	5	5	23.53	84	80	120			
Sample Matrix S	spike Duplicate		Type L	.FMD	Те	est Code: EF	PA Met	thod 300.0	/ 9056			
File ID: 31					Ba	tch ID: 2244	18C		Ana	alysis Date:	07/31/2009 16:54	
Sample ID: 090	73102-04ALFMD	Units : mg/L		Run ID	: IC_	_2_090731A			Pre	p Date:	07/31/2009	
Analyte		Result	PQL	Spk	Val	SpkRefVal	%REC	LCL(ME)	UCL(M	E) RPDRef	Val %RPD(Limit)	Qua
Chloride		28	0.5		5	23.53	89	80	120	27.7		

Comments:



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 Ord 09073103		
Method Blank File ID: 44			Туре	MB		est Code: E		hod 314.0		vsis Date:	08/07/2009 00:50	
Sample ID: MBL	_K-22493	Units : µg/L		R		_3_090807			Prep		08/06/2009	
Analyte		Result	PQL					LCL(ME)	UCL(ME)	RPDRef	val %RPD(Limit)	Qua
Perchlorate		ND		1			• •					
Laboratory Forti	ified Blank		Туре	LFE	ι Te	est Code: E	PA Met	hod 314.0				
File ID: 45					Ba	atch ID: 224	93		Analy	sis Date:	08/07/2009 01:08	
Sample ID: LFB	-22493	Units : µg/L		R	un ID: IC	_3_090807	A		Prep	Date:	08/06/2009	
Analyte		Result	PQL		SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRef	Val %RPD(Limit)	Qua
Perchlorate		26.1		2	25		105	85	115			
Sample Matrix S	pike		Туре	LFN	n Te	est Code: E	PA Met	hod 314.0				
File ID: 49					Ba	atch ID: 224	93		Analy	sis Date:	08/07/2009 02:22	
Sample ID: 0907	73103-03ALFM	Units : µg/L		R	un ID: IC	_3_090807	A		Prep	Date:	08/06/2009	
Analyte		Result	PQL		SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRef	Val %RPD(Limit)	Qua
Perchlorate		34.2		2	25	10.16	96	80	120			
Sample Matrix S	pike Duplicate		Туре	LFN	ID Te	est Code: E	PA Met	hod 314.0				
File ID: 50					Ba	atch ID: 224	93		Analy	sis Date:	08/07/2009 02:40	
Sample ID: 0907	73103-03ALFMD	Units : µg/L		R	un ID: IC	3_090807	A		Prep	Date:	08/06/2009	
Analyte		Result	PQL					LCL(ME)	UCL(ME)	RPDRef	√al %RPD(Limit)	Qua
Perchlorate		35.7		2	25	10.16		80	120	34.2		

Comments:



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: 09073103			
Method Blank File ID: 081209.B\115SMPL.D\ Sample ID: MB-22456	Type MBLK Test Code: EPA Method 200.8 Batch ID: 22456K Analysis Date: 08/12 Units : mg/L Run ID: ICP/MS_090812E Prep Date: 08/03	2/2009 22:48 5/2009			
Analyte	Result PQL SpkVal SpkRefVal %REC LCL(ME) UCL(ME) RPDRefVal %	RPD(Limit) Qual			
Chromium (Cr)	ND 0.005				
Laboratory Control Spike File ID: 081209.B\116_LCS.D\ Sample ID: LCS-22456 Analyte	Type LCS Test Code: EPA Method 200.8 Batch ID: 22456K Analysis Date: 08/12 Units : mg/L Run ID: ICP/MS_090812E Prep Date: 08/03 Result PQL SpkVal SpkRefVal %REC LCL(ME) UCL(ME) RPDRefVal %	/2009			
Chromium (Cr)	0.0512 0.005 0.05 102 80 120				
Sample Matrix Spike File ID: 081209.B\120SMPL.D\ Sample ID: 09073103-03AMS Analyte	Type MS Test Code: EPA Method 200.8 Batch ID: 22456K Analysis Date: 08/12 Units : mg/L Run ID: ICP/MS_090812E Prep Date: 08/03 Result PQL SpkVal SpkRefVal %REC LCL(ME) UCL(ME) RPDRefVal %	/2009			
Chromium (Cr)	0.051 0.005 0.05 0 102 80 120				
Sample Matrix Spike Duplicate File ID: 081209.B\121SMPL.D\	Type MSD Test Code: EPA Method 200.8 Batch ID: 22456K Analysis Date: 08/12				
Sample ID: 09073103-03AMSD Analyte	Units : mg/L Run ID: ICP/MS_090812E Prep Date: 08/03 Result PQL SpkVal SpkRefVal %REC LCL(ME) UCL(ME) RPDRefVal %	/2009 RPD(Limit) Qual			
Chromium (Cr)	0.0488 0.005 0.05 0 98 80 120 0.05098	4.4(20)			

Comments:



Date: 12-Aug-09		(Work Order: 09073103								
Method Bla			Туре М	IBLK	Test Code:						
File ID: 09073					Batch ID: MS15	W0804	N	-		08/05/2009 00:27	•
Sample ID:	MBLK MS15W0804N	Units : µg/L			MSD_15_09080			Prep D		08/05/2009	
Analyte		Result	PQL	SpkVa	al SpkRefVal %	6REC I	LCL(ME)	UCL(ME) I	RPDRef	/al %RPD(Limit)	Qua
Dichlorodifluo		ND	0.5	j j							
Chloromethar		ND	1								
Vinyl chloride		ND	0.5								
Chloroethane Bromomethar		ND ND	0.5 1								
Trichlorofluor		ND	0.5								
1,1-Dichloroel		ND	0.5								
Dichlorometha	ane	ND									
Freon-113		ND	0.5								
trans-1,2-Dich		ND	0.5								
1,1-Dichloroel	tyl ether (MTBE)	ND ND	0.5								
2-Butanone (N			0.8 10								
cis-1,2-Dichlo		ND	0.5								
Bromochloron		ND	0.5								
Chloroform		ND	0.5								
2,2-Dichlorop		ND	0.5								
1,2-Dichloroet		ND	0.5								
1,1,1-Trichloro 1,1-Dichlorop		ND	0.5								
Carbon tetrac	•	ND ND	0.5 0.5								
Benzene	allonde	ND	0.0								
Dibromometh	ane	ND	0.5								
1,2-Dichlorop	ropane	ND	0.5								
Trichloroether		ND	0.5								
Bromodichlor		ND	0.5								
	entanone (MIBK)	ND	2.5								
cis-1,3-Dichlo trans-1,3-Dich		ND ND	0.5 0.5								
1,1,2-Trichlor		ND	0.5								
Toluene		ND	0.5	-							
1,3-Dichlorop	ropane	ND	0.5								
Dibromochlor		ND	0.5	;							
1,2-Dibromoe		ND									
Tetrachloroet		ND	0.5								
1,1,1,2-Tetrac Chlorobenzen		ND ND	0.8								
Ethylbenzene		ND	0.8 0.8								
m,p-Xylene		ND	0.5								
Bromoform		ND	0.5								
Styrene		ND	0.5	5							
o-Xylene	-1.4 41.	ND	0.5								
1,1,2,2-Tetrac		ND	0.5								
1,2,3-Trichlore Isopropylbenz		ND ND	0.5								
Bromobenzer		ND	0.0								
n-Propylbenzo		ND	0.5								
4-Chlorotolue		ND	0.5	5							
2-Chlorotolue		ND	0.5	5							
1,3,5-Trimeth	-	ND	0.5								
tert-Butylbenz 1,2,4-Trimeth		ND ND	0.5 0.5								
sec-Butylbenz		ND	0.5								
1,3-Dichlorob		ND	0.5								
1,4-Dichlorob		ND	0.								
4-Isopropyltol		ND	0.								
1,2-Dichlorob		ND	0.								
n-Butylbenzer	ne 3-chloropropane (DBCP)	ND	0.								
1,2-Dibromo-		ND ND	2.								
Naphthalene				1 1							
Hexachlorobu	utadiene	ND									
1,2,3-Trichlor	obenzene	ND									
0 40 0 1	nloroethane-d4	8.77			0	00	70	400			
Surr: 1,2-Dicr Surr: Toluene		10.9			0	88 109	70	130 130			



Date: 12-Aug-09		(QC Su	mmary	y Report				Work Ord 0907310	
Surr: 4-Bromof	luorobenzene	9.66		10	<u> </u>	97	70	130		
Laboratory (Control Spike		Type LC	S Te	est Code:					
File ID: 090731	138.D			Ba	tch ID: MS15	W080	4N	Analysis Dat	e: 08/04/2009 22:57	
Sample ID:	LCS MS15W0804N	Units : µg/L	F	Run ID: MS	SD_15_090804	4C		Prep Date:	08/04/2009	
Analyte		Result	PQL				LCL(ME)	UCL(ME) RPDR	efVal %RPD(Limit)	Qua
Dichlorodifluoro	omethane	12.4	1	. 10		124	70	130	· · · · · ·	
Chloromethane	9	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 Trichlorofluoror		8.06	2 1	10		81	70 70	130		
1,1-Dichloroeth		10.6 10.5	1	10 10		106 105	70 70	130 130		
Dichloromethar		9.71	2	10		97	70	130		
trans-1,2-Dichle		10.9	1	10		109	70	130		
	yl ether (MTBE)	10.1	0.5	10	-	101	70	130		
1,1-Dichloroeth		10.4	1	10		104	70	130		
cis-1,2-Dichloro Bromochlorome		10.9	1	10		109	70	130		
Chloroform	elliane	10.5 10.4	1	10 10		105 104	70 70	130 130		
2,2-Dichloropro	opane	9.34	1	10		93	70	130		
1,2-Dichloroeth		9.47	1	10		95	70	130		
1,1,1-Trichloroe		10.5	1	10	1	105	70	130		
1,1-Dichloropro	•	10.8	1	10		108	70	130		
Carbon tetrachl Benzene	loride	10.2	1	10		102	70	130		
Dibromometha	ne	10.4 9.88	0.5 1	10 10		104 99	70 70	130 130		
1,2-Dichloropro		10.9	1	10		99 109	70	130		
Trichloroethene	e	11.1	1	10		111	70	130		
Bromodichloror		9.22	1	10		92	70	130		
cis-1,3-Dichloro		9.32	1	10		93	70	130		
trans-1,3-Dichlo 1,1,2-Trichloroe		8.48	1	10		85	70	130		
Toluene	eulane	10.2 10.3	1 0.5	10 10		102 103	70 70	130 130		
1,3-Dichloropro	pane	10.5	0.5	10		105	70	130		
Dibromochloror	methane	9.06	1	10		91	70	130		
1,2-Dibromoeth	, ,	19.7	2	20		98	70	130		
Tetrachloroethe		10.8	1	10		108	70	130		
1,1,1,2-Tetrach Chlorobenzene		10.3	1	10		103	70	130		
Ethylbenzene	;	10.2 10.7	1 0.5	10 10		102 107	70 70	130 130		
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-Tetrach		9.75	1	10		98	70	130		
1,2,3-Trichlorog Isopropylbenze		20.2 11.1	2 1	20 10		101 111	70 70	130 130		
Bromobenzene		10.1	1	10		101	70	130		
n-Propylbenzer	ne	11	1	10		110	70	130		
4-Chlorotoluene	-	10.7	1	10	1	107	70	130		
2-Chlorotoluene		10.6	1	10		106	70	130		
1,3,5-Trimethyll tert-Butylbenze		10.6	1	10		106	70	130		
1,2,4-Trimethyl		10.6 10.7	1 1	10 10		106 107	70 70	130 130		
sec-Butylbenze		10.8	1	10		108	70	130		
1,3-Dichlorober	nzene	10.5	1	10		105	70	130		
1,4-Dichlorober		10	1	10		100	70	130		
4-isopropyltoiue		10.8	1	10		108	70	130		
1,2-Dichlorober n-Butylbenzene		10.1	1	10		101	70	130		
	- chloropropane (DBCP)	11.7 4 6.5	1 3	10 50		117 93	70 70	130 130		
1,2,4-Trichlorot		9.37	2	50 10		93 94	70	130		
Naphthalene		8.8	2	10		88	70	130		
Hexachlorobuta		18.7	2	20	!	93	70	130		
1,2,3-Trichlorob		9.15	2	10		92	70	130		
Surr: 1,2-Dichlo Surr: Toluene-d		8.75		10		88	70 70	130		
		10.3		10	1	103	70	130 130		



Date: 12-Aug-09	(<u>2C Sur</u>	nmary	Report				Work Ord 09073103	
Sample Matrix Spike		Type MS	Test	t Code:					
File ID: 09073143.D			Bato	h ID: MS15	W080	4N	Analysis Date	: 08/05/2009 00:50	
Sample ID: 09073103-03AMS	Units : µg/L	Ru	in ID: MSC	_15_090804	4C		Prep Date:	08/05/2009	
Analyte	Result	PQL				LCL(ME)	UCL(ME) RPDRe	fVal %RPD(Limit)	Qu
Dichlorodifluoromethane	48.9	2.5	50		98	13	167		
Chloromethane	45.3	2.5	50 50		90 91	28	145		
Vinyl chloride	48.5	2.5	50	-	97	43	134		
Chloroethane	40.8	2.5	50		82	39	154		
Bromomethane	38.7	10	50		77	19	176		
Trichlorofluoromethane	49.9	2.5	50		99.8	34	160		
1,1-Dichloroethene Dichloromethane	46.8	2.5	50	-	94	60 60	130		
trans-1,2-Dichloroethene	45.5 49.9	10 2.5	50 50	-	91 99.8	68 63	130 130		
Methyl tert-butyl ether (MTBE)	49.5	1.3	50		99 99	56	141		
1,1-Dichloroethane	47.9	2.5	50		96	61	130		
cis-1,2-Dichloroethene	50.7	2.5	50	0 -	101	70	130		
Bromochloromethane	50.8	2.5	50		102	70	130		
Chloroform	47	2.5	50		94	67	130		
2,2-Dichloropropane	41.3	2.5	50	-	83	30	152		
1,2-Dichloroethane 1,1,1-Trichloroethane	44.7 47.7	2.5 2.5	50 50		89 95	60 59	135 137		
1,1-Dichloropropene	49.4	2.5	50		99 99	63	130		
Carbon tetrachloride	47.7	2.5	50		95	50	147		
Benzene	48.1	1.3	50	-	96	67	130		
Dibromomethane	48.1	2.5	50	0	96	69	133		
1,2-Dichloropropane	49.9	2.5	50		99.8	69	130		
Trichloroethene Bromediableremethene	49.4	2.5	50	-	99	69	130		
Bromodichloromethane cis-1,3-Dichloropropene	43.4 41.6	2.5	50		87	66 62	134 130		
trans-1,3-Dichloropropene	41.3	2.5 2.5	50 50	-	83 83	63 66	131		
1,1,2-Trichloroethane	48.7	2.5	50		97	68	130		
Toluene	47.4	1.3	50	-	95	66	130		
1,3-Dichloropropane	50.5	2.5	50		101	70	130		
Dibromochloromethane	44.2	2.5	50	0	88	70	130		
1,2-Dibromoethane (EDB)	96.9	10	100		97	70	130		
Tetrachloroethene 1,1,1,2-Tetrachloroethane	48.3	2.5	50		97	61	134		
Chlorobenzene	48.5 47.8	2.5 2.5	50 50	-	97 96	70 70	130 130		
Ethylbenzene	48.7	1.3	50	-	97	68	130		
m,p-Xylene	50.8	1.3	50		102	64	130		
Bromoform	40	2.5	50	0	80	64	138		
Styrene	34.7	2.5	50	0	69	69	130		
	51.3	1.3	50		103	70	130		
1,1,2,2-Tetrachloroethane 1,2,3-Trichloropropane	52.5	2.5	50		105	65	131		
Isopropylbenzene	100 50.3	10 2.5	100 50		100 101	70 64	130 138		
Bromobenzene	46.8	2.5	50 50		94	04 70	130		
n-Propylbenzene	49.4	2.5	50		99	66	132		
4-Chlorotoluene	49.9	2.5	50	-	99.8	70	130		
2-Chlorotoluene	49	2.5	50	0	98	70	130		
1,3,5-Trimethylbenzene	48.3	2.5	50		97	66	136		
tert-Butylbenzene	48	2.5	50		96	65	137		
1,2,4-Trimethylbenzene sec-Butylbenzene	49.1 49.5	2.5 2.5	50		98 99	65 66	137 134		
1,3-Dichlorobenzene	49.5 49.9	2.5 2.5	50 50		99 99.8	66 70	134		
1,4-Dichlorobenzene	47.1	2.5	50		94	70	130		
4-Isopropyitoluene	49.3	2.5	50		99	66	137		
1,2-Dichlorobenzene	48.3	2.5	50		97	70	130		
n-Butylbenzene	53	2.5	50		106	60	142		
1,2-Dibromo-3-chloropropane (DBCP)	237	15	250		95	67	130		
1,2,4-Trichlorobenzene Naphthalene	43.2	10	50		86	61	137		
Naphinalene Hexachlorobutadiene	40.9 86.9	10 10	50 100		82 87	40 61	167 130		
1,2,3-Trichlorobenzene	41.8	10	50		87 84	61 51	130		
Surr: 1,2-Dichloroethane-d4	43.8	.0	50		88	70	130		
Surr: Toluene-d8	51.4		50		103	70	130		
Surr: 4-Bromofluorobenzene	49.1		50		98	70	130		



Date: 12-Aug-09	(QC Sur	nmary	Report	t				Work Ord 0907310	
Sample Matrix Spike Duplicate		Type MS	D Te:	st Code:						
File ID: 09073144.D			Bat	ch ID: MS1	5W080)4N	Analy	sis Date: 08	/05/2009 01:12	
Sample ID: 09073103-03AMSD	Units : µg/L	R	un ID: MS	D_15_0908	04C		Prep I	Date: 08/	05/2009	
Analyte	Result	PQL				LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qua
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	Ő	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 Methyl tert-butyl ether (MTBE)	51.1 48.8	2.5 1.3	50 50	0 0	102 98	63 56	130 141	49.91 49.49	2.3(20) 1.5(20)	
1,1-Dichloroethane	48.8	2.5	50 50	0	90 95	61	130	45.45	0.5(20)	
cis-1,2-Dichloroethene	48.6	2.5	50	Ő	97	70	130	50.7	4.2(20)	
Bromochloromethane	51.5	2.5	50	õ	103	70	130	50.8	1.3(20)	
Chloroform	48.5	2.5	50	Ō	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 Dibromomethane	48.3	1.3	50	0	97	67 60	130	48.08	0.5(20)	
1,2-Dichloropropane	47.7 50.1	2.5 2.5	50 50	0	95 100	69 69	133 130	48.09 49.91	0.9(20) 0.4(20)	
Trichloroethene	48.8	2.5	50 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	ŏ	81	63	130	41.6	2.8(20)	
trans-1,3-Dichloropropene	40.8	2.5	50	Ō	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) Tetrachloroethene	94.6	10	100	0	95 98	70	130	96.85	2.3(20)	
1,1,1,2-Tetrachloroethane	48.8 48.2	2.5 2.5	50 50	0 0	98 96	61 70	134 130	48.32 48.5	1.1(20) 0.7(20)	
Chlorobenzene	47.3	2.5	50	0	95	70	130	47.78	1.0(20)	
Ethylbenzene	48.9	1.3	50	ŏ	98	68	130	48.71	0.3(20)	
m,p-Xylene	50.7	1.3	50	Ō	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 n-Propylbenzene	46.1	2.5	50	0	92	70	130	46.75	1.3(20)	
4-Chlorotoluene	51.4 50.2	2.5 2.5	50 50	0 0	103 100	66 70	132 130	49.39 49.91	4.1(20)	
2-Chlorotolüene	49.6	2.5	50 50	0	99	70	130	49.91	0.6(20) 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	ŏ	98	65	137	48.01	1.5(20)	
1,2,4-Trimethylbenzene	48.9	2.5	50	Ō	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 70	137	49.31	1.4(20)	
1,2-Dichlorobenzene n-Butylbenzene	47.8	2.5	50	0	96 100	70 60	130	48.25	0.9(20)	
1,2-Dibromo-3-chloropropane (DBCP)	54.7 238	2.5 15	50 250	0 0	109 95	60 67	142 130	53.04 236.5	3.1(20) 0.8(20)	
1,2,4-Trichlorobenzene	238 44.3	15	250 50	0	95 89	67 61	130	236.5 43.24	2.5(20)	
Naphthalene	41.9	10	50 50	0	84	40	167	40.88	2.3(20)	
Hexachlorobutadiene	91.1	10	100	ŏ	91	61	130	86.9	4.7(20)	
1,2,3-Trichlorobenzene	43.4	10	50	Ō	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			



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

QC Summary Report

Work Order:

09073103

Date: 12-Aug-09 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.

Matrix Type: AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) 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. Bottle Type: 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.

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

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). :

Comments:

-				. 1	rel: (77:	5) 355-10	TEL: (775) 355-1044 FAX: (775) 355-0406	406	č	Rep	ort Due	Bv : 5:	00 PM	On : 14	Report Due By : 5:00 PM On : 14-Aug-2009
Client:			Report Attention		말	Phone Number	ber EMail Address	ddress		•		e			Q
Battelle Memorial Institute	Institute		David Conner	ier,	(81	(818) 393-2808	08 x connerd@battelle.org	battelle.or	ue.						
Suite C-205	ve		Betsy Cutie		(61	(614) 424-4899	99 x cutice@batelle.org	telle.org			EDD Required : Yes	red : Yes			
San Diego, CA 92110	2110		Shane Walton	ac	(61	(614) 424-4117	17 x waltons@battelle.org	pattelle.org	94		Sampled	Sampled by : Client	nt		
PO: 218013											Cooler Temp	emp	Samples Received	eceived	Date Printed
Client's COC #: 25738	738	Job :	G005862/JPL Groundwater Monitoring	JL Grou	ndwater	Monitori	ÐL				2		31-Jul-2009	600	31-Jul-2009
QC Level: DS4	= DOD QC Required	: Final F	Rpt, MBLK, In	itCal/Co	onCal da	ita, LCS,	DOD QC Required : Final Rpt, MBLK, InitCal/ConCal data, LCS, MS/MSD With Surrogates	gates							
) =	:					Requested Tests	ed Tests					
Sample ID	Sample ID	Matr	Collection Matrix Date	NO. 0 Alpha	Alpha Sub	s TAT	300_0(A)_W 300_0(B)_W 300_0(C)_W	300_0(C)_W	314_W	METALS_0	METALS_D VOC_TIC_	VOC_W		Sample	Sample Remarks
BMI09073103-01A	MW-24-4	Ą	07/30/09 07:45	-	0	10				Ŷ					
BMI09073103-02A	MW-24-3	Ą	07/30/09 08:10	сл	0	10			Perchlorate	۵	VOC by 524 VOC by 524 Criteria Criteria	VOC by 524 Criteria			
BMI09073103-03A	MW-24-2	Ą	07/30/09 08:45	10	0	10			Perchlorate	٢	VOC by 524 VOC by 524 Criteria Criteria	VOC by 524 Criteria		MS/MSD	MS/MSD Level IV QC
BMI09073103-04A	MW-24-1	Ą	07/30/09 09:24	თ	0	10	NO2, NO3, NO2, NO3, NO2, NO3, PO4, SO4, CI PO4, SO4, CI	NO2, NO3, 904, SO4, CI	Perchlorate	Cr	VOC by 524 VOC by 524 Criteria Criteria	VOC by 524 Criteria			
BMI09073103-05A	EB-8-7/30/09	Ą	07/30/09 09:10	сл	0	10			Perchlorate	ß	VOC by 524 VOC by 524 Criteria Criteria	VOC by 524 Criteria			
BMI09073103-06A	TB-8-7/30/09	AQ	07/30/09 00:00	-	0	10					VOC by 524 VOC by 524 Criteria Criteria	VOC by 524 Criteria		Reno Trip	Reno Trip Blank 6/22/09

Billing Information :

CHAIN-OF-CUSTODY RECORD

255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778

Alpha Analytical, Inc.

Page: 1 of 1

WorkOrder : BMIS09073103

C A

Billing Information: Name <u>GEPACS TOMPLIAS PATTELLE</u> Address <u>505 KING AVE</u> City. State, Zip <u>CoLUMBUS</u> ON 4325		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? AZCA XVWAF IDOROTHERF Analyses Required	h State? 25738
، ب ای	P.O. # 218013 EMail Address	628 So a B # dol	20.2)	Required OC Level?
م ا∉¢ه	Phone # (619) 726-7311	Fax #		EDD / EDF? YESNO
Matrix* Sampled by See Key	Report Attention	Total and type of	01-	Global ID #
Sampled Sampled Below Lab ID Number (Use Only)	Sample Description	See below	C	/ REMARKS
14571/1 AQBMI09073103-01	MW-24-4	12	X	
ZO- 07	MW-24-3	X SAN	XX	
	Mw - 24-2		X	Molmon / LEVEL TO OC
40- 40-	MW-L4-		×××	
50 - CQ	EB-8-7/30/05		X	EQU'P. BLANK
<u>1</u>	TB-8-7/10/09			TAIP RIMIK
ADDITIONAL INSTRUCTIONS:				
Signature	Print Name	Co	Company	Date Time
Relinquished by	Marco Lyporo	a /NS/647	EEC 7	7/1s/25/300
Relinquished by	Elizabeth Eldcox		pha 7.	7.31.09 1247
Received by				
Relinquished by				
Received by				
*Key: AQ - Aqueous SO - Soil WA - Waste	te 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.



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 San Diego, CA 92110 (818) 393-2808

Suite C-205

CASE NARRATIVE

Project: G005862/JPL Groundwater Monitoring

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 An	alytes
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/Chainof-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.

Walter Hinihum Kandy Saulmer Roger Scholl

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.

Per le

Alpha Analytical, Inc.

255 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 ConnerPhone:(818) 393-2808Fax:(614) 458-6641Date Received : 08/04/09

Job#: G005862/JPL Groundwater Monitoring

		Р	erchlorate by Ion Chromatography			
			EPA Method 314.0			
		Parameter	Concentration	Reporting Limit	Date Sampled	Date Analyzed
Client ID : Lab ID :	MW-22-3 BMI09080404-01A	Perchlorate	2.54	1.00 μg/L	07/31/09	08/07/09
Client ID : Lab ID :	MW-22-2 BMI09080404-02A	Perchlorate	1.99	1.00 µg/L	07/31/09	08/07/09
Client ID : Lab ID :	MW-22-1 BMI09080404-03A	Perchlorate	2.40	1.00 µg/L	07/31/09	08/07/09
Client ID : Lab ID :	EB-9-7/31/09 BMI09080404-04A	Perchlorate	ND	1.00 µg/L	07/31/09	08/07/09
Client ID : Lab ID :	MW-12-5 BMI09080404-06A	Perchlorate	1.65	1.00 µg/L	08/03/09	08/07/09
Client ID : Lab ID :	MW-12-4 BMI09080404-07A	Perchlorate	2.71	1.00 μg/L	08/03/09	08/07/09
Client ID : Lab ID :	MW-12-3 BMI09080404-08A	Perchlorate	ND	1.00 µg/L	08/03/09	08/07/09
Client ID : Lab ID :	MW-12-2 BMI09080404-09A	Perchlorate	2.77	1.00 µg/L	08/03/09	08/07/09
Client ID : Lab ID :	MW-12-1 BMI09080404-10A	Perchlorate	1.35	1.00 µg/L	08/03/09	08/07/09
Client ID : Lab ID :	DUPE-7-3Q09 BM109080404-11A	Perchlorate	2.66	1.00 µg/L	08/03/09	08/07/09
Client ID : Lab ID :	EB-10-8/3/09 BMI09080404-12A	Perchlorate	ND	1.00 µg/L	08/03/09	08/07/09

ND = Not Detected

Roger Scholl

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



255 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 ConnerPhone:(818) 393-2808Fax:(614) 458-6641Date Received : 08/04/09

Job#: G005862/JPL Groundwater Monitoring

			Metals by ICPMS EPA Method 200.8		
		Parameter	Concentration	Reporting Limit	Date Date Sampled Analyzed
Client ID : Lab ID :	MW-22-3 BMI09080404-01A	Chromium (Cr)	ND	0.0050 mg/L	07/31/09 08/14/09
Client ID : Lab ID :	MW-22-2 BMI09080404-02A	Chromium (Cr)	ND	0.0050 mg/L	07/31/09 08/14/09
Client ID : Lab ID :	MW-22-1 BMI09080404-03A	Chromium (Cr)	ND	0.0050 mg/L	07/31/09 08/14/09
Client ID : Lab ID :	EB-9-7/31/09 BMI09080404-04A	Chromium (Cr)	ND	0.0050 mg/L	07/31/09 08/14/09
Client ID : Lab ID :	MW-12-3 BMI09080404-08A	Chromium (Cr)	ND	0.0050 mg/L	08/03/09 08/14/09
Client ID : Lab ID :	MW-12-2 BMI09080404-09A	Chromium (Cr)	ND	0.0050 mg/L	08/03/09 08/14/09
Client ID : Lab ID :	MW-12-1 BMI09080404-10A	Chromium (Cr)	ND	0.0050 mg/L	08/03/09 08/14/09
Client ID : Lab ID :	DUPE-7-3Q09 BMI09080404-11A	Chromium (Cr)	ND	0.0050 mg/L	08/03/09 08/14/09
Client ID : Lab ID :	EB-10-8/3/09 BMI09080404-12A	Chromium (Cr)	ND	0.0050 mg/L	08/03/09 08/14/09

ND = Not Detected

Roger Scholl

Kandy Dantmer

Walter Hirihm

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



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

ANALYTICAL REPORT

393-2808 458-6641

Battelle Memorial Institute	Attn:	David Conner
3990 Old Town Ave	Phone:	(818) 393-2808
San Diego, CA 92110	Fax:	(614) 458-6641
Job#: G005862/JPL Groundwater Monitoring		

Tentatively Identified Compounds - Volatile Organics by GC/MS

		an a		Estimated			
		Parameter	Estimated	Reporting	Date	Date	Date
			Concentration	Limit	Received	Sampled	Analyzed
Client ID : Lab ID :	MW-22-3 BMI09080404-01A	*** None Found ***	ND	2.0 μg/L	08/04/09	07/31/09	08/06/09
Client ID : Lab ID :	MW-22-2 BMI09080404-02A	*** None Found ***	ND	2.0 μg/L	08/04/09	07/31/09	08/06/09
Client ID : Lab ID :	MW-22-1 BMI09080404-03A	*** None Found ***	ND	2.0 μg/L	08/04/09	07/31/09	08/06/09
Client ID : Lab ID :	EB-9-7/31/09 BMI09080404-04A	* * * None Found * * *	ND	2.0 μg/L	08/04/09	07/31/09	08/05/09
Client ID : Lab ID :	TB-9-7/31/09 BMI09080404-05A	* * * None Found * * *	ND	2.0 µg/L	08/04/09	07/31/09	08/05/09
Client ID : Lab ID :	MW-12-5 BMI09080404-06A	Sulfur dioxide	2.4	2.0 μg/L	08/04/09	08/03/09	08/06/09
Client ID : Lab ID :	MW-12-4 BM109080404-07A	Sulfur dioxide	6.9	2.0 µg/L	08/04/09	08/03/09	08/06/09
Client ID : Lab ID :	MW-12-3 BMI09080404-08A	Sulfur dioxide	5.2	2.0 μg/L	08/04/09	08/03/09	08/06/09
Client ID : Lab ID :	MW-12-2 BMI09080404-09A	Sulfur dioxide	7.1	2.0 μg/L	08/04/09	08/03/09	08/06/09
Client ID : Lab ID :	MW-12-1 BMI09080404-10A	* * * None Found * * *	ND	2.0 μg/L	08/04/09	08/03/09	08/06/09
Client ID : Lab ID :	DUPE-7-3Q09 BMI09080404-11A	Sulfur dioxide	6.2	2.0 μg/L	08/04/09	08/03/09	08/06/09
Client ID : Lab ID :	EB-10-8/3/09 BMI09080404-12A	*** None Found ***	ND	2.0 µg/L	08/04/09	08/03/09	08/05/09
Client ID : Lab ID :	TB-10-8/3/09 BMI09080404-13A	* * * None Found * * *	ND	2.0 μg/L	08/04/09	08/03/09	08/05/09



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 Kandy Sanhur Dalter Hinchman, Quality Assurance Officer Roger L. Scholl, Ph.D., Laboratory Director · · Randy Gardner, Laboratory Manager · · Walter Hinchman, Quality Assurance Officer

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



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

<u>AI</u>	NALYTICAL REPORT	
Battelle Memorial Institute	Attn: David Conner	
3990 Old Town Ave	Phone: (818) 393-2808	
San Diego, CA 92110	Fax: (614) 458-6641	
Job#: G005862/JPL Groundwater Monitoring	· ·	
Alpha Analytical Number: BMI09080404-01A	Sampled: 07/31/09	
Client I.D. Number: MW-22-3	Received: 08/04/09	
	Analyzed: 08/06/09	

Volatile Organics by GC/MS

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

Rogen Scholl

Kandy Sandmer 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

Walter Ainihum

8/17/08

Report Date

Page 1 of 1

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.



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

ANA	LYTICAL 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 Li	imit
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	μg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	μg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	μg/L	42	o-Xvlene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	μg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	μg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	μg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	NĎ	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCI	P) ND	2.5	µg/L
25	Trichloroethene	ND	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	Tetrachioroethene	ND	0.50	μg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl

Kandy Sandmer

Walter Arihum

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA \bullet (916) 366-9089 / Las Vegas, NV \bullet (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.

8/17/08

Report Date



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

AN	NALYTICAL 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	entration Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	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 (DBC	P) 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

Rogen Scholl

Kandy Saulmer

Walter Aridmon

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.

199 8/17/08

Report Date



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

	ANALYTICAL REPORT	
Battelle Memorial Institute	Attn: David Conner	
3990 Old Town Ave	Phone: (818) 393-2808	
San Diego, CA 92110	Fax: (614) 458-6641	
Job#: G005862/JPL Groundwater Monitoring	· · ·	
Alpha Analytical Number: BMI09080404-04A	Sampled: 07/31/09	
Client I.D. Number: EB-9-7/31/09	Received: 08/04/09	
	Analyzed: 08/05/09	

Volatile Organics by GC/MS

	Compound	Concentration	Reporting	Limit		Compound	Concentration	Reporting Li	imit
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xvlene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	μg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	μg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	μg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1.3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1.4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1.2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	V ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCI	P) ND	2.5	µg/L
25	Trichloroethene	ND	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			a	. ,	
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

Rogen Scholl

Walter Arihm

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.



Report Date



255 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 G005862/JPL Groundwater Monitoring Job#:

Alpha Analytical Number: BMI09080404-05A Client I.D. Number: TB-9-7/31/09

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

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

Volatile Organics by GC/MS

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

Rogen Scholl

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.

lter Arilin

8/17/08

Report Date



255 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

Alpha Analytical Number: BMI09080404-06A Client I.D. Number: MW-12-5

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

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

Volatile Organics by GC/MS

	Compound	Concentration	Reporting	Limit		Compound	Concentration	Reporting L	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L	
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L	
З	Vinyl chloride	ND	0.50	μg/L	38	Ethylbenzene	ND	0.50	µg/L	
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L	
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L	
6	Trichlorofiuoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L	
7	1,1-Dichloroethene	ND	0.50	μg/L	42	o-Xylene	ND	0.50	μg/L	
8	Dichloromethane	ND	1.0	μg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L	
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L	
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L	
12	1,1-Dichloroethane	ND	0.50	μg/L	47	n-Propyibenzene	ND	0.50	µg/L	
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chiorotoluene	ND	0.50	µg/L	
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L	
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L	
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L	
17	2,2-Dichloropropane	ND	0.50	μg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L	
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L	
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	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 (DBCF	r) ND	2.5	µg/L	
25	Trichloroethene	ND	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

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

Walter Arihm

8/17/09

Report Date

Page 1 of 1

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.



