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

Date: *08-Mar-2011*

QC Summary Report

Work Order: 11030204

Surr: 4-Bromofluorobenzene	10.1	10	101	70	130

Alpha Analytical, Inc.

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Date: 08-Mar-2011

QC Summary Report

Work Order: 11030204

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

File ID: **11030403.D** Batch ID: **MS15W0304M** Analysis Date: **03/04/2011 09:31**

Sample ID: **LCS MS15W0304M** Units : **µg/L** Run ID: **MSD_15_110304B** Prep Date: **03/04/2011 09:31**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	6.7	1	10		67	70(70)	130			L50
Chloromethane	9	2	10		90	70	130			
Vinyl chloride	9.16	1	10		92	70	130			
Chloroethane	9.57	1	10		96	70	130			
Bromomethane	7.02	2	10		70	70	130			
Trichlorofluoromethane	9.16	1	10		92	70	130			
1,1-Dichloroethene	10.3	1	10		103	70	130			
Dichloromethane	9.45	2	10		95	70	130			
Freon-113	10.1	1	10		101	70	137			
trans-1,2-Dichloroethene	10.3	1	10		103	70	130			
Methyl tert-butyl ether (MTBE)	8.87	0.5	10		89	70	130			
1,1-Dichloroethane	10.4	1	10		104	70	130			
2-Butanone (MEK)	176	10	200		88	70	130			
cis-1,2-Dichloroethene	10.4	1	10		104	70	130			
Bromochloromethane	9.74	1	10		97	70	130			
Chloroform	9.37	1	10		94	70	130			
2,2-Dichloropropane	10.2	1	10		102	70	130			
1,2-Dichloroethane	9.03	1	10		90	70	130			
1,1,1-Trichloroethane	10.2	1	10		102	70	130			
1,1-Dichloropropene	10.6	1	10		106	70	130			
Carbon tetrachloride	9.05	1	10		91	70	130			
Benzene	9.88	0.5	10		99	70	130			
Dibromomethane	9.56	1	10		96	70	130			
1,2-Dichloropropane	10.6	1	10		106	70	130			
Trichloroethene	10.5	1	10		105	70	130			
Bromodichloromethane	10.2	1	10		102	70	130			
4-Methyl-2-pentanone (MIBK)	22.2	2.5	25		89	20	182			
cis-1,3-Dichloropropene	9.61	1	10		96	70	130			
trans-1,3-Dichloropropene	8.36	1	10		84	70	130			
1,1,2-Trichloroethane	9.55	1	10		96	70	130			
Toluene	10.7	0.5	10		107	70	130			
1,3-Dichloropropane	10	1	10		100	70	130			
Dibromochloromethane	9.83	1	10		98	70	130			
1,2-Dibromoethane (EDB)	20.2	2	20		101	70	130			
Tetrachloroethene	10.5	1	10		105	70	130			
1,1,1,2-Tetrachloroethane	10.7	1	10		107	70	130			
Chlorobenzene	10.5	1	10		105	70	130			
Ethylbenzene	10.6	0.5	10		106	70	130			
m,p-Xylene	10.8	0.5	10		108	70	130			
Bromoform	9.01	1	10		90	70	130			
Styrene	10.9	1	10		109	70	130			
o-Xylene	10.9	0.5	10		109	70	130			
1,1,2,2-Tetrachloroethane	9.58	1	10		96	70	130			
1,2,3-Trichloropropane	18.4	2	20		92	70	130			
Isopropylbenzene	11	1	10		110	70	130			
Bromobenzene	10.3	1	10		103	70	130			
n-Propylbenzene	11.3	1	10		113	70	130			
4-Chlorotoluene	11.4	1	10		114	70	130			
2-Chlorotoluene	10.9	1	10		109	70	130			
1,3,5-Trimethylbenzene	11	1	10		110	70	130			
tert-Butylbenzene	10.7	1	10		107	70	130			
1,2,4-Trimethylbenzene	11.1	1	10		111	70	130			
sec-Butylbenzene	10.8	1	10		108	70	130			
1,3-Dichlorobenzene	10.9	1	10		109	70	130			
1,4-Dichlorobenzene	10.3	1	10		103	70	130			
4-Isopropyltoluene	10.9	1	10		109	70	130			
1,2-Dichlorobenzene	9.91	1	10		99	70	130			
n-Butylbenzene	11.5	1	10		115	70	130			
1,2-Dibromo-3-chloropropane (DBCP)	43.3	3	50		87	67	130			
1,2,4-Trichlorobenzene	10.7	2	10		107	70	130			
Naphthalene	9.22	2	10		92	70	130			
Hexachlorobutadiene	18.7	2	20		93	70	130			
1,2,3-Trichlorobenzene	10.5	2	10		105	70	130			
Surr: 1,2-Dichloroethane-d4	9.26		10		93	70	130			
Surr: Toluene-d8	10.1		10		101	70	130			

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Date: *08-Mar-2011*

QC Summary Report

Work Order: 11030204

Surr: 4-Bromofluorobenzene	10.2	10	102	70	130	

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Date: 08-Mar-2011

QC Summary Report

Work Order: 11030204

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

File ID: **11030409.D** Batch ID: **MS15W0304M** Analysis Date: **03/04/2011 11:50**

Sample ID: **11030203-01AMS** Units : **µg/L** Run ID: **MSD_15_110304B** Prep Date: **03/04/2011 11:50**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	40.6	2.5	50	0	81	21	138			
Chloromethane	50.9	10	50	0	102	23	144			
Vinyl chloride	51.5	2.5	50	0	103	49	136			
Chloroethane	52.4	2.5	50	0	105	21	159			
Bromomethane	33.6	10	50	0	67	10	174			
Trichlorofluoromethane	50.2	2.5	50	0	100	32	154			
1,1-Dichloroethene	53.1	2.5	50	0	106	64	130			
Dichloromethane	48.5	10	50	0	97	69	130			
Freon-113	54	2.5	50	0	108	55	141			
trans-1,2-Dichloroethene	52.5	2.5	50	0	105	63	130			
Methyl tert-butyl ether (MTBE)	51.5	1.3	50	0	103	47	150			
1,1-Dichloroethane	52.7	2.5	50	0	105	66	130			
2-Butanone (MEK)	814	50	1000	0	81	23	182			
cis-1,2-Dichloroethene	53.4	2.5	50	0	107	70	130			
Bromochloromethane	51.7	2.5	50	0	103	70	132			
Chloroform	58.6	2.5	50	10.36	96	70	130			
2,2-Dichloropropane	52.4	2.5	50	0	105	38	154			
1,2-Dichloroethane	49	2.5	50	0	98	65	134			
1,1,1-Trichloroethane	51.3	2.5	50	0	103	65	136			
1,1-Dichloropropene	53.9	2.5	50	0	108	68	132			
Carbon tetrachloride	46.7	2.5	50	0	93	58	148			
Benzene	50.3	1.3	50	0	101	59	138			
Dibromomethane	53	2.5	50	0	106	70	130			
1,2-Dichloropropane	55.8	2.5	50	0	112	70	131			
Trichloroethene	52.4	2.5	50	0	105	65	144			
Bromodichloromethane	69	2.5	50	15.75	106	50	157			
4-Methyl-2-pentanone (MIBK)	124	13	125	0	99	20	182			
cis-1,3-Dichloropropene	47.7	2.5	50	0	95	63	131			
trans-1,3-Dichloropropene	42.6	2.5	50	0	85	65	136			
1,1,2-Trichloroethane	52.6	2.5	50	0	105	70	131			
Toluene	54.9	1.3	50	0	110	68	130			
1,3-Dichloropropane	57.1	2.5	50	0	114	70	130			
Dibromochloromethane	69.2	2.5	50	16.65	105	42	155			
1,2-Dibromoethane (EDB)	112	5	100	0	112	70	130			
Tetrachloroethene	53.5	2.5	50	0	107	65	130			
1,1,1,2-Tetrachloroethane	54.3	2.5	50	0	109	70	130			
Chlorobenzene	52.6	2.5	50	0	105	70	130			
Ethylbenzene	52.3	1.3	50	0	105	68	130			
m,p-Xylene	52.6	1.3	50	0	105	68	131			
Bromoform	51.6	2.5	50	5.01	93	65	143			
Styrene	48.2	2.5	50	0	96	59	153			
o-Xylene	52.9	1.3	50	0	106	70	130			
1,1,2,2-Tetrachloroethane	53.4	2.5	50	0	107	67	130			
1,2,3-Trichloropropane	99	10	100	0	99	70	130			
Isopropylbenzene	52.7	2.5	50	0	105	55	138			
Bromobenzene	50.4	2.5	50	0	101	70	130			
n-Propylbenzene	53.5	2.5	50	0	107	67	133			
4-Chlorotoluene	54.1	2.5	50	0	108	70	130			
2-Chlorotoluene	53.1	2.5	50	0	106	70	130			
1,3,5-Trimethylbenzene	53.2	2.5	50	0	106	67	134			
tert-Butylbenzene	51.6	2.5	50	0	103	55	147			
1,2,4-Trimethylbenzene	53.5	2.5	50	0	107	65	135			
sec-Butylbenzene	53.2	2.5	50	0	106	68	135			
1,3-Dichlorobenzene	53.5	2.5	50	0	107	70	130			
1,4-Dichlorobenzene	51.3	2.5	50	0	103	70	130			
4-Isopropyltoluene	53.5	2.5	50	0	107	68	132			
1,2-Dichlorobenzene	50.4	2.5	50	0	101	70	130			
n-Butylbenzene	56.6	2.5	50	0	113	62	134			
1,2-Dibromo-3-chloropropane (DBCP)	247	15	250	0	99	64	130			
1,2,4-Trichlorobenzene	58.8	10	50	0	118	62	133			
Naphthalene	50.2	10	50	0	100	32	166			
Hexachlorobutadiene	98.7	10	100	0	99	63	130			
1,2,3-Trichlorobenzene	58.3	10	50	0	117	55	138			
Surr: 1,2-Dichloroethane-d4	47.6		50		95	70	130			
Surr: Toluene-d8	51.9		50		104	70	130			

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Date: *08-Mar-2011*

QC Summary Report

Work Order: 11030204

Surr: 4-Bromofluorobenzene	49.1	50	98	70	130	

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Date: *08-Mar-2011*

QC Summary Report

Work Order: 11030204

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

File ID: **11030410.D** Batch ID: **MS15W0304M** Analysis Date: **03/04/2011 12:12**

Sample ID: **11030203-01AMSD** Units : **µg/L** Run ID: **MSD_15_110304B** Prep Date: **03/04/2011 12:12**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	39.3	2.5	50	0	79	21	138	40.63	3.3(33)	
Chloromethane	49	10	50	0	98	23	144	50.86	3.8(27)	
Vinyl chloride	49.5	2.5	50	0	99	49	136	51.46	3.8(21)	
Chloroethane	50.3	2.5	50	0	101	21	159	52.44	4.3(40)	
Bromomethane	37	10	50	0	74	10	174	33.64	9.6(40)	
Trichlorofluoromethane	48.9	2.5	50	0	98	32	154	50.18	2.6(37)	
1,1-Dichloroethene	50.7	2.5	50	0	101	64	130	53.11	4.7(21)	
Dichloromethane	46.5	10	50	0	93	69	130	48.5	4.2(20)	
Freon-113	51.5	2.5	50	0	103	55	141	54.01	4.7(40)	
trans-1,2-Dichloroethene	50.2	2.5	50	0	100	63	130	52.51	4.5(20)	
Methyl tert-butyl ether (MTBE)	49.2	1.3	50	0	98	47	150	51.49	4.5(40)	
1,1-Dichloroethane	51.3	2.5	50	0	103	66	130	52.73	2.8(20)	
2-Butanone (MEK)	764	50	1000	0	76	23	182	814.1	6.3(22)	
cis-1,2-Dichloroethene	51.8	2.5	50	0	104	70	130	53.42	3.1(20)	
Bromochloromethane	49	2.5	50	0	98	70	132	51.73	5.4(20)	
Chloroform	57.3	2.5	50	10.36	94	70	130	58.56	2.2(20)	
2,2-Dichloropropane	52.1	2.5	50	0	104	38	154	52.39	0.5(22)	
1,2-Dichloroethane	46.5	2.5	50	0	93	65	134	49.02	5.4(20)	
1,1,1-Trichloroethane	50.1	2.5	50	0	100	65	136	51.27	2.4(20)	
1,1-Dichloropropene	52.1	2.5	50	0	104	68	132	53.91	3.5(20)	
Carbon tetrachloride	46.9	2.5	50	0	94	58	148	46.65	0.5(20)	
Benzene	48.7	1.3	50	0	97	59	138	50.26	3.2(21)	
Dibromomethane	49.9	2.5	50	0	99.7	70	130	52.96	6.0(20)	
1,2-Dichloropropane	53.3	2.5	50	0	107	70	131	55.8	4.6(20)	
Trichloroethene	50	2.5	50	0	100	65	144	52.42	4.7(20)	
Bromodichloromethane	67.7	2.5	50	15.75	104	50	157	68.95	1.8(20)	
4-Methyl-2-pentanone (MIBK)	115	13	125	0	92	20	182	123.7	7.7(20)	
cis-1,3-Dichloropropene	46.1	2.5	50	0	92	63	131	47.73	3.5(20)	
trans-1,3-Dichloropropene	41.9	2.5	50	0	84	65	136	42.55	1.5(20)	
1,1,2-Trichloroethane	48.8	2.5	50	0	98	70	131	52.58	7.5(20)	
Toluene	53.7	1.3	50	0	107	68	130	54.94	2.2(20)	
1,3-Dichloropropane	54.3	2.5	50	0	109	70	130	57.09	5.0(20)	
Dibromochloromethane	68.1	2.5	50	16.65	103	42	155	69.21	1.6(20)	
1,2-Dibromoethane (EDB)	107	5	100	0	107	70	130	112.1	4.5(20)	
Tetrachloroethene	51.9	2.5	50	0	104	65	130	53.5	3.0(20)	
1,1,1,2-Tetrachloroethane	53.9	2.5	50	0	108	70	130	54.25	0.7(20)	
Chlorobenzene	51.2	2.5	50	0	102	70	130	52.57	2.6(20)	
Ethylbenzene	50.7	1.3	50	0	101	68	130	52.27	3.0(20)	
m,p-Xylene	51.8	1.3	50	0	104	68	131	52.63	1.5(20)	
Bromoform	51.6	2.5	50	5.01	93	65	143	51.56	0.1(20)	
Styrene	48.7	2.5	50	0	97	59	153	48.24	0.9(37)	
o-Xylene	51	1.3	50	0	102	70	130	52.94	3.8(20)	
1,1,2,2-Tetrachloroethane	49.2	2.5	50	0	98	67	130	53.42	8.2(20)	
1,2,3-Trichloropropane	93.2	10	100	0	93	70	130	98.96	6.0(20)	
Isopropylbenzene	52.6	2.5	50	0	105	55	138	52.74	0.4(20)	
Bromobenzene	49.9	2.5	50	0	99.7	70	130	50.36	1.0(20)	
n-Propylbenzene	54.2	2.5	50	0	108	67	133	53.48	1.3(30)	
4-Chlorotoluene	53.9	2.5	50	0	108	70	130	54.05	0.3(20)	
2-Chlorotoluene	51.4	2.5	50	0	103	70	130	53.11	3.2(20)	
1,3,5-Trimethylbenzene	52.9	2.5	50	0	106	67	134	53.17	0.4(21)	
tert-Butylbenzene	51.9	2.5	50	0	104	55	147	51.55	0.7(20)	
1,2,4-Trimethylbenzene	52.9	2.5	50	0	106	65	135	53.48	1.2(25)	
sec-Butylbenzene	53.2	2.5	50	0	106	68	135	53.21	0.0(20)	
1,3-Dichlorobenzene	54	2.5	50	0	108	70	130	53.51	0.8(20)	
1,4-Dichlorobenzene	51.1	2.5	50	0	102	70	130	51.26	0.3(20)	
4-Isopropyltoluene	53.8	2.5	50	0	108	68	132	53.53	0.6(20)	
1,2-Dichlorobenzene	50.4	2.5	50	0	101	70	130	50.35	0.2(20)	
n-Butylbenzene	58.1	2.5	50	0	116	62	134	56.6	2.6(21)	
1,2-Dibromo-3-chloropropane (DBCP)	241	15	250	0	96	64	130	246.6	2.3(20)	
1,2,4-Trichlorobenzene	57.4	10	50	0	115	62	133	58.81	2.4(29)	
Naphthalene	48.7	10	50	0	97	32	166	50.18	3.1(40)	
Hexachlorobutadiene	104	10	100	0	104	63	130	98.71	5.6(21)	
1,2,3-Trichlorobenzene	56	10	50	0	112	55	138	58.26	3.9(36)	
Surr: 1,2-Dichloroethane-d4	46.8		50		94	70	130			
Surr: Toluene-d8	52.2		50		104	70	130			

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Date: *08-Mar-2011*

QC Summary Report

Work Order: 11030204

Surr: 4-Bromofluorobenzene	50.2	50	100	70	130	

Comments:

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

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

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

Billing Information :

CHAIN-OF-CUSTODY RECORD

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

CA

WorkOrder : BMIS11030204

Report Due By : 5:00 PM On : 15-Mar-2011

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

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

EDD Required : **Yes**

Sampled by : Chase Brogdon/ David Loera

PO : 218013

Client's COC # : 33404, 53566 Job : G005862/JPL Groundwater Monitoring

Cooler Temp	Samples Received	Date Printed
0 °C	02-Mar-2011	**02-Mar-2011**

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

Alpha Sample ID	Client Sample ID	Matrix	Collection Date	No. of Bottles Alpha	Sub	TAT	Requested Tests 300_0_W	314_W	METALS_DW	VOC_TIC_W	VOC_W				Sample Remarks
BMI11030204-01A	MW-20-5	AQ	03/01/11 08:29	5	0	9		Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				
BMI11030204-02A	MW-20-4	AQ	03/01/11 09:00	5	0	9		Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				
BMI11030204-03A	MW-20-3	AQ	03/01/11 09:25	5	0	9		Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				
BMI11030204-04A	MW-20-2	AQ	03/01/11 09:49	5	0	9		Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				Level IV QC
BMI11030204-05A	MW-20-1	AQ	03/01/11 10:23	5	0	9		Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				
BMI11030204-06A	EB-06-03/01/11	AQ	03/01/11 10:03	5	0	9		Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				
BMI11030204-07A	TB-06-03/01/11	AQ	03/01/11 07:00	1	0	9				VOC by 524 Criteria	VOC by 524 Criteria				Reno Trip Blank 12/14/10
BMI11030204-08A	MW-7	AQ	03/01/11 14:40	9	0	9	NO2, NO3, SO4, Cl, PO4	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				

Comments: Security seals intact. Frozen ice. Temp Blank #7570 received @ 0°C. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). :

	Signature	Print Name	Company	Date/Time
Logged in by:	Elizabeth Adcox	Elizabeth Adcox	**Alpha Analytical, Inc.**	3-2-11 1103

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

33404

Billing Information:
Company Name: BATTELLE
Attn: GERALD TOMPKINS
Address: 505 KING AVE.
City, State, Zip: COLUMBUS, OH 43201
Phone Number: ______ Fax: ______

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

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

Consultant / Client Name: BATTELLE / DAVID CONNER
Address: 3990 OLD TOWN AVE, C-205
City, State, Zip: SAN DIEGO, CA 92110
Job #: G005862
Job Name: SPL GW. MON. 1Q11
Report Attention / Project Manager
Name: DAVID CONNER
Email: CONNERD@BATTELLE.ORG.
~~Phone~~ FAX: 614-458-6614 Mobile: 619-726-7311
P.O. #: 218013

Analyses Required

Data Validation Level: III or IV
EDD / EDF? YES X NO ___
Global ID #: ______

Time Sampled	Date Sampled	Matrix* See Key Below	Lab ID Number (Office Use Only)	Sample Description	TAT	Field Filtered	# Containers**	VOCs (524.2)	Total Cr (200.8)	ClO4 (314.0)				REMARKS
0629	3/1/11	AQ	BMI11030204.01	MW-20-5			3v 2p	X	X	X				
0900	↓	↓	.02	MW-20-4			↓	X	X	X				
0925			.03	MW-20-3				X	X	X				
0949			.04	MW-20-2				X	X	X				QC LEVEL IV
1023			.05	MW-20-1			↓	X	X	X				
1003	↓	↓	.06	EB-06-03/01/11			3v 2p	X	X	X				EQUIP BLANK
0700	3/1/11	AQ	.07	TB-06-03/01/11			1v	X						TRIP BLANK

FOR LAB USE ONLY

ADDITIONAL INSTRUCTIONS:

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

Relinquished by: (Signature/Affiliation)	Received by: (Signature/Affiliation)	Date	Time
[signature] / INSIGHT	[signature] / Alpha Analytical	3/1/11	1500
[signature] / Alpha Analytical	[signature] Adcox / Alpha	3-2-11	1103

*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.

53566

Billing Information:
Company Name Battelle
Attn:
Address 505 King Ave
City, State, Zip Columbus OH 43201
Phone Number Fax

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

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

Consultant / Client Name David Conner
Address
City, State, Zip

Job # G005862/JPL GWM Job Name JPL-GW-1Q11

Report Attention / Project Manager
Name: David Conner
Email: conerd@battelle.org
Phone: Mobile (619)726-7311

Time Sampled	Date Sampled	Matrix* See Key Below	P.O. # 218013 / Lab ID Number (Office Use Only)	Sample Description	TAT	Field Filtered	# Containers**	VOCs (524.2)	Total Cr (200.8)	Perchlorate (314.0)	*300				REMARKS
1440	3/1	AQ	-08	MW-7	10		6V, 3P	X	X	X	X				

FOR LAB USE ONLY

Analyses Required

Data Validation Level: III or IV

EDD / EDF? YES ___ NO ___
Global ID # ___

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

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

Relinquished by: (Signature/Affiliation)	Received by: (Signature/Affiliation)	Date:	Time:
David Conra / Battelle	/ INSIGHT	3/1/11	1450
/ INSIGHT	/ Alpha Analytical	3/1/11	1500
/ Alpha Analytical	Elizabeth Adcox / Alpha	3-2-11	1103

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

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

Alpha Analytical, Inc.

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

Date: *09-Mar-11*

David Conner
Battelle Memorial Institute
655 West Broadway Suite 1420
San Diego, CA 92101
(619) 726-7311

CASE NARRATIVE

Job: G005862/JPL Groundwater Monitoring
Work Order: BMI11030301 **Cooler Temp:** 3 °C

Alpha's Sample ID	Client's Sample ID	Matrix
11030301-01A	MW-8	Aqueous
11030301-02A	MW-15	Aqueous
11030301-03A	MW-10	Aqueous
11030301-04A	DUPE-7-1Q11	Aqueous
11030301-05A	Trip Blank	Aqueous

Manually Integrated Analytes

Alpha's Sample ID	Test Reference	Analyte
NONE		

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

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

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

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

Battelle Memorial Institute
655 West Broadway
San Diego, CA 92101

Attn: David Conner
Phone: (619) 726-7311
Fax: (614) 458-6641
Date Received : 03/03/11

Job: G005862/JPL Groundwater Monitoring

Anions by IC
EPA Method 300.0

	Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-8**					
Lab ID : BMI11030301-01A	Chloride	11	0.50 mg/L	03/03/11 11:48	03/03/11 12:49
Date Sampled 03/02/11 14:28	Nitrite (NO2) - N	ND	0.25 mg/L	03/03/11 11:48	03/03/11 12:49
	Nitrate (NO3) - N	0.50	0.25 mg/L	03/03/11 11:48	03/03/11 12:49
	Phosphate, ortho - P	ND	0.50 mg/L	03/03/11 11:48	03/03/11 12:49
	Sulfate (SO4)	19	0.50 mg/L	03/03/11 11:48	03/03/11 12:49

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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

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

3/16/11
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

Battelle Memorial Institute
655 West Broadway
San Diego, CA 92101

Attn: David Conner
Phone: (619) 726-7311
Fax: (614) 458-6641
Date Received : 03/03/11

Job: G005862/JPL Groundwater Monitoring

Perchlorate by Ion Chromatography
EPA Method 314.0

Parameter		Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-8**					
Lab ID : BMI11030301-01A	Perchlorate	ND	1.00 µg/L	03/02/11 12:21	03/03/11 13:35
Date Sampled 03/02/11 14:28					
Client ID: **MW-10**					
Lab ID : BMI11030301-03A	Perchlorate	1.07	1.00 µg/L	03/02/11 12:21	03/03/11 13:54
Date Sampled 03/02/11 17:05					
Client ID: **DUPE-7-1Q11**					
Lab ID : BMI11030301-04A	Perchlorate	ND	1.00 µg/L	03/02/11 12:21	03/03/11 14:12
Date Sampled 03/02/11 17:10					

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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ANALYTICAL REPORT

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655 West Broadway
San Diego, CA 92101

Attn: David Conner
Phone: (619) 726-7311
Fax: (614) 458-6641
Date Received : 03/03/11

Job: G005862/JPL Groundwater Monitoring

Metals by ICPMS
EPA Method 200.8

Parameter		Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-8**					
Lab ID : BMI11030301-01A	Chromium (Cr)	ND	0.0050 mg/L	03/04/11 12:38	03/07/11 10:53
Date Sampled 03/02/11 14:28					
Client ID: **MW-15**					
Lab ID : BMI11030301-02A	Chromium (Cr)	ND	0.0050 mg/L	03/04/11 12:38	03/07/11 11:21
Date Sampled 03/02/11 15:30					
Client ID: **MW-10**					
Lab ID : BMI11030301-03A	Chromium (Cr)	ND	0.0050 mg/L	03/04/11 12:38	03/07/11 11:27
Date Sampled 03/02/11 17:05					
Client ID: **DUPE-7-1Q11**					
Lab ID : BMI11030301-04A	Chromium (Cr)	ND	0.0050 mg/L	03/04/11 12:38	03/07/11 11:33
Date Sampled 03/02/11 17:10					

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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3/16/11
Report Date

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ANALYTICAL REPORT

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

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

Tentatively Identified Compounds - Volatile Organics by GC/MS

	Parameter	Estimated Concentration	Estimated Reporting Limit	Date Extracted	Date Analyzed
Client ID : **MW-8**					
Lab ID : BMI11030301-01A	*** None Found ***	ND	2.0 µg/L	03/04/11 16:52	03/04/11 16:52
Date Received : 03/03/11					
Date Sampled : 03/02/11 14:28					
Client ID : **MW-10**					
Lab ID : BMI11030301-03A	*** None Found ***	ND	2.0 µg/L	03/04/11 17:14	03/04/11 17:14
Date Received : 03/03/11					
Date Sampled : 03/02/11 17:05					
Client ID : **DUPE-7-1Q11**					
Lab ID : BMI11030301-04A	*** None Found ***	ND	2.0 µg/L	03/04/11 17:35	03/04/11 17:35
Date Received : 03/03/11					
Date Sampled : 03/02/11 17:10					
Client ID : **Trip Blank**					
Lab ID : BMI11030301-05A	*** None Found ***	ND	2.0 µg/L	03/04/11 14:00	03/04/11 14:00
Date Received : 03/03/11					
Date Sampled : 03/02/11 00:00					

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

Roger Scholl Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer
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3/16/11
Report Date

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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI11030301-01A
Client I.D. Number: MW-8

Sampled: 03/02/11 14:28
Received: 03/03/11
Extracted: 03/04/11 16:52
Analyzed: 03/04/11 16:52

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5	µg/L
25	Trichloroethene	ND	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	101	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	110	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	97	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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3/16/11

Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI11030301-03A
Client I.D. Number: MW-10

Sampled: 03/02/11 17:05
Received: 03/03/11
Extracted: 03/04/11 17:14
Analyzed: 03/04/11 17:14

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5	µg/L
25	Trichloroethene	ND	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	100	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	110	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	101	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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

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

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

3/16/11
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI11030301-04A
Client I.D. Number: DUPE-7-1Q11

Sampled: 03/02/11 17:10
Received: 03/03/11
Extracted: 03/04/11 17:35
Analyzed: 03/04/11 17:35

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5	µg/L
25	Trichloroethene	ND	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	99	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	112	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	98	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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Report Date

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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI11030301-05A
Client I.D. Number: Trip Blank

Sampled: 03/02/11 00:00
Received: 03/03/11
Extracted: 03/04/11 14:00
Analyzed: 03/04/11 14:00

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5	µg/L
25	Trichloroethene	ND	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	97	(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	99	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

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Report Date

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

VOC Sample Preservation Report

Work Order: BMI11030301 **Job:** G005862/JPL Groundwater Monitoring

Alpha's Sample ID	Client's Sample ID	Matrix	pH
11030301-01A	MW-8	Aqueous	2
11030301-03A	MW-10	Aqueous	2
11030301-04A	DUPE-7-1Q11	Aqueous	2
11030301-05A	Trip Blank	Aqueous	2

3/16/11

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: *08-Mar-11*

QC Summary Report

Work Order: 11030301

Method Blank

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

File ID: **20** Batch ID: **26098** Analysis Date: **03/03/2011 11:53**

Sample ID: **MB-26098** Units : **mg/L** Run ID: **IC_2_110303A** Prep Date: **03/03/2011 11:48**

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

Laboratory Fortified Blank

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

File ID: **21** Batch ID: **26098** Analysis Date: **03/03/2011 12:12**

Sample ID: **LFB-26098** Units : **mg/L** Run ID: **IC_2_110303A** Prep Date: **03/03/2011 11:48**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	53.8	0.5	50		108	90	110			
Nitrite (NO2) - N	4.86	0.25	5		97	90	110			
Nitrate (NO3) - N	5.52	0.25	5		110	90	110			
Phosphate, ortho - P	4.82	0.5	5		96	90	110			
Sulfate (SO4)	110	0.5	100		110	90	110			

Sample Matrix Spike

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

File ID: **31** Batch ID: **26098** Analysis Date: **03/04/2011 14:28**

Sample ID: **11030302-11ALFM** Units : **mg/L** Run ID: **IC_2_110303A** Prep Date: **03/03/2011 11:48**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	135	0.5	100	44.48	91	80	120			
Nitrite (NO2) - N	10.7	0.25	10	0	107	80	120			
Nitrate (NO3) - N	16.2	0.25	10	5.751	105	80	120			
Phosphate, ortho - P	10.2	0.5	10	0	102	80	120			
Sulfate (SO4)	252	0.5	200	80.54	86	80	120			

