



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
505 King Avenue
Columbus, OH 43201
Job#: G005862/JPL Groundwater Monitoring

Attn: David Conner
Phone: (619) 574-4827
Fax: (614) 458-6641

Alpha Analytical Number: BMI09020305-06A
Client I.D. Number: DUPE-03-1Q09

Sampled: 01/30/09
Received: 02/03/09
Analyzed: 02/06/09

Volatile Organics by GC/MS

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethene	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	10 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	ND	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	ND	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	ND	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	104	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	103	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	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 L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / info@alpha-analytical.com

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2/16/09

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Attn: David Conner
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Alpha Analytical Number: BMI09020305-07A
Client I.D. Number: DUPE-04-1Q09

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24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	ND	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	108	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	101	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	93	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

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Attn: David Conner
Phone: (619) 574-4827
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Alpha Analytical Number: BMI09020305-08A
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Received: 02/03/09
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23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	ND	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	100	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	106	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	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

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Job#: G005862/JPL Groundwater Monitoring

Attn: David Conner
Phone: (619) 574-4827
Fax: (614) 458-6641

Alpha Analytical Number: BMI09020305-09A
Client I.D. Number: TB-06-01/30/09

Sampled: 01/30/09
Received: 02/03/09
Analyzed: 02/06/09

Volatile Organics by GC/MS

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
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4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethene	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
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10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	10 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	ND	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
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18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
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22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	ND	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	104	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	102	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	95	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
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Attn: David Conner
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Alpha Analytical Number: BMI09020305-11A
Client I.D. Number: MW-24-3

Sampled: 02/02/09
Received: 02/03/09
Analyzed: 02/06/09

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Alpha Analytical, Inc.

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

ANALYTICAL REPORT

Battelle Memorial Institute
505 King Avenue
Columbus, OH 43201
Job#: G005862/JPL Groundwater Monitoring

Attn: David Conner
Phone: (619) 574-4827
Fax: (614) 458-6641

Alpha Analytical Number: BMI09020305-12A
Client I.D. Number: MW-24-2

Sampled: 02/02/09
Received: 02/03/09
Analyzed: 02/06/09

Volatile Organics by GC/MS

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethene	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	10 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	ND	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	0.61	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	ND	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	104	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	102	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	96	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl

Randy Gardner

Walter Hinchman

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

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2/16/09

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ANALYTICAL REPORT

Battelle Memorial Institute
505 King Avenue
Columbus, OH 43201
Job#: G005862/JPL Groundwater Monitoring

Attn: David Conner
Phone: (619) 574-4827
Fax: (614) 458-6641

Alpha Analytical Number: BMI09020305-13A
Client I.D. Number: MW-24-1

Sampled: 02/02/09
Received: 02/03/09
Analyzed: 02/06/09

Volatile Organics by GC/MS

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethene	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	10 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	2.6	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	ND	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	ND	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	108	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	103	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	93	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

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

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ANALYTICAL REPORT

Battelle Memorial Institute
505 King Avenue
Columbus, OH 43201
Job#: G005862/JPL Groundwater Monitoring

Attn: David Conner
Phone: (619) 574-4827
Fax: (614) 458-6641

Alpha Analytical Number: BMI09020305-14A
Client I.D. Number: EB-07-02/02/09

Sampled: 02/02/09
Received: 02/03/09
Analyzed: 02/06/09

Volatile Organics by GC/MS

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethene	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	10 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	ND	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	ND	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	ND	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	105	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	102	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	95	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

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2/16/09

Report Date

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ANALYTICAL REPORT

Battelle Memorial Institute
505 King Avenue
Columbus, OH 43201
Job#: G005862/JPL Groundwater Monitoring

Attn: David Conner
Phone: (619) 574-4827
Fax: (614) 458-6641

Alpha Analytical Number: BMI09020305-15A
Client I.D. Number: TB-07-02/02/09

Sampled: 02/02/09
Received: 02/03/09
Analyzed: 02/06/09

Volatile Organics by GC/MS

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethene	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	10 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	ND	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	ND	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	ND	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	104	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	103	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	96	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

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VOC Sample Preservation Report

Work Order: BMI09020305

Project: G005862/JPL Groundwater Monitoring

Alpha's Sample ID	Client's Sample ID	Matrix	pH
09020305-01A	MW-20-5	Aqueous	2
09020305-02A	MW-20-4	Aqueous	2
09020305-03A	MW-20-3	Aqueous	2
09020305-04A	MW-20-2	Aqueous	2
09020305-05A	MW-20-1	Aqueous	2
09020305-06A	DUPE-03-1Q09	Aqueous	2
09020305-07A	DUPE-04-1Q09	Aqueous	2
09020305-08A	EB-06-01/30/09	Aqueous	2
09020305-09A	TB-06-01/30/09	Aqueous	2
09020305-11A	MW-24-3	Aqueous	2
09020305-12A	MW-24-2	Aqueous	2
09020305-13A	MW-24-1	Aqueous	2
09020305-14A	EB-07-02/02/09	Aqueous	2
09020305-15A	TB-07-02/02/09	Aqueous	2

2/16/09

Report Date

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

Date:
11-Feb-09

QC Summary Report

Work Order:
09020305

Method Blank

File ID: 14	Type MBLK	Test Code: EPA Method 314.0								
Sample ID: MB-21443	Units : µg/L	Run ID: IC_3_090204A	Batch ID: 21443 Analysis Date: 02/04/2009 13:26							
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	ND		1							

Laboratory Fortified Blank

File ID: 15	Type LFB	Test Code: EPA Method 314.0								
Sample ID: LFB-21443	Units : µg/L	Run ID: IC_3_090204A	Batch ID: 21443 Analysis Date: 02/04/2009 13:44							
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	23.9		2	25	95	85	115			

Sample Matrix Spike

File ID: 20	Type LFM	Test Code: EPA Method 314.0								
Sample ID: 09020305-13ALFM	Units : µg/L	Run ID: IC_3_090204A	Batch ID: 21443 Analysis Date: 02/05/2009 16:18							
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	845		40	500	326.4	104	80	120		

Sample Matrix Spike Duplicate

File ID: 21	Type LFMD	Test Code: EPA Method 314.0								
Sample ID: 09020305-13ALFMD	Units : µg/L	Run ID: IC_3_090204A	Batch ID: 21443 Analysis Date: 02/05/2009 16:37							
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	816		40	500	326.4	98	80	120	844.6	3.4(15)

Comments:

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



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Date:
11-Feb-09

QC Summary Report

Work Order:
09020305

Method Blank

File ID: 020409.B\MB458.D\	Type MBLK	Test Code: EPA Method 200.8	Batch ID: 21458K	Analysis Date: 02/05/2009 15:00						
Sample ID: MB-21458	Units : mg/L	Run ID: ICP/MS_090205C	Prep Date: 02/05/2009							
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	ND	0.005								

Laboratory Control Spike

File ID: 020409.B\L48.D\	Type LCS	Test Code: EPA Method 200.8	Batch ID: 21458K	Analysis Date: 02/05/2009 15:06						
Sample ID: LCS-21458	Units : mg/L	Run ID: ICP/MS_090205C	Prep Date: 02/05/2009							
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0506	0.005	0.05		101	80	120			

Sample Matrix Spike

File ID: 020409.B\MS53.D\	Type MS	Test Code: EPA Method 200.8	Batch ID: 21458K	Analysis Date: 02/05/2009 15:29						
Sample ID: 09020305-13AMS	Units : mg/L	Run ID: ICP/MS_090205C	Prep Date: 02/05/2009							
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.06	0.005	0.05	0.008582	103	80	120			

Sample Matrix Spike Duplicate

File ID: 020409.B\MSD53.D\	Type MSD	Test Code: EPA Method 200.8	Batch ID: 21458K	Analysis Date: 02/05/2009 15:34						
Sample ID: 09020305-13AMSD	Units : mg/L	Run ID: ICP/MS_090205C	Prep Date: 02/05/2009							
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0565	0.005	0.05	0.008582	96	80	120	0.05998	6.1(20)	

Comments:

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



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Date:
12-Feb-09

QC Summary Report

Work Order:
09020305

Method Blank

Type MBLK

Test Code:

File ID: 09020606.D

Batch ID: MS15W0206M

Analysis Date: 02/06/2009 09:33

Sample ID: MBLK MS15W0206M

Units : µg/L

Run ID: MSD_15_090206B

Prep Date: 02/06/2009

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



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Date:
12-Feb-09

QC Summary Report

Work Order:
09020305

Surr: 4-Bromofluorobenzene 9.54 10 95 70 130

Laboratory Control Spike

Type LCS

Test Code:

File ID: 09020604.D

Batch ID: MS15W0206M

Analysis Date: 02/06/2009 08:31

Sample ID: LCS MS15W0206M

Units : µg/L

Run ID: MSD_15_090206B

Prep Date: 02/06/2009

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	7.7	1	10		77	70	130			
Chloromethane	7.6	2	10		76	70	130			
Vinyl chloride	8.97	1	10		90	70	130			
Chloroethane	8.64	1	10		86	70	130			
Bromomethane	7.54	2	10		75	70	130			
Trichlorofluoromethane	11	1	10		110	70	130			
1,1-Dichloroethene	10.5	1	10		105	70	130			
Dichloromethane	9.82	2	10		98	70	130			
trans-1,2-Dichloroethene	10.1	1	10		101	70	130			
Methyl tert-butyl ether (MTBE)	10.1	0.5	10		101	62	136			
1,1-Dichloroethane	10.3	1	10		103	70	130			
cis-1,2-Dichloroethene	10.7	1	10		107	70	130			
Bromochloromethane	11	1	10		110	70	130			
Chloroform	9.75	1	10		98	70	130			
2,2-Dichloropropane	8.77	1	10		88	70	130			
1,2-Dichloroethane	10.2	1	10		102	70	130			
1,1,1-Trichloroethane	10.5	1	10		105	70	130			
1,1-Dichloropropene	10.8	1	10		108	70	130			
Carbon tetrachloride	10.1	1	10		101	70	130			
Benzene	9.54	0.5	10		95	70	130			
Dibromomethane	10.8	1	10		108	70	130			
1,2-Dichloropropane	9.85	1	10		99	70	130			
Trichloroethene	10.8	1	10		108	70	130			
Bromodichloromethane	10.5	1	10		105	70	130			
cis-1,3-Dichloropropene	10.4	1	10		104	70	130			
trans-1,3-Dichloropropene	10.4	1	10		104	70	130			
1,1,2-Trichloroethane	9.72	1	10		97	70	130			
Toluene	9.57	0.5	10		96	70	130			
1,3-Dichloropropane	9.31	1	10		93	70	130			
Dibromochloromethane	10.4	1	10		104	70	130			
1,2-Dibromoethane (EDB)	19.5	2	20		98	70	130			
Tetrachloroethene	10.3	1	10		103	70	130			
1,1,1,2-Tetrachloroethane	9.8	1	10		98	70	130			
Chlorobenzene	9.4	1	10		94	70	130			
Ethylbenzene	9.6	0.5	10		96	70	130			
m,p-Xylene	9.76	0.5	10		98	70	130			
Bromoform	9.56	1	10		96	70	130			
Styrene	9.57	1	10		96	70	130			
o-Xylene	9.54	0.5	10		95	70	130			
1,1,2,2-Tetrachloroethane	8.81	1	10		88	70	130			
1,2,3-Trichloropropane	18.5	2	20		92	70	130			
Isopropylbenzene	9.69	1	10		97	70	130			
Bromobenzene	9.49	1	10		95	70	130			
n-Propylbenzene	9.87	1	10		99	70	130			
4-Chlorotoluene	10	1	10		100	70	130			
2-Chlorotoluene	9.84	1	10		98	70	130			
1,3,5-Trimethylbenzene	9.44	1	10		94	70	130			
tert-Butylbenzene	9.36	1	10		94	70	130			
1,2,4-Trimethylbenzene	9.77	1	10		98	70	130			
sec-Butylbenzene	9.33	1	10		93	70	130			
1,3-Dichlorobenzene	9.64	1	10		96	70	130			
1,4-Dichlorobenzene	9.32	1	10		93	70	130			
4-Isopropyltoluene	9.54	1	10		95	70	130			
1,2-Dichlorobenzene	9.21	1	10		92	70	130			
n-Butylbenzene	9.72	1	10		97	70	130			
1,2-Dibromo-3-chloropropane (DBCP)	45.9	3	50		92	70	130			
1,2,4-Trichlorobenzene	10.1	2	10		101	70	130			
Naphthalene	9.09	2	10		91	70	130			
Hexachlorobutadiene	18.9	2	20		94	70	130			
1,2,3-Trichlorobenzene	10.2	2	10		102	70	130			
Surr: 1,2-Dichloroethane-d4	9.63		10		96	70	130			
Surr: Toluene-d8	9.97		10		99.7	70	130			
Surr: 4-Bromofluorobenzene	9.84		10		98	70	130			



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Date:
12-Feb-09

QC Summary Report

Work Order:
09020305

Sample Matrix Spike

Type MS

Test Code:

File ID: 09020607.D

Batch ID: MS15W0206M

Analysis Date: 02/06/2009 09:55

Sample ID: 09020305-13AMS

Units : µg/L

Run ID: MSD_15_090206B

Prep Date: 02/06/2009

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	46.3	2.5	50	0	93	13	167			
Chloromethane	38.7	10	50	0	77	28	145			
Vinyl chloride	45.5	2.5	50	0	91	43	134			
Chloroethane	39	2.5	50	0	78	39	154			
Bromomethane	37.9	10	50	0	76	19	176			
Trichlorofluoromethane	50.5	2.5	50	0	101	34	160			
1,1-Dichloroethene	45	2.5	50	0	90	60	130			
Dichloromethane	43.7	10	50	0	87	68	130			
trans-1,2-Dichloroethene	45.1	2.5	50	0	90	63	130			
Methyl tert-butyl ether (MTBE)	44.4	1.3	50	0	89	56	141			
1,1-Dichloroethane	45.4	2.5	50	0	91	61	130			
cis-1,2-Dichloroethene	47.2	2.5	50	0	94	70	130			
Bromochloromethane	48.8	2.5	50	0	98	70	130			
Chloroform	46	2.5	50	2.62	87	67	130			
2,2-Dichloropropane	39.1	2.5	50	0	78	30	152			
1,2-Dichloroethane	46.9	2.5	50	0	94	60	135			
1,1,1-Trichloroethane	45.9	2.5	50	0	92	59	137			
1,1-Dichloropropene	45.9	2.5	50	0	92	63	130			
Carbon tetrachloride	44.1	2.5	50	0	88	50	147			
Benzene	41.7	1.3	50	0	83	67	130			
Dibromomethane	48.4	2.5	50	0	97	69	133			
1,2-Dichloropropane	43.4	2.5	50	0	87	69	130			
Trichloroethene	46.9	2.5	50	0	94	69	130			
Bromodichloromethane	47.4	2.5	50	0	95	66	134			
cis-1,3-Dichloropropene	44.8	2.5	50	0	90	63	130			
trans-1,3-Dichloropropene	45.4	2.5	50	0	91	66	131			
1,1,2-Trichloroethane	42.2	2.5	50	0	84	68	130			
Toluene	40.7	1.3	50	0	81	66	130			
1,3-Dichloropropane	40.6	2.5	50	0	81	70	130			
Dibromochloromethane	44.5	2.5	50	0	89	70	130			
1,2-Dibromoethane (EDB)	85.2	10	100	0	85	70	130			
Tetrachloroethene	43.2	2.5	50	0	86	61	134			
1,1,1,2-Tetrachloroethane	42.4	2.5	50	0	85	70	130			
Chlorobenzene	41.3	2.5	50	0	83	70	130			
Ethylbenzene	41.1	1.3	50	0	82	68	130			
m,p-Xylene	41.8	1.3	50	0	84	64	130			
Bromoform	40.5	2.5	50	0	81	64	138			
Styrene	42	2.5	50	0	84	69	130			
o-Xylene	41.2	1.3	50	0	82	70	130			
1,1,2,2-Tetrachloroethane	38.5	2.5	50	0	77	65	131			
1,2,3-Trichloropropane	78.6	10	100	0	79	70	130			
Isopropylbenzene	42.4	2.5	50	0	85	64	138			
Bromobenzene	42.5	2.5	50	0	85	70	130			
n-Propylbenzene	42	2.5	50	0	84	66	132			
4-Chlorotoluene	44.7	2.5	50	0	89	70	130			
2-Chlorotoluene	42.7	2.5	50	0	85	70	130			
1,3,5-Trimethylbenzene	42.2	2.5	50	0	84	66	136			
tert-Butylbenzene	41.2	2.5	50	0	82	65	137			
1,2,4-Trimethylbenzene	43.1	2.5	50	0	86	65	137			
sec-Butylbenzene	40.8	2.5	50	0	82	66	134			
1,3-Dichlorobenzene	43	2.5	50	0	86	70	130			
1,4-Dichlorobenzene	41.1	2.5	50	0	82	70	130			
4-Isopropyltoluene	42.2	2.5	50	0	84	66	137			
1,2-Dichlorobenzene	41.5	2.5	50	0	83	70	130			
n-Butylbenzene	42.2	2.5	50	0	84	60	142			
1,2-Dibromo-3-chloropropane (DBCP)	198	15	250	0	79	67	130			
1,2,4-Trichlorobenzene	43.7	10	50	0	87	61	137			
Naphthalene	35.8	10	50	0	72	40	167			
Hexachlorobutadiene	80.3	10	100	0	80	61	130			
1,2,3-Trichlorobenzene	42.5	10	50	0	85	51	144			
Surr: 1,2-Dichloroethane-d4	48.4		50		97	70	130			
Surr: Toluene-d8	49.7		50		99	70	130			
Surr: 4-Bromofluorobenzene	50.3		50		101	70	130			



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Date:
12-Feb-09

QC Summary Report

Work Order:
09020305

Sample Matrix Spike Duplicate

Type **MSD**

Test Code: _____

File ID: **09020608.D**

Batch ID: **MS15W0206M**

Analysis Date: **02/06/2009 10:18**

Sample ID: **09020305-13AMSD**

Units : **µg/L**

Run ID: **MSD_15_090206B**

Prep Date: **02/06/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	51.2	2.5	50	0	102	13	167	46.28	10.1(20)	
Chloromethane	43.8	10	50	0	88	28	145	38.73	12.2(20)	
Vinyl chloride	48.9	2.5	50	0	98	43	134	45.51	7.2(20)	
Chloroethane	43.1	2.5	50	0	86	39	154	39.04	9.9(20)	
Bromomethane	46.7	10	50	0	93	19	176	37.92	20.6(20)	R5
Trichlorofluoromethane	54.6	2.5	50	0	109	34	160	50.5	7.8(20)	
1,1-Dichloroethene	49.2	2.5	50	0	98	60	130	44.96	9.0(20)	
Dichloromethane	47.1	10	50	0	94	68	130	43.7	7.5(20)	
trans-1,2-Dichloroethene	49.7	2.5	50	0	99	63	130	45.07	9.9(20)	
Methyl tert-butyl ether (MTBE)	47.7	1.3	50	0	95	56	141	44.43	7.1(20)	
1,1-Dichloroethane	49.4	2.5	50	0	99	61	130	45.42	8.4(20)	
cis-1,2-Dichloroethene	50.7	2.5	50	0	101	70	130	47.23	7.1(20)	
Bromochloromethane	52.5	2.5	50	0	105	70	130	48.75	7.5(20)	
Chloroform	49.4	2.5	50	2.62	94	67	130	46.04	7.1(20)	
2,2-Dichloropropane	44.4	2.5	50	0	89	30	152	39.08	12.6(20)	
1,2-Dichloroethane	49.4	2.5	50	0	99	60	135	46.94	5.1(20)	
1,1,1-Trichloroethane	50.2	2.5	50	0	100	59	137	45.85	9.1(20)	
1,1-Dichloropropene	50.8	2.5	50	0	102	63	130	45.94	10.0(20)	
Carbon tetrachloride	49.2	2.5	50	0	98	50	147	44.07	10.9(20)	
Benzene	45.3	1.3	50	0	91	67	130	41.69	8.4(20)	
Dibromomethane	50.7	2.5	50	0	101	69	133	48.37	4.8(20)	
1,2-Dichloropropane	46.9	2.5	50	0	94	69	130	43.44	7.6(20)	
Trichloroethene	50.9	2.5	50	0	102	69	130	46.89	8.2(20)	
Bromodichloromethane	50.3	2.5	50	0	101	66	134	47.42	5.9(20)	
cis-1,3-Dichloropropene	47.8	2.5	50	0	96	63	130	44.76	6.6(20)	
trans-1,3-Dichloropropene	48.1	2.5	50	0	96	66	131	45.37	5.8(20)	
1,1,2-Trichloroethane	45.7	2.5	50	0	91	68	130	42.24	8.0(20)	
Toluene	45.4	1.3	50	0	91	66	130	40.67	11.0(20)	
1,3-Dichloropropane	44.4	2.5	50	0	89	70	130	40.55	9.0(20)	
Dibromochloromethane	49.2	2.5	50	0	98	70	130	44.45	10.2(20)	
1,2-Dibromoethane (EDB)	92.3	10	100	0	92	70	130	85.18	8.0(20)	
Tetrachloroethene	49.3	2.5	50	0	99	61	134	43.16	13.2(20)	
1,1,1,2-Tetrachloroethane	46.7	2.5	50	0	93	70	130	42.43	9.5(20)	
Chlorobenzene	45.8	2.5	50	0	92	70	130	41.3	10.3(20)	
Ethylbenzene	46.3	1.3	50	0	93	68	130	41.14	11.7(20)	
m,p-Xylene	46.7	1.3	50	0	93	64	130	41.79	11.0(20)	
Bromoform	45.3	2.5	50	0	91	64	138	40.46	11.3(20)	
Styrene	46.5	2.5	50	0	93	69	130	41.96	10.2(20)	
o-Xylene	45.7	1.3	50	0	91	70	130	41.21	10.3(20)	
1,1,2,2-Tetrachloroethane	41.4	2.5	50	0	83	65	131	38.46	7.4(20)	
1,2,3-Trichloropropane	87.2	10	100	0	87	70	130	78.61	10.3(20)	
Isopropylbenzene	46.7	2.5	50	0	93	64	138	42.38	9.6(20)	
Bromobenzene	45.8	2.5	50	0	92	70	130	42.54	7.4(20)	
n-Propylbenzene	46.7	2.5	50	0	93	66	132	41.98	10.6(20)	
4-Chlorotoluene	48.8	2.5	50	0	98	70	130	44.7	8.7(20)	
2-Chlorotoluene	47.6	2.5	50	0	95	70	130	42.73	10.7(20)	
1,3,5-Trimethylbenzene	45.9	2.5	50	0	92	66	136	42.23	8.3(20)	
tert-Butylbenzene	45.5	2.5	50	0	91	65	137	41.17	10.0(20)	
1,2,4-Trimethylbenzene	47.1	2.5	50	0	94	65	137	43.12	8.8(20)	
sec-Butylbenzene	45.7	2.5	50	0	91	66	134	40.78	11.4(20)	
1,3-Dichlorobenzene	47.2	2.5	50	0	94	70	130	42.97	9.3(20)	
1,4-Dichlorobenzene	45.1	2.5	50	0	90	70	130	41.1	9.4(20)	
4-Isopropyltoluene	47	2.5	50	0	94	66	137	42.19	10.8(20)	
1,2-Dichlorobenzene	44.7	2.5	50	0	89	70	130	41.5	7.5(20)	
n-Butylbenzene	47.4	2.5	50	0	95	60	142	42.18	11.6(20)	
1,2-Dibromo-3-chloropropane (DBCP)	218	15	250	0	87	67	130	198.4	9.5(20)	
1,2,4-Trichlorobenzene	51.8	10	50	0	104	61	137	43.71	16.9(20)	
Naphthalene	43	10	50	0	86	40	167	35.82	18.1(20)	
Hexachlorobutadiene	95.4	10	100	0	95	61	130	80.26	17.2(20)	
1,2,3-Trichlorobenzene	53.2	10	50	0	106	51	144	42.49	22.3(20)	R5
Surr: 1,2-Dichloroethane-d4	46.8		50		94	70	130			
Surr: Toluene-d8	50.6		50		101	70	130			
Surr: 4-Bromofluorobenzene	49.5		50		99	70	130			



Alpha Analytical, Inc.