255 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

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

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

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

Analyzed: 08/06/09

Volatile Organics by GC/MS

Compound		Concentration	n Reporting Limit			Compound	Concentration	Reporting Li	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L	
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L	
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	μg/L	
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L	
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L	
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L	
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xvlene	ND	0.50	µg/L	
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	
9	Freon-113	ND	0.50	ug/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L	
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L	
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	μg/L	
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L	
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L	
14	cis-1,2-Dichloroethene	ND	0.50	ug/L	49	2-Chlorotoluene	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 (DBC	P) ND	2.5	µg/L	
25	Trichloroethene	ND	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

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.

lter Airihm Da

8/17/08

Report Date



255 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 Li	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1.1.1.2-Tetrachloroethane	ND	0.50	µg/L	
2	Chloromethane	ND	1.0	µg/L	37	Chiorobenzene	ND	0.50	µg/L	
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L	
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	μg/L	
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L	
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L	
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L	
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L	
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L	
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L	
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L	
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L	
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L	
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L	
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L	
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L	
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L	
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L	
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L	
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L	
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L	
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L	
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBC	P) ND	2.5	µg/L	
25	Trichloroethene	ND	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	Tetrachioroethene	ND	0.50	µg/L						

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Rogen Scholl

Kandy Saulun 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

Walter Arihm

8/17/08

Report Date

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.



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

ANALYTICAL REPORT Battelle Memorial Institute Attn: David Conner 3990 Old Town Ave Phone: (818) 393-2808 San Diego, CA 92110 Fax: (614) 458-6641 Job#: G005862/JPL Groundwater Monitoring Alpha Analytical Number: BMI09080404-09A Sampled: 08/03/09 Client I.D. Number: MW-12-2 Received: 08/04/09 Analyzed: 08/06/09

Volatile Organics by GC/MS

	Compound	Concentration	Reporting	Limit		Compound	Concentration	Reporting Li	imit
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1.1.1.2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	μg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m.p-Xvlene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBC	P) ND	2.5	µg/L
25	Trichloroethene	ND	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	114	(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

Rogen Scholl

Kandy Santur 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.

Walter Aridman

8/17/08 **Report Date**

Page 1 of 1



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

	ANALYTICAL REPORT
Battelle Memorial Institute	Attn: David Conner
3990 Old Town Ave	Phone: (818) 393-2808
San Diego, CA 92110	Fax: (614) 458-6641
Job#: G005862/JPL Groundwater Monitoring	
Alpha Analytical Number: BMI09080404-10A	Sampled: 08/03/09

Client I.D. Number: MW-12-1

Received: 08/04/09

Analyzed: 08/06/09

Volatile Organics by GC/MS

Compound		Compound Concentration Reporting Lin		Limit Compound		Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1.1.1.2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	μg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	μg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	μg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	μg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	μg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	μg/L
12	1,1-Dichloroethane	ND	0.50	μg/L	47	n-Propylbenzene	ND	0.50	μg/L
13	2-Butanone (MEK)	ND	10	μg/L	48	4-Chlorotoluene	ND	0.50	μg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	μg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1.3.5-Trimethylbenzene	ND	0.50	μg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	μg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	μg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1.3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1.4-Dichlorobenzene	ND	0.50	μg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1.2-Dibromo-3-chloropropane (DBC	P) ND	2.5	µg/L
25	Trichloroethene	ND	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		ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl

Kandy Sandmer 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.

Walter Arinhm

8/17/08

Report Date



255 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

Alpha Analytical Number: BMI09080404-11A Client I.D. Number: DUPE-7-3Q09

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

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	Chioromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	μg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chioroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	μg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	μg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND ·	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCI	P) ND	2.5	µg/L
25	Trichloroethene	ND	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

Rogen Scholl

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.

Iter Arikmon Ŵ

8/17/08

Report Date



255 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	Attn: David Conner Phone: (818) 393-2808
San Diego, CA 92110 Job#: G005862/JPL Groundwater Monitoring	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 Li	imit
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	μg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	μg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chioroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBC	P) ND	2.5	µg/L
25	Trichloroethene	ND	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

Rogen Scholl

Kandy Saulner

Walter Aridmon

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.



Report Date



255 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 Li	imit
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	μg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	μg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	μg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	μg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	μg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	μg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propvibenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	μg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	μg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butvibenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	μg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	μg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1.3-Dichlorobenzene	ND	0.50	μg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	μg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBC	P) ND	2.5	µg/L
25	Trichloroethene	ND	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			1	,	
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

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

Walter Arihm

8/17/08

Report Date

Page 1 of 1

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.



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-7-3009	Aqueous	2	
09080404-12A	EB-10-8/3/09	Aqueous	2	
09080404-13A	TB-10-8/3/09	Aqueous	2	



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 S	Sum	mar	y Repor	t				Work Ord 09080404	
Method Blank File ID: 44		Туре	MBLI		est Code: E atch ID: 224		thod 314.0		s Date:	08/07/2009 00:50	
Sample ID: MBLK-22493	Units : µg/L				_3_090807/			Prep Da		08/06/2009	
Analyte	Result	PQL	5	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME) F	RPDRef	Val %RPD(Limit)	Qua
Perchlorate	ND		1								
Laboratory Fortified Blank		Туре	LFB	Te	est Code: E	PA Met	thod 314.0				
File ID: 45				Ba	atch ID: 224	93		Analysi	s Date:	08/07/2009 01:08	
Sample ID: LFB-22493	Units : µg/L		Rur	1 ID: IC	_3_090807/	A		Prep Da	ate:	08/06/2009	
Analyte	Result	PQL	S	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME) F	RPDRef	Val %RPD(Limit)	Qua
Perchlorate	26.1		2	25		105	85	115			
Sample Matrix Spike		Туре	LFM	Te	est Code: E	PA Met	thod 314.0				
File ID: 49				Ba	atch ID: 224	93		Analysi	s Date:	08/07/2009 02:22	
Sample ID: 09073103-03ALFM	Units : µg/L		Rur	n ID: IC	_3_090807/	4		Prep Da	ate:	08/06/2009	
Analyte	Result	PQL	S	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME) R	RPDRef	Val %RPD(Limit)	Qua
Perchlorate	34.2		2	25	10.16	96	80	120			
Sample Matrix Spike Duplicate		Туре	LFM) Те	est Code: E	PA Met	thod 314.0			· · · · · ·	
File ID: 50				Ba	atch ID: 224	93		Analysi	s Date:	08/07/2009 02:40	
Sample ID: 09073103-03ALFMD	Units : µg/L		Rur	n ID: IC	_3_090807/	A		Prep Da	ate:	08/06/2009	
Analyte	Result	PQL	S	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME) R	RPDRef	val %RPD(Limit)	Qua
Perchlorate	35.7		2	25	10.16	102	80	120	34.2		

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.



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

Date: 18-Aug-09	()C S	ummar	y Repor	t				Work Ord 0908040	
Method Blank File ID: 081309.B\087SMPL.D\ Sample ID: MB-22512	Units : mg/ L	Туре I	B	est Code: El atch ID: 225 P/MS_0908	12K	thod 200.8	,	vsis Date: Date:	08/13/2009 22:44 08/10/2009	
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	C LCL(ME)	UCL(ME)	RPDRef	Val %RPD(Limit)	Qua
Chromium (Cr)	ND	0.00	5							
Laboratory Control Spike File ID: 081309.B\088_LCS.D\ Sample ID: LCS-22512 Analyte	Units : mg/ L Result	Type I	Ba Run ID: IC	est Code: El atch ID: 225 : P/MS_0908 SpkRefVal	12K 13C		Prep	Date:	08/13/2009 22:49 08/10/2009 Val %RPD(Limit)	Qual
Chromium (Cr)	0.0457	0.00	· · · · · · · · · · · · · · · · · · ·	•	91	80	120		·····	
Sample Matrix Spike File ID: 081309.B\092SMPL.D\ Sample ID: 09080502-03AMS Analyte	Units : mg/L Result	Type I	B Run ID: IC	est Code: El atch ID: 225 P/MS_0908 SpkRefVal	12K 13C		Prep	Date:	08/13/2009 23:12 08/10/2009 Val %RPD(Limit)	Qual
Chromium (Cr)	0.0531	0.00	-		106	80	120			
Sample Matrix Spike Duplicate File ID: 081309.B\093SMPL.D\ Sample ID: 09080502-03AMSD	Units : mg/L	Type I	B Run ID: IC	est Code: El atch ID: 225 P/MS_0908	12K 13C		Prep	Date:	08/13/2009 23:17 08/10/2009	
Analyte	Result	PQL							Val %RPD(Limit)	Qua
Chromium (Cr)	0.0618	0.00	5 0.05	0	124	80	120	0.053	13 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.



Method Blank Type MSLK Tet Code: File ID: 000551 D Bath ID: MSI 500605 Analysis Date: 080/52009 21: Sample ID: MBLK M315W0805N Units : µpL Run ID: MSD_15 (000035) Prep Date: 080/52009 21: Analy do Result PQL SpkVal SpkTerVar %/REC LCL(ME) UCL(ME) (PDRerVar %/RPD(Lumit) Definordiffucornethane ND 0.5 Trichlorofilosomethane ND 1 Chioromethane ND 0.5 Trichlorofilosomethane ND 0.5 Dicharomethane ND 0.5 Trichlorofilosomethane ND 0.5 Dicharomethane ND 0.5 Trichlorofilosomethane ND 0.5 Dicharomethane ND 0.5 Trichlorofilosomethane ND 0.5 Statistic (KEK) ND 10 Cel-32/Dichlorofitane ND 0.5 Z-Dichlorofitane ND 0.5 Trichlorofitane ND 0.5 Z-Dichlorofitane ND 0.5 Trichlorofitane ND 0.5 Z-Dichlorofitane	Date: 14-Aug-09		(QC S	ummary Report			Work Orde 09080404	
Sample D: MELK MS15W0605N Units: uptL Result POL SpkVal SpkRetVal %REC LCL(ME) UCL(ME) RPDRetVal %RPD(Limit) Dehondifiuoromethane ND 0.5 <th></th> <th></th> <th></th> <th>Туре М</th> <th></th> <th>V0805N</th> <th>Analysis Date:</th> <th>08/05/2009 21:11</th> <th></th>				Туре М		V0805N	Analysis Date:	08/05/2009 21:11	
Dickloadiliscronethane ND 0.5 Chloradi ND 0.5 Chloradi ND 0.5 Bronnethane ND 0.5 Bronnethane ND 0.5 Dichloradicuromethane ND 0.5 1.1-Dichloradicuromethane ND 0.5 Dichloradicuromethane ND 0.5 1.1-Dichloradicuromethane ND 0.5 1.1-Dichloradiane ND 0.5 1.1-Dichloradiane ND 0.5 1.1-Dichloradiane ND 0.5 2Butanose (MEK) ND 0.5 1.2-Dichloradiane ND 0.5 Dibromochloradice ND 0.5 1.2-Dichloradiane ND 0.5 Dibromochloradiane		MBLK MS15W0805N		POL			•		Qual
Chidomethane ND 1 Vink dholide ND 0.5 Chidorethane ND 0.5 Bromonethane ND 0.5 Trichlorothuomethane ND 0.5 Freider 113 ND 0.5 2-Butomethane ND 0.5 2-Butomethane ND 0.5 2-Butomethane ND 0.5 2-Dichorophysic ND 0.5 1.1.1-Tichorophysic ND 0.5 1.2-Dichorop		romethane							
Chicoschane ND 0.5 Brommelhane ND 0.5 1.1-Dichicoromethane ND 0.5 Dichoromethane ND 0.5 trans.1.2-Dichicorethene ND 0.5 trans.1.2-Dichicorethene ND 0.5 trans.1.2-Dichicorethene ND 0.5 action of MEKI ND 0.5 2-Butmone (MEK) ND 0.5 2-Butmone (MEK) ND 0.5 2-Dichicorethene ND 0.5 1.1.1-Tichicorethane ND 0.5 1.2.Dichicoropropene ND 0.5 1.2.Dichicoropropene									
Bromoshane ND 1 Tichlorducomeshane ND 0.5 1.1.5Lbickorothane ND 0.5 Tichlorducomeshane ND 0.5 Tarsel.2-Diktorothane ND 0.5 Mathyl terbudyl terb									
Trichloronethane ND 0.5 Jochloromethane ND 1 Freen-113 ND 0.5 trans 1.2-bichloroethane ND 0.5 trans 1.2-bichloroethane ND 0.5 2-bichloroethane ND 0.5 2-bichloroethane ND 0.5 Statanore (MKK) ND 10 C4-1.2-bichloroethane ND 0.5 Bromochloromethane ND 0.5 Chionoform ND 0.5 Chionoform ND 0.5 Carbon tetrachloride ND 0.5 Carbon tetrach									
1.1-Dichlorosthene ND 0.5 Dichlorosthene ND 0.5 Teran-1.2.Dichlorosthene ND 0.5 MatSyl terbutyl ether (MTPE) ND 0.5 2-Butanone (MEK) ND 0.5 2-Butanone (MEK) ND 0.5 2-Butanone (MEK) ND 0.5 2-Dichlorosthene ND 0.5 1.1-Trichlorosthene ND 0.5 1.2-Dichlorosthene ND 0.5 1.2-Dichlorosthene ND 0.5 1.2-Dichlorosthene ND 0.5 1.2-Dichlorosthene ND 0.5 1.3-Dichlorosthene ND 0.5 1.2-Dichlorosthene ND <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>									
Dichloromethane ND 1 Frean-113 ND 0.5 trans-1,2-Dichloroethane ND 0.5 Michail GrebAuly deter (MTEB) ND 0.5 Seltanone (MEK) ND 0.5 Seltanone (MEK) ND 0.5 Enhance (MEK) ND 0.5 Enhance (MEK) ND 0.5 Chionolom ND 0.5 Chionolom ND 0.5 Chionolom ND 0.5 2-Dichloroethane ND 0.5 Carbon tetrachloride ND 0.5 Carbon tetrachloride ND 0.5 Enrezene ND 0.5 Trichloroethane ND 0.5 Enromedicionomethane ND 0.5 Trichloroethane ND 0.5 Trichloroethane ND 0.5 Trichloroethane ND 0.5 Totalonomethane ND 0.5 Totaloroethane ND 0.5 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>									
trans-1.2-Dichloroethene ND 0.5 1.1-Dichloroethane ND 0.5 2-Butanoe (MEK) ND 0.5 Szentone (MEK) ND 0.5 Szentone (MEK) ND 0.5 Chloroethane ND 0.5 Szentone (MEK) ND 0.5 1.2-Dichloroethane ND 0.5 1.2-Dichloroethane ND 0.5 1.1.1-Tichloroethane ND 0.5 1.1.2-Dichloroethane ND 0.5 Dibromomethane ND 0.5 Dibromomethane ND 0.5 Dibromomethane ND 0.5 Trichloroethane ND 0.5 Toleane ND 0.5 Toleane ND 0.5 <		ane							
Methy idenbuik ethousy ethousy and		1							
1.1-Dichoroethane ND 05 2-Butanoe (MEK) ND 05 Bromochicoroenethane ND 0.5 Chioroform ND 0.5 2-Dichoroethane ND 0.5 1.2-Dichoroethane ND 0.5 1.1-Tichioroethane ND 0.5 1.1-Dichoroethane ND 0.5 1.1-Dichoroethane ND 0.5 1.1-Dichoroethane ND 0.5 1.1-Dichoroethane ND 0.5 Earcene ND 0.5 Dibronomethane ND 0.5 1.2-Dichoropropane ND 0.5 1.1.2-Tertachoroethane ND 0.5 Dichoropropane ND 0.5									
2-Butanoe (MEK) ND 10 csi-1-2-Dichloropethene ND 0.5 Bromochloromethane ND 0.5 2.2-Dichloropropane ND 0.5 2.2-Dichloropropane ND 0.5 1.1-Dichloropropene ND 0.5 1.1-Dichloropropene ND 0.5 Dibromomethane ND 0.5 Dibromomethane ND 0.5 Dibromomethane ND 0.5 Trichloropropane ND 0.5 Toluene ND 0.5 Toluene ND 0.5 Toluene ND 0.5 Dibromochhoropethane (EDB) ND 1 Terzchoropethane (EDB) ND 0.5 Trichloropethane (EDB) ND	-								
Bromochloromethane ND 0.5 2.2-Dichloropropane ND 0.5 2.2-Dichloropropane ND 0.5 1.1-Dichloropropane ND 0.5 1.1-Dichloropropane ND 0.5 Garbon tetrachloride ND 0.5 Darbon tetrachloride ND 0.5 Trichloroptic ND 0.5 Trichloroptic ND 0.5 Trichloroptic ND 0.5 Tolleane ND 0.5 Dibromochloroptic ND 0.5 Tolleane ND 0.5 Dibromochloroptic ND 0.5 Dibromochloroptic ND 0.5 Tolleane ND 0.5 Dibromochloroptic ND	2-Butanone (N	MEK)							
Chlorofom ND 0.5 1.2-Dichloropethane ND 0.5 1.1.1 Trichloropethane ND 0.5 1.1.1 Trichloropethane ND 0.5 Carbon tetrachloride ND 0.5 Dibromomethane ND 0.5 Dibromomethane ND 0.5 Trichloropethane ND 0.5 Stromodichloromethane ND 0.5 Trichloropethane ND 0.5 Stromodichloromethane ND 0.5 Stromodichloromethane ND 0.5 Trichlorophopene ND 0.5 Toluonophomopone ND 0.5 Toluone ND 0.5 Toluone ND 0.5 Toluone ND 0.5 Dibromochioromethane ND 0.5 Dibromochioromethane ND 0.5 Dibromochioromethane ND 0.5 Chloroberzene ND 0.5 Dibromochioromethane ND <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>									
2.2-Dichloropopene ND 0.5 1.1-Trichloroethane ND 0.5 1.1-Trichloroopone ND 0.5 Carbon tetrachloride ND 0.5 Dibromothane ND 0.5 Dibromothane ND 0.5 Dibromothane ND 0.5 Dibromothane ND 0.5 Trichloroethane ND 0.5 Trichloroethane ND 0.5 Bromodichloromethane ND 0.5 Trichloroethane ND 0.5 Trichloroethane ND 0.5 Trichloroethane ND 0.5 Trichloroethane ND 0.5 Toluere ND 0.5 Dibromothoroethane ND <td< td=""><td></td><td>netnane</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>		netnane							
1,2-Dichlorosethane ND 0.5 1,1-Drichlorosethane ND 0.5 Benzene ND 0.5 Benzene ND 0.5 Benzene ND 0.5 Dironomethane ND 0.5 Dironomethane ND 0.5 Stronockinopropane ND 0.5 Bromodichlorosethane ND 0.5 Stronockinopropane ND 0.5 1,1-2.Trichlorosethane ND 0.5 T		ropane							
1,1-Trichloroppene ND 0.5 Carbon tetrachloride ND 0.5 Benzene ND 0.5 Dibromonethane ND 0.5 Trichloroppopene ND 0.5 Trichloroptopene ND 0.5 Trichloroptopene ND 0.5 Trichloroptopene ND 0.5 Hamst-1, 3-Dichloroptopene ND 0.5 Trichloroptopene ND 0.5 Tasal-1, 3-Dichloroptopene ND 0.5 Toluene ND 0.5 1,1-2-Trichloroptopene ND 0.5 1,2-Dichloroptopene ND 0.5 1,2-Dichlorop									
Carbon letrachloride ND 0.5 Dibromomethane ND 0.5 J.2-Dichloropropane ND 0.5 Trichloroethene ND 0.5 Bromodichloromethane ND 0.5 Bromodichloromethane ND 0.5 Hamettane ND 0.5 Trichloroethoropene ND 0.5 1,1.2-Trichloroopene ND 0.5 1,3-Dichloropropane ND 0.5 1,3-Dichloropropane ND 0.5 1,2-Trichloroethane ND 0.5 1,2-Ubomoethane (EDB) ND 1 Tetrachloroethane ND 0.5 1,1.2-Tetrachoroethane ND 0.5 Dibromochloropone ND 0.5 Styrene ND 0.5 Styrene ND 0.5 Styrene ND 0.5 Promoform ND 0.5 Bromodoropane ND 0.5 Styrene ND 0.5	1,1,1-Trichloro	pethane	ND	0.5	;				
Benzene ND 0.5 Dibromomethane ND 0.5 1.2-Dichloropropane ND 0.5 Trichloroethane ND 0.5 Bromodichloromethane ND 0.5 4-Methyl-2-pentanone (MIBK) ND 2.5 cis-1.3-Dichloropropene ND 0.5 Toluene ND 0.5 Toluene ND 0.5 Dibromochloromethane ND 0.5 1.2-Trichloropropane ND 0.5 Dibromochloromethane ND 0.5 1.2-Trichloroethane ND 0.5 Dibromochloromethane ND 0.5 1.2-Tothoroethane ND 0.5 Ethylbenzene ND 0.5 Ethylbenzene ND 0.5 Styrene ND 0.5 Styrene ND 0.5 Styrene ND 0.5 Styrene ND 0.5 Propylbenzene ND 0.5		-							
Dibromomethane ND 0.5 1,2-Dichloropropane ND 0.5 Bromodichloromethane ND 0.5 Bromodichloromethane ND 0.5 Hamsell, 3-Dichloropropene ND 0.5 1,12-Trichloroethane ND 0.5 1,12-Trichloropropene ND 0.5 1,12-Trichloropropane ND 0.5 1,12-Trichloropropane ND 0.5 1,12-Trichloropropane ND 0.5 Dibromochloromethane (EDB) ND 1 Tetrachloroethane ND 0.5 Chlorobenzene ND 0.5 Ethylbenzene ND 0.5 Ethylbenzene ND 0.5 Styrene ND 0.5 Styrene ND 0.5 Styrene ND 0.5 Promobenzene ND 0.5 Promobenzene ND 0.5 Styrene ND 0.5 Styrene ND 0.5 <td></td> <td>nioride</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>		nioride							
1,2-DichloropropaneND0.5TrichlorosthaneND0.5HomodichloromethaneND0.54-Methyl-2-pentanone (MIBK)ND2.56:-1.3-DichloropropeneND0.5trans-1,3-DichloropropeneND0.5TolueneND0.51.3-DichloropropaneND0.5DibromochloromethaneND0.5DibromochloromethaneND0.51.2-TichloropropaneND0.5DibromochloromethaneND0.51.2-UbromochloromethaneND0.5EthylbenzeneND0.5EthylbenzeneND0.5StyreneND0.5StyreneND0.5StyreneND0.5I.1,2.2-TetrachloroethaneND0.5StyreneND0.5StyreneND0.5StyreneND0.5IsopropylbenzeneND0.5ProbylbenzeneND0.5StyreneND0.5StyreneND0.5StyreneND0.5StyreneND0.5StyreneND0.5StyreneND0.5StyreneND0.5StyreneND0.5StyreneND0.5StyreneND0.5StyreneND0.5StyreneND0.5StyreneND0.5StyreneND0.5 <td< td=""><td></td><td>ane</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>		ane							
Trichloroethane 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 1,3-Dichloropropane ND 0.5 1,3-Dichloropropane ND 0.5 1,3-Dichloropropane ND 0.5 1,2-Dibromothane (EDB) ND 1 Tetrachloroethane ND 0.5 1,1,2-Tetrachloroethane ND 0.5 Chlorobanzene ND 0.5 Ethylbenzene ND 0.5 Bromodichloroptopane ND 0.5									
4-Methyl-2-pentanone (MIBK) ND 2.5 cis-1.3-Dichloropropene ND 0.5 1,1.2-Trichloroptropene ND 0.5 1,3-Dichloroptropene ND 0.5 1,3-Dichloroptropene ND 0.5 1,3-Dichloroptropane ND 0.5 1,3-Dichloroptropane ND 0.5 1,3-Dichloroptropane ND 0.5 1,3-Dichloroptropane ND 0.5 1,1.2-Tetrachloroethane (EDB) ND 1 Tetrachloroethane ND 0.5 Chlorobenzene ND 0.5 Ethylbenzene ND 0.5 Styrene ND 0.5 Styrene ND 0.5 Styrene ND 0.5 Styrene ND 0.5 Bromoform ND 0.5 Bromoformane ND 0.5 Styrene ND 0.5 I,1,2.2-Tetrachloroethane ND 0.5 J.3-Dichloropropane ND <td></td> <td></td> <td></td> <td>0.5</td> <td>i</td> <td></td> <td></td> <td></td> <td></td>				0.5	i				
cis-1.3-Dichloropropene ND 0.5 trans-1.3-Dichloropropene ND 0.5 1.1.2-Trichloroethane ND 0.5 1.3-Dichloropropane ND 0.5 Dibromochloromethane ND 0.5 1.2-Dibromochloromethane ND 0.5 1.2-Dibromochloromethane ND 0.5 1.1.2-Tetrachloroethene ND 0.5 Chlorobenzene ND 0.5 Ethylbenzene ND 0.5 Styrene ND 0.5 Storoptkenzene ND 0.5 Storoptkenze									
trans-13-Dichloropropene ND 0.5 1.1.2-Trichloroethane ND 0.5 1.3-Dichloropropane ND 0.5 1.3-Dichloropropane ND 0.5 1.2-Uibromoethane (EDB) ND 1 Tetrachloroethene ND 0.5 1.1.12-Tarchloroethene ND 0.5 Chlorobenzene ND 0.5 Ethylbenzene ND 0.5 Bromoform ND 0.5 Styrene ND 0.5 Styrene ND 0.5 1.1.2-Tetrachloroethane ND 0.5 Styrene ND 0.5 1.1.2-Tetrachloroethane ND 0.5 Propybenzene ND 0.5 Propybenzene ND 0.5 Propybenzene ND 0.5 Propybenzene ND 0.5 1.3-Strimethybenzene ND 0.5 1.3-Strimethybenzene ND 0.5 1.3-Strimethybenzene ND									
1.1.2-Trichloroethane ND 0.5 Toluene ND 0.5 1.3-Dichloropropane ND 0.5 Dibromochloromethane ND 0.5 1.2-Dibromochlaromethane ND 0.5 1.1.1_2-Tetrachloroethane ND 0.5 Chlorobenzene ND 0.5 Ethylbenzene ND 0.5 Ethylbenzene ND 0.5 Styrene ND 0.5 Bromobenzene ND 0.5 Styrene ND 0.5 Styrene ND 0.5 Styrene ND 0.5 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>									
1.3-Dichloropropane ND 0.5 Dibromochloromethane ND 0.5 1.2-Dibromochlane (EDB) ND 1 Tetrachloroethane ND 0.5 1.1.1.2-Tetrachloroethane ND 0.5 Chlorobenzene ND 0.5 Ethylbenzene ND 0.5 Bromoform ND 0.5 Styrene ND 0.5	1,1,2-Trichloro								
Dibromochloromethane ND 0.5 1,2-Jibromoethane (EDB) ND 1 Tetrachloroethane ND 0.5 1,1,1,2-Tetrachloroethane ND 0.5 Chlorobenzene ND 0.5 Ethylbenzene ND 0.5 Bromoform ND 0.5 Styrene ND 0.5 Styrene ND 0.5 1,1,2,2-Tetrachloroethane ND 0.5 1,2,3-Tricholoroporbane ND 0.5 1,2,3-Tricholoroporbane ND 0.5 Bromobenzene ND 0.5 Bromobenzene ND 0.5 Propylbenzene ND 0.5 Propolybenzene ND 0.5 2-Chlorobluene ND 0.5 1,3-5-Trimethylbenzene ND 0.5 1,3-5-Trimethylbenzene ND 0.5 1,3-5-Trimethylbenzene ND 0.5 1,3-5-Trimethylbenzene ND 0.5 1,3-Dichlorobenzene									
1.2-Dibromoethane (EDB) ND 1 Tetrachloroethane ND 0.5 1.1.1.2-Tetrachloroethane ND 0.5 Chlorobenzene ND 0.5 Ethrybenzene ND 0.5 Bromoform ND 0.5 Styrene ND 0.5 Styrene ND 0.5 1.2.2-Tetrachloroethane ND 0.5 1.2.2-Tetrachloroethane ND 0.5 1.2.2-Tetrachloroethane ND 0.5 1.2.2-Tetrachloroethane ND 0.5 1.2.3-Trichloropapane ND 0.5 Isopropylbenzene ND 0.5 Promobenzene ND 0.5 -Propylbenzene ND 0.5 2-Chlorotoluene ND 0.5 1.3.5-Trimethylbenzene ND 0.5 1.3.4-Trimethylbenzene ND 0.5 1.3-Dichlorobenzene ND 0.5 1.3-Dichlorobenzene ND 0.5 1.3-Dichlorobenzene ND 0.5 1.3-Dichlorobenzene ND		•							
Tetrachloroethane ND 0.5 1,1,1,2-Tetrachloroethane ND 0.5 Chlorobenzene ND 0.5 Ethylbenzene ND 0.5 Bromoform ND 0.5 Styrene ND 0.5 O-Xylene ND 0.5 1,1,2,2-Tetrachloroethane ND 0.5 1,2,2-Tetrachloroethane ND 0.5 1,2,3-Trichloropropane ND 0.5 1,2,3-Trichloropropane ND 0.5 Promobenzene ND 0.5 Promobenzene ND 0.5 Promobenzene ND 0.5 1.3-S-Trimethylbenzene ND 0.5 1.3.5-Trimethylbenzene ND 0.5 1.3.5-Trimethylbenzene ND 0.5 1.3.5-Dichlorobenzene ND 0.5 1.3.5-Dichlorobenzene ND 0.5 1.3.5-Dichlorobenzene ND 0.5 1.3.5-Dichlorobenzene ND 0.5 1.4-Dichlorobenz		• • • • • • • • •							
1,1,2-Tetrachloroethane ND 0.5 Chlorobenzene ND 0.5 Ethylbenzene 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-Trichloroptopane ND 1 Isopropylbenzene ND 0.5 Bromobenzene ND 0.5 2-Chlorotoluene ND 0.5 2-Chlorotoluene ND 0.5 2-Chlorotoluene ND 0.5 1.3.5-Trimethylbenzene ND 0.5 1.2.4-Trimethylbenzene ND 0.5 1.3-Dichlorobenzene ND 0.5 1.4-Dichlorobenzene ND 0.5 1.2-Dichloroben									
Ethylbenzene ND 0.5 m,p-Xylene ND 0.5 Bromoform ND 0.5 Styrene ND 0.5 o-Xylene ND 0.5 o-Xylene ND 0.5 o-Xylene ND 0.5 o-Xylene ND 0.5 1,1,2,2-Tetrachloroethane ND 0.5 1,2,3-Tichloropopane ND 0.5 Bromobenzene ND 0.5 Propylbenzene ND 0.5 4-Chiorotoluene ND 0.5 2-Chlorotoluene ND 0.5 1,3,5-Trimethylbenzene ND 0.5 1,2,4-Trimethylbenzene ND 0.5 1,2-Urichlorobenzene ND 0.5 1,3-Dichlorobenzene ND 0.5 1,4-Dichlorobenzene ND 0.5 1,2-Dichlorobenzene ND 0.5 1,2-Dichlorobenzene ND 0.5 1,2-Dichlorobenzene 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 a-Chlorotoluene ND 0.5 2-Chlorotoluene ND 0.5 2-Chlorotoluene ND 0.5 1,3,5-Trimethylbenzene ND 0.5 sec-Butylbenzene ND 0.5 sec-Butylbenzene ND 0.5 1,3-Dichlorobenzene ND 0.5 1,4-Dichlorobenzene ND 0.5 1,2-Uichlorobenzene ND 0.5 1,2-Dichlorobenzene ND 0.5 1,2-Dichlorobenzene ND 0.5 1,2-Dichlorobenzene ND 0.5 1,2-Dichlorobenzene ND		e							
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 0.5 1,2,3-Trichloropropane ND 0.5 1,2,3-Trichloropropane 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 1,3.4-Trimethylbenzene ND 0.5 1,3-Drichlorobenzene ND 0.5 1,3-Drichlorobenzene ND 0.5 1,3-Drichlorobenzene ND 0.5 1,3-Drichlorobenzene ND 0.5 1,4-Dichlorobenzene ND 0.5 1,2-Dichlorobenzene ND 0.5 1,2-Dichlorobenzene ND 0.5 1,2-Dichlorobenzene ND 0.5 1,2-Dibromo-3	-								
Styrene ND 0.5 o-Xylene ND 0.5 1,1,2,2-Tetrachloroethane ND 0.5 1,2,3-Trichloroptopane ND 1 Isopropylbenzene ND 0.5 Bromobenzene ND 0.5 Propylbenzene ND 0.5 4-Chlorotoluene ND 0.5 2-Chlorotoluene ND 0.5 1,3,5-Trimethylbenzene ND 0.5 1,2,4-Trimethylbenzene ND 0.5 1,3-Dichlorobenzene ND 0.5 1,2-Dichlorobenzene ND 0.5 1,2-Dichlorobenzene ND 0.5 1,2-Dichlorobenzene ND 0.5 1,2-Dichlorobenzene ND 0.5 1,2-Dibromo-3-chloro									
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 1,2,4-Trimethylbenzene ND 0.5 1,3-Dichlorobenzene ND 0.5 1,3-Dichlorobenzene ND 0.5 1,3-Dichlorobenzene ND 0.5 1,3-Dichlorobenzene ND 0.5 1,4-Dichlorobenzene ND 0.5 1,4-Dichlorobenzene ND 0.5 1,2-Dichlorobenzene ND 0.5 1,2-Di									
1,2,3-TrichloropropaneND1IsopropylbenzeneND0.5BromobenzeneND0.5n-PropylbenzeneND0.54-ChlorotolueneND0.52-ChlorotolueneND0.51,3,5-TrimethylbenzeneND0.51,3,5-TrimethylbenzeneND0.51,2,4-TrimethylbenzeneND0.51,3-DichlorobenzeneND0.51,3-DichlorobenzeneND0.51,3-DichlorobenzeneND0.51,4-DichlorobenzeneND0.51,2-DichlorobenzeneND0.51,2-Dibromo-3-chloropropane (DBCP)ND2.51,2,4-TrichlorobenzeneND1NaphthaleneND1HexachlorobutadieneND1	-	, 							
IsopropylbenzeneND0.5BromobenzeneND0.5Ar-ChorotolueneND0.52-ChlorotolueneND0.52-ChlorotolueneND0.51,3,5-TrimethylbenzeneND0.51,2,4-TrimethylbenzeneND0.51,2,4-TrimethylbenzeneND0.51,3-DichlorobenzeneND0.51,3-DichlorobenzeneND0.51,3-DichlorobenzeneND0.51,4-DichlorobenzeneND0.51,2-DichlorobenzeneND0.51,2-DichlorobenzeneND0.51,2-DichlorobenzeneND0.51,2-DichlorobenzeneND0.51,2-DichlorobenzeneND0.51,2-DichlorobenzeneND0.51,2-DichlorobenzeneND0.51,2-Dibromo-3-chloropropane (DBCP)ND2.51,2,4-TrichlorobenzeneND1NaphthaleneND1HexachlorobutadieneND1									
BromobenzeneND0.5n-PropylbenzeneND0.54-ChlorotolueneND0.52-ChlorotolueneND0.51,3,5-TrimethylbenzeneND0.5tert-ButylbenzeneND0.5sec-ButylbenzeneND0.51,3-DichlorobenzeneND0.51,3-DichlorobenzeneND0.51,3-DichlorobenzeneND0.51,2-4-TrimethylbenzeneND0.51,2-bichlorobenzeneND0.51,2-bichlorobenzeneND0.51,2-DichlorobenzeneND0.51,2-DichlorobenzeneND0.51,2-DichlorobenzeneND0.51,2-DichlorobenzeneND0.51,2-DichlorobenzeneND0.51,2-DichlorobenzeneND0.51,2-LitrichlorobenzeneND0.51,2-LitrichlorobenzeneND1NaphthaleneND1HexachlorobutadieneND1									
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 tert-Butylbenzene ND 0.5 sec-Butylbenzene ND 0.5 1,3-Dichlorobenzene ND 0.5 1,3-Dichlorobenzene ND 0.5 1,4-Dichlorobenzene ND 0.5 1,2-Uichlorobenzene ND 0.5 1,2-Dichlorobenzene ND 0.5 1,2-Dichlorobenzene ND 0.5 1,2-Dichlorobenzene ND 0.5 1,2-Dichlorobenzene ND 0.5 n-Butylbenzene ND 0.5 n-Butylbenzene ND 0.5 1,2-Dichlorobenzene ND 0.5 1,2-4-Trichlorobenzene ND 1 Naphthalene ND 1									
2-ChlorotolueneND0.51,3,5-TrimethylbenzeneND0.5tert-ButylbenzeneND0.51,2,4-TrimethylbenzeneND0.5sec-ButylbenzeneND0.51,3-DichlorobenzeneND0.51,4-DichlorobenzeneND0.51,2-UichlorobenzeneND0.51,2-Dibromo-3-chloropropane (DBCP)ND0.51,2,4-TrichlorobenzeneND0.51,2,4-TrichlorobenzeneND0.51,2,4-TrichlorobenzeneND0.51,2,4-TrichlorobenzeneND1NaphthaleneND1HexachlorobutadieneND1			ND						
1,3,5-TrimethylbenzeneND0.5tert-ButylbenzeneND0.51,2,4-TrimethylbenzeneND0.5sec-ButylbenzeneND0.51,3-DichlorobenzeneND0.51,4-DichlorobenzeneND0.54-IsopropyltolueneND0.51,2-DichlorobenzeneND0.51,2-DichlorobenzeneND0.51,2-DichlorobenzeneND0.51,2-Dibromo-3-chloropropane (DBCP)ND2.51,2,4-TrichlorobenzeneND1NaphthaleneND1HexachlorobutadieneND1									
tert-ButylbenzeneND0.51,2,4-TrimethylbenzeneND0.5sec-ButylbenzeneND0.51,3-DichlorobenzeneND0.51,4-DichlorobenzeneND0.54-IsopropyltolueneND0.51,2-DichlorobenzeneND0.5n-ButylbenzeneND0.51,2-Dibromo-3-chloropropane (DBCP)ND2.51,2,4-TrichlorobenzeneND1NaphthaleneND1HexachlorobutadieneND1									
1,2,4-TrimethylbenzeneND0.5sec-ButylbenzeneND0.51,3-DichlorobenzeneND0.51,4-DichlorobenzeneND0.54-IsopropyltolueneND0.51,2-DichlorobenzeneND0.51,2-DichlorobenzeneND0.51,2-Dibromo-3-chloropropane (DBCP)ND2.51,2,4-TrichlorobenzeneND1NaphthaleneND1HexachlorobutadieneND1	-								
1,3-DichlorobenzeneND0.51,4-DichlorobenzeneND0.54-IsopropyltolueneND0.51,2-DichlorobenzeneND0.5n-ButylbenzeneND0.51,2-Dibromo-3-chloropropane (DBCP)ND2.51,2,4-TrichlorobenzeneND1NaphthaleneND1HexachlorobutadieneND1	1,2,4-Trimethy	/lbenzene							
1,4-DichlorobenzeneND0.54-IsopropyltolueneND0.51,2-DichlorobenzeneND0.5n-ButylbenzeneND0.51,2-Dibromo-3-chloropropane (DBCP)ND2.51,2,4-TrichlorobenzeneND1NaphthaleneND1HexachlorobutadieneND1	-								
4-IsopropyltolueneND0.51,2-DichlorobenzeneND0.5n-ButylbenzeneND0.51,2-Dibromo-3-chloropropane (DBCP)ND2.51,2,4-TrichlorobenzeneND1NaphthaleneND1HexachlorobutadieneND1									
1,2-DichlorobenzeneND0.5n-ButylbenzeneND0.51,2-Dibromo-3-chloropropane (DBCP)ND2.51,2,4-TrichlorobenzeneND1NaphthaleneND1HexachlorobutadieneND1									
n-ButylbenzeneND0.51,2-Dibromo-3-chloropropane (DBCP)ND2.51,2,4-TrichlorobenzeneND1NaphthaleneND1HexachlorobutadieneND1									
1,2,4-TrichlorobenzeneND1NaphthaleneND1HexachlorobutadieneND1			ND	0.5					
Naphthalene ND 1 Hexachlorobutadiene ND 1									
Hexachlorobutadiene ND 1		Duenzene							
	•	tadiene							
	1,2,3-Trichloro	obenzene	ND	1					
Surr: 1,2-Dichloroethane-d4 8.72 10 87 70 130									
Surr: Toluene-d8 10.9 10 109 70 130	ourr: 10luene-	-00	10.9		10 1	09 70	130		



- -

Alpha Analytical, Inc.