Sample Matrix Spike Duplicate

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

File ID: **32** Batch ID: **26098** Analysis Date: **03/04/2011 14:46**

Sample ID: **11030302-11ALFMD** Units : **mg/L** Run ID: **IC_2_110303A** Prep Date: **03/03/2011 11:48**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	137	0.5	100	44.48	93	80	120	135.2	1.6(15)	
Nitrite (NO2) - N	11	0.25	10	0	110	80	120	10.67	2.8(15)	
Nitrate (NO3) - N	16.6	0.25	10	5.751	108	80	120	16.23	2.1(15)	
Phosphate, ortho - P	10.2	0.5	10	0	102	80	120	10.16	0.2(15)	
Sulfate (SO4)	257	0.5	200	80.54	88	80	120	252.4	1.8(15)	

Comments:

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

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Date: *07-Mar-11*

QC Summary Report

Work Order: 11030301

Method Blank

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

File ID: **14** Batch ID: **26092** Analysis Date: **03/02/2011 11:39**

Sample ID: **MB-26092** Units : **µg/L** Run ID: **IC_3_110302A** Prep Date: **03/02/2011 12:21**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	ND	1								

Laboratory Fortified Blank

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

File ID: **15** Batch ID: **26092** Analysis Date: **03/02/2011 11:57**

Sample ID: **LFB-26092** Units : **µg/L** Run ID: **IC_3_110302A** Prep Date: **03/02/2011 12:21**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	25.4	2	25		102	85	115			

Sample Matrix Spike

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

File ID: **20** Batch ID: **26092** Analysis Date: **03/02/2011 13:29**

Sample ID: **11030145-03ALFM** Units : **µg/L** Run ID: **IC_3_110302A** Prep Date: **03/02/2011 12:21**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	50.3	2	25	24.07	105	80	120			

Sample Matrix Spike Duplicate

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

File ID: **21** Batch ID: **26092** Analysis Date: **03/02/2011 13:48**

Sample ID: **11030145-03ALFMD** Units : **µg/L** Run ID: **IC_3_110302A** Prep Date: **03/02/2011 12:21**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	52.1	2	25	24.07	112	80	120	50.28	3.6(15)	

Comments:

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Date: *10-Mar-11*

QC Summary Report

Work Order: 11030301

Method Blank

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

File ID: **030711.B\086_M.D** Batch ID: **26109** Analysis Date: **03/07/2011 21:17**

Sample ID: **MB-26109** Units : **mg/L** Run ID: **ICP/MS_110307B** Prep Date: **03/04/2011 12:38**

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

Laboratory Control Spike

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

File ID: **030711.B\152_D.D** Batch ID: **26109** Analysis Date: **03/08/2011 11:57**

Sample ID: **LCS-26109** Units : **mg/L** Run ID: **ICP/MS_110307B** Prep Date: **03/04/2011 12:38**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0536	0.005	0.05		107	85	115			

Sample Matrix Spike

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

File ID: **030711.B\092_M.D** Batch ID: **26109** Analysis Date: **03/07/2011 21:51**

Sample ID: **11030401-09AMS** Units : **mg/L** Run ID: **ICP/MS_110307B** Prep Date: **03/04/2011 12:38**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0474	0.005	0.05	0	95	70	130			

Sample Matrix Spike Duplicate

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

File ID: **030711.B\093_M.D** Batch ID: **26109** Analysis Date: **03/07/2011 21:56**

Sample ID: **11030401-09AMSD** Units : **mg/L** Run ID: **ICP/MS_110307B** Prep Date: **03/04/2011 12:38**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0482	0.005	0.05	0	96	70	130	0.04744	1.5(20)	

Comments:

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

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Date: *09-Mar-11*

QC Summary Report

Work Order: 11030301

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

File ID: **11030406.D** Batch ID: **MS15W0304M** Analysis Date: **03/04/2011 10:46**

Sample ID: **MBLK MS15W0304M** Units : **µg/L** Run ID: **MSD_15_110304B** Prep Date: **03/04/2011 10:46**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	ND	0.5								
Chloromethane	ND	1								
Vinyl chloride	ND	0.5								
Chloroethane	ND	0.5								
Bromomethane	ND	1								
Trichlorofluoromethane	ND	0.5								
1,1-Dichloroethene	ND	0.5								
Dichloromethane	ND	1								
Freon-113	ND	0.5								
trans-1,2-Dichloroethene	ND	0.5								
Methyl tert-butyl ether (MTBE)	ND	0.5								
1,1-Dichloroethane	ND	0.5								
2-Butanone (MEK)	ND	10								
cis-1,2-Dichloroethene	ND	0.5								
Bromochloromethane	ND	0.5								
Chloroform	ND	0.5								
2,2-Dichloropropane	ND	0.5								
1,2-Dichloroethane	ND	0.5								
1,1,1-Trichloroethane	ND	0.5								
1,1-Dichloropropene	ND	0.5								
Carbon tetrachloride	ND	0.5								
Benzene	ND	0.5								
Dibromomethane	ND	0.5								
1,2-Dichloropropane	ND	0.5								
Trichloroethene	ND	0.5								
Bromodichloromethane	ND	0.5								
4-Methyl-2-pentanone (MIBK)	ND	2.5								
cis-1,3-Dichloropropene	ND	0.5								
trans-1,3-Dichloropropene	ND	0.5								
1,1,2-Trichloroethane	ND	0.5								
Toluene	ND	0.5								
1,3-Dichloropropane	ND	0.5								
Dibromochloromethane	ND	0.5								
1,2-Dibromoethane (EDB)	ND	1								
Tetrachloroethene	ND	0.5								
1,1,1,2-Tetrachloroethane	ND	0.5								
Chlorobenzene	ND	0.5								
Ethylbenzene	ND	0.5								
m,p-Xylene	ND	0.5								
Bromoform	ND	0.5								
Styrene	ND	0.5								
o-Xylene	ND	0.5								
1,1,2,2-Tetrachloroethane	ND	0.5								
1,2,3-Trichloropropane	ND	1								
Isopropylbenzene	ND	0.5								
Bromobenzene	ND	0.5								
n-Propylbenzene	ND	0.5								
4-Chlorotoluene	ND	0.5								
2-Chlorotoluene	ND	0.5								
1,3,5-Trimethylbenzene	ND	0.5								
tert-Butylbenzene	ND	0.5								
1,2,4-Trimethylbenzene	ND	0.5								
sec-Butylbenzene	ND	0.5								
1,3-Dichlorobenzene	ND	0.5								
1,4-Dichlorobenzene	ND	0.5								
4-Isopropyltoluene	ND	0.5								
1,2-Dichlorobenzene	ND	0.5								
n-Butylbenzene	ND	0.5								
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5								
1,2,4-Trichlorobenzene	ND	1								
Naphthalene	ND	1								
Hexachlorobutadiene	ND	1								
1,2,3-Trichlorobenzene	ND	1								
Surr: 1,2-Dichloroethane-d4	9.72		10		97	70	130			
Surr: Toluene-d8	10.6		10		106	70	130			

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QC Summary Report

Work Order: 11030301

Surr: 4-Bromofluorobenzene	10.1	10	101	70	130

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QC Summary Report

Work Order: 11030301

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

File ID: **11030403.D** Batch ID: **MS15W0304M** Analysis Date: **03/04/2011 09:31**

Sample ID: **LCS MS15W0304M** Units : **µg/L** Run ID: **MSD_15_110304B** Prep Date: **03/04/2011 09:31**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	6.7	1	10		67	70(70)	130			L50
Chloromethane	9	2	10		90	70	130			
Vinyl chloride	9.16	1	10		92	70	130			
Chloroethane	9.57	1	10		96	70	130			
Bromomethane	7.02	2	10		70	70	130			
Trichlorofluoromethane	9.16	1	10		92	70	130			
1,1-Dichloroethene	10.3	1	10		103	70	130			
Dichloromethane	9.45	2	10		95	70	130			
Freon-113	10.1	1	10		101	70	137			
trans-1,2-Dichloroethene	10.3	1	10		103	70	130			
Methyl tert-butyl ether (MTBE)	8.87	0.5	10		89	70	130			
1,1-Dichloroethane	10.4	1	10		104	70	130			
2-Butanone (MEK)	176	10	200		88	70	130			
cis-1,2-Dichloroethene	10.4	1	10		104	70	130			
Bromochloromethane	9.74	1	10		97	70	130			
Chloroform	9.37	1	10		94	70	130			
2,2-Dichloropropane	10.2	1	10		102	70	130			
1,2-Dichloroethane	9.03	1	10		90	70	130			
1,1,1-Trichloroethane	10.2	1	10		102	70	130			
1,1-Dichloropropene	10.6	1	10		106	70	130			
Carbon tetrachloride	9.05	1	10		91	70	130			
Benzene	9.88	0.5	10		99	70	130			
Dibromomethane	9.56	1	10		96	70	130			
1,2-Dichloropropane	10.6	1	10		106	70	130			
Trichloroethene	10.5	1	10		105	70	130			
Bromodichloromethane	10.2	1	10		102	70	130			
4-Methyl-2-pentanone (MIBK)	22.2	2.5	25		89	20	182			
cis-1,3-Dichloropropene	9.61	1	10		96	70	130			
trans-1,3-Dichloropropene	8.36	1	10		84	70	130			
1,1,2-Trichloroethane	9.55	1	10		96	70	130			
Toluene	10.7	0.5	10		107	70	130			
1,3-Dichloropropane	10	1	10		100	70	130			
Dibromochloromethane	9.83	1	10		98	70	130			
1,2-Dibromoethane (EDB)	20.2	2	20		101	70	130			
Tetrachloroethene	10.5	1	10		105	70	130			
1,1,1,2-Tetrachloroethane	10.7	1	10		107	70	130			
Chlorobenzene	10.5	1	10		105	70	130			
Ethylbenzene	10.6	0.5	10		106	70	130			
m,p-Xylene	10.8	0.5	10		108	70	130			
Bromoform	9.01	1	10		90	70	130			
Styrene	10.9	1	10		109	70	130			
o-Xylene	10.9	0.5	10		109	70	130			
1,1,2,2-Tetrachloroethane	9.58	1	10		96	70	130			
1,2,3-Trichloropropane	18.4	2	20		92	70	130			
Isopropylbenzene	11	1	10		110	70	130			
Bromobenzene	10.3	1	10		103	70	130			
n-Propylbenzene	11.3	1	10		113	70	130			
4-Chlorotoluene	11.4	1	10		114	70	130			
2-Chlorotoluene	10.9	1	10		109	70	130			
1,3,5-Trimethylbenzene	11	1	10		110	70	130			
tert-Butylbenzene	10.7	1	10		107	70	130			
1,2,4-Trimethylbenzene	11.1	1	10		111	70	130			
sec-Butylbenzene	10.8	1	10		108	70	130			
1,3-Dichlorobenzene	10.9	1	10		109	70	130			
1,4-Dichlorobenzene	10.3	1	10		103	70	130			
4-Isopropyltoluene	10.9	1	10		109	70	130			
1,2-Dichlorobenzene	9.91	1	10		99	70	130			
n-Butylbenzene	11.5	1	10		115	70	130			
1,2-Dibromo-3-chloropropane (DBCP)	43.3	3	50		87	67	130			
1,2,4-Trichlorobenzene	10.7	2	10		107	70	130			
Naphthalene	9.22	2	10		92	70	130			
Hexachlorobutadiene	18.7	2	20		93	70	130			
1,2,3-Trichlorobenzene	10.5	2	10		105	70	130			
Surr: 1,2-Dichloroethane-d4	9.26		10		93	70	130			
Surr: Toluene-d8	10.1		10		101	70	130			

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Surr: 4-Bromofluorobenzene	10.2	10	102	70	130	

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Date: *09-Mar-11*

QC Summary Report

Work Order: 11030301

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

File ID: **11030409.D** Batch ID: **MS15W0304M** Analysis Date: **03/04/2011 11:50**

Sample ID: **11030203-01AMS** Units : **µg/L** Run ID: **MSD_15_110304B** Prep Date: **03/04/2011 11:50**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	40.6	2.5	50	0	81	21	138			
Chloromethane	50.9	10	50	0	102	23	144			
Vinyl chloride	51.5	2.5	50	0	103	49	136			
Chloroethane	52.4	2.5	50	0	105	21	159			
Bromomethane	33.6	10	50	0	67	10	174			
Trichlorofluoromethane	50.2	2.5	50	0	100	32	154			
1,1-Dichloroethene	53.1	2.5	50	0	106	64	130			
Dichloromethane	48.5	10	50	0	97	69	130			
Freon-113	54	2.5	50	0	108	55	141			
trans-1,2-Dichloroethene	52.5	2.5	50	0	105	63	130			
Methyl tert-butyl ether (MTBE)	51.5	1.3	50	0	103	47	150			
1,1-Dichloroethane	52.7	2.5	50	0	105	66	130			
2-Butanone (MEK)	814	50	1000	0	81	23	182			
cis-1,2-Dichloroethene	53.4	2.5	50	0	107	70	130			
Bromochloromethane	51.7	2.5	50	0	103	70	132			
Chloroform	58.6	2.5	50	10.36	96	70	130			
2,2-Dichloropropane	52.4	2.5	50	0	105	38	154			
1,2-Dichloroethane	49	2.5	50	0	98	65	134			
1,1,1-Trichloroethane	51.3	2.5	50	0	103	65	136			
1,1-Dichloropropene	53.9	2.5	50	0	108	68	132			
Carbon tetrachloride	46.7	2.5	50	0	93	58	148			
Benzene	50.3	1.3	50	0	101	59	138			
Dibromomethane	53	2.5	50	0	106	70	130			
1,2-Dichloropropane	55.8	2.5	50	0	112	70	131			
Trichloroethene	52.4	2.5	50	0	105	65	144			
Bromodichloromethane	69	2.5	50	15.75	106	50	157			
4-Methyl-2-pentanone (MIBK)	124	13	125	0	99	20	182			
cis-1,3-Dichloropropene	47.7	2.5	50	0	95	63	131			
trans-1,3-Dichloropropene	42.6	2.5	50	0	85	65	136			
1,1,2-Trichloroethane	52.6	2.5	50	0	105	70	131			
Toluene	54.9	1.3	50	0	110	68	130			
1,3-Dichloropropane	57.1	2.5	50	0	114	70	130			
Dibromochloromethane	69.2	2.5	50	16.65	105	42	155			
1,2-Dibromoethane (EDB)	112	5	100	0	112	70	130			
Tetrachloroethene	53.5	2.5	50	0	107	65	130			
1,1,1,2-Tetrachloroethane	54.3	2.5	50	0	109	70	130			
Chlorobenzene	52.6	2.5	50	0	105	70	130			
Ethylbenzene	52.3	1.3	50	0	105	68	130			
m,p-Xylene	52.6	1.3	50	0	105	68	131			
Bromoform	51.6	2.5	50	5.01	93	65	143			
Styrene	48.2	2.5	50	0	96	59	153			
o-Xylene	52.9	1.3	50	0	106	70	130			
1,1,2,2-Tetrachloroethane	53.4	2.5	50	0	107	67	130			
1,2,3-Trichloropropane	99	10	100	0	99	70	130			
Isopropylbenzene	52.7	2.5	50	0	105	55	138			
Bromobenzene	50.4	2.5	50	0	101	70	130			
n-Propylbenzene	53.5	2.5	50	0	107	67	133			
4-Chlorotoluene	54.1	2.5	50	0	108	70	130			
2-Chlorotoluene	53.1	2.5	50	0	106	70	130			
1,3,5-Trimethylbenzene	53.2	2.5	50	0	106	67	134			
tert-Butylbenzene	51.6	2.5	50	0	103	55	147			
1,2,4-Trimethylbenzene	53.5	2.5	50	0	107	65	135			
sec-Butylbenzene	53.2	2.5	50	0	106	68	135			
1,3-Dichlorobenzene	53.5	2.5	50	0	107	70	130			
1,4-Dichlorobenzene	51.3	2.5	50	0	103	70	130			
4-Isopropyltoluene	53.5	2.5	50	0	107	68	132			
1,2-Dichlorobenzene	50.4	2.5	50	0	101	70	130			
n-Butylbenzene	56.6	2.5	50	0	113	62	134			
1,2-Dibromo-3-chloropropane (DBCP)	247	15	250	0	99	64	130			
1,2,4-Trichlorobenzene	58.8	10	50	0	118	62	133			
Naphthalene	50.2	10	50	0	100	32	166			
Hexachlorobutadiene	98.7	10	100	0	99	63	130			
1,2,3-Trichlorobenzene	58.3	10	50	0	117	55	138			
Surr: 1,2-Dichloroethane-d4	47.6		50		95	70	130			
Surr: Toluene-d8	51.9		50		104	70	130			

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Work Order: 11030301

Surr: 4-Bromofluorobenzene	49.1	50	98	70	130	

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Date: *09-Mar-11*

QC Summary Report

Work Order: 11030301

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

File ID: **11030410.D** Batch ID: **MS15W0304M** Analysis Date: **03/04/2011 12:12**

Sample ID: **11030203-01AMSD** Units : **µg/L** Run ID: **MSD_15_110304B** Prep Date: **03/04/2011 12:12**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	39.3	2.5	50	0	79	21	138	40.63	3.3(33)	
Chloromethane	49	10	50	0	98	23	144	50.86	3.8(27)	
Vinyl chloride	49.5	2.5	50	0	99	49	136	51.46	3.8(21)	
Chloroethane	50.3	2.5	50	0	101	21	159	52.44	4.3(40)	
Bromomethane	37	10	50	0	74	10	174	33.64	9.6(40)	
Trichlorofluoromethane	48.9	2.5	50	0	98	32	154	50.18	2.6(37)	
1,1-Dichloroethene	50.7	2.5	50	0	101	64	130	53.11	4.7(21)	
Dichloromethane	46.5	10	50	0	93	69	130	48.5	4.2(20)	
Freon-113	51.5	2.5	50	0	103	55	141	54.01	4.7(40)	
trans-1,2-Dichloroethene	50.2	2.5	50	0	100	63	130	52.51	4.5(20)	
Methyl tert-butyl ether (MTBE)	49.2	1.3	50	0	98	47	150	51.49	4.5(40)	
1,1-Dichloroethane	51.3	2.5	50	0	103	66	130	52.73	2.8(20)	
2-Butanone (MEK)	764	50	1000	0	76	23	182	814.1	6.3(22)	
cis-1,2-Dichloroethene	51.8	2.5	50	0	104	70	130	53.42	3.1(20)	
Bromochloromethane	49	2.5	50	0	98	70	132	51.73	5.4(20)	
Chloroform	57.3	2.5	50	10.36	94	70	130	58.56	2.2(20)	
2,2-Dichloropropane	52.1	2.5	50	0	104	38	154	52.39	0.5(22)	
1,2-Dichloroethane	46.5	2.5	50	0	93	65	134	49.02	5.4(20)	
1,1,1-Trichloroethane	50.1	2.5	50	0	100	65	136	51.27	2.4(20)	
1,1-Dichloropropene	52.1	2.5	50	0	104	68	132	53.91	3.5(20)	
Carbon tetrachloride	46.9	2.5	50	0	94	58	148	46.65	0.5(20)	
Benzene	48.7	1.3	50	0	97	59	138	50.26	3.2(21)	
Dibromomethane	49.9	2.5	50	0	99.7	70	130	52.96	6.0(20)	
1,2-Dichloropropane	53.3	2.5	50	0	107	70	131	55.8	4.6(20)	
Trichloroethene	50	2.5	50	0	100	65	144	52.42	4.7(20)	
Bromodichloromethane	67.7	2.5	50	15.75	104	50	157	68.95	1.8(20)	
4-Methyl-2-pentanone (MIBK)	115	13	125	0	92	20	182	123.7	7.7(20)	
cis-1,3-Dichloropropene	46.1	2.5	50	0	92	63	131	47.73	3.5(20)	
trans-1,3-Dichloropropene	41.9	2.5	50	0	84	65	136	42.55	1.5(20)	
1,1,2-Trichloroethane	48.8	2.5	50	0	98	70	131	52.58	7.5(20)	
Toluene	53.7	1.3	50	0	107	68	130	54.94	2.2(20)	
1,3-Dichloropropane	54.3	2.5	50	0	109	70	130	57.09	5.0(20)	
Dibromochloromethane	68.1	2.5	50	16.65	103	42	155	69.21	1.6(20)	
1,2-Dibromoethane (EDB)	107	5	100	0	107	70	130	112.1	4.5(20)	
Tetrachloroethene	51.9	2.5	50	0	104	65	130	53.5	3.0(20)	
1,1,1,2-Tetrachloroethane	53.9	2.5	50	0	108	70	130	54.25	0.7(20)	
Chlorobenzene	51.2	2.5	50	0	102	70	130	52.57	2.6(20)	
Ethylbenzene	50.7	1.3	50	0	101	68	130	52.27	3.0(20)	
m,p-Xylene	51.8	1.3	50	0	104	68	131	52.63	1.5(20)	
Bromoform	51.6	2.5	50	5.01	93	65	143	51.56	0.1(20)	
Styrene	48.7	2.5	50	0	97	59	153	48.24	0.9(37)	
o-Xylene	51	1.3	50	0	102	70	130	52.94	3.8(20)	
1,1,2,2-Tetrachloroethane	49.2	2.5	50	0	98	67	130	53.42	8.2(20)	
1,2,3-Trichloropropane	93.2	10	100	0	93	70	130	98.96	6.0(20)	
Isopropylbenzene	52.6	2.5	50	0	105	55	138	52.74	0.4(20)	
Bromobenzene	49.9	2.5	50	0	99.7	70	130	50.36	1.0(20)	
n-Propylbenzene	54.2	2.5	50	0	108	67	133	53.48	1.3(30)	
4-Chlorotoluene	53.9	2.5	50	0	108	70	130	54.05	0.3(20)	
2-Chlorotoluene	51.4	2.5	50	0	103	70	130	53.11	3.2(20)	
1,3,5-Trimethylbenzene	52.9	2.5	50	0	106	67	134	53.17	0.4(21)	
tert-Butylbenzene	51.9	2.5	50	0	104	55	147	51.55	0.7(20)	
1,2,4-Trimethylbenzene	52.9	2.5	50	0	106	65	135	53.48	1.2(25)	
sec-Butylbenzene	53.2	2.5	50	0	106	68	135	53.21	0.0(20)	
1,3-Dichlorobenzene	54	2.5	50	0	108	70	130	53.51	0.8(20)	
1,4-Dichlorobenzene	51.1	2.5	50	0	102	70	130	51.26	0.3(20)	
4-Isopropyltoluene	53.8	2.5	50	0	108	68	132	53.53	0.6(20)	
1,2-Dichlorobenzene	50.4	2.5	50	0	101	70	130	50.35	0.2(20)	
n-Butylbenzene	58.1	2.5	50	0	116	62	134	56.6	2.6(21)	
1,2-Dibromo-3-chloropropane (DBCP)	241	15	250	0	96	64	130	246.6	2.3(20)	
1,2,4-Trichlorobenzene	57.4	10	50	0	115	62	133	58.81	2.4(29)	
Naphthalene	48.7	10	50	0	97	32	166	50.18	3.1(40)	
Hexachlorobutadiene	104	10	100	0	104	63	130	98.71	5.6(21)	
1,2,3-Trichlorobenzene	56	10	50	0	112	55	138	58.26	3.9(36)	
Surr: 1,2-Dichloroethane-d4	46.8		50		94	70	130			
Surr: Toluene-d8	52.2		50		104	70	130			

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Date: *09-Mar-11*

QC Summary Report

Work Order: 11030301

Surr: 4-Bromofluorobenzene	50.2	50	100	70	130	

Comments:

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

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

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

Billing Information :

CHAIN-OF-CUSTODY RECORD

CA

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

WorkOrder : BMIS11030301

Report Due By : 5:00 PM On : 17-Mar-2011

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

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

EDD Required : **Yes**

Sampled by : David Loera

PO : 218013

Client's COC # : 53569 Job : G005862/JPL Groundwater Monitoring

Cooler Temp	Samples Received	Date Printed
3 °C	03-Mar-2011	**03-Mar-2011**

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

Alpha Sample ID	Client Sample ID	Matrix	Collection Date	No. of Bottles Alpha	Sub	TAT	Requested Tests 300_0_W	314_W	METALS_DW	VOC_TIC_W	VOC_W				Sample Remarks
BMI11030301-01A	MW-8	AQ	03/02/11 14:28	9	0	10	NO2, NO3, SO4, Cl, PO4	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				
BMI11030301-02A	MW-15	AQ	03/02/11 15:30	1	0	10			Cr						
BMI11030301-03A	MW-10	AQ	03/02/11 17:05	7	0	10		Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				
BMI11030301-04A	DUPE-7-1Q11	AQ	03/02/11 17:10	7	0	10		Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				
BMI11030301-05A	Trip Blank	AQ	03/02/11 00:00	1	0	10				VOC by 524 Criteria	VOC by 524 Criteria				Reno Trip Blank 11/22/10

Comments: No security seals. Frozen ice. Temp Blank #9009 received @ 3°C. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). :

	Signature	Print Name	Company	Date/Time
Logged in by:	Elizabeth Adcox	Elizabeth Adcox	**Alpha Analytical, Inc.**	3-3-11 9:43

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

53569

Billing Information:
Company Name: Battelle
Attn:
Address: 505 King AVE
City, State, Zip: Columbus, OH. 43201
Phone Number: Fax:

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

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

Consultant / Client Name: David Conner
Address:
City, State, Zip:
Job #: G005862/JPL GWM
Job Name: JPL-GW-1Q11
Report Attention / Project Manager
Name: David Conner
Email: Connerd@battelle.org
Phone: Mobile: 619-726-7311

Time Sampled	Date Sampled	Matrix* See Key Below	P.O. # 218013 / Lab ID Number (Office Use Only)	Sample Description	TAT	Field Filtered	# Containers**	VOCs (524.2)	Total Cr (200.8)	Perchlorate (314.0)	4 300				REMARKS
1428	3/2	AQ	BMI1103039-01	MW-8	10		6V 3P	X	X	X	X				
1530	3/2	AQ	-02	MW-15	10		1P		X						
1705	3/2	AQ	-03	MW-10	10		6V 1P	X	X	X					
1710	3/2	AQ	-04	DUPE-7-1011	10		6V 1P	X	X	X					
		AQ	-05	Trip Blank	10		1V								
		AQ		Temp Blank	10		1P								

FOR LAB USE ONLY

Analyses Required

Data Validation Level: III or IV

EDD / EDF? YES ___ NO ___
Global ID #:

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

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

Relinquished by: (Signature/Affiliation)	Received by: (Signature/Affiliation)	Date:	Time:
David La / Battelle			
Relinquished by: (Signature/Affiliation)	Received by: (Signature/Affiliation)	Date:	Time:
	Elizabeth Adcox / Alpha	3.3.11	9:43
Relinquished by: (Signature/Affiliation)	Received by: (Signature/Affiliation)	Date:	Time:

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

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

Alpha Analytical, Inc.

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

Date: *15-Mar-11*

David Conner
Battelle Memorial Institute
655 West Broadway Suite 1420
San Diego, CA 92101
(619) 726-7311

CASE NARRATIVE

Job: G005862/JPL Groundwater Monitoring
Work Order: BMI11030302 **Cooler Temp:** 0 °C

Alpha's Sample ID	Client's Sample ID	Matrix
11030302-01A	MW-4-3	Aqueous
11030302-02A	MW-4-2	Aqueous
11030302-03A	MW-4-1	Aqueous
11030302-04A	DUPE-04-1Q11	Aqueous
11030302-05A	EB-07-03/02/11	Aqueous
11030302-06A	TB-07-03/02/11	Aqueous
11030302-07A	MW-3-4	Aqueous
11030302-08A	MW-3-3	Aqueous
11030302-09A	MW-3-2	Aqueous
11030302-10A	MW-6	Aqueous
11030302-11A	MW-13	Aqueous

Manually Integrated Analytes

Alpha's Sample ID	Test Reference	Analyte
11030302-10A	EPA Method 314.0	Perchlorate

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

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

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

Alpha Analytical, Inc.

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ANALYTICAL REPORT

Battelle Memorial Institute
655 West Broadway
San Diego, CA 92101

Attn: David Conner
Phone: (619) 726-7311
Fax: (614) 458-6641
Date Received : 03/03/11

Job: G005862/JPL Groundwater Monitoring

Anions by IC
EPA Method 300.0

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-13**				
Lab ID : BMI11030302-11A	Chloride	44	0.50 mg/L	03/03/11 11:48	03/03/11 13:07
Date Sampled 03/02/11 12:01	Nitrite (NO2) - N	ND	0.25 mg/L	03/03/11 11:48	03/03/11 13:07
	Nitrate (NO3) - N	5.8	0.25 mg/L	03/03/11 11:48	03/03/11 13:07
	Phosphate, ortho - P	ND	0.50 mg/L	03/03/11 11:48	03/03/11 13:07
	Sulfate (SO4)	81	0.50 mg/L	03/03/11 11:48	03/03/11 13:07

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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

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

3/15/11
Report Date

Alpha Analytical, Inc.