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

Date:
12-Feb-09

QC Summary Report

Work Order:
09020305

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.

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

Billing Information :

Battelle
505 King Avenue
Columbus, OH 43201

CHAIN-OF-CUSTODY RECORD

Alpha Analytical, Inc.

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

CA

WorkOrder : BMI09020305
Report Due By : 5:00 PM On : 17-Feb-2009

Client: Battelle Memorial Institute
505 King Avenue
Columbus, OH 43201

Report Attention	Phone Number	Email Address
David Conner	(619) 574-4827 x	connerd@battelle.org
Betsy Cutie	(614) 424-4899 x	cutieb@battelle.org
Shane Walton	(614) 424-4117 x	waltonsh@battelle.org

PO : 218013

Job : G005862/JPL Groundwater Monitoring

EDD Required : Yes
Sampled by : Client
Cooler Temp 4 °C Samples Received 03-Feb-2009 Date Printed 03-Feb-2009

QC Level : S4 = Final Rpt, MBLK, InitCal/ConCal data, LCS, MS/MSD With Surrogates

Alpha Sample ID	Client Sample ID	Collection Date	No. of Bottles			314_W	METALS_D W	VOC_TIC_W	VOC_W	Requested Tests	Sample Remarks
			Alpha	Sub	TAT						
BMI09020305-01A	MW-20-5	01/30/09 08:45	5	0	10	Perchlorate	Cr	VOC by S24 Criteria	VOC by S24 Criteria		
BMI09020305-02A	MW-20-4	01/30/09 09:19	5	0	10	Perchlorate	Cr	VOC by S24 Criteria	VOC by S24 Criteria		
BMI09020305-03A	MW-20-3	01/30/09 09:51	5	0	10	Perchlorate	Cr	VOC by S24 Criteria	VOC by S24 Criteria		
BMI09020305-04A	MW-20-2	01/30/09 10:21	5	0	10	Perchlorate	Cr	VOC by S24 Criteria	VOC by S24 Criteria		
BMI09020305-05A	MW-20-1	01/30/09 11:10	5	0	10	Perchlorate	Cr	VOC by S24 Criteria	VOC by S24 Criteria	Level IV QC.	
BMI09020305-06A	DUPE-03-1Q09	01/30/09 00:00	5	0	10	Perchlorate	Cr	VOC by S24 Criteria	VOC by S24 Criteria		
BMI09020305-07A	DUPE-04-1Q09	01/30/09 00:00	5	0	10	Perchlorate	Cr	VOC by S24 Criteria	VOC by S24 Criteria	Level IV QC	
BMI09020305-08A	EB-06-01/30/09	01/30/09 10:37	5	0	10	Perchlorate	Cr	VOC by S24 Criteria	VOC by S24 Criteria		
BMI09020305-09A	TB-06-01/30/09	01/30/09 00:00	1	0	10			VOC by S24 Criteria	VOC by S24 Criteria	Reno Trip Blank 1/6/09	
BMI09020305-10A	MW-24-4	02/02/09 08:40	1	0	10		Cr				

Comments: No security seals. Frozen ice. Temp Blank #8237 received @ 4°. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). Level IV QC. Perchlorate RL of 1.0 ug/L.

Signature	Print Name	Company	Date/Time
<i>Elizabeth Adcox</i>	Elizabeth Adcox	Alpha Analytical, Inc.	2/3/09 1038

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

Billing Information :

Battelle
505 King Avenue
Columbus, OH 43201

CHAIN-OF-CUSTODY RECORD

Alpha Analytical, Inc.

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

CA

WorkOrder : BMI09020305

Report Due By : 5:00 PM On : 17-Feb-2009

Client:

Battelle Memorial Institute
505 King Avenue

Report Attention **Phone Number** **Email Address**

David Conner (619) 574-4827 x connerd@battelle.org

Betsy Cutie (614) 424-4899 x cutiee@battelle.org

Shane Walton (614) 424-4117 x waltonsh@battelle.org

EDD Required : Yes

Sampled by : Client

Cooler Temp **Samples Received** **Date Printed**

4 °C 03-Feb-2009 03-Feb-2009

Client's COC #: 24139

Job : G005862/JPL Groundwater Monitoring

QC Level : S4 = Final Rpt, MBLK, InitCal/ConCal data, LCS, MS/MSD With Surrogates

Alpha Sample ID	Client Sample ID	Collection Date	No. of Bottles			Requested Tests				Sample Remarks
			Alpha	Sub	TAT	314_W	METALS_D W	VOC_TIC_W	VOC_W	
BMI09020305-11A	MW-24-3	AQ 02/02/09 09:04	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	
BMI09020305-12A	MW-24-2	AQ 02/02/09 09:28	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	
BMI09020305-13A	MW-24-1	AQ 02/02/09 10:21	10	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	MS/MSD
BMI09020305-14A	EB-07-02/02/09	AQ 02/02/09 10:03	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	
BMI09020305-15A	TB-07-02/02/09	AQ 02/02/09 00:00	1	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	Reno Trip Blank 1/6/09

Comments: No security seals. Frozen ice. Temp Blank #8237 received @ 4°. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). Level IV QC. Perchlorate RL of 1.0 ug/L.

Logged in by: Carlybeth Aldox Signature: [Signature] Print Name: Elizabeth Aldox Company: Alpha Analytical, Inc. Date/Time: 2/3/09 1038

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

Billing Information:

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



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

Samples Collected From Which State? **24139**
 AZ CA NV WA
 ID OR OTHER
 Page # 1 of 1

Client Name DAVID CONNER P.O. # 218013 Job # 5005862
 Address 3990 QDS TOWN AVE C-205 Email Address _____
 City, State, Zip SPRINGFIELD, CA 92110 Phone # 619-726-7311 Fax # _____

Time Sampled	Date Sampled	Matrix* See Key Below	Sampled by	Lab ID Number (Use Only)	Report Attention	Sample Description	TAT	Field Filtered	Total and type of containers ** See below	Analyses Required	Required QC Level? I II III IV	EDD / EDF? YES NO	REMARKS
0845	1/30/09	AQ		BMT09020305-01		MW-20-5			5	UCC (524.2)	III		
0919						MW-20-4				TOTAL C (200.8)	III		
0951						MW-20-3				2109-(314.0)	III		
1021						MW-20-2					III		
1110						MW-20-1					III		
-						Dupe-03-1809					III		QC LEVEL IV
-						Dupe-04-1809					III		DUPLICATE
1037						LR-06-01/30/09			1		III		QC LEVEL IV
-						TB-06-01/30/09					III		EQUIPMENT BLANK
											III		TUP BLANK

ADDITIONAL INSTRUCTIONS:

Signature	Print Name	Company	Date	Time
<i>[Signature]</i>	CHASE BRADY	EC-CI	01/30/09	1330
<i>[Signature]</i>	Elizabeth Adcox	Depna	2/3/09	1038
Relinquished by				
Received by				
Relinquished by				
Received by				

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

Billing Information:

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



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

Samples Collected From Which State?

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

Page # 1 of 1

Analyses Required

P.O. # 218013

Job # 6005862

Email Address

Phone # 619-26-7311

Fax #

Report Attention

Sample Description

TAT

Field Filled

Total and type of containers
 ** See below

Required QC Level?
 I II III IV

EDD / EDF? YES _____ NO _____
 Global ID # _____
 REMARKS

Time Sampled	Date Sampled	Matrix* See Key Below	Sampled by	Lab ID Number	Office (Use Only)	Report Attention	Sample Description	TAT	Field Filled	Total and type of containers ** See below	Analyses Required	REMARKS
0840	2/2	AAQ								4	VOL (524.2) TOTAL Cr (200.0) C104 - (314.0) Cr, SO4, NO3, NH4 PO4 - 3 (300.0)	NS/MSD COMPOSITE BLANK TRAP BLANK
0904										5		
0928										5		
1021										10		
1003										5		
-										1		

ADDITIONAL INSTRUCTIONS:

Signature	Print Name	Company	Date	Time
<i>[Signature]</i>	Elizabeth Alexander	Alpha	2/3/09	1330
Received by				
Relinquished by				
Received by				
Relinquished by				
Received by				
Relinquished by				

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



Alpha Analytical, Inc.

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

Date: 10-Feb-09

David Conner
Battelle Memorial Institute
505 King Avenue
Columbus, OH 43201
(619) 574-4827

CASE NARRATIVE

Project: G005862/JPL Groundwater Monitoring

Work Order: BMI09020401

Cooler Temp: 4 °C

Alpha's Sample ID	Client's Sample ID	Matrix
09020401-01A	MW-12-5	Aqueous
09020401-02A	MW-12-4	Aqueous
09020401-03A	MW-12-3	Aqueous
09020401-04A	MW-12-2	Aqueous
09020401-05A	MW-12-1	Aqueous
09020401-06A	EB-08-02/03/09	Aqueous
09020401-07A	TB-08-02/03/09	Aqueous

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

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

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

Roger Scholl

Randy Gardner

Walter Hinchman

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

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



Alpha Analytical, Inc.

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ANALYTICAL REPORT

Battelle Memorial Institute
505 King Avenue
Columbus, OH 43201

Attn: David Conner
Phone: (619) 574-4827
Fax: (614) 458-6641
Date Received : 02/04/09

Job#: G005862/JPL Groundwater Monitoring

Perchlorate by Ion Chromatography
EPA Method 314.0

Parameter	Concentration	Reporting Limit	Date Sampled	Date Analyzed
Client ID: MW-12-5 Lab ID: BMI09020401-01A Perchlorate	1.62	1.00 µg/L	02/03/09	02/04/09
Client ID: MW-12-4 Lab ID: BMI09020401-02A Perchlorate	3.25	1.00 µg/L	02/03/09	02/04/09
Client ID: MW-12-3 Lab ID: BMI09020401-03A Perchlorate	ND	1.00 µg/L	02/03/09	02/04/09
Client ID: MW-12-2 Lab ID: BMI09020401-04A Perchlorate	2.21	1.00 µg/L	02/03/09	02/04/09
Client ID: MW-12-1 Lab ID: BMI09020401-05A Perchlorate	ND	1.00 µg/L	02/03/09	02/04/09
Client ID: EB-08-02/03/09 Lab ID: BMI09020401-06A Perchlorate	ND	1.00 µg/L	02/03/09	02/04/09

ND = Not Detected

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

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2/17/09

Report Date



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

Battelle Memorial Institute
505 King Avenue
Columbus, OH 43201

Attn: David Conner
Phone: (619) 574-4827
Fax: (614) 458-6641
Date Received : 02/04/09

Job#: G005862/JPL Groundwater Monitoring

Metals by ICPMS
EPA Method 200.8

Parameter	Concentration	Reporting Limit	Date Sampled	Date Analyzed
Client ID : MW-12-3 Lab ID : BMI09020401-03A Chromium (Cr)	ND	0.0050 mg/L	02/03/09	02/04/09
Client ID : MW-12-2 Lab ID : BMI09020401-04A Chromium (Cr)	ND	0.0050 mg/L	02/03/09	02/04/09
Client ID : MW-12-1 Lab ID : BMI09020401-05A Chromium (Cr)	ND	0.0050 mg/L	02/03/09	02/04/09
Client ID : EB-08-02/03/09 Lab ID : BMI09020401-06A Chromium (Cr)	ND	0.0050 mg/L	02/03/09	02/04/09

ND = Not Detected

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

2/11/09
Report Date



Alpha Analytical, Inc.

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

Battelle Memorial Institute
505 King Avenue
Columbus, OH 43201
Job#: G005862/JPL Groundwater Monitoring

Attn: David Conner
Phone: (619) 574-4827
Fax: (614) 458-6641

Tentatively Identified Compounds - Volatile Organics by GC/MS

	Parameter	Estimated Concentration	Estimated Reporting Limit	Date Received	Date Sampled	Date Analyzed
Client ID: MW-12-5 Lab ID: BMI09020401-01A	Sulfur dioxide	11	2.0 µg/L	02/04/09	02/03/09	02/05/09
Client ID: MW-12-4 Lab ID: BMI09020401-02A	Sulfur dioxide	14	2.0 µg/L	02/04/09	02/03/09	02/05/09
Client ID: MW-12-3 Lab ID: BMI09020401-03A	Sulfur dioxide	14	2.0 µg/L	02/04/09	02/03/09	02/05/09
Client ID: MW-12-2 Lab ID: BMI09020401-04A	Sulfur dioxide	19	2.0 µg/L	02/04/09	02/03/09	02/05/09
Client ID: MW-12-1 Lab ID: BMI09020401-05A	Sulfur dioxide	8.9	2.0 µg/L	02/04/09	02/03/09	02/05/09
Client ID: EB-08-02/03/09 Lab ID: BMI09020401-06A	*** None Found ***	ND	2.0 µg/L	02/04/09	02/03/09	02/05/09
Client ID: TB-08-02/03/09 Lab ID: BMI09020401-07A	*** None Found ***	ND	2.0 µg/L	02/04/09	02/03/09	02/05/09

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

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

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2/17/09

Report Date

Page 1 of 1



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

Battelle Memorial Institute
505 King Avenue
Columbus, OH 43201
Job#: G005862/JPL Groundwater Monitoring

Attn: David Conner
Phone: (619) 574-4827
Fax: (614) 458-6641

Alpha Analytical Number: BMI09020401-01A
Client I.D. Number: MW-12-5

Sampled: 02/03/09
Received: 02/04/09
Analyzed: 02/05/09

Volatile Organics by GC/MS

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethene	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	10 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	ND	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	ND	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	ND	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	107	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	101	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	95	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

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

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

2/17/09

Report Date

Page 1 of 1



Alpha Analytical, Inc.

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

ANALYTICAL REPORT

Battelle Memorial Institute
505 King Avenue
Columbus, OH 43201
Job#: G005862/JPL Groundwater Monitoring

Attn: David Conner
Phone: (619) 574-4827
Fax: (614) 458-6641

Alpha Analytical Number: BMI09020401-02A
Client I.D. Number: MW-12-4

Sampled: 02/03/09
Received: 02/04/09
Analyzed: 02/05/09

Volatile Organics by GC/MS

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethene	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	10 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	0.87	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	1.7	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	0.53	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	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 L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer

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

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2/17/09

Report Date

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Alpha Analytical, Inc.

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

Battelle Memorial Institute
505 King Avenue
Columbus, OH 43201
Job#: G005862/JPL Groundwater Monitoring

Attn: David Conner
Phone: (619) 574-4827
Fax: (614) 458-6641

Alpha Analytical Number: BMI09020401-03A
Client I.D. Number: MW-12-3

Sampled: 02/03/09
Received: 02/04/09
Analyzed: 02/05/09

Volatile Organics by GC/MS

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethene	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	10 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	3.8	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	ND	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	0.62	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	107	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	102	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	95	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

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

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Alpha Analytical, Inc.

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

Battelle Memorial Institute
505 King Avenue
Columbus, OH 43201
Job#: G005862/JPL Groundwater Monitoring

Attn: David Conner
Phone: (619) 574-4827
Fax: (614) 458-6641

Alpha Analytical Number: BMI09020401-04A
Client I.D. Number: MW-12-2

Sampled: 02/03/09
Received: 02/04/09
Analyzed: 02/05/09

Volatile Organics by GC/MS

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethene	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	10 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	ND	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	ND	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	ND	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	107	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	102	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	95	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

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Alpha Analytical, Inc.

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

ANALYTICAL REPORT

Battelle Memorial Institute
505 King Avenue
Columbus, OH 43201
Job#: G005862/JPL Groundwater Monitoring

Attn: David Conner
Phone: (619) 574-4827
Fax: (614) 458-6641

Alpha Analytical Number: BMI09020401-05A
Client I.D. Number: MW-12-1

Sampled: 02/03/09
Received: 02/04/09
Analyzed: 02/05/09

Volatile Organics by GC/MS

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethene	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	10 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	ND	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	ND	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	ND	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	106	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	102	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	94	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

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ANALYTICAL REPORT

Battelle Memorial Institute
505 King Avenue
Columbus, OH 43201
Job#: G005862/JPL Groundwater Monitoring

Attn: David Conner
Phone: (619) 574-4827
Fax: (614) 458-6641

Alpha Analytical Number: BMI09020401-06A
Client I.D. Number: EB-08-02/03/09

Sampled: 02/03/09
Received: 02/04/09
Analyzed: 02/05/09

Volatile Organics by GC/MS

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethene	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	10 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	ND	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
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19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
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21 Carbon tetrachloride	ND	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	ND	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	104	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	102	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	96	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

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ANALYTICAL REPORT

Battelle Memorial Institute
505 King Avenue
Columbus, OH 43201
Job#: G005862/JPL Groundwater Monitoring

Attn: David Conner
Phone: (619) 574-4827
Fax: (614) 458-6641

Alpha Analytical Number: BMI09020401-07A
Client I.D. Number: TB-08-02/03/09

Sampled: 02/03/09
Received: 02/04/09
Analyzed: 02/05/09

Volatile Organics by GC/MS

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

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger 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

2/17/09

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.

Page 1 of 1



Alpha Analytical, Inc.

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

VOC Sample Preservation Report

Work Order: BMI09020401

Project: G005862/JPL Groundwater Monitoring

Alpha's Sample ID	Client's Sample ID	Matrix	pH
09020401-01A	MW-12-5	Aqueous	2
09020401-02A	MW-12-4	Aqueous	2
09020401-03A	MW-12-3	Aqueous	2
09020401-04A	MW-12-2	Aqueous	2
09020401-05A	MW-12-1	Aqueous	2
09020401-06A	EB-08-02/03/09	Aqueous	2
09020401-07A	TB-08-02/03/09	Aqueous	2

2/17/09
Report Date



Alpha Analytical, Inc.

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

Date:
10-Feb-09

QC Summary Report

Work Order:
09020401

Method Blank

File ID: 14	Type MBLK	Test Code: EPA Method 314.0	Batch ID: 21443	Analysis Date: 02/04/2009 13:26
Sample ID: MB-21443	Units : µg/L	Run ID: IC_3_090204A	Prep Date: 02/04/2009	
Analyte	Result	PQL	SpkVal	SpkRefVal %REC LCL(ME) UCL(ME) RPDRefVal %RPD(Limit) Qual
Perchlorate	ND	1		

Laboratory Fortified Blank

File ID: 15	Type LFB	Test Code: EPA Method 314.0	Batch ID: 21443	Analysis Date: 02/04/2009 13:44
Sample ID: LFB-21443	Units : µg/L	Run ID: IC_3_090204A	Prep Date: 02/04/2009	
Analyte	Result	PQL	SpkVal	SpkRefVal %REC LCL(ME) UCL(ME) RPDRefVal %RPD(Limit) Qual
Perchlorate	23.9	2	25	95 85 115

Sample Matrix Spike

File ID: 20	Type LFM	Test Code: EPA Method 314.0	Batch ID: 21443	Analysis Date: 02/05/2009 16:18
Sample ID: 09020305-13ALFM	Units : µg/L	Run ID: IC_3_090204A	Prep Date: 02/04/2009	
Analyte	Result	PQL	SpkVal	SpkRefVal %REC LCL(ME) UCL(ME) RPDRefVal %RPD(Limit) Qual
Perchlorate	845	40	500	326.4 104 80 120

Sample Matrix Spike Duplicate

File ID: 21	Type LFMD	Test Code: EPA Method 314.0	Batch ID: 21443	Analysis Date: 02/05/2009 16:37
Sample ID: 09020305-13ALFMD	Units : µg/L	Run ID: IC_3_090204A	Prep Date: 02/04/2009	
Analyte	Result	PQL	SpkVal	SpkRefVal %REC LCL(ME) UCL(ME) RPDRefVal %RPD(Limit) Qual
Perchlorate	816	40	500	326.4 98 80 120 844.6 3.4(15)

Comments:

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



Alpha Analytical, Inc.

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Date:
09-Feb-09

QC Summary Report

Work Order:
09020401

Method Blank

File ID: 020409.B\052SMPL.D\		Type	MBLK		Test Code: EPA Method 200.8					
Sample ID: MB-21448		Units :	mg/L		Batch ID: 21448K		Analysis Date: 02/04/2009 19:09			
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	ND	0.005								

Laboratory Control Spike

File ID: 020409.B\053_LCS.D\		Type	LCS		Test Code: EPA Method 200.8					
Sample ID: LCS-21448		Units :	mg/L		Batch ID: 21448K		Analysis Date: 02/04/2009 19:15			
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0505	0.005	0.05		101	80	120			

Sample Matrix Spike

File ID: 020409.B\057SMPL.D\		Type	MS		Test Code: EPA Method 200.8					
Sample ID: 09013053-01AMS		Units :	mg/L		Batch ID: 21448K		Analysis Date: 02/04/2009 19:38			
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0545	0.005	0.05	0	109	80	120			

Sample Matrix Spike Duplicate

File ID: 020409.B\058SMPL.D\		Type	MSD		Test Code: EPA Method 200.8					
Sample ID: 09013053-01AMSD		Units :	mg/L		Batch ID: 21448K		Analysis Date: 02/04/2009 19:44			
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0535	0.005	0.05	0	107	80	120	0.05447	1.8(20)	

Comments:

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



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Date:
10-Feb-09

QC Summary Report

Work Order:
09020401

Method Blank

File ID: 09020506.D

Type **MBLK** Test Code: _____

Batch ID: **MS15W0205M**

Analysis Date: **02/05/2009 10:19**

Sample ID: **MBLK MS15W0205M**

Units: **µg/L**

Run ID: **MSD_15_090205A**

Prep Date: **02/05/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	ND	0.5								
Chloromethane	ND	1								
Vinyl chloride	ND	0.5								
Chloroethane	ND	0.5								
Bromomethane	ND	1								
Trichlorofluoromethane	ND	0.5								
1,1-Dichloroethene	ND	0.5								
Dichloromethane	ND	1								
Freon-113	ND	0.5								
trans-1,2-Dichloroethene	ND	0.5								
Methyl tert-butyl ether (MTBE)	ND	0.5								
1,1-Dichloroethane	ND	0.5								
2-Butanone (MEK)	ND	10								
cis-1,2-Dichloroethene	ND	0.5								
Bromochloromethane	ND	0.5								
Chloroform	ND	0.5								
2,2-Dichloropropane	ND	0.5								
1,2-Dichloroethane	ND	0.5								
1,1,1-Trichloroethane	ND	0.5								
1,1-Dichloropropene	ND	0.5								
Carbon tetrachloride	ND	0.5								
Benzene	ND	0.5								
Dibromomethane	ND	0.5								
1,2-Dichloropropane	ND	0.5								
Trichloroethene	ND	0.5								
Bromodichloromethane	ND	0.5								
4-Methyl-2-pentanone (MIBK)	ND	2.5								
cis-1,3-Dichloropropene	ND	0.5								
trans-1,3-Dichloropropene	ND	0.5								
1,1,2-Trichloroethane	ND	0.5								
Toluene	ND	0.5								
1,3-Dichloropropane	ND	0.5								
Dibromochloromethane	ND	0.5								
1,2-Dibromoethane (EDB)	ND	1								
Tetrachloroethene	ND	0.5								
1,1,1,2-Tetrachloroethane	ND	0.5								
Chlorobenzene	ND	0.5								
Ethylbenzene	ND	0.5								
m,p-Xylene	ND	0.5								
Bromoform	ND	0.5								
Styrene	ND	0.5								
o-Xylene	ND	0.5								
1,1,2,2-Tetrachloroethane	ND	0.5								
1,2,3-Trichloropropane	ND	1								
Isopropylbenzene	ND	0.5								
Bromobenzene	ND	0.5								
n-Propylbenzene	ND	0.5								
4-Chlorotoluene	ND	0.5								
2-Chlorotoluene	ND	0.5								
1,3,5-Trimethylbenzene	ND	0.5								
tert-Butylbenzene	ND	0.5								
1,2,4-Trimethylbenzene	ND	0.5								
sec-Butylbenzene	ND	0.5								
1,3-Dichlorobenzene	ND	0.5								
1,4-Dichlorobenzene	ND	0.5								
4-Isopropyltoluene	ND	0.5								
1,2-Dichlorobenzene	ND	0.5								
n-Butylbenzene	ND	0.5								
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5								
1,2,4-Trichlorobenzene	ND	1								
Naphthalene	ND	1								
Hexachlorobutadiene	ND	1								
1,2,3-Trichlorobenzene	ND	1								
Surr: 1,2-Dichloroethane-d4	10.5		10		105	70	130			
Surr: Toluene-d8	10.1		10		101	70	130			



Alpha Analytical, Inc.