Date: 14-Aug-09	(QC Sun	nmary	Report			Work Order: 09080404
Surr: 4-Bromofluorobenzene	9.44		10	94	70	130	
Laboratory Control Spike File ID: 09080527.D Sample ID: LCS MS15W0805N		Type LCS	Bat	st Code: tch ID: MS15W080	5N	Analysis Prep Da	Date: 08/05/2009 19:42 te: 08/05/2009
Analyte	Units : µg/L Result			D_15_090805B SokRefVal %REC	LCL(ME)	•	PDRefVal %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 Bromomethane	9.75	1	10	98 85	70	130 130	
Trichlorofluoromethane	8.54 12.5	2 1	10 10	125	70 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) 1,1-Dichloroethane	9.52 10	0.5 1	10 10	95 100	70 70	130 130	
cis-1,2-Dichloroethene	10.7	1	10	100	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 1,1,1-Trichloroethane	9.69	1	10	97	70 70	130 130	
1,1-Dichloropropene	11.4 11.1	1 1	10 10	114 111	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 Trichloroethene	9.98	1	10	99.8	70	130	
Bromodichloromethane	11.1 9.28	1 1	10 10	111 93	70 70	130 130	
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	
	10.3	0.5	10	103	70	130	
1,3-Dichloropropane Dibromochloromethane	10.1 9.57	1 1	10 10	101 96	70 70	130 130	
1,2-Dibromoethane (EDB)	19.7	2	20	98 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 m,p-Xylene	10.8 11.5	0.5 0.5	10 10	108 115	70 70	130 130	
Bromoform	8.72	0.5	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 Isopropylbenzene	20.7 10.9	2 1	20 10	103 109	70 70	130 130	
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 1,3,5-Trimethylbenzene	10.4	1	10	104	70	130	
tert-Butylbenzene	10.4 10.5	1 1	10 10	104 105	70 70	130 130	
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 4-Isopropyltoluene	10.2	1	10	102	70	130	
1,2-Dichlorobenzene	10.8 10.2	1	10 10	108 102	70 70	130 130	
n-Butylbenzene	11.7	1	10	102	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 Hexachlorobutadiene	8.72	2	10	87	70	130	
1,2,3-Trichlorobenzene	20.2 9.42	2 2	20 10	101 94	70 70	130 130	
Surr: 1,2-Dichloroethane-d4	8.92	2	10	94 89	70	130	
Surr: Toluene-d8	10.4		10	104	70	130	
Surr: 4-Bromofluorobenzene	9.45		10	95	70	130	



12.70

Alpha Analytical, Inc.

Sample Matrix Spike File ID: 09080532.D Sample ID: 09080404-08AMS Analyte		Туре М	S T	est Code:					-
Sample ID: 09080404-08AMS									
•			Ba	atch ID: MS 1	15W080)5N	Analysis Date:	08/05/2009 21:33	
Analyte	Units : µg/L		Run ID: M	SD_15_090	805B		Prep Date:	08/05/2009	
	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME) RPDRef	Val %RPD(Limit)	Qua
Dichlorodifluoromethane	56	2.5	50	0	112	13	167		
Chloromethane	41.8	10	50	Ő	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 1,1-Dichloroethene	61.8	2.5	50	0	124	34	160		
Dichloromethane	51.6 42.7	2.5 10	50 50	0	103 85	60 68	130 130		
trans-1,2-Dichloroethene	52.1	2.5	50	0	104	63	130		
Methyl tert-butyl ether (MTBE)	46.2	1.3	50	Ő	92	56	141		
1,1-Dichloroethane	46.4	2.5	50	Ō	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 1,1,1-Trichloroethane	46.9 55.4	2.5	50	0	94 111	60 59	135 137		
1,1-Dichloropropene	55.4 51.7	2.5 2.5	50 50	0	111	59 63	137		
Carbon tetrachloride	54.8	2.5	50	0	110	50	147		
Benzene	46.7	1.3	50	Ő	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 trans-1,3-Dichloropropene	39.1	2.5	50	0	78	63	130		
1,1,2-Trichloroethane	39.5 46.4	2.5 2.5	50 50	0	79 93	66 68	131 130		
Toluene	40.4	1.3	50 50	0	93 94	66	130		
1,3-Dichloropropane	46.4	2.5	50	0	93	70	130		
Dibromochloromethane	44.8	2.5	50	ō	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 Ethylbenzene	47.4	2.5	50	0	95	70	130		
m,p-Xylene	49.5 52.1	1.3 1.3	50 50	0	99 104	68 64	130 130		
Bromoform	40.8	2.5	50	0	82	64	138		
Styrene	34.5	2.5	50	ő	69	69	130		
o-Xylene	51.6	1.3	50	Ō	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		
sópropylbenzene Bromobenzene	50.2	2.5	50	0	100	64	138		
n-Propylbenzene	44.1 49.9	2.5	50	0	88	70	130		
4-Chlorotoluene	49.9	2.5 2.5	50 50	0 0	99.7 98	66 70	132 130		
2-Chlorotoluene	47.8	2.5	50	0	96	70	130		
1,3,5-Trimethylbenzene	47.4	2.5	50	ő	95	66	136		
ert-Butylbenzene	49	2.5	50	Ō	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 1,4-Dichlorobenzene	48.1	2.5	50	0	96	70	130		
1-Isopropyitoluene	46.1 50.6	2.5	50	0	92	70	130		
1,2-Dichlorobenzene	46.6	2.5 2.5	50 50	0	101 93	66 70	137 130		
n-Butylbenzene	53.3	2.5	50	0	93 107	60	142		
1,2-Dibromo-3-chloropropane (DBCP)	211	15	250	0	85	67	130		
1,2,4-Trichlorobenzene	41.7	10	50	Ő	83	61	137		
Naphthalene	35.7	10	50	Ō	71	40	167		
	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 Surr: Toluene-d8	46.6		50		93	70	130		
Surr: 4-Bromofluorobenzene	51.9 47.5		50 50		104 95	70 70	130 130		



Date:

Alpha Analytical, Inc.

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

QC Summary Report

Work Order: 09080404

Date: 14-Aug-09	(QC Su	mmar	y Repor	t				Work Orde 09080404	
Sample Matrix Spike Duplicate		Type MS	SD Te	est Code:						_
File ID: 09080533.D		,		atch ID: MS	15W080	05N	Analy	sis Date: 0	8/05/2009 21:56	
Sample ID: 09080404-08AMSD	Units : µg/L	F	Run ID: M	SD_15_090	805 B		Prep	Date: 0	8/05/2009	
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVa	I %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 Chloroethane	56.4 46.2	2.5 2.5	50 50	0	113 92	43 39	134 154	54.24 45.09	3.9(20) 2.4(20)	
Bromomethane	40.2	2.5	50	0	92 92	39 19	176	40.14	13.4(20)	
Trichlorofluoromethane	61.4	2.5	50	Ō	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 trans-1,2-Dichloroethene	45.7	10	50	0	91	68	130	42.67	6.8(20)	
Methyl tert-butyl ether (MTBE)	52.9 50.6	2.5 1.3	50 50	0	106 101	63 56	130 141	52.08 46.24	1.5(20) 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 2,2-Dichloropropane	50.5 45.8	2.5 2.5	50 50	0	101 92	67 30	130 152	49.49 44.97	2.0(20) 1.8(20)	
1,2-Dichloroethane	49	2.5	50	0	98	60	132	46.86	4.4(20)	
1,1,1-Trichloroethane	55.3	2.5	50	Ō	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 Benzene	55.8	2.5	50	0	<u></u> 112	50 67	147	54.77	1.8(20)	
Dibromomethane	48.1 50.3	1.3 2.5	50 50	0	96 101	67 69	130 133	46.69 47.45	3.0(20) 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 trans-1,3-Dichloropropene	41.5 43.4	2.5 2.5	50 50	0	83 87	63 66	130 131	39.1 39.5	5.9(20) 9.5(20)	
1,1,2-Trichloroethane	- 50.9	2.5	50	0	102	68	130	46.4	9.2(20)	
Toluêne	48.1	1.3	50	Ő	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 1,2-Dibromoethane (EDB)	47.7 99.4	2.5	50	0	95	70	130	44.84	6.1(20)	
Tetrachloroethene	99.4 53.4	10 2.5	100 50	0	99 107	70 61	130 134	93.06 54.55	6.6(20) 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 m,p-Xylene	50.2	1.3	50	0	100	68	130	49.53	1.3(20)	
Bromoform	53 43.9	1.3 2.5	50 50	0	106 88	64 64	130 138	52.05 40.83	1.9(20) 7.3(20)	
Styrene	35.6	2.5	50 50	. 0	71	69	130	40.03 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 Isopropylbenzene	104	10	100	0	104	70	130	97.12	6.9(20)	
Bromobenzene	49.7 45.6	2.5 2.5	50 50	0 0	99 91	64 70	138 130	50.22 44.07	1.1(20) 3.4(20)	
n-Propylbenzene	49.6	2.5	50	Ő	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 1,3,5-Trimethylbenzene	48.2	2.5	50	0	96	70	130	47.84	0.7(20)	
tert-Butylbenzene	47.4 48.5	2.5 2.5	50 50	0	95 97	66 65	136 137	47.39 48.97	0.0(20) 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 4-Isopropyltoluene	47.8 49.9	2.5 2.5	50 50	0	96 99.8	70 66	130 137	46.11 50.57	3.5(20) 1.4(20)	
1,2-Dichlorobenzene	48.2	2.5	50	0	99.0 96	70	137	46.6	3.4(20)	
n-Butylbenzene	52.7	2.5	50	Ő	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 Naphthalene	44 39.4	10	50	0	88 70	61	137	41.69	5.4(20)	
Hexachlorobutadiene	39.4 93.9	10 10	50 100	0	79 94	40 61	167 130	35.68 94.51	10.0(20) 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 Surr: 4-Bromofluorobenzene	51.8 46.7		50		104	70	130			
	40.7		50		93	70	130			



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.

8409 1154	Alpha Analytical, Inc.	dcox	cth H	lizabeth	77		X	Udicex	5	luputh	Logged in by:
Date/11me	Company	-			-1)	
		-		-					cim		
ssible (I.E.: MS/MSD). :	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). :	Samples should	Level IV QC.	L of 1.0 ug/L.]	hlorate R	4°C. Perc	ceived @	Blank #7650 re	e. Temp	No security seals. Frozen ic	Comments:
		VOC by 524 Criteria	VOC by 524 VOC by 524 Criteria Criteria	Perchlorate Cr		0 10	<u> </u>	08/03/09 09:58	Ą	MW-12-1	BMI09080404-10A
		VOC by 524 Criteria	VOC by 524 VOC by 524 Criteria Criteria	Perchlorate Cr		0 10	ග 	08/03/09 09:25	Ą	MW-12-2	
MS/MSD		VOC by 524 Criteria	VOC by 524 Criteria	Perchlorate Cr		0 10	10	08/03/09 08:48	AQ	MW-12-3	BM109080404-08A
Level IV QC		VOC by 524 Criteria	VOC by 524 Criteria	Perchlorate		0 10	4	08/03/09 08:12	AQ	MW-12-4	BMI09080404-07A
		VOC by 524 Criteria	VOC by 524 Criteria	Perchlorate		0 10	4	08/03/09 07:49	AQ	MW-12-5	BMI09080404-06A
Reno Trip Blank 6/22/09		VOC by 524 Criteria	VOC by 524 Criteria		0	0 10	د	07/31/09 00:00	Â	TB-9-7/31/09	BMI09080404-05A
		VOC by 524 Criteria	VOC by 524 Criteria	Perchlorate Cr		0 10	රා 	07/31/09 08:12	Â	EB-9-7/31/09	BM109080404-04A
		VOC by 524 Criteria	VOC by 524 Criteria	Perchiorate Cr		0 10	රා 	07/31/09 08:24	Ą	MW-22-1	
		VOC by 524 Criteria	VOC by 524 VOC by 524 Criteria Criteria	Perchlorate Cr	 	0	රා 	07/31/09 07:58	Å	MW-22-2	1
		VOC by 524 Criteria	VOC by 524 Criteria	Perchlorate Cr		0 10	- თ 	07/31/09 07:37	Ą	MW-22-3	
Sample Remarks		Requested Tests	_D VOC_TIC_	314_W METALS_D W		3otties Sub TAT	No. of Bottles Alpha Sub	ollection Date	C Matrix	Client Sample ID	Alpha Sample ID
			ırrogates	MSD With Su	-CS, MS/	àl data, l	al/ConC	rt, MBLK, InitC	Final Rp	= DOD QC Required : Final Rpt, MBLK, InitCal/ConCal data, LCS, MS/MSD With Surrogates	QC Level: DS4
Received Date Printed -2009 04-Aug-2009	<u>Cooler Temp</u> Samples Received 4 °C 04-Aug-2009				nitoring	vater Mo	Ground	G005862/JPL Groundwater Monitoring	Job : 0	25743, 25752	PO: 218013 Client's COC #: 257
	Sampled by : Client		waltons@battelle.org	x walton	(614) 424-4117	(614) 4:		Shane Walton		:110	San Diego, CA 92110
	EDD Required : Yes		cutiee@batelle.org	x cutiee	(614) 424-4899	(614) 4;	Band in	Betsy Cutie	-),	đ	Suite C-205
			connerd@battelle.org	x conner	(818) 393-2808	(818) 3		David Conner	H	Institute	Battelle Memorial Institute
			EMail Address	EMa	Phone Number	Phone	2	Report Attention			Client:
09080404 On : 18-Aug-2009	WorkOrder : BMIS09080404 Report Due By : 5:00 PM On : 18-Aug-2009	78	InC. ada 89431-57 15-0406	Alpha Analytical, Inc. 255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778 TEL: (775) 355-1044 FAX: (775) 355-0406	1 Ana e, Suite 21 5-1044	Alpha Ans endale Avenue, Suite 2 TEL: (775) 355-1044	5 Glenda TEL	2			-
Page: 1 of 2	C.A	ORD	REC	CHAIN-OF-CUSTODY RECO	CUS	OF-	I.	CHA			Billing Information :

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

B	
₹	
Q	
3	
₫	
3	
ğ	
ğ	
2	

CHAIN-OF-CUSTODY RECORD

Page: 2 of 2

		CH	AIN	-OF	-CI	CHAIN-OF-CUSTODY RECO	DY I	RECO	ORD	C.A	Page:	Page: Z of Z
				Alp	ha Ai	Alpha Analytical, Inc.	cal, In	:		WorkOrder · BMIS09080404	RMIS000804	104
			255 Gler	idale Ave	mue, Sui	255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778	ks, Nevada	1 89431-577	78			
-			T	EL: (775)) 355-10-	TEL: (775) 355-1044 FAX: (775) 355-0406	(775) 355-()406		Report Due By : 5:00 PM On : 18-Aug-2009	:00 PM On : 1	18-Aug-2009
Client:		Report Attention	ntion	Pho	Phone Number	ber	EMail Address	ddress				
Battelle Memorial Institute		David Conner	a.	(818	(818) 393-2808 x	x 80	connerd@	connerd@battelle.org	U.			
3990 Old Lown Ave Suite C-205		Betsy Cutie		(614	(614) 424-4899 x	x 66	cutiee@batelle.org	atelle.org		EDD Required : Yes	S	
San Diego, CA 92110		Shane Walton	n	(614	(614) 424-4117 x	17 x	waltons@	waltons@battelle.org		Sampled by : Client	ent	
PO: 218013										Cooler Temp	Samples Received	Date Printed
Client's COC #: 25743, 25752	: qof	G005862/JPL Groundwater Monitoring	L Groun	ıdwater f	Monitori	ng				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	: Final R	pt, MBLK, Ini	tCal/Co	nCal dat	a, LCS,	MS/MSD	With Surro	ogates				
									Requested Tests	d Tests		
Alpha Client Sample ID Sample ID	Matri	Collection No. of Bottles Matrix Date Alpha Sub	No. of Alpha	' Bottles Sub	TAT	314_W	METALS_D VOC_TIC_	VOC_TIC_	VOC_W		Saml	Sample Remarks
BMI09080404-11A DUPE-7-3Q09	AQ	08/03/09 00:00	თ	0	10	Perchlorate	ç	VOC by 524 VOC by 524 Criteria Criteria	VOC by 524 Criteria		1 HCI voa an air t	1 HCl voa received contains an air bubble > 6mm.
BMI09080404-12A EB-10-8/3/09	AQ	08/03/09 09:41	თ	0	10	Perchlorate	ç	VOC by 524 VOC by 524 Criteria Criteria	VOC by 524 Criteria			
BMI09080404-13A TB-10-8/3/09	Â	08/03/09 00:00		0	10			VOC by 524 VOC by 524 Criteria Criteria	VOC by 524 Criteria		Reno Tri	Reno Trip Blank 6/22/09

Comments: No security scals. 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). :



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

Billing Information: Name <u>GENALD TOMPKING BATTECLE</u> Address 505 KUNG ALT		Alpha Analytical, Inc. Samilytical, Inc. 255 Glendale Avenue, Suite 21 AZ - Sparks, Nevada 89431-5778 ID	Samples Collected From Which State? AZCANVWAI IDOROTHERI	Fage # / of /
te, Zip		(775) 355-1044 75) 355-0406	Analyses Required	
Client Name BATTELLE / DAVID LOWNER	Po. # 218013	Job# G 305 862	1 CEC	
GARES WAY TOWN AVE. (-255	EMail Address		(20) (20) (34)	
SAN DIEGO, CA GLIIS	(619) 726 - 7311			EDD/EDF? YES NO
Sampled Sampled Refew Lab ID Number 1.01/fice.1	Sample Description	TAT Field containers		Global ID #
BMTN90804	MW-22-3	m VP/5		
	MW	 	\times	
-03		×.	× ×	
S12 - CX	1 EB-9-7/31/29	X	× ×	FOUR BLANK
	JTB-9- 7/31/09			TRIP BLOWE
ADDITIONAL INSTRUCTIONS:				
Signature	Print Name	Com	Company	Date Time
Relinquished by	MARCO MENDON	· /NSIGHT	GEC 8/3	CEZ/ 30/
Relinquished by	Elizabeth Aldrox	x (Jep	84	hall 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	<pre>ste OT - Other AR - Air ** c reported unless other arrangements are n</pre>	**: L-Liter V-Voa S-Soil Jar O-() made. Hazardous samples will be returned :	O-Orbo T-Tedlar B-Brass I ed to client or disposed of at client expense	P-Plastic OT-Other se. 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 CELLAND TOMPENDS BATTELLE Address 505 KING AVE		I, Inc. Suite 21 5778	Samples Collected From Which State? AZCA_XNVWA IDOROTHERF	State? 25752 Page # of
(асимви), OH	L(320) Phone Fax (7	Phone (775) 355-1044 Fax (775) 355-0406	Analyses Required	
Client Name BATTELLE DAVID LOWNER	510812 # OP	Job# 6005862	2)	Required QC Level?
. MUCT C-	EMail Address		200	- = ① v
, CA 9211	Phone # 726 - 7311	Fax #		EDD / EDF? YES NO
e Key	<u> </u>	Total and type of	Lei	Giobal ID #
Satispied Satispied Below Lab ID Number (Use Only)	Sample Description	See below		REMARKS
1- 04 12/18 64-1	0 MW-12-5	- - -	×	
5007	M٣.	1 ve /4 ×	×	LEVEL TO WC
	8 MW-12-3		××	MS/MSD
20- 20-	MW-12-2	$\times 5/A$	××	
0/-) MW - 12 - 1	×	× ×	
-//	DUPE - 7 - 3009	×	X	DUPLICATE
°/-	2 EB-10-8/3/09		XX	
	3-13-10-8/3/09			THIP RIANK
	C			
AUDITIONAL INSTRUCTIONS:				
Signature	Print Name	Cor	Company	Date Time
Relinquished by	MARCO MENDORA	M INSIGHT	tec inc 8/	052/ 220
Relinquished by	Klizabeth Hdco		oha 8.4	107 1154
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	iste OT - Other AR - Air **: are reported unless other arrangements are m	**: L-Liter V-Voa S-Soil Jar O. made. Hazardous samples will be returned	O-Orbo T-Tedlar B-Brass ed to client or disposed of at client exper	P-Plastic OT-Other nse. 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.



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 San Diego, CA 92110 (818) 393-2808

Suite C-205

CASE NARRATIVE

Project: G005862/JPL Groundwater Monitoring

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 A	nalytes
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/Chainof-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.

Walter Acrim Kandy Saulman Roger Scholl

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.



255 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 ConnerPhone:(818) 393-2808Fax:(614) 458-6641Date 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 : N	1W-25-5						
Lab ID : B	MI09080502-01A	Perchlorate	ND	1.00 µg/L	08/04/09	08/06/09	
	1W-25-4 BM109080502-02A	Perchlorate	7.43	1.00 μg/L	08/04/09	08/06/09	
Client ID : N	1W-25-3						
Lab ID : B	M109080502-03A	Perchlorate	9.11	1.00 µg/L	08/04/09	08/06/09	
	1W-25-2 3MI09080502-04A	Perchlorate	13.1	1.00 µg/L	08/04/09	08/06/09	
Client ID : N	4W-25-1						
Lab ID : B	M109080502-05A	Perchlorate	9.54	1.00 µg/L	08/04/09	08/06/09	
	C B-11-8/4/09 SM109080502-06A	Perchlorate	ND	1.00 μg/L	08/04/09	08/06/09	
Client ID : N	1W-26-2						
Lab ID : B	MI09080502-08A	Perchlorate	ND	1.00 µg/L	08/04/09	08/06/09	
	1W-26-1 BM109080502-09A	Perchlorate	2.09	1.00 μg/L	08/04/09	08/06/09	

ND = Not Detected

Roger Scholl

Kandy Dantmer

Walter Hindman

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



255 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

David Conner Attn: Phone: (818) 393-2808 (614) 458-6641 Fax: 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 : Lab ID :	MW-25-5 BMI09080502-01A	Chromium (Cr)	ND	0.0050 mg/L	08/04/09	08/13/09		
Client ID : Lab ID :	MW-25-4 BMI09080502-02A	Chromium (Cr)	ND	0.0050 mg/L	08/04/09	08/13/09		
Client ID : Lab ID :	MW-25-3 BMI09080502-03A	Chromium (Cr)	ND	0.0050 mg/L	08/04/09	08/13/09		
Client ID : Lab ID :	MW-25-2 BMI09080502-04A	Chromium (Cr)	ND	0.0050 mg/L	08/04/09	08/13/09		
Client ID : Lab ID :	MW-25-1 BMI09080502-05A	Chromium (Cr)	ND	0.0050 mg/L	08/04/09	08/13/09		
Client ID : Lab ID :	EB-11-8/4/09 BMI09080502-06A	Chromium (Cr)	ND	0.0050 mg/L	08/04/09	08/13/09		
Client ID : Lab ID :	MW-26-2 BMI09080502-08A	Chromium (Cr)	ND	0.0050 mg/L	08/04/09	08/13/09		
Client ID : Lab ID :	MW-26-1 BMI09080502-09A	Chromium (Cr)	ND	0.0050 mg/L	08/04/09	08/13/09		

ND = Not Detected

Roger Scholl

Kandy

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**



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

ANALYTICAL REPORT

Battelle Memorial Institute Attn: David Conner 3990 Old Town Ave Phone: (818) 393-2808 San Diego, CA 92110 Fax: (614) 458-6641 Job#: G005862/JPL Groundwater Monitoring

Tentatively Identified Compounds - Volatile Organics by GC/MS

				Estimated		1.1. B 1077 W	
		Parameter	Estimated	Reporting	Date	Date	Date
			Concentration	Limit	Received	Sampled	Analyzed
Client ID : Lab ID :	MW-25-5 BMI09080502-01A	Sulfur dioxide	48	2.0 μg/L	08/05/09	08/04/09	08/14/09
Client ID : Lab ID :	MW-25-4 BMI09080502-02A	Sulfur dioxide	2.5	2.0 μg/L	08/05/09	08/04/09	08/14/09
Client ID : Lab ID :	MW-25-3 BMI09080502-03A	* * * None Found * * *	ND	2.0 μg/L	08/05/09	08/04/09	08/14/09
Client ID : Lab ID :	MW-25-2 BMI09080502-04A	* * * None Found * * *	ND	2.0 μg/L	08/05/09	08/04/09	08/14/09
Client ID : Lab ID :	MW-25-1 BMI09080502-05A	* * * None Found * * *	ND	2.0 μg/L	08/05/09	08/04/09	08/15/09
Client ID : Lab ID :	EB-11-8/4/09 BMI09080502-06A	* * * None Found * * *	ND	2.0 μg/L	08/05/09	08/04/09	08/14/09
Client ID : Lab ID :	TB-11-8/4/09 BMI09080502-07A	* * * None Found * * *	ND	2.0 µg/L	08/05/09	08/04/09	08/07/09
Client ID : Lab ID :	MW-26-2 BMI09080502-08A	* * * None Found * * *	ND	2.0 µg/L	08/05/09	08/04/09	08/15/09
Client ID : Lab ID :	MW-26-1 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

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

8/18/09

Report Date

Page 1 of 1

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.



255 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

Alpha Analytical Number: BMI09080502-01A Client I.D. Number: MW-25-5 Attn:David ConnerPhone:(818) 393-2808Fax:(614) 458-6641

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 (DBC	P) ND	2.5	μg/L
25	Trichloroethene	ND	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

Rogen Scholl

Kandy Sandmer

Walter A

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.



Report Date Page 1 of 1



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

ANALYTICAL REPORT

Battelle Memorial Institute	Attn: David Conner		
3990 Old Town Ave	Phone: (818) 393-2808		
San Diego, CA 92110	Fax: (614) 458-6641		
Job#: G005862/JPL Groundwater Monitoring	· · ·		
Alpha Analytical Number: BMI09080502-02A	Sampled: 08/04/09		
Client I.D. Number: MW-25-4	Received: 08/05/09		

Analyzed: 08/14/09

Volatile Organics by GC/MS

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

Rogen Scholl

Kundg Danlmer

Walter Acrihan

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

Page 1 of 1



255 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

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

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

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

Analyzed: 08/14/09

Volatile	Organics	bv	GC/MS
· oracine	organieo	0,	00,1110

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

Kandy Sandner

Walter Hiridman

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.





255 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: BMI09080502-04A	Sampled: 08/04/09
Client I.D. Number: MW-25-2	Received: 08/05/09

Volatile Organics by GC/MS

Analyzed: 08/14/09

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

Kandy Danlmen

Walter Hirihm

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 Page 1 of 1



255 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

Alpha Analytical Number: BMI09080502-05A Client I.D. Number: MW-25-1 Attn: David Conner Phone: (818) 393-2808 Fax: (614) 458-6641

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

Volatile Organics by GC/MS

	Compound	Concentration	Reporting	Limit		Compound	Concentration	Reporting L	imit
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
З	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	μg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	μg/L	40	Bromoform	ND	0.50	μg/L
6	Trichlorofluoromethane	ND	0.50	μg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	μg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	μg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	μg/L
10	trans-1,2-Dichloroethene	ND	0.50	μg/L	45	Isopropylbenzene	ND	0.50	μg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	μg/L
12	1,1-Dichloroethane	ND	0.50	μα/L	47	n-Propylbenzene	ND	0.50	μg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	μg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	μg/L
15	Bromochloromethane	ND	0.50	μα/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 (DBC	P) 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

Walter A

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.



Report Date Page 1 of 1



255 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

Alpha Analytical Number: BMI09080502-06A Client I.D. Number: EB-11-8/4/09 Attn: David Conner Phone: (818) 393-2808 Fax: (614) 458-6641

Sampled: 08/04/09

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

Volatile Organics by GC/MS

	Compound	Concentration	Reporting	Limit		Compound	Concentration	Reporting Li	mit
1	Dichlorodifluoromethane	ND	0.50	μg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	μg/L	37	Chlorobenzene	ND	0.50	µg/L
з	Vinyl chłoride	ND	0.50	μg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	μg/L	39	m,p-Xylene	ND	0.50	μg/L
5	Bromomethane	ND	1.0	μg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	μg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	μg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	μg/L
16	Chioroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	_µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	μg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	μg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBC	P) ND	2.5	µg/L
25	Trichloroethene	ND	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

Kandy Santur

lter 4

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 Page 1 of 1



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

ANALYTICAL REPORT

Battelle Memorial Institute	Attn: 1
3990 Old Town Ave	Phone: (
San Diego, CA 92110	Fax: (
Job#: G005862/JPL Groundwater Monitoring	
Alpha Analytical Number: BMI09080502-074	Sample

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

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

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

Volatile Organics by GC/MS

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

Kandy Dandmer

Walter Arihm

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.



Report Date Page 1 of 1



255 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

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

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

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

Analyzed: 08/15/09

Volatile Organics by GC/MS

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

Rogen Scholl

Kandy Sandmer

Walter Aridner

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.



Report Date Page 1 of 1



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

ANALYTICAL REPORT

Battelle Memorial Institute	Attn: David Conner
3990 Old Town Ave	Phone: (818) 393-2808
San Diego, CA 92110	Fax: (614) 458-6641
Job#: G005862/JPL Groundwater Monitoring	
Alpha Analytical Number: BMI09080502-09A	Sampled: 08/04/09
Client I.D. Number: MW-26-1	Received: 08/05/09
	Analyzed: 08/15/09

Volatile Organics by GC/MS

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

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

lter Acrihan Wa

8/18/09

Report Date

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.

Page 1 of 1



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	рН	
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



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

Date: 17-Aug-09		QC Sumr	nary Report			Work Orde 09080502	
Method Blank File ID: 14		Type MBLK	Batch ID: 22492	lethod 314.0		08/06/2009 15:38	
Sample ID: MB-2 Analyte	2492 Units : μ Result		ID: IC_3_090806A kVal_SpkRefVal %RE	EC LCL(ME)	Prep Date: JCL(ME) RPDRef	08/06/2009 Val %RPD(Limit)	Qual
Perchlorate	ND	1		,	· · · · · · · · · · · · · · · · · · ·		
Laboratory Fortif	ied Blank	Type L FB	Test Code: EPA M Batch ID: 22492	lethod 314.0	Analysis Date:	08/06/2009 15:56	
Sample ID: LFB-; Analyte	22492 Units : µ Result		ID: I C_3_090806A kVal_SpkRefVal %RE	EC LCL(ME)	Prep Date: JCL(ME) RPDRef	08/06/2009 Val %RPD(Limit)	Qual
Perchiorate	24.8	2	25 99	9 85	115		
Sample Matrix Sp File ID: 35	ike	Type LFM	Test Code: EPA M Batch ID: 22492	lethod 314.0	Analysis Date:	08/06/2009 22:04	
Sample ID: 09080 Analyte	0502-03ALFM Units : µ Result		ID: I C_3_090806A kVal_SpkRefVal %RE	EC LCL(ME)	Prep Date: UCL(ME) RPDRef	08/06/2009 Val %RPD(L imit)	Qual
Perchlorate	34.4	2	25 9.105 10	1 80	120		
Sample Matrix Sp File ID: 36	ike Duplicate	Type LFMD	Test Code: EPA M Batch ID: 22492	lethod 314.0	Analysis Date:	08/06/2009 22:22	
Sample ID: 0908	0502-03ALFMD Units : µ	g/L Run	ID: IC_3_090806A		Prep Date:	08/06/2009	
Analyte	Result	PQL Sp	kVal SpkRefVal %R	EC LCL(ME)	UCL(ME) RPDRef	Val %RPD(Limit)	Qual
Perchlorate	34.7	2	25 9.105 10	2 80	120 34.4	3 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.