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ANALYTICAL REPORT

Battelle Memorial Institute
655 West Broadway
San Diego, CA 92101

Attn: David Conner
Phone: (619) 726-7311
Fax: (614) 458-6641
Date Received : 03/03/11

Job: G005862/JPL Groundwater Monitoring

Perchlorate by Ion Chromatography
EPA Method 314.0

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-4-3**				
Lab ID : BMI11030302-01A Perchlorate	ND	1.00 µg/L	03/04/11 10:36	03/04/11 14:00
Date Sampled 03/02/11 08:46				
Client ID: **MW-4-2**				
Lab ID : BMI11030302-02A Perchlorate	23.0	1.00 µg/L	03/04/11 10:36	03/04/11 14:19
Date Sampled 03/02/11 09:17				
Client ID: **MW-4-1**				
Lab ID : BMI11030302-03A Perchlorate	ND	1.00 µg/L	03/04/11 10:36	03/04/11 14:37
Date Sampled 03/02/11 09:53				
Client ID: **DUPE-04-1Q11**				
Lab ID : BMI11030302-04A Perchlorate	22.5	1.00 µg/L	03/04/11 10:36	03/04/11 14:55
Date Sampled 03/02/11 00:00				
Client ID: **EB-07-03/02/11**				
Lab ID : BMI11030302-05A Perchlorate	ND	1.00 µg/L	03/04/11 10:36	03/04/11 15:14
Date Sampled 03/02/11 10:01				
Client ID: **MW-3-4**				
Lab ID : BMI11030302-07A Perchlorate	ND	1.00 µg/L	03/04/11 10:36	03/04/11 15:32
Date Sampled 03/02/11 11:20				
Client ID: **MW-3-3**				
Lab ID : BMI11030302-08A Perchlorate	ND	1.00 µg/L	03/04/11 10:36	03/04/11 16:27
Date Sampled 03/02/11 11:42				
Client ID: **MW-3-2**				
Lab ID : BMI11030302-09A Perchlorate	45.8	1.00 µg/L	03/04/11 10:36	03/04/11 16:46
Date Sampled 03/02/11 12:00				
Client ID: **MW-6**				
Lab ID : BMI11030302-10A Perchlorate	3.14	1.00 µg/L	03/04/11 10:36	03/04/11 17:04
Date Sampled 03/02/11 09:40				
Client ID: **MW-13**				
Lab ID : BMI11030302-11A Perchlorate	167	10.0 µg/L	03/04/11 10:36	03/07/11 15:34
Date Sampled 03/02/11 12:01				

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ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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3/15/11

Report Date

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ANALYTICAL REPORT

Battelle Memorial Institute
655 West Broadway
San Diego, CA 92101

Attn: David Conner
Phone: (619) 726-7311
Fax: (614) 458-6641
Date Received : 03/03/11

Job: G005862/JPL Groundwater Monitoring

Metals by ICPMS
EPA Method 200.8

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-4-3**				
Lab ID : BMI11030302-01A Chromium (Cr)	ND	0.0050 mg/L	03/08/11 09:44	03/09/11 13:40
Date Sampled 03/02/11 08:46				
Client ID: **MW-4-2**				
Lab ID : BMI11030302-02A Chromium (Cr)	0.0067	0.0050 mg/L	03/08/11 09:44	03/09/11 13:45
Date Sampled 03/02/11 09:17				
Client ID: **MW-4-1**				
Lab ID : BMI11030302-03A Chromium (Cr)	ND	0.0050 mg/L	03/08/11 09:44	03/09/11 13:17
Date Sampled 03/02/11 09:53				
Client ID: **DUPE-04-1Q11**				
Lab ID : BMI11030302-04A Chromium (Cr)	ND	0.0050 mg/L	03/08/11 09:44	03/09/11 13:51
Date Sampled 03/02/11 00:00				
Client ID: **EB-07-03/02/11**				
Lab ID : BMI11030302-05A Chromium (Cr)	ND	0.0050 mg/L	03/08/11 09:44	03/09/11 14:01
Date Sampled 03/02/11 10:01				
Client ID: **MW-3-4**				
Lab ID : BMI11030302-07A Chromium (Cr)	ND	0.0050 mg/L	03/08/11 09:44	03/09/11 14:07
Date Sampled 03/02/11 11:20				
Client ID: **MW-3-3**				
Lab ID : BMI11030302-08A Chromium (Cr)	ND	0.0050 mg/L	03/08/11 09:44	03/09/11 14:12
Date Sampled 03/02/11 11:42				
Client ID: **MW-3-2**				
Lab ID : BMI11030302-09A Chromium (Cr)	0.0056	0.0050 mg/L	03/08/11 09:44	03/09/11 14:18
Date Sampled 03/02/11 12:00				
Client ID: **MW-6**				
Lab ID : BMI11030302-10A Chromium (Cr)	ND	0.0050 mg/L	03/08/11 09:44	03/09/11 14:24
Date Sampled 03/02/11 09:40				
Client ID: **MW-13**				
Lab ID : BMI11030302-11A Chromium (Cr)	0.015	0.0050 mg/L	03/08/11 09:44	03/09/11 14:29
Date Sampled 03/02/11 12:01				

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ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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ANALYTICAL REPORT

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

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

Tentatively Identified Compounds - Volatile Organics by GC/MS

	Parameter	Estimated Concentration	Estimated Reporting Limit	Date Extracted	Date Analyzed
Client ID : **MW-4-3** Lab ID : BMI11030302-01A Date Received : 03/03/11 Date Sampled : 03/02/11 08:46	*** None Found ***	ND	2.0 µg/L	03/07/11 12:45	03/07/11 12:45
Client ID : **MW-4-2** Lab ID : BMI11030302-02A Date Received : 03/03/11 Date Sampled : 03/02/11 09:17	*** None Found ***	ND	2.0 µg/L	03/07/11 13:06	03/07/11 13:06
Client ID : **MW-4-1** Lab ID : BMI11030302-03A Date Received : 03/03/11 Date Sampled : 03/02/11 09:53	*** None Found ***	ND	2.0 µg/L	03/07/11 13:28	03/07/11 13:28
Client ID : **DUPE-04-1Q11** Lab ID : BMI11030302-04A Date Received : 03/03/11 Date Sampled : 03/02/11 00:00	*** None Found ***	ND	2.0 µg/L	03/07/11 13:49	03/07/11 13:49
Client ID : **EB-07-03/02/11** Lab ID : BMI11030302-05A Date Received : 03/03/11 Date Sampled : 03/02/11 10:01	*** None Found ***	ND	2.0 µg/L	03/07/11 12:23	03/07/11 12:23
Client ID : **TB-07-03/02/11** Lab ID : BMI11030302-06A Date Received : 03/03/11 Date Sampled : 03/02/11 07:00	*** None Found ***	ND	2.0 µg/L	03/07/11 12:02	03/07/11 12:02
Client ID : **MW-3-4** Lab ID : BMI11030302-07A Date Received : 03/03/11 Date Sampled : 03/02/11 11:20	*** None Found ***	ND	2.0 µg/L	03/07/11 14:11	03/07/11 14:11
Client ID : **MW-3-3** Lab ID : BMI11030302-08A Date Received : 03/03/11 Date Sampled : 03/02/11 11:42	*** None Found ***	ND	2.0 µg/L	03/07/11 14:32	03/07/11 14:32
Client ID : **MW-3-2** Lab ID : BMI11030302-09A Date Received : 03/03/11 Date Sampled : 03/02/11 12:00	*** None Found ***	ND	2.0 µg/L	03/07/11 14:54	03/07/11 14:54

Alpha Analytical, Inc.

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Client ID :	**MW-6**					
Lab ID :	BMI11030302-10A	*** None Found ***	ND	2.0 µg/L	03/07/11 15:15	03/07/11 15:15
Date Received :	03/03/11					
Date Sampled :	03/02/11 09:40					
Client ID :	**MW-13**					
Lab ID :	BMI11030302-11A	*** None Found ***	ND	2.0 µg/L	03/07/11 15:37	03/07/11 15:37
Date Received :	03/03/11					
Date Sampled :	03/02/11 12:01					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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3/15/11

Report Date

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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI11030302-01A
Client I.D. Number: MW-4-3

Sampled: 03/02/11 08:46
Received: 03/03/11
Extracted: 03/07/11 12:45
Analyzed: 03/07/11 12:45

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit	
1	Dichlorodifluoromethane	ND		0.50	µg/L
2	Chloromethane	ND		1.0	µg/L
3	Vinyl chloride	ND		0.50	µg/L
4	Chloroethane	ND		0.50	µg/L
5	Bromomethane	ND	Q	1.0	µg/L
6	Trichlorofluoromethane	ND		0.50	µg/L
7	1,1-Dichloroethene	ND		0.50	µg/L
8	Dichloromethane	ND		1.0	µg/L
9	Freon-113	ND		0.50	µg/L
10	trans-1,2-Dichloroethene	ND		0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND		0.50	µg/L
12	1,1-Dichloroethane	ND		0.50	µg/L
13	2-Butanone (MEK)	ND		10	µg/L
14	cis-1,2-Dichloroethene	ND		0.50	µg/L
15	Bromochloromethane	ND		0.50	µg/L
16	Chloroform	ND		0.50	µg/L
17	2,2-Dichloropropane	ND		0.50	µg/L
18	1,2-Dichloroethane	ND		0.50	µg/L
19	1,1,1-Trichloroethane	ND		0.50	µg/L
20	1,1-Dichloropropene	ND		0.50	µg/L
21	Carbon tetrachloride	ND		0.50	µg/L
22	Benzene	ND		0.50	µg/L
23	Dibromomethane	ND		0.50	µg/L
24	1,2-Dichloropropane	ND		0.50	µg/L
25	Trichloroethene	ND		0.50	µg/L
26	Bromodichloromethane	ND		0.50	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND		2.5	µg/L
28	cis-1,3-Dichloropropene	ND		0.50	µg/L
29	trans-1,3-Dichloropropene	ND		0.50	µg/L
30	1,1,2-Trichloroethane	ND		0.50	µg/L
31	Toluene	ND		0.50	µg/L
32	1,3-Dichloropropane	ND		0.50	µg/L
33	Dibromochloromethane	ND		0.50	µg/L
34	1,2-Dibromoethane (EDB)	ND		1.0	µg/L
35	Tetrachloroethene	ND		0.50	µg/L
36	1,1,1,2-Tetrachloroethane	ND		0.50	µg/L
37	Chlorobenzene	ND		0.50	µg/L
38	Ethylbenzene	ND		0.50	µg/L
39	m,p-Xylene	ND		0.50	µg/L
40	Bromoform	ND		0.50	µg/L
41	Styrene	ND		0.50	µg/L
42	o-Xylene	ND		0.50	µg/L
43	1,1,2,2-Tetrachloroethane	ND		0.50	µg/L
44	1,2,3-Trichloropropane	ND		1.0	µg/L
45	Isopropylbenzene	ND		0.50	µg/L
46	Bromobenzene	ND		0.50	µg/L
47	n-Propylbenzene	ND		0.50	µg/L
48	4-Chlorotoluene	ND		0.50	µg/L
49	2-Chlorotoluene	ND		0.50	µg/L
50	1,3,5-Trimethylbenzene	ND		0.50	µg/L
51	tert-Butylbenzene	ND		0.50	µg/L
52	1,2,4-Trimethylbenzene	ND		0.50	µg/L
53	sec-Butylbenzene	ND		0.50	µg/L
54	1,3-Dichlorobenzene	ND		0.50	µg/L
55	1,4-Dichlorobenzene	ND		0.50	µg/L
56	4-Isopropyltoluene	ND		0.50	µg/L
57	1,2-Dichlorobenzene	ND		0.50	µg/L
58	n-Butylbenzene	ND		0.50	µg/L
59	1,2-Dibromo-3-chloropropane (DBCP)	ND		2.5	µg/L
60	1,2,4-Trichlorobenzene	ND		1.0	µg/L
61	Naphthalene	ND		1.0	µg/L
62	Hexachlorobutadiene	ND		1.0	µg/L
63	1,2,3-Trichlorobenzene	ND		1.0	µg/L
64	Surr: 1,2-Dichloroethane-d4	99		(70-130)	%REC
65	Surr: Toluene-d8	110		(70-130)	%REC
66	Surr: 4-Bromofluorobenzene	105		(70-130)	%REC

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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3/15/11
Report Date

Alpha Analytical, Inc.

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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI11030302-02A
Client I.D. Number: MW-4-2

Sampled: 03/02/11 09:17
Received: 03/03/11
Extracted: 03/07/11 13:06
Analyzed: 03/07/11 13:06

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND		0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND		1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND		0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND		0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	Q	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND		0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND		0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND		1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND		0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND		0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND		0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND		0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND		10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND		0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND		0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND		0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND		0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND		0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND		0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND		0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND		0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND		0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND		0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND		0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5	µg/L
25	Trichloroethene	ND		0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND		0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND		2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND		0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND		0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	100	(70-130)	%REC
30	1,1,2-Trichloroethane	ND		0.50	µg/L	65	Surr: Toluene-d8	109	(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	105	(70-130)	%REC
32	1,3-Dichloropropane	ND		0.50	µg/L					
33	Dibromochloromethane	ND		0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND		1.0	µg/L					
35	Tetrachloroethene	0.63		0.50	µg/L					

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer
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3/15/11
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI11030302-03A
Client I.D. Number: MW-4-1

Sampled: 03/02/11 09:53
Received: 03/03/11
Extracted: 03/07/11 13:28
Analyzed: 03/07/11 13:28

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND		0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND		1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND		0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND		0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	Q	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND		0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND		0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND		1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND		0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND		0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND		0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND		0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND		10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND		0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND		0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND		0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND		0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND		0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND		0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND		0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND		0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND		0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND		0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND		0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5	µg/L
25	Trichloroethene	ND		0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND		0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND		2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND		0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND		0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	102	(70-130)	%REC
30	1,1,2-Trichloroethane	ND		0.50	µg/L	65	Surr: Toluene-d8	110	(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	104	(70-130)	%REC
32	1,3-Dichloropropane	ND		0.50	µg/L					
33	Dibromochloromethane	ND		0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND		1.0	µg/L					
35	Tetrachloroethene	ND		0.50	µg/L					

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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3/15/11
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI11030302-04A
Client I.D. Number: DUPE-04-1Q11

Sampled: 03/02/11 00:00
Received: 03/03/11
Extracted: 03/07/11 13:49
Analyzed: 03/07/11 13:49

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit	
1	Dichlorodifluoromethane	ND		0.50	µg/L
2	Chloromethane	ND		1.0	µg/L
3	Vinyl chloride	ND		0.50	µg/L
4	Chloroethane	ND		0.50	µg/L
5	Bromomethane	ND	Q	1.0	µg/L
6	Trichlorofluoromethane	ND		0.50	µg/L
7	1,1-Dichloroethene	ND		0.50	µg/L
8	Dichloromethane	ND		1.0	µg/L
9	Freon-113	ND		0.50	µg/L
10	trans-1,2-Dichloroethene	ND		0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND		0.50	µg/L
12	1,1-Dichloroethane	ND		0.50	µg/L
13	2-Butanone (MEK)	ND		10	µg/L
14	cis-1,2-Dichloroethene	ND		0.50	µg/L
15	Bromochloromethane	ND		0.50	µg/L
16	Chloroform	ND		0.50	µg/L
17	2,2-Dichloropropane	ND		0.50	µg/L
18	1,2-Dichloroethane	ND		0.50	µg/L
19	1,1,1-Trichloroethane	ND		0.50	µg/L
20	1,1-Dichloropropene	ND		0.50	µg/L
21	Carbon tetrachloride	ND		0.50	µg/L
22	Benzene	ND		0.50	µg/L
23	Dibromomethane	ND		0.50	µg/L
24	1,2-Dichloropropane	ND		0.50	µg/L
25	Trichloroethene	ND		0.50	µg/L
26	Bromodichloromethane	ND		0.50	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND		2.5	µg/L
28	cis-1,3-Dichloropropene	ND		0.50	µg/L
29	trans-1,3-Dichloropropene	ND		0.50	µg/L
30	1,1,2-Trichloroethane	ND		0.50	µg/L
31	Toluene	ND		0.50	µg/L
32	1,3-Dichloropropane	ND		0.50	µg/L
33	Dibromochloromethane	ND		0.50	µg/L
34	1,2-Dibromoethane (EDB)	ND		1.0	µg/L
35	Tetrachloroethene	ND		0.50	µg/L
36	1,1,1,2-Tetrachloroethane	ND		0.50	µg/L
37	Chlorobenzene	ND		0.50	µg/L
38	Ethylbenzene	ND		0.50	µg/L
39	m,p-Xylene	ND		0.50	µg/L
40	Bromoform	ND		0.50	µg/L
41	Styrene	ND		0.50	µg/L
42	o-Xylene	ND		0.50	µg/L
43	1,1,2,2-Tetrachloroethane	ND		0.50	µg/L
44	1,2,3-Trichloropropane	ND		1.0	µg/L
45	Isopropylbenzene	ND		0.50	µg/L
46	Bromobenzene	ND		0.50	µg/L
47	n-Propylbenzene	ND		0.50	µg/L
48	4-Chlorotoluene	ND		0.50	µg/L
49	2-Chlorotoluene	ND		0.50	µg/L
50	1,3,5-Trimethylbenzene	ND		0.50	µg/L
51	tert-Butylbenzene	ND		0.50	µg/L
52	1,2,4-Trimethylbenzene	ND		0.50	µg/L
53	sec-Butylbenzene	ND		0.50	µg/L
54	1,3-Dichlorobenzene	ND		0.50	µg/L
55	1,4-Dichlorobenzene	ND		0.50	µg/L
56	4-Isopropyltoluene	ND		0.50	µg/L
57	1,2-Dichlorobenzene	ND		0.50	µg/L
58	n-Butylbenzene	ND		0.50	µg/L
59	1,2-Dibromo-3-chloropropane (DBCP)	ND		2.5	µg/L
60	1,2,4-Trichlorobenzene	ND		1.0	µg/L
61	Naphthalene	ND		1.0	µg/L
62	Hexachlorobutadiene	ND		1.0	µg/L
63	1,2,3-Trichlorobenzene	ND		1.0	µg/L
64	Surr: 1,2-Dichloroethane-d4	102		(70-130)	%REC
65	Surr: Toluene-d8	109		(70-130)	%REC
66	Surr: 4-Bromofluorobenzene	103		(70-130)	%REC

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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3/15/11
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI11030302-05A
Client I.D. Number: EB-07-03/02/11

Sampled: 03/02/11 10:01
Received: 03/03/11
Extracted: 03/07/11 12:23
Analyzed: 03/07/11 12:23

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND		0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND		1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND		0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND		0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	Q	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND		0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND		0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND		1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND		0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND		0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND		0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND		0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND		10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND		0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND		0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND		0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND		0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND		0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND		0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND		0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND		0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND		0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND		0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND		0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5	µg/L
25	Trichloroethene	ND		0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND		0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND		2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND		0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND		0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	100	(70-130)	%REC
30	1,1,2-Trichloroethane	ND		0.50	µg/L	65	Surr: Toluene-d8	103	(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	95	(70-130)	%REC
32	1,3-Dichloropropane	ND		0.50	µg/L					
33	Dibromochloromethane	ND		0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND		1.0	µg/L					
35	Tetrachloroethene	ND		0.50	µg/L					

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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3/15/11
Report Date

Alpha Analytical, Inc.

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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI11030302-06A
Client I.D. Number: TB-07-03/02/11

Sampled: 03/02/11 07:00
Received: 03/03/11
Extracted: 03/07/11 12:02
Analyzed: 03/07/11 12:02

Volatile Organics by GC/MS
EPA Method SW8260B

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

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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

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

3/15/11
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI11030302-07A
Client I.D. Number: MW-3-4

Sampled: 03/02/11 11:20
Received: 03/03/11
Extracted: 03/07/11 14:11
Analyzed: 03/07/11 14:11

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND		0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND		1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND		0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND		0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	Q	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND		0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND		0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND		1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND		0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND		0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND		0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND		0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND		10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND		0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND		0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND		0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND		0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND		0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND		0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND		0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND		0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND		0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND		0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND		0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5	µg/L
25	Trichloroethene	ND		0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND		0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND		2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND		0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND		0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	103	(70-130)	%REC
30	1,1,2-Trichloroethane	ND		0.50	µg/L	65	Surr: Toluene-d8	111	(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	104	(70-130)	%REC
32	1,3-Dichloropropane	ND		0.50	µg/L					
33	Dibromochloromethane	ND		0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND		1.0	µg/L					
35	Tetrachloroethene	ND		0.50	µg/L					

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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

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

3/15/11
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI11030302-08A
Client I.D. Number: MW-3-3

Sampled: 03/02/11 11:42
Received: 03/03/11
Extracted: 03/07/11 14:32
Analyzed: 03/07/11 14:32

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND		2.0	µg/L	36	1,1,1,2-Tetrachloroethane	ND	2.0	µg/L
2	Chloromethane	ND		4.0	µg/L	37	Chlorobenzene	ND	2.0	µg/L
3	Vinyl chloride	ND		2.0	µg/L	38	Ethylbenzene	ND	2.0	µg/L
4	Chloroethane	ND		2.0	µg/L	39	m,p-Xylene	ND	2.0	µg/L
5	Bromomethane	ND	Q	4.0	µg/L	40	Bromoform	ND	2.0	µg/L
6	Trichlorofluoromethane	ND		2.0	µg/L	41	Styrene	ND	2.0	µg/L
7	1,1-Dichloroethene	ND		2.0	µg/L	42	o-Xylene	ND	2.0	µg/L
8	Dichloromethane	ND		4.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	2.0	µg/L
9	Freon-113	ND		2.0	µg/L	44	1,2,3-Trichloropropane	ND	4.0	µg/L
10	trans-1,2-Dichloroethene	ND		2.0	µg/L	45	Isopropylbenzene	ND	2.0	µg/L
11	Methyl tert-butyl ether (MTBE)	ND		2.0	µg/L	46	Bromobenzene	ND	2.0	µg/L
12	1,1-Dichloroethane	ND		2.0	µg/L	47	n-Propylbenzene	ND	2.0	µg/L
13	2-Butanone (MEK)	ND		40	µg/L	48	4-Chlorotoluene	ND	2.0	µg/L
14	cis-1,2-Dichloroethene	ND		2.0	µg/L	49	2-Chlorotoluene	ND	2.0	µg/L
15	Bromochloromethane	ND		2.0	µg/L	50	1,3,5-Trimethylbenzene	ND	2.0	µg/L
16	Chloroform	ND		2.0	µg/L	51	tert-Butylbenzene	ND	2.0	µg/L
17	2,2-Dichloropropane	ND		2.0	µg/L	52	1,2,4-Trimethylbenzene	ND	2.0	µg/L
18	1,2-Dichloroethane	ND		2.0	µg/L	53	sec-Butylbenzene	ND	2.0	µg/L
19	1,1,1-Trichloroethane	ND		2.0	µg/L	54	1,3-Dichlorobenzene	ND	2.0	µg/L
20	1,1-Dichloropropene	ND		2.0	µg/L	55	1,4-Dichlorobenzene	ND	2.0	µg/L
21	Carbon tetrachloride	ND		2.0	µg/L	56	4-Isopropyltoluene	ND	2.0	µg/L
22	Benzene	ND		2.0	µg/L	57	1,2-Dichlorobenzene	ND	2.0	µg/L
23	Dibromomethane	ND		2.0	µg/L	58	n-Butylbenzene	ND	2.0	µg/L
24	1,2-Dichloropropane	ND		2.0	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND	10	µg/L
25	Trichloroethene	ND		2.0	µg/L	60	1,2,4-Trichlorobenzene	ND	4.0	µg/L
26	Bromodichloromethane	ND		2.0	µg/L	61	Naphthalene	ND	4.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND		10	µg/L	62	Hexachlorobutadiene	ND	4.0	µg/L
28	cis-1,3-Dichloropropene	ND		2.0	µg/L	63	1,2,3-Trichlorobenzene	ND	4.0	µg/L
29	trans-1,3-Dichloropropene	ND		2.0	µg/L	64	Surr: 1,2-Dichloroethane-d4	103	(70-130)	%REC
30	1,1,2-Trichloroethane	ND		2.0	µg/L	65	Surr: Toluene-d8	108	(70-130)	%REC
31	Toluene	ND		2.0	µg/L	66	Surr: 4-Bromofluorobenzene	104	(70-130)	%REC
32	1,3-Dichloropropane	ND		2.0	µg/L					
33	Dibromochloromethane	ND		2.0	µg/L					
34	1,2-Dibromoethane (EDB)	ND		4.0	µg/L					
35	Tetrachloroethene	ND		2.0	µg/L					

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

Reporting Limits were increased due to sample foaming.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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

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

3/15/11
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI11030302-09A
Client I.D. Number: MW-3-2

Sampled: 03/02/11 12:00
Received: 03/03/11
Extracted: 03/07/11 14:54
Analyzed: 03/07/11 14:54

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit	
1	Dichlorodifluoromethane	ND		0.50	µg/L
2	Chloromethane	ND		1.0	µg/L
3	Vinyl chloride	ND		0.50	µg/L
4	Chloroethane	ND		0.50	µg/L
5	Bromomethane	ND	Q	1.0	µg/L
6	Trichlorofluoromethane	ND		0.50	µg/L
7	1,1-Dichloroethene	ND		0.50	µg/L
8	Dichloromethane	ND		1.0	µg/L
9	Freon-113	ND		0.50	µg/L
10	trans-1,2-Dichloroethene	ND		0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND		0.50	µg/L
12	1,1-Dichloroethane	ND		0.50	µg/L
13	2-Butanone (MEK)	ND		10	µg/L
14	cis-1,2-Dichloroethene	ND		0.50	µg/L
15	Bromochloromethane	ND		0.50	µg/L
16	Chloroform	ND		0.50	µg/L
17	2,2-Dichloropropane	ND		0.50	µg/L
18	1,2-Dichloroethane	ND		0.50	µg/L
19	1,1,1-Trichloroethane	ND		0.50	µg/L
20	1,1-Dichloropropene	ND		0.50	µg/L
21	Carbon tetrachloride	ND		0.50	µg/L
22	Benzene	ND		0.50	µg/L
23	Dibromomethane	ND		0.50	µg/L
24	1,2-Dichloropropane	ND		0.50	µg/L
25	Trichloroethene	ND		0.50	µg/L
26	Bromodichloromethane	ND		0.50	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND		2.5	µg/L
28	cis-1,3-Dichloropropene	ND		0.50	µg/L
29	trans-1,3-Dichloropropene	ND		0.50	µg/L
30	1,1,2-Trichloroethane	ND		0.50	µg/L
31	Toluene	ND		0.50	µg/L
32	1,3-Dichloropropane	ND		0.50	µg/L
33	Dibromochloromethane	ND		0.50	µg/L
34	1,2-Dibromoethane (EDB)	ND		1.0	µg/L
35	Tetrachloroethene	ND		0.50	µg/L
36	1,1,1,2-Tetrachloroethane	ND		0.50	µg/L
37	Chlorobenzene	ND		0.50	µg/L
38	Ethylbenzene	ND		0.50	µg/L
39	m,p-Xylene	ND		0.50	µg/L
40	Bromoform	ND		0.50	µg/L
41	Styrene	ND		0.50	µg/L
42	o-Xylene	ND		0.50	µg/L
43	1,1,2,2-Tetrachloroethane	ND		0.50	µg/L
44	1,2,3-Trichloropropane	ND		1.0	µg/L
45	Isopropylbenzene	ND		0.50	µg/L
46	Bromobenzene	ND		0.50	µg/L
47	n-Propylbenzene	ND		0.50	µg/L
48	4-Chlorotoluene	ND		0.50	µg/L
49	2-Chlorotoluene	ND		0.50	µg/L
50	1,3,5-Trimethylbenzene	ND		0.50	µg/L
51	tert-Butylbenzene	ND		0.50	µg/L
52	1,2,4-Trimethylbenzene	ND		0.50	µg/L
53	sec-Butylbenzene	ND		0.50	µg/L
54	1,3-Dichlorobenzene	ND		0.50	µg/L
55	1,4-Dichlorobenzene	ND		0.50	µg/L
56	4-Isopropyltoluene	ND		0.50	µg/L
57	1,2-Dichlorobenzene	ND		0.50	µg/L
58	n-Butylbenzene	ND		0.50	µg/L
59	1,2-Dibromo-3-chloropropane (DBCP)	ND		2.5	µg/L
60	1,2,4-Trichlorobenzene	ND		1.0	µg/L
61	Naphthalene	ND		1.0	µg/L
62	Hexachlorobutadiene	ND		1.0	µg/L
63	1,2,3-Trichlorobenzene	ND		1.0	µg/L
64	Surr: 1,2-Dichloroethane-d4	102		(70-130)	%REC
65	Surr: Toluene-d8	111		(70-130)	%REC
66	Surr: 4-Bromofluorobenzene	105		(70-130)	%REC

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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3/15/11
Report Date

Alpha Analytical, Inc.

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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI11030302-10A
Client I.D. Number: MW-6

Sampled: 03/02/11 09:40
Received: 03/03/11
Extracted: 03/07/11 15:15
Analyzed: 03/07/11 15:15

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND		0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND		1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND		0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND		0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	Q	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND		0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND		0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND		1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND		0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND		0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND		0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND		0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND		10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND		0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND		0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	0.57		0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND		0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND		0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND		0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND		0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND		0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND		0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND		0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND		0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5	µg/L
25	Trichloroethene	4.0		0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND		0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND		2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND		0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND		0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	102	(70-130)	%REC
30	1,1,2-Trichloroethane	ND		0.50	µg/L	65	Surr: Toluene-d8	113	(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	101	(70-130)	%REC
32	1,3-Dichloropropane	ND		0.50	µg/L					
33	Dibromochloromethane	ND		0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND		1.0	µg/L					
35	Tetrachloroethene	1.2		0.50	µg/L					

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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

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

3/15/11
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI11030302-11A
Client I.D. Number: MW-13

Sampled: 03/02/11 12:01
Received: 03/03/11
Extracted: 03/07/11 15:37
Analyzed: 03/07/11 15:37

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND		0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND		1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND		0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND		0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	Q	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND		0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND		0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND		1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND		0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND		0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND		0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND		0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND		10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND		0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND		0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	2.1		0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND		0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND		0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND		0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND		0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	0.64		0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND		0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND		0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND		0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5	µg/L
25	Trichloroethene	1.0		0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND		0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND		2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND		0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND		0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	103	(70-130)	%REC
30	1,1,2-Trichloroethane	ND		0.50	µg/L	65	Surr: Toluene-d8	108	(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	98	(70-130)	%REC
32	1,3-Dichloropropane	ND		0.50	µg/L					
33	Dibromochloromethane	ND		0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND		1.0	µg/L					
35	Tetrachloroethene	ND		0.50	µg/L					

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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3/15/11
Report Date

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

VOC Sample Preservation Report

Work Order: BMI11030302 **Job:** G005862/JPL Groundwater Monitoring

Alpha's Sample ID	Client's Sample ID	Matrix	pH
11030302-01A	MW-4-3	Aqueous	2
11030302-02A	MW-4-2	Aqueous	2
11030302-03A	MW-4-1	Aqueous	2
11030302-04A	DUPE-04-1Q11	Aqueous	2
11030302-05A	EB-07-03/02/11	Aqueous	2
11030302-06A	TB-07-03/02/11	Aqueous	2
11030302-07A	MW-3-4	Aqueous	2
11030302-08A	MW-3-3	Aqueous	2
11030302-09A	MW-3-2	Aqueous	2
11030302-10A	MW-6	Aqueous	2
11030302-11A	MW-13	Aqueous	2

3/15/11

Report Date

Alpha Analytical, Inc.