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

Date:

10-Feb-09

QC Summary Report

Work Order:

09020401

Surr: 4-Bromofluorobenzene 9.44 10 94 70 130

Laboratory Control Spike

Type LCS

Test Code:

File ID: 09020504.D

Batch ID: MS15W0205M

Analysis Date: 02/05/2009 09:20

Sample ID: LCS MS15W0205M

Units: µg/L

Run ID: MSD_15_090205A

Prep Date: 02/05/2009

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	7.91	1	10		79	70	130			
Chloromethane	7.88	2	10		79	70	130			
Vinyl chloride	9.28	1	10		93	70	130			
Chloroethane	8.38	1	10		84	70	130			
Bromomethane	8.43	2	10		84	70	130			
Trichlorofluoromethane	10.8	1	10		108	70	130			
1,1-Dichloroethene	10.4	1	10		104	70	130			
Dichloromethane	9.76	2	10		98	70	130			
trans-1,2-Dichloroethene	10.5	1	10		105	70	130			
Methyl tert-butyl ether (MTBE)	10.2	0.5	10		102	62	136			
1,1-Dichloroethane	10.4	1	10		104	70	130			
cis-1,2-Dichloroethene	10.6	1	10		106	70	130			
Bromochloromethane	11.3	1	10		113	70	130			
Chloroform	9.78	1	10		98	70	130			
2,2-Dichloropropane	8.9	1	10		89	70	130			
1,2-Dichloroethane	10.4	1	10		104	70	130			
1,1,1-Trichloroethane	10.6	1	10		106	70	130			
1,1-Dichloropropene	10.8	1	10		108	70	130			
Carbon tetrachloride	10.2	1	10		102	70	130			
Benzene	9.56	0.5	10		96	70	130			
Dibromomethane	10.6	1	10		106	70	130			
1,2-Dichloropropane	9.96	1	10		99.6	70	130			
Trichloroethene	10.9	1	10		109	70	130			
Bromodichloromethane	10.5	1	10		105	70	130			
cis-1,3-Dichloropropene	10.4	1	10		104	70	130			
trans-1,3-Dichloropropene	10.3	1	10		103	70	130			
1,1,2-Trichloroethane	9.72	1	10		97	70	130			
Toluene	9.47	0.5	10		95	70	130			
1,3-Dichloropropane	9.31	1	10		93	70	130			
Dibromochloromethane	10.2	1	10		102	70	130			
1,2-Dibromoethane (EDB)	19	2	20		95	70	130			
Tetrachloroethene	10.1	1	10		101	70	130			
1,1,1,2-Tetrachloroethane	9.57	1	10		96	70	130			
Chlorobenzene	9.31	1	10		93	70	130			
Ethylbenzene	9.51	0.5	10		95	70	130			
m,p-Xylene	9.77	0.5	10		98	70	130			
Bromoform	9.31	1	10		93	70	130			
Styrene	9.57	1	10		96	70	130			
o-Xylene	9.46	0.5	10		95	70	130			
1,1,2,2-Tetrachloroethane	8.74	1	10		87	70	130			
1,2,3-Trichloropropane	18	2	20		90	70	130			
Isopropylbenzene	9.61	1	10		96	70	130			
Bromobenzene	9.35	1	10		94	70	130			
n-Propylbenzene	9.78	1	10		98	70	130			
4-Chlorotoluene	9.8	1	10		98	70	130			
2-Chlorotoluene	9.67	1	10		97	70	130			
1,3,5-Trimethylbenzene	9.34	1	10		93	70	130			
tert-Butylbenzene	9.22	1	10		92	70	130			
1,2,4-Trimethylbenzene	9.66	1	10		97	70	130			
sec-Butylbenzene	9.28	1	10		93	70	130			
1,3-Dichlorobenzene	9.52	1	10		95	70	130			
1,4-Dichlorobenzene	9.15	1	10		92	70	130			
4-Isopropyltoluene	9.46	1	10		95	70	130			
1,2-Dichlorobenzene	9.09	1	10		91	70	130			
n-Butylbenzene	9.6	1	10		96	70	130			
1,2-Dibromo-3-chloropropane (DBCP)	44.7	3	50		89	70	130			
1,2,4-Trichlorobenzene	10.2	2	10		102	70	130			
Naphthalene	8.76	2	10		88	70	130			
Hexachlorobutadiene	18.4	2	20		92	70	130			
1,2,3-Trichlorobenzene	10.1	2	10		101	70	130			
Surr: 1,2-Dichloroethane-d4	9.88		10		99	70	130			
Surr: Toluene-d8	9.94		10		99	70	130			
Surr: 4-Bromofluorobenzene	9.78		10		98	70	130			



Alpha Analytical, Inc.

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Date:
10-Feb-09

QC Summary Report

Work Order:
09020401

Sample Matrix Spike

File ID: 09020507.D

Type MS

Test Code:

Batch ID: MS15W0205M

Analysis Date: 02/05/2009 10:41

Sample ID: 09020401-05AMS

Units : µg/L

Run ID: MSD_15_090205A

Prep Date: 02/05/2009

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	41.3	2.5	50	0	83	13	167			
Chloromethane	38.4	10	50	0	77	28	145			
Vinyl chloride	43.5	2.5	50	0	87	43	134			
Chloroethane	37.4	2.5	50	0	70	39	154			
Bromomethane	39.1	10	50	0	78	19	176			
Trichlorofluoromethane	49	2.5	50	0	98	34	160			
1,1-Dichloroethene	46.7	2.5	50	0	93	60	130			
Dichloromethane	45.4	10	50	0	91	68	130			
trans-1,2-Dichloroethene	47.4	2.5	50	0	95	63	130			
Methyl tert-butyl ether (MTBE)	48.7	1.3	50	0	97	56	141			
1,1-Dichloroethane	47.4	2.5	50	0	95	61	130			
cis-1,2-Dichloroethene	48.6	2.5	50	0	97	70	130			
Bromochloromethane	53.5	2.5	50	0	107	70	130			
Chloroform	45.5	2.5	50	0	91	67	130			
2,2-Dichloropropane	39.9	2.5	50	0	80	30	152			
1,2-Dichloroethane	49.4	2.5	50	0	99	60	135			
1,1,1-Trichloroethane	47	2.5	50	0	94	59	137			
1,1-Dichloropropene	48	2.5	50	0	96	63	130			
Carbon tetrachloride	45.7	2.5	50	0	91	50	147			
Benzene	43.7	1.3	50	0	87	67	130			
Dibromomethane	51.8	2.5	50	0	104	69	133			
1,2-Dichloropropane	46.4	2.5	50	0	93	69	130			
Trichloroethene	49.2	2.5	50	0	98	69	130			
Bromodichloromethane	49.9	2.5	50	0	99.8	66	134			
cis-1,3-Dichloropropene	47.8	2.5	50	0	96	63	130			
trans-1,3-Dichloropropene	50.1	2.5	50	0	100	66	131			
1,1,2-Trichloroethane	46.7	2.5	50	0	93	68	130			
Toluene	43.3	1.3	50	0	87	66	130			
1,3-Dichloropropane	44.9	2.5	50	0	90	70	130			
Dibromochloromethane	48.7	2.5	50	0	97	70	130			
1,2-Dibromoethane (EDB)	92.6	10	100	0	93	70	130			
Tetrachloroethene	45.5	2.5	50	0	91	61	134			
1,1,1,2-Tetrachloroethane	45.9	2.5	50	0	92	70	130			
Chlorobenzene	43.5	2.5	50	0	87	70	130			
Ethylbenzene	43.6	1.3	50	0	87	68	130			
m,p-Xylene	44.8	1.3	50	0	90	64	130			
Bromoform	45.1	2.5	50	0	90	64	138			
Styrene	44.8	2.5	50	0	90	69	130			
o-Xylene	43.5	1.3	50	0	87	70	130			
1,1,2,2-Tetrachloroethane	43.5	2.5	50	0	87	65	131			
1,2,3-Trichloropropane	88.9	10	100	0	89	70	130			
Isopropylbenzene	43.4	2.5	50	0	87	64	138			
Bromobenzene	44.6	2.5	50	0	89	70	130			
n-Propylbenzene	43.2	2.5	50	0	86	66	132			
4-Chlorotoluene	45.9	2.5	50	0	92	70	130			
2-Chlorotoluene	44.4	2.5	50	0	89	70	130			
1,3,5-Trimethylbenzene	43.1	2.5	50	0	86	66	136			
tert-Butylbenzene	42.1	2.5	50	0	84	65	137			
1,2,4-Trimethylbenzene	44.2	2.5	50	0	88	65	137			
sec-Butylbenzene	42.2	2.5	50	0	84	66	134			
1,3-Dichlorobenzene	44.4	2.5	50	0	89	70	130			
1,4-Dichlorobenzene	42.7	2.5	50	0	85	70	130			
4-Isopropyltoluene	43.3	2.5	50	0	87	66	137			
1,2-Dichlorobenzene	43	2.5	50	0	86	70	130			
n-Butylbenzene	43.4	2.5	50	0	87	60	142			
1,2-Dibromo-3-chloropropane (DBCP)	222	15	250	0	89	67	130			
1,2,4-Trichlorobenzene	48.6	10	50	0	97	61	137			
Naphthalene	43.6	10	50	0	87	40	167			
Hexachlorobutadiene	85	10	100	0	85	61	130			
1,2,3-Trichlorobenzene	50.6	10	50	0	101	51	144			
Surr: 1,2-Dichloroethane-d4	49.2		50		98	70	130			
Surr: Toluene-d8	49.6		50		99	70	130			
Surr: 4-Bromofluorobenzene	49.4		50		99	70	130			



Alpha Analytical, Inc.

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Date:
10-Feb-09

QC Summary Report

Work Order:
09020401

Sample Matrix Spike Duplicate

Type MSD

Test Code:

File ID: 09020508.D

Batch ID: MS15W0205M

Analysis Date: 02/05/2009 11:04

Sample ID: 09020401-05AMSD

Units: µg/L

Run ID: MSD_15_090205A

Prep Date: 02/05/2009

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	40.2	2.5	50	0	80	13	167	41.31	2.6(20)	
Chloromethane	37.2	10	50	0	74	28	145	38.37	3.2(20)	
Vinyl chloride	42	2.5	50	0	84	43	134	43.49	3.6(20)	
Chloroethane	38.6	2.5	50	0	72	39	154	37.44	3.0(20)	
Bromomethane	41.5	10	50	0	83	19	176	39.1	6.0(20)	
Trichlorofluoromethane	47.9	2.5	50	0	96	34	160	49.04	2.4(20)	
1,1-Dichloroethene	45	2.5	50	0	90	60	130	46.71	3.8(20)	
Dichloromethane	45.3	10	50	0	91	68	130	45.43	0.2(20)	
trans-1,2-Dichloroethene	47.3	2.5	50	0	95	63	130	47.36	0.1(20)	
Methyl tert-butyl ether (MTBE)	48.2	1.3	50	0	96	56	141	48.7	1.0(20)	
1,1-Dichloroethane	47.5	2.5	50	0	95	61	130	47.4	0.2(20)	
cis-1,2-Dichloroethene	50	2.5	50	0	100	70	130	48.61	2.9(20)	
Bromochloromethane	52.8	2.5	50	0	106	70	130	53.52	1.4(20)	
Chloroform	45.7	2.5	50	0	91	67	130	45.49	0.4(20)	
2,2-Dichloropropane	40.2	2.5	50	0	80	30	152	39.87	0.9(20)	
1,2-Dichloroethane	49.3	2.5	50	0	99	60	135	49.41	0.2(20)	
1,1,1-Trichloroethane	47.1	2.5	50	0	94	59	137	47.02	0.1(20)	
1,1-Dichloropropene	47.5	2.5	50	0	95	63	130	48.02	1.1(20)	
Carbon tetrachloride	45.9	2.5	50	0	92	50	147	45.65	0.5(20)	
Benzene	44.2	1.3	50	0	88	67	130	43.68	1.2(20)	
Dibromomethane	52	2.5	50	0	104	69	133	51.8	0.4(20)	
1,2-Dichloropropane	46.7	2.5	50	0	93	69	130	46.38	0.7(20)	
Trichloroethene	48.8	2.5	50	0	98	69	130	49.17	0.8(20)	
Bromodichloromethane	50.1	2.5	50	0	100	66	134	49.92	0.3(20)	
cis-1,3-Dichloropropene	47.5	2.5	50	0	95	63	130	47.84	0.7(20)	
trans-1,3-Dichloropropene	49.7	2.5	50	0	99	66	131	50.14	0.9(20)	
1,1,2-Trichloroethane	46.2	2.5	50	0	92	68	130	46.72	1.1(20)	
Toluene	44	1.3	50	0	88	66	130	43.29	1.7(20)	
1,3-Dichloropropane	45	2.5	50	0	90	70	130	44.91	0.2(20)	
Dibromochloromethane	49.6	2.5	50	0	99	70	130	48.66	2.0(20)	
1,2-Dibromoethane (EDB)	92.8	10	100	0	93	70	130	92.63	0.2(20)	
Tetrachloroethene	46	2.5	50	0	92	61	134	45.52	1.0(20)	
1,1,1,2-Tetrachloroethane	46.8	2.5	50	0	94	70	130	45.91	1.9(20)	
Chlorobenzene	44.6	2.5	50	0	89	70	130	43.48	2.6(20)	
Ethylbenzene	44.4	1.3	50	0	89	68	130	43.57	1.8(20)	
m,p-Xylene	45.1	1.3	50	0	90	64	130	44.76	0.8(20)	
Bromoform	45.6	2.5	50	0	91	64	138	45.06	1.3(20)	
Styrene	45.3	2.5	50	0	91	69	130	44.75	1.2(20)	
o-Xylene	44.6	1.3	50	0	89	70	130	43.45	2.5(20)	
1,1,2,2-Tetrachloroethane	41.9	2.5	50	0	84	65	131	43.45	3.6(20)	
1,2,3-Trichloropropane	88.8	10	100	0	89	70	130	88.87	0.1(20)	
Isopropylbenzene	44.5	2.5	50	0	89	64	138	43.35	2.6(20)	
Bromobenzene	46.1	2.5	50	0	92	70	130	44.59	3.2(20)	
n-Propylbenzene	45.1	2.5	50	0	90	66	132	43.2	4.2(20)	
4-Chlorotoluene	48	2.5	50	0	96	70	130	45.88	4.4(20)	
2-Chlorotoluene	45.8	2.5	50	0	92	70	130	44.36	3.2(20)	
1,3,5-Trimethylbenzene	44.4	2.5	50	0	89	66	136	43.13	2.9(20)	
tert-Butylbenzene	43.3	2.5	50	0	87	65	137	42.11	2.7(20)	
1,2,4-Trimethylbenzene	45.8	2.5	50	0	92	65	137	44.22	3.6(20)	
sec-Butylbenzene	42.8	2.5	50	0	86	66	134	42.19	1.4(20)	
1,3-Dichlorobenzene	46.5	2.5	50	0	93	70	130	44.42	4.5(20)	
1,4-Dichlorobenzene	44.5	2.5	50	0	89	70	130	42.72	4.0(20)	
4-Isopropyltoluene	44.1	2.5	50	0	88	66	137	43.28	1.9(20)	
1,2-Dichlorobenzene	45.1	2.5	50	0	90	70	130	43.02	4.6(20)	
n-Butylbenzene	44.8	2.5	50	0	90	60	142	43.36	3.4(20)	
1,2-Dibromo-3-chloropropane (DBCP)	221	15	250	0	89	67	130	221.5	0.0(20)	
1,2,4-Trichlorobenzene	52.9	10	50	0	106	61	137	48.56	8.5(20)	
Naphthalene	45.7	10	50	0	91	40	167	43.58	4.7(20)	
Hexachlorobutadiene	90.4	10	100	0	90	61	130	85	6.1(20)	
1,2,3-Trichlorobenzene	54.5	10	50	0	109	51	144	50.61	7.4(20)	
Surr: 1,2-Dichloroethane-d4	47.8		50		96	70	130			
Surr: Toluene-d8	50.6		50		101	70	130			
Surr: 4-Bromofluorobenzene	49.6		50		99	70	130			



Alpha Analytical, Inc.

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

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

Date:
10-Feb-09

QC Summary Report

Work Order:
09020401

Comments:

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



Alpha Analytical, Inc.

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Date: 16-Feb-09

David Conner
Battelle Memorial Institute
505 King Avenue
Columbus, OH 43201
(619) 574-4827

CASE NARRATIVE

Project: G005862/JPL Groundwater Monitoring

Work Order: BMI09020504

Cooler Temp: 4 °C

Alpha's Sample ID	Client's Sample ID	Matrix
09020504-01A	MW-3-4	Aqueous
09020504-02A	MW-3-3	Aqueous
09020504-03A	MW-3-2	Aqueous
09020504-04A	DUPE-5-1Q09	Aqueous
09020504-05A	MW-4-3	Aqueous
09020504-06A	MW-4-2	Aqueous
09020504-07A	MW-4-1	Aqueous
09020504-08A	EB-09-02/04/09	Aqueous
09020504-09A	TB-09-02/04/09	Aqueous

Manually Integrated Analytes

Alpha's Sample ID	Test Reference	Analyte
09020504-01A	EPA Method 314.0	Perchlorate
09020504-03A	EPA Method 314.0	Perchlorate
09020504-06A	EPA Method 314.0	Perchlorate
09020504-07A	EPA Method 314.0	Perchlorate

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

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

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

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

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



Alpha Analytical, Inc.

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ANALYTICAL REPORT

Battelle Memorial Institute
505 King Avenue
Columbus, OH 43201

Attn: David Conner
Phone: (619) 574-4827
Fax: (614) 458-6641
Date Received : 02/05/09

Job#: G005862/JPL Groundwater Monitoring

Perchlorate by Ion Chromatography
EPA Method 314.0

Parameter	Concentration	Reporting Limit	Date Sampled	Date Analyzed
Client ID : MW-3-4 Lab ID : BMI09020504-01A Perchlorate	7.29	1.00 µg/L	02/04/09	02/05/09
Client ID : MW-3-3 Lab ID : BMI09020504-02A Perchlorate	ND	1.00 µg/L	02/04/09	02/05/09
Client ID : MW-3-2 Lab ID : BMI09020504-03A Perchlorate	98.7	10.0 µg/L	02/04/09	02/12/09
Client ID : DUPE-5-1Q09 Lab ID : BMI09020504-04A Perchlorate	ND	1.00 µg/L	02/04/09	02/05/09
Client ID : MW-4-3 Lab ID : BMI09020504-05A Perchlorate	ND	1.00 µg/L	02/04/09	02/05/09
Client ID : MW-4-2 Lab ID : BMI09020504-06A Perchlorate	2.14	1.00 µg/L	02/04/09	02/05/09
Client ID : MW-4-1 Lab ID : BMI09020504-07A Perchlorate	16.0	1.00 µg/L	02/04/09	02/05/09
Client ID : EB-09-02/04/09 Lab ID : BMI09020504-08A Perchlorate	ND	1.00 µg/L	02/04/09	02/05/09

ND = Not Detected

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2/18/09

Report Date



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ANALYTICAL REPORT

Battelle Memorial Institute
505 King Avenue
Columbus, OH 43201

Attn: David Conner
Phone: (619) 574-4827
Fax: (614) 458-6641
Date Received : 02/05/09

Job#: G005862/JPL Groundwater Monitoring

Metals by ICPMS
EPA Method 200.8

Parameter	Concentration	Reporting Limit	Date Sampled	Date Analyzed
Client ID : MW-3-4 Lab ID : BMI09020504-01A Chromium (Cr)	ND	0.0050 mg/L	02/04/09	02/13/09
Client ID : MW-3-3 Lab ID : BMI09020504-02A Chromium (Cr)	ND	0.0050 mg/L	02/04/09	02/13/09
Client ID : MW-3-2 Lab ID : BMI09020504-03A Chromium (Cr)	ND	0.0050 mg/L	02/04/09	02/13/09
Client ID : DUPE-5-1Q09 Lab ID : BMI09020504-04A Chromium (Cr)	ND	0.0050 mg/L	02/04/09	02/13/09
Client ID : MW-4-3 Lab ID : BMI09020504-05A Chromium (Cr)	ND	0.0050 mg/L	02/04/09	02/13/09
Client ID : MW-4-2 Lab ID : BMI09020504-06A Chromium (Cr)	ND	0.0050 mg/L	02/04/09	02/13/09
Client ID : MW-4-1 Lab ID : BMI09020504-07A Chromium (Cr)	ND	0.0050 mg/L	02/04/09	02/13/09
Client ID : EB-09-02/04/09 Lab ID : BMI09020504-08A Chromium (Cr)	ND	0.0050 mg/L	02/04/09	02/13/09

ND = Not Detected

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ANALYTICAL REPORT

Battelle Memorial Institute
505 King Avenue
Columbus, OH 43201
Job#: G005862/JPL Groundwater Monitoring

Attn: David Conner
Phone: (619) 574-4827
Fax: (614) 458-6641

Tentatively Identified Compounds - Volatile Organics by GC/MS

	Parameter	Estimated Concentration	Estimated Reporting Limit	Date Received	Date Sampled	Date Analyzed
Client ID : MW-3-4 Lab ID : BMI09020504-01A	Sulfur dioxide	23	2.0 µg/L	02/05/09	02/04/09	02/09/09
Client ID : MW-3-3 Lab ID : BMI09020504-02A	Sulfur dioxide	9.5	2.0 µg/L	02/05/09	02/04/09	02/09/09
Client ID : MW-3-2 Lab ID : BMI09020504-03A	*** None Found ***	ND	2.0 µg/L	02/05/09	02/04/09	02/09/09
Client ID : DUPE-5-1Q09 Lab ID : BMI09020504-04A	Sulfur dioxide	5.1	2.0 µg/L	02/05/09	02/04/09	02/09/09
Client ID : MW-4-3 Lab ID : BMI09020504-05A	Sulfur dioxide	2.6	2.0 µg/L	02/05/09	02/04/09	02/09/09
Client ID : MW-4-2 Lab ID : BMI09020504-06A	*** None Found ***	ND	2.0 µg/L	02/05/09	02/04/09	02/09/09
Client ID : MW-4-1 Lab ID : BMI09020504-07A	*** None Found ***	ND	2.0 µg/L	02/05/09	02/04/09	02/09/09
Client ID : EB-09-02/04/09 Lab ID : BMI09020504-08A	*** None Found ***	ND	2.0 µg/L	02/05/09	02/04/09	02/09/09
Client ID : TB-09-02/04/09 Lab ID : BMI09020504-09A	*** None Found ***	ND	2.0 µg/L	02/05/09	02/04/09	02/09/09

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl *Randy Gardner* *Walter Hinchman*

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2/18/09

Report Date

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Alpha Analytical, Inc.