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

Date: 17-Aug-09	(QC S	ummar	y Repor	t				Work Ord 09080502	
Method Blank File ID: 081309.B\087SMPL.D\ Sample ID: MB-22512	Units : mg/L	Type I	Ba	est Code: El atch ID: 225 P/MS_0908	12K	thod 200.8		/sis Date: Date:	08/13/2009 22:44 08/10/2009	
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRef	Val %RPD(Limit)	Qua
Chromium (Cr)	ND	0.00	5							
Laboratory Control Spike File ID: 081309.B\088_LCS.D\ Sample ID: LCS-22512 Analyte	Units : mg/L Result	Type I	Ba Run ID: I C	est Code: El atch ID: 225 P/MS_0908 SpkRefVal	12K 13C		Prep	Date:	08/13/2009 22:49 08/10/2009 Val %RPD(Limit)	Qual
Chromium (Cr)	0.0457	0.00	5 0.05		91	80	120			
Sample Matrix Spike File ID: 081309.B\092SMPL.D\ Sample ID: 09080502-03AMS Analyte	Units : mg/L Result	Type I	Ba Run ID: IC	est Code: El atch ID: 225 P/MS_0908 SpkRefVal	12K 13C		Prep	Date:	08/13/2009 23:12 08/10/2009 Val %RPD(Limit)	Qual
Chromium (Cr)	0.0531	0.00			106	80	120			
Sample Matrix Spike Duplicate File ID: 081309.B\093SMPL.D\ Sample ID: 09080502-03AMSD	Units : mg/L		Ba Run ID: IC	est Code: El atch ID: 225 P/MS_0908	12K 13C		Prep	Date:	08/13/2009 23:17 08/10/2009	
Analyte Chromium (Cr)	Result 0.0618	PQL 0.00		SpkRefVal 0		5 LCL(ME) 80	UCL(ME) 120	0.053	Val %RPD(Limit) 13 15.1(20)	Qual 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.



Date: 18-Aug-09	(QC Si	ummary Report		Work Orde 09080502	
Method Blank File ID: 09081411.D		Туре N	Batch ID: MS15W0814M	-	08/14/2009 15:40	
Sample ID: MBLK MS15W0814M Analyte	Units : µg/L		Run ID: MSD_15_090814A SpkVal SpkRefVal %REC LCL(I	Prep Date:	08/14/2009	Qual
Dichlorodifluoromethane	Result	PQL				Qual
Chloromethane	ND ND	0.5 1				
Vinyl chloride	ND	0.5				
Chloroethane	ND	0.5				
Bromomethane	ND	1				
Trichlorofluoromethane	ND ND	0.5 0.5				
Dichloromethane	ND	0.5				
Freon-113	ND	0.5				
trans-1,2-Dichloroethene	ND	0.5				
Methyl tert-butyl ether (MTBE) 1,1-Dichloroethane	ND	0.5				
2-Butanone (MEK)	ND ND	0.5 10				
cis-1,2-Dichloroethene	ND	0.5				
Bromochloromethane	ND	0.5				
Chloroform	ND	0.5				
2,2-Dichloropropane 1,2-Dichloroethane	ND ND	0.5 0.5				
1,1,1-Trichloroethane	ND	0.5				
1,1-Dichloropropene	ND	0.5				
Carbon tetrachloride	ND	0.5				
Benzene Dibromomethane	ND ND	0.5 0.5				
1,2-Dichloropropane	ND	0.5				
Trichloroethene	ND	0.5				
Bromodichloromethane	ND	0.5				
4-Methyl-2-pentanone (MIBK) cis-1,3-Dichloropropene	ND ND	2.5				
trans-1,3-Dichloropropene	ND	0.5 0.5				
1,1,2-Trichloroethane	ND	0.5				
Toluene	ND	0.5				
1,3-Dichloropropane Dibromochloromethane	ND ND	0.5				
1,2-Dibromoethane (EDB)	ND	0.5 1				
Tetrachloroethene	ND	0.5				
1,1,1,2-Tetrachloroethane	ND	0.5				
Chlorobenzene	ND	0.5				
Ethylbenzene m,p-Xylene	ND ND	0.5 0.5				
Bromoform	ND	0.5				
Styrene	ND	0.5				
o-Xylene	ND	0.5				
1,1,2,2-Tetrachloroethane 1,2,3-Trichloropropane	ND ND	0.5 1				
Isopropylbenzene	ND	0.5				
Bromobenzene	ND	0.5				
n-Propylbenzene	ND	0.5				
4-Chlorotoluene 2-Chlorotoluene	ND ND	0.5 0.5				
1,3,5-Trimethylbenzene	ND	0.5				
tert-Butylbenzene	ND	0.5				
1,2,4-Trimethylbenzene	ND	0.5				
sec-Butylbenzene 1,3-Dichlorobenzene	ND ND	0.5				
1,4-Dichlorobenzene	ND	0.5 0.5				
4-isopropyltoluene	ND	0.5				
1,2-Dichlorobenzene	ND	0.5				
n-Butylbenzene 1,2-Dibromo-3-chloropropane (DBCP)	ND	0.5				
1,2,4-Trichlorobenzene	ND ND	2.5 1				
Naphthalene	ND	1				
Hexachlorobutadiene	ND	1				
1,2,3-Trichlorobenzene	ND	1	10 100 7	100		
Surr: 1,2-Dichloroethane-d4 Surr: Toluene-d8	10.3 10		10 103 70 10 100 70			
	IU		10 100 70	, 100		



Sum - H-Borndilucrobenzone 6.93 10 89 70 130 Laboratory Control Spike File 10: 060408D Type LCS Test Code: Batch ID: MSTSW0814M Analysis Date: 06/14/2009 14:16 Sample ID: LCS MSTSW0814M Units: ygL Run ID: MSD. 15_00014A Prop Date:: 06/14/2009 14:16 Analyte Result ID: MSD. 15_00014A File Code: Status POL Status POL Status Code: 14:17 Code: 14:17 Code: 14:17 POL Status Code: 14:17 Code: 14:17 </th <th>Date: 18-Aug-09</th> <th>(</th> <th>QC Sun</th> <th>nmary R</th> <th>eport</th> <th></th> <th></th> <th>Work Ord 09080502</th> <th></th>	Date: 18-Aug-09	(QC Sun	nmary R	eport			Work Ord 09080502	
Fiel D: 00091408.D Each ID: MST.Y00914M Analysic Date: 001/02009 14:1242009 Analysic LCS MSTSW00914M POL SpkVal SpkV	Surr: 4-Bromofluorobenzene	8.93		10	89	70	130		
Analysis Result POL SpxMail SpxRerVal %REC LCL(ME) UCL(ME) PPDRerVal %RPD(Limit) Dichlorodiflucromethane 12.5 1 10 12.6 70 130 Uning charing 11.2 1 10 12.7 130 Disconserbane 11.2 1 10 12.7 130 Disconserbane 12.2 10 132.7 130 130 Trichloroflucromethane 12.2 10 166.7 130 130 Dichloromethane 10.8 2 10 166.7 130 130 Dichloromethane 11.4 1 10 114.7 70 130 Dichloromethane 10.8 2 10 116.7 70 130 Dichloromethane 10.7 1 10 117.7 130 130 Dichloromethane 11.2 1 10 117.7 130 130 Dichloromethane 11.2 1 10 117.7 130 130			Type LCS			IM	Analysis Da	te: 08/14/2009 14:16	
Dicksondilucronethane 125 1 10 125 70 130 Viny Idholide 11.4 1 10 114 70 130 Viny Idholide 11.4 1 10 114 70 130 Bromomethane 13.2 2 10 132 70 130(130) Tichlorothoromethane 12 1 10 110 70 130 Dichoromethane 10.6 2 10 132 70 130 Dichoromethane 11.4 1 10 114 70 130 Dichoromethane 11.2 1 10 114 70 130 Itals 1.2 Dichloroethane 11.2 1 10 112 70 130 L2-Dichloroptane 12.5 1 10 112 70 130 L2-Dichloroptane 11.2 10 112 70 130 L2-Dichloroptane 11.2 10 112 70 <th>Sample ID: LCS MS15W0814M</th> <th>Units : µg/L</th> <th>Ru</th> <th>un ID: MSD_</th> <th>15_090814A</th> <th></th> <th>Prep Date:</th> <th>08/14/2009</th> <th></th>	Sample ID: LCS MS15W0814M	Units : µg/L	Ru	un ID: MSD_	15_090814A		Prep Date:	08/14/2009	
Chlocmethane 10.8 2 10 108 70 130 Chlocestane 11.4 10 112 70 130 Ernomethane 13.2 2 10 112 70 130 Trichicordhuromethane 12 1 10 120 70 130 Linchicordhuromethane 11 1 10 100 70 130 Linchicordhuromethane 11.4 1 10 114 70 130 Linchicordhuromethane 11.4 1 10 114 70 130 Linchicordhuromethane 11.4 1 10 114 70 130 Linchicordhuromethane 11.5 10 116 70 130 Linchicordhuromethane 11.5 1 10 117 70 130 Linchicordhane 11.2 1 10 117 70 130 Linchicordhane 11.5 1 10 117	Analyte	Result	PQL	SpkVal Spk	RefVal %REC I	LCL(ME	E) UCL(ME) RPDF	RefVal %RPD(Limit)	Qua
Chiloromethane Chiloromethane 10.4 10 112 70 130 Chiloredtane 11.2 1 10 112 70 130 Erronmethane 12.2 1 10 120 70 130(130) Trichicorducionethane 12.2 10 106 70 130 Dichicoramethane 10.4 10 10 70 130 Dichicoramethane 10.4 10 100 70 130 Chiloromethane 10.4 10 112 10 102 70 130 Chiloroform 10.6 1 10 114 70 130 L'ADchiloroptethane 11.5 1 10 115 70 130 L'ADchiloroptethane 11.5 1 10 117 70 130 L'ADchiloroptethane 11.5 1 10 117 70 130 L'ADchiloroptethane 11.5 1 10 111 70 <td>Dichlorodifluoromethane</td> <td>12.5</td> <td>1</td> <td>10</td> <td>125</td> <td>70</td> <td>130</td> <td></td> <td></td>	Dichlorodifluoromethane	12.5	1	10	125	70	130		
Chicoethane 11.2 1 10 112 70 130 Trichioofluoromethane 12 1 10 120 70 130 1.1.Ochioromethane 11 1 10 100 70 130 Dichforomethane 10.6 2 10 106 70 130 Trichiorofethane 11.4 10 110 70 130 Trichiorofethane 11.2 1 10 112 70 130 Calcorofethane 11.2 1 10 112 70 130 Calcorofethane 11.2 1 10 116 70 130 Calcorofethane 11.2 1 10 112 70 130 Calcorofethane 10.7 1 10 117 70 130 Calcorofethane 11.2 1 10 111 70 130 L2-Dichoromethane 11.2 1 10 111 70			2	10					
Bromomethane 13.2 2 10 13.2 70 1300 1.1-Dichlorosthene 11 1 10 10 70 130 1.1-Dichlorosthene 11 1 10 10 70 130 trans-1.2-Dichlorosthene 11.4 1 10 114 70 130 trans-1.2-Dichlorosthene 11.4 1 10 114 70 130 cist-2.2-Dichlorosthene 11.2 10 112 70 130 cist-2.2-Dichlorosthene 12.2 10 105 70 130 2.2-Dichlorosthene 11.2 10 112 70 130 1.1-Dichlorosthene 11.2 10 112 70 130 1.1.1-Trichlorosthene 11.2 10 112 70 130 1.1.1 10 111 70 130 130 1.1.2 10 112 70 130 130 1.1.2 10	•								
Thichicrofusion effane 12 1 10 120 70 130 Dichicromethane 16 2 10 106 70 130 Trais 12-Dichicroethane 114 1 10 114 70 130 Metry terbudy ether (MTBE) 11 0.5 10 110 70 130 Cis 12-Dichicroethane 11.2 1 10 112 70 130 Cis 12-Dichicroethane 12.5 1 10 126 70 130 Chicroform 16.6 1 10 106 70 130 12-Dichicroethane 11.7 10 117 70 130 12-Dichicroprogene 11.2 10 112 70 130 11-Dichicroprogene 11.1 10 111 70 130 12-Dichicroprogene 11.1 10 111 70 130 12-Dichicroprogene 11.1 10 111 70 130 <td></td> <td></td> <td></td> <td>-</td> <td></td> <td></td> <td></td> <td></td> <td>L51</td>				-					L51
1.1-Dichloroethene 11 1 10 70 130 Uchloroethene 11.4 1 10 114 70 130 trans.1.2-Dichloroethene 11.9 11 0.5 10 110 70 130 1.1-Dichloroethane 11.2 10 112 70 130 Bromochloromethane 11.4 1 10 114 70 130 2.2-Dichloroethane 12.5 1 10 125 70 130 2.2-Dichloroethane 11.5 1 10 117 70 130 2.2-Dichloroethane 11.2 10 117 70 130 1.1.1-Dichloroethane 11.2 10 117 70 130 2.2-Dichloroethane 11.1 10 117 70 130 1.1.1-Dichloroethane 11.2 10 112 70 130 Dioroomethane 11.2 10 111 70 130 Dioroomethane 11.2 10 112 70 130 Dioroome									LUT
Dichloromethane 106 2 10 146 10 147 70 130 Methy Iderburyl ether UNPERD 11 0.5 10 100 70 130 1.1-Dichloroethane 11.2 1 0 114 70 130 Chiotoform 10.6 1 0 114 70 130 Chiotoform 10.6 1 0 114 70 130 Chiotoform 10.6 1 0 116 70 130 1.2-Dichloroethane 11.5 10 115 70 130 1.1-Dichloroptopane 11.2 1 0 117 70 130 1.1-Dichloroptopane 11.1 1 0 111 70 130 1.2-Dichloroptopane 11.1 1 0 111 70 130 1.2-Dichloroptopane 11.2 1 0 112 70 130 1.2-Dichloroptopane 10.4 1				-					
trans-1.2-Dichlorosthene 11.4 1 10 114 70 130 1.1-Dichlorosthane 10.9 1 0 109 70 130 5:1-2-Dichlorosthane 11.4 1 0 114 70 130 Bromochloromethane 11.4 1 0 114 70 130 2.2-Dichlorosthane 12.5 1 0 125 70 130 2.2-Dichlorosthane 11.5 1 0 117 70 130 1.1-Dichlorosthane 11.2 10 117 70 130 2.2-Dichlorosthane 11.2 10 117 70 130 Carbon tetrachloride 11.7 1 0 117 70 130 Carbon tetrachloride 11.1 10 111 70 130 130 Dibromoreshane 11.1 10 111 70 130 130 Dibromoreshane 11.1 10 111 70 130 130 L2-Dichloropropene 10.2 10 102 </td <td>,</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	,								
1,1-Dichloroethane 10,9 1 10 109 70 130 Bromochloromethane 11,4 1 10 114 70 130 Bromochloromethane 12,5 1 10 126 70 130 2.2-Dichloropropane 12,5 1 10 125 70 130 1.1.1-Trichloroethane 11,2 10 112 70 130 Carbon tetrachloride 11,7 1 10 117 70 130 Dibromomethane 11,2 10 112 70 130 Dibromotethane 11,1 10 111 70 130 Dibromotethane 11,1 10 111 70 130 Trichloroethane 11,1 10 111 70 130 Trichloroethane 10,4 10 104 70 130 Trichloroethane 10,2 10 102 70 130 1,3-Dichloropropane 10,2 10 104 70 130 1,1-2-Trichloroethane									
cis-1.2-Dichloroethane 11.2 1 10 11.4 70 130 Chloroform 10.6 10 106 70 130 Chloroform 10.6 10 106 70 130 1.2-Dichloropropane 12.5 10 10.7 70 130 1.2-Dichloropropane 11.2 10 11.7 70 130 1.1-Dichloropropane 11.2 10 11.7 70 130 Cahon tetraknolide 11.7 10 11.7 70 130 Benzene 11.1 10 111 70 130 12-Dichloropropane 11.1 10 111 70 130 12-Dichloropropane 11.1 10 111 70 130 1.2-Dichloropropane 11.1 10 112 70 130 Chaon tetrakene 11.2 10 104 70 130 I-1.3-Dichloropropane 10.2 10 104 70			0.5						
Bromochloromethane 11.4 1 10 11.4 70 130 2.2-Dichloropropane 12.5 1 10 125 130 2.2-Dichloropropane 12.5 1 10 125 70 130 1.1-Trichloroethane 11.5 1 10 115 70 130 Carbon tetrachloride 11.7 1 10 112 70 130 Carbon tetrachloride 11.7 1 0 112 70 130 Dibromomethane 11.1 0 111 70 130 Dibromomethane 11.2 1 0 112 70 130 L2-Dichloropropene 11.1 10 111 70 130 14 L3-Dichloropropene 10.2 10 102 70 130 Tarkin-Josoftenane 10.2 10 102 70 130 L2-Dichloropropene 10.2 10 102 70 130 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>									
Chloroform 10.6 1 10 106 70 130 2.2-Dichloroporpane 12.5 1 10 107 70 130 1.2-Dichloroporpane 11.5 1 10 107 70 130 1.1-Dichloroporpane 11.2 1 10 112 70 130 Carbon tetrachloride 11.7 1 10 117 70 130 Dibromomethane 11.1 1.5 10 111 70 130 1.2-Dichloropropane 11.1 10 111 70 130 1.2-Dichloropropane 11.1 10 111 70 130 1.2-Dichloropropane 10.2 1 10 112 70 130 1.2-Dichloropropane 10.2 1 10 102 70 130 1.2-Dichloropropane 10.2 10 104 70 130 1.12-Tichloropropane 10.2 10 104 70 1			•						
2.2-Dichloropopane 12.5 1 10 125 10 126 130 1.1-Dichloropopane 11.5 10 115 10 112 70 130 Carbon tetrachloride 11.7 10 117 70 130 Carbon tetrachloride 11.7 10 117 70 130 Dibromorethane 11.1 0.5 10 111 70 130 Dibromorethane 11.1 10 111 70 130 Tickloroptopane 11.1 10 111 70 130 Dibromorethane 11.2 10 112 70 130 Tickloroptopene 10.2 10 102 70 130 Tarsh-3.Dichloroptopene 10.2 10 104 70 130 1.2-Tickhoroptenane 9.95 1 10 104 70 130 Toluene 10.4 0.5 10 104 70 130 L2-Dioromochhane (EDB) 22.3 2 20 111 70 130									
1.2-Dichloroberhane 10.7 1 10 107 70 130 1.1-Dichloropropene 11.2 10 112 70 130 1.1-Dichloropropene 11.2 10 117 70 130 Carbon tetrachonide 11.1 0.5 10 111 70 130 Dibromomethane 11.2 1 10 112 70 130 Dibromomethane 11.1 1 10 111 70 130 Trichloroptopane 11.1 1 10 111 70 130 Trichloroptopene 10.2 1 10 104 70 130 Toluere 10.4 1 10 104 70 130 1.3-Dichloropropene 10.2 1 10 104 70 130 Dibromochhane (EDB) 22.3 2 20 111 70 130 Dibromochhane (EDB) 22.3 2 20 111 70 130 1.2-Dithoropthane 10.2 0.5 10 104 </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>									
1,1-Tichkhoroefhane 11.5 1 10 115 70 130 Carbon tetrachkoride 11.7 1 10 117 70 130 Carbon tetrachkoride 11.1 10 117 70 130 Dibromorethane 11.2 10 112 70 130 Dibromorethane 11.1 10 112 70 130 Dibromorethane 11.1 10 112 70 130 Grondochhoroenthane 11.1 10 112 70 130 Trichkoroethane 10.2 10 102 70 130 trans: 13-Dichkoropropene 10.2 10 104 70 130 Tolkene 10.4 0.5 10 104 70 130 Tolkene 10.2 1 10 102 70 130 Dibromochkoromethane (EDB) 2.2.3 2.0 1111 70 130 L2-Diorbonethane (EDB) 2.3.2 2.0 111 70 130 Dibromochkoromethane 10.8<			-						
Carbon tetrachloride 11.7 1 10 117 70 130 Dibromomethane 11.2 1 0 111 70 130 1.2-Dichloropropane 11.1 1 10 111 70 130 Tichloroethene 11 1 10 111 70 130 Bromodichloromethane 11.1 1 10 112 70 130 Si-3.Dichloropropene 10.2 1 10 102 70 130 Toluene 10.4 0.5 10 104 70 130 Dibromochloromethane 9.95 1 10 102 70 130 1.2-Ditorhorethane (EDB) 22.3 2 20 111 70 130 1.2-Ditorhorethane (EDB) 22.3 2 20 111 70 130 1.1.1.2-Tetrachloroethane 10.8 10 108 70 130 1.1.1.2-Tetrachloroethane 10.4 0.5 10 107 130 Diorbenzene 10.7 0.5 <td< td=""><td></td><td></td><td>-</td><td></td><td></td><td>70</td><td></td><td></td><td></td></td<>			-			70			
Benzene 11.1 0.5 10 11.1 70 130 Dibromomethane 11.2 1 10 112 70 130 1.2-Dichloropropane 11.1 1 10 111 70 130 Trichloroethane 11.1 1 10 112 70 130 Bromodichloromethane 11.2 1 10 112 70 130 trans-1.3-Dichloropropane 10.4 1 10 104 70 130 1,1.2-Trichloroethane 10.4 1 10 104 70 130 1.3-Dichloropropane 10.2 1 10 102 70 130 1.3-Dictaromethane (EDB) 22.3 2 20 111 70 130 1.3-Dictarohoroethane 10.8 1 10 102 70 130 1.3-Dictarohoroethane 10.4 0.5 10 104 70 130 1.1.1.2-Tetrachoroethane 10.4			•						
Dibromorethane 11.2 1 0 11.2 7.0 130 1.2-Dickhoropropane 11.1 1 10 111 70 130 Trichloropropane 11.1 1 10 112 70 130 Bromodichloropropene 11.1 1 10 112 70 130 Lis-Ja-Dichloropropene 10.2 1 10 104 70 130 Toluene 10.4 0.5 10 104 70 130 Ja-Dichloropropane 10.2 1 10 102 70 130 Ja-Dichloropropane 10.2 1 10 102 70 130 Ja-Dichorochtane (EDB) 22.3 2 20 111 70 130 L2-Dibromochtane (EDB) 22.3 2 20 111 70 130 L2-Dibromochtane (EDB) 22.3 2 20 10 10 10 10 10 10 10 1									
1.2-Dichloropropane 11.1 1 10 110 70 130 Trichlorosethane 11.2 1 10 110 70 130 Bromodichloromethane 11.2 1 10 111 70 130 Itanai 1.3-Dichloropropene 10.2 1 10 111 70 130 Itanai 1.3-Dichloropropene 10.4 1 10 104 70 130 Itanai 1.3-Dichloropropene 10.2 1 10 104 70 130 I.3-Dichloropropane 10.2 1 10 104 70 130 I.3-Dichloropropane 10.2 1 10 100 70 130 I.2-Dibromochtane (EDB) 22.3 2 20 111 70 130 I.1.1.2-Tetrachloroethane 10.1 1 10 101 70 130 Chiorobenzene 10.2 0.5 10 102 70 130 Ethyleenzene 0.6 1 102 70 130 I.1.2-Tetrachloroethane <									
Trichtoroethane 11 1 10 110 70 130 Bromodichhormethane 11.1 1 10 111 70 130 trans-1.3-Dichloropropene 10.2 1 10 102 70 130 Toluene 10.4 1 10 104 70 130 Toluene 10.4 10 104 70 130 Dibromochloroptane 9.5 1 10 102 70 130 L2-Dibromochloromethane 9.55 1 10 102 70 130 L2-Dibromochloromethane 11.2 10 108 70 130 L2-Dibromochloromethane 11.2 10 108 70 130 L1.1.2-Tetrachioroethane 10.8 10 108 70 130 L1.1.2-Tetrachioroethane 10.2 0.5 10 104 70 130 Styrene 0.4 0.5 10 107 70 130 Styrene 9.66 10 97 70 130									
cis1.3-Dichloropropene 11.1 1 10 111 70 130 trans-1.3-Dichloropropene 10.2 1 10 104 70 130 Toluene 10.4 1 10 104 70 130 J.2-Dichloropropane 10.2 1 10 104 70 130 Dibromochloromethane 9.95 1 10 102 70 130 J.2-Dichomothane (EDB) 22.3 2 20 111 70 130 Tetrachloroethane 11.2 1 10 108 70 130 Chiorobenzene 10.1 10 101 70 130 Ethylbenzene 10.2 0.5 10 104 70 130 Styrene 10.7 0.5 10 104 70 130 o-Xylene 10.7 0.5 10 107 70 130 J.2.3-Trichloropropane 9.84 1 10 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>									
trans-13-Dichloropropene10.211010.2701301,1.2-Trichloroethane10.4110104701301.3-Dichloropropane10.2110104701301.3-Dichloropropane10.211010070130Dibromochhane (EDB)22.3220111701301.2-Dibromoethane (EDB)22.322011170130Tetrachloroethane10.811010870130Chlorobenzene10.111010170130Ethylbenzene10.20.51010270130Bromoform9.131109170130Styrene8.521108570130Styrene9.66110770130Lasoropylbenzene19.22209670130Styrene9.841109970130J.2-Zhrichloropropane9.841109970130Stromelybenzene9.971109970130J.3-Strinkhoropropane9.871109970130J.2-Zhrichloropropane9.881109970130J.3-Strinkhoropropane9.871109970130J.3-Trinkhoropropane9.871109570<		11.2	1	10	112	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-Dibromochlaroethane 10.8 1 10 108 70 130 Tetrachloroethane 10.8 1 10 108 70 130 Chlorobenzene 10.1 1 10 101 70 130 Ethylbenzene 10.2 0.5 10 104 70 130 Bromoform 9.13 1 10 91 70 130 Styrene 8.52 1 10 85 70 130 L2.3-Trichloroptopane 9.66 1 10 97 70 130 Iscoropylbenzene 9.84 10 98 70 130 Iscoropylbenzene 9.87 1 10 97			-						
Toluene 10.4 0.5 10 10.4 70 130 1.3-Dichloroppane 10.2 1 10 102 70 130 1.3-Dichloroppane 0.95 1 10 100 70 130 1.2-Dibromoethane (EDB) 22.3 2 20 111 70 130 Tetrachloroethane 11.2 1 10 108 70 130 Chloroberzene 10.1 1 10 101 70 130 Bromoform 9.13 1 10 91 70 130 Styrene 8.52 1 10 85 70 130 Styrene 9.66 1 97 70 130 I.2.2-Tetrachloroethane 9.84 1 10 98 70 130 I.3.5-Trinchloropropane 9.97 1 10 99 70 130 I.2.3-Trichloropropane 9.84 1 10 99 7									
1.3-Dichloropropane 10.2 1 10 102 70 130 Dibromochloromethane 9.95 1 10 100 70 130 1.2-Dibromochlaromethane 10.8 1 10 108 70 130 Tetrachloroethane 10.8 1 10 108 70 130 1.1.1.2-Tetrachloroethane 11.2 1 10 101 70 130 Chlorobenzene 10.2 0.5 10 104 70 130 Ethylbenzene 10.4 0.5 10 104 70 130 Bromoform 9.13 1 10 91 70 130 Styrene 8.52 1 10 85 70 130 1.2.3-Trichtoroethane 9.66 1 10 97 70 130 1.2.3-Trichtoroptopane 9.84 1 10 98 70 130 1.2.3-Trichtoroptopane 9.97 1 0 98 70 130 1.2.3-Trichtoroptopane 9.84									
Dibromochloromethane 9.95 1 10 100 70 130 1.2-Dibromoethane (EDB) 22.3 2 20 111 70 130 1.1.1.2-Tetrachloroethane 11.2 1 10 108 70 130 Chlorobenzene 10.1 1 10 112 70 130 Chlorobenzene 10.2 0.5 10 102 70 130 Bromoform 9.13 1 10 91 70 130 Bromoform 9.13 1 10 85 70 130 Styrene 6.82 1 10 85 70 130 1.1.2.2-Tetrachloroethane 9.66 1 10 97 70 130 1.2.3-Trichloropropane 9.84 1 10 98 70 130 Propylbenzene 9.81 1 10 99 70 130 2-Chlorobluene 9.87 1 10									
1.2-Dibromoethane (EDB) 22.3 2 20 111 70 130 Tetrachloroethane 10.8 1 10 108 70 130 Chlorobenzene 10.1 1 10 112 70 130 Chlorobenzene 10.1 1 10 101 70 130 Ethvibenzene 10.2 0.5 10 102 70 130 m.p-Xylene 0.4 0.5 10 104 70 130 Bromoform 9.13 1 10 91 70 130 Styrene 8.52 1 10 85 70 130 1.2.3-Trichloropthane 9.66 1 10 97 70 130 1.2.3-Trichloropthane 9.84 1 10 98 70 130 Isopropylbenzene 9.87 1 10 99 70 130 -Chlorotoluene 9.97 1 10 99 70 130 -Chlorotoluene 9.86 1 10 95 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>									
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 0-Xylene 10.7 0.5 10 107 70 130 1.2.3-Trichloroethane 9.66 1 10 97 70 130 1.2.3-Trichlorophane 19.2 2 20 96 70 130 I.2.3-Trichlorophane 9.84 1 0 99.7 70 130 Isopropylbenzene 9.88 1 0 99.7 70 130 I.2.3-Trichlorobluene 9.91 1 10 99 70 130 2-Chlorobluene 9.91 1 0	1,2-Dibromoethane (EDB)		2		111	70	130		
Chlorobenzene 10.1 1 10 101 70 130 Ethylbenzene 10.2 0.5 10 102 70 130 mp-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 1.2.2-Tetrachloroethane 9.66 1 10 97 70 130 lsopropylbenzene 9.84 1 10 98 70 130 Bromobenzene 9.84 1 10 99 70 130 -Propylbenzene 9.97 1 10 99 70 130 2-Chlorotoluene 9.91 1 10 95 70 130 1.2.4-Trimethylbenzene 9.53 1 10 95 70 <td></td> <td></td> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>			1						
Ethylbenzene 10.2 0.5 10 10.2 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-Trichloroppane 19.2 2 20 96 70 130 Isopropylbenzene 9.84 1 10 98 70 130 Provplbenzene 9.97 1 10 99.7 70 130 -Propylbenzene 9.91 1 10 99.7 70 130 2-Chlorotoluene 9.91 1 10 95 70 130 1.3.5-Trimethylbenzene 9.54 1 10 95			1						
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-Xvlene 10.7 0.5 10 107 70 130 1,2.2-Tetrachloroethane 9.66 1 10 97 70 130 1,2.3-Trichloroppane 19.2 2 20 96 70 130 Isopropylbenzene 9.84 1 10 98 70 130 Bromobenzene 9.88 1 10 99 70 130 -Propylbenzene 9.97 1 10 99 70 130 2-Chlorotoluene 9.91 1 0 95 70 130 1.2.4-Timethylbenzene 9.53 1 10 95 70 130 1.2.4-Timethylbenzene 9.59 1 10 96 70 130 1.2.4-Timethylbenzene 9.59 1 10 96			1		-				
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 99 70 130 Bromobenzene 9.97 1 10 99 70 130 -Propylbenzene 9.97 1 10 99 70 130 4-Chlorotoluene 9.91 1 10 99 70 130 2-Chlorotoluene 9.87 1 10 99 70 130 1,3.5-Trimethylbenzene 9.53 1 10 95 70 130 1,2.4-Trimethylbenzene 9.6 1 10 92 70 130 1,4-Dichlorobenzene 9.79 1 0 <	,								
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 Propylbenzene 9.88 1 10 99 70 130 -Propylbenzene 9.97 1 10 99 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 1,2,4-Trimethylbenzene 9.21 1 10 96 70 130 1,3-Dichlorobenzene 9.99 1 10 96 70 130 1,4-Dichlorobenzene 9.59 1 10									
1,1,2,2-Tetrachloroethane 9,66 10 97 70 130 1,2,3-Trichloropropane 19,2 2 20 96 70 130 Isopropylbenzene 9,84 1 10 98 70 130 Bromobenzene 9,84 1 10 99 70 130 Propylbenzene 9,97 1 10 99 70 130 n-Propylbenzene 9,97 1 10 99 70 130 2-Chlorotoluene 9,87 1 10 99 70 130 2-Chlorotoluene 9,87 1 10 99 70 130 2-Chlorotoluene 9,87 1 10 95 70 130 2-Chlorotoluene 9,53 1 10 95 70 130 1,3-5-Trimethylbenzene 9,21 1 10 92 70 130 1,3-Dichlorobenzene 9,69 1 10 96 70 130 1,3-Dichlorobenzene 9,59 1 10 <t< td=""><td>Styrene</td><td></td><td>1</td><td>-</td><td>85</td><td>70</td><td></td><td></td><td></td></t<>	Styrene		1	-	85	70			
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 95 70 130 1,2,4-Trimethylbenzene 9.53 1 10 96 70 130 1,2-A-Trimethylbenzene 9.6 1 10 96 70 130 1,2-Dichlorobenzene 9.79 1 10 98 70 130 1,2-Dichlorobenzene 9.45 1 <td< td=""><td>-</td><td></td><td>0.5</td><td>10</td><td></td><td></td><td></td><td></td><td></td></td<>	-		0.5	10					
Isopropylbenzene9.841109870130Bromobenzene9.881109970130n-Propylbenzene9.9711099.7701304-Chlorotoluene9.9111099701302-Chlorotoluene9.8711099701302-Chlorotoluene9.8711095701302-Chlorotoluene9.5411095701301,3,5-Trimethylbenzene9.531109570130tert-Butylbenzene9.611096701301,3-Dichlorobenzene9.611096701301,3-Dichlorobenzene9.7911098701301,4-Dichlorobenzene9.7911096701301,4-Dichlorobenzene9.5511096701301,2-Dichlorobenzene9.5511095701301,2-Dichlorobenzene9.5511095701301,2-Dibromo-3-chloropropane (DBCP)48.735097701301,2,4-Trichlorobenzene9.7521098701301,2,4-Trichlorobenzene9.7521096701301,2,3-Trichlorobenzene9.412109470130									
Bromobenzene9.881109970130n-Propylbenzene9.9711099.7701304-Chlorotoluene9.9111099701302-Chlorotoluene9.8711099701301,3,5-Trimethylbenzene9.5411095701301,2,4-Trimethylbenzene9.5311095701301,2,4-Trimethylbenzene9.611096701301,3-Dichlorobenzene9.9911096701301,3-Dichlorobenzene9.9911096701301,4-Dichlorobenzene9.7911098701301,2-Dichlorobenzene9.5511095701301,2-Dichlorobenzene9.4511095701301,2-Dichlorobenzene9.7511095701301,2-Dichlorobenzene9.7511095701301,2-Dibromo-3-chloropropane (DBCP)48.735097701301,2,4-Trichlorobenzene9.7521098701301,2,4-Trichlorobenzene9.7521097701301,2,3-Trichlorobenzene9.7521098701301,2,3-Trichlorobenzene9.412109470130									
n-Propylbenzene9.9711099.7701304-Chlorotoluene9.9111099701302-Chlorotoluene9.8711099701301,3,5-Trimethylbenzene9.541109570130tert-Butylbenzene9.5311095701301,2,4-Trimethylbenzene9.611096701301,2,4-Trimethylbenzene9.611096701301,2,4-Trimethylbenzene9.611096701301,3-Dichlorobenzene9.9911098701301,4-Dichlorobenzene9.7911098701301,4-Dichlorobenzene9.5911095701301,2-Dichlorobenzene9.5511095701301,2-Dichlorobenzene9.5511095701301,2-Dichlorobenzene9.5511095701301,2-Dibromo-3-chloropropane (DBCP)48.735097701301,2,4-Trichlorobenzene9.7521098701301,2,4-Trichlorobenzene9.7521098701301,2,3-Trichlorobenzene9.412109470130									
4-Chlorotoluene9.9111099701302-Chlorotoluene9.8711099701301,3,5-Trimethylbenzene9.541109570130tert-Butylbenzene9.5311095701301,2,4-Trimethylbenzene9.2111092701301,2,4-Trimethylbenzene9.611096701301,3-Dichlorobenzene9.9911099.9701301,4-Dichlorobenzene9.7911098701301,4-Dichlorobenzene9.5911095701301,2-Dichlorobenzene9.4511095701301,2-Dichlorobenzene9.5911095701301,2-Dichlorobenzene9.5511095701301,2-Dichlorobenzene9.5511095701301,2-Dichlorobenzene9.5511095701301,2-Dibromo-3-chloropropane (DBCP)48.735097701301,2,4-Trichlorobenzene9.7521098701301,2,3-Trichlorobutadiene19.322096701301,2,3-Trichlorobenzene9.412109470130									
1,3,5-Trimethylbenzene9,541109570130tert-Butylbenzene9,5311095701301,2,4-Trimethylbenzene9,211109270130sec-Butylbenzene9,611096701301,3-Dichlorobenzene9,9911099,9701301,4-Dichlorobenzene9,7911098701301,4-Dichlorobenzene9,5911096701301,2-Dichlorobenzene9,5911095701301,2-Dichlorobenzene9,5511095701301,2-Dibromo-3-chloropropane (DBCP)48.735097701301,2,4-Trichlorobenzene9,752109870130Naphthalene9,7521098701301,2,3-Trichlorobenzene9,412109470130	4-Chlorotoluene								
tert-Butylbenzene9.5311095701301,2,4-Trimethylbenzene9.211109270130sec-Butylbenzene9.611096701301,3-Dichlorobenzene9.9911099.9701301,4-Dichlorobenzene9.7911098701301,4-Dichlorobenzene9.5911096701304-Isopropyltoluene9.5911095701301,2-Dichlorobenzene9.4511095701301,2-Dibromo-3-chloropropane (DBCP)48.735097701301,2,4-Trichlorobenzene9.752109770130Naphthalene9.7521098701301,2,3-Trichlorobenzene9.412109470130			1						
1,2,4-Trimethylbenzene9,211109270130sec-Butylbenzene9,611096701301,3-Dichlorobenzene9,9911099,9701301,4-Dichlorobenzene9,7911098701304-Isopropyltoluene9,5911096701301,2-Dichlorobenzene9,451109570130n-Butylbenzene9,511095701301,2-Dibromo-3-chloropropane (DBCP)48.735097701301,2,4-Trichlorobenzene9,722109770130Naphthalene9,752109870130Hexachlorobutadiene19,322096701301,2,3-Trichlorobenzene9,412109470130									
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									
1,3-Dichlorobenzene9.9911099.9701301,4-Dichlorobenzene9.7911098701304-Isopropyltoluene9.5911096701301,2-Dichlorobenzene9.451109570130n-Butylbenzene9.511095701301,2-Dibromo-3-chloropropane (DBCP)48.735097701301,2,4-Trichlorobenzene9.722109770130Naphthalene9.752109870130Hexachlorobutadiene19.322096701301,2,3-Trichlorobenzene9.412109470130				-					
1,4-Dichlorobenzene9.7911098701304-Isopropyltoluene9.5911096701301,2-Dichlorobenzene9.451109570130n-Butylbenzene9.511095701301,2-Dibromo-3-chloropropane (DBCP)48.735097701301,2,4-Trichlorobenzene9.722109770130Naphthalene9.752109870130Hexachlorobutadiene19.322096701301,2,3-Trichlorobenzene9.412109470130									
1,2-Dichlorobenzene9,451109570130n-Butylbenzene9,511095701301,2-Dibromo-3-chloropropane (DBCP)48.735097701301,2,4-Trichlorobenzene9.722109770130Naphthalene9.752109870130Hexachlorobutadiene19.322096701301,2,3-Trichlorobenzene9.412109470130	-	9.79							
n-Butylbenzene9.511095701301,2-Dibromo-3-chloropropane (DBCP)48.735097701301,2,4-Trichlorobenzene9.722109770130Naphthalene9.752109870130Hexachlorobutadiene19.322096701301,2,3-Trichlorobenzene9.412109470130	,								
1,2-Dibromo-3-chloropropane (DBCP)48.735097701301,2,4-Trichlorobenzene9.722109770130Naphthalene9.752109870130Hexachlorobutadiene19.322096701301,2,3-Trichlorobenzene9.412109470130									
1,2,4-Trichlorobenzene9.722109770130Naphthalene9.752109870130Hexachlorobutadiene19.322096701301,2,3-Trichlorobenzene9.412109470130									
Naphthalene9.752109870130Hexachlorobutadiene19.322096701301,2,3-Trichlorobenzene9.412109470130									
Hexachlorobutadiene 19.3 2 20 96 70 130 1,2,3-Trichlorobenzene 9.41 2 10 94 70 130									
1,2,3-Trichlorobenzene 9.41 2 10 94 70 130	•								
Surr: 1.2-Dichloroethane-d4 0.07 to 0.07 to 10.07									
	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									
Surr: 4-Bromofluorobenzene 9.75 10 98 70 130	Sun. 4-DIOMONUOIODENZENE	9.75		10	98	70	130		