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Date: *08-Mar-11*

QC Summary Report

Work Order: 11030302

Method Blank

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

File ID: **20** Batch ID: **26098** Analysis Date: **03/03/2011 11:53**

Sample ID: **MB-26098** Units : **mg/L** Run ID: **IC_2_110303A** Prep Date: **03/03/2011 11:48**

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

Laboratory Fortified Blank

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

File ID: **21** Batch ID: **26098** Analysis Date: **03/03/2011 12:12**

Sample ID: **LFB-26098** Units : **mg/L** Run ID: **IC_2_110303A** Prep Date: **03/03/2011 11:48**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	53.8	0.5	50		108	90	110			
Nitrite (NO2) - N	4.86	0.25	5		97	90	110			
Nitrate (NO3) - N	5.52	0.25	5		110	90	110			
Phosphate, ortho - P	4.82	0.5	5		96	90	110			
Sulfate (SO4)	110	0.5	100		110	90	110			

Sample Matrix Spike

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

File ID: **31** Batch ID: **26098** Analysis Date: **03/04/2011 14:28**

Sample ID: **11030302-11ALFM** Units : **mg/L** Run ID: **IC_2_110303A** Prep Date: **03/03/2011 11:48**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	135	0.5	100	44.48	91	80	120			
Nitrite (NO2) - N	10.7	0.25	10	0	107	80	120			
Nitrate (NO3) - N	16.2	0.25	10	5.751	105	80	120			
Phosphate, ortho - P	10.2	0.5	10	0	102	80	120			
Sulfate (SO4)	252	0.5	200	80.54	86	80	120			

Sample Matrix Spike Duplicate

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

File ID: **32** Batch ID: **26098** Analysis Date: **03/04/2011 14:46**

Sample ID: **11030302-11ALFMD** Units : **mg/L** Run ID: **IC_2_110303A** Prep Date: **03/03/2011 11:48**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	137	0.5	100	44.48	93	80	120	135.2	1.6(15)	
Nitrite (NO2) - N	11	0.25	10	0	110	80	120	10.67	2.8(15)	
Nitrate (NO3) - N	16.6	0.25	10	5.751	108	80	120	16.23	2.1(15)	
Phosphate, ortho - P	10.2	0.5	10	0	102	80	120	10.16	0.2(15)	
Sulfate (SO4)	257	0.5	200	80.54	88	80	120	252.4	1.8(15)	

Comments:

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

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Date: *08-Mar-11*

QC Summary Report

Work Order: 11030302

Method Blank

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

File ID: **14** Batch ID: **26107** Analysis Date: **03/04/2011 11:33**

Sample ID: **MB-26107** Units : **µg/L** Run ID: **IC_3_110304A** Prep Date: **03/04/2011 10:36**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	ND	1								

Laboratory Fortified Blank

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

File ID: **15** Batch ID: **26107** Analysis Date: **03/04/2011 11:51**

Sample ID: **LFB-26107** Units : **µg/L** Run ID: **IC_3_110304A** Prep Date: **03/04/2011 10:36**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	26.3	2	25		105	85	115			

Sample Matrix Spike

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

File ID: **33** Batch ID: **26107** Analysis Date: **03/04/2011 17:23**

Sample ID: **11030302-10ALFM** Units : **µg/L** Run ID: **IC_3_110304A** Prep Date: **03/04/2011 10:36**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	27.4	2	25	3.141	97	80	120			

Sample Matrix Spike Duplicate

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

File ID: **34** Batch ID: **26107** Analysis Date: **03/04/2011 17:41**

Sample ID: **11030302-10ALFMD** Units : **µg/L** Run ID: **IC_3_110304A** Prep Date: **03/04/2011 10:36**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	27.1	2	25	3.141	96	80	120	27.38	1.1(15)	

Comments:

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Date: *14-Mar-11*

QC Summary Report

Work Order: 11030302

Method Blank

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

File ID: **030911.B\020_M.D** Batch ID: **26124** Analysis Date: **03/09/2011 12:49**

Sample ID: **MB-26124** Units : **mg/L** Run ID: **ICP/MS_110309B** Prep Date: **03/08/2011 09:44**

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

Laboratory Control Spike

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

File ID: **030911.B\021_M.D** Batch ID: **26124** Analysis Date: **03/09/2011 12:54**

Sample ID: **LCS-26124** Units : **mg/L** Run ID: **ICP/MS_110309B** Prep Date: **03/08/2011 09:44**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.045	0.005	0.05		90	85	115			

Sample Matrix Spike

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

File ID: **030911.B\026_M.D** Batch ID: **26124** Analysis Date: **03/09/2011 13:22**

Sample ID: **11030302-03AMS** Units : **mg/L** Run ID: **ICP/MS_110309B** Prep Date: **03/08/2011 09:44**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0493	0.005	0.05	0	99	70	130			

Sample Matrix Spike Duplicate

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

File ID: **030911.B\027_M.D** Batch ID: **26124** Analysis Date: **03/09/2011 13:28**

Sample ID: **11030302-03AMSD** Units : **mg/L** Run ID: **ICP/MS_110309B** Prep Date: **03/08/2011 09:44**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0475	0.005	0.05	0	95	70	130	0.04931	3.7(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: *08-Mar-2011*

QC Summary Report

Work Order: 11030302

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

File ID: **11030706.D** Batch ID: **MS15W0307M** Analysis Date: **03/07/2011 09:52**

Sample ID: **MBLK MS15W0307M** Units : **µg/L** Run ID: **MSD_15_110307B** Prep Date: **03/07/2011 09:52**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	ND	0.5								
Chloromethane	ND	1								
Vinyl chloride	ND	0.5								
Chloroethane	ND	0.5								
Bromomethane	ND	1								
Trichlorofluoromethane	ND	0.5								
1,1-Dichloroethene	ND	0.5								
Dichloromethane	ND	1								
Freon-113	ND	0.5								
trans-1,2-Dichloroethene	ND	0.5								
Methyl tert-butyl ether (MTBE)	ND	0.5								
1,1-Dichloroethane	ND	0.5								
2-Butanone (MEK)	ND	10								
cis-1,2-Dichloroethene	ND	0.5								
Bromochloromethane	ND	0.5								
Chloroform	ND	0.5								
2,2-Dichloropropane	ND	0.5								
1,2-Dichloroethane	ND	0.5								
1,1,1-Trichloroethane	ND	0.5								
1,1-Dichloropropene	ND	0.5								
Carbon tetrachloride	ND	0.5								
Benzene	ND	0.5								
Dibromomethane	ND	0.5								
1,2-Dichloropropane	ND	0.5								
Trichloroethene	ND	0.5								
Bromodichloromethane	ND	0.5								
4-Methyl-2-pentanone (MIBK)	ND	2.5								
cis-1,3-Dichloropropene	ND	0.5								
trans-1,3-Dichloropropene	ND	0.5								
1,1,2-Trichloroethane	ND	0.5								
Toluene	ND	0.5								
1,3-Dichloropropane	ND	0.5								
Dibromochloromethane	ND	0.5								
1,2-Dibromoethane (EDB)	ND	1								
Tetrachloroethene	ND	0.5								
1,1,1,2-Tetrachloroethane	ND	0.5								
Chlorobenzene	ND	0.5								
Ethylbenzene	ND	0.5								
m,p-Xylene	ND	0.5								
Bromoform	ND	0.5								
Styrene	ND	0.5								
o-Xylene	ND	0.5								
1,1,2,2-Tetrachloroethane	ND	0.5								
1,2,3-Trichloropropane	ND	1								
Isopropylbenzene	ND	0.5								
Bromobenzene	ND	0.5								
n-Propylbenzene	ND	0.5								
4-Chlorotoluene	ND	0.5								
2-Chlorotoluene	ND	0.5								
1,3,5-Trimethylbenzene	ND	0.5								
tert-Butylbenzene	ND	0.5								
1,2,4-Trimethylbenzene	ND	0.5								
sec-Butylbenzene	ND	0.5								
1,3-Dichlorobenzene	ND	0.5								
1,4-Dichlorobenzene	ND	0.5								
4-Isopropyltoluene	ND	0.5								
1,2-Dichlorobenzene	ND	0.5								
n-Butylbenzene	ND	0.5								
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5								
1,2,4-Trichlorobenzene	ND	1								
Naphthalene	ND	1								
Hexachlorobutadiene	ND	1								
1,2,3-Trichlorobenzene	ND	1								
Surr: 1,2-Dichloroethane-d4	9.95		10		100	70	130			
Surr: Toluene-d8	10.4		10		104	70	130			

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Date: *08-Mar-2011*

QC Summary Report

Work Order: 11030302

Surr: 4-Bromofluorobenzene	9.86	10	99	70	130	

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Date: 08-Mar-2011

QC Summary Report

Work Order: 11030302

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

File ID: **11030703.D** Batch ID: **MS15W0307M** Analysis Date: **03/07/2011 08:38**

Sample ID: **LCS MS15W0307M** Units : **µg/L** Run ID: **MSD_15_110307B** Prep Date: **03/07/2011 08:38**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	10.6	1	10		106	70	130			
Chloromethane	8.99	2	10		90	70	130			
Vinyl chloride	10.5	1	10		105	70	130			
Chloroethane	11	1	10		110	70	130			
Bromomethane	6.53	2	10		65	70(70)	130			L50
Trichlorofluoromethane	10.8	1	10		108	70	130			
1,1-Dichloroethene	10.9	1	10		109	70	130			
Dichloromethane	9.56	2	10		96	70	130			
Freon-113	10.6	1	10		106	70	137			
trans-1,2-Dichloroethene	10.4	1	10		104	70	130			
Methyl tert-butyl ether (MTBE)	9.4	0.5	10		94	70	130			
1,1-Dichloroethane	10.5	1	10		105	70	130			
2-Butanone (MEK)	179	10	200		89	70	130			
cis-1,2-Dichloroethene	9.97	1	10		99.7	70	130			
Bromochloromethane	9.93	1	10		99	70	130			
Chloroform	9.93	1	10		99	70	130			
2,2-Dichloropropane	10.7	1	10		107	70	130			
1,2-Dichloroethane	9.92	1	10		99	70	130			
1,1,1-Trichloroethane	11	1	10		110	70	130			
1,1-Dichloropropene	11	1	10		110	70	130			
Carbon tetrachloride	9.78	1	10		98	70	130			
Benzene	9.93	0.5	10		99	70	130			
Dibromomethane	9.86	1	10		99	70	130			
1,2-Dichloropropane	10.5	1	10		105	70	130			
Trichloroethene	10.7	1	10		107	70	130			
Bromodichloromethane	10.9	1	10		109	70	130			
4-Methyl-2-pentanone (MIBK)	21.8	2.5	25		87	20	182			
cis-1,3-Dichloropropene	9.73	1	10		97	70	130			
trans-1,3-Dichloropropene	8.91	1	10		89	70	130			
1,1,2-Trichloroethane	9.58	1	10		96	70	130			
Toluene	10.7	0.5	10		107	70	130			
1,3-Dichloropropane	10.2	1	10		102	70	130			
Dibromochloromethane	10.6	1	10		106	70	130			
1,2-Dibromoethane (EDB)	20.5	2	20		103	70	130			
Tetrachloroethene	10.5	1	10		105	70	130			
1,1,1,2-Tetrachloroethane	11.1	1	10		111	70	130			
Chlorobenzene	10.3	1	10		103	70	130			
Ethylbenzene	10.4	0.5	10		104	70	130			
m,p-Xylene	10.7	0.5	10		107	70	130			
Bromoform	10.2	1	10		102	70	130			
Styrene	10.8	1	10		108	70	130			
o-Xylene	10.6	0.5	10		106	70	130			
1,1,2,2-Tetrachloroethane	9.99	1	10		99.9	70	130			
1,2,3-Trichloropropane	19.1	2	20		95	70	130			
Isopropylbenzene	10.6	1	10		106	70	130			
Bromobenzene	10.1	1	10		101	70	130			
n-Propylbenzene	10.7	1	10		107	70	130			
4-Chlorotoluene	10.9	1	10		109	70	130			
2-Chlorotoluene	10.6	1	10		106	70	130			
1,3,5-Trimethylbenzene	10.7	1	10		107	70	130			
tert-Butylbenzene	10.4	1	10		104	70	130			
1,2,4-Trimethylbenzene	10.9	1	10		109	70	130			
sec-Butylbenzene	10.6	1	10		106	70	130			
1,3-Dichlorobenzene	10.7	1	10		107	70	130			
1,4-Dichlorobenzene	10.1	1	10		101	70	130			
4-Isopropyltoluene	10.6	1	10		106	70	130			
1,2-Dichlorobenzene	9.99	1	10		99.9	70	130			
n-Butylbenzene	11.3	1	10		113	70	130			
1,2-Dibromo-3-chloropropane (DBCP)	47	3	50		94	67	130			
1,2,4-Trichlorobenzene	11	2	10		110	70	130			
Naphthalene	9.57	2	10		96	70	130			
Hexachlorobutadiene	19.1	2	20		95	70	130			
1,2,3-Trichlorobenzene	10.9	2	10		109	70	130			
Surr: 1,2-Dichloroethane-d4	9.93		10		99	70	130			
Surr: Toluene-d8	10.2		10		102	70	130			

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Work Order: 11030302

Surr: 4-Bromofluorobenzene	9.79	10	98	70	130	

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QC Summary Report

Work Order: 11030302

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

File ID: **11030707.D** Batch ID: **MS15W0307M** Analysis Date: **03/07/2011 10:13**

Sample ID: **11030302-10AMS** Units : **µg/L** Run ID: **MSD_15_110307B** Prep Date: **03/07/2011 10:13**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	43	2.5	50	0	86	21	138			
Chloromethane	43.9	10	50	0	88	23	144			
Vinyl chloride	46.2	2.5	50	0	92	49	136			
Chloroethane	48.5	2.5	50	0	97	21	159			
Bromomethane	32.8	10	50	0	66	10	174			
Trichlorofluoromethane	47.3	2.5	50	0	95	32	154			
1,1-Dichloroethene	49.3	2.5	50	0	99	64	130			
Dichloromethane	45.8	10	50	0	92	69	130			
Freon-113	52.4	2.5	50	0	105	55	141			
trans-1,2-Dichloroethene	49	2.5	50	0	98	63	130			
Methyl tert-butyl ether (MTBE)	47.7	1.3	50	0	95	47	150			
1,1-Dichloroethane	49.4	2.5	50	0	99	66	130			
2-Butanone (MEK)	769	50	1000	0	77	23	182			
cis-1,2-Dichloroethene	48.5	2.5	50	0	97	70	130			
Bromochloromethane	49.1	2.5	50	0	98	70	132			
Chloroform	46	2.5	50	0.57	91	70	130			
2,2-Dichloropropane	49.8	2.5	50	0	99.7	38	154			
1,2-Dichloroethane	47.9	2.5	50	0	96	65	134			
1,1,1-Trichloroethane	49.3	2.5	50	0	99	65	136			
1,1-Dichloropropene	51.5	2.5	50	0	103	68	132			
Carbon tetrachloride	45.4	2.5	50	0	91	58	148			
Benzene	46.4	1.3	50	0	93	59	138			
Dibromomethane	48.8	2.5	50	0	98	70	130			
1,2-Dichloropropane	50.5	2.5	50	0	101	70	131			
Trichloroethene	52.7	2.5	50	4.02	97	65	144			
Bromodichloromethane	50.9	2.5	50	0	102	50	157			
4-Methyl-2-pentanone (MIBK)	112	13	125	0	90	20	182			
cis-1,3-Dichloropropene	45.1	2.5	50	0	90	63	131			
trans-1,3-Dichloropropene	41.8	2.5	50	0	84	65	136			
1,1,2-Trichloroethane	48.9	2.5	50	0	98	70	131			
Toluene	48.1	1.3	50	0	96	68	130			
1,3-Dichloropropane	49	2.5	50	0	98	70	130			
Dibromochloromethane	49.1	2.5	50	0	98	42	155			
1,2-Dibromoethane (EDB)	100	5	100	0	100	70	130			
Tetrachloroethene	48.3	2.5	50	1.15	94	65	130			
1,1,1,2-Tetrachloroethane	51.2	2.5	50	0	102	70	130			
Chlorobenzene	48.9	2.5	50	0	98	70	130			
Ethylbenzene	49.5	1.3	50	0	99	68	130			
m,p-Xylene	50.3	1.3	50	0	101	68	131			
Bromoform	47.9	2.5	50	0	96	65	143			
Styrene	52.4	2.5	50	0	105	59	153			
o-Xylene	51.4	1.3	50	0	103	70	130			
1,1,2,2-Tetrachloroethane	51.4	2.5	50	0	103	67	130			
1,2,3-Trichloropropane	98.5	10	100	0	98	70	130			
Isopropylbenzene	49.3	2.5	50	0	99	55	138			
Bromobenzene	48	2.5	50	0	96	70	130			
n-Propylbenzene	50.6	2.5	50	0	101	67	133			
4-Chlorotoluene	51.7	2.5	50	0	103	70	130			
2-Chlorotoluene	49.8	2.5	50	0	99.6	70	130			
1,3,5-Trimethylbenzene	50.4	2.5	50	0	101	67	134			
tert-Butylbenzene	49.3	2.5	50	0	99	55	147			
1,2,4-Trimethylbenzene	51	2.5	50	0	102	65	135			
sec-Butylbenzene	49.8	2.5	50	0	100	68	135			
1,3-Dichlorobenzene	51.9	2.5	50	0	104	70	130			
1,4-Dichlorobenzene	49	2.5	50	0	98	70	130			
4-Isopropyltoluene	50.8	2.5	50	0	102	68	132			
1,2-Dichlorobenzene	48.3	2.5	50	0	97	70	130			
n-Butylbenzene	53.8	2.5	50	0	108	62	134			
1,2-Dibromo-3-chloropropane (DBCP)	227	15	250	0	91	64	130			
1,2,4-Trichlorobenzene	52.8	10	50	0	106	62	133			
Naphthalene	46.5	10	50	0	93	32	166			
Hexachlorobutadiene	93	10	100	0	93	63	130			
1,2,3-Trichlorobenzene	53.9	10	50	0	108	55	138			
Surr: 1,2-Dichloroethane-d4	49.9		50		99.7	70	130			
Surr: Toluene-d8	48.4		50		97	70	130			

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Surr: 4-Bromofluorobenzene	49.3	50	99	70	130	

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QC Summary Report

Work Order: 11030302

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

File ID: **11030709.D** Batch ID: **MS15W0307M** Analysis Date: **03/07/2011 10:57**

Sample ID: **11030302-11AMS** Units : **µg/L** Run ID: **MSD_15_110307B** Prep Date: **03/07/2011 10:57**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	41.9	2.5	50	0	84	21	138			
Chloromethane	41.3	10	50	0	83	23	144			
Vinyl chloride	44.3	2.5	50	0	89	49	136			
Chloroethane	46	2.5	50	0	92	21	159			
Bromomethane	35.9	10	50	0	72	10	174			
Trichlorofluoromethane	44.7	2.5	50	0	89	32	154			
1,1-Dichloroethene	47.6	2.5	50	0	95	64	130			
Dichloromethane	44.2	10	50	0	88	69	130			
Freon-113	49.9	2.5	50	0	99.8	55	141			
trans-1,2-Dichloroethene	47.1	2.5	50	0	94	63	130			
Methyl tert-butyl ether (MTBE)	47.7	1.3	50	0	95	47	150			
1,1-Dichloroethane	47.6	2.5	50	0	95	66	130			
2-Butanone (MEK)	770	50	1000	0	77	23	182			
cis-1,2-Dichloroethene	49.3	2.5	50	0	99	70	130			
Bromochloromethane	48.1	2.5	50	0	96	70	132			
Chloroform	45.8	2.5	50	2.14	87	70	130			
2,2-Dichloropropane	49.8	2.5	50	0	99.6	38	154			
1,2-Dichloroethane	46.4	2.5	50	0	93	65	134			
1,1,1-Trichloroethane	48.9	2.5	50	0	98	65	136			
1,1-Dichloropropene	48.8	2.5	50	0	98	68	132			
Carbon tetrachloride	45.7	2.5	50	0.64	90	58	148			
Benzene	45.3	1.3	50	0	91	59	138			
Dibromomethane	48.4	2.5	50	0	97	70	130			
1,2-Dichloropropane	49.3	2.5	50	0	99	70	131			
Trichloroethene	48.8	2.5	50	1.01	96	65	144			
Bromodichloromethane	49.8	2.5	50	0	99.6	50	157			
4-Methyl-2-pentanone (MIBK)	112	13	125	0	89	20	182			
cis-1,3-Dichloropropene	45	2.5	50	0	90	63	131			
trans-1,3-Dichloropropene	42	2.5	50	0	84	65	136			
1,1,2-Trichloroethane	48.7	2.5	50	0	97	70	131			
Toluene	47.8	1.3	50	0	96	68	130			
1,3-Dichloropropane	49.4	2.5	50	0	99	70	130			
Dibromochloromethane	50	2.5	50	0	100	42	155			
1,2-Dibromoethane (EDB)	102	5	100	0	102	70	130			
Tetrachloroethene	47.8	2.5	50	0	96	65	130			
1,1,1,2-Tetrachloroethane	50.7	2.5	50	0	101	70	130			
Chlorobenzene	48.6	2.5	50	0	97	70	130			
Ethylbenzene	48.3	1.3	50	0	97	68	130			
m,p-Xylene	49	1.3	50	0	98	68	131			
Bromoform	48	2.5	50	0	96	65	143			
Styrene	51.3	2.5	50	0	103	59	153			
o-Xylene	49.5	1.3	50	0	99	70	130			
1,1,2,2-Tetrachloroethane	51	2.5	50	0	102	67	130			
1,2,3-Trichloropropane	96.6	10	100	0	97	70	130			
Isopropylbenzene	48.6	2.5	50	0	97	55	138			
Bromobenzene	47.1	2.5	50	0	94	70	130			
n-Propylbenzene	49.1	2.5	50	0	98	67	133			
4-Chlorotoluene	51.1	2.5	50	0	102	70	130			
2-Chlorotoluene	48.7	2.5	50	0	97	70	130			
1,3,5-Trimethylbenzene	49.4	2.5	50	0	99	67	134			
tert-Butylbenzene	47.7	2.5	50	0	95	55	147			
1,2,4-Trimethylbenzene	49.9	2.5	50	0	99.7	65	135			
sec-Butylbenzene	48.6	2.5	50	0	97	68	135			
1,3-Dichlorobenzene	50.7	2.5	50	0	101	70	130			
1,4-Dichlorobenzene	47.9	2.5	50	0	96	70	130			
4-Isopropyltoluene	49.4	2.5	50	0	99	68	132			
1,2-Dichlorobenzene	47.7	2.5	50	0	95	70	130			
n-Butylbenzene	52.4	2.5	50	0	105	62	134			
1,2-Dibromo-3-chloropropane (DBCP)	234	15	250	0	94	64	130			
1,2,4-Trichlorobenzene	52.6	10	50	0	105	62	133			
Naphthalene	49.2	10	50	0	98	32	166			
Hexachlorobutadiene	95.5	10	100	0	95	63	130			
1,2,3-Trichlorobenzene	56.5	10	50	0	113	55	138			
Surr: 1,2-Dichloroethane-d4	48.2		50		96	70	130			
Surr: Toluene-d8	49.9		50		99.8	70	130			

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Surr: 4-Bromofluorobenzene	49.3	50	99	70	130	

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QC Summary Report

Work Order: 11030302

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

File ID: **11030708.D** Batch ID: **MS15W0307M** Analysis Date: **03/07/2011 10:35**

Sample ID: **11030302-10AMSD** Units : **µg/L** Run ID: **MSD_15_110307B** Prep Date: **03/07/2011 10:35**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	40	2.5	50	0	80	21	138	43.01	7.2(33)	
Chloromethane	41.9	10	50	0	84	23	144	43.89	4.7(27)	
Vinyl chloride	43.5	2.5	50	0	87	49	136	46.22	6.0(21)	
Chloroethane	44.4	2.5	50	0	89	21	159	48.46	8.8(40)	
Bromomethane	33.9	10	50	0	68	10	174	32.77	3.5(40)	
Trichlorofluoromethane	44.6	2.5	50	0	89	32	154	47.34	5.9(37)	
1,1-Dichloroethene	46.6	2.5	50	0	93	64	130	49.31	5.7(21)	
Dichloromethane	43.2	10	50	0	86	69	130	45.8	5.8(20)	
Freon-113	47.7	2.5	50	0	95	55	141	52.41	9.5(40)	
trans-1,2-Dichloroethene	46	2.5	50	0	92	63	130	49.04	6.4(20)	
Methyl tert-butyl ether (MTBE)	45.8	1.3	50	0	92	47	150	47.69	4.0(40)	
1,1-Dichloroethane	46	2.5	50	0	92	66	130	49.4	7.0(20)	
2-Butanone (MEK)	725	50	1000	0	72	23	182	769.2	5.9(22)	
cis-1,2-Dichloroethene	45.4	2.5	50	0	91	70	130	48.49	6.6(20)	
Bromochloromethane	46.7	2.5	50	0	93	70	132	49.06	4.9(20)	
Chloroform	43.4	2.5	50	0.57	86	70	130	46.02	5.8(20)	
2,2-Dichloropropane	48.1	2.5	50	0	96	38	154	49.84	3.6(22)	
1,2-Dichloroethane	44.5	2.5	50	0	89	65	134	47.85	7.2(20)	
1,1,1-Trichloroethane	46.7	2.5	50	0	93	65	136	49.28	5.3(20)	
1,1-Dichloropropene	47.7	2.5	50	0	95	68	132	51.47	7.6(20)	
Carbon tetrachloride	43.2	2.5	50	0	86	58	148	45.4	5.0(20)	
Benzene	43.8	1.3	50	0	88	59	138	46.39	5.9(21)	
Dibromomethane	46.4	2.5	50	0	93	70	130	48.76	5.1(20)	
1,2-Dichloropropane	47.4	2.5	50	0	95	70	131	50.45	6.2(20)	
Trichloroethene	50.2	2.5	50	4.02	92	65	144	52.68	4.9(20)	
Bromodichloromethane	48.7	2.5	50	0	97	50	157	50.89	4.4(20)	
4-Methyl-2-pentanone (MIBK)	108	13	125	0	86	20	182	112.4	3.9(20)	
cis-1,3-Dichloropropene	43.3	2.5	50	0	87	63	131	45.11	4.0(20)	
trans-1,3-Dichloropropene	40.3	2.5	50	0	81	65	136	41.79	3.7(20)	
1,1,2-Trichloroethane	45.4	2.5	50	0	91	70	131	48.9	7.4(20)	
Toluene	45.2	1.3	50	0	90	68	130	48.06	6.2(20)	
1,3-Dichloropropane	46.2	2.5	50	0	92	70	130	48.99	5.9(20)	
Dibromochloromethane	46.4	2.5	50	0	93	42	155	49.07	5.6(20)	
1,2-Dibromoethane (EDB)	94.4	5	100	0	94	70	130	100.1	5.8(20)	
Tetrachloroethene	46.2	2.5	50	1.15	90	65	130	48.34	4.5(20)	
1,1,1,2-Tetrachloroethane	47.7	2.5	50	0	95	70	130	51.19	7.1(20)	
Chlorobenzene	45.8	2.5	50	0	92	70	130	48.9	6.6(20)	
Ethylbenzene	45.8	1.3	50	0	92	68	130	49.52	7.7(20)	
m,p-Xylene	47.3	1.3	50	0	95	68	131	50.25	6.1(20)	
Bromoform	45.1	2.5	50	0	90	65	143	47.86	6.0(20)	
Styrene	48.7	2.5	50	0	97	59	153	52.42	7.3(37)	
o-Xylene	47.9	1.3	50	0	96	70	130	51.42	7.1(20)	
1,1,2,2-Tetrachloroethane	46.3	2.5	50	0	93	67	130	51.39	10.5(20)	
1,2,3-Trichloropropane	90.5	10	100	0	91	70	130	98.46	8.4(20)	
Isopropylbenzene	46.4	2.5	50	0	93	55	138	49.28	6.1(20)	
Bromobenzene	44.5	2.5	50	0	89	70	130	47.97	7.6(20)	
n-Propylbenzene	46.7	2.5	50	0	93	67	133	50.55	7.9(30)	
4-Chlorotoluene	48.1	2.5	50	0	96	70	130	51.72	7.2(20)	
2-Chlorotoluene	46	2.5	50	0	92	70	130	49.81	8.1(20)	
1,3,5-Trimethylbenzene	46.9	2.5	50	0	94	67	134	50.44	7.3(21)	
tert-Butylbenzene	45.4	2.5	50	0	91	55	147	49.25	8.1(20)	
1,2,4-Trimethylbenzene	46.9	2.5	50	0	94	65	135	51.03	8.4(25)	
sec-Butylbenzene	46.8	2.5	50	0	94	68	135	49.75	6.1(20)	
1,3-Dichlorobenzene	47.6	2.5	50	0	95	70	130	51.93	8.7(20)	
1,4-Dichlorobenzene	45.4	2.5	50	0	91	70	130	48.98	7.6(20)	
4-Isopropyltoluene	47.4	2.5	50	0	95	68	132	50.76	6.8(20)	
1,2-Dichlorobenzene	45	2.5	50	0	90	70	130	48.29	7.1(20)	
n-Butylbenzene	50.5	2.5	50	0	101	62	134	53.79	6.4(21)	
1,2-Dibromo-3-chloropropane (DBCP)	219	15	250	0	88	64	130	226.9	3.4(20)	
1,2,4-Trichlorobenzene	50.9	10	50	0	102	62	133	52.83	3.8(29)	
Naphthalene	45.4	10	50	0	91	32	166	46.53	2.4(40)	
Hexachlorobutadiene	89.3	10	100	0	89	63	130	93	4.0(21)	
1,2,3-Trichlorobenzene	52.8	10	50	0	106	55	138	53.91	2.1(36)	
Surr: 1,2-Dichloroethane-d4	49.9		50		99.9	70	130			
Surr: Toluene-d8	48.9		50		98	70	130			

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Date: *08-Mar-2011*

QC Summary Report

Work Order: 11030302

Surr: 4-Bromofluorobenzene	48.6	50	97	70	130	

Alpha Analytical, Inc.

