

**APPENDIX C**  
**IDW AND SAMPLE ANALYSIS DOCUMENTATION**

**Summary of Analytical Results from Groundwater Samples**

Sample Location	Sample ID	Sample Date	Volatile Organic Compounds EPA 524.2 (µg/L)	Perchlorate EPA 314.0 / 8321A (µg/L)	Metals EPA 200.8 (mg/L)							Cr VI EPA 7196A (mg/L)	Anions EPA 300.0/9056 (mg/L)			1,2,3- Trichloropropane EPA 524.2 (µg/L)	1,4 Dioxane EPA 8270 SEM (µg/L)	NDMA EPA 1625C (µg/L)	RDX and TNT EPA 8330 (µg/L)	TDS EPA 160.1 (mg/L)	Alkalinity (as CaCO3) EPA SM2320B (mg/L)
					Na	Mg	K	Ca	Cr	As	Pb	Cr(VI)	Cl	NO <sub>3</sub>	SO <sub>4</sub>						
NA	Water Source-5-3-05	5/03/2005	<0.500 <b>Bromodichloromethane = 11.2</b> <b>Bromoform = 3.60</b> <b>Dibromochloromethane = 10.8</b> <b>Chloroform = 10.1</b> <b>Chloromethane = 0.900</b>	<2.0 / NA																	
MW26 Zone 1 (130'-140')	MW-26-1	5/25/2005	<0.500 <b>m,p-xylenes = 0.4J</b>	<4 / 1.5	<b>28.3</b>	<b>38.4</b>	<b>3.04</b>	<b>101</b>	<b>0.0071</b>	<b>0.0036J</b>	<b>0.000023J</b>	<0.01	<b>70.4</b>	<b>3.3</b>	<b>76.6</b>	<0.5	<1.5	<0.0020	<1	<b>618</b>	<b>273</b>
MW26 Zone 2 (210'-220')	MW-26-2	5/25/2005	<0.500 <b>m,p-xylenes = 0.3J</b>	<4 / 1.0	<b>44.2</b>	<b>25.3</b>	<b>2.92</b>	<b>76</b>	<b>0.0111</b>	<b>0.0013J</b>	<0.001	<0.01	<b>41.8</b>	<b>1.5</b>	<b>33.1</b>	<0.5	<1.5	<0.0020	<1	<b>448</b>	<b>295</b>

Detections are in bold.  
 NA = Not analyzed or list not reported.  
 J = Estimated value between PQL and MDL

**Analytical Results from IDW Samples (Laboratory Reports Available on CD, by Request)**

Water																												
Tank ID	Sample ID	Sample Date	VOCs EPA 8260B (µg/L)	Semivolatile Organic Compounds EPA 8270C (µg/L)	Title 26 Metals plus Hexavalent Chromium and Strontium (mg/L) EPA 6010/7000																		Perchlorate EPA 314.0 (µg/L)	Cyanide EPA 4500 CN (mg/L)	TPH-E (Diesel) EPA 8015B (mg/L)	TPH-E (Jet Fuel) EPA 8015B (mg/L)	TPH-E (Oil) EPA 8015B (mg/L)	
					Sb	As	Ba	Be	Cd	Cr	Cr(VI)	Cu	Co	Pb	Mo	Hg	Ni	Se	Ag	Sr	Tl	V						Zn
BT-025697	BKRV-025697-5-3-05	5/3/2005	ND	ND	<0.0050	<0.0050	0.14	<0.0040	<0.0050	<0.0050	<0.020	<0.010	<0.0050	<0.0050	0.0089	<0.0010	<0.0050	<0.0050	<0.0050	0.73	0.0063	0.009	0.19	<2.0	<0.005	<0.050	<0.050	<0.50
Soil																												
Bin ID	Sample ID	Sample Date	VOCs EPA 8260B (µg/kg)	Semivolatile Organic Compounds EPA 8270C (µg/kg)	Title 26 Metals plus Hexavalent Chromium and Strontium (mg/kg) EPA 6020/6020A															Cyanide EPA 4500 CN (mg/kg)	TPH-E (Diesel) EPA 8015B (mg/kg)	TPH-E (Jet Fuel) EPA 8015B (mg/kg)	TPH-E (Oil) EPA 8015B (mg/kg)					
					Sb	As	Be	Cd	Cr	Cr(VI)	Cu	Pb	Hg	Ni	Se	Ag	Sr	Tl	Zn									
R2135	R2135-4-20-05	4/20/2005	ND	ND	<1.0	2.4	<1.0	<1.0	5.4	<0.01	5.0	1.9	<0.20	2.8	<1.0	<1.0	<10	<1.0	<20	<0.5	<5.0	<5.0	<10					
R2034	R2034-4-20-05	4/20/2005	ND	ND	<1.0	3.2	<1.0	<1.0	4.5	0.27	5.9	3.1	<0.20	3.4	<1.0	<1.0	<10	<1.0	<20	<0.5	<5.0	<5.0	<10					
R2009RT	R2009RT-4-20-05	4/20/2005	ND	ND	<1.0	1.1	<1.0	<1.0	4.3	<0.01	4.9	1.8	<0.20	2.9	<1.0	<1.0	<10	<1.0	20	<0.5	<5.0	<5.0	<10					