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ANALYTICAL REPORT

Battelle Memorial Institute
505 King Avenue
Columbus, OH 43201
Job#: G005862/JPL Groundwater Monitoring

Attn: David Conner
Phone: (619) 574-4827
Fax: (614) 458-6641

Alpha Analytical Number: BMI09020504-01A
Client I.D. Number: MW-3-4

Sampled: 02/04/09
Received: 02/05/09
Analyzed: 02/09/09

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	0.64	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethene	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	10 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	ND	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	ND	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	ND	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	105	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	103	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	95	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

Note: Analysis conducted using EPA Method 524.2 criteria.

*Note: Dichlorodifluoromethane failed the 524 CV Criteria of 70-130% @ 135.1%.

ND = Not Detected

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2/18/09

Report Date

Page 1 of 1



Alpha Analytical, Inc.

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ANALYTICAL REPORT

Battelle Memorial Institute
505 King Avenue
Columbus, OH 43201
Job#: G005862/JPL Groundwater Monitoring

Attn: David Conner
Phone: (619) 574-4827
Fax: (614) 458-6641

Alpha Analytical Number: BMI09020504-02A
Client I.D. Number: MW-3-3

Sampled: 02/04/09
Received: 02/05/09
Analyzed: 02/09/09

Volatile Organics by GC/MS

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethene	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	10 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	ND	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	ND	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	ND	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	106	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	101	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	95	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

Note: Analysis conducted using EPA Method 524.2 criteria.

*Note: Dichlorodifluoromethane failed the 524 CV Criteria of 70-130% @ 135.1%.

ND = Not Detected

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Alpha Analytical, Inc.

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

Battelle Memorial Institute
505 King Avenue
Columbus, OH 43201
Job#: G005862/JPL Groundwater Monitoring

Attn: David Conner
Phone: (619) 574-4827
Fax: (614) 458-6641

Alpha Analytical Number: BMI09020504-03A
Client I.D. Number: MW-3-2

Sampled: 02/04/09
Received: 02/05/09
Analyzed: 02/09/09

Volatile Organics by GC/MS

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	* 0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethene	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	10 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	0.70	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	ND	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	ND	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	1.0	0.50 µg/L	61 Naphthalene	ND	1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	103	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	102	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	93	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	1.1	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.

*Note: Dichlorodifluoromethane failed the 524 CV Criteria of 70-130% @ 135.1%.

ND = Not Detected

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Alpha Analytical, Inc.

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ANALYTICAL REPORT

Battelle Memorial Institute
505 King Avenue
Columbus, OH 43201
Job#: G005862/JPL Groundwater Monitoring

Attn: David Conner
Phone: (619) 574-4827
Fax: (614) 458-6641

Alpha Analytical Number: BMI09020504-04A
Client I.D. Number: DUPE-5-1Q09

Sampled: 02/04/09
Received: 02/05/09
Analyzed: 02/09/09

Volatile Organics by GC/MS

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethene	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	10 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	ND	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	ND	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	ND	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	105	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	102	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	95	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

Note: Analysis conducted using EPA Method 524.2 criteria.

*Note: Dichlorodifluoromethane failed the 524 CV Criteria of 70-130% @ 135.1%.

ND = Not Detected

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Alpha Analytical, Inc.

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ANALYTICAL REPORT

Battelle Memorial Institute
505 King Avenue
Columbus, OH 43201
Job#: G005862/JPL Groundwater Monitoring

Attn: David Conner
Phone: (619) 574-4827
Fax: (614) 458-6641

Alpha Analytical Number: BMI09020504-05A
Client I.D. Number: MW-4-3

Sampled: 02/04/09
Received: 02/05/09
Analyzed: 02/09/09

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	2.1	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	0.50	0.50 µg/L
7 1,1-Dichloroethene	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	10 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	ND	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	ND	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	ND	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	103	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	102	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	96	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

Note: Analysis conducted using EPA Method 524.2 criteria.

*Note: Dichlorodifluoromethane failed the 524 CV Criteria of 70-130% @ 135.1%.

ND = Not Detected

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ANALYTICAL REPORT

Battelle Memorial Institute
505 King Avenue
Columbus, OH 43201
Job#: G005862/JPL Groundwater Monitoring

Attn: David Conner
Phone: (619) 574-4827
Fax: (614) 458-6641

Alpha Analytical Number: BMI09020504-06A
Client I.D. Number: MW-4-2

Sampled: 02/04/09
Received: 02/05/09
Analyzed: 02/09/09

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
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21 Carbon tetrachloride	ND	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	0.50	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	103	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	96	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

Note: Analysis conducted using EPA Method 524.2 criteria.

*Note: Dichlorodifluoromethane failed the 524 CV Criteria of 70-130% @ 135.1%.

ND = Not Detected

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ANALYTICAL REPORT

Battelle Memorial Institute
505 King Avenue
Columbus, OH 43201
Job#: G005862/JPL Groundwater Monitoring

Attn: David Conner
Phone: (619) 574-4827
Fax: (614) 458-6641

Alpha Analytical Number: BMI09020504-07A
Client I.D. Number: MW-4-1

Sampled: 02/04/09
Received: 02/05/09
Analyzed: 02/09/09

Volatile Organics by GC/MS

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	* 0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethene	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	10 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	ND	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	ND	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	ND	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	105	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	102	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	95	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

Note: Analysis conducted using EPA Method 524.2 criteria.

*Note: Dichlorodifluoromethane failed the 524 CV Criteria of 70-130% @ 135.1%.

ND = Not Detected

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

2/18/09

Report Date

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Alpha Analytical, Inc.

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

ANALYTICAL REPORT

Battelle Memorial Institute
505 King Avenue
Columbus, OH 43201
Job#: G005862/JPL Groundwater Monitoring

Attn: David Conner
Phone: (619) 574-4827
Fax: (614) 458-6641

Alpha Analytical Number: BMI09020504-08A
Client I.D. Number: EB-09-02/04/09

Sampled: 02/04/09
Received: 02/05/09
Analyzed: 02/09/09

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
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23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
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25 Trichloroethene	ND	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	104	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	102	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	95	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

Note: Analysis conducted using EPA Method 524.2 criteria.

*Note: Dichlorodifluoromethane failed the 524 CV Criteria of 70-130% @ 135.1%.

ND = Not Detected

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Alpha Analytical, Inc.

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ANALYTICAL REPORT

Battelle Memorial Institute
505 King Avenue
Columbus, OH 43201
Job#: G005862/JPL Groundwater Monitoring

Attn: David Conner
Phone: (619) 574-4827
Fax: (614) 458-6641

Alpha Analytical Number: BMI09020504-09A
Client I.D. Number: TB-09-02/04/09

Sampled: 02/04/09
Received: 02/05/09
Analyzed: 02/09/09

Volatile Organics by GC/MS

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
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5 Bromomethane	ND	1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethene	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	10 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
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26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	103	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	101	(70-130) %REC
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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.

*Note: Dichlorodifluoromethane failed the 524 CV Criteria of 70-130% @ 135.1%.

ND = Not Detected

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Page 1 of 1



Alpha Analytical, Inc.

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

VOC Sample Preservation Report

Work Order: BMI09020504

Project: G005862/JPL Groundwater Monitoring

Alpha's Sample ID	Client's Sample ID	Matrix	pH
09020504-01A	MW-3-4	Aqueous	2
09020504-02A	MW-3-3	Aqueous	2
09020504-03A	MW-3-2	Aqueous	2
09020504-04A	DUPE-5-1Q09	Aqueous	2
09020504-05A	MW-4-3	Aqueous	2
09020504-06A	MW-4-2	Aqueous	2
09020504-07A	MW-4-1	Aqueous	2
09020504-08A	EB-09-02/04/09	Aqueous	2
09020504-09A	TB-09-02/04/09	Aqueous	2

2/18/09
Report Date



Alpha Analytical, Inc.

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QC Summary Report

Date:
16-Feb-09

Work Order:
09020504

Method Blank

File ID:	Type	MBLK	Test Code:	EPA Method 314.0	Batch ID:	21462	Analysis Date:	02/05/2009 14:28		
Sample ID:	Units :	µg/L	Run ID:	IC_3_090205A	Prep Date:	02/05/2009				
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	ND		1							

Laboratory Fortified Blank

File ID:	Type	LFB	Test Code:	EPA Method 314.0	Batch ID:	21462	Analysis Date:	02/05/2009 14:46		
Sample ID:	Units :	µg/L	Run ID:	IC_3_090205A	Prep Date:	02/05/2009				
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	24.1	2	25		97	85	115			

Sample Matrix Spike

File ID:	Type	LFM	Test Code:	EPA Method 314.0	Batch ID:	21462	Analysis Date:	02/12/2009 14:42		
Sample ID:	Units :	µg/L	Run ID:	IC_3_090205A	Prep Date:	02/05/2009				
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	351	20	250		98.71	101	80	120		

Sample Matrix Spike Duplicate

File ID:	Type	LFMD	Test Code:	EPA Method 314.0	Batch ID:	21462	Analysis Date:	02/12/2009 15:01		
Sample ID:	Units :	µg/L	Run ID:	IC_3_090205A	Prep Date:	02/05/2009				
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	352	20	250		98.71	101	80	120	351	0.3(15)

Comments:

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



Alpha Analytical, Inc.

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Date:
18-Feb-09

QC Summary Report

Work Order:
09020504

Method Blank

File ID: 021309.B\091SMPL.D\	Type MBLK	Test Code: EPA Method 200.8	Batch ID: 21494K	Analysis Date: 02/13/2009 21:24						
Sample ID: MB-21494	Units : mg/L	Run ID: ICP/MS_090213C	Prep Date: 02/11/2009							
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	ND	0.005								

Laboratory Control Spike

File ID: 021309.B\092_LCS.D\	Type LCS	Test Code: EPA Method 200.8	Batch ID: 21494K	Analysis Date: 02/13/2009 21:29						
Sample ID: LCS-21494	Units : mg/L	Run ID: ICP/MS_090213C	Prep Date: 02/11/2009							
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0557	0.005	0.05		111	80	120			

Sample Matrix Spike

File ID: 021309.B\096SMPL.D\	Type MS	Test Code: EPA Method 200.8	Batch ID: 21494K	Analysis Date: 02/13/2009 21:52						
Sample ID: 09020504-03AMS	Units : mg/L	Run ID: ICP/MS_090213C	Prep Date: 02/11/2009							
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0489	0.005	0.05	0	98	80	120			

Sample Matrix Spike Duplicate

File ID: 021309.B\097SMPL.D\	Type MSD	Test Code: EPA Method 200.8	Batch ID: 21494K	Analysis Date: 02/13/2009 21:58						
Sample ID: 09020504-03AMSD	Units : mg/L	Run ID: ICP/MS_090213C	Prep Date: 02/11/2009							
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0492	0.005	0.05	0	98	80	120	0.04891	0.7(20)	

Comments:

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



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Date:
17-Feb-09

QC Summary Report

Work Order:
09020504

Method Blank

Type **MBLK** Test Code: _____

File ID: **09020907.D**

Batch ID: **MS15W0209M**

Analysis Date: **02/09/2009 10:52**

Sample ID: **MBLK MS15W0209M**

Units: **µg/L**

Run ID: **MSD_15_090209B**

Prep Date: **02/09/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	ND	0.5								
Chloromethane	ND	1								
Vinyl chloride	ND	0.5								
Chloroethane	ND	0.5								
Bromomethane	ND	1								
Trichlorofluoromethane	ND	0.5								
1,1-Dichloroethene	ND	0.5								
Dichloromethane	ND	1								
Freon-113	ND	0.5								
trans-1,2-Dichloroethene	ND	0.5								
Methyl tert-butyl ether (MTBE)	ND	0.5								
1,1-Dichloroethane	ND	0.5								
2-Butanone (MEK)	ND	10								
cis-1,2-Dichloroethene	ND	0.5								
Bromochloromethane	ND	0.5								
Chloroform	ND	0.5								
2,2-Dichloropropane	ND	0.5								
1,2-Dichloroethane	ND	0.5								
1,1,1-Trichloroethane	ND	0.5								
1,1-Dichloropropene	ND	0.5								
Carbon tetrachloride	ND	0.5								
Benzene	ND	0.5								
Dibromomethane	ND	0.5								
1,2-Dichloropropane	ND	0.5								
Trichloroethene	ND	0.5								
Bromodichloromethane	ND	0.5								
4-Methyl-2-pentanone (MIBK)	ND	2.5								
cis-1,3-Dichloropropene	ND	0.5								
trans-1,3-Dichloropropene	ND	0.5								
1,1,2-Trichloroethane	ND	0.5								
Toluene	ND	0.5								
1,3-Dichloropropane	ND	0.5								
Dibromochloromethane	ND	0.5								
1,2-Dibromoethane (EDB)	ND	1								
Tetrachloroethene	ND	0.5								
1,1,1,2-Tetrachloroethane	ND	0.5								
Chlorobenzene	ND	0.5								
Ethylbenzene	ND	0.5								
m,p-Xylene	ND	0.5								
Bromoform	ND	0.5								
Styrene	ND	0.5								
o-Xylene	ND	0.5								
1,1,2,2-Tetrachloroethane	ND	0.5								
1,2,3-Trichloropropane	ND	1								
Isopropylbenzene	ND	0.5								
Bromobenzene	ND	0.5								
n-Propylbenzene	ND	0.5								
4-Chlorotoluene	ND	0.5								
2-Chlorotoluene	ND	0.5								
1,3,5-Trimethylbenzene	ND	0.5								
tert-Butylbenzene	ND	0.5								
1,2,4-Trimethylbenzene	ND	0.5								
sec-Butylbenzene	ND	0.5								
1,3-Dichlorobenzene	ND	0.5								
1,4-Dichlorobenzene	ND	0.5								
4-Isopropyltoluene	ND	0.5								
1,2-Dichlorobenzene	ND	0.5								
n-Butylbenzene	ND	0.5								
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5								
1,2,4-Trichlorobenzene	ND	1								
Naphthalene	ND	1								
Hexachlorobutadiene	ND	1								
1,2,3-Trichlorobenzene	ND	1								
Surr: 1,2-Dichloroethane-d4	10.4		10		104	70	130			
Surr: Toluene-d8	10.2		10		102	70	130			



Alpha Analytical, Inc.

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

Date:

17-Feb-09

QC Summary Report

Work Order:

09020504

Surr: 4-Bromofluorobenzene 9.49 10 95 70 130

Laboratory Control Spike

Type LCS

Test Code:

File ID: 09020905.D

Batch ID: MS15W0209M

Analysis Date: 02/09/2009 09:51

Sample ID: LCS MS15W0209M

Units : µg/L

Run ID: MSD_15_090209B

Prep Date: 02/09/2009

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	13.5	1	10		135	70	130(130)			L51
Chloromethane	9.65	2	10		97	70	130			
Vinyl chloride	11	1	10		110	70	130			
Chloroethane	10.9	1	10		93	70	130			
Bromomethane	9.42	2	10		94	70	130			
Trichlorofluoromethane	12.2	1	10		122	70	130			
1,1-Dichloroethene	11	1	10		110	70	130			
Dichloromethane	10	2	10		100	70	130			
trans-1,2-Dichloroethene	10.6	1	10		106	70	130			
Methyl tert-butyl ether (MTBE)	9.14	0.5	10		91	62	136			
1,1-Dichloroethane	10.5	1	10		105	70	130			
cis-1,2-Dichloroethene	10.9	1	10		109	70	130			
Bromochloromethane	10.8	1	10		108	70	130			
Chloroform	9.91	1	10		99	70	130			
2,2-Dichloropropane	9.92	1	10		99	70	130			
1,2-Dichloroethane	9.92	1	10		99	70	130			
1,1,1-Trichloroethane	10.8	1	10		108	70	130			
1,1-Dichloropropene	11	1	10		110	70	130			
Carbon tetrachloride	10.7	1	10		107	70	130			
Benzene	9.66	0.5	10		97	70	130			
Dibromomethane	10.2	1	10		102	70	130			
1,2-Dichloropropane	9.92	1	10		99	70	130			
Trichloroethene	11.2	1	10		112	70	130			
Bromodichloromethane	10.4	1	10		104	70	130			
cis-1,3-Dichloropropene	10.3	1	10		103	70	130			
trans-1,3-Dichloropropene	9.84	1	10		98	70	130			
1,1,2-Trichloroethane	9.25	1	10		93	70	130			
Toluene	9.82	0.5	10		98	70	130			
1,3-Dichloropropane	8.91	1	10		89	70	130			
Dibromochloromethane	10.1	1	10		101	70	130			
1,2-Dibromoethane (EDB)	18.6	2	20		93	70	130			
Tetrachloroethene	10.7	1	10		107	70	130			
1,1,1,2-Tetrachloroethane	9.87	1	10		99	70	130			
Chlorobenzene	9.61	1	10		96	70	130			
Ethylbenzene	9.91	0.5	10		99	70	130			
m,p-Xylene	10.1	0.5	10		101	70	130			
Bromoform	9.31	1	10		93	70	130			
Styrene	9.78	1	10		98	70	130			
o-Xylene	9.87	0.5	10		99	70	130			
1,1,2,2-Tetrachloroethane	8.29	1	10		83	70	130			
1,2,3-Trichloropropane	17.9	2	20		89	70	130			
Isopropylbenzene	9.98	1	10		99.8	70	130			
Bromobenzene	9.39	1	10		94	70	130			
n-Propylbenzene	9.91	1	10		99	70	130			
4-Chlorotoluene	10.2	1	10		102	70	130			
2-Chlorotoluene	10	1	10		100	70	130			
1,3,5-Trimethylbenzene	9.77	1	10		98	70	130			
tert-Butylbenzene	9.65	1	10		97	70	130			
1,2,4-Trimethylbenzene	9.84	1	10		98	70	130			
sec-Butylbenzene	9.67	1	10		97	70	130			
1,3-Dichlorobenzene	9.71	1	10		97	70	130			
1,4-Dichlorobenzene	9.39	1	10		94	70	130			
4-Isopropyltoluene	9.91	1	10		99	70	130			
1,2-Dichlorobenzene	9.21	1	10		92	70	130			
n-Butylbenzene	10.1	1	10		101	70	130			
1,2-Dibromo-3-chloropropane (DBCP)	44.5	3	50		89	70	130			
1,2,4-Trichlorobenzene	11.4	2	10		114	70	130			
Naphthalene	9.71	2	10		97	70	130			
Hexachlorobutadiene	20	2	20		100	70	130			
1,2,3-Trichlorobenzene	11.8	2	10		118	70	130			
Surr: 1,2-Dichloroethane-d4	9.66		10		97	70	130			
Surr: Toluene-d8	10.2		10		102	70	130			
Surr: 4-Bromofluorobenzene	9.62		10		96	70	130			



Alpha Analytical, Inc.

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

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

Date:
17-Feb-09

QC Summary Report

Work Order:
09020504

Sample Matrix Spike

Type **MS**

Test Code: _____

File ID: **09020908.D**

Batch ID: **MS15W0209M**

Analysis Date: **02/09/2009 11:14**

Sample ID: **09020504-03AMS**

Units : **µg/L**

Run ID: **MSD_15_090209B**

Prep Date: **02/09/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	51.3	2.5	50	0	103	13	167			
Chloromethane	41.6	10	50	0	83	28	145			
Vinyl chloride	50.2	2.5	50	0	100	43	134			
Chloroethane	45	2.5	50	0	90	39	154			
Bromomethane	44.4	10	50	0	89	19	176			
Trichlorofluoromethane	56.2	2.5	50	0	112	34	160			
1,1-Dichloroethene	49.3	2.5	50	0	99	60	130			
Dichloromethane	46.2	10	50	0	92	68	130			
trans-1,2-Dichloroethene	48.7	2.5	50	0	97	63	130			
Methyl tert-butyl ether (MTBE)	46.7	1.3	50	0	93	56	141			
1,1-Dichloroethane	49	2.5	50	0	98	61	130			
cis-1,2-Dichloroethene	50.9	2.5	50	0	102	70	130			
Bromochloromethane	52.3	2.5	50	0	105	70	130			
Chloroform	47.1	2.5	50	0.7	93	67	130			
2,2-Dichloropropane	43.6	2.5	50	0	87	30	152			
1,2-Dichloroethane	48.7	2.5	50	0	97	60	135			
1,1,1-Trichloroethane	50.6	2.5	50	0	101	59	137			
1,1-Dichloropropene	50.6	2.5	50	0	101	63	130			
Carbon tetrachloride	49.5	2.5	50	0	99	50	147			
Benzene	45.1	1.3	50	0	90	67	130			
Dibromomethane	50.7	2.5	50	0	101	69	133			
1,2-Dichloropropane	46.6	2.5	50	0	93	69	130			
Trichloroethene	51.2	2.5	50	0	102	69	130			
Bromodichloromethane	50.8	2.5	50	1.01	99.6	66	134			
cis-1,3-Dichloropropene	47.6	2.5	50	0	95	63	130			
trans-1,3-Dichloropropene	49	2.5	50	0	98	66	131			
1,1,2-Trichloroethane	46	2.5	50	0	92	68	130			
Toluene	44.9	1.3	50	0	90	66	130			
1,3-Dichloropropane	43.6	2.5	50	0	87	70	130			
Dibromochloromethane	50.3	2.5	50	1.07	98	70	130			
1,2-Dibromoethane (EDB)	91.2	10	100	0	91	70	130			
Tetrachloroethene	48.2	2.5	50	0	96	61	134			
1,1,1,2-Tetrachloroethane	46.3	2.5	50	0	93	70	130			
Chlorobenzene	44.8	2.5	50	0	90	70	130			
Ethylbenzene	45.6	1.3	50	0	91	68	130			
m,p-Xylene	46.3	1.3	50	0	93	64	130			
Bromoform	45.5	2.5	50	0	91	64	138			
Styrene	45.5	2.5	50	0	91	69	130			
o-Xylene	45.4	1.3	50	0	91	70	130			
1,1,2,2-Tetrachloroethane	40.9	2.5	50	0	82	65	131			
1,2,3-Trichloropropane	84.8	10	100	0	85	70	130			
Isopropylbenzene	46.7	2.5	50	0	93	64	138			
Bromobenzene	46.1	2.5	50	0	92	70	130			
n-Propylbenzene	46.5	2.5	50	0	93	66	132			
4-Chlorotoluene	48.8	2.5	50	0	98	70	130			
2-Chlorotoluene	47.5	2.5	50	0	95	70	130			
1,3,5-Trimethylbenzene	46	2.5	50	0	92	66	136			
tert-Butylbenzene	45.4	2.5	50	0	91	65	137			
1,2,4-Trimethylbenzene	47	2.5	50	0	94	65	137			
sec-Butylbenzene	45.7	2.5	50	0	91	66	134			
1,3-Dichlorobenzene	47	2.5	50	0	94	70	130			
1,4-Dichlorobenzene	45	2.5	50	0	90	70	130			
4-Isopropyltoluene	47.1	2.5	50	0	94	66	137			
1,2-Dichlorobenzene	44.7	2.5	50	0	89	70	130			
n-Butylbenzene	47.5	2.5	50	0	95	60	142			
1,2-Dibromo-3-chloropropane (DBCP)	217	15	250	0	87	67	130			
1,2,4-Trichlorobenzene	51.5	10	50	0	103	61	137			
Naphthalene	43.8	10	50	0	88	40	167			
Hexachlorobutadiene	99	10	100	0	99	61	130			
1,2,3-Trichlorobenzene	51.1	10	50	0	102	51	144			
Surr: 1,2-Dichloroethane-d4	46.7		50		93	70	130			
Surr: Toluene-d8	50.5		50		101	70	130			
Surr: 4-Bromofluorobenzene	49.5		50		99	70	130			



Alpha Analytical, Inc.