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

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

Date: *08-Mar-2011*

QC Summary Report

Work Order: 11030302

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

File ID: **11030710.D** Batch ID: **MS15W0307M** Analysis Date: **03/07/2011 11:18**

Sample ID: **11030302-11AMSD** Units : **µg/L** Run ID: **MSD_15_110307B** Prep Date: **03/07/2011 11:18**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	42.1	2.5	50	0	84	21	138	41.85	0.6(33)	
Chloromethane	46.5	10	50	0	93	23	144	41.29	11.9(27)	
Vinyl chloride	48.7	2.5	50	0	97	49	136	44.29	9.5(21)	
Chloroethane	49	2.5	50	0	98	21	159	46.02	6.3(40)	
Bromomethane	42.1	10	50	0	84	10	174	35.93	15.9(40)	
Trichlorofluoromethane	47.4	2.5	50	0	95	32	154	44.69	5.8(37)	
1,1-Dichloroethene	50.8	2.5	50	0	102	64	130	47.56	6.6(21)	
Dichloromethane	46.9	10	50	0	94	69	130	44.15	6.1(20)	
Freon-113	50.5	2.5	50	0	101	55	141	49.88	1.2(40)	
trans-1,2-Dichloroethene	49.9	2.5	50	0	99.8	63	130	47.09	5.8(20)	
Methyl tert-butyl ether (MTBE)	48.8	1.3	50	0	98	47	150	47.65	2.3(40)	
1,1-Dichloroethane	50.5	2.5	50	0	101	66	130	47.61	5.8(20)	
2-Butanone (MEK)	760	50	1000	0	76	23	182	769.8	1.3(22)	
cis-1,2-Dichloroethene	51.3	2.5	50	0	103	70	130	49.32	3.9(20)	
Bromochloromethane	50.4	2.5	50	0	101	70	132	48.09	4.8(20)	
Chloroform	48	2.5	50	2.14	92	70	130	45.79	4.8(20)	
2,2-Dichloropropane	51.9	2.5	50	0	104	38	154	49.82	4.1(22)	
1,2-Dichloroethane	47.1	2.5	50	0	94	65	134	46.41	1.6(20)	
1,1,1-Trichloroethane	51	2.5	50	0	102	65	136	48.88	4.2(20)	
1,1-Dichloropropene	51.5	2.5	50	0	103	68	132	48.75	5.4(20)	
Carbon tetrachloride	48.3	2.5	50	0.64	95	58	148	45.68	5.6(20)	
Benzene	48.1	1.3	50	0	96	59	138	45.27	6.0(21)	
Dibromomethane	49.9	2.5	50	0	99.9	70	130	48.44	3.1(20)	
1,2-Dichloropropane	51.8	2.5	50	0	104	70	131	49.33	5.0(20)	
Trichloroethene	51.9	2.5	50	1.01	102	65	144	48.77	6.3(20)	
Bromodichloromethane	52.2	2.5	50	0	104	50	157	49.81	4.6(20)	
4-Methyl-2-pentanone (MIBK)	113	13	125	0	91	20	182	111.7	1.3(20)	
cis-1,3-Dichloropropene	47.5	2.5	50	0	95	63	131	44.95	5.6(20)	
trans-1,3-Dichloropropene	43.7	2.5	50	0	87	65	136	41.98	4.0(20)	
1,1,2-Trichloroethane	50	2.5	50	0	99.9	70	131	48.68	2.6(20)	
Toluene	49.9	1.3	50	0	99.9	68	130	47.78	4.4(20)	
1,3-Dichloropropane	50.4	2.5	50	0	101	70	130	49.43	1.9(20)	
Dibromochloromethane	50.5	2.5	50	0	101	42	155	50	1.0(20)	
1,2-Dibromoethane (EDB)	102	5	100	0	102	70	130	102.4	0.4(20)	
Tetrachloroethene	49.5	2.5	50	0	99	65	130	47.79	3.5(20)	
1,1,1,2-Tetrachloroethane	52.8	2.5	50	0	106	70	130	50.73	3.9(20)	
Chlorobenzene	50.4	2.5	50	0	101	70	130	48.55	3.7(20)	
Ethylbenzene	50.6	1.3	50	0	101	68	130	48.34	4.5(20)	
m,p-Xylene	52.3	1.3	50	0	105	68	131	49.04	6.5(20)	
Bromoform	49.3	2.5	50	0	99	65	143	48.01	2.7(20)	
Styrene	53.6	2.5	50	0	107	59	153	51.32	4.4(37)	
o-Xylene	52.9	1.3	50	0	106	70	130	49.54	6.6(20)	
1,1,2,2-Tetrachloroethane	51.7	2.5	50	0	103	67	130	50.96	1.4(20)	
1,2,3-Trichloropropane	98.4	10	100	0	98	70	130	96.55	1.9(20)	
Isopropylbenzene	52	2.5	50	0	104	55	138	48.6	6.7(20)	
Bromobenzene	50.1	2.5	50	0	100	70	130	47.13	6.1(20)	
n-Propylbenzene	52.2	2.5	50	0	104	67	133	49.08	6.2(30)	
4-Chlorotoluene	54.2	2.5	50	0	108	70	130	51.08	5.9(20)	
2-Chlorotoluene	52.5	2.5	50	0	105	70	130	48.72	7.5(20)	
1,3,5-Trimethylbenzene	52.8	2.5	50	0	106	67	134	49.36	6.6(21)	
tert-Butylbenzene	51.5	2.5	50	0	103	55	147	47.66	7.7(20)	
1,2,4-Trimethylbenzene	52.9	2.5	50	0	106	65	135	49.86	6.0(25)	
sec-Butylbenzene	52	2.5	50	0	104	68	135	48.58	6.8(20)	
1,3-Dichlorobenzene	53.5	2.5	50	0	107	70	130	50.71	5.3(20)	
1,4-Dichlorobenzene	50.8	2.5	50	0	102	70	130	47.9	5.8(20)	
4-Isopropyltoluene	52.7	2.5	50	0	105	68	132	49.41	6.4(20)	
1,2-Dichlorobenzene	49.6	2.5	50	0	99	70	130	47.7	3.8(20)	
n-Butylbenzene	55.9	2.5	50	0	112	62	134	52.35	6.5(21)	
1,2-Dibromo-3-chloropropane (DBCP)	234	15	250	0	94	64	130	233.9	0.2(20)	
1,2,4-Trichlorobenzene	55.2	10	50	0	110	62	133	52.61	4.8(29)	
Naphthalene	48.7	10	50	0	97	32	166	49.21	1.1(40)	
Hexachlorobutadiene	99.7	10	100	0	99.7	63	130	95.45	4.3(21)	
1,2,3-Trichlorobenzene	55.8	10	50	0	112	55	138	56.49	1.2(36)	
Surr: 1,2-Dichloroethane-d4	47.3		50		95	70	130			
Surr: Toluene-d8	49		50		98	70	130			

Alpha Analytical, Inc.

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

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

Date: *08-Mar-2011*

QC Summary Report

Work Order: 11030302

Surr: 4-Bromofluorobenzene	49.5	50	99	70	130	

Comments:

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

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

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

Billing Information :

CHAIN-OF-CUSTODY RECORD

CA

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

WorkOrder : BMIS11030302

Report Due By : 5:00 PM On : 16-Mar-2011

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

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

EDD Required : **Yes**

Sampled by : Chase Brogdon, David Loera

PO : 218013

Client's COC # : 33403, 53568 Job : G005862/JPL Groundwater Monitoring

Cooler Temp	Samples Received	Date Printed
0 °C	03-Mar-2011	03-Mar-2011

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

Alpha Sample ID	Client Sample ID	Matrix	Collection Date	No. of Bottles Alpha	Sub	TAT	Requested Tests 300_0_W	314_W	METALS_DW	VOC_TIC_W	VOC_W				Sample Remarks
BMI11030302-01A	MW-4-3	AQ	03/02/11 08:46	5	0	9		Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				
BMI11030302-02A	MW-4-2	AQ	03/02/11 09:17	5	0	9		Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				
BMI11030302-03A	MW-4-1	AQ	03/02/11 09:53	5	0	9		Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				Level IV QC
BMI11030302-04A	DUPE-04-1Q11	AQ	03/02/11 00:00	5	0	9		Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				
BMI11030302-05A	EB-07-03/02/11	AQ	03/02/11 10:01	5	0	9		Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				
BMI11030302-06A	TB-07-03/02/11	AQ	03/02/11 07:00	2	0	9				VOC by 524 Criteria	VOC by 524 Criteria				2 Reno Trip Blanks: (1) 12/14/10 (1) 1/19/11
BMI11030302-07A	MW-3-4	AQ	03/02/11 11:20	5	0	9		Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				
BMI11030302-08A	MW-3-3	AQ	03/02/11 11:42	5	0	9		Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				Level IV QC
BMI11030302-09A	MW-3-2	AQ	03/02/11 12:00	5	0	9		Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				

Comments: Security seals intact. Frozen ice. Temp Blank #8784 received @ 0°C. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). :

	Signature	Print Name	Company	Date/Time
Logged in by:	Elizabeth Adcox	Elizabeth Adcox	Alpha Analytical, Inc.	3-3-11 1049

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

Billing Information :

CHAIN-OF-CUSTODY RECORD

CA

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

WorkOrder : BMIS11030302

Report Due By : 5:00 PM On : 16-Mar-2011

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

PO : 218013

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

EDD Required : **Yes**

Sampled by : Chase Brogdon, David Loera

Cooler Temp	Samples Received	Date Printed
0 °C	03-Mar-2011	**03-Mar-2011**

Client's COC # : 33403, 53568 Job : G005862/JPL Groundwater Monitoring

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

Alpha Sample ID	Client Sample ID	Matrix	Collection Date	No. of Bottles Alpha	Sub	TAT	Requested Tests 300_0_W	314_W	METALS_DW	VOC_TIC_W	VOC_W				Sample Remarks
BMI11030302-10A	MW-6	AQ	03/02/11 09:40	18	0	9		Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				MS/MSD. Logged in per earliest sample time provided.
BMI11030302-11A	MW-13	AQ	03/02/11 12:01	13	0	9	NO2, NO3, SO4, Cl, PO4	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				MS/MSD. Logged in per earliest sample time provided.

Comments: Security seals intact. Frozen ice. Temp Blank #8784 received @ 0°C. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). :

	Signature	Print Name	Company	Date/Time
Logged in by:	Elizabeth Adcox	Elizabeth Adcox	**Alpha Analytical, Inc.**	3.3.11 1049

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

33403

Billing Information:
Company Name BATTELLE
Attn: GERALD TOMPKINS
Address 505 KING AVE.
City, State, Zip COLUMBUS, OH 43201
Phone Number ______ Fax ______

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

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

Consultant / Client Name: BATTELLE / DAVID CONNER
Address: 3990 OLD TOWN AVE. C-205
City, State, Zip: SAN DIEGO, CA 92110
P.O. # 218013

Job # 6005862
Job Name: JPL GW. MON. 1Q11

Report Attention / Project Manager
Name: DAVID CONNER
Email: CONNERD@BATTELLE.ORG
Phone: 614-458-6641 Mobile: 619-726-7311

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

Analyses Required

Time Sampled	Date Sampled	Matrix* See Key Below	Lab ID Number (Office Use Only)	Sample Description	TAT	Field Filtered	# Containers**	VOC's (524.2)	TOTAL Cr (200.8)	ClO4 (314.0)					REMARKS
0846	3/2/11	AQ	BMI11030302-01	MW-4-3			3v 2p	X	X	X					
0917	↓	↓	-02	MW-4 2			3v 2p	X	X	X					
0953			-03	MW-4-1			3v 2p	X	X	X					QC LEVEL IV
"			-04	DUPE-04-1Q11			3v 2p	X	X	X					DUPLICATE
1001	↓	↓	-05	EB-07-03/02/11			3v 2p	X	X	X					EQUIP. BLANK
0700	3/2/11	AQ	-06	TB-07-03/02/11			1v	X							TRIP BLANK
1120	3/2/11	AQ	-07	MW-3-4			3v 2p	X	X	X					
1142	3/2/11	AQ	-08	MW-3-3			3v 2p	X	X	X					QC LEVEL IV
1200	3/2/11	AQ	-09	MW-3-2			3v 2p	X	X	X					

FOR LAB USE ONLY

ADDITIONAL INSTRUCTIONS:

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

Relinquished by: (Signature/Affiliation)	Received by: (Signature/Affiliation)	Date:	Time:
[signature] / INSIGHT	[signature] / Alpha Analytical	03/02/11	1500
[signature] / Alpha Analytical	Elizabeth Adcox / Alpha	3·3·11	1049

*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.

53568

Billing Information:
Company Name: Battelle
Attn:
Address: 505 King Ave
City, State, Zip: Columbus OH 43201
Phone Number: Fax:

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

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

Consultant / Client Name: David Conner
Address:
City, State, Zip:
Job # 60058G2 / JPLGWM | Job Name: JPL-GW-1Q11
Report Attention / Project Manager
Name: David Conner
Email: Connerd@battelle.org
Phone: ___ Mobile: 614-726-7311
P.O. # 218013

Analyses Required

Time Sampled	Date Sampled	Matrix* See Key Below	Lab ID Number (Office Use Only)	Sample Description	TAT	Field Filtered	# Containers**	VOCs (524.2)	Total Cr (200.8)	Perchlorate (314.0)	* 300				REMARKS
0940	3/2/11	AQ	-10	MW-6	10		6V 1P	X	X	X	X DL				
0945	3/2/11	↓	↓	MW-6-MS/MSD	10		6V 1P	X	X	X					
1201	3/2/11		-11	MW-13	10		6V 3P	X	X	X	X				
1205	3/2/11		↓	MW-13-MS/MSD	10		6V 3P	X	X	X	X				

FOR LAB USE ONLY

Data Validation Level: III or IV
EDD / EDF? YES ___ NO ___
Global ID # ___

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

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

Relinquished by: (Signature/Affiliation)	Received by: (Signature/Affiliation)	Date:	Time:
David L / Battelle	/ INSIGHT	3/02/11	1315
/ INSIGHT	/ Alpha Analytical	03/02/11	1500
/ Alpha Analytical	Elizabeth Adcox / Alpha	3.3.11	1049

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

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

Alpha Analytical, Inc.

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

Date *09-Mar-11*

David Conner
Battelle Memorial Institute
655 West Broadway Suite 1420
San Diego, CA 92101
(619) 726-7311

CASE NARRATIVE

Job: G005862/JPL Groundwater Monitoring
Work Order: BMI11030401 **Cooler Temp:** 0 °C

Alpha's Sample ID	Client's Sample ID	Matrix
11030401-01A	MW-22-3	Aqueous
11030401-02A	MW-22-2	Aqueous
11030401-03A	MW-22-1	Aqueous
11030401-04A	EB-08-03/03/11	Aqueous
11030401-05A	TB-08-03/03/11	Aqueous
11030401-06A	MW-11-4	Aqueous
11030401-07A	MW-11-3	Aqueous
11030401-08A	MW-11-2	Aqueous
11030401-09A	MW-11-1	Aqueous
11030401-10A	MW-5	Aqueous

Manually Integrated Analytes

Alpha's Sample ID	Test Reference	Analyte
NONE		

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

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

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

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

Battelle Memorial Institute
655 West Broadway
San Diego, CA 92101

Attn: David Conner
Phone: (619) 726-7311
Fax: (614) 458-6641
Date Received : 03/04/11

Job: G005862/JPL Groundwater Monitoring

Anions by IC
EPA Method 300.0

	Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-11-1**					
Lab ID : BMI11030401-09A	Chloride	24	0.50 mg/L	03/04/11 11:20	03/04/11 12:00
Date Sampled 03/03/11 12:17	Nitrite (NO2) - N	ND	0.25 mg/L	03/04/11 11:20	03/04/11 12:00
	Nitrate (NO3) - N	1.0	0.25 mg/L	03/04/11 11:20	03/04/11 12:00
	Phosphate, ortho - P	ND	0.50 mg/L	03/04/11 11:20	03/04/11 12:00
	Sulfate (SO4)	54	0.50 mg/L	03/04/11 11:20	03/04/11 12:00

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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

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

3/16/11
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

Battelle Memorial Institute
655 West Broadway
San Diego, CA 92101

Attn: David Conner
Phone: (619) 726-7311
Fax: (614) 458-6641
Date Received : 03/04/11

Job: G005862/JPL Groundwater Monitoring

Perchlorate by Ion Chromatography
EPA Method 314.0

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-22-3** Lab ID : BMI11030401-01A Perchlorate Date Sampled 03/03/11 08:25	1.91	1.00 µg/L	03/07/11 10:27	03/07/11 17:43
Client ID: **MW-22-2** Lab ID : BMI11030401-02A Perchlorate Date Sampled 03/03/11 09:09	2.39	1.00 µg/L	03/07/11 10:27	03/07/11 18:01
Client ID: **MW-22-1** Lab ID : BMI11030401-03A Perchlorate Date Sampled 03/03/11 09:39	22.9	1.00 µg/L	03/07/11 10:27	03/07/11 18:19
Client ID: **EB-08-03/03/11** Lab ID : BMI11030401-04A Perchlorate Date Sampled 03/03/11 09:30	ND	1.00 µg/L	03/07/11 10:27	03/07/11 18:38
Client ID: **MW-11-4** Lab ID : BMI11030401-06A Perchlorate Date Sampled 03/03/11 10:58	ND	1.00 µg/L	03/07/11 10:27	03/07/11 18:56
Client ID: **MW-11-3** Lab ID : BMI11030401-07A Perchlorate Date Sampled 03/03/11 11:25	ND	1.00 µg/L	03/07/11 10:27	03/07/11 19:15
Client ID: **MW-11-2** Lab ID : BMI11030401-08A Perchlorate Date Sampled 03/03/11 11:49	ND	1.00 µg/L	03/07/11 10:27	03/07/11 19:33
Client ID: **MW-11-1** Lab ID : BMI11030401-09A Perchlorate Date Sampled 03/03/11 12:17	ND	1.00 µg/L	03/07/11 10:27	03/07/11 19:51
Client ID: **MW-5** Lab ID : BMI11030401-10A Perchlorate Date Sampled 03/03/11 10:26	ND	1.00 µg/L	03/07/11 10:27	03/07/11 20:47

Alpha Analytical, Inc.

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ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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

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3/16/11

Report Date

Alpha Analytical, Inc.

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ANALYTICAL REPORT

Battelle Memorial Institute
655 West Broadway
San Diego, CA 92101

Attn: David Conner
Phone: (619) 726-7311
Fax: (614) 458-6641
Date Received : 03/04/11

Job: G005862/JPL Groundwater Monitoring

Metals by ICPMS
EPA Method 200.8

Parameter		Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-22-3**					
Lab ID : BMI11030401-01A	Chromium (Cr)	ND	0.0050 mg/L	03/04/11 12:38	03/07/11 22:08
Date Sampled 03/03/11 08:25					
Client ID: **MW-22-2**					
Lab ID : BMI11030401-02A	Chromium (Cr)	ND	0.0050 mg/L	03/04/11 12:38	03/07/11 22:13
Date Sampled 03/03/11 09:09					
Client ID: **MW-22-1**					
Lab ID : BMI11030401-03A	Chromium (Cr)	ND	0.0050 mg/L	03/04/11 12:38	03/07/11 22:19
Date Sampled 03/03/11 09:39					
Client ID: **EB-08-03/03/11**					
Lab ID : BMI11030401-04A	Chromium (Cr)	ND	0.0050 mg/L	03/04/11 12:38	03/07/11 22:25
Date Sampled 03/03/11 09:30					
Client ID: **MW-11-3**					
Lab ID : BMI11030401-07A	Chromium (Cr)	ND	0.0050 mg/L	03/04/11 12:38	03/07/11 22:30
Date Sampled 03/03/11 11:25					
Client ID: **MW-11-2**					
Lab ID : BMI11030401-08A	Chromium (Cr)	ND	0.0050 mg/L	03/04/11 12:38	03/07/11 22:36
Date Sampled 03/03/11 11:49					
Client ID: **MW-11-1**					
Lab ID : BMI11030401-09A	Chromium (Cr)	ND	0.0050 mg/L	03/04/11 12:38	03/07/11 21:45
Date Sampled 03/03/11 12:17					
Client ID: **MW-5**					
Lab ID : BMI11030401-10A	Chromium (Cr)	ND	0.0050 mg/L	03/04/11 12:38	03/07/11 22:42
Date Sampled 03/03/11 10:26					

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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3/16/11
Report Date

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ANALYTICAL REPORT

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

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

Tentatively Identified Compounds - Volatile Organics by GC/MS

	Parameter	Estimated Concentration	Estimated Reporting Limit	Date Extracted	Date Analyzed
Client ID : **MW-22-3**					
Lab ID : BMI11030401-01A	* * * None Found * * *	ND	2.0 µg/L	03/08/11 13:53	03/08/11 13:53
Date Received : 03/04/11					
Date Sampled : 03/03/11 08:25					
Client ID : **MW-22-2**					
Lab ID : BMI11030401-02A	* * * None Found * * *	ND	2.0 µg/L	03/08/11 14:15	03/08/11 14:15
Date Received : 03/04/11					
Date Sampled : 03/03/11 09:09					
Client ID : **MW-22-1**					
Lab ID : BMI11030401-03A	* * * None Found * * *	ND	2.0 µg/L	03/08/11 14:36	03/08/11 14:36
Date Received : 03/04/11					
Date Sampled : 03/03/11 09:39					
Client ID : **EB-08-03/03/11**					
Lab ID : BMI11030401-04A	* * * None Found * * *	ND	2.0 µg/L	03/08/11 13:32	03/08/11 13:32
Date Received : 03/04/11					
Date Sampled : 03/03/11 09:30					
Client ID : **TB-08-03/03/11**					
Lab ID : BMI11030401-05A	* * * None Found * * *	ND	2.0 µg/L	03/08/11 13:10	03/08/11 13:10
Date Received : 03/04/11					
Date Sampled : 03/03/11 07:00					
Client ID : **MW-11-4**					
Lab ID : BMI11030401-06A	Sulfur dioxide	5.7	2.0 µg/L	03/08/11 14:58	03/08/11 14:58
Date Received : 03/04/11					
Date Sampled : 03/03/11 10:58					
Client ID : **MW-11-3**					
Lab ID : BMI11030401-07A	Sulfur dioxide	10	2.0 µg/L	03/08/11 15:19	03/08/11 15:19
Date Received : 03/04/11					
Date Sampled : 03/03/11 11:25					
Client ID : **MW-11-2**					
Lab ID : BMI11030401-08A	Sulfur dioxide	3.0	2.0 µg/L	03/08/11 15:41	03/08/11 15:41
Date Received : 03/04/11					
Date Sampled : 03/03/11 11:49					
Client ID : **MW-11-1**					
Lab ID : BMI11030401-09A	Sulfur dioxide	3.4	2.0 µg/L	03/08/11 16:03	03/08/11 16:03
Date Received : 03/04/11					
Date Sampled : 03/03/11 12:17					

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Client ID : **MW-5**

Lab ID :	BMI11030401-10A	* * * None Found * * *	ND	2.0 µg/L	03/08/11 16:24	03/08/11 16:24

Date Received : 03/04/11

Date Sampled : 03/03/11 10:26

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI11030401-01A
Client I.D. Number: MW-22-3

Sampled: 03/03/11 08:25
Received: 03/04/11
Extracted: 03/08/11 13:53
Analyzed: 03/08/11 13:53

Volatile Organics by GC/MS
EPA Method SW8260B

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

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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3/16/11
Report Date

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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI11030401-02A
Client I.D. Number: MW-22-2

Sampled: 03/03/11 09:09
Received: 03/04/11
Extracted: 03/08/11 14:15
Analyzed: 03/08/11 14:15

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5	µg/L
25	Trichloroethene	ND	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-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	112	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	100	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI11030401-03A
Client I.D. Number: MW-22-1

Sampled: 03/03/11 09:39
Received: 03/04/11
Extracted: 03/08/11 14:36
Analyzed: 03/08/11 14:36

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	0.81	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	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	112	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	101	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	1.0	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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

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

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

3/16/11
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI11030401-04A
Client I.D. Number: EB-08-03/03/11

Sampled: 03/03/11 09:30
Received: 03/04/11
Extracted: 03/08/11 13:32
Analyzed: 03/08/11 13:32

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5	µg/L
25	Trichloroethene	ND	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	103	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	107	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	99	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer
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3/16/11
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI11030401-05A
Client I.D. Number: TB-08-03/03/11

Sampled: 03/03/11 07:00
Received: 03/04/11
Extracted: 03/08/11 13:10
Analyzed: 03/08/11 13:10

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5	µg/L
25	Trichloroethene	ND	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	99	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	103	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	99	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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3/16/11
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI11030401-06A
Client I.D. Number: MW-11-4

Sampled: 03/03/11 10:58
Received: 03/04/11
Extracted: 03/08/11 14:58
Analyzed: 03/08/11 14:58

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5	µg/L
25	Trichloroethene	ND	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	103	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	112	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	102	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer
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3/16/11
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI11030401-07A
Client I.D. Number: MW-11-3

Sampled: 03/03/11 11:25
Received: 03/04/11
Extracted: 03/08/11 15:19
Analyzed: 03/08/11 15:19

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5	µg/L
25	Trichloroethene	ND	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	104	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	111	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	100	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

3/16/11
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI11030401-08A
Client I.D. Number: MW-11-2

Sampled: 03/03/11 11:49
Received: 03/04/11
Extracted: 03/08/11 15:41
Analyzed: 03/08/11 15:41

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5	µg/L
25	Trichloroethene	ND	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	105	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	111	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	97	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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

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

3/16/11
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI11030401-09A
Client I.D. Number: MW-11-1

Sampled: 03/03/11 12:17
Received: 03/04/11
Extracted: 03/08/11 16:03
Analyzed: 03/08/11 16:03

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	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	112	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	101	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer
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3/16/11
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI11030401-10A
Client I.D. Number: MW-5

Sampled: 03/03/11 10:26
Received: 03/04/11
Extracted: 03/08/11 16:24
Analyzed: 03/08/11 16:24

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5	µg/L
25	Trichloroethene	ND	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	105	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	111	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	103	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane.	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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3/16/11
Report Date

Alpha Analytical, Inc.

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

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

VOC Sample Preservation Report

Work Order: BMI11030401 **Job:** G005862/JPL Groundwater Monitoring

Alpha's Sample ID	Client's Sample ID	Matrix	pH
11030401-01A	MW-22-3	Aqueous	2
11030401-02A	MW-22-2	Aqueous	2
11030401-03A	MW-22-1	Aqueous	2
11030401-04A	EB-08-03/03/11	Aqueous	2
11030401-05A	TB-08-03/03/11	Aqueous	2
11030401-06A	MW-11-4	Aqueous	2
11030401-07A	MW-11-3	Aqueous	2
11030401-08A	MW-11-2	Aqueous	2
11030401-09A	MW-11-1	Aqueous	2
11030401-10A	MW-5	Aqueous	2

3/16/11

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: *15-Mar-11*

QC Summary Report

Work Order: 11030401

Method Blank

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

File ID: **20** Batch ID: **26108** Analysis Date: **03/04/2011 11:04**

Sample ID: **MB-26108** Units : **mg/L** Run ID: **IC_2_110304A** Prep Date: **03/04/2011 11:20**

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

Laboratory Fortified Blank

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

File ID: **33** Batch ID: **26108** Analysis Date: **03/04/2011 15:05**

Sample ID: **LFB-26108** Units : **mg/L** Run ID: **IC_2_110304A** Prep Date: **03/04/2011 11:20**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	53.2	0.5	50		106	90	110			
Nitrite (NO2) - N	5.34	0.25	5		107	90	110			
Nitrate (NO3) - N	5.34	0.25	5		107	90	110			
Phosphate, ortho - P	4.96	0.5	5		99	90	110			
Sulfate (SO4)	109	0.5	100		109	90	110			

Sample Matrix Spike

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

File ID: **29** Batch ID: **26108** Analysis Date: **03/04/2011 13:51**

Sample ID: **11030401-09ALFM** Units : **mg/L** Run ID: **IC_2_110304A** Prep Date: **03/04/2011 11:20**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	120	0.5	100	24.46	96	80	120			
Nitrite (NO2) - N	10.7	0.25	10	0	107	80	120			
Nitrate (NO3) - N	11.5	0.25	10	1.008	105	80	120			
Phosphate, ortho - P	10.2	0.5	10	0	102	80	120			
Sulfate (SO4)	233	0.5	200	53.73	90	80	120			

Sample Matrix Spike Duplicate

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

File ID: **30** Batch ID: **26108** Analysis Date: **03/04/2011 14:09**

Sample ID: **11030401-09ALFMD** Units : **mg/L** Run ID: **IC_2_110304A** Prep Date: **03/04/2011 11:20**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloride	122	0.5	100	24.46	97	80	120	120.5	1.1(15)	
Nitrite (NO2) - N	11.1	0.25	10	0	111	80	120	10.74	3.1(15)	
Nitrate (NO3) - N	11.7	0.25	10	1.008	107	80	120	11.52	1.4(15)	
Phosphate, ortho - P	10.1	0.5	10	0	101	80	120	10.16	1.1(15)	
Sulfate (SO4)	234	0.5	200	53.73	90	80	120	232.8	0.7(15)	

Comments:

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

Alpha Analytical, Inc.

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

Date: *08-Mar-11*

QC Summary Report

Work Order: 11030401

Method Blank

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

File ID: **25** Batch ID: **26115** Analysis Date: **03/07/2011 16:47**

Sample ID: **MB-26115** Units : **µg/L** Run ID: **IC_3_110307A** Prep Date: **03/07/2011 10:27**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	ND	1								

Laboratory Fortified Blank

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

File ID: **26** Batch ID: **26115** Analysis Date: **03/07/2011 17:06**

Sample ID: **LFB-26115** Units : **µg/L** Run ID: **IC_3_110307A** Prep Date: **03/07/2011 10:27**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	26.3	2	25		105	85	115			

Sample Matrix Spike

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

File ID: **36** Batch ID: **26115** Analysis Date: **03/07/2011 20:10**

Sample ID: **11030401-09ALFM** Units : **µg/L** Run ID: **IC_3_110307A** Prep Date: **03/07/2011 10:27**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	26.5	2	25	0	106	80	120			

Sample Matrix Spike Duplicate

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

File ID: **37** Batch ID: **26115** Analysis Date: **03/07/2011 20:28**

Sample ID: **11030401-09ALFMD** Units : **µg/L** Run ID: **IC_3_110307A** Prep Date: **03/07/2011 10:27**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	26.8	2	25	0	107	80	120	26.45	1.2(15)	

Comments:

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

Alpha Analytical, Inc.