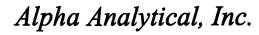


Date: 18-Aug-09	(QC St	ımmary	v Report				Work Ord 09080502	
Sample Matrix Spike		Туре М	S Te	st Code:				,	
File ID: 09081414.D			Ba	tch ID: MS15	5W08 ⁻	14M	Analysis I	Date: 08/14/2009 16:47	
Sample ID: 09080502-03AMS	Units : µg/L		Run ID: MS	D_15_09081	14 A		Prep Date	e: 08/14/2009	
Analyte	Result	PQL	SpkVal	SpkRefVal %	%REC	LCL(ME)	UCL(ME) RP	DRefVal %RPD(Limit)	Qual
Dichlorodifluoromethane	47.3	2.5	50	0	95	13	167		
Chloromethane	53.6	10	50	0	107	28	145		
Vinyl chloride Chloroethane	59.7 53.4	2.5 2.5	50 50	0 0	119 107	43 39	134 154		
Bromomethane	62.3	2.5	50 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 trans-1,2-Dichloroethene	51.4 52.4	10 2.5	50 50	0 0	103 105	68 63	130 130		
Methyl tert-butyl ether (MTBE)	56.9	1.3	50	Ő	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 Chloroform	56.6 50.5	2.5 2.5	50 50	0 0	113 101	70 67	130 130		
2,2-Dichloropropane	55.5	2.5	50 50	0	111	30	152		
1,2-Dichloroethane	52.8	2.5	50	Ō	106	60	135		
1,1,1-Trichloroethane	53.4	2.5	50	0	107	59	137		
1,1-Dichloropropene Carbon tetrachloride	51.5	2.5	50	0	103	63	130		
Benzene	53.9 52.2	2.5 1.3	50 50	0 0	108 104	50 67	147 130		
Dibromomethane	56.6	2.5	50	0	113	69	133		
1,2-Dichloropropane	53.1	2.5	50	Ō	106	69	130		
Trichloroethene	50.7	2.5	50	0	101	69	130		
Bromodichloromethane cis-1,3-Dichloropropene	54.3	2.5	50	0	109	66 67	134		
trans-1,3-Dichloropropene	53 49.7	2.5 2.5	50 50	0 0	106 99	63 66	130 131		
1,1,2-Trichloroethane	53.5	2.5	50 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 1,2-Dibromoethane (EDB)	48.8 110	2.5 10	50 100	0 0	98 110	70 70	130 130		
Tetrachloroethene	49.6	2.5	100 50	0	99	61	130		
1,1,1,2-Tetrachloroethane	52.5	2.5	50	õ	105	70	130		
Chlorobenzene	47.9	2.5	50	0	96	70	130		
Ethylbenzene m,p-Xylene	47.1	1.3	50	0	94	68	130		
Bromoform	48.5 46.3	1.3 2.5	50 50	0 0	97 93	64 64	130 138		
Styrene	40.1	2.5	50	õ	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 Isopropylbenzene	97.4 45.1	10 2.5	100 50	0 0	97 90	70 64	130 138		
Bromobenzene	48.2	2.5	50 50	Ő	96	70	130		
n-Propylbenzene	45.8	2.5	50	Ō	92	66	132		
4-Chlorotoluene	46.7	2.5	50	0	93	70	130		
2-Chlorotoluene 1,3,5-Trimethylbenzene	46	2.5	50	0	92 89	70	130		
tert-Butylbenzene	44.6 44.3	2.5 2.5	50 50	0 0	89 89	66 65	136 137		
1,2,4-Trimethylbenzene	43.6	2.5	50	ŏ	87	65	137		
sec-Butylbenzene	44.5	2.5	50	0	89	66	134		
1,3-Dichlorobenzene 1.4-Dichlorobenzene	48.1	2.5	50	0	96	70	130		
4-Isopropyltoluene	47.4 45	2.5 2.5	50 50	0 0	95 90	70 66	130 137		
1,2-Dichlorobenzene	46.8	2.5	50	0	94	70	130		
n-Butylbenzene	44.3	2.5	50	Ō	89	60	142		
1,2-Dibromo-3-chloropropane (DBCP)	252	15	250	0	101	67	130		
1,2,4-Trichlorobenzene Naphthalene	49.5 51.4	10	50 50	0	99 102	61	137 167		
Hexachlorobutadiene	51.4 90.8	10 10	50 100	0 0	103 91	40 61	167		
1,2,3-Trichlorobenzene	49.1	10	50	0 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		



Alpha Analytical, Inc.

Date: 18-Aug-09	(QC Sun	nmary	Report					Work Ord 09080502	
Sample Matrix Spike Duplicate		Type MSC) Test	t Code:						
File ID: 09081415.D			Bato	h ID: MS15	W0814N	1	Analys	is Date: 08	/14/2009 17:09	
Sample ID: 09080502-03AMSD	Units : µg/L			_15_09081			Prep D		/14/200 9	
Analyte	Result	PQL	SpkVal S	pkRefVal %	REC LO	CL(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		108	28	145	53.57	1.0(20)	
Vinyl chloride	56.2	2.5	50	-	112	43	134	59.71	6.0(20)	
Chloroethane Bromomethane	50.8	2.5	50	-	102	39 10	154 176	53.43 62.33	5.1(20) 2.3(20)	
Trichlorofluoromethane	60.9 53.4	10 2.5	50 50		122 107	19 34	160	56.71	6.0(20)	
1,1-Dichloroethene	47.3	2.5	50 50		95	60	130	50.16	5.9(20)	
Dichloromethane	50.8	10	50		102	68	130	51.43	1.2(20)	
trans-1,2-Dichloroethene	49.3	2.5	50	-	99	63	130	52.41	6.1(20)	
Methyl tert-butyl ether (MTBE)	58	1.3	50		116	56	141	56.91	2.0(20)	
1,1-Dichloroethane cis-1,2-Dichloroethene	49.7 53	2.5 2.5	50 50	-	99 106	61 70	130 130	51.36 53.1	3.3(20) 0.1(20)	
Bromochloromethane	55.7	2.5 2.5	50 50	-	100	70	130	56.57	1.5(20)	
Chloroform	49.4	2.5	50		99	67	130	50.54	2.3(20)	
2,2-Dichloropropane	52.3	2.5	50	-	105	30	152	55.48	5.8(20)	
1,2-Dichloroethane	52.2	2.5	50		104	60	135	52.84	1.2(20)	
1,1,1-Trichloroethane	51	2.5	50		102	59	137	53.39	4.7(20)	
1,1-Dichloropropene Carbon tetrachloride	49.1 51.2	2.5	50		98 102	63 50	130 147	51.47 53.88	4.7(20) 4.9(20)	
Benzene	51.3 50.5	2.5 1.3	50 50	-	103 101	50 67	130	53.88 52.22	3.4(20)	
Dibromomethane	57	2.5	50	-	114	69	133	56.64	0.6(20)	
1,2-Dichloropropane	53.2	2.5	50		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	-	108	66	134	54.3	0.4(20)	
cis-1,3-Dichloropropene trans-1,3-Dichloropropene	52.3	2.5	50	-	105	63 60	130	52.98	1.4(20)	
1,1,2-Trichloroethane	49.2 52.6	2.5 2.5	50 50		98 105	66 68	131 130	49.69 53.47	1.1(20) 1.7(20)	
Toluene	45.5	1.3	50 50		91	66	130	47.89	5.2(20)	
1,3-Dichloropropane	50.5	2.5	50		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	-	111	70	130	109.6	1.7(20)	
Tetrachloroethene	47	2.5	50		94	61 70	134	49.64	5.4(20)	
1,1,1,2-Tetrachloroethane Chlorobenzene	51 45.7	2.5 2.5	50 50	-	102 91	70 70	130 130	52.53 47.94	3.0(20) 4.8(20)	
Ethylbenzene	44.9	1.3	50 50		90	68	130	47.06	4.8(20)	
m,p-Xylene	45.6	1.3	50		91	64	130	48.51	6.3(20)	
Bromoform	45.7	2.5	50		91	64	138	46.28	1.2(20)	
Styrene	38.4	2.5	50		77	69	130	40.13	4.4(20)	
o-Xylene 1,1,2,2-Tetrachloroethane	47.7	1.3	50		95 102	70 65	130 131	49.88 50.22	4.4(20) 1.2(20)	
1,2,3-Trichloropropane	50.8 98.5	2.5 10	50 100		98	05 70	130	97.35	1.1(20)	
Isopropylbenzene	42.4	2.5	50		85	64	138	45.11	6.1(20)	
Bromobenzene	46.2	2.5	50		92	70	130	48.18	4.1(20)	
n-Propylbenzene	43	2.5	50		86	66	132	45.81	6.4(20)	
4-Chlorotoluene 2-Chlorotoluene	44.5	2.5	50		89	70	130	46.73	4.8(20)	
1,3,5-Trimethylbenzene	43.8 41.9	2.5 2.5	50 50		88 84	70 66	130 136	45.95 44.58	4.8(20) 6.3(20)	
tert-Butylbenzene	41.5	2.5	50		83	65	137	44.26	6.5(20)	
1,2,4-Trimethylbenzene	41.2	2.5	50		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		91	70	130	48.12	5.2(20)	
1,4-Dichlorobenzene 4-Isopropyltoluene	45.2	2.5	50	-	90 84	70 66	130 137	47.37 45.02	4.6(20) 7.3(20)	
1,2-Dichlorobenzene	41.8 45.4	2.5 2.5	50 50		84 91	66 70	137	45.02 46.84	3.1(20)	
n-Butylbenzene	42.2	2.5	50 50		84	60	142	44.28	4.9(20)	
1,2-Dibromo-3-chloropropane (DBCP)	258	15	250		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		103	40	167	51.4	0.1(20)	
Hexachlorobutadiene 1,2,3-Trichlorobenzene	86.6	10	100		87	61	130	90.8	4.7(20)	
Surr: 1,2-Dichloroethane-d4	48.8 52.1	10	50 50		98 104	51 70	144 130	49.07	0.5(20)	
Surr: Toluene-d8	47.7		50 50		95	70	130			
Surr: 4-Bromofluorobenzene	47.7		50		95	70	130			
	71.1		50				100			





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

QC Summary Report

Work Order: 09080502

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.

Date: 18-Aug-09 Comments:

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

Logged in by: Ulnaketh Udcax	Signature
Elizabeth Eldcox	Print Name
Alpha Analytical, Inc.	Company
85.59 9:46	Date/Time

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). :

-				4	2667	1 226 10	11 EAV. /	336/366	TEL: (1775) 355 1044 EAV: (775) 355 0406		Report Due By : 5:00 PM On : 19-Aug-2009
Client:			Report Attention		Pho	Phone Number	Phone Number EMail Addr	EMail /	EMail Address		
Battelle Memorial Institute	Institute		David Conner	9	818)	(818) 393-2808	x 80	connerd(connerd@battelle.org		
3990 Old Town Ave	ve		Refev Cutie		(617	(614) 474-4800		cutiee@l	cutiee@hatelle.org		EDD Required : Yes
Suite C-205							11		a		
San Diego, CA 92110	2110		Shane Walton	ĭ	(614	(614) 424-4117	17 x	waltons@	waltons@battelle.org	UQ.	Sampled by : Client
PO: 218013											Cooler Temp Samples Received Date Printed
Client's COC #: 24115	115	Job :	G005862/JPL Groundwater Monitoring	² L Grour	ndwater I	Monitori	рŋ				
QC Level: DS4	= DOD QC Required : Final Rpt, MBLK, InitCal/ConCal data, LCS, MS/MSD With Surrogates	I : Final R	pt, MBLK, In	itCal/Co	nCal dat	a, LCS,	MS/MSD \	Vith Surr	ogates		
	- - -									Requested Tests	d Tests
Alpha Sample ID	Client Sample ID	Matrix	Collection ix Date	No. of Alpha	No. of Bottles Alpha Sub	TAT	314_W	METALS_D W		VOC_W	Pampa Domarka
				, abut	-						
BMI09080502-01A	MW-25-5	AQ	08/04/09 07:57	თ	0	10	Perchlorate	Ŷ	VOC by 524 Criteria	VOC by 524 Criteria	
BMI09080502-02A	MW-25-4	A	08/04/09 08:23	თ	0	10	Perchlorate	Ŷ	VOC by 524 Criteria	VOC by 524 Criteria	
BMI09080502-03A	MW-25-3	Q	08/04/09 08:59	10	0	10	Perchlorate	Ŷ	VOC by 524 Criteria	VOC by 524 Criteria	MS/MSD
BM109080502-04A	MW-25-2	AQ	08/04/09 09:25	ы	0	10	Perchlorate	Ŷ	VOC by 524 Criteria	VOC by 524 Criteria	
BMI09080502-05A	MW-25-1	AQ	08/04/09 09:50	თ	0	10	Perchlorate	ç	VOC by 524 Criteria	VOC by 524 Criteria	
BMI09080502-06A	EB-11-8/4/09	AQ	08/04/09 09:37	сı	0	10	Perchlorate	ç	VOC by 524 Criteria	VOC by 524 Criteria	
BMI09080502-07A	TB-11-8/4/09	AQ	08/04/09 00:00	-	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	с л	0	10	Perchlorate	Ç	VOC by 524 Criteria	VOC by 524 Criteria	
BMI09080502-09A	MW-26-1	AQ	08/04/09 11:35	თ	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	

CHAIN-OF-CUSTODY RECORD

255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778

Alpha Analytical, Inc.

Billing Information :

Page: 1 of 1

WorkOrder : BMIS09080502

C A

		•		
Billing Information: Name CaE ICALD TO MPKINS/BATTERE		Alpha Analytical, Inc. AZ 255 Glendale Avenue, Suite 21 ID	AZ CONNECTED From Which Stater AZ CA VV WA Pace ID OR OTHER Pace	Page # / of /
Address <u>5.25 Kinks</u> Ave City, State, Zip <u>Calum Gus</u> , <u>att 43201</u> Phone Number Fax			nalys	
TELLE /DAVID CONNER	EMail Address	600582		Required QC Level?
City State Zip City State Zip CAN DI EGS (A 92/13	Phone # 726 - 7311 [Fax #			EDD / EDF? YES NO
Sampled by		<u> </u>		Global ID #
Sampled Sampled Below Lab ID Number (Use Only)	Sample Description	TAT Field "See below		REMARKS
757 844 AQ BMI0908050201	MW-25-5	Norm nols X	××	
823 1 1	MW-25-4	- - -	××	
	MW-25-3	× cl/a	XX	molmoo
	MW-25-2	1 VP/5 X	XX	
50- -05	MW-25-1		×	
-M-	ER-11-S/w/ne	X	× ×	En no Riade
	TR-11-8/4/09	$X = \frac{1}{2} \sqrt{2}$		TRUP BLANK
ADDITIONAL INSTRUCTIONS:				
Signature	Print Name			Date Time
Received by	MARCO MENDURA	INSIGHT	EEC XI	
Relinquished by	Flizebeth Flox	dry (rub	ла- О.	0.5.0/ 1.70
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.	OT - Other AR - Air **: L-Liter reported unless other arrangements are made. H is received by the laboratory with this coc. The lia	r V-Voa S-Soil Jar O Hazardous samples will be returne iability of the laboratory is limited to	O-Orbo T-Tedlar B-Brass red to client or disposed of at client expen to the amount paid for the report.	P-Plastic OT-Other se. The report for the analysis
of the above samples is applicable only to those samples received by the laboratory with this coc. The labolity of the laboratory is limited to the amount baild for the report.	is received by the laboratory with this coc. The li	lability of the laboratory is limited to	the amount paid for the report.	

Billing Information: Name (-(-)CPL> TOMPKINS	Alpha An 255 Giendale Sparks, Neva	I, Inc. Suite 21 5778 Suite 21 Suite 21 S	I From Which State? 026290 NV WA Page # of
le, Zip <u>COLUM (2015, c</u> umber Fax	3 2 Ø j Fax (775) 355-1044 Fax (775) 355-0406		Analyses Required
Client Name ANIN CONNET	P.O.# 218013 Job #	10,005-362 AN 3/0/	Required QC Level?
12 ravi	EMail Address		/ / I II (ÎI) IV
1	Phone #/9-726-7311 Fax #	-	EDD/EDF? YES NO
Nimbor	Report Attention	Tot	Global ID #
			A REMARKS
	NAL-26 - 1		
ADDITIONAL INSTRUCTIONS:			
			-
Signature	Print Name	Company	Date Time
Received by 1 th 41 1 A man	Lizzh U Char	Insight CEC	1/1/10 00-2'8
Relinquished by	Variation 1 112 - Variation		
Received by			
Relinquished by			
Received by			
*Key: AQ - Aqueous SO - Soil WA - Waste NOTE: Samples are discarded 60 days after results are in of the above samples is applicable only to those samples	te OT - Other AR - Air **: L-Liter e reported unless other arrangements are made. Hat as received by the laboratory with this coc. The list	*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 con The liability of the laboratory is limited to the amount paid for the report	B-Brass P-Plastic OT-Other lof at client expense. The report for the analysis
of the above samples is applicable only to those sample	es received by the laboratory with this coc. The lia	of the above samples is applicable only to mose samples received by the laboratory with this coc. The liability of the laboratory is limited to the amount paid for the report.	ne report.



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 San Diego, CA 92110 (818) 393-2808

Suite C-205

CASE NARRATIVE

oject: ork Order:	G005862/JPL Grou BMI09080602	undwater Monitoring	Cooler Temp: 4 °C	
Alpha's	Sample ID	Client's Sample ID	Matrix	
09080	0602-01A	MW-7	Aqueous	
09080)602-02A	MW-16	Aqueous	
09080	0602-03A	TB-12-8/5/09	Aqueous	
		Manually Integrated An	alytes	
<u>Alpha's Sar</u>	mple 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/Chainof-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.

Walter Acrihan Roger Scholl Kandy Saulmer

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.



255 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				
Lab ID . BIVI109080002-01A	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				
Lau ID . DIVI109080602-02A	Phosphate, ortho - P	ND	0.25 mg/L	08/05/09 10:29	08/06/09 16:26				

ND = Not Detected

Roger Scholl

Kandy Dandmer

lter Aridmin

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



255 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

38.

 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 Date Sampled Analyze			
Client ID : 1	MW-7							
Lab ID : 1	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 : 1	MW-16							
Lab ID : 1	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

Kandys

Walter Arihm

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



255 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

		Perchlorate by Ion Chromatography EPA Method 314.0		
	Parameter	Concentration	Reporting Limit	Date Date Sampled 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

Kandy Santur

Dalter Acrilmon

Aff

8/19/09 Report Date

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.



255 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

		Metals by ICPMS EPA Method 200.8		
	Parameter	Concentration	Reporting Limit	Date Date Sampled Analyzed
Client ID : MW-7 Lab ID : BMI09080602-0	01A Chromium (Cr)	0.011	0.0050 mg/L	08/05/09 08/14/09
Client ID : MW-16 Lab ID : BMI09080602-()2A Chromium (Cr)	0.016	0.0050 mg/L	08/05/09 08/14/09

Roger Scholl

lter Arihm

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



255 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

				Estimated			
		Parameter	Estimated	Reporting	Date	Date	Date
			Concentration	Limit	Received	Sampled	Analyzed
Client ID : Lab ID :	MW-7 BMI09080602-01A	*** None Found ***	ND	2.0 μg/L	08/06/09	08/05/09	08/14/09
Client ID :	MW-16			10			
Lab ID :	BMI09080602-02A	*** None Found ***	ND	2.0 μg/L	08/06/09	08/05/09	08/14/09
Client ID : Lab ID :	TB-12-8/5/09 BMI09080602-03A	*** \		2 2 1	0.0/0.5/0.0	00/05/00	00/11/000
Lau ID .	DIMI09060002-03A	*** 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

Rogen Scholl Kandg Sandmer

Dalter Horihan

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



255 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

Alpha Analytical Number: BMI09080602-01A Client I.D. Number: MW-7 Attn:David ConnerPhone:(818) 393-2808Fax:(614) 458-6641

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

Analyzed: 08/14/09

Volatile Organics by GC/MS

	Compound	Concentration	Reporting	Limit		Compound	Concentration	Reporting L	imit
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1.1.1.2-Tetrachloroethane	ND	0.50	μg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	μg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Stvrene	ND	0.50	μg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xvlene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43		ND	0.50	μg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	μg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	μg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	μg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	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 (DBC	P) 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

Kandy Dandmer

Walter Amilian

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.



Report Date



255 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

Alpha Analytical Number: BMI09080602-02A Client I.D. Number: MW-16 Attn:David ConnerPhone:(818) 393-2808Fax:(614) 458-6641

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

Analyzed: 08/14/09

Volatile Organics by GC/MS

	Compound	Concentration	Reporting	Limit		Compound	Concentration	Reporting L	imit
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1.1.1.2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	μg/L
4	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	· · · · · · · · · · · · · · · · · · ·	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBC	P) 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

Kandy Saulman

Walter Arihm

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



255 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

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

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

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

Analyzed: 08/14/09

Volatile Organics by GC/MS

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

Kandy Santur

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.

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

8/19/09

Report Date



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	рН	
09080602-01A	MW-7	Aqueous	2	
09080602-02A	MW-16	Aqueous	2	
09080602-03A	TB-12-8/5/09	Aqueous	2	



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 Su	ımmar	y Repor	t				Work Orde 09080602	
Method Blank File ID: 17 Sample ID: MB-22491 Analyte	Units : mg/L Result	Type MI	Ba Run ID: IC	est Code: EF Itch ID: 2249 _2_090806A SpkRefVal	91A		Analy Prep I	Date:	08/06/2009 15:12 08/06/2009 Val %RPD(Limit)	Qual
Nitrite (NO2) - N Nitrate (NO3) - N Phosphate, ortho - P	ND ND ND	0.25 0.25 0.25								
Laboratory Fortified Blank		Type LF	•в те	est Code: EF	PA Me	thod 300.0	/ 9056			
File ID: 18 Sample ID: LFB-22491 Analyte	Units : mg/L Result	PQL	Run ID: IC	atch ID: 2249 _2_090806A _SpkBefVal			Prep	Date:	08/06/2009 15:31 08/06/2009 Val %RPD(Limit)	Qual
Nitrite (NO2) - N Nitrate (NO3) - N Phosphate, ortho - P	1.21 1.24 1.24	0.25 0.25 0.25	1.25 1.25 1.25	opiniorun	97 99.6 99	90 90 90	110 110 110 110			
Sample Matrix Spike		Type LF	-M Te	est Code: EF	A Met	thod 300.0	/ 9056			
File ID: 24			Ba	atch ID: 2249	91A		Analy	sis Date:	08/06/2009 17:22	
Sample ID: 09080602-02ALFM	Units : mg/L			_2_090806A			Prep		08/06/2009	
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	CLCL(ME)	UCL(ME)	RPDRef	Val %RPD(Limit)	Qual
Nitrite (NO2) - N Nitrate (NO3) - N Phosphate, ortho - P	1.29 2.5 1.24	0.25 0.25 0.25	1.25 1.25 1.25	0 1.346 0	104 92 99	80 80 80	120 120 120			
Sample Matrix Spike Duplicate		Type LF	MD Te	est Code: EF	A Me	thod 300.0	/ 9056			
File ID: 25			Ba	atch ID: 2249	91A		Analy	sis Date:	08/06/2009 17:40	
Sample ID: 09080602-02ALFMD	Units : mg/L	I	Run ID: IC	_2_090806A	•		Prep	Date:	08/06/2009	
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	CLCL(ME)	UCL(ME)	RPDRef	Val %RPD(Limit)	Qual
Nitrite (NO2) - N Nitrate (NO3) - N Phosphate, ortho - P	1.39 2.52 1.03	0.25 0.25 0.25	1.25 1.25 1.25	0 1.346 0	111 94 82	80 80 80	120 120 120	1.299 2.490 1.24	6 0.8(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. $P_{2} = M_{2}^{2} (M_{2}^{2}) P_{2}^{2}$

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



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 File ID: 17	Type MBLK Test Code: EPA Method 300.0 / 9056 Batch ID: 22491B Analysis Date: 00	
Sample ID: MB-22491 Analyte	Units : mg/L Run ID: IC_2_090806A Prep Date: 08 Result PQL SpkVal SpkRefVal %REC LCL(ME) UCL(ME) RPDRefVal	3/06/2009 %RPD(Limit) Qua
Sulfate (SO4)	ND 0.5	_
Laboratory Fortified Blank File ID: 18	Type LFBTest Code: EPA Method 300.0 / 9056Batch ID: 22491BAnalysis Date: 0	8/06/2009 15:31
Sample ID: LFB-22491 Analyte	Units : mg/L Run ID: IC_2_090806A Prep Date: 08 Result PQL SpkVal SpkRefVal %REC LCL(ME) UCL(ME) RPDRefVal	3/06/2009 %RPD(Limit) Qua
Sulfate (SO4)	10.3 0.5 10 103 90 110	
Sample Matrix Spike File ID: 24	Type LFMTest Code: EPA Method 300.0 / 9056Batch ID: 22491BAnalysis Date: 0	8/06/2009 17:22
Sample ID: 09080602-02ALFM Analyte	I Units : mg/L Run ID: IC_2_090806A Prep Date: 08 Result PQL SpkVal SpkRefVal %REC LCL(ME) UCL(ME) RPDRefVal	3/06/2009 %RPD(Limit) Qua
Sulfate (SO4)	58.1 0.5 10 49.52 85 80 120	
Sample Matrix Spike Duplica File ID: 25	te Type LFMD Test Code: EPA Method 300.0 / 9056 Batch ID: 22491B Analysis Date: 00	8/06/2009 17:40
Sample ID: 09080602-02ALFM	ID Units : mg/L Run ID: IC_2_090806A Prep Date: 08	3/06/2009
Analyte	Result PQL SpkVal SpkRefVal %REC LCL(ME) UCL(ME) RPDRefVal	%RPD(Limit) Qua
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.



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 S	ummar	y Repor	t				Work Orde 09080602	
Method Blank		Type N		est Code: EF	PA Met	hod 300.0	/ 9056			
File ID: 17			Ba	atch ID: 2249	1C		Analy	sis 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)	RPDRef	Val %RPD(Limit)	Qua
Chloride	ND	0.5	5							
Laboratory Fortified Blank		Type L	. FB T	est Code: EF	'A Met	thod 300.0	/ 9056			
File ID: 18			Ba	atch ID: 2249	1C		Analy	sis 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)	RPDRef	Val %RPD(Limit)	Qua
Chloride	4.56	0.5	5 5		91	90	110			
Sample Matrix Spike		Type L	.FM To	est Code: EF	PA Met	thod 300.0	/ 9056			
File ID: 24			Ba	atch ID: 2249	1C		Analy	sis 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)	RPDRef	Val %RPD(Limit)	Qua
Chloride	82	0.5	5 5	80.06	39	80	120			M2
Sample Matrix Spike Duplicate		Type L	FMD T	est Code: EF	A Met	hod 300.0	/ 9056			
File ID: 25			Ba	atch ID: 2249	1C		Analy	sis 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)	RPDRef	Val %RPD(Limit)	Qua
Chloride	83.3	0.5		80.06	65	80	120	82.0		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.



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 S	umma	ry Repo	t				Work Ord 09080602	
Method Blank File ID: 44		Type I		Test Code: E Batch ID: 224		thod 314.0	Analys	sis Date:	08/07/2009 00:50	
Sample ID: MBLK-2249	3 Units : μg/L		Run ID:	IC_3_090807	A		Prep [Date:	08/06/2009	
Analyte	Result	PQL	SpkVa	al SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRef	Val %RPD(Limit)	Qua
Perchlorate	ND		1							
Laboratory Fortified BI File ID: 45	ank	Type I		Test Code: E Batch ID: 224		thod 314.0	Analy	sis Dater	08/07/2009 01:08	
Sample ID: LFB-22493	Units : µg/L			IC_3_090807			Prep [08/06/2009	
Analyte	Result	PQL				LCL(ME)			Val %RPD(Limit)	Qua
Perchlorate	26.1			5	105	85	115			
Sample Matrix Spike File ID: 49		Type I		Test Code: E Batch ID: 224		thod 314.0	Analy	sis Date:	08/07/2009 02:22	
Sample ID: 09073103-0	SALFM Units : µa/L			IC 3_090807			Prep [08/06/2009	
Analyte	Result	PQL				LCL(ME)			Val %RPD(Limit)	Qua
Perchlorate	34.2			5 10.16		80	120		<u></u>	
Sample Matrix Spike D File ID: 50	ıplicate	Type I		Test Code: E Batch ID: 224		thod 314.0	Analys	sis Date:	08/07/2009 02:40	_
Sample ID: 09073103-0	BALFMD Units : µa/L			IC_3_090807			Prep [08/06/2009	
Analyte	Result	PQL				LCL(ME)			Val %RPD(Limit)	Qua
Perchlorate	35.7			5 10.16		80	120	34.2		

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.



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 S	ummar	y Report	,				Work Ord 0908060	
Method Blank File ID: 081309.B\087SMPL.D\		Type I		est Code: EP atch ID: 2251		thod 200.8		·	08/13/2009 22:44	
Sample ID: MB-22512	Units : mg/L			P/MS_09081				Date:	08/10/2009	0
Analyte Chromium (Cr)	Result ND	PQL 0.00		SpkRefVal	%REC	C LCL(ME)	UCL(ME)	RPDRet	Val %RPD(Limit)	Qua
Laboratory Control Spike File ID: 081309.B\088_LCS.D\		Type L		est Code: EP atch ID: 2251		thod 200.8	Analy	/sis Date:	08/13/2009 22:49	
Sample ID: LCS-22512 Analyte	Units : mg/L Result	PQL		P/MS_09081 SpkRefVal		CLCL(ME)	•	Date: RPDRef	08/10/2009 Val %RPD(Limit)	Qua
Chromium (Cr)	0.0457	0.00	5 0.05		91	80	120			
Sample Matrix Spike File ID: 081309.B\092SMPL.D\ Sample ID: 09080502-03AMS Analyte	Units : mg/L Result	Type I	Ba Run ID: IC	est Code: EP atch ID: 2251 P/MS_09081	2K 3C		Prep	Date:	08/13/2009 23:12 08/10/2009 Val %RPD(Limit)	Qua
Chromium (Cr)	0.0531	0.00			106	80	120			
Sample Matrix Spike Duplicate File ID: 081309.B\093SMPL.D\	····	Туре I		est Code: EP atch ID: 2251		thod 200.8	Analy	/sis Date:	08/13/2009 23:17	
Sample ID: 09080502-03AMSD	Units : mg/L		Run ID: IC	P/MS_09081	3C		Prep	Date:	08/10/2009	
Analyte	Result	PQL	SpkVal	SpkRefVal S	%REC	CLCL(ME)	UCL(ME)	RPDRef	Val %RPD(Limit)	Qua
Chromium (Cr)	0.0618	0.00	5 0.05	0	124	80	120	0.053	13 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.