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

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

Date:
17-Feb-09

QC Summary Report

Work Order:
09020504

Sample Matrix Spike Duplicate

Type **MSD**

Test Code: _____

File ID: **09020909.D**

Batch ID: **MS15W0209M**

Analysis Date: **02/09/2009 11:36**

Sample ID: **09020504-03AMSD**

Units : **µg/L**

Run ID: **MSD_15_090209B**

Prep Date: **02/09/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	51.3	2.5	50	0	103	13	167	51.26	0.1(20)	
Chloromethane	42.9	10	50	0	86	28	145	41.58	3.1(20)	
Vinyl chloride	50.3	2.5	50	0	101	43	134	50.2	0.1(20)	
Chloroethane	49.7	2.5	50	0	99	39	154	45.01	9.8(20)	
Bromomethane	49.1	10	50	0	98	19	176	44.35	10.1(20)	
Trichlorofluoromethane	56.5	2.5	50	0	113	34	160	56.22	0.6(20)	
1,1-Dichloroethene	50.8	2.5	50	0	102	60	130	49.33	2.9(20)	
Dichloromethane	48.2	10	50	0	96	68	130	46.15	4.2(20)	
trans-1,2-Dichloroethene	50.9	2.5	50	0	102	63	130	48.66	4.4(20)	
Methyl tert-butyl ether (MTBE)	49.4	1.3	50	0	99	56	141	46.74	5.5(20)	
1,1-Dichloroethane	50.4	2.5	50	0	101	61	130	48.96	2.8(20)	
cis-1,2-Dichloroethene	51.7	2.5	50	0	103	70	130	50.87	1.6(20)	
Bromochloromethane	54.5	2.5	50	0	109	70	130	52.32	4.2(20)	
Chloroform	48.5	2.5	50	0.7	96	67	130	47.05	2.9(20)	
2,2-Dichloropropane	45.1	2.5	50	0	90	30	152	43.57	3.3(20)	
1,2-Dichloroethane	50.3	2.5	50	0	101	60	135	48.73	3.3(20)	
1,1,1-Trichloroethane	51.8	2.5	50	0	104	59	137	50.63	2.4(20)	
1,1-Dichloropropene	51.5	2.5	50	0	103	63	130	50.56	1.8(20)	
Carbon tetrachloride	51.1	2.5	50	0	102	50	147	49.48	3.2(20)	
Benzene	46.3	1.3	50	0	93	67	130	45.09	2.5(20)	
Dibromomethane	53.4	2.5	50	0	107	69	133	50.74	5.1(20)	
1,2-Dichloropropane	47.8	2.5	50	0	96	69	130	46.57	2.7(20)	
Trichloroethene	52.2	2.5	50	0	104	69	130	51.24	1.8(20)	
Bromodichloromethane	53.1	2.5	50	1.01	104	66	134	50.81	4.4(20)	
cis-1,3-Dichloropropene	49.3	2.5	50	0	99	63	130	47.59	3.4(20)	
trans-1,3-Dichloropropene	50.4	2.5	50	0	101	66	131	49.02	2.7(20)	
1,1,2-Trichloroethane	46.2	2.5	50	0	92	68	130	45.99	0.5(20)	
Toluene	45.4	1.3	50	0	91	66	130	44.9	1.0(20)	
1,3-Dichloropropane	45.2	2.5	50	0	90	70	130	43.6	3.5(20)	
Dibromochloromethane	51.8	2.5	50	1.07	101	70	130	50.3	2.9(20)	
1,2-Dibromoethane (EDB)	93.8	10	100	0	94	70	130	91.16	2.9(20)	
Tetrachloroethene	48.9	2.5	50	0	98	61	134	48.24	1.4(20)	
1,1,1,2-Tetrachloroethane	47.1	2.5	50	0	94	70	130	46.3	1.7(20)	
Chlorobenzene	45.9	2.5	50	0	92	70	130	44.84	2.3(20)	
Ethylbenzene	46.4	1.3	50	0	93	68	130	45.59	1.8(20)	
m,p-Xylene	47.3	1.3	50	0	95	64	130	46.31	2.1(20)	
Bromoform	47.5	2.5	50	0	95	64	138	45.54	4.3(20)	
Styrene	46.7	2.5	50	0	93	69	130	45.47	2.8(20)	
o-Xylene	47	1.3	50	0	94	70	130	45.43	3.4(20)	
1,1,2,2-Tetrachloroethane	42.9	2.5	50	0	86	65	131	40.88	4.9(20)	
1,2,3-Trichloropropane	90	10	100	0	90	70	130	84.79	5.9(20)	
Isopropylbenzene	47.2	2.5	50	0	94	64	138	46.68	1.2(20)	
Bromobenzene	46.6	2.5	50	0	93	70	130	46.07	1.1(20)	
n-Propylbenzene	47.7	2.5	50	0	95	66	132	46.5	2.5(20)	
4-Chlorotoluene	49.4	2.5	50	0	99	70	130	48.81	1.2(20)	
2-Chlorotoluene	47.3	2.5	50	0	95	70	130	47.46	0.3(20)	
1,3,5-Trimethylbenzene	46.6	2.5	50	0	93	66	136	46.02	1.2(20)	
tert-Butylbenzene	46.2	2.5	50	0	92	65	137	45.4	1.8(20)	
1,2,4-Trimethylbenzene	47.3	2.5	50	0	95	65	137	46.99	0.6(20)	
sec-Butylbenzene	46.4	2.5	50	0	93	66	134	45.73	1.5(20)	
1,3-Dichlorobenzene	47.8	2.5	50	0	96	70	130	46.95	1.9(20)	
1,4-Dichlorobenzene	45.6	2.5	50	0	91	70	130	44.96	1.5(20)	
4-Isopropyltoluene	47.3	2.5	50	0	95	66	137	47.13	0.3(20)	
1,2-Dichlorobenzene	45.9	2.5	50	0	92	70	130	44.69	2.6(20)	
n-Butylbenzene	48.2	2.5	50	0	96	60	142	47.49	1.6(20)	
1,2-Dibromo-3-chloropropane (DBCP)	225	15	250	0	90	67	130	217.4	3.2(20)	
1,2,4-Trichlorobenzene	56.8	10	50	0	114	61	137	51.51	9.8(20)	
Naphthalene	48.2	10	50	0	96	40	167	43.8	9.5(20)	
Hexachlorobutadiene	101	10	100	0	101	61	130	98.98	1.6(20)	
1,2,3-Trichlorobenzene	58.4	10	50	0	117	51	144	51.07	13.5(20)	
Surr: 1,2-Dichloroethane-d4	48.1		50		96	70	130			
Surr: Toluene-d8	50		50		99.9	70	130			
Surr: 4-Bromofluorobenzene	49.1		50		98	70	130			



Alpha Analytical, Inc.

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

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

Date:

17-Feb-09

QC Summary Report

Work Order:

09020504

Comments:

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

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

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

Billing Information :

Battelle
505 King Avenue
Columbus, OH 43201

Client:

Battelle Memorial Institute
505 King Avenue
Columbus, OH 43201

PO : 218013

Client's COC # : 24138

QC Level : S4 = Final Rpt, MBLK, InitCal/ConCal data, LCS, MS/MSD With Surrogates

CHAIN-OF-CUSTODY RECORD

Alpha Analytical, Inc.

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

CA

WorkOrder : BMI09020504

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

Report Attention	Phone Number	Email Address
David Conner	(619) 574-4827 x	connerd@battelle.org
Betsy Cutie	(614) 424-4899 x	cutiee@battelle.org
Shane Walton	(614) 424-4117 x	walton@s@battelle.org

EDD Required : Yes

Sampled by : Client

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

Job : G005862/JPL Groundwater Monitoring

Alpha Sample ID	Client Sample ID	Collection Matrix Date	No. of Bottles Alpha Sub	TAT	Requested Tests				Sample Remarks	
					314_W	METALS_D W	VOC TIC_W	VOC_W		
BMI09020504-01A	MW-3-4	AQ 02/04/09 09:34	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	
BMI09020504-02A	MW-3-3	AQ 02/04/09 10:01	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	
BMI09020504-03A	MW-3-2	AQ 02/04/09 10:42	10	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	MS/MSD
BMI09020504-04A	DUPE-5-1Q09	AQ 02/04/09 00:00	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	
BMI09020504-05A	MW-4-3	AQ 02/04/09 07:26	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	
BMI09020504-06A	MW-4-2	AQ 02/04/09 07:46	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	
BMI09020504-07A	MW-4-1	AQ 02/04/09 08:12	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	
BMI09020504-08A	EB-09-02/04/09	AQ 02/04/09 08:02	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	
BMI09020504-09A	TB-09-02/04/09	AQ 02/04/09 00:00	1	0	10					Reno Trip Blank 1/6/09

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

Logged in by: Camryn Decker Signature: [Signature] Print Name: Elizabeth Adcox Company: Alpha Analytical, Inc. Date/Time: 2-5-09 11:20

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

Billing Information:

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



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

Samples Collected From Which State? 24138
 AZ _____ CA NV _____ WA _____
 ID _____ OR _____ OTHER _____ Page # 1 of 1

Analyses Required

Required QC Level?
 I II III IV

EDD / EDF? YES _____ NO _____

Global ID # _____

REMARKS

Client Name	Address	City, State, Zip	P.O. #	Job #	Phone #	Fax #	Report Attention	Sample Description	TAT	Field Filled	Total and type of containers ** See below	VOC (524.2)	TOTAL Cr (200.8)	ClO4 (314.0)	REMARKS
DAVID CONNER	3990 OLD TOWN AVE, C-205	San Diego CA 92110	218013	6005862	619-726-7311										
934	4/4/09	AQ	BMT09020507-01	MW-3-4							5	X	X	X	
1042				MW-3-3							5	X	X	X	MS/MSD
746				MW-3-2							10	X	X	X	DUPLICATE
812				MW-4-3							5	X	X	X	
802				MW-4-2							5	X	X	X	
				MW-4-1							1	X	X	X	
				EB-09-02/04/09											
				TB-09-02/04/09											

ADDITIONAL INSTRUCTIONS:

Signature	Print Name	Company	Date	Time
<i>[Signature]</i>	MARK WENNER	Alpha	2/5/09	1230
<i>[Signature]</i>	Elizabeth Flood	Alpha	2-5-09	1120

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



Alpha Analytical, Inc.

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

Date: 16-Feb-09

David Conner
Battelle Memorial Institute
505 King Avenue
Columbus, OH 43201
(619) 574-4827

CASE NARRATIVE

Project: G005862/JPL Groundwater Monitoring

Work Order: BMI09020652

Cooler Temp: 4 °C

Alpha's Sample ID	Client's Sample ID	Matrix
09020652-01A	MW-22-3	Aqueous
09020652-02A	MW-22-2	Aqueous
09020652-03A	MW-22-1	Aqueous
09020652-04A	MW-11-4	Aqueous
09020652-05A	MW-11-3	Aqueous
09020652-06A	MW-11-2	Aqueous
09020652-07A	MW-11-1	Aqueous
09020652-08A	EB-10-02/05/09	Aqueous
09020652-09A	TB-10-02/05/09	Aqueous

Manually Integrated Analytes

Alpha's Sample ID	Test Reference	Analyte
09020652-01A	EPA Method 314.0	Perchlorate
09020652-02A	EPA Method 314.0	Perchlorate
09020652-03A	EPA Method 314.0	Perchlorate
09020652-04A	EPA Method 314.0	Perchlorate

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

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

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

Roger Scholl

Randy Gardner

Walter Hinchman

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

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

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Alpha Analytical, Inc.

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

ANALYTICAL REPORT

Battelle Memorial Institute
505 King Avenue
Columbus, OH 43201

Attn: David Conner
Phone: (619) 574-4827
Fax: (614) 458-6641
Date Received : 02/06/09

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-11-1	Nitrite (NO2) - N	ND	0.25 mg/L	02/05/09 11:56	02/06/09 15:37
Lab ID: BMI09020652-07A	Nitrate (NO3) - N	1.1	0.25 mg/L	02/05/09 11:56	02/06/09 15:37
	Phosphate, ortho - P	ND	0.25 mg/L	02/05/09 11:56	02/06/09 15:37

ND = Not Detected

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^A
2/19/09

Report Date



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Fax: (614) 458-6641
Date Received : 02/06/09

Job#: G005862/JPL Groundwater Monitoring

Anions by IC
EPA Method 300.0 / 9056

Parameter	Concentration	Reporting Limit	Date Sampled	Date Analyzed
Client ID : MW-11-1				
Lab ID : BMI09020652-07A Chloride	26	0.50 mg/L	02/05/09	02/06/09
Sulfate (SO4)	55	0.50 mg/L	02/05/09	02/06/09

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Date Received : 02/06/09

Job#: G005862/JPL Groundwater Monitoring

Perchlorate by Ion Chromatography
EPA Method 314.0

Parameter	Concentration	Reporting Limit	Date Sampled	Date Analyzed
Client ID : MW-22-3 Lab ID : BMI09020652-01A Perchlorate	3.18	1.00 µg/L	02/05/09	02/12/09
Client ID : MW-22-2 Lab ID : BMI09020652-02A Perchlorate	2.32	1.00 µg/L	02/05/09	02/12/09
Client ID : MW-22-1 Lab ID : BMI09020652-03A Perchlorate	2.48	1.00 µg/L	02/05/09	02/12/09
Client ID : MW-11-4 Lab ID : BMI09020652-04A Perchlorate	1.86	1.00 µg/L	02/05/09	02/12/09
Client ID : MW-11-3 Lab ID : BMI09020652-05A Perchlorate	ND	1.00 µg/L	02/05/09	02/12/09
Client ID : MW-11-2 Lab ID : BMI09020652-06A Perchlorate	ND	1.00 µg/L	02/05/09	02/12/09
Client ID : MW-11-1 Lab ID : BMI09020652-07A Perchlorate	ND	1.00 µg/L	02/05/09	02/12/09
Client ID : EB-10-02/05/09 Lab ID : BMI09020652-08A Perchlorate	ND	1.00 µg/L	02/05/09	02/12/09

ND = Not Detected

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ANALYTICAL REPORT

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Attn: David Conner
Phone: (619) 574-4827
Fax: (614) 458-6641
Date Received : 02/06/09

Job#: G005862/JPL Groundwater Monitoring

Metals by ICPMS
EPA Method 200.8

Parameter	Concentration	Reporting Limit	Date Sampled	Date Analyzed
Client ID: MW-22-3 Lab ID: BMI09020652-01A Chromium (Cr)	ND	0.0050 mg/L	02/05/09	02/13/09
Client ID: MW-22-2 Lab ID: BMI09020652-02A Chromium (Cr)	ND	0.0050 mg/L	02/05/09	02/13/09
Client ID: MW-22-1 Lab ID: BMI09020652-03A Chromium (Cr)	ND	0.0050 mg/L	02/05/09	02/14/09
Client ID: MW-11-3 Lab ID: BMI09020652-05A Chromium (Cr)	ND	0.0050 mg/L	02/05/09	02/14/09
Client ID: MW-11-2 Lab ID: BMI09020652-06A Chromium (Cr)	ND	0.0050 mg/L	02/05/09	02/14/09
Client ID: MW-11-1 Lab ID: BMI09020652-07A Chromium (Cr)	ND	0.0050 mg/L	02/05/09	02/14/09
Client ID: EB-10-02/05/09 Lab ID: BMI09020652-08A Chromium (Cr)	ND	0.0050 mg/L	02/05/09	02/14/09

ND = Not Detected

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ANALYTICAL REPORT

Battelle Memorial Institute
505 King Avenue
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Job#: G005862/JPL Groundwater Monitoring

Attn: David Conner
Phone: (619) 574-4827
Fax: (614) 458-6641

Tentatively Identified Compounds - Volatile Organics by GC/MS

	Parameter	Estimated Concentration	Estimated Reporting Limit	Date Received	Date Sampled	Date Analyzed
Client ID : MW-22-3 Lab ID : BMI09020652-01A	*** None Found ***	ND	2.0 µg/L	02/06/09	02/05/09	02/11/09
Client ID : MW-22-2 Lab ID : BMI09020652-02A	*** None Found ***	ND	2.0 µg/L	02/06/09	02/05/09	02/11/09
Client ID : MW-22-1 Lab ID : BMI09020652-03A	*** None Found ***	ND	2.0 µg/L	02/06/09	02/05/09	02/11/09
Client ID : MW-11-4 Lab ID : BMI09020652-04A	Sulfur dioxide	24	2.0 µg/L	02/06/09	02/05/09	02/11/09
Client ID : MW-11-3 Lab ID : BMI09020652-05A	Sulfur dioxide	28	2.0 µg/L	02/06/09	02/05/09	02/11/09
Client ID : MW-11-2 Lab ID : BMI09020652-06A	Sulfur dioxide	21	2.0 µg/L	02/06/09	02/05/09	02/11/09
Client ID : MW-11-1 Lab ID : BMI09020652-07A	Sulfur dioxide	15	2.0 µg/L	02/06/09	02/05/09	02/11/09
Client ID : EB-10-02/05/09 Lab ID : BMI09020652-08A	*** None Found ***	ND	2.0 µg/L	02/06/09	02/05/09	02/11/09
Client ID : TB-10-02/05/09 Lab ID : BMI09020652-09A	*** None Found ***	ND	2.0 µg/L	02/06/09	02/05/09	02/11/09

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

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ANALYTICAL REPORT

Battelle Memorial Institute
505 King Avenue
Columbus, OH 43201
Job#: G005862/JPL Groundwater Monitoring

Attn: David Conner
Phone: (619) 574-4827
Fax: (614) 458-6641

Alpha Analytical Number: BMI09020652-01A
Client I.D. Number: MW-22-3

Sampled: 02/05/09
Received: 02/06/09
Analyzed: 02/11/09

Volatile Organics by GC/MS

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethene	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	10 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	ND	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	ND	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	ND	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	103	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	104	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	96	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl

Randy Gardner

Walter Hinchman

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Alpha Analytical, Inc.

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ANALYTICAL REPORT

Battelle Memorial Institute
505 King Avenue
Columbus, OH 43201
Job#: G005862/JPL Groundwater Monitoring

Attn: David Conner
Phone: (619) 574-4827
Fax: (614) 458-6641

Alpha Analytical Number: BMI09020652-02A
Client I.D. Number: MW-22-2

Sampled: 02/05/09
Received: 02/06/09
Analyzed: 02/11/09

Volatile Organics by GC/MS

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethene	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	10 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	ND	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	ND	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	ND	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	102	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	103	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	97	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

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ANALYTICAL REPORT

Battelle Memorial Institute
505 King Avenue
Columbus, OH 43201
Job#: G005862/JPL Groundwater Monitoring

Attn: David Conner
Phone: (619) 574-4827
Fax: (614) 458-6641

Alpha Analytical Number: BMI09020652-03A
Client I.D. Number: MW-22-1

Sampled: 02/05/09
Received: 02/06/09
Analyzed: 02/11/09

Volatile Organics by GC/MS

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethene	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	10 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	ND	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	ND	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	ND	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	104	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	103	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	95	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	1.3	0.50 µg/L			

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

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ANALYTICAL REPORT

Battelle Memorial Institute
505 King Avenue
Columbus, OH 43201
Job#: G005862/JPL Groundwater Monitoring

Attn: David Conner
Phone: (619) 574-4827
Fax: (614) 458-6641

Alpha Analytical Number: BMI09020652-04A
Client I.D. Number: MW-11-4

Sampled: 02/05/09
Received: 02/06/09
Analyzed: 02/11/09

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-Dichloroethane	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	1.0 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	ND	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	ND	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	ND	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	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	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 L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer
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2/19/09

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Alpha Analytical, Inc.

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ANALYTICAL REPORT

Battelle Memorial Institute
505 King Avenue
Columbus, OH 43201
Job#: G005862/JPL Groundwater Monitoring

Attn: David Conner
Phone: (619) 574-4827
Fax: (614) 458-6641

Alpha Analytical Number: BMI09020652-05A
Client I.D. Number: MW-11-3

Sampled: 02/05/09
Received: 02/06/09
Analyzed: 02/11/09

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-Dichloroethane	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	10 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	ND	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	ND	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	ND	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	105	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	103	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	94	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

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ANALYTICAL REPORT

Battelle Memorial Institute
505 King Avenue
Columbus, OH 43201
Job#: G005862/JPL Groundwater Monitoring

Attn: David Conner
Phone: (619) 574-4827
Fax: (614) 458-6641

Alpha Analytical Number: BMI09020652-06A
Client I.D. Number: MW-11-2

Sampled: 02/05/09
Received: 02/06/09
Analyzed: 02/11/09

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-Dichloroethane	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethane	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	1.0 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethane	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	ND	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	ND	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethane	ND	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	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	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 Tetrachloroethane	ND	0.50 µg/L			

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

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Alpha Analytical, Inc.

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ANALYTICAL REPORT

Battelle Memorial Institute
505 King Avenue
Columbus, OH 43201
Job#: G005862/JPL Groundwater Monitoring

Attn: David Conner
Phone: (619) 574-4827
Fax: (614) 458-6641

Alpha Analytical Number: BMI09020652-07A
Client I.D. Number: MW-11-1

Sampled: 02/05/09
Received: 02/06/09
Analyzed: 02/11/09

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-Dichloroethane	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	1.0 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	ND	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	ND	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	ND	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	107	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	102	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	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

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ANALYTICAL REPORT

Battelle Memorial Institute
505 King Avenue
Columbus, OH 43201
Job#: G005862/JPL Groundwater Monitoring

Attn: David Conner
Phone: (619) 574-4827
Fax: (614) 458-6641

Alpha Analytical Number: BMI09020652-08A
Client I.D. Number: EB-10-02/05/09

Sampled: 02/05/09
Received: 02/06/09
Analyzed: 02/11/09

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
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9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
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17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
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19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	ND	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	ND	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	101	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	103	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	96	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

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505 King Avenue
Columbus, OH 43201
Job#: G005862/JPL Groundwater Monitoring

Attn: David Conner
Phone: (619) 574-4827
Fax: (614) 458-6641

Alpha Analytical Number: BMI09020652-09A
Client I.D. Number: TB-10-02/05/09

Sampled: 02/05/09
Received: 02/06/09
Analyzed: 02/11/09

Volatile Organics by GC/MS

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethene	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	10 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	ND	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	ND	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	ND	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	102	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	102	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	97	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger 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.

2/19/09

Report Date

Page 1 of 1



Alpha Analytical, Inc.

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

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

VOC Sample Preservation Report

Work Order: BMI09020652

Project: G005862/JPL Groundwater Monitoring

Alpha's Sample ID	Client's Sample ID	Matrix	pH
09020652-01A	MW-22-3	Aqueous	2
09020652-02A	MW-22-2	Aqueous	2
09020652-03A	MW-22-1	Aqueous	2
09020652-04A	MW-11-4	Aqueous	2
09020652-05A	MW-11-3	Aqueous	2
09020652-06A	MW-11-2	Aqueous	2
09020652-07A	MW-11-1	Aqueous	2
09020652-08A	EB-10-02/05/09	Aqueous	2
09020652-09A	TB-10-02/05/09	Aqueous	2

2/19/09
Report Date



Alpha Analytical, Inc.