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

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

Date: *10-Mar-11*

QC Summary Report

Work Order: 11030401

Method Blank

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

File ID: **030711.B\086_M.D** Batch ID: **26109** Analysis Date: **03/07/2011 21:17**

Sample ID: **MB-26109** Units : **mg/L** Run ID: **ICP/MS_110307B** Prep Date: **03/04/2011 12:38**

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

Laboratory Control Spike

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

File ID: **030711.B\152_D.D** Batch ID: **26109** Analysis Date: **03/08/2011 11:57**

Sample ID: **LCS-26109** Units : **mg/L** Run ID: **ICP/MS_110307B** Prep Date: **03/04/2011 12:38**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0536	0.005	0.05		107	85	115			

Sample Matrix Spike

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

File ID: **030711.B\092_M.D** Batch ID: **26109** Analysis Date: **03/07/2011 21:51**

Sample ID: **11030401-09AMS** Units : **mg/L** Run ID: **ICP/MS_110307B** Prep Date: **03/04/2011 12:38**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0474	0.005	0.05	0	95	70	130			

Sample Matrix Spike Duplicate

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

File ID: **030711.B\093_M.D** Batch ID: **26109** Analysis Date: **03/07/2011 21:56**

Sample ID: **11030401-09AMSD** Units : **mg/L** Run ID: **ICP/MS_110307B** Prep Date: **03/04/2011 12:38**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0482	0.005	0.05	0	96	70	130	0.04744	1.5(20)	

Comments:

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

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Date: *09-Mar-11*

QC Summary Report

Work Order: 11030401

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

File ID: **11030807.D** Batch ID: **MS15W0308M** Analysis Date: **03/08/2011 10:17**

Sample ID: **MBLK MS15W0308M** Units : **µg/L** Run ID: **MSD_15_110308C** Prep Date: **03/08/2011 10:17**

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	10.3		10		103	70	130			

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Surr: 4-Bromofluorobenzene	9.98	10	99.8	70	130	

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Date: 09-Mar-11

QC Summary Report

Work Order: 11030401

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

File ID: **11030803.D** Batch ID: **MS15W0308M** Analysis Date: **03/08/2011 08:42**

Sample ID: **LCS MS15W0308M** Units : **µg/L** Run ID: **MSD_15_110308C** Prep Date: **03/08/2011 08:42**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	11.1	1	10		111	70	130			
Chloromethane	10.3	2	10		103	70	130			
Vinyl chloride	11	1	10		110	70	130			
Chloroethane	11.3	1	10		113	70	130			
Bromomethane	8.65	2	10		87	70	130			
Trichlorofluoromethane	11.2	1	10		112	70	130			
1,1-Dichloroethene	11	1	10		110	70	130			
Dichloromethane	9.68	2	10		97	70	130			
Freon-113	11.4	1	10		114	70	137			
trans-1,2-Dichloroethene	10.7	1	10		107	70	130			
Methyl tert-butyl ether (MTBE)	9.47	0.5	10		95	70	130			
1,1-Dichloroethane	10.7	1	10		107	70	130			
2-Butanone (MEK)	179	10	200		90	70	130			
cis-1,2-Dichloroethene	10.4	1	10		104	70	130			
Bromochloromethane	10.4	1	10		104	70	130			
Chloroform	10.2	1	10		102	70	130			
2,2-Dichloropropane	11.1	1	10		111	70	130			
1,2-Dichloroethane	10.4	1	10		104	70	130			
1,1,1-Trichloroethane	11.3	1	10		113	70	130			
1,1-Dichloropropene	11.5	1	10		115	70	130			
Carbon tetrachloride	10.6	1	10		106	70	130			
Benzene	10.2	0.5	10		102	70	130			
Dibromomethane	10.3	1	10		103	70	130			
1,2-Dichloropropane	10.5	1	10		105	70	130			
Trichloroethene	11.1	1	10		111	70	130			
Bromodichloromethane	11.4	1	10		114	70	130			
4-Methyl-2-pentanone (MIBK)	22.8	2.5	25		91	20	182			
cis-1,3-Dichloropropene	10.3	1	10		103	70	130			
trans-1,3-Dichloropropene	9.4	1	10		94	70	130			
1,1,2-Trichloroethane	10.2	1	10		102	70	130			
Toluene	10.5	0.5	10		105	70	130			
1,3-Dichloropropane	10.2	1	10		102	70	130			
Dibromochloromethane	10.8	1	10		108	70	130			
1,2-Dibromoethane (EDB)	20.8	2	20		104	70	130			
Tetrachloroethene	10.5	1	10		105	70	130			
1,1,1,2-Tetrachloroethane	11.5	1	10		115	70	130			
Chlorobenzene	10.7	1	10		107	70	130			
Ethylbenzene	10.8	0.5	10		108	70	130			
m,p-Xylene	10.9	0.5	10		109	70	130			
Bromoform	10.3	1	10		103	70	130			
Styrene	11.1	1	10		111	70	130			
o-Xylene	11	0.5	10		110	70	130			
1,1,2,2-Tetrachloroethane	10.2	1	10		102	70	130			
1,2,3-Trichloropropane	20	2	20		99.8	70	130			
Isopropylbenzene	10.8	1	10		108	70	130			
Bromobenzene	10.3	1	10		103	70	130			
n-Propylbenzene	10.9	1	10		109	70	130			
4-Chlorotoluene	11.2	1	10		112	70	130			
2-Chlorotoluene	10.7	1	10		107	70	130			
1,3,5-Trimethylbenzene	11	1	10		110	70	130			
tert-Butylbenzene	10.7	1	10		107	70	130			
1,2,4-Trimethylbenzene	11.1	1	10		111	70	130			
sec-Butylbenzene	11	1	10		110	70	130			
1,3-Dichlorobenzene	11	1	10		110	70	130			
1,4-Dichlorobenzene	10.5	1	10		105	70	130			
4-Isopropyltoluene	10.9	1	10		109	70	130			
1,2-Dichlorobenzene	10	1	10		100	70	130			
n-Butylbenzene	11.5	1	10		115	70	130			
1,2-Dibromo-3-chloropropane (DBCP)	47.5	3	50		95	67	130			
1,2,4-Trichlorobenzene	11.4	2	10		114	70	130			
Naphthalene	9.96	2	10		99.6	70	130			
Hexachlorobutadiene	19.9	2	20		99	70	130			
1,2,3-Trichlorobenzene	12	2	10		120	70	130			
Surr: 1,2-Dichloroethane-d4	10.3		10		103	70	130			
Surr: Toluene-d8	9.79		10		98	70	130			

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Surr: 4-Bromofluorobenzene	9.79	10	98	70	130	

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QC Summary Report

Work Order: 11030401

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

File ID: **11030808.D** Batch ID: **MS15W0308M** Analysis Date: **03/08/2011 10:39**

Sample ID: **11030401-09AMS** Units : **µg/L** Run ID: **MSD_15_110308C** Prep Date: **03/08/2011 10:39**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	43.2	2.5	50	0	86	21	138			
Chloromethane	43.9	10	50	0	88	23	144			
Vinyl chloride	48.2	2.5	50	0	96	49	136			
Chloroethane	49.1	2.5	50	0	98	21	159			
Bromomethane	34.9	10	50	0	70	10	174			
Trichlorofluoromethane	50	2.5	50	0	100	32	154			
1,1-Dichloroethene	48.8	2.5	50	0	98	64	130			
Dichloromethane	44.5	10	50	0	89	69	130			
Freon-113	51.6	2.5	50	0	103	55	141			
trans-1,2-Dichloroethene	46.9	2.5	50	0	94	63	130			
Methyl tert-butyl ether (MTBE)	49.4	1.3	50	0	99	47	150			
1,1-Dichloroethane	48.7	2.5	50	0	97	66	130			
2-Butanone (MEK)	776	50	1000	0	78	23	182			
cis-1,2-Dichloroethene	49.1	2.5	50	0	98	70	130			
Bromochloromethane	47.7	2.5	50	0	95	70	132			
Chloroform	45.6	2.5	50	0	91	70	130			
2,2-Dichloropropane	50	2.5	50	0	100	38	154			
1,2-Dichloroethane	48.5	2.5	50	0	97	65	134			
1,1,1-Trichloroethane	49.8	2.5	50	0	100	65	136			
1,1-Dichloropropene	50.9	2.5	50	0	102	68	132			
Carbon tetrachloride	45.2	2.5	50	0	90	58	148			
Benzene	45.9	1.3	50	0	92	59	138			
Dibromomethane	49.5	2.5	50	0	99	70	130			
1,2-Dichloropropane	49.2	2.5	50	0	98	70	131			
Trichloroethene	48.4	2.5	50	0	97	65	144			
Bromodichloromethane	49.3	2.5	50	0	99	50	157			
4-Methyl-2-pentanone (MIBK)	110	13	125	0	88	20	182			
cis-1,3-Dichloropropene	45.2	2.5	50	0	90	63	131			
trans-1,3-Dichloropropene	42.3	2.5	50	0	85	65	136			
1,1,2-Trichloroethane	47.8	2.5	50	0	96	70	131			
Toluene	48.3	1.3	50	0	97	68	130			
1,3-Dichloropropane	51.1	2.5	50	0	102	70	130			
Dibromochloromethane	49.8	2.5	50	0	99.7	42	155			
1,2-Dibromoethane (EDB)	102	5	100	0	102	70	130			
Tetrachloroethene	47.7	2.5	50	0	95	65	130			
1,1,1,2-Tetrachloroethane	50.7	2.5	50	0	101	70	130			
Chlorobenzene	48.3	2.5	50	0	97	70	130			
Ethylbenzene	48.2	1.3	50	0	96	68	130			
m,p-Xylene	48.7	1.3	50	0	97	68	131			
Bromoform	46.8	2.5	50	0	94	65	143			
Styrene	50.7	2.5	50	0	101	59	153			
o-Xylene	49.7	1.3	50	0	99	70	130			
1,1,2,2-Tetrachloroethane	49.8	2.5	50	0	99.5	67	130			
1,2,3-Trichloropropane	97.6	10	100	0	98	70	130			
Isopropylbenzene	48	2.5	50	0	96	55	138			
Bromobenzene	46.6	2.5	50	0	93	70	130			
n-Propylbenzene	49.7	2.5	50	0	99	67	133			
4-Chlorotoluene	50.4	2.5	50	0	101	70	130			
2-Chlorotoluene	48.5	2.5	50	0	97	70	130			
1,3,5-Trimethylbenzene	49.4	2.5	50	0	99	67	134			
tert-Butylbenzene	48.1	2.5	50	0	96	55	147			
1,2,4-Trimethylbenzene	50	2.5	50	0	99.9	65	135			
sec-Butylbenzene	49.1	2.5	50	0	98	68	135			
1,3-Dichlorobenzene	50	2.5	50	0	99.9	70	130			
1,4-Dichlorobenzene	47.9	2.5	50	0	96	70	130			
4-Isopropyltoluene	50.1	2.5	50	0	100	68	132			
1,2-Dichlorobenzene	47.1	2.5	50	0	94	70	130			
n-Butylbenzene	52.8	2.5	50	0	106	62	134			
1,2-Dibromo-3-chloropropane (DBCP)	233	15	250	0	93	64	130			
1,2,4-Trichlorobenzene	53.1	10	50	0	106	62	133			
Naphthalene	47.2	10	50	0	94	32	166			
Hexachlorobutadiene	91.3	10	100	0	91	63	130			
1,2,3-Trichlorobenzene	54.8	10	50	0	110	55	138			
Surr: 1,2-Dichloroethane-d4	50.6		50		101	70	130			
Surr: Toluene-d8	50		50		99.9	70	130			

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Surr: 4-Bromofluorobenzene	48.7	50	97	70	130	

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QC Summary Report

Work Order: 11030401

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

File ID: **11030809.D** Batch ID: **MS15W0308M** Analysis Date: **03/08/2011 11:01**

Sample ID: **11030401-09AMSD** Units : **µg/L** Run ID: **MSD_15_110308C** Prep Date: **03/08/2011 11:01**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	40.3	2.5	50	0	81	21	138	43.24	7.2(33)	
Chloromethane	41.2	10	50	0	82	23	144	43.93	6.3(27)	
Vinyl chloride	46	2.5	50	0	92	49	136	48.19	4.7(21)	
Chloroethane	45.5	2.5	50	0	91	21	159	49.13	7.7(40)	
Bromomethane	36.4	10	50	0	73	10	174	34.87	4.3(40)	
Trichlorofluoromethane	46.1	2.5	50	0	92	32	154	50.02	8.2(37)	
1,1-Dichloroethene	45.2	2.5	50	0	90	64	130	48.76	7.7(21)	
Dichloromethane	43	10	50	0	86	69	130	44.51	3.4(20)	
Freon-113	47.6	2.5	50	0	95	55	141	51.55	8.0(40)	
trans-1,2-Dichloroethene	45.3	2.5	50	0	91	63	130	46.91	3.6(20)	
Methyl tert-butyl ether (MTBE)	48.8	1.3	50	0	98	47	150	49.39	1.3(40)	
1,1-Dichloroethane	46.4	2.5	50	0	93	66	130	48.72	4.9(20)	
2-Butanone (MEK)	789	50	1000	0	79	23	182	775.7	1.7(22)	
cis-1,2-Dichloroethene	46.4	2.5	50	0	93	70	130	49.06	5.5(20)	
Bromochloromethane	46.6	2.5	50	0	93	70	132	47.66	2.2(20)	
Chloroform	43.1	2.5	50	0	86	70	130	45.62	5.7(20)	
2,2-Dichloropropane	48.9	2.5	50	0	98	38	154	50.01	2.2(22)	
1,2-Dichloroethane	47.4	2.5	50	0	95	65	134	48.54	2.4(20)	
1,1,1-Trichloroethane	47	2.5	50	0	94	65	136	49.75	5.7(20)	
1,1-Dichloropropene	47.1	2.5	50	0	94	68	132	50.93	7.8(20)	
Carbon tetrachloride	44.1	2.5	50	0	88	58	148	45.17	2.4(20)	
Benzene	43.7	1.3	50	0	87	59	138	45.86	4.7(21)	
Dibromomethane	48.3	2.5	50	0	97	70	130	49.46	2.4(20)	
1,2-Dichloropropane	47.7	2.5	50	0	95	70	131	49.18	3.0(20)	
Trichloroethene	45.4	2.5	50	0	91	65	144	48.35	6.4(20)	
Bromodichloromethane	49.6	2.5	50	0	99	50	157	49.34	0.5(20)	
4-Methyl-2-pentanone (MIBK)	113	13	125	0	91	20	182	109.9	3.2(20)	
cis-1,3-Dichloropropene	44.7	2.5	50	0	89	63	131	45.24	1.3(20)	
trans-1,3-Dichloropropene	42.4	2.5	50	0	85	65	136	42.28	0.3(20)	
1,1,2-Trichloroethane	47.5	2.5	50	0	95	70	131	47.76	0.6(20)	
Toluene	47.6	1.3	50	0	95	68	130	48.32	1.6(20)	
1,3-Dichloropropane	52	2.5	50	0	104	70	130	51.09	1.8(20)	
Dibromochloromethane	51.1	2.5	50	0	102	42	155	49.83	2.5(20)	
1,2-Dibromoethane (EDB)	105	5	100	0	105	70	130	102	3.1(20)	
Tetrachloroethene	46.8	2.5	50	0	94	65	130	47.72	2.0(20)	
1,1,1,2-Tetrachloroethane	50.2	2.5	50	0	100	70	130	50.7	0.9(20)	
Chlorobenzene	47.7	2.5	50	0	95	70	130	48.31	1.2(20)	
Ethylbenzene	46.3	1.3	50	0	93	68	130	48.19	4.0(20)	
m,p-Xylene	46.4	1.3	50	0	93	68	131	48.65	4.7(20)	
Bromoform	47.5	2.5	50	0	95	65	143	46.76	1.6(20)	
Styrene	49.7	2.5	50	0	99	59	153	50.7	2.1(37)	
o-Xylene	47.6	1.3	50	0	95	70	130	49.74	4.4(20)	
1,1,2,2-Tetrachloroethane	50.4	2.5	50	0	101	67	130	49.76	1.4(20)	
1,2,3-Trichloropropane	97	10	100	0	97	70	130	97.56	0.6(20)	
Isopropylbenzene	46.3	2.5	50	0	93	55	138	47.97	3.5(20)	
Bromobenzene	46	2.5	50	0	92	70	130	46.64	1.4(20)	
n-Propylbenzene	47.8	2.5	50	0	96	67	133	49.69	4.0(30)	
4-Chlorotoluene	49.9	2.5	50	0	99.8	70	130	50.39	1.0(20)	
2-Chlorotoluene	47.4	2.5	50	0	95	70	130	48.51	2.4(20)	
1,3,5-Trimethylbenzene	48.1	2.5	50	0	96	67	134	49.39	2.7(21)	
tert-Butylbenzene	46.4	2.5	50	0	93	55	147	48.09	3.7(20)	
1,2,4-Trimethylbenzene	48.7	2.5	50	0	97	65	135	49.95	2.6(25)	
sec-Butylbenzene	47.4	2.5	50	0	95	68	135	49.08	3.5(20)	
1,3-Dichlorobenzene	49.2	2.5	50	0	98	70	130	49.95	1.5(20)	
1,4-Dichlorobenzene	47.8	2.5	50	0	96	70	130	47.87	0.1(20)	
4-Isopropyltoluene	48.2	2.5	50	0	96	68	132	50.05	3.8(20)	
1,2-Dichlorobenzene	46.9	2.5	50	0	94	70	130	47.1	0.5(20)	
n-Butylbenzene	52	2.5	50	0	104	62	134	52.76	1.5(21)	
1,2-Dibromo-3-chloropropane (DBCP)	243	15	250	0	97	64	130	233.5	4.1(20)	
1,2,4-Trichlorobenzene	54.8	10	50	0	110	62	133	53.09	3.2(29)	
Naphthalene	50.2	10	50	0	100	32	166	47.21	6.1(40)	
Hexachlorobutadiene	95.9	10	100	0	96	63	130	91.29	4.9(21)	
1,2,3-Trichlorobenzene	56.8	10	50	0	114	55	138	54.75	3.7(36)	
Surr: 1,2-Dichloroethane-d4	49.8		50		99.5	70	130			
Surr: Toluene-d8	50.9		50		102	70	130			

Alpha Analytical, Inc.

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

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

Date: *09-Mar-11*

QC Summary Report

Work Order: 11030401

Surr: 4-Bromofluorobenzene	48.4	50	97	70	130	

Comments:

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

Billing Information :

CHAIN-OF-CUSTODY RECORD

CA

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

WorkOrder : BMIS11030401

Report Due By : 5:00 PM On : 17-Mar-2011

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

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

EDD Required : **Yes**

Sampled by : Chase Brogdon, David Loera

PO : 218013

Client's COC # : 33402, 53570 Job : G005862/JPL Groundwater Monitoring

Cooler Temp	Samples Received	Date Printed
0 °C	04-Mar-2011	**04-Mar-2011**

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

Alpha Sample ID	Client Sample ID	Matrix	Collection Date	No. of Bottles Alpha	Sub	TAT	Requested Tests 300_0_W	314_W	METALS_DW	VOC_TIC_W	VOC_W				Sample Remarks
BMI11030401-01A	MW-22-3	AQ	03/03/11 08:25	5	0	9		Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				
BMI11030401-02A	MW-22-2	AQ	03/03/11 09:09	5	0	9		Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				
BMI11030401-03A	MW-22-1	AQ	03/03/11 09:39	5	0	9		Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				
BMI11030401-04A	EB-08-03/03/11	AQ	03/03/11 09:30	5	0	9		Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				
BMI11030401-05A	TB-08-03/03/11	AQ	03/03/11 07:00	1	0	9				VOC by 524 Criteria	VOC by 524 Criteria				Reno Trip Blank 12/14/10
BMI11030401-06A	MW-11-4	AQ	03/03/11 10:58	4	0	9		Perchlorate		VOC by 524 Criteria	VOC by 524 Criteria				
BMI11030401-07A	MW-11-3	AQ	03/03/11 11:25	5	0	9		Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				
BMI11030401-08A	MW-11-2	AQ	03/03/11 11:49	5	0	9		Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				
BMI11030401-09A	MW-11-1	AQ	03/03/11 12:17	10	0	9	NO2, NO3, SO4, Cl, PO4	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				MS/MSD
BMI11030401-10A	MW-5	AQ	03/03/11 10:26	7	0	9		Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria				

Comments: Security seals intact. Frozen ice. Temp Blank #9091 received @ 0°C. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). :

	Signature	Print Name	Company	Date/Time
Logged in by:	Elizabeth Adcox	Elizabeth Adcox	**Alpha Analytical, Inc.**	3-4-11 1044

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

33402

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

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

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

Consultant / Client Name: BATTELLE / DAVID CONNEN
Address: 3990 OLD TOWN AVE, C-205
City, State, Zip: SAN DIEGO, CA 92110
Job #: GA5862
Job Name: SPL GW. MON. 10/11
Report Attention / Project Manager
Name: DAVID CONNEN
Email: CONNELD@BATTELLE.ORG
FAX 614-458-6641 Mobile: 619-726-7311
P.O. # 218013

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

Analyses Required: VOCs (524.2); TOTAL Cr (6010); Cl04 (314.0); Cl-, SO4, NO3, NO2, PO4, F (300.0)

Time Sampled	Date Sampled	Matrix* See Key Below	Lab ID Number (Office Use Only)	Sample Description	TAT	Field Filtered	# Containers**	VOCs	TOTAL Cr	Cl04	Cl-, SO4, NO3, NO2, PO4, F				REMARKS
0825	3/3/11	AQ	BMI1103040 01	MW-22-3			3v 2p	X	X	X					
0908			02	MW-22-2				X	X	X					
0939			03	MW-22-1				X	X	X					
0930			04	EB-08-03/03/11			3v 2p	X	X	X					EQUIP BLANK
0700	3/3/11	AQ	05	TB-08-03/03/11			1v	X							TRIP BLANK
1058	3/3/11	AQ	06	MW-11-4			3v 1p	X		X					
1125			07	MW-11-3			3v 2p	X	X	X					
1149			08	MW-11-2			3v 2p	X	X	X					
1217	3/3/11	AQ	09	MW-11-1			6v 4p	X	X	X	X				MS/MSD

FOR LAB USE ONLY

ADDITIONAL INSTRUCTIONS:

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

Relinquished by: (Signature/Affiliation)	Received by: (Signature/Affiliation) / Alph. Analyst	Date: 3/3/11	Time: 1400
Relinquished by: (Signature/Affiliation) / Alpha Analyst	Received by: (Signature/Affiliation) Elizabeth Adcox / Alpha	Date: 3-4-11	Time: 1044
Relinquished by: (Signature/Affiliation)	Received by: (Signature/Affiliation)	Date:	Time:

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

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

53570

Billing Information:
Company Name: Battelle
Attn:
Address: 505 King Ave
City, State, Zip: Columbus OH, 43201
Phone Number: Fax:

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

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

Consultant / Client Name: DAVid Conner
Address:
City, State, Zip:

Job #: G005862/JPL GWM Job Name: JPL-GW-1Q11

Report Attention / Project Manager
Name: David Conner
Email: Connerd@battelle.org
Phone: Mobile: 619-726-7311

P.O. # 218013

Data Validation Level: III or IV

EDD / EDF? YES ___ NO ___
Global ID # ___

Time Sampled	Date Sampled	Matrix* See Key Below	Lab ID Number (Office Use Only)	Sample Description	TAT	Field Filtered	# Containers**	VOCs (524.2)	total cr (200.8)	Perchlorate (314.0)	* 300				REMARKS
1026	3/3	AQ	-10	MW-5	10		6V 1P	X	X	X					

FOR LAB USE ONLY

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

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

Relinquished by: (Signature/Affiliation)	Received by: (Signature/Affiliation)	Date:	Time:
David Loera / Battelle	INSIGHT	3/3/11	1100
INSIGHT	Alpha Analytical	3/3/11	1400
Alpha Analytical	Cynthia Adcox / Alpha	3-4-11	1044

*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-Mar-11*

David Conner
Battelle Memorial Institute
655 West Broadway Suite 1420
San Diego, CA 92101
(619) 726-7311

CASE NARRATIVE

Job: G005862/JPL Groundwater Monitoring

Work Order: BMI11030801 **Cooler Temp:** 0 °C

Alpha's Sample ID	Client's Sample ID	Matrix
11030801-01A	MW-23-4	Aqueous
11030801-02A	MW-23-3	Aqueous
11030801-03A	MW-23-2	Aqueous
11030801-04A	MW-23-1	Aqueous
11030801-05A	EB-09-03/04/11	Aqueous
11030801-06A	TB-09-03/04/11	Aqueous
11030801-07A	DUPE-05-1Q11	Aqueous
11030801-08A	MW-12-5	Aqueous
11030801-09A	MW-12-4	Aqueous
11030801-10A	MW-12-3	Aqueous
11030801-11A	MW-12-2	Aqueous
11030801-12A	MW-12-1	Aqueous
11030801-13A	DUPE-06-1Q11	Aqueous
11030801-14A	EB-10-03/07/11	Aqueous
11030801-15A	TB-10-03/07/11	Aqueous

Manually Integrated Analytes

Alpha's Sample ID	Test Reference	Analyte
NONE		

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

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

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

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

Battelle Memorial Institute
655 West Broadway
San Diego, CA 92101

Attn: David Conner
Phone: (619) 726-7311
Fax: (614) 458-6641
Date Received : 03/08/11

Job: G005862/JPL Groundwater Monitoring

Perchlorate by Ion Chromatography
EPA Method 314.0

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-23-3**				
Lab ID : BMI11030801-02A Perchlorate	1.18	1.00 µg/L	03/08/11 15:58	03/08/11 18:04
Date Sampled 03/04/11 08:39				
Client ID: **MW-23-2**				
Lab ID : BMI11030801-03A Perchlorate	3.42	1.00 µg/L	03/08/11 15:58	03/08/11 18:22
Date Sampled 03/04/11 09:05				
Client ID: **MW-23-1**				
Lab ID : BMI11030801-04A Perchlorate	302	10.0 µg/L	03/08/11 15:58	03/09/11 13:48
Date Sampled 03/04/11 09:38				
Client ID: **EB-09-03/04/11**				
Lab ID : BMI11030801-05A Perchlorate	ND	1.00 µg/L	03/08/11 15:58	03/08/11 18:59
Date Sampled 03/04/11 09:26				
Client ID: **MW-12-5**				
Lab ID : BMI11030801-08A Perchlorate	2.29	1.00 µg/L	03/08/11 15:58	03/08/11 19:17
Date Sampled 03/07/11 08:42				
Client ID: **MW-12-4**				
Lab ID : BMI11030801-09A Perchlorate	3.53	1.00 µg/L	03/08/11 15:58	03/08/11 19:36
Date Sampled 03/07/11 09:14				
Client ID: **MW-12-3**				
Lab ID : BMI11030801-10A Perchlorate	4.85	1.00 µg/L	03/08/11 15:58	03/08/11 19:54
Date Sampled 03/07/11 09:49				
Client ID: **MW-12-2**				
Lab ID : BMI11030801-11A Perchlorate	5.71	1.00 µg/L	03/08/11 15:58	03/08/11 20:49
Date Sampled 03/07/11 10:17				
Client ID: **MW-12-1**				
Lab ID : BMI11030801-12A Perchlorate	ND	1.00 µg/L	03/08/11 15:58	03/08/11 21:08
Date Sampled 03/07/11 10:42				
Client ID: **DUPE-06-1Q11**				
Lab ID : BMI11030801-13A Perchlorate	3.36	1.00 µg/L	03/08/11 15:58	03/08/11 21:26
Date Sampled 03/07/11 00:00				
Client ID: **EB-10-03/07/11**				
Lab ID : BMI11030801-14A Perchlorate	ND	1.00 µg/L	03/08/11 15:58	03/08/11 22:21
Date Sampled 03/07/11 10:31				

Alpha Analytical, Inc.

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

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

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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

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

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

3/18/11

Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

Battelle Memorial Institute
655 West Broadway
San Diego, CA 92101

Attn: David Conner
Phone: (619) 726-7311
Fax: (614) 458-6641
Date Received : 03/08/11

Job: G005862/JPL Groundwater Monitoring

Metals by ICPMS
EPA Method 200.8

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-23-4**				
Lab ID : BMI11030801-01A Chromium (Cr)	ND	0.0050 mg/L	03/09/11 13:35	03/09/11 16:34
Date Sampled 03/04/11 08:13				
Client ID: **MW-23-3**				
Lab ID : BMI11030801-02A Chromium (Cr)	ND	0.0050 mg/L	03/09/11 13:35	03/09/11 16:40
Date Sampled 03/04/11 08:39				
Client ID: **MW-23-2**				
Lab ID : BMI11030801-03A Chromium (Cr)	ND	0.0050 mg/L	03/09/11 13:35	03/09/11 16:11
Date Sampled 03/04/11 09:05				
Client ID: **MW-23-1**				
Lab ID : BMI11030801-04A Chromium (Cr)	0.0072	0.0050 mg/L	03/09/11 13:35	03/09/11 17:12
Date Sampled 03/04/11 09:38				
Client ID: **EB-09-03/04/11**				
Lab ID : BMI11030801-05A Chromium (Cr)	ND	0.0050 mg/L	03/09/11 13:35	03/09/11 17:18
Date Sampled 03/04/11 09:26				
Client ID: **DUPE-05-1Q11**				
Lab ID : BMI11030801-07A Chromium (Cr)	ND	0.0050 mg/L	03/09/11 13:35	03/09/11 17:23
Date Sampled 03/04/11 00:00				
Client ID: **MW-12-3**				
Lab ID : BMI11030801-10A Chromium (Cr)	ND	0.0050 mg/L	03/09/11 13:35	03/09/11 17:29
Date Sampled 03/07/11 09:49				
Client ID: **MW-12-2**				
Lab ID : BMI11030801-11A Chromium (Cr)	ND	0.0050 mg/L	03/09/11 13:35	03/09/11 17:35
Date Sampled 03/07/11 10:17				
Client ID: **MW-12-1**				
Lab ID : BMI11030801-12A Chromium (Cr)	ND	0.0050 mg/L	03/09/11 13:35	03/09/11 17:40
Date Sampled 03/07/11 10:42				
Client ID: **EB-10-03/07/11**				
Lab ID : BMI11030801-14A Chromium (Cr)	ND	0.0050 mg/L	03/09/11 13:35	03/09/11 17:46
Date Sampled 03/07/11 10:31				

Alpha Analytical, Inc.

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ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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

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

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3/18/11

Report Date

Alpha Analytical, Inc.