# Applied P & CH Laboratories

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# APCL Analytical Report

Submitted to:  
 Battelle - Columbus Operations  
 Attention: David Conner  
 3990 Old Town Ave, Suite C-205.  
 San Diego CA 92110  
 Tel: (619)574-4821 Fax: (619)260-0882

Service ID #: 801-052848 Received: 05/25/05  
 Collected by: MM Extracted: 05/16-06/01/05  
 Collected on: 05/25/05 Tested: 05/25-06/03/05  
 Reported: 06/08/05

Sample Description: Water  
 Project Description: G486090 JPL GW Mon-2Q05

## Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result	
				EB-19-5/25/05 05-02848-1	MW-26-1 05-02848-2
BICARBONATE	SM2320B	mg/L	2	< 2	273
CARBONATE	SM2320B	mg/L	2	< 2	< 2
CHROMIUM (VI)	7196	mg/L	0.01	< 0.01	< 0.01
PH	9040B	pH unit	0.01	5.49	6.79
SOLIDS, TOTAL DISSOLVED (TDS)	160.1	mg/L	10	< 10	618
Dilution Factor				1	1
PERCHLORATE	314.0	µg/L	4	< 4	< 4
Dilution Factor				1	10
CHLORIDE	300.0	mg/L	0.2	0.11J	70.4
NITRATE AS N	300.0	mg/L	0.04	0.033J	3.3
SULFATE	300.0	mg/L	0.5	< 0.5	76.6
Dilution Factor				1	1
CHROMIUM	200.8	µg/L	1	0.61J	7.1
LEAD	200.8	µg/L	1	< 1	0.023J
Dilution Factor				1	1
ARSENIC	200.9	µg/L	5	1.9J	3.6J
Dilution Factor				1	1
CALCIUM	200.7	µg/L	200	< 200	101,000
IRON	200.7	µg/L	50	17.1J	93.9
MAGNESIUM	200.7	µg/L	100	12.6J	38,400
POTASSIUM	200.7	µg/L	400	68.2J	3,040
SODIUM	200.7	µg/L	2000	459J	28,300
<b>VOLATILE ORGANIC COMPOUNDS</b>					
Dilution Factor				1	1
BENZENE	524.2	µg/L	0.5	< 0.5	< 0.5
BROMOBENZENE	524.2	µg/L	0.5	< 0.5	< 0.5
BROMOCHLOROMETHANE	524.2	µg/L	0.5	< 0.5	< 0.5
BROMODICHLOROMETHANE	524.2	µg/L	0.5	< 0.5	< 0.5
BROMOFORM	524.2	µg/L	0.5	< 0.5	< 0.5
BROMOMETHANE	524.2	µg/L	0.5	< 0.5	< 0.5
N-BUTYLBENZENE	524.2	µg/L	0.5	< 0.5	< 0.5
SEC-BUTYLBENZENE	524.2	µg/L	0.5	< 0.5	< 0.5
TERT-BUTYLBENZENE	524.2	µg/L	0.5	< 0.5	< 0.5
2-BUTANONE	524.2	µg/L	10	< 10	< 10
CARBON TETRACHLORIDE	524.2	µg/L	0.5	< 0.5	< 0.5
CHLOROBENZENE	524.2	µg/L	0.5	< 0.5	< 0.5
CHLORODIBROMOMETHANE	524.2	µg/L	0.5	< 0.5	< 0.5
CHLOROETHANE	524.2	µg/L	0.5	< 0.5	< 0.5
CHLOROFORM	524.2	µg/L	0.5	< 0.5	< 0.5

# APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result	
				EB-19-5/25/05	MW-26-1
				05-02848-1	05-02848-2
CHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5
2-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5
4-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5
1,2-DIBROMOETHANE (EDB)	524.2	µg/L	0.5	<0.5	<0.5
DIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5
DICHLORODIFLUOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5
1,1-DICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5
1,2-DICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5
1,1-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5
CIS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5
TRANS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5
1,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5
1,3-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5
2,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5
CIS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5
ETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5
HEXACHLOROBUTADIENE	524.2	µg/L	0.5	<0.5	<0.5
ISOPROPYLBENZENE (CUMENE)	524.2	µg/L	0.5	<0.5	<0.5
P-ISOPROPYLTOLUENE	524.2	µg/L	0.5	<0.5	<0.5
METHYLENE CHLORIDE	524.2	µg/L	0.5	<0.5	<0.5
METHYL-T-BUTYL ETHER (MTBE)	524.2	µg/L	1	<1	<1
4-METHYL-2-PENTANONE (MIBK)	524.2	µg/L	10	<10	<10
NAPHTHALENE	524.2	µg/L	0.5	<0.5	<0.5
N-PROPYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5
STYRENE	524.2	µg/L	0.5	<0.5	<0.5
1,1,1,2-TETRACHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5
1,1,2,2-TETRACHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5
TETRACHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5
TOLUENE	524.2	µg/L	0.5	<0.5	<0.5
1,2,3-TRICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5
1,2,4-TRICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5
1,1,1-TRICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5
1,1,2-TRICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5
TRICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5
TRICHLOROFLUOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5
1,2,3-TRICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5
1,1,2,2-TRICHLORO-1,1,2,2-TRIFLUOROETHANE	524.2	µg/L	0.5	<0.5	<0.5
1,2,4-TRIMETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5
1,3,5-TRIMETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5
VINYL CHLORIDE	524.2	µg/L	0.5	<0.5	<0.5
O-XYLENE	524.2	µg/L	0.5	<0.5	<0.5
M/P-XYLENE	524.2	µg/L	0.5	<0.5	0.4J

# APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result		
				MW-26-2 05-02848-3	SB-1-2Q05 05-02848-4	TB-19-5/25/05 05-02848-5
<b>BICARBONATE</b>	SM2320B	mg/L	2	295	< 2	-
<b>CARBONATE</b>	SM2320B	mg/L	2	< 2	< 2	-
<b>CHROMIUM (VI)</b>	7196	mg/L	0.01	< 0.01	< 0.01	-
<b>PH</b>	9040B	pH unit	0.01	7.42	6.14	-
<b>SOLIDS, TOTAL DISSOLVED (TDS)</b>	160.1	mg/L	10	448	< 10	-
Dilution Factor				1	1	1
<b>PERCHLORATE</b>	314.0	µg/L	4	< 4	< 4	-
Dilution Factor				8	1	1
<b>CHLORIDE</b>	300.0	mg/L	0.2	41.8	0.11J	-
<b>NITRATE AS N</b>	300.0	mg/L	0.04	1.5	0.049	-
<b>SULFATE</b>	300.0	mg/L	0.5	33.1	0.39J	-
Dilution Factor				1	1	1
<b>CHROMIUM</b>	200.8	µg/L	1	11.1	1.5	-
<b>LEAD</b>	200.8	µg/L	1	< 1	< 1	-
Dilution Factor				1	1	1
<b>ARSENIC</b>	200.9	µg/L	5	1.3J	< 5	-
Dilution Factor				1	1	1
<b>CALCIUM</b>	200.7	µg/L	200	76,000	< 200	-
<b>IRON</b>	200.7	µg/L	50	590	22.6J	-
<b>MAGNESIUM</b>	200.7	µg/L	100	25,300	16.2J	-
<b>POTASSIUM</b>	200.7	µg/L	400	2,920	78.8J	-
<b>SODIUM</b>	200.7	µg/L	2000	44,200	< 2000	-
<b>VOLATILE ORGANIC COMPOUNDS</b>						
Dilution Factor				1	1	1
<b>BENZENE</b>	524.2	µg/L	0.5	< 0.5	< 0.5	< 0.5
<b>BROMOBENZENE</b>	524.2	µg/L	0.5	< 0.5	< 0.5	< 0.5
<b>BROMOCHLOROMETHANE</b>	524.2	µg/L	0.5	< 0.5	< 0.5	< 0.5
<b>BROMODICHLOROMETHANE</b>	524.2	µg/L	0.5	< 0.5	< 0.5	< 0.5
<b>BROMOFORM</b>	524.2	µg/L	0.5	< 0.5	< 0.5	< 0.5
<b>BROMOMETHANE</b>	524.2	µg/L	0.5	< 0.5	< 0.5	< 0.5
<b>N-BUTYLBENZENE</b>	524.2	µg/L	0.5	< 0.5	< 0.5	< 0.5
<b>SEC-BUTYLBENZENE</b>	524.2	µg/L	0.5	< 0.5	< 0.5	< 0.5
<b>TERT-BUTYLBENZENE</b>	524.2	µg/L	0.5	< 0.5	< 0.5	< 0.5
<b>2-BUTANONE</b>	524.2	µg/L	10	< 10	< 10	< 10
<b>CARBON TETRACHLORIDE</b>	524.2	µg/L	0.5	< 0.5	< 0.5	< 0.5
<b>CHLOROBENZENE</b>	524.2	µg/L	0.5	< 0.5	< 0.5	< 0.5
<b>CHLORODIBROMOMETHANE</b>	524.2	µg/L	0.5	< 0.5	< 0.5	< 0.5
<b>CHLOROETHANE</b>	524.2	µg/L	0.5	< 0.5	< 0.5	< 0.5
<b>CHLOROFORM</b>	524.2	µg/L	0.5	< 0.5	< 0.5	< 0.5
<b>CHLOROMETHANE</b>	524.2	µg/L	0.5	< 0.5	< 0.5	< 0.5
<b>2-CHLOROTOLUENE</b>	524.2	µg/L	0.5	< 0.5	< 0.5	< 0.5
<b>4-CHLOROTOLUENE</b>	524.2	µg/L	0.5	< 0.5	< 0.5	< 0.5
<b>1,2-DIBROMO-3-CHLOROPROPANE</b>	524.2	µg/L	0.5	< 0.5	< 0.5	< 0.5
<b>1,2-DIBROMOETHANE (EDB)</b>	524.2	µg/L	0.5	< 0.5	< 0.5	< 0.5
<b>DIBROMOMETHANE</b>	524.2	µg/L	0.5	< 0.5	< 0.5	< 0.5
<b>1,2-DICHLOROBENZENE</b>	524.2	µg/L	0.5	< 0.5	< 0.5	< 0.5
<b>1,3-DICHLOROBENZENE</b>	524.2	µg/L	0.5	< 0.5	< 0.5	< 0.5
<b>1,4-DICHLOROBENZENE</b>	524.2	µg/L	0.5	< 0.5	< 0.5	< 0.5

## APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result		
				MW-26-2	SB-1-2Q05	TB-19-5/25/05
				05-02848-3	05-02848-4	05-02848-5
DICHLORODIFLUOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1-DICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CIS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TRANS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,3-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
2,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CIS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
ETHYLBENZENE	524.2	µg/L	0.5	<0.5	5.5	<0.5
HEXACHLOROBUTADIENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
ISOPROPYLBENZENE (CUMENE)	524.2	µg/L	0.5	<0.5	<0.5	<0.5
P-ISOPROPYLTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
METHYLENE CHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
METHYL-T-BUTYL ETHER (MTBE)	524.2	µg/L	1	<1	<1	<1
4-METHYL-2-PENTANONE (MIBK)	524.2	µg/L	10	<10	<10	<10
NAPHTHALENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
N-PROPYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
STYRENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1,1,2-TETRACHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1,2,2-TETRACHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TETRACHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TOLUENE	524.2	µg/L	0.5	<0.5	1.5	<0.5
1,2,3-TRICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2,4-TRICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1,1-TRICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1,2-TRICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TRICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TRICHLOROFLUOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2,3-TRICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1,2-TRICHLORO-1,2,2-TRIFLUORO	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2,4-TRIMETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,3,5-TRIMETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
VINYL CHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
O-XYLENE	524.2	µg/L	0.5	<0.5	8.3	<0.5
M/P-XYLENE	524.2	µg/L	0.5	0.3J	25.0	<0.5

# APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result	
				MW-26-1 05-02848-2	MW-26-2 05-02848-3
Dilution Factor				1.05	1.05
<b>1,2,3-TRICHLOROPROPANE</b>	504.1	µg/L	0.005	< 0.0052	< 0.0052
Dilution Factor				1	1
<b>1,4-DIOXANE</b>	8270-SIM	µg/L	1.5	< 1.5	< 1.5
<b>NITROAROMATICS AND NITROAMINES</b>					
Dilution Factor				1	1
4-AMINO-2,6-DINITROTOLUENE	8330	µg/L	1	< 1	< 1
2-AMINO-4,6-DINITROTOLUENE	8330	µg/L	1	< 1	< 1
1,3-DINITROBENZENE	8330	µg/L	1	< 1	< 1
2,4-DINITROTOLUENE	8330	µg/L	1	< 1	< 1
2,6-DINITROTOLUENE	8330	µg/L	1	< 1	< 1
HMX	8330	µg/L	1.5	< 1.5	< 1.5
NITROBENZENE	8330	µg/L	1	< 1	< 1
3-NITROTOLUENE	8330	µg/L	1	< 1	< 1
RDX	8330	µg/L	1	< 1	< 1
TETRYL	8330	µg/L	1	< 1	< 1
1,3,5-TRINITROBENZENE	8330	µg/L	1	< 1	< 1
2,4,6-TRINITROTOLUENE	8330	µg/L	1	< 1	< 1
2/4-NITROTOLUENE	8330	µg/L	2	< 2	< 2

PQL: Practical Quantitation Limit. MDL: Method Detection Limit. CRDL: Contract Required Detection Limit

N.D.: Not Detected or less than the practical quantitation limit.

"-": Analysis is not required.

J: Reported between PQL and MDL.

Listed Dilution Factors (DF) are relative to the method default DF. All unlisted DFs are 1.0

Respectfully submitted,

  
 Dominic Lau  
 Laboratory Director

Applied P & CH Laboratories



**Billing Information :**  
 Battelle  
 505 King Avenue

Columbus, OH 43201

**Client:**  
 Battelle Memorial Institute  
 505 King Avenue

Columbus, OH 43201

**Report Attention :** David Conner

**CC Report :**

# CHAIN-OF-CUSTODY RECORD

## Alpha Analytical, Inc.

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

TEL: (775) 355-1044 FAX: (775) 355-0406

David Conner

TEL : (626) 345-0598 x

FAX : (760) 385-4613

EEmail connerd@battelle.org

Job : G486090-T3

PO :