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Date:
16-Feb-09

QC Summary Report

Work Order:
09020652

Method Blank

Method Blank		Type	Test Code: EPA Method 300.0 / 9056							
File ID: 26		MBLK	Batch ID: 21469A					Analysis Date: 02/06/2009 14:42		
Sample ID: MB-21469	Units : mg/L		Run ID: IC_1_090206A					Prep Date: 02/06/2009		
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Nitrite (NO2) - N	ND	0.25								
Nitrate (NO3) - N	ND	0.25								
Phosphate, ortho - P	ND	0.25								

Laboratory Fortified Blank Duplicate

Laboratory Fortified Blank Duplicate		Type	Test Code: EPA Method 300.0 / 9056							
File ID: 28		LFBD	Batch ID: 21469A					Analysis Date: 02/06/2009 15:19		
Sample ID: LFBD-21469	Units : mg/L		Run ID: IC_1_090206A					Prep Date: 02/06/2009		
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Nitrite (NO2) - N	1.29	0.25	1.25		103	90	110	1.349	4.7(10)	
Nitrate (NO3) - N	1.36	0.25	1.25		109	90	110	1.385	2.0(10)	
Phosphate, ortho - P	1.32	0.25	1.25		105	90	110	1.366	3.6(10)	

Sample Matrix Spike

Sample Matrix Spike		Type	Test Code: EPA Method 300.0 / 9056							
File ID: 30		LFM	Batch ID: 21469A					Analysis Date: 02/06/2009 15:56		
Sample ID: 09020652-07ALFM	Units : mg/L		Run ID: IC_1_090206A					Prep Date: 02/06/2009		
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Nitrite (NO2) - N	1.34	0.25	1.25	0	107	80	120			
Nitrate (NO3) - N	2.39	0.25	1.25	1.059	106	80	120			
Phosphate, ortho - P	1.33	0.25	1.25	0	106	80	120			

Sample Matrix Spike Duplicate

Sample Matrix Spike Duplicate		Type	Test Code: EPA Method 300.0 / 9056							
File ID: 31		LFMD	Batch ID: 21469A					Analysis Date: 02/06/2009 16:14		
Sample ID: 09020652-07ALFMD	Units : mg/L		Run ID: IC_1_090206A					Prep Date: 02/06/2009		
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Nitrite (NO2) - N	1.42	0.25	1.25	0	114	80	120	1.338	6.1(10)	
Nitrate (NO3) - N	2.39	0.25	1.25	1.059	106	80	120	2.386	0.0(10)	
Phosphate, ortho - P	1.29	0.25	1.25	0	103	80	120	1.326	2.5(10)	

Comments:

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



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Date:
16-Feb-09

QC Summary Report

Work Order:
09020652

Method Blank

File ID: 26	Type MBLK	Test Code: EPA Method 300.0 / 9056	Batch ID: 21469B	Analysis Date: 02/06/2009 14:42						
Sample ID: MB-21469	Units : mg/L	Run ID: IC_1_090206A	Prep Date: 02/06/2009							
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sulfate (SO4)	ND	0.5								

Laboratory Fortified Blank Duplicate

File ID: 28	Type LFBD	Test Code: EPA Method 300.0 / 9056	Batch ID: 21469B	Analysis Date: 02/06/2009 15:19						
Sample ID: LFBD-21469	Units : mg/L	Run ID: IC_1_090206A	Prep Date: 02/06/2009							
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sulfate (SO4)	10.4	0.5	10		104	90	110	10.6	1.8(10)	

Sample Matrix Spike

File ID: 30	Type LFM	Test Code: EPA Method 300.0 / 9056	Batch ID: 21469B	Analysis Date: 02/06/2009 15:56						
Sample ID: 09020652-07ALFM	Units : mg/L	Run ID: IC_1_090206A	Prep Date: 02/06/2009							
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sulfate (SO4)	65.5	0.5	10		54.5	110	80	120		

Sample Matrix Spike Duplicate

File ID: 31	Type LFMD	Test Code: EPA Method 300.0 / 9056	Batch ID: 21469B	Analysis Date: 02/06/2009 16:14						
Sample ID: 09020652-07ALFMD	Units : mg/L	Run ID: IC_1_090206A	Prep Date: 02/06/2009							
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Sulfate (SO4)	66.1	0.5	10		54.5	116	80	120	65.46	1.0(10)

Comments:

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Date:
16-Feb-09

QC Summary Report

Work Order:
09020652

Method Blank

File ID: 26	Type MBLK	Test Code: EPA Method 300.0 / 9056								
Sample ID: MB-21469	Units : mg/L	Run ID: IC_1_090206A	Batch ID: 21469C							Analysis Date: 02/06/2009 14:42
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	ND	0.5								

Laboratory Fortified Blank Duplicate

File ID: 28	Type LFBD	Test Code: EPA Method 300.0 / 9056								
Sample ID: LFBD-21469	Units : mg/L	Run ID: IC_1_090206A	Batch ID: 21469C							Analysis Date: 02/06/2009 15:19
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	4.68	0.5	5		94	90	110	4.797	2.5(10)	

Sample Matrix Spike

File ID: 30	Type LFM	Test Code: EPA Method 300.0 / 9056								
Sample ID: 09020652-07ALFM	Units : mg/L	Run ID: IC_1_090206A	Batch ID: 21469C							Analysis Date: 02/06/2009 15:56
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	30.7	0.5	5	25.62	102	80	120			

Sample Matrix Spike Duplicate

File ID: 31	Type LFMD	Test Code: EPA Method 300.0 / 9056								
Sample ID: 09020652-07ALFMD	Units : mg/L	Run ID: IC_1_090206A	Batch ID: 21469C							Analysis Date: 02/06/2009 16:14
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	30.9	0.5	5	25.62	105	80	120	30.73	0.5(10)	

Comments:

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Date:
16-Feb-09

QC Summary Report

Work Order:
09020652

Method Blank

File ID: 14	Type MBLK	Test Code: EPA Method 314.0								
Sample ID: MB-21508	Units : µg/L	Run ID: IC_3_090212A	Batch ID: 21508 Analysis Date: 02/12/2009 13:29							
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	ND		1							

Laboratory Fortified Blank

File ID: 15	Type LFB	Test Code: EPA Method 314.0								
Sample ID: LFB-21508	Units : µg/L	Run ID: IC_3_090212A	Batch ID: 21508 Analysis Date: 02/12/2009 13:47							
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	24.7	2	25	99	85	115				

Sample Matrix Spike

File ID: 22	Type LFM	Test Code: EPA Method 314.0								
Sample ID: 09021103-02ALFM	Units : µg/L	Run ID: IC_3_090212A	Batch ID: 21508 Analysis Date: 02/12/2009 15:56							
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	41.6	2	25	18.04	94	80	120			

Sample Matrix Spike Duplicate

File ID: 23	Type LFMD	Test Code: EPA Method 314.0								
Sample ID: 09021103-02ALFMD	Units : µg/L	Run ID: IC_3_090212A	Batch ID: 21508 Analysis Date: 02/12/2009 16:14							
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	43.4	2	25	18.04	102	80	120	41.62	4.2(15)	

Comments:

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



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Date:
18-Feb-09

QC Summary Report

Work Order:
09020652

Method Blank

Method Blank		Type	Test Code: EPA Method 200.8							
File ID: 021309.B\091SMPL.D\			Batch ID: 21494K							
Sample ID: MB-21494	Units : mg/L		Run ID: ICP/MS_090213C							
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	ND	0.005								

Laboratory Control Spike

Laboratory Control Spike		Type	Test Code: EPA Method 200.8							
File ID: 021309.B\092_LCS.D\			Batch ID: 21494K							
Sample ID: LCS-21494	Units : mg/L		Run ID: ICP/MS_090213C							
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0557	0.005	0.05		111	80	120			

Sample Matrix Spike

Sample Matrix Spike		Type	Test Code: EPA Method 200.8							
File ID: 021309.B\096SMPL.D\			Batch ID: 21494K							
Sample ID: 09020504-03AMS	Units : mg/L		Run ID: ICP/MS_090213C							
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0489	0.005	0.05	0	98	80	120			

Sample Matrix Spike Duplicate

Sample Matrix Spike Duplicate		Type	Test Code: EPA Method 200.8							
File ID: 021309.B\097SMPL.D\			Batch ID: 21494K							
Sample ID: 09020504-03AMSD	Units : mg/L		Run ID: ICP/MS_090213C							
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0492	0.005	0.05	0	98	80	120	0.04891	0.7(20)	

Comments:

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Date:
17-Feb-09

QC Summary Report

Work Order:
09020652

Method Blank

Type **MBLK** Test Code: _____

File ID: **09021106.D**

Batch ID: **MS15W0211M**

Analysis Date: **02/11/2009 10:17**

Sample ID: **MBLK MS15W0211M**

Units : **µg/L**

Run ID: **MSD_15_090211A**

Prep Date: **02/11/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	ND	0.5								
Chloromethane	ND	1								
Vinyl chloride	ND	0.5								
Chloroethane	ND	0.5								
Bromomethane	ND	1								
Trichlorofluoromethane	ND	0.5								
1,1-Dichloroethene	ND	0.5								
Dichloromethane	ND	1								
Freon-113	ND	0.5								
trans-1,2-Dichloroethene	ND	0.5								
Methyl tert-butyl ether (MTBE)	ND	0.5								
1,1-Dichloroethane	ND	0.5								
2-Butanone (MEK)	ND	10								
cis-1,2-Dichloroethene	ND	0.5								
Bromochloromethane	ND	0.5								
Chloroform	ND	0.5								
2,2-Dichloropropane	ND	0.5								
1,2-Dichloroethane	ND	0.5								
1,1,1-Trichloroethane	ND	0.5								
1,1-Dichloropropene	ND	0.5								
Carbon tetrachloride	ND	0.5								
Benzene	ND	0.5								
Dibromomethane	ND	0.5								
1,2-Dichloropropane	ND	0.5								
Trichloroethene	ND	0.5								
Bromodichloromethane	ND	0.5								
4-Methyl-2-pentanone (MIBK)	ND	2.5								
cis-1,3-Dichloropropene	ND	0.5								
trans-1,3-Dichloropropene	ND	0.5								
1,1,2-Trichloroethane	ND	0.5								
Toluene	ND	0.5								
1,3-Dichloropropane	ND	0.5								
Dibromochloromethane	ND	0.5								
1,2-Dibromoethane (EDB)	ND	1								
Tetrachloroethene	ND	0.5								
1,1,1,2-Tetrachloroethane	ND	0.5								
Chlorobenzene	ND	0.5								
Ethylbenzene	ND	0.5								
m,p-Xylene	ND	0.5								
Bromoform	ND	0.5								
Styrene	ND	0.5								
o-Xylene	ND	0.5								
1,1,2,2-Tetrachloroethane	ND	0.5								
1,2,3-Trichloropropane	ND	1								
Isopropylbenzene	ND	0.5								
Bromobenzene	ND	0.5								
n-Propylbenzene	ND	0.5								
4-Chlorotoluene	ND	0.5								
2-Chlorotoluene	ND	0.5								
1,3,5-Trimethylbenzene	ND	0.5								
tert-Butylbenzene	ND	0.5								
1,2,4-Trimethylbenzene	ND	0.5								
sec-Butylbenzene	ND	0.5								
1,3-Dichlorobenzene	ND	0.5								
1,4-Dichlorobenzene	ND	0.5								
4-Isopropyltoluene	ND	0.5								
1,2-Dichlorobenzene	ND	0.5								
n-Butylbenzene	ND	0.5								
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5								
1,2,4-Trichlorobenzene	ND	1								
Naphthalene	ND	1								
Hexachlorobutadiene	ND	1								
1,2,3-Trichlorobenzene	ND	1								
Surr: 1,2-Dichloroethane-d4	10.1		10		101	70	130			
Surr: Toluene-d8	10.2		10		102	70	130			



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Date:

17-Feb-09

QC Summary Report

Work Order:

09020652

Surr: 4-Bromofluorobenzene 9.58 10 96 70 130

Laboratory Control Spike

Type LCS

Test Code:

File ID: 09021104.D

Batch ID: MS15W0211M

Analysis Date: 02/11/2009 09:13

Sample ID: LCS MS15W0211M

Units: µg/L

Run ID: MSD_15_090211A

Prep Date: 02/11/2009

Analyte	Result	PQL	SpkVal	SpkReVal	%REC	LCL(ME)	UCL(ME)	RPDRReVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	12.2	1	10		122	70	130			
Chloromethane	10	2	10		100	70	130			
Vinyl chloride	10.9	1	10		109	70	130			
Chloroethane	9.66	1	10		97	70	130			
Bromomethane	9.59	2	10		96	70	130			
Trichlorofluoromethane	11.1	1	10		111	70	130			
1,1-Dichloroethene	10.9	1	10		109	70	130			
Dichloromethane	10.1	2	10		101	70	130			
trans-1,2-Dichloroethene	11	1	10		110	70	130			
Methyl tert-butyl ether (MTBE)	10.6	0.5	10		106	62	136			
1,1-Dichloroethane	10.7	1	10		107	70	130			
cis-1,2-Dichloroethene	11.2	1	10		112	70	130			
Bromochloromethane	11.4	1	10		114	70	130			
Chloroform	9.97	1	10		99.7	70	130			
2,2-Dichloropropane	9.18	1	10		92	70	130			
1,2-Dichloroethane	10.3	1	10		103	70	130			
1,1,1-Trichloroethane	10.6	1	10		106	70	130			
1,1-Dichloropropene	11.2	1	10		112	70	130			
Carbon tetrachloride	10.3	1	10		103	70	130			
Benzene	10.1	0.5	10		101	70	130			
Dibromomethane	11.1	1	10		111	70	130			
1,2-Dichloropropane	10.6	1	10		106	70	130			
Trichloroethene	11.2	1	10		112	70	130			
Bromodichloromethane	10.7	1	10		107	70	130			
cis-1,3-Dichloropropene	11	1	10		110	70	130			
trans-1,3-Dichloropropene	10.9	1	10		109	70	130			
1,1,2-Trichloroethane	10.2	1	10		102	70	130			
Toluene	10.4	0.5	10		104	70	130			
1,3-Dichloropropane	10.2	1	10		102	70	130			
Dibromochloromethane	11	1	10		110	70	130			
1,2-Dibromoethane (EDB)	20.8	2	20		104	70	130			
Tetrachloroethene	11.1	1	10		111	70	130			
1,1,1,2-Tetrachloroethane	10.6	1	10		106	70	130			
Chlorobenzene	10.3	1	10		103	70	130			
Ethylbenzene	10.5	0.5	10		105	70	130			
m,p-Xylene	10.9	0.5	10		109	70	130			
Bromoform	10.3	1	10		103	70	130			
Styrene	10.6	1	10		106	70	130			
o-Xylene	10.5	0.5	10		105	70	130			
1,1,2,2-Tetrachloroethane	9.26	1	10		93	70	130			
1,2,3-Trichloropropane	19.5	2	20		98	70	130			
Isopropylbenzene	10.4	1	10		104	70	130			
Bromobenzene	10.3	1	10		103	70	130			
n-Propylbenzene	10.6	1	10		106	70	130			
4-Chlorotoluene	10.7	1	10		107	70	130			
2-Chlorotoluene	10.5	1	10		105	70	130			
1,3,5-Trimethylbenzene	10.2	1	10		102	70	130			
tert-Butylbenzene	9.98	1	10		99.8	70	130			
1,2,4-Trimethylbenzene	10.5	1	10		105	70	130			
sec-Butylbenzene	10	1	10		100	70	130			
1,3-Dichlorobenzene	10.2	1	10		102	70	130			
1,4-Dichlorobenzene	9.76	1	10		98	70	130			
4-Isopropyltoluene	10.3	1	10		103	70	130			
1,2-Dichlorobenzene	9.86	1	10		99	70	130			
n-Butylbenzene	10.2	1	10		102	70	130			
1,2-Dibromo-3-chloropropane (DBCP)	47	3	50		94	70	130			
1,2,4-Trichlorobenzene	10.9	2	10		109	70	130			
Naphthalene	9.85	2	10		99	70	130			
Hexachlorobutadiene	20	2	20		99.9	70	130			
1,2,3-Trichlorobenzene	10.8	2	10		108	70	130			
Surr: 1,2-Dichloroethane-d4	9.14		10		91	70	130			
Surr: Toluene-d8	10.3		10		103	70	130			
Surr: 4-Bromofluorobenzene	9.97		10		99.7	70	130			



Alpha Analytical, Inc.

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

Date:
17-Feb-09

QC Summary Report

Work Order:
09020652

Sample Matrix Spike

File ID: 09021107.D

Type MS

Test Code:

Batch ID: MS15W0211M

Analysis Date: 02/11/2009 10:39

Sample ID: 09021004-02AMS

Units: µg/L

Run ID: MSD_15_090211A

Prep Date: 02/11/2009

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	40	2.5	50	0	80	13	167			
Chloromethane	38.1	10	50	0	76	28	145			
Vinyl chloride	46.6	2.5	50	0	93	43	134			
Chloroethane	44.6	2.5	50	0	84	39	154			
Bromomethane	45	10	50	0	90	19	176			
Trichlorofluoromethane	49	2.5	50	0	98	34	160			
1,1-Dichloroethene	45.8	2.5	50	0	92	60	130			
Dichloromethane	44.5	10	50	0	89	68	130			
trans-1,2-Dichloroethene	50.2	2.5	50	0	100	63	130			
Methyl tert-butyl ether (MTBE)	45.9	1.3	50	0	92	56	141			
1,1-Dichloroethane	47.8	2.5	50	0	96	61	130			
cis-1,2-Dichloroethene	49.6	2.5	50	0	99	70	130			
Bromochloromethane	50.8	2.5	50	0	102	70	130			
Chloroform	44.9	2.5	50	0	90	67	130			
2,2-Dichloropropane	44.2	2.5	50	0	88	30	152			
1,2-Dichloroethane	46.3	2.5	50	0	93	60	135			
1,1,1-Trichloroethane	49.4	2.5	50	0	99	59	137			
1,1-Dichloropropene	49.6	2.5	50	0	99	63	130			
Carbon tetrachloride	48.1	2.5	50	0	96	50	147			
Benzene	44.4	1.3	50	0	89	67	130			
Dibromomethane	49.5	2.5	50	0	99	69	133			
1,2-Dichloropropane	45.8	2.5	50	0	92	69	130			
Trichloroethene	51	2.5	50	0	102	69	130			
Bromodichloromethane	47.6	2.5	50	0	95	66	134			
cis-1,3-Dichloropropene	46.3	2.5	50	0	93	63	130			
trans-1,3-Dichloropropene	44.3	2.5	50	0	89	66	131			
1,1,2-Trichloroethane	43	2.5	50	0	86	68	130			
Toluene	45.4	1.3	50	0	91	66	130			
1,3-Dichloropropane	42.4	2.5	50	0	85	70	130			
Dibromochloromethane	46.4	2.5	50	0	93	70	130			
1,2-Dibromoethane (EDB)	89	10	100	0	89	70	130			
Tetrachloroethene	49.6	2.5	50	0	99	61	134			
1,1,1,2-Tetrachloroethane	46.5	2.5	50	0	93	70	130			
Chlorobenzene	45.2	2.5	50	0	90	70	130			
Ethylbenzene	46.2	1.3	50	0	92	68	130			
m,p-Xylene	47.1	1.3	50	0	94	64	130			
Bromoform	42.6	2.5	50	0	85	64	138			
Styrene	45.7	2.5	50	0	91	69	130			
o-Xylene	45.7	1.3	50	0	91	70	130			
1,1,2,2-Tetrachloroethane	39	2.5	50	0	78	65	131			
1,2,3-Trichloropropane	84.2	10	100	0	84	70	130			
Isopropylbenzene	45.9	2.5	50	0	92	64	138			
Bromobenzene	45	2.5	50	0	90	70	130			
n-Propylbenzene	46.5	2.5	50	0	93	66	132			
4-Chlorotoluene	46.8	2.5	50	0	94	70	130			
2-Chlorotoluene	46.5	2.5	50	0	93	70	130			
1,3,5-Trimethylbenzene	45.1	2.5	50	0	90	66	136			
tert-Butylbenzene	44.8	2.5	50	0	90	65	137			
1,2,4-Trimethylbenzene	46.2	2.5	50	0	92	65	137			
sec-Butylbenzene	45.5	2.5	50	0	91	66	134			
1,3-Dichlorobenzene	45.4	2.5	50	0	91	70	130			
1,4-Dichlorobenzene	43.3	2.5	50	0	87	70	130			
4-Isopropyltoluene	46.1	2.5	50	0	92	66	137			
1,2-Dichlorobenzene	43.4	2.5	50	0	87	70	130			
n-Butylbenzene	45.9	2.5	50	0	92	60	142			
1,2-Dibromo-3-chloropropane (DBCP)	204	15	250	0	82	67	130			
1,2,4-Trichlorobenzene	47.4	10	50	0	95	61	137			
Naphthalene	40.4	10	50	0	81	40	167			
Hexachlorobutadiene	94.1	10	100	0	94	61	130			
1,2,3-Trichlorobenzene	46.4	10	50	0	93	51	144			
Surr: 1,2-Dichloroethane-d4	46.3		50		93	70	130			
Surr: Toluene-d8	50.9		50		102	70	130			
Surr: 4-Bromofluorobenzene	48.9		50		98	70	130			



Alpha Analytical, Inc.