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ANALYTICAL REPORT

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

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

Tentatively Identified Compounds - Volatile Organics by GC/MS

	Parameter	Estimated Concentration	Estimated Reporting Limit	Date Extracted	Date Analyzed
Client ID : **MW-23-3** Lab ID : BMI11030801-02A Date Received : 03/08/11 Date Sampled : 03/04/11 08:39	* * * None Found * * *	ND	2.0 µg/L	03/09/11 13:44	03/09/11 13:44
Client ID : **MW-23-2** Lab ID : BMI11030801-03A Date Received : 03/08/11 Date Sampled : 03/04/11 09:05	* * * None Found * * *	ND	2.0 µg/L	03/09/11 14:06	03/09/11 14:06
Client ID : **MW-23-1** Lab ID : BMI11030801-04A Date Received : 03/08/11 Date Sampled : 03/04/11 09:38	* * * None Found * * *	ND	2.0 µg/L	03/09/11 14:27	03/09/11 14:27
Client ID : **EB-09-03/04/11** Lab ID : BMI11030801-05A Date Received : 03/08/11 Date Sampled : 03/04/11 09:26	* * * None Found * * *	ND	2.0 µg/L	03/09/11 12:39	03/09/11 12:39
Client ID : **TB-09-03/04/11** Lab ID : BMI11030801-06A Date Received : 03/08/11 Date Sampled : 03/04/11 07:00	* * * None Found * * *	ND	2.0 µg/L	03/09/11 12:17	03/09/11 12:17
Client ID : **MW-12-5** Lab ID : BMI11030801-08A Date Received : 03/08/11 Date Sampled : 03/07/11 08:42	* * * None Found * * *	ND	2.0 µg/L	03/09/11 14:48	03/09/11 14:48
Client ID : **MW-12-4** Lab ID : BMI11030801-09A Date Received : 03/08/11 Date Sampled : 03/07/11 09:14	Sulfur dioxide	4.5	2.0 µg/L	03/09/11 15:09	03/09/11 15:09
Client ID : **MW-12-3** Lab ID : BMI11030801-10A Date Received : 03/08/11 Date Sampled : 03/07/11 09:49	Sulfur dioxide	5.4	2.0 µg/L	03/09/11 15:31	03/09/11 15:31
Client ID : **MW-12-2** Lab ID : BMI11030801-11A Date Received : 03/08/11 Date Sampled : 03/07/11 10:17	* * * None Found * * *	ND	2.0 µg/L	03/09/11 15:53	03/09/11 15:53

Alpha Analytical, Inc.

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Client ID : **MW-12-1**						
Lab ID : BMI11030801-12A	* * * None Found * * *	ND	2.0 µg/L	03/09/11 16:14	03/09/11 16:14
Date Received : 03/08/11						
Date Sampled : 03/07/11 10:42						
Client ID : **DUPE-06-1Q11**						
Lab ID : BMI11030801-13A	Sulfur dioxide	4.3	2.0 µg/L	03/09/11 16:36	03/09/11 16:36
Date Received : 03/08/11						
Date Sampled : 03/07/11 00:00						
Client ID : **EB-10-03/07/11**						
Lab ID : BMI11030801-14A	* * * None Found * * *	ND	2.0 µg/L	03/09/11 13:21	03/09/11 13:21
Date Received : 03/08/11						
Date Sampled : 03/07/11 10:31						
Client ID : **TB-10-03/07/11**						
Lab ID : BMI11030801-15A	* * * None Found * * *	ND	2.0 µg/L	03/09/11 13:00	03/09/11 13:00
Date Received : 03/08/11						
Date Sampled : 03/04/11 07:00						

Note: Analysis conducted using EPA Method 524.2 criteria.
This replaces the report signed 3/18/11. Sample -15A has been reported.
ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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

4/19/11
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI11030801-02A
Client I.D. Number: MW-23-3

Sampled: 03/04/11 08:39
Received: 03/08/11
Extracted: 03/09/11 13:44
Analyzed: 03/09/11 13:44

Volatile Organics by GC/MS
EPA Method SW8260B

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

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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

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

3/18/11
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI11030801-03A
Client I.D. Number: MW-23-2

Sampled: 03/04/11 09:05
Received: 03/08/11
Extracted: 03/09/11 14:06
Analyzed: 03/09/11 14:06

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	0.56	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	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	112	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	101	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	0.63	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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

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

3/18/11
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI11030801-04A
Client I.D. Number: MW-23-1

Sampled: 03/04/11 09:38
Received: 03/08/11
Extracted: 03/09/11 14:27
Analyzed: 03/09/11 14:27

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	1.3	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5	µg/L
25	Trichloroethene	0.87	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	113	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	100	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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3/18/11
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI11030801-05A
Client I.D. Number: EB-09-03/04/11

Sampled: 03/04/11 09:26
Received: 03/08/11
Extracted: 03/09/11 12:39
Analyzed: 03/09/11 12:39

Volatile Organics by GC/MS
EPA Method SW8260B

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

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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3/18/11
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI11030801-06A
Client I.D. Number: TB-09-03/04/11

Sampled: 03/04/11 07:00
Received: 03/08/11
Extracted: 03/09/11 12:17
Analyzed: 03/09/11 12:17

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5	µg/L
25	Trichloroethene	ND	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-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	104	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	98	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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3/18/11
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI11030801-08A
Client I.D. Number: MW-12-5

Sampled: 03/07/11 08:42
Received: 03/08/11
Extracted: 03/09/11 14:48
Analyzed: 03/09/11 14:48

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	0.56	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5	µg/L
25	Trichloroethene	ND	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	106	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	112	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	98	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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3/18/11
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI11030801-09A
Client I.D. Number: MW-12-4

Sampled: 03/07/11 09:14
Received: 03/08/11
Extracted: 03/09/11 15:09
Analyzed: 03/09/11 15:09

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	0.65	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	1.0	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	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	113	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	104	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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3/18/11
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI11030801-10A
Client I.D. Number: MW-12-3

Sampled: 03/07/11 09:49
Received: 03/08/11
Extracted: 03/09/11 15:31
Analyzed: 03/09/11 15:31

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	0.54	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	0.79	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	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	114	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	99	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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3/18/11
Report Date

Alpha Analytical, Inc.

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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI11030801-11A
Client I.D. Number: MW-12-2

Sampled: 03/07/11 10:17
Received: 03/08/11
Extracted: 03/09/11 15:53
Analyzed: 03/09/11 15:53

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5	µg/L
25	Trichloroethene	ND	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	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	112	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	99	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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

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3/18/11
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI11030801-12A
Client I.D. Number: MW-12-1

Sampled: 03/07/11 10:42
Received: 03/08/11
Extracted: 03/09/11 16:14
Analyzed: 03/09/11 16:14

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit		Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37 Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38 Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39 m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40 Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41 Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42 o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44 1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45 Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46 Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47 n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48 4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49 2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50 1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51 tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52 1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53 sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54 1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55 1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56 4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57 1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58 n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5	µg/L
25	Trichloroethene	ND	0.50	µg/L	60 1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61 Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62 Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63 1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64 Surr: 1,2-Dichloroethane-d4	104	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65 Surr: Toluene-d8	110	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66 Surr: 4-Bromofluorobenzene	99	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L				
33	Dibromochloromethane	ND	0.50	µg/L				
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L				
35	Tetrachloroethene	ND	0.50	µg/L				

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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3/18/11
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI11030801-13A
Client I.D. Number: DUPE-06-1Q11

Sampled: 03/07/11 00:00
Received: 03/08/11
Extracted: 03/09/11 16:36
Analyzed: 03/09/11 16:36

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	0.66	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	1.0	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	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	111	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	101	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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3/18/11
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI11030801-14A
Client I.D. Number: EB-10-03/07/11

Sampled: 03/07/11 10:31
Received: 03/08/11
Extracted: 03/09/11 13:21
Analyzed: 03/09/11 13:21

Volatile Organics by GC/MS
EPA Method SW8260B

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

Roger Scholl Randy Gardner Walter Hinchman

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

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3/18/11
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI11030801-15A
Client I.D. Number: TB-10-03/07/11

Sampled: 03/04/11 07:00
Received: 03/08/11
Extracted: 03/09/11 13:00
Analyzed: 03/09/11 13:00

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration	Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND	0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND	1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND	0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND	0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND	0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND	0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND	1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND	0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND	0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND	0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND	10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND	0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND	0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND	0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND	0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND	0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND	0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND	0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND	0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND	0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND	0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND	0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5	µg/L
25	Trichloroethene	ND	0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND	0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND	2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND	0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND	0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	100	(70-130)	%REC
30	1,1,2-Trichloroethane	ND	0.50	µg/L	65	Surr: Toluene-d8	101	(70-130)	%REC
31	Toluene	ND	0.50	µg/L	66	Surr: 4-Bromofluorobenzene	99	(70-130)	%REC
32	1,3-Dichloropropane	ND	0.50	µg/L					
33	Dibromochloromethane	ND	0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND	1.0	µg/L					
35	Tetrachloroethene	ND	0.50	µg/L					

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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3/18/11
Report Date

Alpha Analytical, Inc.

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

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

VOC Sample Preservation Report

Work Order: BMI11030801 **Job:** G005862/JPL Groundwater Monitoring

Alpha's Sample ID	Client's Sample ID	Matrix	pH
11030801-02A	MW-23-3	Aqueous	2
11030801-03A	MW-23-2	Aqueous	2
11030801-04A	MW-23-1	Aqueous	2
11030801-05A	EB-09-03/04/11	Aqueous	2
11030801-06A	TB-09-03/04/11	Aqueous	2
11030801-08A	MW-12-5	Aqueous	2
11030801-09A	MW-12-4	Aqueous	2
11030801-10A	MW-12-3	Aqueous	2
11030801-11A	MW-12-2	Aqueous	2
11030801-12A	MW-12-1	Aqueous	2
11030801-13A	DUPE-06-1Q11	Aqueous	2
11030801-14A	EB-10-03/07/11	Aqueous	2
11030801-15A	TB-10-03/07/11	Aqueous	2

3/18/11

Report Date

Alpha Analytical, Inc.

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

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

Date: *10-Mar-11*

QC Summary Report

Work Order: 11030801

Method Blank

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

File ID: **14** Batch ID: **26132** Analysis Date: **03/08/2011 17:09**

Sample ID: **MB-26132** Units : **µg/L** Run ID: **IC_3_110308A** Prep Date: **03/08/2011 15:58**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	ND	1								

Laboratory Fortified Blank

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

File ID: **15** Batch ID: **26132** Analysis Date: **03/08/2011 17:27**

Sample ID: **LFB-26132** Units : **µg/L** Run ID: **IC_3_110308A** Prep Date: **03/08/2011 15:58**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	25.5	2	25		102	85	115			

Sample Matrix Spike

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

File ID: **24** Batch ID: **26132** Analysis Date: **03/08/2011 20:13**

Sample ID: **11030801-10ALFM** Units : **µg/L** Run ID: **IC_3_110308A** Prep Date: **03/08/2011 15:58**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	31.4	2	25	4.846	106	80	120			

Sample Matrix Spike Duplicate

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

File ID: **25** Batch ID: **26132** Analysis Date: **03/08/2011 20:31**

Sample ID: **11030801-10ALFMD** Units : **µg/L** Run ID: **IC_3_110308A** Prep Date: **03/08/2011 15:58**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	31.8	2	25	4.846	108	80	120	31.39	1.3(15)	

Comments:

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

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QC Summary Report

Work Order: 11030801

Method Blank

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

File ID: **030911.B\050_M.D** Batch ID: **26136** Analysis Date: **03/09/2011 15:43**

Sample ID: **MB-26136** Units : **mg/L** Run ID: **ICP/MS_110309C** Prep Date: **03/09/2011 13:35**

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

Laboratory Control Spike

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

File ID: **030911.B\051_M.D** Batch ID: **26136** Analysis Date: **03/09/2011 15:48**

Sample ID: **LCS-26136** Units : **mg/L** Run ID: **ICP/MS_110309C** Prep Date: **03/09/2011 13:35**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0446	0.005	0.05		89	85	115			

Sample Matrix Spike

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

File ID: **030911.B\056_M.D** Batch ID: **26136** Analysis Date: **03/09/2011 16:16**

Sample ID: **11030801-03AMS** Units : **mg/L** Run ID: **ICP/MS_110309C** Prep Date: **03/09/2011 13:35**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.051	0.005	0.05	0	102	70	130			

Sample Matrix Spike Duplicate

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

File ID: **030911.B\057_M.D** Batch ID: **26136** Analysis Date: **03/09/2011 16:22**

Sample ID: **11030801-03AMSD** Units : **mg/L** Run ID: **ICP/MS_110309C** Prep Date: **03/09/2011 13:35**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.0509	0.005	0.05	0	102	70	130	0.05095	0.2(20)	

Comments:

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

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QC Summary Report

Work Order: 11030801

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

File ID: **11030906.D** Batch ID: **MS15W0309M** Analysis Date: **03/09/2011 10:51**

Sample ID: **MBLK MS15W0309M** Units : **µg/L** Run ID: **MSD_15_110309A** Prep Date: **03/09/2011 10:51**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	ND	0.5								
Chloromethane	ND	1								
Vinyl chloride	ND	0.5								
Chloroethane	ND	0.5								
Bromomethane	ND	1								
Trichlorofluoromethane	ND	0.5								
1,1-Dichloroethene	ND	0.5								
Dichloromethane	ND	1								
Freon-113	ND	0.5								
trans-1,2-Dichloroethene	ND	0.5								
Methyl tert-butyl ether (MTBE)	ND	0.5								
1,1-Dichloroethane	ND	0.5								
2-Butanone (MEK)	ND	10								
cis-1,2-Dichloroethene	ND	0.5								
Bromochloromethane	ND	0.5								
Chloroform	ND	0.5								
2,2-Dichloropropane	ND	0.5								
1,2-Dichloroethane	ND	0.5								
1,1,1-Trichloroethane	ND	0.5								
1,1-Dichloropropene	ND	0.5								
Carbon tetrachloride	ND	0.5								
Benzene	ND	0.5								
Dibromomethane	ND	0.5								
1,2-Dichloropropane	ND	0.5								
Trichloroethene	ND	0.5								
Bromodichloromethane	ND	0.5								
4-Methyl-2-pentanone (MIBK)	ND	2.5								
cis-1,3-Dichloropropene	ND	0.5								
trans-1,3-Dichloropropene	ND	0.5								
1,1,2-Trichloroethane	ND	0.5								
Toluene	ND	0.5								
1,3-Dichloropropane	ND	0.5								
Dibromochloromethane	ND	0.5								
1,2-Dibromoethane (EDB)	ND	1								
Tetrachloroethene	ND	0.5								
1,1,1,2-Tetrachloroethane	ND	0.5								
Chlorobenzene	ND	0.5								
Ethylbenzene	ND	0.5								
m,p-Xylene	ND	0.5								
Bromoform	ND	0.5								
Styrene	ND	0.5								
o-Xylene	ND	0.5								
1,1,2,2-Tetrachloroethane	ND	0.5								
1,2,3-Trichloropropane	ND	1								
Isopropylbenzene	ND	0.5								
Bromobenzene	ND	0.5								
n-Propylbenzene	ND	0.5								
4-Chlorotoluene	ND	0.5								
2-Chlorotoluene	ND	0.5								
1,3,5-Trimethylbenzene	ND	0.5								
tert-Butylbenzene	ND	0.5								
1,2,4-Trimethylbenzene	ND	0.5								
sec-Butylbenzene	ND	0.5								
1,3-Dichlorobenzene	ND	0.5								
1,4-Dichlorobenzene	ND	0.5								
4-Isopropyltoluene	ND	0.5								
1,2-Dichlorobenzene	ND	0.5								
n-Butylbenzene	ND	0.5								
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5								
1,2,4-Trichlorobenzene	ND	1								
Naphthalene	ND	1								
Hexachlorobutadiene	ND	1								
1,2,3-Trichlorobenzene	ND	1								
Surr: 1,2-Dichloroethane-d4	9.55		10		96	70	130			
Surr: Toluene-d8	10.6		10		106	70	130			

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Surr: 4-Bromofluorobenzene	9.77	10	98	70	130	

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QC Summary Report

Work Order: 11030801

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

File ID: **11030903.D** Batch ID: **MS15W0309M** Analysis Date: **03/09/2011 09:38**

Sample ID: **LCS MS15W0309M** Units : **µg/L** Run ID: **MSD_15_110309A** Prep Date: **03/09/2011 09:38**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	10.5	1	10		105	70	130			
Chloromethane	10.6	2	10		106	70	130			
Vinyl chloride	10.6	1	10		106	70	130			
Chloroethane	10.7	1	10		107	70	130			
Bromomethane	7.36	2	10		74	70	130			
Trichlorofluoromethane	11	1	10		110	70	130			
1,1-Dichloroethene	10.6	1	10		106	70	130			
Dichloromethane	9.49	2	10		95	70	130			
Freon-113	11	1	10		110	70	137			
trans-1,2-Dichloroethene	10.4	1	10		104	70	130			
Methyl tert-butyl ether (MTBE)	8.86	0.5	10		89	70	130			
1,1-Dichloroethane	10.4	1	10		104	70	130			
2-Butanone (MEK)	172	10	200		86	70	130			
cis-1,2-Dichloroethene	10.2	1	10		102	70	130			
Bromochloromethane	9.72	1	10		97	70	130			
Chloroform	9.71	1	10		97	70	130			
2,2-Dichloropropane	10.4	1	10		104	70	130			
1,2-Dichloroethane	9.46	1	10		95	70	130			
1,1,1-Trichloroethane	10.6	1	10		106	70	130			
1,1-Dichloropropene	10.9	1	10		109	70	130			
Carbon tetrachloride	9.93	1	10		99	70	130			
Benzene	9.99	0.5	10		99.9	70	130			
Dibromomethane	9.75	1	10		98	70	130			
1,2-Dichloropropane	10.4	1	10		104	70	130			
Trichloroethene	10.6	1	10		106	70	130			
Bromodichloromethane	10.6	1	10		106	70	130			
4-Methyl-2-pentanone (MIBK)	21.3	2.5	25		85	20	182			
cis-1,3-Dichloropropene	9.89	1	10		99	70	130			
trans-1,3-Dichloropropene	8.72	1	10		87	70	130			
1,1,2-Trichloroethane	9.71	1	10		97	70	130			
Toluene	10.7	0.5	10		107	70	130			
1,3-Dichloropropane	10.1	1	10		101	70	130			
Dibromochloromethane	10.3	1	10		103	70	130			
1,2-Dibromoethane (EDB)	20.6	2	20		103	70	130			
Tetrachloroethene	10.5	1	10		105	70	130			
1,1,1,2-Tetrachloroethane	11	1	10		110	70	130			
Chlorobenzene	10.6	1	10		106	70	130			
Ethylbenzene	10.6	0.5	10		106	70	130			
m,p-Xylene	10.9	0.5	10		109	70	130			
Bromoform	9.81	1	10		98	70	130			
Styrene	11.1	1	10		111	70	130			
o-Xylene	11	0.5	10		110	70	130			
1,1,2,2-Tetrachloroethane	9.5	1	10		95	70	130			
1,2,3-Trichloropropane	18.5	2	20		92	70	130			
Isopropylbenzene	11.2	1	10		112	70	130			
Bromobenzene	10.6	1	10		106	70	130			
n-Propylbenzene	11.3	1	10		113	70	130			
4-Chlorotoluene	11.6	1	10		116	70	130			
2-Chlorotoluene	11.2	1	10		112	70	130			
1,3,5-Trimethylbenzene	11.4	1	10		114	70	130			
tert-Butylbenzene	10.9	1	10		109	70	130			
1,2,4-Trimethylbenzene	11.2	1	10		112	70	130			
sec-Butylbenzene	11.2	1	10		112	70	130			
1,3-Dichlorobenzene	11.2	1	10		112	70	130			
1,4-Dichlorobenzene	10.6	1	10		106	70	130			
4-Isopropyltoluene	11.2	1	10		112	70	130			
1,2-Dichlorobenzene	10.2	1	10		102	70	130			
n-Butylbenzene	11.8	1	10		118	70	130			
1,2-Dibromo-3-chloropropane (DBCP)	43.4	3	50		87	67	130			
1,2,4-Trichlorobenzene	10.8	2	10		108	70	130			
Naphthalene	9.03	2	10		90	70	130			
Hexachlorobutadiene	18.9	2	20		94	70	130			
1,2,3-Trichlorobenzene	10.4	2	10		104	70	130			
Surr: 1,2-Dichloroethane-d4	9.5		10		95	70	130			
Surr: Toluene-d8	10.1		10		101	70	130			

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Surr: 4-Bromofluorobenzene	10.2	10	102	70	130	

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QC Summary Report

Work Order: 11030801

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

File ID: **11030907.D** Batch ID: **MS15W0309M** Analysis Date: **03/09/2011 11:12**

Sample ID: **11030801-10AMS** Units : **µg/L** Run ID: **MSD_15_110309A** Prep Date: **03/09/2011 11:12**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	38.8	2.5	50	0	78	21	138			
Chloromethane	44.3	10	50	0	89	23	144			
Vinyl chloride	45.3	2.5	50	0	91	49	136			
Chloroethane	44.9	2.5	50	0	90	21	159			
Bromomethane	30.1	10	50	0	60	10	174			
Trichlorofluoromethane	44.9	2.5	50	0	90	32	154			
1,1-Dichloroethene	45	2.5	50	0	90	64	130			
Dichloromethane	42.3	10	50	0	85	69	130			
Freon-113	46.9	2.5	50	0	94	55	141			
trans-1,2-Dichloroethene	44.4	2.5	50	0	89	63	130			
Methyl tert-butyl ether (MTBE)	45.7	1.3	50	0	91	47	150			
1,1-Dichloroethane	46	2.5	50	0	92	66	130			
2-Butanone (MEK)	720	50	1000	0	72	23	182			
cis-1,2-Dichloroethene	46.2	2.5	50	0	92	70	130			
Bromochloromethane	45.9	2.5	50	0	92	70	132			
Chloroform	42.5	2.5	50	0.54	84	70	130			
2,2-Dichloropropane	45.7	2.5	50	0	91	38	154			
1,2-Dichloroethane	44.8	2.5	50	0	90	65	134			
1,1,1-Trichloroethane	44.6	2.5	50	0	89	65	136			
1,1-Dichloropropene	46.8	2.5	50	0	94	68	132			
Carbon tetrachloride	42.7	2.5	50	0.79	84	58	148			
Benzene	43.1	1.3	50	0	86	59	138			
Dibromomethane	46.3	2.5	50	0	93	70	130			
1,2-Dichloropropane	45.9	2.5	50	0	92	70	131			
Trichloroethene	44.7	2.5	50	0	89	65	144			
Bromodichloromethane	45.3	2.5	50	0	91	50	157			
4-Methyl-2-pentanone (MIBK)	105	13	125	0	84	20	182			
cis-1,3-Dichloropropene	42.3	2.5	50	0	85	63	131			
trans-1,3-Dichloropropene	38.4	2.5	50	0	77	65	136			
1,1,2-Trichloroethane	45	2.5	50	0	90	70	131			
Toluene	47	1.3	50	0	94	68	130			
1,3-Dichloropropane	48.8	2.5	50	0	98	70	130			
Dibromochloromethane	46.5	2.5	50	0	93	42	155			
1,2-Dibromoethane (EDB)	97.3	5	100	0	97	70	130			
Tetrachloroethene	46.2	2.5	50	0	92	65	130			
1,1,1,2-Tetrachloroethane	47.1	2.5	50	0	94	70	130			
Chlorobenzene	45.1	2.5	50	0	90	70	130			
Ethylbenzene	45	1.3	50	0	90	68	130			
m,p-Xylene	45.4	1.3	50	0	91	68	131			
Bromoform	43.4	2.5	50	0	87	65	143			
Styrene	46.2	2.5	50	0	92	59	153			
o-Xylene	45.3	1.3	50	0	91	70	130			
1,1,2,2-Tetrachloroethane	45.6	2.5	50	0	91	67	130			
1,2,3-Trichloropropane	85.9	10	100	0	86	70	130			
Isopropylbenzene	44.8	2.5	50	0	90	55	138			
Bromobenzene	43.4	2.5	50	0	87	70	130			
n-Propylbenzene	45.9	2.5	50	0	92	67	133			
4-Chlorotoluene	46.9	2.5	50	0	94	70	130			
2-Chlorotoluene	44.7	2.5	50	0	89	70	130			
1,3,5-Trimethylbenzene	45.6	2.5	50	0	91	67	134			
tert-Butylbenzene	44.3	2.5	50	0	89	55	147			
1,2,4-Trimethylbenzene	46.1	2.5	50	0	92	65	135			
sec-Butylbenzene	45.7	2.5	50	0	91	68	135			
1,3-Dichlorobenzene	46.1	2.5	50	0	92	70	130			
1,4-Dichlorobenzene	44	2.5	50	0	88	70	130			
4-Isopropyltoluene	46.1	2.5	50	0	92	68	132			
1,2-Dichlorobenzene	43.1	2.5	50	0	86	70	130			
n-Butylbenzene	49.2	2.5	50	0	98	62	134			
1,2-Dibromo-3-chloropropane (DBCP)	207	15	250	0	83	64	130			
1,2,4-Trichlorobenzene	49.2	10	50	0	98	62	133			
Naphthalene	44.3	10	50	0	89	32	166			
Hexachlorobutadiene	84.8	10	100	0	85	63	130			
1,2,3-Trichlorobenzene	49.9	10	50	0	99.8	55	138			
Surr: 1,2-Dichloroethane-d4	49.9		50		99.9	70	130			
Surr: Toluene-d8	51.2		50		102	70	130			

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Surr: 4-Bromofluorobenzene	47.7	50	95	70	130	

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QC Summary Report

Work Order: 11030801

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

File ID: **11030908.D** Batch ID: **MS15W0309M** Analysis Date: **03/09/2011 11:34**

Sample ID: **11030801-10AMSD** Units : **µg/L** Run ID: **MSD_15_110309A** Prep Date: **03/09/2011 11:34**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	40.4	2.5	50	0	81	21	138	38.75	4.1(33)	
Chloromethane	45	10	50	0	90	23	144	44.29	1.6(27)	
Vinyl chloride	48.2	2.5	50	0	96	49	136	45.32	6.1(21)	
Chloroethane	49.1	2.5	50	0	98	21	159	44.93	8.8(40)	
Bromomethane	34.9	10	50	0	70	10	174	30.05	15.0(40)	
Trichlorofluoromethane	47.7	2.5	50	0	95	32	154	44.93	5.9(37)	
1,1-Dichloroethene	47	2.5	50	0	94	64	130	45.04	4.3(21)	
Dichloromethane	45.2	10	50	0	90	69	130	42.32	6.5(20)	
Freon-113	49.3	2.5	50	0	99	55	141	46.89	5.0(40)	
trans-1,2-Dichloroethene	47	2.5	50	0	94	63	130	44.43	5.6(20)	
Methyl tert-butyl ether (MTBE)	49.4	1.3	50	0	99	47	150	45.7	7.8(40)	
1,1-Dichloroethane	48.5	2.5	50	0	97	66	130	45.95	5.5(20)	
2-Butanone (MEK)	789	50	1000	0	79	23	182	719.5	9.3(22)	
cis-1,2-Dichloroethene	49.3	2.5	50	0	99	70	130	46.2	6.5(20)	
Bromochloromethane	49.1	2.5	50	0	98	70	132	45.9	6.7(20)	
Chloroform	45	2.5	50	0.54	89	70	130	42.48	5.7(20)	
2,2-Dichloropropane	50	2.5	50	0	100	38	154	45.67	9.1(22)	
1,2-Dichloroethane	46.8	2.5	50	0	94	65	134	44.83	4.2(20)	
1,1,1-Trichloroethane	47.7	2.5	50	0	95	65	136	44.62	6.6(20)	
1,1-Dichloropropene	49.5	2.5	50	0	99	68	132	46.82	5.5(20)	
Carbon tetrachloride	46.4	2.5	50	0.79	91	58	148	42.73	8.2(20)	
Benzene	45.8	1.3	50	0	92	59	138	43.1	6.0(21)	
Dibromomethane	49	2.5	50	0	98	70	130	46.26	5.7(20)	
1,2-Dichloropropane	49.5	2.5	50	0	99	70	131	45.94	7.5(20)	
Trichloroethene	47.9	2.5	50	0	96	65	144	44.74	6.7(20)	
Bromodichloromethane	49.7	2.5	50	0	99	50	157	45.34	9.1(20)	
4-Methyl-2-pentanone (MIBK)	113	13	125	0	90	20	182	104.9	7.3(20)	
cis-1,3-Dichloropropene	46	2.5	50	0	92	63	131	42.26	8.4(20)	
trans-1,3-Dichloropropene	41.6	2.5	50	0	83	65	136	38.39	8.1(20)	
1,1,2-Trichloroethane	47.2	2.5	50	0	94	70	131	44.96	5.0(20)	
Toluene	49.4	1.3	50	0	99	68	130	46.99	5.1(20)	
1,3-Dichloropropane	52.6	2.5	50	0	105	70	130	48.78	7.6(20)	
Dibromochloromethane	50.9	2.5	50	0	102	42	155	46.54	9.0(20)	
1,2-Dibromoethane (EDB)	105	5	100	0	105	70	130	97.28	7.7(20)	
Tetrachloroethene	48	2.5	50	0	96	65	130	46.15	3.8(20)	
1,1,1,2-Tetrachloroethane	50.6	2.5	50	0	101	70	130	47.14	7.1(20)	
Chlorobenzene	48.1	2.5	50	0	96	70	130	45.12	6.4(20)	
Ethylbenzene	47.7	1.3	50	0	95	68	130	45	5.7(20)	
m,p-Xylene	48.4	1.3	50	0	97	68	131	45.43	6.4(20)	
Bromoform	47.4	2.5	50	0	95	65	143	43.36	9.0(20)	
Styrene	49.8	2.5	50	0	99.7	59	153	46.19	7.6(37)	
o-Xylene	49.3	1.3	50	0	99	70	130	45.29	8.4(20)	
1,1,2,2-Tetrachloroethane	48.8	2.5	50	0	98	67	130	45.55	6.9(20)	
1,2,3-Trichloropropane	95.6	10	100	0	96	70	130	85.87	10.7(20)	
Isopropylbenzene	46.2	2.5	50	0	92	55	138	44.75	3.2(20)	
Bromobenzene	45.5	2.5	50	0	91	70	130	43.41	4.8(20)	
n-Propylbenzene	47.4	2.5	50	0	95	67	133	45.87	3.3(30)	
4-Chlorotoluene	49.1	2.5	50	0	98	70	130	46.93	4.5(20)	
2-Chlorotoluene	46.5	2.5	50	0	93	70	130	44.71	4.0(20)	
1,3,5-Trimethylbenzene	47.5	2.5	50	0	95	67	134	45.58	4.1(21)	
tert-Butylbenzene	46.3	2.5	50	0	93	55	147	44.33	4.4(20)	
1,2,4-Trimethylbenzene	48	2.5	50	0	96	65	135	46.09	4.0(25)	
sec-Butylbenzene	47.7	2.5	50	0	95	68	135	45.69	4.4(20)	
1,3-Dichlorobenzene	48.1	2.5	50	0	96	70	130	46.13	4.2(20)	
1,4-Dichlorobenzene	46.5	2.5	50	0	93	70	130	44.01	5.6(20)	
4-Isopropyltoluene .	48.1	2.5	50	0	96	68	132	46.05	4.4(20)	
1,2-Dichlorobenzene	45.7	2.5	50	0	91	70	130	43.13	5.8(20)	
n-Butylbenzene	51.8	2.5	50	0	104	62	134	49.22	5.1(21)	
1,2-Dibromo-3-chloropropane (DBCP)	227	15	250	0	91	64	130	207.4	9.0(20)	
1,2,4-Trichlorobenzene	53.8	10	50	0	108	62	133	49.2	8.8(29)	
Naphthalene	48.4	10	50	0	97	32	166	44.34	8.8(40)	
Hexachlorobutadiene	95.1	10	100	0	95	63	130	84.79	11.5(21)	
1,2,3-Trichlorobenzene	54	10	50	0	108	55	138	49.91	7.9(36)	
Surr: 1,2-Dichloroethane-d4	49.4		50		99	70	130			
Surr: Toluene-d8	51.9		50		104	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: *16-Mar-11*