Date: 18-Aug-09	4.14.14	(QC Su	mmary Rep	ort			Work Orde 09080602	
Method Bla			Туре МІ	BLK Test Code:					
File ID: 09081	I411.D			Batch ID: N	IS15W0814	M		08/14/2009 15:40	
Sample ID:	MBLK MS15W0814M	Units : µg/L	I	Run ID: MSD_15_0			Prep Date:	08/14/2009	
Analyte		Result	PQL	SpkVal SpkRefV	al %REC L	CL(ME) UC	L(ME) RPDRef	Vat %RPD(Limit)	Q
Dichlorodifluo		ND	0.5						
Chloromethan		ND	1						
Vinyl chloride Chloroethane		ND	0.5						
Bromomethar		ND ND	0.5 1						
richlorofluor		ND	0.5						
,1-Dichloroet	thene	ND	0.5						
Dichlorometha	ane	ND	1						
Freon-113		ND	0.5						
rans-1,2-Dich	tyl ether (MTBE)	ND ND	0.5 0.5						
1,1-Dichloroet		ND	0.5						
2-Butanone (N		ND	10						
cis-1,2-Dichlo		ND	0.5						
Bromochloron	nethane	ND	0.5						
Chloroform 2,2-Dichloropi	ronane	ND ND	0.5 0.5						
1,2-Dichloroet		ND	0.5						
1,1,1-Trichlor		ND	0.5						
1,1-Dichloropi	ropene	ND	0.5						
Carbon tetrac	hloride	ND	0.5						
Benzene		ND	0.5						
Dibromometh 1,2-Dichloropi		ND ND	0.5 0.5						
Frichloroether	-	ND	0.5						
Bromodichlor		ND	0.5						
	ntanone (MIBK)	ND	2.5						
cis-1,3-Dichlo		ND	0.5						
rans-1,3-Dich 1,1,2-Trichlord		ND	0.5						
Toluene	Jethane	ND ND	0.5 0.5						
1,3-Dichlorop	ropane	ND	0.5						
Dibromochlor	•	ND	0.5						
1,2-Dibromoe	. ,	ND	1						
Tetrachloroeth		ND	0.5						
1,1,1,2-Tetrac Chlorobenzen		ND ND	0.5						
Ethylbenzene		ND	0.5 0.5						
n,p-Xylene		ND	0.5						
Bromoform		ND	0.5						
Styrene		ND	0.5						
o-Xylene		ND	0.5						
1,1,2,2-Tetrac 1,2,3-Trichlor		ND ND	0.5						
sopropylbenz		ND	1 0.5						
Bromobenzen		ND	0.5						
n-Propylbenze		ND	0.5						
4-Chlorotolue		ND	0.5						
2-Chlorotolue 1,3,5-Trimeth		ND	0.5						
ert-Butylbenz		ND ND	0.5 0.5						
1,2,4-Trimeth		ND	0.5						
sec-Butylbenz		ND	0.5						
1,3-Dichlorob		ND	0.5						
4-Dichlorob		ND	0.5						
1-Isopropyltol		ND	0.5						
1,2-Dichlorob 1-Butylbenzer		ND ND	0.5 0.5						
	3-chloropropane (DBCP)	ND	0.5 2.5						
1,2,4-Trichlor		ND	2.5						
Naphthalene		ND	1						
Hexachlorobu		ND	1						
1,2,3-Trichlor	obenzene Iloroethane-d4	ND	1		100	70	100		
	NO DELITATE U4	10.3		10	103	70	130		



Date: 18-Aug-09	(QC Sun	nmary Re	eport			Work Ord 09080602	
Surr: 4-Bromofluorobenzene	8.93		10	89	70	130		
Laboratory Control Spike File ID: 09081408.D		Type LCS): MS15W0814	M		Date: 08/14/2009 14:16	
Sample ID: LCS MS15W0814M	Units : µg/L		n ID: MSD_1			Prep Date		-
Analyte	Result	PQL	SpkVal SpkF	lefVal %REC L) UCL(ME) RP	DRefVal %RPD(Limit)	Qua
Dichlorodifluoromethane	12.5	1	10	125	70	130		
Chloromethane	10.8	2	10	108	70	130		
Vinyl chloride Chloroethane	11.4 11.2	1	10 10	114 112	70 70	130 130		
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 cis-1,2-Dichloroethene	10.9	1	10	109	70	130		
Bromochloromethane	11.2 11.4	1	10 10	112 114	70 70	130 130		
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 Dibromomethane	11.1	0.5	10	111	70	130		
1,2-Dichloropropane	11.2 11.1	1	10 10	112 111	70 70	130 130		
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 1,3-Dichloropropane	10.4	0.5	10	104	70	130		
Dibromochloromethane	10.2 9.95	1	10 10	102 100	70 70	130 130		
1,2-Dibromoethane (EDB)	22.3	2	20	100	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 Bromoform	10.4 9.13	0.5 1	10	104 91	70 70	130 130		
Styrene	8.52	1	10 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 n-Propylbenzene	9.88	1	10	99	70	130		
4-Chlorotoluene	9.97 9.91	1	10 10	99.7 99	70 70	130 130		
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 1,4-Dichlorobenzene	9.99 9.79	1	10 10	99.9 98	70 70	130 130		
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 Hexachlorobutadiona	9.75	2	10	98	70	130		
Hexachlorobutadiene 1,2,3-Trichlorobenzene	19.3	2	20	96	70 70	130		
Surr: 1,2-Dichloroethane-d4	9.41 9.97	2	10 10	94 99.7	70 70	130 130		
-	9.97 10		10					
Surr: Toluene-d8	10		10	100	70	130		



Date: 18-Aug-09	(QC St	ımmar	y Repor	t	<u></u>			Work Ord 09080602	
Sample Matrix Spike		Туре М		est Code: _						
File ID: 09081412.D			Ba	atch ID: MS [.]	15W08	14M	•		08/14/2009 16:02	
Sample ID: 09080602-02AMS	Units : µg/L		Run ID: M	SD_15_090	814A		Prep Dat	e:	08/14/2009	
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	CLCL(ME)	UCL(ME) RP	DRefV	al %RPD(Limit)	Qua
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 Bromomethane	46.9	2.5	50	0	94	39	154			
Trichlorofluoromethane	49.9 47.3	10 2.5	50 50	0	99.8 95	19 34	176 160			
1,1-Dichloroethene	44.4	2.5	50 50	0	95 89	60	130			
Dichloromethane	46.7	10	50	Ő	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 Chloroform	52.1 49.6	2.5	50	0	104 93	70 67	130 130			
2,2-Dichloropropane	33.6	2.5 2.5	50 50	3.23 0	93 67	30	152			
1,2-Dichloroethane	49	2.5	50	0	98	60	135			
1,1,1-Trichloroethane	47.6	2.5	50	Ō	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 1,2-Dichloropropane	51.8 48.7	2.5 2.5	50 50	0	104 97	69 69	133 130			
Trichloroethene	46.7	2.5	50 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		4	
1,1,2-Trichloroethane	48.4	2.5	50	0	97	68	130			
Toluene	43.5	1.3	50	0	87	66 70	130			
1,3-Dichloropropane Dibromochloromethane	46.4 52	2.5	50 50	0 7.81	93 88	70 70	130 130			
1,2-Dibromoethane (EDB)	99.8	2.5 10	100	1.81	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 Styrene	48.1 35.8	2.5	50	8.14	80 72	64 60	138 130			
o-Xylene	45.1	2.5 1.3	50 50	0 0	90	69 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 2-Chlorotoluene	41.6 41.5	2.5	50	0	83 83	70 70	130 130			
1,3,5-Trimethylbenzene	39.6	2.5 2.5	50 50	0	83 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 1.2-Dichlorobenzene	39.2	2.5	50	0	78	66 70	137			
n-Butylbenzene	42.3 38.1	2.5 2.5	50 50	0	85 76	70 60	130 142			
1,2-Dibromo-3-chloropropane (DBCP)	228	2.5 15	250	0	76 91	60 67	130			
1,2,4-Trichlorobenzene	43.7	10	250 50	0	87	61	130			
Naphthalene	47.1	10	50	Ő	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 Surr: Toluene-d8	50.5		50		101	70	130			
Surr: 4-Bromofluorobenzene	48.8 47.7		50 50		98 95	70 70	130 130			
Contra Distriction (Denzene	41.1		50		90	70	130			



Date: 18-Aug-09	(QC Si	ummary	Repor	t				Work Or 0908060	
Sample Matrix Spike Duplicate		Туре М		st Code:						
File ID: 09081413.D			Ba	tch ID: MS1	5W081	4M	-		3/14/2009 16:24	1
Sample ID: 09080602-02AMSD	Units : µg/L		Run ID: MS	D_15_0908	514A		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		0	79	43	134	59.71	40.3(20)	R5
Chloroethane	41.9	2.5		0	84	39	154	53.43	24.3(20)	R5
Bromomethane	49.3	10		0	99	19	176	62.33	23.3(20)	R58
Trichlorofluoromethane	44.3	2.5		0	89	34	160	56.71	24.5(20)	R5
1,1-Dichloroethene	40.8	2.5		0	82	60	130	50.16	20.5(20)	R5
Dichloromethane	45	10	50 50	0	90	68	130	51.43	13.3(20)	110
trans-1,2-Dichloroethene	43.8	2.5		Ő	88	63	130	52.41	18.0(20)	
Methyl tert-butyl ether (MTBE)	53.2	1.3	50	Õ	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		0	95	70	130	53.1	11.4(20)	
Bromochloromethane	52.6	2.5		0	105	70	130	56.57	7.3(20)	
Chloroform 2,2-Dichloropropane	46.9	2.5		3.23	87 61	67 20	130	50.54	7.6(20) 58.6(20)	R5
1,2-Dichloroethane	30.3	2.5		0		30 60	152	55.48 52.84	58.6(20) 8.5(20)	cn
1,1,1-Trichloroethane	48.5 43.9	2.5 2.5		0	97 88	60 59	135 137	52.84 53.39	8.5(20) 19.5(20)	
1,1-Dichloropropene	43.9	2.5		0	84	63	130	51.47	20.3(20)	R5
Carbon tetrachloride	45.4	2.5		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		Õ	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		0	85	69	130	50.65	17.3(20)	
Bromodichloromethane	54	2.5		5.05	98	66	134	54.3	0.6(20)	
cis-1,3-Dichloropropene trans-1,3-Dichloropropene	43.8	2.5		0	88	63 66	130 131	52.98 49.69	18.9(20) 17.6(20)	
1,1,2-Trichloroethane	41.6 49.5	2.5 2.5	50 50	0	83 99	68	130	49.89 53.47	7.8(20)	
Toluene	40.9	1.3	50	Ő	82	66	130	47.89	15.8(20)	
1,3-Dichloropropane	47.3	2.5	50	õ	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)	R 5
1,1,1,2-Tetrachloroethane	47	2.5	50	0	94	70	130	52.53	11.1(20)	
Chlorobenzene Ethylbenzene	42	2.5	50	0	84	70	130	47.94	13.1(20)	
m.p-Xylene	40.1 40.7	1.3 1.3	50 50	0 0	80 81	68 64	130 130	47.06 48.51	15.9(20) 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 Isopropylbenzene	92	10	100	0	92	70	130	97.35	5.6(20)	
Bromobenzene	37.8 42.9	2.5 2.5	50 50	0 0	76 86	64 70	138 130	45.11 48.18	17.6(20) 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	õ	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 sec-Butylbenzene	36.8	2.5	50	0	74	65 65	137	43.57	16.7(20)	
1,3-Dichlorobenzene	37 41.2	2.5 2.5	50 50	0 0	74 82	66 70	134 130	44.47 48.12	18.3(20) 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	õ	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	õ	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	õ	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 Surr: 1,2-Dichloroethane-d4	47.2	10	50	0	94	51	144	49.07	3.8(20)	
Surr: Toluene-d8	51 49		50 50		102 98	70 70	130 130			
	43		50		30	10	130			



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

QC Summary Report

Work Order: 09080602

Date: 18-Aug-09 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.

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

Logged in by: Chyploth Adcox Elizabeth Adcox Alpha Analytical, Inc. 8-10-09 1/15		1
are Print Name Comp Odcox Elizabeth Adcox Alpha Analy	Logged in by:	
are Print Name Comp Odcox Elizabeth Adcox Alpha Analy	Cenpbeth	
Print Name Comp izabeth Adcox Alpha Analy	adcox	Signature
d Cox Alpha Analy	izab	Print N
$\begin{array}{c} \text{Company} & \text{Date/Time} \\ \text{Alpha Analytical, Inc.} & 8 \cdot (0 \cdot 0 \ 1 1 \cdot 5 \cdot 5$		ame
Date/Time 8-6-09 1/15	Alpha Analytical, Inc.	Company
	21/1 60.01.8	Date/Time

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).:

Comments:

San Diego, CA 92110	92110		Shane Walton	ă	(614	(614) 424-4117 x	17 x	waltons@	waltons@battelle.org			Sampleo	Sampled by : Client	ent	
PO: 218013												Cooler Temp		Samples Received	Date Printed
Client's COC #: 25740	5740	: qof	Job : G005862/JPL Groundwater Monitoring	L Groun	dwater N	Monitori	рŋ					4	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	: Final R	tpt, MBLK, In	itCal/Cor	nCal data	a, LCS,	MS/MSD V	Nith Surro	gates						
										Requested Tests	ed Tests				
Alpha Sample ID	Client Sample ID	Matr	Collection No. of Bottles Matrix Date Alpha Sub	No. of Bottles Alpha Sub TAT	Bottles Sub		300_0(A)_W 300_0(B)_W 300_0(C)_W	300_0(B)_W	300_0(C)_W	314_W	METALS_D W	314_W METALS_D VOC_TIC_ VOC_W	VOC_W	Samp	Sample Remarks
BMI09080602-01A	MW-7	AQ	08/05/09 08:41	თ	0	10	NO2, NO3, NO2, NO3, NO2, NO3, PO4, SO4, CI PO4, SO4, CI PO4, SO4, CI	NO2, NO3, PO4, SO4, CI	NO2, NO3, PO4, SO4, CI	Perchlorate	Ç,	VOC by 524 VOC by 524 Criteria Criteria	VOC by 524 Criteria		
BMI09080602-02A MW-16	MW-16	AQ	08/05/09 10:29	10	0	10	NO2, NO3, NO2, NO3, NO2, NO3, PO4, SO4, CI PO4, SO4, CI PO4, SO4, CI PO4, SO4, CI	NO2, NO3, PO4, SO4, CI	NO2, NO3, PO4, SO4, CI	Perchlorate	Ŷ	VOC by 524 VOC by 524 Criteria Criteria	VOC by 524 Criteria		MS/MSD
BMI09080602-03A TB-12-8/5/09	TB-12-8/5/09	Ą	08/05/09	<u>د</u>	o	10						VOC by 524 VOC by 524 Criteria Criteria	VOC by 524 Criteria	Reno Tri	Reno Trip Blank 6/22/09

Client: Battelle Memorial Institute Suite C-205 3990 Old Town Ave Report Attention Betsy Cutie David Conner CHAIN-OF-CUSTODY RECORD 255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778 TEL: (775) 355-1044 FAX: (775) 355-0406 Alpha Analytical, Inc. Phone Number (614) 424-4899 x (818) 393-2808 x cutiee@batelle.org connerd@battelle.org EMail Address Report Due By : 5:00 PM On : 20-Aug-2009 WorkOrder : BMIS09080602 EDD Required : Yes C A

Page: 1 of 1

Billing Information :

Billing Information: Name <u>Genals</u> Tompking Iso Address <u>Sos Icines Ave</u> City, State, Zip <u>Columber of 43</u> 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 W AZ CA NV ID OR OTHER Analyses Requi) ³ age	25740 ; <u># 1 or 1</u>
Client Name SATTELLE DAVID CONNER Address 3990 CLD TOWN AND CONNER	PO. # 218013 Job #	2005862	Requ	Required QC Level?
s ca 921	Phone # 726-7311 Fax#		EDD / EDF? YES	
Matrix* Sampled by See Key Lab ID Nui Below	Report Attention Sample Description	TAT Field "See below	Giobal ID #	REMARKS
841 85/5 A& BMT09080602-01	Mw-7	15/ JN		
ζΩ.	D MW-16		Mshsz	¢
.03	3 TB-12-8/5/09		Traine	Rearle
ADDITIONAL INSTRUCTIONS:				
Signature	Print Name	Company	Date	Time
Relinquished by	MARCO MENZONA	INSIGHT EEC	8/5/09	1300
Received by Clapbeth (Ldcox	Elizabeth Adax	. (Llpha	8.6.09	1115
Received by Relinquished by				
Received by				
*Key: AQ - Aqueous SO - Soil WA - Waste	ste OT_Other AD_Air **: 1_Liter	V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass	on D Diantin	

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.



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 San Diego, CA 92110 (818) 393-2808

Suite C-205

CASE NARRATIVE

Project:	G005862/JPL Gro	undwater Monitoring		
Work Order:	BMI09080703	7	Cooler Temp:	4 °C
Alpha's	Sample ID	Client's Sample ID	Matrix	
09080)703-01A	MW-13	Aqueous	
09080)703-02A	MW-8	Aqueous	
09080)703-03A	MW-6	Aqueous	
09080)703-04A	TB-13-8/6/09	Aqueous	
		Manually Integrat	ed Analytes	i internetion de la
<u>Alpha's Sa</u>	mple ID	Test Reference		Analyte
0908070	03-01A	EPA Method 314.0		Perchlorate
0908070	03-02A	EPA Method 314.0		Perchlorate
0908070	03-03A	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/Chainof-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.

Walter Airidmon Kandy Sandmer Roger Scholl

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.



255 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 1ethod 300.0 / 9056		د 	
	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
Lab 1D : BM109080703-01A	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
	Nitrate (NO3) - N	3.7	0.25 mg/L	08/06/09 10:10	08/07/09 12:48
Lab ID : BMI09080703-02A	Phosphate, ortho - P	ND	0.25 mg/L	08/06/09 10:10	08/07/09 12:48

ND = Not Detected

Roger Scholl

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



255 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									
	Parat	neter	Concentration	Reporting Limit	Date Sampled	Date Analyzed				
Client ID : MW-1	3									
Lab ID : BMI09	080703-01A 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 : BMI09	080703-02A 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				

Rogen Scholl

Kandys

lter A

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



255 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

]	Perchlorate by Ion Chromatography EPA Method 314.0		
	Parameter	Concentration	Reporting Limit	Date Date Sampled Analyzed
Client ID : MW-13 Lab ID : BM109080703-01A	Perchlorate	1,110	100 μg/L	08/06/09 08/07/09
Client ID : MW-8 Lab ID : BM109080703-02A	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 Kandy Sandner

alter A

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



255 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

	Metals by ICPMS EPA Method 200.8										
		Parameter	Concentration	Reporting Limit	Date Date Sampled Analyzed						
Client ID : Lab ID :	MW-13 BMI09080703-01A	Chromium (Cr)	0.031	0.0050 mg/L	08/06/09 08/13/09						
Client ID : Lab ID :	MW-8 BMI09080703-02A	Chromium (Cr)	0.0053	0.0050 mg/L	08/06/09 08/13/09						
Client ID : Lab ID :	MW-6 BMI09080703-03A	Chromium (Cr)	0.048	0.0050 mg/L	08/06/09 08/13/09						

Roger Scholl Walter Aridman Kandy Santan

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



255 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
			Concentration	Linit	10001700	Sumpice	i iluiy2eu
Client ID : Lab ID :	MW-13 BMI09080703-01A	*** None Found ***	ND	2.0 μg/L	08/07/09	08/06/09	08/14/09
Client ID : Lab ID :	MW-8 BMI09080703-02A	*** None Found ***	ND	2.0 μg/L	08/07/09	08/06/09	08/14/09
Client ID : Lab ID :	MW-6 BMI09080703-03A	* * * None Found * * *	ND	2.0 μg/L	08/07/09	08/06/09	08/14/09
Client ID : Lab ID :	TB-13-8/6/09 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 Kandy Sandmer

Dalter Arihm

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 Page 1 of 1



255 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 G005862/JPL Groundwater Monitoring Job#:

Alpha Analytical Number: BMI09080703-01A Client I.D. Number: MW-13

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

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

Analyzed: 08/14/09

Volatile Organics by GC/MS

	Compound	Concentration	Reporting	Limit		Compound	Concentration	Reporting Li	mit
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	μg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	μg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	μg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachioroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	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 (DBCI	P) 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

Kandy Sarlan

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.

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

8/20/09

Report Date



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

ANAL	YTICAL REPORT
Battelle Memorial Institute	Attn: David Conner
3990 Old Town Ave	Phone: (818) 393-2808
San Diego, CA 92110	Fax: (614) 458-6641
Job#: G005862/JPL Groundwater Monitoring	
Alpha Analytical Number: BMI09080703-02A	Sampled: 08/06/09
Client I.D. Number: MW-8	Received: 08/07/09
	Analyzed: 08/14/09

Volatile Organics by GC/MS

	Compound	Concentration	Reporting	Limit		Compound	Concentration	Reporting Li	imit
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	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	ug/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	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-Butvibenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butvibenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1.3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCI	P) 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			1	, , ,	
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

Rogen Scholl

Kandy Douton

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

8/20/09

Report Date

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.



255 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

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

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

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

Analyzed: 08/14/09

Volatile Organics by GC/MS

	Compound	Concentration	Reporting	Limit		Compound	Concentration	Reporting L	imit
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	μg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloroproparie	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	μg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBC	P) ND	2.5	µg/L
25	Trichloroethene	2.4	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	108	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	103	(70-130)	%REC
31	Toluene	ND	0.50	μg/L	66	Surr: 4-Bromofluorobenzene	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	1.2	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl

Kandy Sandman

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.

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

8/20/09

Report Date



255 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 G005862/JPL Groundwater Monitoring Job#:

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

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

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

Analyzed: 08/14/09

Volatile Organics by GC/MS

	Compound	Concentration	Reporting	Limit		Compound	Concentration	Reporting Li	imit
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1.1.1.2-Tetrachloroethane	ND	0.50	μg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	μg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m.p-Xylene	ND	0.50	μg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	μg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	μg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBC	P) ND	2.5	µg/L
25	Trichloroethene	ND	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-Bromofluorobenzerie	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

Kandy Sandman

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.

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

8/20/09 **Report Date**



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	рН	
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	

•



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 Si	ummar	y Repor	t				Work Ord 09080703	
Method Blank File ID: 17 Sample ID: MB-22498 Analyte	Units : mg/L Result	Type M	Ba Run ID: IC	est Code: El atch ID: 224 _ 2_090807 SpkRefVal	98A		Analy Prep	Date:	08/07/2009 11:34 08/07/2009 Val %RPD(Limit)	Qual
Nitrite (NO2) - N Nitrate (NO3) - N Phosphate, ortho - P	ND ND ND	0.25 0.25 0.25								
Laboratory Fortified Blank		Type L	FB Te	est Code: El	PA Me	thod 300.0	/ 9056			
File ID: 18 Sample ID: LFB-22498	Units : mg/L			atch ID: 2249			Analy Prep		08/07/2009 11:53 08/07/2009	
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRef	Val %RPD(Limit)	Qual
Nitrite (NO2) - N Nitrate (NO3) - N Phosphate, ortho - P	1.16 1.37 1.14	0.25 0.25 0.25	1.25		93 110 91	90 90 90	110 110 110			
Sample Matrix Spike		Type L	FM Te	est Code: El	PA Me	thod 300.0	/ 9056			
File ID: 29			Ba	atch ID: 224	A86		Analy	sis Date:	08/07/2009 15:16	
Sample ID: 09080703-01ALFM	Units : mg/L		-	_2_090807#			Prep		08/07/2009	
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRef	Val %RPD(Limit)	Qual
Nitrite (NO2) - N Nitrate (NO3) - N Phosphate, ortho - P	1.12 7.8 1.33	0.25 0.25 0.25	1.25	0 6.689 0	89 89 106	80 80 80	120 120 120			
Sample Matrix Spike Duplicate		Type L	FMD Te	est Code: El	PA Me	thod 300.0	/ 9056			
File ID: 30			Ba	atch ID: 2249	98A		Analy	sis Date:	08/07/2009 15:35	
Sample ID: 09080703-01ALFMD	Units : mg/L			_2_090807#			Prep		08/07/2009	
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	CLCL(ME)	UCL(ME)	RPDRef	Val %RPD(Limit)	Qual
Nitrite (NO2) - N Nitrate (NO3) - N Phosphate, ortho - P	1.37 7.92 1.21	0.25 0.25 0.25	1.25	0 6.689 0	109 99 97	80 80 80	120 120 120	1.11 7.80 1.32	3 1.5(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.



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

Date: 		QC Summary Report								Work Order: 09080703	
Method Blan File ID: 17	k		Type N		Fest Code: E Batch ID: 224		thod 300.0		/sis Date:	08/07/2009 11:34	
Sample ID:	MB-22498	Units : mg/L		Run ID: I	C_2_090807	Ά		Prep	Date:	08/07/2009	
Analyte		Result	PQL	SpkVa	I SpkRefVa	I %REC	C LCL(ME)	UCL(ME)	RPDRef	Val %RPD(Limit)	Qua
Sulfate (SO4)		ND	0.5	5							
Laboratory F	Fortified Blank		Type L	FB -	Fest Code: E	EPA Me	thod 300.0	/ 9056			
File ID: 18				E	Batch ID: 224	198B		Analy	sis Date:	08/07/2009 11:53	
Sample ID:	LFB-22498	Units : mg/L		Run ID: I	C_2_090807	Ά		Prep	Date:	08/07/2009	
Analyte		Result	PQL	SpkVa	I SpkRefVa	I %REC	C LCL(ME)	UCL(ME)	RPDRef	Val %RPD(Limit)	Qua
Sulfate (SO4)		10.2	0.5	5 10)	102	90	110			
Sample Matr	ix Spike		Type L	.FM ⁻	Fest Code: E	EPA Me	thod 300.0	/ 9056			
File ID: 29				E	Batch ID: 224	498B		Anaiy	sis Date:	08/07/2009 15:16	
Sample ID:	09080703-01ALFM	Units : mg/L		Run ID: I	C_2_090807	Ά		Prep	Date:	08/07/2009	
Analyte		Result	PQL	SpkVa	I SpkRefVa	I %REC	C LCL(ME)	UCL(ME)	RPDRef	Val %RPD(Limit)	Qua
Sulfate (SO4)		62.2	0.5	5 10) 53.12	2 90	80	120			
Sample Matr	ix Spike Duplicate		Type L	.FMD	Fest Code: E	EPA Me	thod 300.0	/ 9056			
File ID: 30				E	Batch ID: 22	498B		Analy	sis Date:	08/07/2009 15:35	
Sample ID:	09080703-01ALFMD	Units : mg/L		Run ID: I	C_2_090807	Ά		Prep	Date:	08/07/2009	
Analyte		Result	PQL	SpkVa	I SpkRefVa	I %REC	LCL(ME)	UCL(ME)	RPDRef	Val %RPD(Limit)	Qua
Sulfate (SO4)		62.7	0.5				80	120	62.1		

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.



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 Blan File ID: 17	Type MBLK Test Code: EPA Method 300.0 / 9056 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	Spk	Val	SpkRefVal	%REC	LCL(ME)	UCL(ME) RPDRef	Val %RPD(Limit)	Qua
Chloride		ND	0.	5								
Laboratory Fortified Blank File ID: 18			Type LFB			Test Code: EPA Method 300.0				unia Data	00/07/0000 11:53	
Sample ID: Analyte	LFB-22498	Units : mg/L Result	PQL): IC_	2_090807A			Prep	, Date:	08/07/2009 11:53 08/07/2009 Val %RPD(Limit)	Qua
Chloride		4.48	0.1		5	opkitervar	90	90	110			
Sample Matrix Spike File ID: 29			Test Code: EPA Method 300.0 / Batch ID: 22498C					ysis Date:	08/07/2009 15:16			
Sample ID:	09080703-01ALFM	Units : mg/L		Run IC): IC_	2_090807A			Prep	Date:	08/07/2009	
Analyte		Result	PQL	Spk	Val 3	SpkRefVal	%REC	LCL(ME)	UCL(ME) RPDRef	Val %RPD(Limit)	Qua
Chloride		40.6	0.	5	5	37.13	69	80	120			M2
	rix Spike Duplicate		Type LFMD Test Code: EPA Method 300.0 / 9056									
File ID: 30					Bat	tch ID: 2249	8C		Anal	ysis Date:	08/07/2009 15:35	
Sample ID:	09080703-01ALFMD	Units : mg/L		Run ID): IC_	2_090807 <i>A</i>	1		Prep	Date:	08/07/2009	
Analyte		Result	PQL	Spk	Val 🗄	SpkRefVal	%REC	LCL(ME)	UCL(ME) RPDRef	Val %RPD(Limit)	Qua
Chloride		41.3	0.	5	5	37.13	83	80	120	40.5	7 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.



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 S	Sum	mar	y Repor	t				Work Ord 09080703	
Method Blank File ID: 14	. <u>1948</u> - 1949	Туре	MBLK		est Code: El atch ID: 224		hod 314.0		sis Date:	08/07/2009 11:00	
Sample ID: MB-22496	Units : µg/L		Run	ID: IC	_3_090807	3		Prep	Date:	08/07/2009	
Analyte	Result	PQL					LCL(ME)	UCL(ME)	RPDRef	Val %RPD(Limit)	Qua
Perchlorate	ND		1								
Laboratory Fortified Blank		Туре	LFB	Τe	est Code: El	PA Met	hod 314.0			14.2.4.100 m v	
File ID: 15				Ba	atch ID: 224	96		Analy	sis Date:	08/07/2009 11:18	
Sample ID: LFB-22496	Units : µg/L		Run	ID: IC	_3_0908076	3		Prep	Date:	08/07/2009	
Analyte	Result	PQL	S	okVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRef	Val %RPD(Limit)	Qua
Perchlorate	25.7		2	25		103	85	115			
Sample Matrix Spike	<u></u>	Туре	LFM	Τe	est Code: El	PA Met	hod 314.0				
File ID: 28				Ba	atch ID: 224	96		Analy	sis Date:	08/07/2009 15:17	
Sample ID: 09080703-01ALFM	Units : µg/L		Run	ID: IC	_3_090807	3		Prep	Date:	08/07/2009	
Analyte	Result	PQL	S	okVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRef	Val %RPD(Limit)	Qua
Perchlorate	3780	20	00	2500	1113	107	80	120			
Sample Matrix Spike Duplicate		Туре	LFMD	Τe	est Code: El	PA Met	hod 314.0				
File ID: 29				Ba	atch ID: 224	96		Analy	sis Date:	08/07/2009 15:36	
Sample ID: 09080703-01ALFMD	Units : µg/L		Run	ID: IC	_3_090807E	3		Prep	Date:	08/07/2009	
Analyte	Result	PQL	S	okVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRef	Val %RPD(Limit)	Qua
Perchlorate	3700	20	00	2500	1113	104	80	120	377	7 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.



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 S	ummar	y Repor	t				Work Ord 09080703	
Method Blank File ID: 081309.B\052SMPL.D\		Type I		est Code: E atch ID: 225		thod 200.8		sis Date:	08/13/2009 19:24	
Sample ID: MB-22542	Ųnits : mg/L		Run ID: IC	CP/MS_0908	13B		Prep	Date:	08/13/2009	
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	CLCL(ME)	UCL(ME)	RPDRef	Val %RPD(Limit)	Qual
Chromium (Cr)	ND	0.00	5							
Laboratory Control Spike File ID: 081309.B\053_LCS.D\		Туре І		est Code: E atch ID: 225		thod 200.8		sis Date:	08/13/2009 19:30	
Sample ID: LCS-22542	Units : mg/L		Run ID: IC	CP/MS_0908	13B		Prep	Date:	08/13/2009	
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	CLCL(ME)	UCL(ME)	RPDRef	Val %RPD(Limit)	Qual
Chromium (Cr)	0.0571	0.00	5 0.05		1 1 4	80	120			
Sample Matrix Spike File iD: 081309.B\057SMPL.D\		Type I		est Code: E atch ID: 225		thod 200.8		sis Date:	08/13/2009 19:52	
Sample ID: 09080703-01AMS	Units : mg/L		Run ID: IC	CP/MS_0908	13B		Prep	Date:	08/13/2009	
Analyte	Result	PQL	SpkVal		%REC	CLCL(ME)	UCL(ME)	RPDRef	val %RPD(Limit)	Qual
Chromium (Cr)	0.0776	0.00	5 0.05	0.03121	93	80	120			
Sample Matrix Spike Duplicate File ID: 081309.B\058SMPL.D\		Type I	-	est Code: E		thod 200.8		vsis Date:	08/13/2009 19:58	
Sample ID: 09080703-01AMSD	Units : mg/L		_	CP/MS_0908				Date:	08/13/2009	
Analyte	Result	PQL				CLCL(ME)			val %RPD(Limit)	Qual
Chromium (Cr)	0.0789	0.00			95	80	120	0.077		

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.