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

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

Date:
17-Feb-09

QC Summary Report

Work Order:
09020652

Sample Matrix Spike Duplicate

Type **MSD**

Test Code: _____

File ID: **09021108.D**

Batch ID: **MS15W0211M**

Analysis Date: **02/11/2009 11:02**

Sample ID: **09021004-02AMSD**

Units : **µg/L**

Run ID: **MSD_15_090211A**

Prep Date: **02/11/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	43.1	2.5	50	0	86	13	167	40	7.5(20)	
Chloromethane	39.8	10	50	0	80	28	145	38.06	4.5(20)	
Vinyl chloride	48.9	2.5	50	0	98	43	134	46.62	4.8(20)	
Chloroethane	46.9	2.5	50	0	89	39	154	44.62	5.0(20)	
Bromomethane	51.8	10	50	0	104	19	176	45.04	13.9(20)	
Trichlorofluoromethane	55.4	2.5	50	0	111	34	160	49	12.2(20)	
1,1-Dichloroethene	49	2.5	50	0	98	60	130	45.84	6.6(20)	
Dichloromethane	46	10	50	0	92	68	130	44.51	3.3(20)	
trans-1,2-Dichloroethene	51.1	2.5	50	0	102	63	130	50.16	1.9(20)	
Methyl tert-butyl ether (MTBE)	47.3	1.3	50	0	95	56	141	45.86	3.1(20)	
1,1-Dichloroethane	49.5	2.5	50	0	99	61	130	47.84	3.3(20)	
cis-1,2-Dichloroethene	50.7	2.5	50	0	101	70	130	49.6	2.2(20)	
Bromochloromethane	52.9	2.5	50	0	106	70	130	50.79	4.1(20)	
Chloroform	46	2.5	50	0	92	67	130	44.93	2.4(20)	
2,2-Dichloropropane	45.5	2.5	50	0	91	30	152	44.15	3.0(20)	
1,2-Dichloroethane	48.2	2.5	50	0	96	60	135	46.32	4.0(20)	
1,1,1-Trichloroethane	51.3	2.5	50	0	103	59	137	49.37	3.9(20)	
1,1-Dichloropropene	51.6	2.5	50	0	103	63	130	49.64	3.8(20)	
Carbon tetrachloride	50.7	2.5	50	0	101	50	147	48.05	5.3(20)	
Benzene	46.1	1.3	50	0	92	67	130	44.39	3.8(20)	
Dibromomethane	49.8	2.5	50	0	99.6	69	133	49.46	0.7(20)	
1,2-Dichloropropane	47.2	2.5	50	0	94	69	130	45.76	3.2(20)	
Trichloroethene	52.5	2.5	50	0	105	69	130	51.04	2.8(20)	
Bromodichloromethane	49.2	2.5	50	0	98	66	134	47.64	3.3(20)	
cis-1,3-Dichloropropene	47.9	2.5	50	0	96	63	130	46.25	3.6(20)	
trans-1,3-Dichloropropene	47.7	2.5	50	0	95	66	131	44.32	7.3(20)	
1,1,2-Trichloroethane	44.5	2.5	50	0	89	68	130	42.95	3.6(20)	
Toluene	46.3	1.3	50	0	93	66	130	45.4	2.1(20)	
1,3-Dichloropropane	43.1	2.5	50	0	86	70	130	42.44	1.6(20)	
Dibromochloromethane	48.4	2.5	50	0	97	70	130	46.42	4.2(20)	
1,2-Dibromoethane (EDB)	91.3	10	100	0	91	70	130	88.96	2.6(20)	
Tetrachloroethene	50.8	2.5	50	0	102	61	134	49.63	2.4(20)	
1,1,1,2-Tetrachloroethane	47.8	2.5	50	0	96	70	130	46.45	2.9(20)	
Chlorobenzene	46.1	2.5	50	0	92	70	130	45.23	1.8(20)	
Ethylbenzene	47.2	1.3	50	0	94	68	130	46.23	2.0(20)	
m,p-Xylene	47.9	1.3	50	0	96	64	130	47.12	1.7(20)	
Bromoform	45.6	2.5	50	0	91	64	138	42.6	6.7(20)	
Styrene	47.1	2.5	50	0	94	69	130	45.74	2.9(20)	
o-Xylene	47.1	1.3	50	0	94	70	130	45.65	3.0(20)	
1,1,2,2-Tetrachloroethane	40.4	2.5	50	0	81	65	131	39.01	3.5(20)	
1,2,3-Trichloropropane	83.9	10	100	0	84	70	130	84.23	0.3(20)	
Isopropylbenzene	48.1	2.5	50	0	96	64	138	45.88	4.8(20)	
Bromobenzene	46.6	2.5	50	0	93	70	130	45.02	3.4(20)	
n-Propylbenzene	48.7	2.5	50	0	97	66	132	46.51	4.6(20)	
4-Chlorotoluene	49.3	2.5	50	0	99	70	130	46.78	5.3(20)	
2-Chlorotoluene	48.8	2.5	50	0	98	70	130	46.49	4.9(20)	
1,3,5-Trimethylbenzene	47.5	2.5	50	0	95	66	136	45.13	5.0(20)	
tert-Butylbenzene	47.2	2.5	50	0	94	65	137	44.77	5.4(20)	
1,2,4-Trimethylbenzene	48.5	2.5	50	0	97	65	137	46.22	4.9(20)	
sec-Butylbenzene	47.8	2.5	50	0	96	66	134	45.5	5.0(20)	
1,3-Dichlorobenzene	47.8	2.5	50	0	96	70	130	45.38	5.2(20)	
1,4-Dichlorobenzene	45.5	2.5	50	0	91	70	130	43.34	4.9(20)	
4-Isopropyltoluene	48.6	2.5	50	0	97	66	137	46.06	5.5(20)	
1,2-Dichlorobenzene	45.7	2.5	50	0	91	70	130	43.42	5.1(20)	
n-Butylbenzene	49.2	2.5	50	0	98	60	142	45.86	7.0(20)	
1,2-Dibromo-3-chloropropane (DBCP)	208	15	250	0	83	67	130	203.8	2.1(20)	
1,2,4-Trichlorobenzene	53.4	10	50	0	107	61	137	47.38	11.9(20)	
Naphthalene	42.5	10	50	0	85	40	167	40.37	5.1(20)	
Hexachlorobutadiene	102	10	100	0	102	61	130	94.13	7.6(20)	
1,2,3-Trichlorobenzene	52.3	10	50	0	105	51	144	46.41	11.9(20)	
Surr: 1,2-Dichloroethane-d4	46.2		50		92	70	130			
Surr: Toluene-d8	50.8		50		102	70	130			
Surr: 4-Bromofluorobenzene	49.1		50		98	70	130			



Alpha Analytical, Inc.

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

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

Date:

17-Feb-09

QC Summary Report

Work Order:

09020652

Comments:

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

Billing Information :
 Battelle
 505 King Avenue
 Columbus, OH 43201

CHAIN-OF-CUSTODY RECORD

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

Client:
 Battelle Memorial Institute
 505 King Avenue
 Columbus, OH 43201

Report Attention **Phone Number** **E-Mail Address**
 David Conner (619) 574-4827 x connerd@battelle.org
 Betsy Cutie (614) 424-4899 x cutiee@batelle.org
 Shane Walton (614) 424-4117 x waltons@battelle.org

CA

WorkOrder : BMI09020652
Report Due By : 5:00 PM On : 20-Feb-09

EDD Required : Yes

Sampled by : Client


PO : 218013 **Cooler Temp** **Samples Received** **Date Printed**
 Client's COC #: 24137 4 °C 06-Feb-09 06-Feb-09

Job : G005862/JPL Groundwater Monitoring

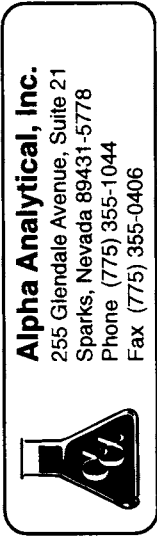
QC Level : S4 = Final Rpt, MBLK, InitCal/ConCal data, LCS, MS/MSD With Surrogates

Alpha Sample ID	Client Sample ID	Matrix	Collection Date	No. of Bottles	Alpha	Sub	TAT	Requested Tests				Sample Remarks	
								300_0(A)_W	300_0(B)_W	300_0(C)_W	314_W		
BMI09020652-01A	MW-22-3	AQ	02/05/09 07:58	5	0	10		Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	VOC by 524 Criteria	
BMI09020652-02A	MW-22-2	AQ	02/05/09 08:25	5	0	10		Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	VOC by 524 Criteria	
BMI09020652-03A	MW-22-1	AQ	02/05/09 08:54	5	0	10		Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	VOC by 524 Criteria	
BMI09020652-04A	MW-11-4	AQ	02/05/09 10:16	4	0	10		Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	VOC by 524 Criteria	
BMI09020652-05A	MW-11-3	AQ	02/05/09 10:43	5	0	10		Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	VOC by 524 Criteria	
BMI09020652-06A	MW-11-2	AQ	02/05/09 11:08	5	0	10		Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	VOC by 524 Criteria	
BMI09020652-07A	MW-11-1	AQ	02/05/09 11:56	5	0	10		Perchlorate	Cr	NO2, NO3, PO4, Cl, SO4	NO2, NO3, PO4, Cl, SO4	VOC by 524 Criteria	
BMI09020652-08A	EB-10-02/05/09	AQ	02/05/09 08:42	5	0	10		Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	VOC by 524 Criteria	Equipment Blank
BMI09020652-09A	TB-10-02/05/09	AQ	02/05/09 00:00	1	0	10		Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria	VOC by 524 Criteria	Reno 8260 TB, 1/6/09.

Comments: No security seals. Frozen ice. Temp Blank #8704 received @ 4°. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). Level IV QC. Perchlorate RL of 1.0 ug/L. .

Logged in by:  **Signature** **Print Name** **Company** **Date/Time**
 Tara Johnson Tara Johnson Alpha Analytical, Inc. 2/6/09 1020

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



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

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

Time Sampled	Date Sampled	Matrix* See Key Below	Lab ID Number (Office Use Only)	Sampled by	Report Attention	Sample Description	TAT	Field Filtered	Total and type of containers ** See below	Analyses Required				Global ID #	REMARKS
										Required QC Level?	I	II	III		
0753	7/5/09	AQ	BMTDA0205201	DAVID CONNER		MW-22-3			5	X	X	X	X		
0825			-02			MW-22-2			1	X	X	X	X		
0854			-03			MW-22-1			4	X	X	X	X		
1016			-04			MW-11-4			5	X	X	X	X		
1043			-05			MW-11-3			1	X	X	X	X		
1109			-06			MW-11-2			5	X	X	X	X		
1156			-07			MW-11-1			1	X	X	X	X		
0842			-08			EB-10-02/05/09			5	X	X	X	X		EQUIPMENT BLANK
			-09			TB-10-02/05/09			1	X	X	X	X		TYP BLANK

ADDITIONAL INSTRUCTIONS:

Relinquished by	Signature	Print Name	Company	Date	Time
Received by	<i>[Signature]</i>	CHASE BRADON	INSIG-147 CCCI	07/05/09	1330
Relinquished by	<i>[Signature]</i>	Tara JICKINSON	Aloma	2-16-09	1020
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-Teclor B-Brass P-Plastic OT-Other
 NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this coc. The liability of the laboratory is limited to the amount paid for the report.



Alpha Analytical, Inc.

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

Date: 16-Feb-09

David Conner
Battelle Memorial Institute
505 King Avenue
Columbus, OH 43201
(619) 574-4827

CASE NARRATIVE

Project: G005862/JPL Groundwater Monitoring

Work Order: BMI09021004

Cooler Temp: 4 °C

Alpha's Sample ID	Client's Sample ID	Matrix
09021004-01A	MW-23-4	Aqueous
09021004-02A	MW-23-3	Aqueous
09021004-03A	MW-23-2	Aqueous
09021004-04A	MW-23-1	Aqueous
09021004-05A	EB-11-02/09/09	Aqueous
09021004-06A	TB-11-02/09/09	Aqueous
09021004-07A	SB-01-1Q09	Aqueous

Manually Integrated Analytes

Alpha's Sample ID	Test Reference	Analyte
09021004-03A	EPA Method 314.0	Perchlorate

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

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

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

Roger Scholl

Randy Gardner

Walter Hinchman

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

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

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Alpha Analytical, Inc.

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

ANALYTICAL REPORT

Battelle Memorial Institute
505 King Avenue
Columbus, OH 43201

Attn: David Conner
Phone: (619) 574-4827
Fax: (614) 458-6641
Date Received : 02/10/09

Job#: G005862/JPL Groundwater Monitoring

Perchlorate by Ion Chromatography
EPA Method 314.0

Parameter	Concentration	Reporting Limit	Date Sampled	Date Analyzed
Client ID: MW-23-3 Lab ID: BMI09021004-02A Perchlorate	ND	1.00 µg/L	02/09/09	02/12/09
Client ID: MW-23-2 Lab ID: BMI09021004-03A Perchlorate	4.18	1.00 µg/L	02/09/09	02/12/09
Client ID: MW-23-1 Lab ID: BMI09021004-04A Perchlorate	2.29	1.00 µg/L	02/09/09	02/12/09
Client ID: EB-11-02/09/09 Lab ID: BMI09021004-05A Perchlorate	ND	1.00 µg/L	02/09/09	02/12/09
Client ID: SB-01-1Q09 Lab ID: BMI09021004-07A Perchlorate	ND	1.00 µg/L	02/09/09	02/12/09

ND = Not Detected

Roger Scholl *Randy Gardner* *Walter Hinchman*

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Report Date



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ANALYTICAL REPORT

Battelle Memorial Institute
505 King Avenue
Columbus, OH 43201

Attn: David Conner
Phone: (619) 574-4827
Fax: (614) 458-6641
Date Received : 02/10/09

Job#: G005862/JPL Groundwater Monitoring

Metals by ICPMS
EPA Method 200.8


Parameter	Concentration	Reporting Limit	Date Sampled	Date Analyzed
Client ID: MW-23-4 Lab ID: BMI09021004-01A Chromium (Cr)	ND	0.0050 mg/L	02/09/09	02/14/09
Client ID: MW-23-3 Lab ID: BMI09021004-02A Chromium (Cr)	ND	0.0050 mg/L	02/09/09	02/14/09
Client ID: MW-23-2 Lab ID: BMI09021004-03A Chromium (Cr)	ND	0.0050 mg/L	02/09/09	02/14/09
Client ID: MW-23-1 Lab ID: BMI09021004-04A Chromium (Cr)	ND	0.0050 mg/L	02/09/09	02/14/09
Client ID: EB-11-02/09/09 Lab ID: BMI09021004-05A Chromium (Cr)	ND	0.0050 mg/L	02/09/09	02/14/09
Client ID: SB-01-1Q09 Lab ID: BMI09021004-07A Chromium (Cr)	ND	0.0050 mg/L	02/09/09	02/14/09

ND = Not Detected

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ANALYTICAL REPORT

Battelle Memorial Institute
505 King Avenue
Columbus, OH 43201
Job#: G005862/JPL Groundwater Monitoring

Attn: David Conner
Phone: (619) 574-4827
Fax: (614) 458-6641

Tentatively Identified Compounds - Volatile Organics by GC/MS

	Parameter	Estimated Concentration	Estimated Reporting Limit	Date Received	Date Sampled	Date Analyzed
Client ID : MW-23-3 Lab ID : BMI09021004-02A	Sulfur dioxide	10	2.0 µg/L	02/10/09	02/09/09	02/11/09
Client ID : MW-23-2 Lab ID : BMI09021004-03A	*** None Found ***	ND	2.0 µg/L	02/10/09	02/09/09	02/11/09
Client ID : MW-23-1 Lab ID : BMI09021004-04A	*** None Found ***	ND	2.0 µg/L	02/10/09	02/09/09	02/11/09
Client ID : EB-11-02/09/09 Lab ID : BMI09021004-05A	*** None Found ***	ND	2.0 µg/L	02/10/09	02/09/09	02/11/09
Client ID : TB-11-02/09/09 Lab ID : BMI09021004-06A	*** None Found ***	ND	2.0 µg/L	02/10/09	02/09/09	02/11/09
Client ID : SB-01-1Q09 Lab ID : BMI09021004-07A	2-Methyl-1-propene	6.1	2.0 µg/L	02/10/09	02/09/09	02/11/09

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

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2/23/09

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ANALYTICAL REPORT

Battelle Memorial Institute
505 King Avenue
Columbus, OH 43201
Job#: G005862/JPL Groundwater Monitoring

Attn: David Conner
Phone: (619) 574-4827
Fax: (614) 458-6641

Alpha Analytical Number: BMI09021004-02A
Client I.D. Number: MW-23-3

Sampled: 02/09/09
Received: 02/10/09
Analyzed: 02/11/09

Volatile Organics by GC/MS

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethene	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	10 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	ND	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	ND	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	ND	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	102	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	103	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	96	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

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Alpha Analytical, Inc.

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

ANALYTICAL REPORT

Battelle Memorial Institute
505 King Avenue
Columbus, OH 43201
Job#: G005862/JPL Groundwater Monitoring

Attn: David Conner
Phone: (619) 574-4827
Fax: (614) 458-6641

Alpha Analytical Number: BMI09021004-03A
Client I.D. Number: MW-23-2

Sampled: 02/09/09
Received: 02/10/09
Analyzed: 02/11/09

Volatile Organics by GC/MS

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethene	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	10 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	ND	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	ND	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	0.83	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	99	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	105	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	94	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

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ANALYTICAL REPORT

Battelle Memorial Institute
505 King Avenue
Columbus, OH 43201

Attn: David Conner
Phone: (619) 574-4827
Fax: (614) 458-6641

Job#: G005862/JPL Groundwater Monitoring

Alpha Analytical Number: BMI09021004-04A
Client I.D. Number: MW-23-1

Sampled: 02/09/09
Received: 02/10/09
Analyzed: 02/11/09

Volatile Organics by GC/MS

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethene	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	10 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	ND	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	ND	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	1.5	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	103	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	103	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	93	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	0.53	0.50 µg/L			

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

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ANALYTICAL REPORT

Battelle Memorial Institute
505 King Avenue
Columbus, OH 43201
Job#: G005862/JPL Groundwater Monitoring

Attn: David Conner
Phone: (619) 574-4827
Fax: (614) 458-6641

Alpha Analytical Number: BMI09021004-05A
Client I.D. Number: EB-11-02/09/09

Sampled: 02/09/09
Received: 02/10/09
Analyzed: 02/11/09

Volatile Organics by GC/MS

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethene	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	10 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	ND	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	ND	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	ND	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	103	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	102	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	97	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

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2/13/09

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Alpha Analytical, Inc.

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

ANALYTICAL REPORT

Battelle Memorial Institute
505 King Avenue
Columbus, OH 43201
Job#: G005862/JPL Groundwater Monitoring

Attn: David Conner
Phone: (619) 574-4827
Fax: (614) 458-6641

Alpha Analytical Number: BMI09021004-06A
Client I.D. Number: TB-11-02/09/09

Sampled: 02/09/09
Received: 02/10/09
Analyzed: 02/11/09

Volatile Organics by GC/MS

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	0.50 µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50 µg/L
2 Chloromethane	ND	1.0 µg/L	37 Chlorobenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethene	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	10 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	ND	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	ND	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	ND	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	101	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	103	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	95	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

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2/23/09

Report Date

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Alpha Analytical, Inc.

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ANALYTICAL REPORT

Battelle Memorial Institute
505 King Avenue
Columbus, OH 43201
Job#: G005862/JPL Groundwater Monitoring

Attn: David Conner
Phone: (619) 574-4827
Fax: (614) 458-6641

Alpha Analytical Number: BMI09021004-07A
Client I.D. Number: SB-01-1Q09

Sampled: 02/09/09
Received: 02/10/09
Analyzed: 02/11/09

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
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3 Vinyl chloride	ND	0.50 µg/L	38 Ethylbenzene	ND	0.50 µg/L
4 Chloroethane	ND	0.50 µg/L	39 m,p-Xylene	ND	0.50 µg/L
5 Bromomethane	ND	1.0 µg/L	40 Bromoform	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	0.50 µg/L	41 Styrene	ND	0.50 µg/L
7 1,1-Dichloroethane	ND	0.50 µg/L	42 o-Xylene	ND	0.50 µg/L
8 Dichloromethane	ND	1.0 µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50 µg/L
9 Freon-113	ND	0.50 µg/L	44 1,2,3-Trichloropropane	ND	1.0 µg/L
10 trans-1,2-Dichloroethene	ND	0.50 µg/L	45 Isopropylbenzene	ND	0.50 µg/L
11 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	46 Bromobenzene	ND	0.50 µg/L
12 1,1-Dichloroethane	ND	0.50 µg/L	47 n-Propylbenzene	ND	0.50 µg/L
13 2-Butanone (MEK)	ND	10 µg/L	48 4-Chlorotoluene	ND	0.50 µg/L
14 cis-1,2-Dichloroethene	ND	0.50 µg/L	49 2-Chlorotoluene	ND	0.50 µg/L
15 Bromochloromethane	ND	0.50 µg/L	50 1,3,5-Trimethylbenzene	ND	0.50 µg/L
16 Chloroform	ND	0.50 µg/L	51 tert-Butylbenzene	ND	0.50 µg/L
17 2,2-Dichloropropane	ND	0.50 µg/L	52 1,2,4-Trimethylbenzene	ND	0.50 µg/L
18 1,2-Dichloroethane	ND	0.50 µg/L	53 sec-Butylbenzene	ND	0.50 µg/L
19 1,1,1-Trichloroethane	ND	0.50 µg/L	54 1,3-Dichlorobenzene	ND	0.50 µg/L
20 1,1-Dichloropropene	ND	0.50 µg/L	55 1,4-Dichlorobenzene	ND	0.50 µg/L
21 Carbon tetrachloride	ND	0.50 µg/L	56 4-Isopropyltoluene	ND	0.50 µg/L
22 Benzene	ND	0.50 µg/L	57 1,2-Dichlorobenzene	ND	0.50 µg/L
23 Dibromomethane	ND	0.50 µg/L	58 n-Butylbenzene	ND	0.50 µg/L
24 1,2-Dichloropropane	ND	0.50 µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5 µg/L
25 Trichloroethene	ND	0.50 µg/L	60 1,2,4-Trichlorobenzene	ND	1.0 µg/L
26 Bromodichloromethane	ND	0.50 µg/L	61 Naphthalene	ND	1.0 µg/L
27 4-Methyl-2-pentanone (MIBK)	ND	2.5 µg/L	62 Hexachlorobutadiene	ND	1.0 µg/L
28 cis-1,3-Dichloropropene	ND	0.50 µg/L	63 1,2,3-Trichlorobenzene	ND	1.0 µg/L
29 trans-1,3-Dichloropropene	ND	0.50 µg/L	64 Surr: 1,2-Dichloroethane-d4	104	(70-130) %REC
30 1,1,2-Trichloroethane	ND	0.50 µg/L	65 Surr: Toluene-d8	103	(70-130) %REC
31 Toluene	ND	0.50 µg/L	66 Surr: 4-Bromofluorobenzene	94	(70-130) %REC
32 1,3-Dichloropropane	ND	0.50 µg/L			
33 Dibromochloromethane	ND	0.50 µg/L			
34 1,2-Dibromoethane (EDB)	ND	1.0 µg/L			
35 Tetrachloroethene	ND	0.50 µg/L			

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

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2/13/09

Report Date

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Alpha Analytical, Inc.

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

VOC Sample Preservation Report

Work Order: BMI09021004

Project: G005862/JPL Groundwater Monitoring

Alpha's Sample ID	Client's Sample ID	Matrix	pH
09021004-02A	MW-23-3	Aqueous	2
09021004-03A	MW-23-2	Aqueous	2
09021004-04A	MW-23-1	Aqueous	2
09021004-05A	EB-11-02/09/09	Aqueous	2
09021004-06A	TB-11-02/09/09	Aqueous	2
09021004-07A	SB-01-1Q09	Aqueous	2

2/23/09
Report Date



Alpha Analytical, Inc.

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

Date:
16-Feb-09

QC Summary Report

Work Order:
09021004

Method Blank

Method Blank		Type	Test Code: EPA Method 314.0							
File ID: 14		MBLK	Batch ID: 21508				Analysis Date: 02/12/2009 13:29			
Sample ID: MB-21508	Units : µg/L		Run ID: IC_3_090212A				Prep Date: 02/12/2009			
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	ND		1							

Laboratory Fortified Blank

Laboratory Fortified Blank		Type	Test Code: EPA Method 314.0							
File ID: 15		LFB	Batch ID: 21508				Analysis Date: 02/12/2009 13:47			
Sample ID: LFB-21508	Units : µg/L		Run ID: IC_3_090212A				Prep Date: 02/12/2009			
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	24.7	2	25		99	85	115			

Sample Matrix Spike

Sample Matrix Spike		Type	Test Code: EPA Method 314.0							
File ID: 22		LFM	Batch ID: 21508				Analysis Date: 02/12/2009 15:56			
Sample ID: 09021103-02ALFM	Units : µg/L		Run ID: IC_3_090212A				Prep Date: 02/12/2009			
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	41.6	2	25	18.04	94	80	120			

Sample Matrix Spike Duplicate

Sample Matrix Spike Duplicate		Type	Test Code: EPA Method 314.0							
File ID: 23		LFMD	Batch ID: 21508				Analysis Date: 02/12/2009 16:14			
Sample ID: 09021103-02ALFMD	Units : µg/L		Run ID: IC_3_090212A				Prep Date: 02/12/2009			
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	43.4	2	25	18.04	102	80	120	41.62	4.2(15)	

Comments:

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



Alpha Analytical, Inc.