QC Summary Report

Work Order: 11030801

Surr: 4-Bromofluorobenzene	47.6	50	95	70	130	

Comments:

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

Billing Information :

CHAIN-OF-CUSTODY RECORD

CA

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

WorkOrder : BMIS11030801

Report Due By : 5:00 PM On : 21-Mar-2011

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

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

EDD Required : **Yes**

Sampled by : Chase Brogdon

PO : 218013

Client's COC # : 33401, 33400 Job : G005862/JPL Groundwater Monitoring

Cooler Temp	Samples Received	Date Printed
0 °C	08-Mar-2011	08-Mar-2011

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

Alpha Sample ID	Client Sample ID	Matrix	Collection Date	No. of Bottles Alpha	Sub	TAT	Requested Tests 314_W	METALS_DW	VOC_TIC_W	VOC_W					Sample Remarks
BMI11030801-01A	MW-23-4	AQ	03/04/11 08:13	1	0	9		Cr							
BMI11030801-02A	MW-23-3	AQ	03/04/11 08:39	5	0	9	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI11030801-03A	MW-23-2	AQ	03/04/11 09:05	5	0	9	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					Level IV QC
BMI11030801-04A	MW-23-1	AQ	03/04/11 09:38	5	0	9	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI11030801-05A	EB-09-03/04/11	AQ	03/04/11 09:26	5	0	9	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI11030801-06A	TB-09-03/04/11	AQ	03/04/11 07:00	1	0	9			VOC by 524 Criteria	VOC by 524 Criteria					Reno Trip Blank 12/14/10
BMI11030801-07A	DUPE-05-1Q11	AQ	03/04/11 00:00	1	0	9		Cr							
BMI11030801-08A	MW-12-5	AQ	03/07/11 08:42	4	0	9	Perchlorate		VOC by 524 Criteria	VOC by 524 Criteria					
BMI11030801-09A	MW-12-4	AQ	03/07/11 09:14	4	0	9	Perchlorate		VOC by 524 Criteria	VOC by 524 Criteria					
BMI11030801-10A	MW-12-3	AQ	03/07/11 09:49	10	0	9	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					MS/MSD

Comments: Security seals intact. Frozen ice. Temp Blank #8746 received @ 0°C. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). :

	Signature	Print Name	Company	Date/Time
Logged in by:	Elizabeth Adcox	Elizabeth Adcox	**Alpha Analytical, Inc.**	3-8-11 1030

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

Billing Information :

CHAIN-OF-CUSTODY RECORD

CA

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

WorkOrder : BMIS11030801

Report Due By : 5:00 PM On : 21-Mar-2011

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

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

EDD Required : **Yes**

Sampled by : Chase Brogdon

PO : 218013

Client's COC # : 33401, 33400 Job : G005862/JPL Groundwater Monitoring

Cooler Temp	Samples Received	Date Printed
0 °C	08-Mar-2011	**08-Mar-2011**

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

Alpha Sample ID	Client Sample ID	Matrix	Collection Date	No. of Bottles Alpha	Sub	TAT	Requested Tests 314_W	METALS_DW	VOC_TIC_W	VOC_W					Sample Remarks
BMI11030801-11A	MW-12-2	AQ	03/07/11 10:17	5	0	9	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI11030801-12A	MW-12-1	AQ	03/07/11 10:42	5	0	9	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI11030801-13A	DUPE-06-1Q11	AQ	03/07/11 00:00	4	0	9	Perchlorate		VOC by 524 Criteria	VOC by 524 Criteria					
BMI11030801-14A	EB-10-03/07/11	AQ	03/07/11 10:31	5	0	9	Perchlorate	Cr	VOC by 524 Criteria	VOC by 524 Criteria					
BMI11030801-15A	TB-10-03/07/11	AQ	03/04/11 07:00	1	0	9			VOC by 524 Criteria	VOC by 524 Criteria					Reno Trip Blank 12/14/10

Comments: Security seals intact. Frozen ice. Temp Blank #8746 received @ 0°C. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). :

	Signature	Print Name	Company	Date/Time
Logged in by:	Elizabeth Adcox	Elizabeth Adcox	**Alpha Analytical, Inc.**	3.8.11 1030

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

33401

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

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

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

Consultant / Client Name: BATTELLE / DAVID CONNER
Address: 3990 OLD TOWN AVE. C-205
City, State, Zip: SAN DIEGO, CA 92110
P.O. # 218013
Job # G005862
Job Name: SPL GW. MON. 1Q11
Report Attention / Project Manager
Name: DAVID CONNER
Email: CONNERD@BATTELLE.ORG
Phone: 64-458-8641 Mobile: 619-726-7311

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

Time Sampled	Date Sampled	Matrix* See Key Below	Lab ID Number (Office Use Only)	Sample Description	TAT	Field Filtered	# Containers**	VOCs (524.2)	TOTAL Cr (200.8)	Cl04 (314.0)	REMARKS
0813	3/4/11	AQ	BMI1103080-01	MW-23-4			1P		X		
0839			-02	MW-23-3			3V 2P	X	X	X	
0905			-03	MW-23-2			3V 2P	X	X	X	QC LEVEL IV
0938			-04	MW-23-1			3V 2P	X	X	X	
0926			-05	EB-09-03/04/11			3V 2P	X	X	X	EQUIP. BLANK
0700	3/4/11	AQ	-06	TB-09-03/04/11			1V	X			TRIP BLANK
"	3/4/11	AQ	-07	DUPE-05-1Q11			1P		X		DUPLICATE

FOR LAB USE ONLY

ADDITIONAL INSTRUCTIONS:

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action (NAC 445A.0626 (c) (2)). Sampled By: CHRIS ENGAN

Relinquished by: (Signature/Affiliation) INSIDE	Received by: (Signature/Affiliation) / Alpha Analytical	Date: 03/07/11	Time: 1130
Relinquished by: (Signature/Affiliation) / Alpha Analytical	Received by: (Signature/Affiliation) Elizabeth Adcox / Alpha	Date: 3.8.11	Time: 1030
Relinquished by: (Signature/Affiliation)	Received by: (Signature/Affiliation)	Date:	Time:

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

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

35400

Billing Information:
Company Name BATTELLE
Attn: GERALD TOMPKINS
Address 505 KING AVE.
City, State, Zip COLUMBUS, OH 43201
Phone Number ______ Fax ______

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

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

Consultant / Client Name: BATTELLE / DAVID CONNER
Address: 3990 OLD TOWN AVE. C-205
City, State, Zip: SAN DIEGO, CA 92110
Job #: G005862
Job Name: JPL GW. MON. 1Q11
Report Attention / Project Manager
Name: DAVID CONNER
Email: CONNERD@BATTELLE.ORG
~~Fax~~ Phone: 614-458-6641 Mobile: 619-726-7311
P.O. #: 218013

Analyses Required: VOCs (524.2); TOTAL Cr (200.8); Clo4- (314.0)

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

Time Sampled	Date Sampled	Matrix* See Key Below	Lab ID Number (Office Use Only)	Sample Description	TAT	Field Filtered	# Containers**	VOCs (524.2)	TOTAL Cr (200.8)	Clo4- (314.0)					REMARKS
0842	3/7/11	AQ	-08	MW-12-5			3v 1p	X		X					
0914	↓	↓	-09	MW-12-4			3v 1p	X		X					
0949			-10	MW-12-3			6v 4p	X	X	X					MS/MSD
1017			-11	MW-12-2			3v 2p	X	X	X					
1042			-12	MW-12-1			3v 2p	X	X	X					
—			-13	DUPE-06-1Q11			3v 1p	X		X					DUPLICATE
1031	↓	↓	-14	EB-10-03/07/11			3v 2p	X	X	X					EQUIP BLANK
0700	3/7/11	AQ	-15	TB-10-03/07/11			1V	X							TRIP BLANK

FOR LAB USE ONLY

ADDITIONAL INSTRUCTIONS:

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

Relinquished by: (Signature/Affiliation)	Received by: (Signature/Affiliation)	Date	Time
[signature] / INSIGHTS	[signature] / Alpha Analytical	03/07/11	1130
[signature] / Alpha Analytical	Elizabeth Adcox / Alpha	3-8-11	1030

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

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

Alpha Analytical, Inc.

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

Date: *16-Mar-2011*

David Conner
Battelle Memorial Institute
655 West Broadway Suite 1420
San Diego, CA 92101
(619) 726-7311

CASE NARRATIVE

Job: G005862/JPL Groundwater Monitoring
Work Order: BMI11030901 **Cooler Temp:** 0 °C

Alpha's Sample ID	Client's Sample ID	Matrix
11030901-01A	MW-19-5	Aqueous
11030901-02A	MW-19-4	Aqueous
11030901-03A	MW-19-3	Aqueous
11030901-04A	MW-19-2	Aqueous
11030901-05A	MW-19-1	Aqueous
11030901-06A	EB-11-03/08/11	Aqueous
11030901-07A	TB-11-03/08/11	Aqueous

Manually Integrated Analytes

Alpha's Sample ID	Test Reference	Analyte
NONE		

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

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

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

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

Battelle Memorial Institute
655 West Broadway
San Diego, CA 92101

Attn: David Conner
Phone: (619) 726-7311
Fax: (614) 458-6641
Date Received : 03/09/11

Job: G005862/JPL Groundwater Monitoring

Perchlorate by Ion Chromatography
EPA Method 314.0

Parameter		Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: **MW-19-5**					
Lab ID : BMI11030901-01A	Perchlorate	2.87	1.00 µg/L	03/09/11 11:01	03/09/11 14:06
Date Sampled 03/08/11 08:45					
Client ID: **MW-19-4**					
Lab ID : BMI11030901-02A	Perchlorate	3.16	1.00 µg/L	03/09/11 11:01	03/09/11 14:24
Date Sampled 03/08/11 09:12					
Client ID: **MW-19-3**					
Lab ID : BMI11030901-03A	Perchlorate	3.91	1.00 µg/L	03/09/11 11:01	03/09/11 15:20
Date Sampled 03/08/11 09:38					
Client ID: **MW-19-2**					
Lab ID : BMI11030901-04A	Perchlorate	5.96	1.00 µg/L	03/09/11 11:01	03/09/11 15:38
Date Sampled 03/08/11 09:51					
Client ID: **MW-19-1**					
Lab ID : BMI11030901-05A	Perchlorate	7.40	1.00 µg/L	03/09/11 11:01	03/09/11 15:57
Date Sampled 03/08/11 10:15					
Client ID: **EB-11-03/08/11**					
Lab ID : BMI11030901-06A	Perchlorate	ND	1.00 µg/L	03/09/11 11:01	03/09/11 16:15
Date Sampled 03/08/11 10:07					

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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

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

3/21/11
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Tentatively Identified Compounds - Volatile Organics by GC/MS

	Parameter	Estimated Concentration	Estimated Reporting Limit	Date Extracted	Date Analyzed
Client ID : **MW-19-5**					
Lab ID : BMI11030901-01A	* * * None Found * * *	ND	2.0 µg/L	03/10/11 14:29	03/10/11 14:29
Date Received : 03/09/11					
Date Sampled : 03/08/11 08:45					
Client ID : **MW-19-4**					
Lab ID : BMI11030901-02A	* * * None Found * * *	ND	2.0 µg/L	03/10/11 14:51	03/10/11 14:51
Date Received : 03/09/11					
Date Sampled : 03/08/11 09:12					
Client ID : **MW-19-3**					
Lab ID : BMI11030901-03A	* * * None Found * * *	ND	2.0 µg/L	03/10/11 15:12	03/10/11 15:12
Date Received : 03/09/11					
Date Sampled : 03/08/11 09:38					
Client ID : **MW-19-2**					
Lab ID : BMI11030901-04A	* * * None Found * * *	ND	2.0 µg/L	03/10/11 15:34	03/10/11 15:34
Date Received : 03/09/11					
Date Sampled : 03/08/11 09:51					
Client ID : **MW-19-1**					
Lab ID : BMI11030901-05A	* * * None Found * * *	ND	2.0 µg/L	03/10/11 15:56	03/10/11 15:56
Date Received : 03/09/11					
Date Sampled : 03/08/11 10:15					
Client ID : **EB-11-03/08/11**					
Lab ID : BMI11030901-06A	* * * None Found * * *	ND	2.0 µg/L	03/10/11 14:08	03/10/11 14:08
Date Received : 03/09/11					
Date Sampled : 03/08/11 10:07					
Client ID : **TB-11-03/08/11**					
Lab ID : BMI11030901-07A	* * * None Found * * *	ND	2.0 µg/L	03/10/11 13:46	03/10/11 13:46
Date Received : 03/09/11					
Date Sampled : 03/08/11 07:00					

Alpha Analytical, Inc.

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

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

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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

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

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

3/21/11

Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI11030901-01A
Client I.D. Number: MW-19-5

Sampled: 03/08/11 08:45
Received: 03/09/11
Extracted: 03/10/11 14:29
Analyzed: 03/10/11 14:29

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND		0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND		1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND		0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND		0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	Q	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND		0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND		0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND		1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND		0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND		0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND		0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND		0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND		10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND		0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND		0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND		0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND		0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND		0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND		0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND		0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND		0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND		0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND		0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND		0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5	µg/L
25	Trichloroethene	ND		0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND		0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND		2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND		0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND		0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	103	(70-130)	%REC
30	1,1,2-Trichloroethane	ND		0.50	µg/L	65	Surr: Toluene-d8	113	(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	99	(70-130)	%REC
32	1,3-Dichloropropane	ND		0.50	µg/L					
33	Dibromochloromethane	ND		0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND		1.0	µg/L					
35	Tetrachloroethene	1.1		0.50	µg/L					

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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

3/21/11
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI11030901-02A
Client I.D. Number: MW-19-4

Sampled: 03/08/11 09:12
Received: 03/09/11
Extracted: 03/10/11 14:51
Analyzed: 03/10/11 14:51

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND		0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND		1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND		0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND		0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	Q	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND		0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND		0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND		1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND		0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND		0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND		0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND		0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND		10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND		0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND		0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND		0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND		0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND		0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND		0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND		0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND		0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND		0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND		0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND		0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5	µg/L
25	Trichloroethene	ND		0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND		0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND		2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND		0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND		0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	103	(70-130)	%REC
30	1,1,2-Trichloroethane	ND		0.50	µg/L	65	Surr: Toluene-d8	111	(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	100	(70-130)	%REC
32	1,3-Dichloropropane	ND		0.50	µg/L					
33	Dibromochloromethane	ND		0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND		1.0	µg/L					
35	Tetrachloroethene	ND		0.50	µg/L					

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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

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

3/21/11
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI11030901-03A
Client I.D. Number: MW-19-3

Sampled: 03/08/11 09:38
Received: 03/09/11
Extracted: 03/10/11 15:12
Analyzed: 03/10/11 15:12

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND		0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND		1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND		0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND		0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	Q	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND		0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND		0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND		1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND		0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND		0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND		0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND		0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND		10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND		0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND		0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND		0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND		0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND		0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND		0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND		0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND		0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND		0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND		0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND		0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5	µg/L
25	Trichloroethene	ND		0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND		0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND		2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND		0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND		0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	104	(70-130)	%REC
30	1,1,2-Trichloroethane	ND		0.50	µg/L	65	Surr: Toluene-d8	113	(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	101	(70-130)	%REC
32	1,3-Dichloropropane	ND		0.50	µg/L					
33	Dibromochloromethane	ND		0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND		1.0	µg/L					
35	Tetrachloroethene	0.59		0.50	µg/L					

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer
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3/21/11
Report Date

Alpha Analytical, Inc.

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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI11030901-04A
Client I.D. Number: MW-19-2

Sampled: 03/08/11 09:51
Received: 03/09/11
Extracted: 03/10/11 15:34
Analyzed: 03/10/11 15:34

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit		Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND		0.50	µg/L	36 1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND		1.0	µg/L	37 Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND		0.50	µg/L	38 Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND		0.50	µg/L	39 m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	Q	1.0	µg/L	40 Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND		0.50	µg/L	41 Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND		0.50	µg/L	42 o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND		1.0	µg/L	43 1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND		0.50	µg/L	44 1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND		0.50	µg/L	45 Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND		0.50	µg/L	46 Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND		0.50	µg/L	47 n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND		10	µg/L	48 4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND		0.50	µg/L	49 2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND		0.50	µg/L	50 1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND		0.50	µg/L	51 tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND		0.50	µg/L	52 1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND		0.50	µg/L	53 sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND		0.50	µg/L	54 1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND		0.50	µg/L	55 1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND		0.50	µg/L	56 4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND		0.50	µg/L	57 1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND		0.50	µg/L	58 n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND		0.50	µg/L	59 1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5	µg/L
25	Trichloroethene	2.1		0.50	µg/L	60 1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND		0.50	µg/L	61 Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND		2.5	µg/L	62 Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND		0.50	µg/L	63 1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND		0.50	µg/L	64 Surr: 1,2-Dichloroethane-d4	106	(70-130)	%REC
30	1,1,2-Trichloroethane	ND		0.50	µg/L	65 Surr: Toluene-d8	113	(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66 Surr: 4-Bromofluorobenzene	103	(70-130)	%REC
32	1,3-Dichloropropane	ND		0.50	µg/L				
33	Dibromochloromethane	ND		0.50	µg/L				
34	1,2-Dibromoethane (EDB)	ND		1.0	µg/L				
35	Tetrachloroethene	0.78		0.50	µg/L				

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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

3/21/11
Report Date

Alpha Analytical, Inc.

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ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI11030901-05A
Client I.D. Number: MW-19-1

Sampled: 03/08/11 10:15
Received: 03/09/11
Extracted: 03/10/11 15:56
Analyzed: 03/10/11 15:56

Volatile Organics by GC/MS
EPA Method SW8260B

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

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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

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3/21/11
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI11030901-06A
Client I.D. Number: EB-11-03/08/11

Sampled: 03/08/11 10:07
Received: 03/09/11
Extracted: 03/10/11 14:08
Analyzed: 03/10/11 14:08

Volatile Organics by GC/MS
EPA Method SW8260B

	Compound	Concentration		Reporting Limit			Compound	Concentration	Reporting Limit	
1	Dichlorodifluoromethane	ND		0.50	µg/L	36	1,1,1,2-Tetrachloroethane	ND	0.50	µg/L
2	Chloromethane	ND		1.0	µg/L	37	Chlorobenzene	ND	0.50	µg/L
3	Vinyl chloride	ND		0.50	µg/L	38	Ethylbenzene	ND	0.50	µg/L
4	Chloroethane	ND		0.50	µg/L	39	m,p-Xylene	ND	0.50	µg/L
5	Bromomethane	ND	Q	1.0	µg/L	40	Bromoform	ND	0.50	µg/L
6	Trichlorofluoromethane	ND		0.50	µg/L	41	Styrene	ND	0.50	µg/L
7	1,1-Dichloroethene	ND		0.50	µg/L	42	o-Xylene	ND	0.50	µg/L
8	Dichloromethane	ND		1.0	µg/L	43	1,1,2,2-Tetrachloroethane	ND	0.50	µg/L
9	Freon-113	ND		0.50	µg/L	44	1,2,3-Trichloropropane	ND	1.0	µg/L
10	trans-1,2-Dichloroethene	ND		0.50	µg/L	45	Isopropylbenzene	ND	0.50	µg/L
11	Methyl tert-butyl ether (MTBE)	ND		0.50	µg/L	46	Bromobenzene	ND	0.50	µg/L
12	1,1-Dichloroethane	ND		0.50	µg/L	47	n-Propylbenzene	ND	0.50	µg/L
13	2-Butanone (MEK)	ND		10	µg/L	48	4-Chlorotoluene	ND	0.50	µg/L
14	cis-1,2-Dichloroethene	ND		0.50	µg/L	49	2-Chlorotoluene	ND	0.50	µg/L
15	Bromochloromethane	ND		0.50	µg/L	50	1,3,5-Trimethylbenzene	ND	0.50	µg/L
16	Chloroform	ND		0.50	µg/L	51	tert-Butylbenzene	ND	0.50	µg/L
17	2,2-Dichloropropane	ND		0.50	µg/L	52	1,2,4-Trimethylbenzene	ND	0.50	µg/L
18	1,2-Dichloroethane	ND		0.50	µg/L	53	sec-Butylbenzene	ND	0.50	µg/L
19	1,1,1-Trichloroethane	ND		0.50	µg/L	54	1,3-Dichlorobenzene	ND	0.50	µg/L
20	1,1-Dichloropropene	ND		0.50	µg/L	55	1,4-Dichlorobenzene	ND	0.50	µg/L
21	Carbon tetrachloride	ND		0.50	µg/L	56	4-Isopropyltoluene	ND	0.50	µg/L
22	Benzene	ND		0.50	µg/L	57	1,2-Dichlorobenzene	ND	0.50	µg/L
23	Dibromomethane	ND		0.50	µg/L	58	n-Butylbenzene	ND	0.50	µg/L
24	1,2-Dichloropropane	ND		0.50	µg/L	59	1,2-Dibromo-3-chloropropane (DBCP)	ND	2.5	µg/L
25	Trichloroethene	ND		0.50	µg/L	60	1,2,4-Trichlorobenzene	ND	1.0	µg/L
26	Bromodichloromethane	ND		0.50	µg/L	61	Naphthalene	ND	1.0	µg/L
27	4-Methyl-2-pentanone (MIBK)	ND		2.5	µg/L	62	Hexachlorobutadiene	ND	1.0	µg/L
28	cis-1,3-Dichloropropene	ND		0.50	µg/L	63	1,2,3-Trichlorobenzene	ND	1.0	µg/L
29	trans-1,3-Dichloropropene	ND		0.50	µg/L	64	Surr: 1,2-Dichloroethane-d4	104	(70-130)	%REC
30	1,1,2-Trichloroethane	ND		0.50	µg/L	65	Surr: Toluene-d8	104	(70-130)	%REC
31	Toluene	ND		0.50	µg/L	66	Surr: 4-Bromofluorobenzene	98	(70-130)	%REC
32	1,3-Dichloropropane	ND		0.50	µg/L					
33	Dibromochloromethane	ND		0.50	µg/L					
34	1,2-Dibromoethane (EDB)	ND		1.0	µg/L					
35	Tetrachloroethene	ND		0.50	µg/L					

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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3/21/11
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

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

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

Alpha Analytical Number: BMI11030901-07A
Client I.D. Number: TB-11-03/08/11

Sampled: 03/08/11 07:00
Received: 03/09/11
Extracted: 03/10/11 13:46
Analyzed: 03/10/11 13:46

Volatile Organics by GC/MS
EPA Method SW8260B

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

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

Note: Analysis conducted using EPA Method 524.2 criteria.

Q = One or more quality control criteria failed.

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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3/21/11
Report Date

Alpha Analytical, Inc.

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

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

VOC Sample Preservation Report

Work Order: BMI11030901 **Job:** G005862/JPL Groundwater Monitoring

Alpha's Sample ID	Client's Sample ID	Matrix	pH
11030901-01A	MW-19-5	Aqueous	2
11030901-02A	MW-19-4	Aqueous	2
11030901-03A	MW-19-3	Aqueous	2
11030901-04A	MW-19-2	Aqueous	2
11030901-05A	MW-19-1	Aqueous	2
11030901-06A	EB-11-03/08/11	Aqueous	2
11030901-07A	TB-11-03/08/11	Aqueous	2

3/21/11

Report Date

Alpha Analytical, Inc.

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

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

Date: *18-Mar-11*

QC Summary Report

Work Order: 11030901

Method Blank

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

File ID: **14** Batch ID: **26134** Analysis Date: **03/09/2011 11:57**

Sample ID: **MB-26134** Units : **µg/L** Run ID: **IC_3_110309A** Prep Date: **03/09/2011 11:01**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	ND	1								

Laboratory Fortified Blank

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

File ID: **15** Batch ID: **26134** Analysis Date: **03/09/2011 12:16**

Sample ID: **LFB-26134** Units : **µg/L** Run ID: **IC_3_110309A** Prep Date: **03/09/2011 11:01**

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

Sample Matrix Spike

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

File ID: **23** Batch ID: **26134** Analysis Date: **03/09/2011 14:43**

Sample ID: **11030901-02ALFM** Units : **µg/L** Run ID: **IC_3_110309A** Prep Date: **03/09/2011 11:01**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	29.9	2	25	3.162	107	80	120			

Sample Matrix Spike Duplicate

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

File ID: **24** Batch ID: **26134** Analysis Date: **03/09/2011 15:01**

Sample ID: **11030901-02ALFMD** Units : **µg/L** Run ID: **IC_3_110309A** Prep Date: **03/09/2011 11:01**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Perchlorate	29.7	2	25	3.162	106	80	120	29.9	0.5(15)	

Comments:

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

Alpha Analytical, Inc.

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

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Date: *16-Mar-2011*

QC Summary Report

Work Order: 11030901

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

File ID: **11031007.D** Batch ID: **MS15W0310M** Analysis Date: **03/10/2011 10:32**

Sample ID: **MBLK MS15W0310M** Units : **µg/L** Run ID: **MSD_15_110310C** Prep Date: **03/10/2011 10:32**

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	10.6		10		106	70	130			

Alpha Analytical, Inc.

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

Date: *16-Mar-2011*

QC Summary Report

Work Order: 11030901

Surr: 4-Bromofluorobenzene	9.83	10	98	70	130	

Alpha Analytical, Inc.

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Date: *16-Mar-2011*

QC Summary Report

Work Order: 11030901

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

File ID: **11031003.D** Batch ID: **MS15W0310M** Analysis Date: **03/10/2011 08:56**

Sample ID: **LCS MS15W0310M** Units : **µg/L** Run ID: **MSD_15_110310C** Prep Date: **03/10/2011 08:56**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	10	1	10		100	70	130			
Chloromethane	8.99	2	10		90	70	130			
Vinyl chloride	10.4	1	10		104	70	130			
Chloroethane	10.8	1	10		108	70	130			
Bromomethane	6.8	2	10		68	70(70)	130			L50
Trichlorofluoromethane	11.7	1	10		117	70	130			
1,1-Dichloroethene	10.3	1	10		103	70	130			
Dichloromethane	8.99	2	10		90	70	130			
Freon-113	10.8	1	10		108	70	137			
trans-1,2-Dichloroethene	10.2	1	10		102	70	130			
Methyl tert-butyl ether (MTBE)	8.76	0.5	10		88	70	130			
1,1-Dichloroethane	10.3	1	10		103	70	130			
2-Butanone (MEK)	166	10	200		83	70	130			
cis-1,2-Dichloroethene	9.84	1	10		98	70	130			
Bromochloromethane	9.82	1	10		98	70	130			
Chloroform	9.61	1	10		96	70	130			
2,2-Dichloropropane	10.8	1	10		108	70	130			
1,2-Dichloroethane	9.76	1	10		98	70	130			
1,1,1-Trichloroethane	10.8	1	10		108	70	130			
1,1-Dichloropropene	10.8	1	10		108	70	130			
Carbon tetrachloride	10.3	1	10		103	70	130			
Benzene	9.58	0.5	10		96	70	130			
Dibromomethane	9.58	1	10		96	70	130			
1,2-Dichloropropane	9.84	1	10		98	70	130			
Trichloroethene	10.3	1	10		103	70	130			
Bromodichloromethane	10.8	1	10		108	70	130			
4-Methyl-2-pentanone (MIBK)	20.2	2.5	25		81	20	182			
cis-1,3-Dichloropropene	9.7	1	10		97	70	130			
trans-1,3-Dichloropropene	8.8	1	10		88	70	130			
1,1,2-Trichloroethane	9.42	1	10		94	70	130			
Toluene	9.93	0.5	10		99	70	130			
1,3-Dichloropropane	9.27	1	10		93	70	130			
Dibromochloromethane	10.1	1	10		101	70	130			
1,2-Dibromoethane (EDB)	19.2	2	20		96	70	130			
Tetrachloroethene	9.96	1	10		99.6	70	130			
1,1,1,2-Tetrachloroethane	10.7	1	10		107	70	130			
Chlorobenzene	9.9	1	10		99	70	130			
Ethylbenzene	10.1	0.5	10		101	70	130			
m,p-Xylene	10.2	0.5	10		102	70	130			
Bromoform	9.53	1	10		95	70	130			
Styrene	10.3	1	10		103	70	130			
o-Xylene	10.4	0.5	10		104	70	130			
1,1,2,2-Tetrachloroethane	9.07	1	10		91	70	130			
1,2,3-Trichloropropane	18.3	2	20		92	70	130			
Isopropylbenzene	10.4	1	10		104	70	130			
Bromobenzene	9.71	1	10		97	70	130			
n-Propylbenzene	10.6	1	10		106	70	130			
4-Chlorotoluene	10.7	1	10		107	70	130			
2-Chlorotoluene	10.4	1	10		104	70	130			
1,3,5-Trimethylbenzene	10.4	1	10		104	70	130			
tert-Butylbenzene	10.2	1	10		102	70	130			
1,2,4-Trimethylbenzene	10.6	1	10		106	70	130			
sec-Butylbenzene	10.4	1	10		104	70	130			
1,3-Dichlorobenzene	10.4	1	10		104	70	130			
1,4-Dichlorobenzene	9.9	1	10		99	70	130			
4-Isopropyltoluene	10.4	1	10		104	70	130			
1,2-Dichlorobenzene	9.56	1	10		96	70	130			
n-Butylbenzene	11	1	10		110	70	130			
1,2-Dibromo-3-chloropropane (DBCP)	42.8	3	50		86	67	130			
1,2,4-Trichlorobenzene	10.2	2	10		102	70	130			
Naphthalene	8.63	2	10		86	70	130			
Hexachlorobutadiene	17.9	2	20		90	70	130			
1,2,3-Trichlorobenzene	10.2	2	10		102	70	130			
Surr: 1,2-Dichloroethane-d4	10.3		10		103	70	130			
Surr: Toluene-d8	9.82		10		98	70	130			

Alpha Analytical, Inc.

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Date: *16-Mar-2011*

QC Summary Report

Work Order: 11030901

Surr: 4-Bromofluorobenzene	9.89	10	99	70	130	