19-Aug-09	(<u>2C Sumn</u>	nary Report		Work Order: 09080703		
Method Blank File ID: 09081411.D Sample ID: MBLK MS15W0814M	Units : µg/L	Type MBLK Run I	Test Code: Batch ID: MS15W0814M D: MSD_15_090814A	Analysis Date: Prep Date:	08/14/2009 15:40 08/14/2009		
Analyte	Result	PQL Spl	<pre></pre>	E) UCL(ME) RPDRef	√al %RPD(Limit)	Qu	
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 trans-1,2-Dichloroethene	ND ND	0.5 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 1,1-Dichloropropene	ND	0.5					
Carbon tetrachloride	ND	0.5					
Benzene	ND ND	0.5 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 Dibromochloromethane	ND	0.5					
1,2-Dibromoethane (EDB)	ND ND	0.5 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 1,2,3-Trichloropropane	ND	0.5					
Isopropylbenzene	ND 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 1,4-Dichlorobenzene	ND	0.5					
4-isopropyitoluene	ND ND	0.5					
1,2-Dichlorobenzene	ND ND	0.5 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			



Date: 19-Aug-09	(QC Sumn	nary Rep	ort		······································	Work Ord 09080703	
Surr: 4-Bromofluorobenzene	8.93		10	89	70	130		
Laboratory Control Spike File ID: 09081408.D		Type LCS	Test Code: Batch ID: N	S15W081	4M		: 08/14/2009 14:16	
Sample ID: LCS MS15W0814M	Units : µg/L		D: MSD_15_0			Prep Date:	08/14/2009	Qual
Analyte	Result) UCL(ME) RPDRe		Qual
Dichlorodifluoromethane Chloromethane	12.5 10.8	1 2	10 10	125 108	70 70	130 130		
Vinyl chloride	11.4	2	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 trans-1,2-Dichloroethene	10.6 11.4	2	10	106	70 70	130 130		
Methyl tert-butyl ether (MTBE)	11.4	1 0.5	10 10	114 110	70	130		
1,1-Dichloroethane	10.9	0.0	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 1,2-Dichloroethane	12.5 10.7	1 1	10 10	125 107	70 70	130 130		
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 1,2-Dichloropropane	11.2	1	10	112	70	130 130		
Trichloroethene	11.1 11	1 1	10 10	111 110	70 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 1,3-Dichloropropane	10.4	0.5	10	104 102	70 70	130		
Dibromochloromethane	10.2 9.95	1 1	10 10	102	70 70	130 130		
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 70	130		
Ethylbenzene m,p-Xylene	10.2 10.4	0.5 0.5	10 10	102 104	70 70	130 130		
Bromoform	9.13	0.5	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 Isopropylbenzene	19.2 9.84	2 1	20 10	96 98	70 70	130 130		
Bromobenzene	9.88	1	10	98 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 tert-Butylbenzene	9.54	1	10	95	70 70	130		
1,2,4-Trimethylbenzene	9.53 9.21	1 1	10 10	95 92	70 70	130 130		
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 70	130		
1,2-Dichlorobenzene n-Butylbenzene	. 9.45 9.5	1	10 10	95 95	70 70	130 130		
1,2-Dibromo-3-chloropropane (DBCP)	9.5 48.7	3	10 50	95 97	70 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 Surr: Toluene-d8	9.97 10		10 10	99.7 100	70 70	130 130		
Surr: 4-Bromofluorobenzene	9.75		10	98	70	130		
· · · · · ·								



Date: 19-Aug-09	(QC Su	immary	Report	-			Work Orde 09080703	
Sample Matrix Spike		Туре М	S Te	st Code:					
File ID: 09081414.D			Ba	tch ID: MS1	5W081	4M	Analysis Da	ate: 08/14/2009 16:47	
Sample ID: 09080502-03AMS	Units:µg/L	1		D_15_0908			Prep Date:	08/14/2009	
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME) RPDI	RefVal %RPD(Limit)	Qual
Dichlorodifluoromethane	47.3	2.5	50	0	95	13	167		
Chloromethane Vinyl chloride	53.6 59.7	10	50	0	107	28 43	145 134		
Chloroethane	53.4	2.5 2.5	50 50	0 0	119 107	43 39	154		
Bromomethane	62.3	10	50	ŏ	125	19	176		
Trichlorofluoromethane	56.7	2.5	50	0	113	34	160		
1,1-Dichloroethene Dichloromethane	50.2	2.5	50	0	100	60	130		
trans-1,2-Dichloroethene	51.4 52.4	10 2.5	50 50	0 0	103 105	68 63	130 130		
Methyl tert-butyl ether (MTBE)	56.9	1.3	50	õ	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 Chloroform	56.6 50.5	2.5 2.5	50 50	0 0	113 101	70 67	130 130		
2,2-Dichloropropane	55.5	2.5 2.5	50 50	0	111	30	152		
1,2-Dichloroethane	52.8	2.5	50	õ	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 Benzene	53.9 52.2	2.5 1.3	50 50	0 0	108 104	50 67	147 130		
Dibromomethane	56.6	2.5	50 50	0	113	69	133		
1,2-Dichloropropane	53.1	2.5	50	Ō	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 trans-1,3-Dichloropropene	53 49.7	2.5 2.5	50 50	0 0	106 99	63 66	130 131		
1,1,2-Trichloroethane	53.5	2.5	50	ŏ	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 1,2-Dibromoethane (EDB)	48.8 110	2.5 10	50 100	0	98 110	70 70	130 130		
Tetrachloroethene	49.6	2.5	50	0	99	61	134		
1,1,1,2-Tetrachloroethane	52.5	2.5	50	Ō	105	70	130		
Chlorobenzene	47.9	2.5	50	0	96	70	130		
Ethylbenzene m.p-Xylene	47.1 48.5	1.3	50	0 0	94 97	68 64	130 130		
Bromoform	46.3	1.3 2.5	50 50	0	93	64 64	138		
Styrene	40.1	2.5	50	õ	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 Isopropylbenzene	97.4 45.1	10 2.5	100 50	0 0	97 90	70 64	130 138		
Bromobenzene	48.2	2.5	50	Ő	96	70	130		
n-Propylbenzene	45.8	2.5	50	Ō	92	66	132		
4-Chlorotoluene	46.7	2.5	50	0	93	70	130		
2-Chlorotoluene 1,3,5-Trimethylbenzene	46 44.6	2.5 2.5	50 50	0 0	92 89	70 66	130 136		
tert-Butylbenzene	44.3	2.5	50 50	0	89	65	130		
1,2,4-Trimethylbenzene	43.6	2.5	50	õ	87	65	137		
sec-Butylbenzene	44.5	2.5	50	0	8 9	66	134		
1,3-Dichlorobenzene 1,4-Dichlorobenzene	48.1	2.5	50	0	96 05	70	130		
4-Isopropyltoluene	47.4 45	2.5 2.5	50 50	0 0	95 90	70 66	130 137		
1,2-Dichlorobenzene	46.8	2.5	50	õ	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 Naphthalene	49.5 51.4	10 10	50 50	0	99 103	61 40	137 167		
Hexachlorobutadiene	90.8	10	100	0	103 91	40 61	130		
1,2,3-Trichlorobenzene	49.1	10	50	õ	98	51	144		
Surr: 1,2-Dichloroethane-d4	50.4		50		101	70	130		
Surr: Toluene-d8 Surr: 4-Bromofluorobenzene	48.8 48		50 50		98 96	70 70	130 130		
	40		50		30	10	100		



Date: 19-Aug-09	(QC Sun	nmary	Report					Work Ord 09080703	
Sample Matrix Spike Duplicate		Type MSC) Te	st Code:						
File ID: 09081415.D			Bat	tch ID: MS15	5 W08 1	4 M	Analys	is Date: 08	/14/2009 17:09	
Sample ID: 09080502-03AMSD	Units : µg/L	Ru	in ID: MS	D_15_09081	14 A		Prep D	ate: 08/	14/2009	
Analyte	Result	PQL	SpkVal \$	SpkRefVal %	%REC	LCL(ME)	UCL(ME) F	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	46.1	2.5	50	0	92	13	16 7	47.27	2.4(20)	
Chloromethane	54.1	10	50	0	108	28	145	53.57	1.0(20)	
Vinyl chloride Chloroethane	56.2 50.8	2.5 2.5	50 50	0 0	112 102	43 39	134 154	59.71 53.43	6.0(20) 5.1(20)	
Bromomethane	60.9	2.5	50	0	122	19	176	62.33	2.3(20)	
Trichlorofluoromethane	53.4	2.5	50		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 trans-1,2-Dichloroethene	50.8	10	50	0	102	68 62	130	51.43	1.2(20)	
Methyl tert-butyl ether (MTBE)	49.3 58	2.5 1.3	50 50	0 0	99 116	63 56	130 141	52.41 56.91	6.1(20) 2.0(20)	
1,1-Dichloroethane	49.7	2.5	50	Ő	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 2,2-Dichloropropane	49.4 52.3	2.5 2.5	50 50	0 0	99 105	67 30	130 152	50.54 55.48	2.3(20) 5.8(20)	
1,2-Dichloroethane	52.3	2.5 2.5	50 50	0	105	30 60	135	55.46 52.84	1.2(20)	
1,1,1-Trichloroethane	51	2.5	50	Ő	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 Dibromomethane	50.5 57	1.3 2.5	50	0	101 114	67 69	130 133	52.22 56.64	3.4(20) 0.6(20)	
1,2-Dichloropropane	53.2	2.5	50 50	0	106	69 69	133	53.09	0.2(20)	
Trichloroethene	48	2.5	50	Ő	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 1,1,2-Trichloroethane	49.2 52.6	2.5 2.5	50 50	0 0	98 105	66 68	131 130	49.69 53.47	1.1(20) 1.7(20)	
Toluene	45.5	2.5	50 50	0	91	66	130	47.89	5.2(20)	
1,3-Dichloropropane	50.5	2.5	50	Ō	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		111	70	130	109.6	1.7(20)	
Tetrachloroethene 1,1,2-Tetrachloroethane	47 51	2.5 2.5	50 50	0 0	94 102	61 70	134 130	49.64 52.53	5.4(20) 3.0(20)	
Chlorobenzene	45.7	2.5	50	0 0	91	70	130	47.94	4.8(20)	
Ethylbenzene	44.9	1.3	50	Ō	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 Styrene	45.7	2.5	50	0	91 77	64 60	138 130	46.28 40.13	1.2(20)	
o-Xylene	38.4 47.7	2.5 1.3	50 50	0	95	69 70	130	40.13	4.4(20) 4.4(20)	
1,1,2,2-Tetrachloroethane	50.8	2.5	50	-	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 n-Propylbenzene	46.2 43	2.5 2.5	50 50	0 0	92 86	70 66	130 132	48.18 45.81	4.1(20) 6.4(20)	
4-Chlorotoluene	44.5	2.5	50	0	89	70	132	46.73	4.8(20)	
2-Chlorotoluene	43.8	2.5	50	Ő	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 sec-Butylbenzene	41.2 41.9	2.5 2.5	50 50	0 0	82 84	65 66	137 134	43.57 44.47	5.5(20) 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	Ō	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 n-Butylbenzene	45.4 42.2	2.5	50 50	0	91 84	70 60	130 142	46.84 44.28	3.1(20) 4.9(20)	
1,2-Dibromo-3-chloropropane (DBCP)	42.2 258	2.5 15	50 250	0 0	84 103	60 67	142	44.28 251.5	4.9(20) 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	Ō	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 Surr: 1,2-Dichloroethane-d4	48.8 52.1	10	50 50	0	98 104	51 70	144 130	49.07	0.5(20)	
Surr: Toluene-d8	52.1 47.7		50 50		104 95	70	130			
Surr: 4-Bromofluorobenzene	47.7		50		95	70	130			



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

QC Summary Report

Work Order: 09080703

19-Aug-09 Comments:

Date:

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.

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

]	
Logged in by:		
Clinpte		
th advox	Signature	
Elizabeth	Print P	
Adcox	lame	
Alpha Analytical, Inc.	Company	
8-7-09 1035	Date/Time	

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) :

Comments:

	CHAIN-O	CHAIN-OF-CUSTODY RECORD		Page: 1 of 1
	All	Alpha Analytical, Inc.	WorkOrder : BMIS09080703	080703
_	200 Ulendale A TEL: (7)	253 Giendale Avenue, Suite 21 Sparks, Nevada 89431-5778 TEL: (775) 355-1044 FAX: (775) 355-0406	Report Due By : 5:00 PM On : 21-Aug-2009)n : 21-Aug-2009
Client:	Report Attention Pt	Phone Number EMail Address		
Battelle Memorial Institute	David Conner (8	(818) 393-2808 x connerd@battelle.org		
3990 Old Town Ave Suite C-205	Betsy Cutie (6	(614) 424-4899 x cutiee@batelle.org	EDD Required : Yes	
San Diego, CA 92110	Shane Walton (6	(614) 424-4117 x waltons@battelle.org	Sampled by : Client	
PO: 218013			Cooler Temp Samples Received	ceived Date Printed
Client's COC #: 24144	Job : G005862/JPL Groundwater Monitoring	r Monitoring	4 °C 07-Aug-2009	009 07-Aug-2009
QC Level : DS4 = DOD QC	DOD QC Required : Final Rpt, MBLK, InitCal/ConCal data, LCS, MS/MSD With Surrogates	ata, LCS, MS/MSD With Surrogates		-
			ted Tests	
Alpha Client Sample ID Sample ID	Collection No. of Bottles Matrix Date Alpha Sub	300_0(A)_W 300_0(B)_W 300_0(C)_W TAT	314_W METALS_D VOC_TIC_ VOC_W	Sample Remarks
BMI09080703-01A MW-13	AQ 08/06/09 5 0 08:26	10 NO2, NO3, NO2, NO3, NO2, NO3, Perc PO4, SO4, CI PO4, SO4, CI PO4, SO4, CI	Perchlorate Cr VOC by 524 VOC by 524 Criteria	
BMI09080703-02A MW-8	AQ 08/06/09 5 0 10:10	10 NO2, NO3, NO2, NO3, NO2, NO3, Perc PO4, SO4, CI PO4, SO4, CI PO4, SO4, CI	Perchlorate Cr VOC by 524 VOC by 524 Criteria	
BM109080703-03A MW-6	AQ 08/06/09 5 0 11:58	10 Perc	Perchlorate Cr VOC by 524 VOC by 524 Criteria	
BMI09080703-04A TB-13-8/6/09	AQ 08/06/09 1 0	10	VOC by 524 VOC by 524 R	Reno Trip Blank 6/22/09

Billing Information :

	- Alpha Ar 255 Glendale	Alpha Analytical, Inc. Az 255 Glendale Avenue, Suite 21 ID	AZ CA X NV WA Pag	Page # / of /
Address <u>505 KING AVE</u> City, State, Zip <u>CULUMほんら, att 432a1</u> Phone Number Fax			Analys	
ID GNNER	P.O. # 2 / 80/3 Job #	* 4-02-862	1 1 2 2 C 2 2 2	Der Le
2 OLD TOWN AVE (-20)	-		~Z = (z	/ I II (III) IV
Co Co 92110	Phone #			EDD / EDF7 YES NO
Matrix* Sampled by	rt Attention	Total and type of	N K Strand /	Global ID #
Sampled Sampled See Ney Lab ID Number (Use Only)	Sample Description	TAT Fild ** See below		REMARKS
BMT0908070301	MW-13		× × × ×	
.02	$\mathcal{M} \mathcal{W} - \mathcal{Y}$		∧ × × ×	
1/58			X	
<u>- +0+</u> -0+ -	TB-13-8/6/09	× 1/1		TRUP BLANK
	-			
			-	
ADDITIONAL INSTRUCTIONS:				
Signature	Print Name		Company	Date Time
Relinquished by	MARCO MENDIA	(NSIGMT	SEC 8	8/6/09 1400
Received by Charles the Adrex 4	Hizabuth Hacax		(Ilpha 8	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	OT - Other AR - Air **: L-Liter orted unless other arrangements are made. H	er V-Voa S-Soil Jar Hazardous samples will be returr	O-Orbo T-Tedlar B-Brass ned to client or disposed of at client exp	P-Plastic OT-Other oense. 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.	ceived by the laboratory with this coc. The l	liability of the laboratory is limited	to the amount paid for the report.	



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 San Diego, CA 92110 (818) 393-2808

Suite C-205

CASE NARRATIVE

Project:	G005862/JPL	Groundwater Monitoring		
Work Order:	BMI09081341		Cooler Temp: 4 °C	
Alpha's	s Sample ID	Client's Sample ID	Matrix	
0908	1341-01A	MW -10	Aqueous	
0908	1341-02A	MW-15	Aqueous	
0908	1341-03A	TB-14-8/7/09	Aqueous	
0908	1341-04A	SB-1-3Q09	Aqueous	
0908	1341-05A	MW-5	Aqueous	
0908	1341-06A	TB-15 8/12/09	Aqueous	
		Manually Integrat	ed Analytes	
<u>Alpha's Sa</u>	mple ID	Test Reference	Analyte	
090813	4I-01A	EPA Method 314.0	Perchlorate	
090813	4I-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/Chainof-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.

Walter Arihm Roger Scholl Kandy Saulman



255 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

David Conner Attn: 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 Date Sampled Analyzed
Client ID : Lab ID :	MW-10 BMI09081341-01A	Perchlorate	2.70	1.00 μg/L	08/07/09 08/13/09
Client ID : Lab ID :	SB-1-3Q09 BMI09081341-04A	Perchlorate	ND	1.00 μg/L	08/07/09 08/13/09
Client ID : Lab ID :	MW-5 BMI09081341-05A	Perchlorate	3.36	1.00 μg/L	08/12/09 08/13/09

ND = Not Detected

Kandy Saulmer Roger Scholl

Dalter Arihm

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.

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

gf

8/26/09 **Report Date**



255 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 Date Sampled Analyzed
Client ID : Lab ID :	MW-10 BMI09081341-01A	Chromium (Cr)	0.0066	0.0050 mg/L	08/07/09 08/13/09
Client ID : Lab ID :	MW-15 BMI09081341-02A	Chromium (Cr)	ND	0.0050 mg/L	08/07/09 08/13/09
Client ID : Lab ID :	S B-1-3Q09 BMI09081341-04A	Chromium (Cr)	ND	0.0050 mg/L	08/07/09 08/13/09
Client ID : Lab ID :	MW-5 BMI09081341-05A	Chromium (Cr)	ND	0.0050 mg/L	08/12/09 08/13/09

ND = Not Detected

Roger Scholl Kandy Sandmer

Dalter Arihm

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.

Report Date



255 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

				Estimated			
		Parameter	Estimated	Reporting	Date	Date	Date
			Concentration	Limit	Received	Sampled	Analyzed
Client ID : Lab ID :	MW-10 BMI09081341-01A	*** None Found ***	ND	2.0 μg/L	08/13/09	08/07/09	08/14/09
Client ID : Lab ID :	TB-14-8/7/09 BMI09081341-03A	* * * None Found * * *	ND	2.0 μg/L	08/13/09	08/07/09	08/14/09
Client ID : Lab ID :	SB-1-3Q09 BMI09081341-04A	Tertiary Butyl Alcohol (TBA)	12	10 μg/L	08/13/09	08/07/09	08/14/09
Client ID : Lab ID :	MW-5 BMI09081341-05A	* * * None Found * * *	ND	2.0 μg/L	08/13/09	08/12/09	08/14/09
Client ID : Lab ID :	TB-15 8/12/09 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

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.

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

8/26/09

Report Date

Page 1 of 1



Battelle Memorial Institute

Alpha Analytical, Inc.

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

ANALYTICAL REPORT Attn: David Conner Phone: Fax:

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

Alpha Analytical Number: BMI09081341-01A Client I.D. Number: MW-10

(818) 393-2808 (614) 458-6641

Sampled: 08/07/09 Received: 08/13/09 Analyzed: 08/14/09

Volatile Organics by GC/MS

	Compound	Concentration	Reporting	Limit		Compound	Concentration	Reporting Li	imit
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	μg/L
4	Chloroethane	ND	0.50	µg/L	39	m.p-Xvlene	⁻ ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	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 (DBC	P) ND	2.5	µg/L
25	Trichloroethene	2.3	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1.2-Dichloroethar:e-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			1	. ,	
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					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl

Kandy Saulmer

Walter Arithm

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.



Report Date Page 1 of 1



255 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

Alpha Analytical Number: BMI09081341-03A Client I.D. Number: TB-14-8/7/09
 Attn:
 David Conner

 Phone:
 (818) 393-2808

 Fax:
 (614) 458-6641

Sampled: 08/07/09 Received: 08/13/09

Analyzed: 08/14/09

Volatile Organics by GC/MS

	Compound	Concentration	Reporting	Limit		Compound	Concentration	Reporting L	.imit
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	· · · · · ·	
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50 0.50	
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND		r y -
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50 0.50	µg/L
6	Trichiorofluoromethane	ND	0.50	µg/L	41	Styrene	ND		µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xvlene	ND	0.50 0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND		µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	1.0	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene		0.50	µg/L
16	Chioroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	_	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	μg/L	54	1,3-Dichlorobenzene		0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1.4-Dichlorobenzene	ND ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene		0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCF	ND ND	0.50	µg/L
25	Trichloroethene	ND	0.50	µg/L	60	1,2,4-Trichlorobenzene	,	2.5	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		ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L		1,2,3-Trichlorobenzene	ND	1.0	µg/L
30	1,1,2-Trichloroethane	ND	0.50		64	Surr: 1,2-Dichloroethane-d4	105	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	65	Surr: Toluene-d8	99	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	92	(70-130)	%REC
33	Dibromochloromethane	ND	0.50	µg/L uα/I					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L ́					
			0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl

Kandy Danlaur.

lter Arihm

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.



Report Date

Page 1 of 1



255 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

Alpha Analytical Number: BMI09081341-04A Client I.D. Number: SB-1-3Q09 Attn:David ConnerPhone:(818) 393-2808Fax:(614) 458-6641

Sampled: 08/07/09 Received: 08/13/09

Analyzed: 08/14/09

Volatile Organics by GC/MS

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

Rogen Scholl

Kandy Sandner

Dalter Aridman

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



255 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

Alpha Analytical Number: BMI09081341-05A Client I.D. Number: MW-5

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

Sampled: 08/12/09 Received: 08/13/09

Analyzed: 08/14/09

Volatile Organics by GC/MS

	Compound	Concentration	Reporting	Limit		Compound	Concentration	Reporting Li	imit
1	Dichiorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	μg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chioroethane	ND	0.50	µg/L	39	m.p-Xvlene	ND	0.50	μg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butybenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1.3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBC	P) ND	2.5	µg/L
25	Trichloroethene	ND	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			1	. ,	
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

Kandy Saulner 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.

Walter Ainihum

8/26/09

Report Date

Page 1 of 1



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

ANALYTICAL REPORT

Volatile Organics by GC/MS

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

Alpha Analytical Number: BMI09081341-06A Client I.D. Number: TB-15 8/12/09
 Attn:
 David Conner

 Phone:
 (818) 393-2808

 Fax:
 (614) 458-6641

Sampled: 08/12/09 Received: 08/13/09

Analyzed: 08/14/09

	Compound	Concentration	Reporting	Limit		Compound	Concentration	Reporting Li	imit
1	Dichloredifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	μg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m.p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	μg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	μ <u>ς</u> L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	μg/L	59	1,2-Dibromo-3-chloropropane (DBC	P) ND	2.5	µg/L
25	Trichloroethene	ND	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

Rogen Scholl

Kanda Sandmer

Walter Arm

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.

PS

8/26/09 **Report Date**

Page 1 of 1



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	



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 S	Sum	mary	Repor	t				Work Ord 09081341	
Method Blank File ID: 14		Туре		Ba	st Code: El tch ID: 225 4	47	thod 314.0	Analysi		08/13/2009 16:15	
Sample ID: MB-22547 Analyte	Units : µg/L Result	PQL			3_090813 SokRefVal		LCL(ME)	Prep D UCL(ME) F		08/13/2009 √al %RPD(Limit)	Qua
Perchlorate	ND		1				,				
Laboratory Fortified Blank File ID: 15		Туре		Ba	st Code: El tch ID: 225	47	thod 314.0	Analysi		08/13/2009 16:33	
Sample ID: LFB-22547 Analyte	Units : µg/L Result	PQL		-	_ 3_090813 SpkRefVal		CLCL(ME)	Prep D UCL(ME) F		08/13/2009 √al %RPD(Limit)	Qua
Perchlorate	25.1		2	25		101	85	115			
Sample Matrix Spike File ID: 18		Туре	LFM	_	st Code: El tch ID: 2254		thod 314.0		s Date:	08/13/2009 17:29	
Sample ID: 09081303-05ALFM Analyte	Units : µg/L Result	PQL			_ 3_090813 # SpkRefVal		CLCL(ME)	Prep D UCL(ME) F		08/13/2009 /al %RPD(Limit)	Qua
Perchlorate	22.7		2	25	0	91	80	120			
Sample Matrix Spike Duplicate File ID: 19		Туре	LFMC		st Code: El		thod 314.0		s Date:	08/13/2009 17:47	
Sample ID: 09081303-05ALFMD Analyte	Units : µg/L Result	PQL		n ID: IC_	3_0908134	•	CLCL(ME)	Prep D	ate:	08/13/2009 /al %RPD(Limit)	Qua
Perchlorate	24.4		2	25	0	98	80	120	22.7		

Comments:

der +

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.



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

Date: 20-Aug-09	Q	C S	ummar	y Repor	t				Work Orde 09081341	
Method Blank File ID: 081309.B\052SMPL.D\ Sample ID: MB-22542	Units : mg/L	Гуре М	Ba Run ID: IC	est Code: El atch ID: 2254 P/MS_0908	42 13A		Prep	Date:	08/13/2009 19:24 08/13/2009	
Analyte	Result	PQL		SpkRefVal	%REC	CLCL(ME)	UCL(ME)	RPDRef	Val %RPD(Limit)	Qual
Chromium (Cr)	ND	0.005	5							
Laboratory Control Spike File ID: 081309.B\053_LCS.D\ Sample ID: LCS-22542 Analyte	- Units : mg/L Result	Fype L PQL	Ba Run ID: I C	est Code: El atch ID: 225 P/MS_0908 SpkRefVal	42 13A		Prep	Date:	08/13/2009 19:30 08/13/2009 Val %RPD(Limit)	Qual
Chromium (Cr)	0.0571	0.005			114	85	115			
Sample Matrix Spike File ID: 081309.B\057SMPL.D\ Sample ID: 09080703-01AMS Analyte	Units : mg/L Result	Fype N PQL	Ba Run ID: IC	est Code: El atch ID: 225 P/MS_0908 SpkRefVal	42 13A		Prep	Date:	08/13/2009 19:52 08/13/2009 Val %RPD(Limit)	Qual
Chromium (Cr)	0.0776	0.005		0.03121	93	70	130		· · · · · · · · · · · · · · · · · · ·	
Sample Matrix Spike Duplicate File ID: 081309.B\058SMPL.D\		Гуре М		est Code: El atch ID: 225		thod 200.8	Analy	/sis Date:	08/13/2009 19:58	
Sample ID: 09080703-01AMSD	Units : mg/L		Run ID: IC	P/MS_0908	13A		Prep	Date:	08/13/2009	
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	CLCL(ME)	UCL(ME)	RPDRef	Val %RPD(Limit)	Quai
Chromium (Cr)	0.0789	0.005	5 0.05	0.03121	95	70	130	0.077	59 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.



Date: 22-Aug-09		(QC Si	ummary Repor	t	· · · · · · · · · · · · · · · · ·	Work Orde 09081341	
Method Bla	nk		Type M	BLK Test Code:				
File ID: 09081	411.D			Batch ID: MS1	5W0814M	Analysis Da	te: 08/14/2009 15:40	
Sample ID:	MBLK MS15W0814M	Units : µg/L		Run ID: MSD_15_0908		Prep Date:	08/14/2009	
Analyte		Result	PQL	SpkVal SpkRefVal	%REC LCL(ME	E) UCL(ME) RPDF	RefVal %RPD(Limit)	Qual
Dichlorodifluo	-	ND	0.5					
Chloromethan	e	ND	1					
Vinyl chloride Chloroethane		ND ND	0.5 0.5					
Bromomethar	e	ND	0.5					
Trichlorofluor		ND	0.5					
1,1-Dichloroet		ND	0.5					
Dichlorometha Freon-113		ND ND	1 0.5					
trans-1,2-Dich		ND	0.5					
	tyl ether (MTBE)	ND	0.5					
1,1-Dichloroet 2-Butanone (N		ND	0.5					
cis-1,2-Dichlo		ND ND	10 0.5					
Bromochloron		ND	0.5					
Chloroform	• •	ND	0.5					
2,2-Dichlorop		ND	0.5					
1,2-Dichloroet		ND ND	0.5					
1,1-Dichlorop		ND	0.5					
Carbon tetrac	hloride	ND	0.5					
Benzene		ND	0.5					
Dibromometha 1,2-Dichloropr		ND ND	0.5 0.5					
Trichloroether		ND	0.5					
Bromodichloro		ND	0.5					
	ntanone (MIBK)	ND	2.5					
cis-1,3-Dichlo trans-1,3-Dich		ND ND	0.5 0.5					
1,1,2-Trichlord		ND	0.5					
Toluene		ND	0.5					
1,3-Dichlorop	•	ND	0.5					
Dibromochlore 1,2-Dibromoe		ND ND	0.5 1					
Tetrachloroeth	. ,	ND	0.5					
1,1,1,2-Tetrac		ND	0.5					
Chlorobenzen	e	ND	0.5					
Ethylbenzene m,p-Xylene		ND ND	0.5					
Bromoform		ND	0.5 0.5					
Styrene		ND	0.5					
o-Xylene		ND	0.5					
1,1,2,2-Tetrac 1,2,3-Trichlor		ND ND	0.5					
Isopropylbenz		ND	1 0.5					
Bromobenzen	e	ND	0.5					
n-Propylbenze		ND	0.5					
4-Chlorotoluer 2-Chlorotoluer		ND ND	0.5					
1,3,5-Trimethy		ND	0.5 0.5					
tert-Butylbenz		ND	0.5					
1,2,4-Trimethy		ND	0.5					
sec-Butylbenz 1,3-Dichlorobe		ND	0.5					
1,4-Dichlorobe		ND ND	0.5 0.5					
4-Isopropyltol		ND	0.5					
1,2-Dichlorobe		ND	0.5					
n-Butylbenzer		ND	0.5					
1,2-Dibromo-3	B-chloropropane (DBCP)	ND ND	2.5 1					
Naphthalene		ND	1					
Hexachlorobu		ND	1					
1,2,3-Trichlord		ND	1		400 70	100		
Surr: 1,2-Dich Surr: Toluene		10.3 10		10 10	103 70 100 70	130 130		
Sun. Toluelle	00	10		IU	100 70	130		