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Date:
19-Feb-09

QC Summary Report

Work Order:
09021004

Method Blank

Method Blank		Type	Test Code: EPA Method 200.8							
File ID: 021309.B\136SMPL.D\			Batch ID: 21512K				Analysis Date: 02/14/2009 01:39			
Sample ID:	MB-21512	Units : mg/L	Run ID: ICP/MS_090213D				Prep Date: 02/12/2009			
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	ND	0.005								

Laboratory Control Spike

Laboratory Control Spike		Type	Test Code: EPA Method 200.8							
File ID: 021309.B\138_LCS.D\			Batch ID: 21512K				Analysis Date: 02/14/2009 01:51			
Sample ID:	LCS-21512	Units : mg/L	Run ID: ICP/MS_090213D				Prep Date: 02/12/2009			
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0494	0.005	0.05		99	80	120			

Sample Matrix Spike

Sample Matrix Spike		Type	Test Code: EPA Method 200.8							
File ID: 021309.B\142SMPL.D\			Batch ID: 21512K				Analysis Date: 02/14/2009 02:14			
Sample ID:	09021004-02AMS	Units : mg/L	Run ID: ICP/MS_090213D				Prep Date: 02/12/2009			
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0504	0.005	0.05	0	101	80	120			

Sample Matrix Spike Duplicate

Sample Matrix Spike Duplicate		Type	Test Code: EPA Method 200.8							
File ID: 021309.B\143SMPL.D\			Batch ID: 21512K				Analysis Date: 02/14/2009 02:19			
Sample ID:	09021004-02AMSD	Units : mg/L	Run ID: ICP/MS_090213D				Prep Date: 02/12/2009			
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0518	0.005	0.05	0	104	80	120	0.05035	2.9(20)	

Comments:

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



Alpha Analytical, Inc.

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Date:
17-Feb-09

QC Summary Report

Work Order:
09021004

Method Blank

Type **MBLK**

Test Code: _____

File ID: **09021106.D**

Batch ID: **MS15W0211M**

Analysis Date: **02/11/2009 10:17**

Sample ID: **MBLK MS15W0211M**

Units : **µg/L**

Run ID: **MSD_15_090211A**

Prep Date: **02/11/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	ND	0.5								
Chloromethane	ND	1								
Vinyl chloride	ND	0.5								
Chloroethane	ND	0.5								
Bromomethane	ND	1								
Trichlorofluoromethane	ND	0.5								
1,1-Dichloroethene	ND	0.5								
Dichloromethane	ND	1								
Freon-113	ND	0.5								
trans-1,2-Dichloroethene	ND	0.5								
Methyl tert-butyl ether (MTBE)	ND	0.5								
1,1-Dichloroethane	ND	0.5								
2-Butanone (MEK)	ND	10								
cis-1,2-Dichloroethene	ND	0.5								
Bromochloromethane	ND	0.5								
Chloroform	ND	0.5								
2,2-Dichloropropane	ND	0.5								
1,2-Dichloroethane	ND	0.5								
1,1,1-Trichloroethane	ND	0.5								
1,1-Dichloropropene	ND	0.5								
Carbon tetrachloride	ND	0.5								
Benzene	ND	0.5								
Dibromomethane	ND	0.5								
1,2-Dichloropropane	ND	0.5								
Trichloroethene	ND	0.5								
Bromodichloromethane	ND	0.5								
4-Methyl-2-pentanone (MIBK)	ND	2.5								
cis-1,3-Dichloropropene	ND	0.5								
trans-1,3-Dichloropropene	ND	0.5								
1,1,2-Trichloroethane	ND	0.5								
Toluene	ND	0.5								
1,3-Dichloropropane	ND	0.5								
Dibromochloromethane	ND	0.5								
1,2-Dibromoethane (EDB)	ND	1								
Tetrachloroethene	ND	0.5								
1,1,1,2-Tetrachloroethane	ND	0.5								
Chlorobenzene	ND	0.5								
Ethylbenzene	ND	0.5								
m,p-Xylene	ND	0.5								
Bromoform	ND	0.5								
Styrene	ND	0.5								
o-Xylene	ND	0.5								
1,1,2,2-Tetrachloroethane	ND	0.5								
1,2,3-Trichloropropane	ND	1								
Isopropylbenzene	ND	0.5								
Bromobenzene	ND	0.5								
n-Propylbenzene	ND	0.5								
4-Chlorotoluene	ND	0.5								
2-Chlorotoluene	ND	0.5								
1,3,5-Trimethylbenzene	ND	0.5								
tert-Butylbenzene	ND	0.5								
1,2,4-Trimethylbenzene	ND	0.5								
sec-Butylbenzene	ND	0.5								
1,3-Dichlorobenzene	ND	0.5								
1,4-Dichlorobenzene	ND	0.5								
4-Isopropyltoluene	ND	0.5								
1,2-Dichlorobenzene	ND	0.5								
n-Butylbenzene	ND	0.5								
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5								
1,2,4-Trichlorobenzene	ND	1								
Naphthalene	ND	1								
Hexachlorobutadiene	ND	1								
1,2,3-Trichlorobenzene	ND	1								
Surr: 1,2-Dichloroethane-d4	10.1		10		101	70	130			
Surr: Toluene-d8	10.2		10		102	70	130			



Alpha Analytical, Inc.

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

Date:

17-Feb-09

QC Summary Report

Work Order:

09021004

Surr: 4-Bromofluorobenzene 9.58 10 96 70 130

Laboratory Control Spike

Type LCS

Test Code:

File ID: 09021104.D

Batch ID: MS15W0211M

Analysis Date: 02/11/2009 09:13

Sample ID: LCS MS15W0211M

Units : µg/L

Run ID: MSD_15_090211A

Prep Date: 02/11/2009

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	12.2	1	10		122	70	130			
Chloromethane	10	2	10		100	70	130			
Vinyl chloride	10.9	1	10		109	70	130			
Chloroethane	9.66	1	10		97	70	130			
Bromomethane	9.59	2	10		96	70	130			
Trichlorofluoromethane	11.1	1	10		111	70	130			
1,1-Dichloroethene	10.9	1	10		109	70	130			
Dichloromethane	10.1	2	10		101	70	130			
trans-1,2-Dichloroethene	11	1	10		110	70	130			
Methyl tert-butyl ether (MTBE)	10.6	0.5	10		106	62	136			
1,1-Dichloroethane	10.7	1	10		107	70	130			
cis-1,2-Dichloroethene	11.2	1	10		112	70	130			
Bromochloromethane	11.4	1	10		114	70	130			
Chloroform	9.97	1	10		99.7	70	130			
2,2-Dichloropropane	9.18	1	10		92	70	130			
1,2-Dichloroethane	10.3	1	10		103	70	130			
1,1,1-Trichloroethane	10.6	1	10		106	70	130			
1,1-Dichloropropene	11.2	1	10		112	70	130			
Carbon tetrachloride	10.3	1	10		103	70	130			
Benzene	10.1	0.5	10		101	70	130			
Dibromomethane	11.1	1	10		111	70	130			
1,2-Dichloropropane	10.6	1	10		106	70	130			
Trichloroethene	11.2	1	10		112	70	130			
Bromodichloromethane	10.7	1	10		107	70	130			
cis-1,3-Dichloropropene	11	1	10		110	70	130			
trans-1,3-Dichloropropene	10.9	1	10		109	70	130			
1,1,2-Trichloroethane	10.2	1	10		102	70	130			
Toluene	10.4	0.5	10		104	70	130			
1,3-Dichloropropane	10.2	1	10		102	70	130			
Dibromochloromethane	11	1	10		110	70	130			
1,2-Dibromoethane (EDB)	20.8	2	20		104	70	130			
Tetrachloroethene	11.1	1	10		111	70	130			
1,1,1,2-Tetrachloroethane	10.6	1	10		106	70	130			
Chlorobenzene	10.3	1	10		103	70	130			
Ethylbenzene	10.5	0.5	10		105	70	130			
m,p-Xylene	10.9	0.5	10		109	70	130			
Bromoform	10.3	1	10		103	70	130			
Styrene	10.6	1	10		106	70	130			
o-Xylene	10.5	0.5	10		105	70	130			
1,1,2,2-Tetrachloroethane	9.26	1	10		93	70	130			
1,2,3-Trichloropropane	19.5	2	20		98	70	130			
Isopropylbenzene	10.4	1	10		104	70	130			
Bromobenzene	10.3	1	10		103	70	130			
n-Propylbenzene	10.6	1	10		106	70	130			
4-Chlorotoluene	10.7	1	10		107	70	130			
2-Chlorotoluene	10.5	1	10		105	70	130			
1,3,5-Trimethylbenzene	10.2	1	10		102	70	130			
tert-Butylbenzene	9.98	1	10		99.8	70	130			
1,2,4-Trimethylbenzene	10.5	1	10		105	70	130			
sec-Butylbenzene	10	1	10		100	70	130			
1,3-Dichlorobenzene	10.2	1	10		102	70	130			
1,4-Dichlorobenzene	9.76	1	10		98	70	130			
4-Isopropyltoluene	10.3	1	10		103	70	130			
1,2-Dichlorobenzene	9.86	1	10		99	70	130			
n-Butylbenzene	10.2	1	10		102	70	130			
1,2-Dibromo-3-chloropropane (DBCP)	47	3	50		94	70	130			
1,2,4-Trichlorobenzene	10.9	2	10		109	70	130			
Naphthalene	9.85	2	10		99	70	130			
Hexachlorobutadiene	20	2	20		99.9	70	130			
1,2,3-Trichlorobenzene	10.8	2	10		108	70	130			
Surr: 1,2-Dichloroethane-d4	9.14		10		91	70	130			
Surr: Toluene-d8	10.3		10		103	70	130			
Surr: 4-Bromofluorobenzene	9.97		10		99.7	70	130			



Alpha Analytical, Inc.

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

Date:
17-Feb-09

QC Summary Report

Work Order:
09021004

Sample Matrix Spike

Type MS

Test Code:

File ID: 09021107.D

Batch ID: MS15W0211M

Analysis Date: 02/11/2009 10:39

Sample ID: 09021004-02AMS

Units : µg/L

Run ID: MSD_15_090211A

Prep Date: 02/11/2009

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	40	2.5	50	0	80	13	167			
Chloromethane	38.1	10	50	0	76	28	145			
Vinyl chloride	46.6	2.5	50	0	93	43	134			
Chloroethane	44.6	2.5	50	0	84	39	154			
Bromomethane	45	10	50	0	90	19	176			
Trichlorofluoromethane	49	2.5	50	0	98	34	160			
1,1-Dichloroethene	45.8	2.5	50	0	92	60	130			
Dichloromethane	44.5	10	50	0	89	68	130			
trans-1,2-Dichloroethene	50.2	2.5	50	0	100	63	130			
Methyl tert-butyl ether (MTBE)	45.9	1.3	50	0	92	56	141			
1,1-Dichloroethane	47.8	2.5	50	0	96	61	130			
cis-1,2-Dichloroethene	49.6	2.5	50	0	99	70	130			
Bromochloromethane	50.8	2.5	50	0	102	70	130			
Chloroform	44.9	2.5	50	0	90	67	130			
2,2-Dichloropropane	44.2	2.5	50	0	88	30	152			
1,2-Dichloroethane	46.3	2.5	50	0	93	60	135			
1,1,1-Trichloroethane	49.4	2.5	50	0	99	59	137			
1,1-Dichloropropene	49.6	2.5	50	0	99	63	130			
Carbon tetrachloride	48.1	2.5	50	0	96	50	147			
Benzene	44.4	1.3	50	0	89	67	130			
Dibromomethane	49.5	2.5	50	0	99	69	133			
1,2-Dichloropropane	45.8	2.5	50	0	92	69	130			
Trichloroethene	51	2.5	50	0	102	69	130			
Bromodichloromethane	47.6	2.5	50	0	95	66	134			
cis-1,3-Dichloropropene	46.3	2.5	50	0	93	63	130			
trans-1,3-Dichloropropene	44.3	2.5	50	0	89	66	131			
1,1,2-Trichloroethane	43	2.5	50	0	86	68	130			
Toluene	45.4	1.3	50	0	91	66	130			
1,3-Dichloropropane	42.4	2.5	50	0	85	70	130			
Dibromochloromethane	46.4	2.5	50	0	93	70	130			
1,2-Dibromoethane (EDB)	89	10	100	0	89	70	130			
Tetrachloroethene	49.6	2.5	50	0	99	61	134			
1,1,1,2-Tetrachloroethane	46.5	2.5	50	0	93	70	130			
Chlorobenzene	45.2	2.5	50	0	90	70	130			
Ethylbenzene	46.2	1.3	50	0	92	68	130			
m,p-Xylene	47.1	1.3	50	0	94	64	130			
Bromoform	42.6	2.5	50	0	85	64	138			
Styrene	45.7	2.5	50	0	91	69	130			
o-Xylene	45.7	1.3	50	0	91	70	130			
1,1,2,2-Tetrachloroethane	39	2.5	50	0	78	65	131			
1,2,3-Trichloropropane	84.2	10	100	0	84	70	130			
Isopropylbenzene	45.9	2.5	50	0	92	64	138			
Bromobenzene	45	2.5	50	0	90	70	130			
n-Propylbenzene	46.5	2.5	50	0	93	66	132			
4-Chlorotoluene	46.8	2.5	50	0	94	70	130			
2-Chlorotoluene	46.5	2.5	50	0	93	70	130			
1,3,5-Trimethylbenzene	45.1	2.5	50	0	90	66	136			
tert-Butylbenzene	44.8	2.5	50	0	90	65	137			
1,2,4-Trimethylbenzene	46.2	2.5	50	0	92	65	137			
sec-Butylbenzene	45.5	2.5	50	0	91	66	134			
1,3-Dichlorobenzene	45.4	2.5	50	0	91	70	130			
1,4-Dichlorobenzene	43.3	2.5	50	0	87	70	130			
4-Isopropyltoluene	46.1	2.5	50	0	92	66	137			
1,2-Dichlorobenzene	43.4	2.5	50	0	87	70	130			
n-Butylbenzene	45.9	2.5	50	0	92	60	142			
1,2-Dibromo-3-chloropropane (DBCP)	204	15	250	0	82	67	130			
1,2,4-Trichlorobenzene	47.4	10	50	0	95	61	137			
Naphthalene	40.4	10	50	0	81	40	167			
Hexachlorobutadiene	94.1	10	100	0	94	61	130			
1,2,3-Trichlorobenzene	46.4	10	50	0	93	51	144			
Surr: 1,2-Dichloroethane-d4	46.3		50		93	70	130			
Surr: Toluene-d8	50.9		50		102	70	130			
Surr: 4-Bromofluorobenzene	48.9		50		98	70	130			



Alpha Analytical, Inc.

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

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

Date:
17-Feb-09

QC Summary Report

Work Order:
09021004

Sample Matrix Spike Duplicate

Type **MSD**

Test Code: _____

File ID: **09021108.D**

Batch ID: **MS15W0211M**

Analysis Date: **02/11/2009 11:02**

Sample ID: **09021004-02AMSD**

Units : **µg/L**

Run ID: **MSD_15_090211A**

Prep Date: **02/11/2009**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	43.1	2.5	50	0	86	13	167	40	7.5(20)	
Chloromethane	39.8	10	50	0	80	28	145	38.06	4.5(20)	
Vinyl chloride	48.9	2.5	50	0	98	43	134	46.62	4.8(20)	
Chloroethane	46.9	2.5	50	0	89	39	154	44.62	5.0(20)	
Bromomethane	51.8	10	50	0	104	19	176	45.04	13.9(20)	
Trichlorofluoromethane	55.4	2.5	50	0	111	34	160	49	12.2(20)	
1,1-Dichloroethene	49	2.5	50	0	98	60	130	45.84	6.6(20)	
Dichloromethane	46	10	50	0	92	68	130	44.51	3.3(20)	
trans-1,2-Dichloroethene	51.1	2.5	50	0	102	63	130	50.16	1.9(20)	
Methyl tert-butyl ether (MTBE)	47.3	1.3	50	0	95	56	141	45.86	3.1(20)	
1,1-Dichloroethane	49.5	2.5	50	0	99	61	130	47.84	3.3(20)	
cis-1,2-Dichloroethene	50.7	2.5	50	0	101	70	130	49.6	2.2(20)	
Bromochloromethane	52.9	2.5	50	0	106	70	130	50.79	4.1(20)	
Chloroform	46	2.5	50	0	92	67	130	44.93	2.4(20)	
2,2-Dichloropropane	45.5	2.5	50	0	91	30	152	44.15	3.0(20)	
1,2-Dichloroethane	48.2	2.5	50	0	96	60	135	46.32	4.0(20)	
1,1,1-Trichloroethane	51.3	2.5	50	0	103	59	137	49.37	3.9(20)	
1,1-Dichloropropene	51.6	2.5	50	0	103	63	130	49.64	3.8(20)	
Carbon tetrachloride	50.7	2.5	50	0	101	50	147	48.05	5.3(20)	
Benzene	46.1	1.3	50	0	92	67	130	44.39	3.8(20)	
Dibromomethane	49.8	2.5	50	0	99.6	69	133	49.46	0.7(20)	
1,2-Dichloropropane	47.2	2.5	50	0	94	69	130	45.76	3.2(20)	
Trichloroethene	52.5	2.5	50	0	105	69	130	51.04	2.8(20)	
Bromodichloromethane	49.2	2.5	50	0	98	66	134	47.64	3.3(20)	
cis-1,3-Dichloropropene	47.9	2.5	50	0	96	63	130	46.25	3.6(20)	
trans-1,3-Dichloropropene	47.7	2.5	50	0	95	66	131	44.32	7.3(20)	
1,1,2-Trichloroethane	44.5	2.5	50	0	89	68	130	42.95	3.6(20)	
Toluene	46.3	1.3	50	0	93	66	130	45.4	2.1(20)	
1,3-Dichloropropane	43.1	2.5	50	0	86	70	130	42.44	1.6(20)	
Dibromochloromethane	48.4	2.5	50	0	97	70	130	46.42	4.2(20)	
1,2-Dibromoethane (EDB)	91.3	10	100	0	91	70	130	88.96	2.6(20)	
Tetrachloroethene	50.8	2.5	50	0	102	61	134	49.63	2.4(20)	
1,1,1,2-Tetrachloroethane	47.8	2.5	50	0	96	70	130	46.45	2.9(20)	
Chlorobenzene	46.1	2.5	50	0	92	70	130	45.23	1.8(20)	
Ethylbenzene	47.2	1.3	50	0	94	68	130	46.23	2.0(20)	
m,p-Xylene	47.9	1.3	50	0	96	64	130	47.12	1.7(20)	
Bromoform	45.6	2.5	50	0	91	64	138	42.6	6.7(20)	
Styrene	47.1	2.5	50	0	94	69	130	45.74	2.9(20)	
o-Xylene	47.1	1.3	50	0	94	70	130	45.65	3.0(20)	
1,1,2,2-Tetrachloroethane	40.4	2.5	50	0	81	65	131	39.01	3.5(20)	
1,2,3-Trichloropropane	83.9	10	100	0	84	70	130	84.23	0.3(20)	
Isopropylbenzene	48.1	2.5	50	0	96	64	138	45.88	4.8(20)	
Bromobenzene	46.6	2.5	50	0	93	70	130	45.02	3.4(20)	
n-Propylbenzene	48.7	2.5	50	0	97	66	132	46.51	4.6(20)	
4-Chlorotoluene	49.3	2.5	50	0	99	70	130	46.78	5.3(20)	
2-Chlorotoluene	48.8	2.5	50	0	98	70	130	46.49	4.9(20)	
1,3,5-Trimethylbenzene	47.5	2.5	50	0	95	66	136	45.13	5.0(20)	
tert-Butylbenzene	47.2	2.5	50	0	94	65	137	44.77	5.4(20)	
1,2,4-Trimethylbenzene	48.5	2.5	50	0	97	65	137	46.22	4.9(20)	
sec-Butylbenzene	47.8	2.5	50	0	96	66	134	45.5	5.0(20)	
1,3-Dichlorobenzene	47.8	2.5	50	0	96	70	130	45.38	5.2(20)	
1,4-Dichlorobenzene	45.5	2.5	50	0	91	70	130	43.34	4.9(20)	
4-Isopropyltoluene	48.6	2.5	50	0	97	66	137	46.06	5.5(20)	
1,2-Dichlorobenzene	45.7	2.5	50	0	91	70	130	43.42	5.1(20)	
n-Butylbenzene	49.2	2.5	50	0	98	60	142	45.86	7.0(20)	
1,2-Dibromo-3-chloropropane (DBCP)	208	15	250	0	83	67	130	203.8	2.1(20)	
1,2,4-Trichlorobenzene	53.4	10	50	0	107	61	137	47.38	11.9(20)	
Naphthalene	42.5	10	50	0	85	40	167	40.37	5.1(20)	
Hexachlorobutadiene	102	10	100	0	102	61	130	94.13	7.6(20)	
1,2,3-Trichlorobenzene	52.3	10	50	0	105	51	144	46.41	11.9(20)	
Surr: 1,2-Dichloroethane-d4	46.2		50		92	70	130			
Surr: Toluene-d8	50.8		50		102	70	130			
Surr: 4-Bromofluorobenzene	49.1		50		98	70	130			



Alpha Analytical, Inc.

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

Date:
17-Feb-09

QC Summary Report

Work Order:
09021004

Comments:

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

Billing Information :

Battelle
505 King Avenue
Columbus, OH 43201

Columbus, OH 43201

Client:

Battelle Memorial Institute
505 King Avenue
Columbus, OH 43201

PO : 218013

Client's COC # : 24136

QC Level : S4

Job : G005862/JPL Groundwater Monitoring
= Final Rpt, MBLK, InitCal/ConCal data, LCS, MS/MSD With Surrogates

CHAIN-OF-CUSTODY RECORD

Alpha Analytical, Inc.

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

CA

WorkOrder : BMI09021004

Report Due By : 5:00 PM On : 24-Feb-2009

Report Attention	Phone Number	Email Address
David Comer	(619) 574-4827 x	comerd@battelle.org
Betsy Cutie	(614) 424-4899 x	cutiee@battelle.org
Shane Walton	(614) 424-4117 x	waltonss@battelle.org

EDD Required : Yes

Sampled by : Client

Cooler Temp 4 °C Samples Received 10-Feb-2009 Date Printed 10-Feb-2009

Alpha Sample ID	Client Sample ID	Collection Matrix Date	No. of Bottles		TAT	Requested Tests				Sample Remarks	
			Alpha	Sub		314_W	METALS_D	VOC_TTC	VOC_W		
BMI09021004-01A	NW-23-4	AQ 02/09/09 08:25	1	0	10	Cr					
BMI09021004-02A	NW-23-3	AQ 02/09/09 08:58	10	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria		MS/MSD
BMI09021004-03A	NW-23-2	AQ 02/09/09 09:59	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria		
BMI09021004-04A	NW-23-1	AQ 02/09/09 10:41	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria		
BMI09021004-05A	EB-11-02/09/09	AQ 02/09/09 10:20	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria		
BMI09021004-06A	TB-11-02/09/09	AQ 02/09/09 00:00	1	0	10			VOC by 524 Criteria	VOC by 524 Criteria		Reno Trip Blank 1/6/09
BMI09021004-07A	SB-01-1009	AQ 02/09/09 10:25	5	0	10	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria		

Comments: No security seals. Frozen ice Temp Blank #7570 received @ 4°. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). Level IV QC. Perchlorate RL of 1.0 ug/L.

Logged in by: Elizabeth Alcox Signature: Elizabeth Alcox Print Name: Elizabeth Alcox Company: Alpha Analytical, Inc. Date/Time: 2-10-09 11:56

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