Sur: 4 Bromofluorobenzene 8.93 10 89 70 130 Laboratory Control Spike Type LCS Test Code:	ler: 1
File ID: 09081408.0 Units: µg/L Batch ID: M\$15W0814M Analysis Date: 08/14/2009 14:1 Sample ID: LCS M\$15W0814M Units: µg/L Fun ID: M\$0 15,00814A Prep Date: 08/14/2009 Analyte Result POL SpkRefVal %REC LCL(ME) UCL(ME) RPDRefVal %RPD(LUINE) 08/14/2009 Dichroomethane 12.5 1 10 12.5 70 130 Ohoromethane 11.2 1 10 112.2 70 130 Tothoromethane 12.5 70 130 Dichroomethane 11.2 1 10 112.2 70 130 Tothoromethane 1.1.2 1.1.0 10.7 130 Tothoromethane <	
Analyte Result POL SptVal SptVal <th> 3</th>	 3
Dichlorodiffuoromethane 12.5 1 10 125 70 130 Ohloromethane 10.8 2 10 109 70 130 Ohloromethane 11.2 1 10 114 70 130 Chloroethane 13.2 2 10 132 70 130 Dichlorodifuoromethane 13.2 2 10 132 70 130 Dichloroethane 11 1 10 100 70 130 Dichloroethane 11.4 1 11 10 114 70 130 I.1-Dichloroethane 11.4 1 110 70 130 130 I.1-Dichloroethane 11.2 1 0 114 70 130 I.1-Dichloroethane 11.2 1 110 116 70 130 I.1-Dichloroethane 11.2 1 10 117 70 130 I.2-Dichloroptopane 12.5 1<	0
Chicomethane 10.8 2 10 108 70 130 Vinvi choride 11.4 1 10 114 70 130 Bromomethane 13.2 2 10 132 70 130(130) Trichlorofitomethane 11 1 10 110 70 130 1.1-Dichloroethane 11 1 10 110 70 130 Dichloromethane 10.6 2 10 14 70 130 Dichloromethane 11.4 1 10 110 70 130 Dichloromethane 11.4 1 10 114 70 130 Itans-12-Dichloroethane 10.9 1 10 114 70 130 Itans-12-Dichloroethane 10.6 1 10 114 70 130 2.2-Dichloroethane 10.7 1 10 115 70 130 1.2-Dichloroptopane 11.2 1 1	Qua
Vinvi chloride 11.4 1 10 114 70 130 Chloroethane 11.2 1 10 112 70 130(130) Trichloroflucromethane 12 1 10 120 70 130(130) Trichloroethane 11 1 10 170 70 130 Dichloroethane 10.6 2 10 106 70 130 Methyl tert-butyl ether (MTBE) 11 0.5 10 110 70 130 1.1-Dichloroethane 10.9 1 10 109 70 130 is1.2-Dichloroethane 11.4 10 114 70 130 is1.2-Dichloroethane 12.5 10 106 70 130 1.2-Dichloroethane 12.5 10 115 70 130 1.2-Dichloroeroethane 11.5 10 117 70 130 1.2-Dichloroeroethane 11.2 10 117 70 130 <td></td>	
Brommethane 13.2 2 10 132 70 130(130) Trichtorofluoronethane 12 1 10 120 70 130 J-Dichtoroethane 11 1 10 110 70 130 Dichtoroethane 10.6 2 10 106 70 130 Attams-1.2-Dichtoroethane 11.4 10 114 70 130 1.1-Dichtoroethane 10.9 1 10 109 70 130 ois-1.2-Dichtoroethane 11.2 1 10 112 70 130 Bromochioromethane 11.2 1 10 112 70 130 1.2-Dichtoropethane 12.5 1 10 112 70 130 1.2-Dichtoropethane 11.5 1 10 117 70 130 1.1-Dichtoropethane 11.2 1 10 117 70 130 1.2-Dichtoropropane 11.2 1	
Trichlorofluoromethane 12 1 10 120 70 130 1,1-Dichloroethane 11 1 10 10 70 130 trans-1,2-Dichloroethane 11.4 1 10 106 70 130 trans-1,2-Dichloroethane 10.9 1 0 109 70 130 trans-1,2-Dichloroethane 10.9 10 109 70 130 stroncelitoroethane 11.4 1 10 114 70 130 Bromochloroethane 11.4 1 10 114 70 130 2,2-Dichloroethane 10.6 1 10 116 70 130 1,2-Dichloroethane 10.7 1 10 127 70 130 1,1-Dichloroethane 11.2 1 10 117 70 130 1,2-Dichloroethane 11.2 1 10 117 70 130 1,2-Dichloroethane 11.1 10	
1.1-Dichloroethene 11 1 10 100 70 130 Dichloromethane 10.6 2 10 106 70 130 Methyl tert-bulyl ether (MTBE) 11 0.5 10 110 70 130 J-Dichloroethane 10.9 1 10 109 70 130 cis-1.2-Dichloroethane 11.2 1 10 114 70 130 Bromochloroethane 11.4 1 10 114 70 130 Chloroform 10.6 1 10 116 70 130 2.2-Dichloroptopane 12.5 1 10 117 70 130 1.1-Dichloroptopane 11.2 1 0 117 70 130 1.1-Dichloroptopane 11.2 1 0 117 70 130 1.1-Dichloroptopane 11.2 1 0 117 70 130 Dibromomethane 11.2 1 0 117 70 130 1.2-Dichloropropene 11.1	L51
Dickhoromethane 10.6 2 10 106 70 130 trans-1,2-Dickhoroethane 11.4 1 10 114 70 130 hethvi ter-butvi ether (MTBE) 11 0.5 10 109 70 130 1,1-Dickhoroethane 10.9 1 10 112 70 130 Bromochloromethane 11.4 1 10 114 70 130 Chloroform 10.6 1 10 114 70 130 Chloroform 10.6 1 10 115 70 130 2.2-Dichloroethane 10.7 1 10 115 70 130 1.1-Trichloroethane 11.5 1 10 115 70 130 1.1-Dichloropropane 11.1 10 111 70 130 Carbon tetrachloride 11.7 1 10 111 70 130 Dibromomethane 11.2 1 10 111 70 130 Carbon tetrachloride 11.1 10	
trans-12-Dichloroethene11.411011470130Methyl ert-bulyl ether (MTBE)110.510109701301.1-Dichloroethane10.911011270130cis-1.2-Dichloroethane11.411011470130Bromochloromethane11.411011470130Chloroform10.6110106701302.2-Dichloroptopane12.5110105701301.2-Dichloroothane11.7110117701301.1-Dichloroothane11.2110112701301.1-Dichloroothane11.211011270130Carbon tetrachloride11.711011770130Dibromomethane11.2110112701301.2-Dichloroorpopane11.1110111701301.2-Dichloroorpopane11.1110111701301.2-Dichloroorpopane10.2110112701301.2-Dichloroorpopene10.2110112701301.2-Dichloroorpopene10.2110112701301.2-Dichloroorpopene10.2110102701301.2-Dichloroorpopene10.2110102701301.2-Dichlo	
1,1-Dichloroethane 10,9 1 10 109 70 130 cis-1,2-Dichloroethane 11,2 1 10 114 70 130 Bromochloromethane 11,4 1 10 114 70 130 Chloroform 10,6 1 10 106 70 130 2.2-Dichloropropane 12,5 1 10 127 70 130 1,1-Dichloropropane 11,2 1 10 115 70 130 1,1-Dichloropropene 11,2 1 10 117 70 130 Carbon tetrachloride 11,7 1 10 117 70 130 Dibromomethane 11,2 1 10 112 70 130 Dibromotheme 11 1 10 111 70 130 1,2-Dichloropropane 11,1 1 10 111 70 130 1,2-Dichloropropane 11,1 1 10 112 70 130 1,2-Dichloropropane 10,2 1	
cis-12-Dichloroethane 11.2 1 10 112 70 130 Bromochloromethane 11.4 1 10 114 70 130 2.2-Dichloropropane 12.5 1 10 125 70 130 2.2-Dichloroethane 10.7 1 10 115 70 130 1.1-Trichloroethane 11.5 1 10 112 70 130 1.1-Trichloroethane 11.2 1 10 112 70 130 1.1-Trichloroethane 11.2 1 10 117 70 130 1.1-Trichloroethane 11.2 1 10 117 70 130 Dibromomethane 11.2 1 10 112 70 130 Dibromomethane 11.1 1 10 111 70 130 Carbon tetrachloride 11.1 1 10 112 70 130 Trichloroethane 10.2 1 10 112 70 130 I_2-Dichloropropane 10.2	
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-Dichloropthane 10.7 1 10 107 70 130 1.1-Trichloropthane 11.5 1 10 115 70 130 Carbon tetrachloride 11.7 1 10 117 70 130 Dibromomethane 11.2 1 10 117 70 130 1.2-Dichloropropane 11.1 0 111 70 130 1.2-Dichloropropane 11.1 10 111 70 130 1.2-Dichloropropene 11.1 10 111 70 130 1.2-Dichloropropene 10.2 1 10 104 70 130 1.2-Trichloroethane 10.2 1 10 104 70	
Chloroform 10.6 1 10 106 70 130 2.2-Dichloropropane 12.5 1 10 125 70 130 1.2-Dichloroethane 10.7 1 10 177 70 130 1.1-Trichloroethane 11.5 1 10 115 70 130 1.1-Dichloropropene 11.2 10 112 70 130 Carbon tetrachloride 11.7 1 10 117 70 130 Dibromomethane 11.2 10 111 70 130 Dibromomethane 11.1 10 111 70 130 Dibromomethane 11.1 10 111 70 130 Cis-1.3-Dichloropropene 11.1 10 111 70 130 Gronodichloromethane 10.2 1 10 112 70 130 cis-1.3-Dichloropropane 10.2 1 10 102 70 130 <t< td=""><td></td></t<>	
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-Dichloroptopene 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 Trichloroethene 11.1 10 111 70 130 Bromodichloropropane 11.1 10 111 70 130 Ircans-1,3-Dichloropropene 10.4 10 102 70 130 Irtans-1,3-Dichloropropene 10.4 10 104 70 130 Irlans-1,3-Dichloropropene 10.2 10 102 70 130 I,1,2-Trichloroethane 9.95 1 10 104 70 </td <td></td>	
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 10 111 70 130 Trichloroethene 11 10 111 70 130 Bromodichloromethane 11.2 1 10 112 70 130 trans-1,3-Dichloropropene 10.2 1 10 112 70 130 trans-1,3-Dichloropropene 10.2 1 10 102 70 130 1,3-Dichloropropene 10.2 1 10 104 70 130 1,3-Dichloropropane 10.2 1 10 104 70 130 1,2-Dibromothane (EDB) 22.3 2 2	
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 10 111 70 130 1.2-Dichloropropane 11.1 1 10 111 70 130 Trichloroethene 11.1 1 10 111 70 130 Bromodichloromethane 11.2 1 10 111 70 130 cis-1,3-Dichloropropene 10.2 1 10 111 70 130 trans-1,3-Dichloropropene 10.4 1 10 104 70 130 1,1.2-Trichloroethane 10.4 0.5 10 104 70 130 1,2-Dibromoethane (EDB) 22.3 2 20 111 70 130 1,2-Dibromoethane 10.2 1 10 102 70 130 1,2-Dibromoethane 10.	
Carbon tetrachloride 11.7 1 10 117 70 130 Benzne 11.1 0.5 10 111 70 130 Dibromomethane 11.2 1 10 112 70 130 Dibromomethane 11.1 10 111 70 130 Trichloroptopane 11 1 10 110 70 130 Bromodichloromethane 11.2 1 10 112 70 130 cis-1,3-Dichloroptopene 11.1 10 111 70 130 trans-1,3-Dichloroptopene 10.2 100 102 70 130 1,2-Dichloroptopene 10.4 1 10 104 70 130 1,3-Dichloroptopane 10.4 0.5 10 104 70 130 1,3-Dichloroptopane 10.2 1 10 102 70 130 1,2-Dibromochlaromethane 9.95 1 10 100 70 130 1,2-Dichloroptopane 10.8 1 10 10	
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 10 111 70 130 Bromodichloromethane 11.2 1 10 112 70 130 trans-1,3-Dichloropropene 11.1 1 10 111 70 130 trans-1,3-Dichloropropene 10.2 1 10 102 70 130 trans-1,3-Dichloropropene 10.4 10 104 70 130 trans-1,3-Dichloropropane 10.2 1 10 104 70 130 J.1,2-Trichloroethane 10.2 1 10 100 70 130 J.2-Dibromoethane (EDB) 22.3 2 20 111 70 130 J.1,1,2-Tetrachloroethane 10.8 <t< td=""><td></td></t<>	
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 1,2-Dibromoethane (EDB) 22.3 2 20 111 70 130 1,2-Dibromoethane (EDB) 22.3 2 20 111 70 130 1,1,1,2-Tetrachloroethane 11.2 1 10 108 70 130 1,1,1,2-Tetrachloroethane 11.2 1 10 111 70 130 1,1,1,2-Tetrachloroethane 10.1 1 10 101 70 130 1,1,1,2-Tetr	
Trichloroethene1111011070130Bromodichloromethane11.211011270130cis-1,3-Dichloropropene11.111011170130trans-1,3-Dichloropropene10.211010270130trans-1,3-Dichloropropene10.411010470130Toluene10.40.51010470130Toluene10.2110102701301,3-Dichloropropane10.211010270130Dibromoethane (EDB)22.3220111701301,2-Dibromoethane (EDB)22.3220111701301,1,1,2-Tetrachloroethane10.1110108701301,1,1,2-Tetrachloroethane10.1110101701301,1,1,2-Tetrachloroethane10.20.510102701301,1,1,2-Tetrachloroethane10.20.510102701301,1,2,2-Tetrachloroethane10.40.51010470130Bromoform9,131109170130Bromoform9,131109170130Styrene8,5211085701301,2,3-Trichloroethane9,6611097701301,2,3-Trichloroethane	
Bromodichloromethane11.211011270130cis-1,3-Dichloropropene11.111011170130trans-1,3-Dichloropropene10.2110102701301,1,2-Trichloroethane10.411010470130Toluene10.4110104701301,3-Dichloropropane10.211010270130Dibromochloromethane9.95110100701301,2-Dibromoethane (EDB)22.3220111701301,2-Dibromoethane11.2110108701301,1,1,2-Tetrachloroethane11.2110112701301,1,1,2-Tetrachloroethane10.111010170130Chlorobenzene10.111010170130Ethylbenzene10.40.51010470130m,p-Xylene10.40.51010470130Bromoform9.131109170130Styrene8.521108570130-Xylene10.70.510107701301,1,2,2-Tetrachloroethane9.6611097701301,2,3-Trichloropropane9.22209670130I,2,3-Trichloropropane9.841<	
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 1,3-Dichloropropane 10.2 1 10 102 70 130 1,2-Dibromoethane (EDB) 22.3 2 20 111 70 130 1,2-Dibromoethane (EDB) 22.3 2 20 111 70 130 1,1,2-Tetrachloroethane 11.2 1 10 108 70 130 1,1,1,2-Tetrachloroethane 10.1 1 10 101 70 130 Chlorobenzene 10.1 1 10 101 70 130 m.p-Xylene 10.4 0.5 10 104 70 130 Bromoform 9.1	
trans-1,3-Dichloropropene10.2110102701301,1,2-Trichloroethane10.411010470130Toluene10.40.510104701301,3-Dichloropropane10.211010270130Dibromochloromethane9.95110100701301,2-Dibromoethane (EDB)22.3220111701301,1,1,2-Tetrachloroethane10.8110108701301,1,1,2-Tetrachloroethane10.111010170130Chlorobenzene10.111010170130Ethvlbenzene10.20.51010270130Bromoform9.131109170130Styrene8.521108570130o-Xylene10.70.510107701301,1,2,2-Tetrachloroethane9.66109770130styrene8.521108570130o-Xylene10.70.510107701301,2,2-Tetrachloroethane9.661097701301,2,3-Trichloropropane9.841109870130	
Toluene10.40.510104701301,3-Dichloropropane10.211010270130Dibromochloromethane9.95110100701301,2-Dibromoethane (EDB)22.322011170130Tetrachloroethane10.8110108701301,1,1,2-Tetrachloroethane11.211011270130Chlorobenzene10.111010170130Ethylbenzene10.20.51010270130Bromoform9.131109170130Styrene8.521108570130o-Xylene10.70.510107701301,1,2,2-Tetrachloroethane9.661109770130styrene9.6611097701301,2,3-Trichloropropane9.841109870130	
1,3-Dichloropropane10.211010270130Dibromochloromethane9.95110100701301,2-Dibromoethane (EDB)22.322011170130Tetrachloroethane10.8110108701301,1,1,2-Tetrachloroethane11.211011270130Chlorobenzene10.111010170130Ethylbenzene10.20.51010270130m,p-Xylene10.40.51010470130Bromoform9.131109170130Styrene8.521108570130o-Xylene10.70.510107701301,1,2,2-Tetrachloroethane9.6611097701301,2,3-Trichloropropane19.22209670130Isopropylbenzene9.841109870130	
Dibromochloromethane9.95110100701301,2-Dibromoethane (EDB)22.322011170130Tetrachloroethane10.8110108701301,1,1,2-Tetrachloroethane11.211011270130Chlorobenzene10.111010170130Ethylbenzene10.20.51010270130m,p-Xylene10.40.51010470130Bromoform9.131109170130Styrene8.521108570130o-Xylene10.70.510107701301,1,2,2-Tetrachloroethane9.6611097701301,2,3-Trichloropropane19.22209670130Isopropylbenzene9.841109870130	
1.2-Dibromoethane (EDB)22.322011170130Tetrachloroethene10.8110108701301,1,1,2-Tetrachloroethane11.211011270130Chlorobenzene10.111010170130Ethylbenzene10.20.51010270130m,p-Xylene10.40.51010470130Bromoform9.131109170130Styrene8.521108570130o-Xylene10.70.510107701301,1,2,2-Tetrachloroethane9.6611097701301,2,3-Trichloropropane19.22209670130Isopropylbenzene9.841109870130	
Tetrachloroethene10.8110108701301,1,1,2-Tetrachloroethane11.211011270130Chlorobenzene10.111010170130Ethylbenzene10.20.51010270130m,p-Xylene10.40.51010470130Bromoform9.131109170130Styrene8.521108570130o-Xylene10.70.510107701301,1,2,2-Tetrachloroethane9.6611097701301,2,3-Trichloropropane19.22209670130Isopropylbenzene9.841109870130	
Chlorobenzene10.111010170130Ethylbenzene10.20.51010270130m,p-Xylene10.40.51010470130Bromoform9.131109170130Styrene8.521108570130o-Xylene10.70.510107701301,1,2,2-Tetrachloroethane9.6611097701301,2,3-Trichloropropane19.22209670130Isopropylbenzene9.841109870130	
Ethylbenzene10.20.51010270130m,p-Xylene10.40.51010470130Bromoform9.131109170130Styrene8.521108570130o-Xylene10.70.510107701301,1,2,2-Tetrachloroethane9.6611097701301,2,3-Trichloropropane19.22209670130Isopropylbenzene9.841109870130	
m.p-Xylene10.40.51010470130Bromoform9.131109170130Styrene8.521108570130o-Xylene10.70.510107701301,1,2,2-Tetrachloroethane9.6611097701301,2,3-Trichloropropane19.22209670130Isopropylbenzene9.841109870130	
Bromoform9.131109170130Styrene8.521108570130o-Xylene10.70.510107701301,1,2,2-Tetrachloroethane9.6611097701301,2,3-Trichloropropane19.22209670130Isopropylbenzene9.841109870130	
Styrene8.521108570130o-Xylene10.70.510107701301,1,2,2-Tetrachloroethane9.6611097701301,2,3-Trichloropropane19.22209670130Isopropylbenzene9.841109870130	
1,1,2,2-Tetrachloroethane9.6611097701301,2,3-Trichloropropane19.22209670130Isopropylbenzene9.841109870130	
1,2,3-Trichloropropane19.22209670130Isopropylbenzene9.841109870130	
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	
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-Trichlorobenzene9.722109770130Naphthalene9.752109870130	
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	



Date: 22-Aug-09	(QC Su	mmar	y Repor	t			Work Ord 0908134	
Sample Matrix Spike		Type MS	i Te	est Code:					
File ID: 09081412.D			Ba	atch ID: MS1	I 5W081	4M	Analysis Da	te: 08/14/2009 16:02	1
Sample ID: 09080602-02AMS	Units : µg/L	F	Run ID: MS	SD_15_090	814A		Prep Date:	08/14/2009	
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME) RPDF	RefVal %RPD(Limit)	Qu
Dichlorodifluoromethane	43.8	2.5	50	0	88	13	167		
Chloromethane	43.5	10	50	Ō	87	28	145		
Vinyl chloride	44.2	2.5	50	0	88	43	134		
Chloroethane Bromomethane	46.9	2.5	50	0	94	39	154 176		
Trichlorofluoromethane	49.9 47.3	10 2.5	50 50	0	99.8 95	19 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) 1,1-Dichloroethane	51.7	1.3	50	0	103	56	141		
cis-1,2-Dichloroethene	46.8 49.7	2.5 2.5	50 50	0	94 99	61 70	130 130		
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 1,1,1-Trichloroethane	49	2.5	50	0	98 05	60 50	135 137		
1,1-Dichloropropene	47.6 46.4	2.5 2.5	50 50	0	95 93	59 63	137		
Carbon tetrachloride	49	2.5	50 50	1.56	95 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 Bromodichloromethane	46.1 54.8	2.5 2.5	50 50	0 5.05	92 99	69 66	130 134		
cis-1,3-Dichloropropene	43.9	2.5	50 50	5.05	33 88	63	130		
trans-1,3-Dichloropropene	41.8	2.5	50	õ	84	66	131		
1,1,2-Trichloroethane	48.4	2.5	50	0	97	68	130		
Toluene 1,3-Dichloropropane	43.5	1.3	50	0	87	66	130		
Dibromochloromethane	46.4 52	2.5 2.5	50 50	0 7.81	93 88	70 70	130 130		
1,2-Dibromoethane (EDB)	99.8	10	100	7.01	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 Ethylbenzene	43.3	2.5	50	0	87 05	70	130		
m,p-Xylene	42.4 43.9	1.3 1.3	50 50	0	85 88	68 64	130 130		
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 1,2,3-Trichloropropane	45.5	2.5	50	0	91 89	65	131		
Isopropylbenzene	89.3 40.2	10 2.5	100 50	0	89 80	70 64	130 138		
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 1,3,5-Trimethylbenzene	41.5	2.5	50	0	83	70 66	130		
tert-Butylbenzene	39.6 39.8	2.5 2.5	50 50	0	79 80	66 65	136 137		
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 4-Isopropyltoluene	42.1	2.5	50	0	84 79	70 66	130		
1,2-Dichlorobenzene	39.2 42.3	2.5 2.5	50 50	0 0	78 85	66 70	137 130		
n-Butylbenzene	38.1	2.5	50	0	76	60	142		
1,2-Dibromo-3-chloropropane (DBCP)	228	15	250	Ő	91	67	130		
1,2,4-Trichlorobenzene	43.7	10	50	0	87	61	137		
Naphthalene Hexachlorobutadiene	47.1	10	50	0	94	40	167		
1,2,3-Trichlorobenzene	77.5 44.4	10 10	100 50	0	78 89	61 51	130 144		
Surr: 1,2-Dichloroethane-d4	50 <i>.</i> 5	10	50 50	0	101	70	130		
Surr: Toluene-d8	48.8		50		98	70	130		
Surr: 4-Bromofluorobenzene	47.7		50		95	70	130		



22-Aug-09	(<u> 2C S</u> i	ummary	Report	t				Work Ord 0908134	
Sample Matrix Spike Duplicate		Туре М		st Code:						
File ID: 09081413.D			Bat	tch ID: MS1	5W081	4M	Analys	sis Date: 08	/14/2009 16:24	1
Sample ID: 09080602-02AMSD	Units : µg/L		Run ID: MS	D_15_0908	14A		Prep [Date: 08	/14/2009	
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qua
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		0	90	68	130	51.43	13.3(20)	
trans-1,2-Dichloroethene	43.8	2.5		0	88	63	130	52.41	18.0(20)	
Methyl tert-butyl ether (MTBE) 1,1-Dichloroethane	53.2 44.1	1.3 2.5	50 50	0 0	106 88	56 61	141 130	56.91 51.36	6.7(20) 15.3(20)	
cis-1,2-Dichloroethene	47.4	2.5		0	95	70	130	53.1	11.4(20)	
Bromochloromethane	52.6	2.5	50	ŏ	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 1,1-Dichloropropene	43.9	2.5	50	0	88	59 62	137	53.39	19.5(20)	R5
	42	2.5		0	84	63	130	51.47	20.3(20)	нэ
Carbon tetrachloride Benzene	45.4 45	2.5 1.3	50 50	1.56 0	88 90	50 67	147 130	53.88 52.22	17.1(20) 14.8(20)	
Dibromomethane	45 51.9	2.5	50 50	0	90 104	69	133	56.64	8.7(20)	
1,2-Dichloropropane	47.1	2.5	50	ő	94	69	130	53.09	12.1(20)	
Trichloroethene	42.6	2.5		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		0	88	63	130	52.98	18.9(20)	
trans-1,3-Dichloropropene 1,1,2-Trichloroethane	41.6 49.5	2.5 2.5	50 50	0 0	83 99	66 68	131 130	49.69 53.47	17.6(20) 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	Õ	95	70	130	50.56	6.6(20)	
Dibromochloromethane	53.4	2.5		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)	D -
Tetrachloroethene	40.4	2.5		0	81	61	134	49.64	20.6(20)	R5
1,1,1,2-Tetrachloroethane Chlorobenzene	47 42	2.5 2.5	-	0 0	94 84	70 70	130 130	52.53 47.94	11.1(20) 13.1(20)	
Ethylbenzene	42	2.5	50 50	0	84 80	68	130	47.94	15.9(20)	
m,p-Xylene	40.7	1.3	50	õ	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 1,1,2,2-Tetrachloroethane	43.3	1.3	50	0	87	70	130	49.88	14.1(20)	
1,2,3-Trichloropropane	47.1 92	2.5 10	50 100	0 0	94 92	65 70	131 130	50.22 97.35	6.4(20) 5.6(20)	
Isopropylbenzene	37.8	2.5	50	0	76	64	138	45.11	17.6(20)	
Bromobenzene	42.9	2.5		Ō	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 2-Chlorotoluene	39.5	2.5		0	79	70	130	46.73	16.7(20)	
1,3,5-Trimethylbenzene	39.6 37.4	2.5 2.5	50 50	0 0	7 9 75	70 66	130 136	45.95 44.58	14.9(20) 17.6(20)	
tert-Butylbenzene	37.2	2.5	50 50	0	74	65	137	44.26	17.3(20)	
1,2,4-Trimethylbenzene	36.8	2.5	50	ŏ	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)	DE
4-Isopropyltoluene	36.6	2.5	50	0	73	66 70	137	45.02	20.7(20)	R5
1,2-Dichlorobenzene n-Butylbenzene	41.8 34 7	2.5	50 50	0	84 69	70 60	130 142	46.84	11.4(20) 24 2(20)	R5
1,2-Dibromo-3-chloropropane (DBCP)	34.7	2.5	50	0	69 06	60 67	142	44.28	24.2(20) 5 1(20)	пð
1,2,4-Trichlorobenzene	239 44.5	15 10	250 50	0 0	96 89	67 61	130 137	251.5 49.48	5.1(20) 10.7(20)	
Naphthalene	49.1	10	50	0	98	40	167	51.4	4.5(20)	
Hexachlorobutadiene	76	10	100	Õ	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 Surr: 4-Bromofluorobenzene	49 47.6		50 50		98 95	70 70	130 130			



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

QC Summary Report

Work Order: 09081341

22-Aug-09 Comments:

Date:

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 :			CH/	E	-OF	-CU	ISTO	DY F	CHAIN-OF-CUSTODY RECO	ORD	C.A	Page: 1 of 1	1 of 1
-			2	55 Glen	Alph dale Ave	1a Ai nue, Suit	nalytic e 21 Spart	Alpha Analytical, Inc. ale Avenue, Suite 21 Sparks, Nevada 8	Alpha Analytical, Inc. 255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778		WorkOrder : BMIS09081341	MIS0908134	41 7- A 110-00
Client:		71	Report Attention	- I ,	3L: (775) Pho	(775) 355-1044 Phone Number	4 FAX:(TEL: (775) 355-1044 FAX: (775) 355-0406 Phone Number EMail Address	406 Idress		Report Due By : S:00 PM On : 27-Aug-09		/-Aug-Uy
Battelle Memorial Institute	ıte		David Conner		(818	(818) 393-2808	x 80	connerd@)	connerd@battelle.org				
3990 Old Town Ave			Betsy Cutie		(614	(614) 424-4899 x	x 66	cutiee@batelle.org	telle.org		EDD Required : Yes		
San Diego, CA 92110			Shane Walton	-	(614	(614) 424-4117 x	17 x	waltons@battelle.org	pattelle.org		Sampled by : Client	It	
PO: 218013											Cooler Temp	Samples Received	<u>Date Printed</u>
Client's COC #: 25741/25742	742 Job :		G005862/JPL Groundwater Monitoring	. Groun	dwater N	Aonitorir	Ð				4 °C	13-Aug-09	13-Aug-09
QC Level : DS4 = D	DOD QC Required : Final Rpt, MBLK, InitCal/ConCal data, LCS, MS/MSD With Surrogates	ıal Rpt	t, MBLK, Init	Cal/Cor	ıCal dat	a, LCS,	MS/MSD V	Nith Surro	gates				
										Requested Tests	ests		
			on	No. of	No. of Bottles		314_W	METALS_D VOC_TIC_		VOC_W			
Sample ID Samp	Sample ID	Matrix	Matrix Date	Alpha	Alpha Sub TAT	TAT						Sample	Sample Remarks
BMI09081341-01A MW-10		Ą	08/07/09 07:27	5	0	10	Perchlorate	ទ	VOC by 524 VOC by 524 Criteria Criteria	VOC by 524 Criteria			
BMI09081341-02A MW-15		AQ	08/07/09 08:33	د	0	10		Cr					
BMI09081341-03A TB-14	TB-14-8/7/09	AQ	08/07/09 00:00	<u>د</u>	0	10			VOC by 524 Criteria	VOC by 524 Criteria		Reno Trip	Reno Trip Blank 6/22/09
BMI09081341-04A SB-1-3Q09		AQ	08/07/09 09:12	ປາ	0	10	Perchlorate	ç	VOC by 524 VOC by 524 Criteria Criteria	VOC by 524 Criteria			

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). : BMI09081341-06A

TB-15 8/12/09

Å

08/12/09 00:00

-

0

6

Å

08/12/09 07:32

σı

0

10

Perchlorate

ç

VOC by 524 VOC by 524 Criteria Criteria

VOC by 524 Criteria Criteria

Reno Trip Blank 6/22/09

BMI09081341-05A MW-5



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) 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. Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

Billing Information: Name <u>GEMALD TS NPENS</u> BATTELLE Address <u>505 King Ave</u> City, State, Zip <u>CS King Ave</u> Fax		cal, Inc. e, Suite 21 31-5778 144	Samples Collected From Which State? AZCA_XVVWAF IDOROTHERF Analyses Required	State? 25741 Page # <u>1</u> of <u>1</u>
US TOWN AVE. C-105	s s	Job # C 005 86 2	42) (22) (3140)	Required QC Level?
BIECS CA 92113 Matrix Sampled by	Phone #) 726-7311 Report Attention	<u>а</u> ,	"0.4" (cc	EDD / EDF? YES NO
<u>a</u>	Sample Description	TAT Field ** See below		REMARKS
727 8/1/2 AQ BM109081341-01	MW-10	VP 15	× ×	
₹0 20-	MW-15	e / 1	×	
-03	78-14-817 bg	× /, ×		TRIP BLANK
40- 1 211 P	513-1-3009	1 VP /5 X		Source BLANK
		· · ·		
ADDITIONAL INSTRUCTIONS:				
Signature	Print Name	Company		Date Time
	to MEN	1/2 SIGNT	- ~	5 1
Relinquished by		w propries		
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	OT - Other AR - Air **: L-Liter	Liter V-Voa S-Soil Jar O-C 3. Hazardous samples will be returned t	O-Orbo T-Tedlar B-Brass ed to client or disposed of at client expen	P-Plastic OT-Other Ise. 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.

Name <u>GENALS TOMPICIUS</u> <u>BATTELLE</u> Address <u>505 ICINC AVE</u> City, State, Zip <u>Columbus</u> on <u>43201</u> Phone Number Fax		255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778 Phone (775) 355-1044 Fax (775) 355-0406	ID OR OT Analyses F	WA Page Required /	# of
E DAVID LONNER	PO.# <u> 名(</u> な / 3 EMail Address	228500 # gor	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	/ / / Requ	Required QC Level?
a 9211	Phone #> 726-7311	Fax #	(52 (6) (3)	EDD / EDF? YES	YES NO
Matrix* Sampled by See Key	on	Total and type of		Global ID #	
Sampled Sampled Below Lab ID Number (Use Only)	Sample Description	TAT Field ** See below		/ / / REN	REMARKS
732 1/25 Au Bm109081341-05	MW-5				
	MW-6		XXX		A
	TB-15- 8/12/05	Norm V/1	~	The	BLAUK
		-			
ADDITIONAL INSTRUCTIONS:					
		а «Маст			
Signature	Print Name		Company	Date	Time
Relinquished by	MARCO MENOUS	INSIGH	I GEC	8/12/29	د م1/
Received by Hillian Collasa Relinquished by	hatricia Edr	nosa A	(pha	8/13/09	G5:C1
Received by					
Relinquished by					
Received by					
*Key: AQ - Aqueous SO - Soil WA - Waste	• OT - Other AR - Air	**: L-Liter V-Voa S-Soil Jar	lar O-Orbo T-Tedlar	B-Brass P-Plastic	OT-Other
NOTE: Satilples are discarded of days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed or at client expense. The report or 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 naid for the report.	reported unless other arrangements an	made. Hazardous samples will p	e returned to client or disposed c	of at client expense. The repo	ort for the analysis



(805) 526-7270 fax

CAS SR #P0902483

Table of Contents

Cover Letter			
Case Narrative	·····		2
Sample Cross-Reference			 3
Acronym List			 4
Chain of Custody			
Internal Chain of Custody	· · · · · · · · · · · · · · · · · · ·	0	 6
Sample Acceptance Check Form			 7
Hexavalent Chromium Analytical Data			
Hexavalent Chromium Raw Data			

.



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 <u>23</u> 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.

Quelest

Sue Anderson Project Manager

Page 1 of <u>23</u>



Client: Battelle Project: JPL GW Mon 3Q09 / G486090 CAS Project No:

(805) 526-7270 fax

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.

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

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 MDI	Method Detection Limit
MRL	Method Reporting Limit
MS	Matrix Spike
MTBE	Methyl <i>tert</i> -Butyl Ether
NA	Not Applicable Not Calculated
NC	
ND NTU	None Detected at or above the Method Reporting/Detection Limit (MRL/MDL)
	Nephelometric Turbidity Units Parts Per Billion
ppb	Parts Per Million
ppm PQL	Practical Quantitation Limit
OA/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,
5	Third Edition, 1986 and as amended by Updates 1, II, IIA, and IIB.
TDS	Total Dissolved Solids
ТРН	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	r, but was not detected	("Non-detect") at or above the MRL/MDL	<i></i>

- 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.

Page 1 of Water & Soil - Chain of Custody Record & Analytical Service Request

Analytical 26 Services ^{mc} 5i	2655 Park Center Drive, Suite A Simi Valley, California 93065	Suite A 3065				9						
	Phone (805) 526-7161 Fax (805) 526-7270		Requested Turn 1 Day (100%) 2	urnaround T) 2 Day (75%	around Time in Business Days (Surcharges) please circle Day (75%) 3 Day (50%) 4 Day (35%) 5 Day (25%) 10 Day - Standard	Days (Sur 1 Day (35%)	charges) pl 5 Day (25	ease circle %) 10 Day	- Standard	PPSE	BAS Project No. 98	<u>م</u>
Company Name & Address (Reporting Information)	sporting Information)	Project Name	me			Analys	s Method a	Analysis Method and/or Analytes	ytes	CAS C	CAS Conta ct.	
RATELLE		1					Pres	Preservative Code	0		Preservative Key	Key
1900 FID TIM	MO TAN AVE. C-WI	JPL	GW NUN	N 3009			0					e
		Project Number	imber		(pəı							
DAN VIEGO, CA		きてい	0609								2 HNO3	HNO3
Proiect Manager		P.O. # / Bil	P.O. # / Billing Information	u	q)		~					
	120	214319	/ BATT	E L L	acte		9	· · · · .,				7n Acetate
د	× ×	<i>.</i>	Ger	TOMPRINS	Sontr Sontr	SW/	61					Asc Acid
1126-2211		505 K	م مراجع (ن) م	AVE OU HIDOI	genate 08 35 08 35	09 sc	L)					er
		Sampler (Print & Sign)		10.201	8015B 015B) <u>+</u>					
Client Sample ID	Laboratory Date ID Number Collected	Time Collected	Matrix	Number of Containers	Volatile Org 524 □ 826 BTEX 8021 TPH Gas 8 BTEX 8021 TPH Diesel	525 □ 827 Semi-Volati	I h				Remarks	
MW-14-3	7/22/25	05-5	3	1	- - 	;						
MW-14-2												
MW-14-1		1015										
DUPE- 2 -3009)					X				DuPLICATIE	١.,
											1	
EB- 2- 7/22/09		940									EDUP. BI	BLANK
							2					
								/				
						+	+					
Report Tier Levels - please select Tier 1 - (Results/Default if not specified)		ata Validation	Package) 10%	Surcharge	MRL required Yes / No	ed Yes / No		EDD req	EDD required Yes / No	Projec	Project Requirements (MRLs, QAPP)	QAPP)
Tier II - (Results + QC)		ent specified)	Tier V - (client specified))	WDL / POL	MDL / PQL / J required Yes / No	es / No	Type:				. <u></u>
Relinquished by: (Signature)	all a	2	,5 Time: (0 ²	Received by: (Signature)	Signatôre)				pate: 7. 7 Timel	60		
Relinquished by: (Signatane)	5	-1999: L/c	Time: 14	H Received by: (Signature)	Signature)		E -		Bayer 1/1, 6 Timper C	S Coole	Cooler / Blank / Ice / No Ice	
linquished by-(Signature)		/ Date: /	Time:	Received by: (Signature)	Signature	N			Dáte: { Time:	Tempe	Temperature	°

Columbia Analytical Services, Inc. Chain of Custody Report

Client:BattelleProject: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	

6

Columbia Analytical Services, Inc.

Sample	Acceptance	Check Form

	Battelle					Work order:	P0902483			
		3Q09 / G486090								
· ·	s) received on:			-	Date opened:		by:	SSTAI		
		samples received by CAS							indication	1 of
compliance	or nonconformity.	Thernal preservation and	pH will only be a	evaluated either at	the request of th	ne client and/or as re	quired by the meth	od/SOP. <u>Yes</u>	<u>No</u>	<u>N/A</u>
1	Were sample	containers properly r	narked with cl	ient sample ID	?			\mathbf{X}		
2	-	upplied by CAS?		r .				\mathbf{X}		
3		ontainers arrive in go	od condition?					\mathbf{X}		
4	Was a chain-o	of-custody provided?						\mathbf{X}		
5	Was the chain	-of-custody properly	completed?					\mathbf{X}		
6		ontainer labels and/or		th custody pap	ers?			\times		
7	Was sample v	olume received adequ	uate for analys	is?				\mathbf{X}		
8	Are samples w	vithin specified holdin	g times?					\mathbf{X}		
9	Was proper te	mperature (thermal j	preservation) o	of cooler at rec	eipt adhered t	to?		\mathbf{X}		
	C	ooler Temperature		°C Blank 7	Cemperature	3	°C			
10	Was a trip bla	nk received?		-						×
	Trip blank su	upplied by CAS:					_			
11	Were custody	seals on outside of co	ooler/Box?						×	
	Location of a	seal(s)?	.				_Sealing Lid?			×
	Were signatu	ire and date included	?							\times
	Were seals in	ntact?								\mathbf{X}
	Were custody	seals on outside of sa	mple container	r?					\times	
	Location of s	seal(s)?					_Sealing Lid?			\mathbf{X}
	Were signatu	are and date included	?							\mathbf{X}
	Were seals in	ntact?								\mathbf{X}
12	Do containers	have appropriate pre	servation, acc	cording to meth	nod/SOP or C	lient specified in	formation?	×		
	Is there a clier	nt indication that the s	submitted samp	ples are pH p	reserved?					X
	Were <u>VOA vi</u>	ials checked for prese	ence/absence o	f air bubbles?						\times
	Does the clien	nt/method/SOP requir	e that the analy	yst check the s	ample pH and	l <u>if necessary</u> al	ter it?			\times
13	Tubes:	Are the tubes cap	ped and intact	?						X
		Do they contain n	noisture?							X
14	Badges:	Are the badges p	roperly capped	d and intact?						\mathbf{X}
		Are dual bed badg	ges separated a	nd individuall	y capped and	intact?				\mathbf{X}
Lab S	Sample ID	Container	Required	Received	Adjusted	VOA Headspace	Receip	ot / Pres	ervatior	1
		Description	pH *	pH	pH	(Presence/Absence)		Commer		
P0902483	3-001.01	125mL Plastic NP								
P0902483		125mL Plastic NP								
P0902483		125mL Plastic NP								
P0902483		125mL Plastic NP					1			
P0902483	5-005.01	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) Diss. Sulfide_NaOH (pH>12); T. Sulfide_NaOH/ZnAc (pH>14) Diss. Sulfide_NaOH (pH>14); T. Sulfide_NaOH (pH>14) Diss. Sulfide_NaOH (pH>14); T. Sulfide_NaOH (pH>14); T 7

DIVIDER SHEET

ANALYTICAL DATA FOR

Hexavalent Chromium

ANALYSIS

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

Kare Rya Date: 7/23/09

9

Report By:SAnderson

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: _ ICCBMDL/120594

Kaler Rya Date: 7/23/69

QA/QC Report

Client:BattelleProject: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: ____ CCV1A/120594

Karen Rya

QA/QC Report

Client : Project Name : Project Number : Sample Matrix :	Battelle JPL GW Mon 3Q09 G486090 WATER			Date Date Date J	e Reques Collecteo Receiveo Extracteo Analyzeo	l: NA l: NA l: NA		
			ory Control Sampl Inorganic Parame	e Summary	Anaryzeu	I. 077227	V7	
Sample Name : Lab Code : Test Notes :	Laboratory Control Sample P0902483-LCS				Unit Basi	U	(ppm)	
		Buon	Analysis			Percent	CAS Percent Recovery Acceptance	Result
Analyte		Prep Method	Analysis Method	True Value	Result		Limits	Notes
Chromium, Hexaval	ent	None	7196A	0.0400	0.0395	99	86-114	

Approved By	Kau	Rua	Date :	7/23/09	
	<u>, , , , , , , , , , , , , , , , , </u>	0			

12