Client's COC # : 08810

**CA AMENDED** Page: 1 of 1

**WorkOrder : BMI05042145**

**Report Due By : 5:00 PM On : 22-Apr-05**

EDD Required : Yes

PDF Required : No

Sampled by : D. Conner

Cooler Temp : 4 °C

**21-Apr-05**

QC Level : DS3 = DOD QC Required : Final Rpt, MBLK, LCS, MS/MSD With Surrogates

Alpha Sample ID	Client Sample ID	Collection Matrix	Collection Date	No. of Bottles			BNA_S	CYANIDE	CYANIDE_T OTAL	Requested Tests		TPH/E_C	VOC_S	VOC_W	Sample Remarks
				ORG	SUB	TAT				PWS #	METALS_C R6_S				
BMI05042145-01A	R2135-4-20-05	SO	04/20/05 09:45	2	2	1	8270	Cyanide	Cyanide	SUB-CLS	PPO Metals + Sr	TPH/E_C	8260_Cs		Cyanide subbed to SEM. Cr VI subbed to CLS.
BMI05042145-02A	R2034-4-20-05	SO	04/20/05 10:00	2	2	1	8270	Cyanide	Cyanide	SUB-CLS	PPO Metals + Sr	TPH/E_C	8260_Cs		Cyanide subbed to SEM. Cr VI subbed to CLS.
BMI05042145-03A	R2009RT-4-20-05	SO	04/20/05 10:15	2	2	1	8270	Cyanide	Cyanide	SUB-CLS	PPO Metals + Sr	TPH/E_C	8260_Cs		Cyanide subbed to SEM. Cr VI subbed to CLS.
BMI05042145-04A	Trip Blank	AQ	04/20/05 00:00	1	0	1							8260_Cs		Reno Trip Blank 02/18/05

**Comments:** No security seals. Frozen ice. Temp Blank # 2959 received at 4 degrees C. 24 Hr TAT. Cyanide and Metals subbed to SEM. Amended 04/21/05 to change Metals to PPO list plus Strontium and sub Chromium IV to CLS per David Clextan. LE :

Received by: *Latricia Edrosa* Signature *Latricia Edrosa* Print Name *Latricia Edrosa* Company Alpha Analytical, Inc. Date/Time 4/21/05 2:15

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report.

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

**Billing Information:**

Name Gerald Tompkins  
 Address 505 King Ave.  
 City, State, Zip Columbus, OH 43201  
 Phone Number 614-424-4849 Fax 614-458-4849



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

**Samples Collected From Which State?**

AZ  CA  NV  WA   
 ID  OR  OTHER  Page #      of     

Analyses Required

08810

Client Name		P.O. #	Job #	Required QC Level?									
Batelle		187831	6480090-T3	I	II								
Address		E-Mail Address	EDD/EDF? YES <input type="checkbox"/> NO <input type="checkbox"/>										
505 King Ave.		connerd@batelle.org	Global ID # _____										
City, State, Zip		Phone #	Fax #	REMARKS									
Columbus, OH 43201		614-726-7311	614-260-0882										
Time Sampled	Date Sampled	Matrix* See Key Below	Office Use Only	Sampled by	Report Attention	TAT	Field Filtered	Total and type of containers ** See below	VOCs (82604)	SVOCs (82702)	Trace Metals + Strontium (6010700)	Cyanide (45002)	TPH-E Diesel/3rd Party (8015M)
			Lab ID Number	D. Conner	D. Conner								
0945	4-20	SO	BM108042143-01			24		4-S	X	X	X	X	X
1000	4-20	SO	-02	R2034 - 4-20-05		24		4-S	X	X	X	X	X
1015	4-20	SO	-03	R2009RT - 4-20-05		24		4-S	X	X	X	X	X
			-04	Trig Blank				1-V	X				
				Temp Blank									

**ADDITIONAL INSTRUCTIONS:**

Signature	Print Name	Company	Date	Time
<i>[Signature]</i>	David J. Conner	Batelle	4-20-05	17:00
<i>[Signature]</i>	Patricia Edrosa	Alpha	4-21-05	10:27
Relinquished by				
Received by				
Relinquished by				
Received by				

\*Key: AQ - Aqueous SO - Soil WA - Waste OT - Other \*\*; 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

## ANALYTICAL REPORT

Battelle Memorial Institute  
505 King Avenue  
Columbus, OH 43201

Attn: David Conner  
Phone: (626) 345-0598  
Fax: (760) 385-4613  
Date Received 04/21/05

Job#: G486090-T3

### Total Petroleum Hydrocarbons - Extractable (TPH-E) EPA Method SW8015B/DHS LUFT Manual

	Parameter	Concentration	Reporting Limit	Date Sampled	Date Analyzed
Client ID : <b>R2135-4-20-05</b>	TPH-E (Jet Fuel)	ND	5.0 mg/Kg	04/20/05	04/21/05
Lab ID : BMI05042145-01A	TPH-E (Diesel)	ND	5.0 mg/Kg	04/20/05	04/21/05
	TPH-E (Oil)	ND	10 mg/Kg	04/20/05	04/21/05
	Surr: Nonane	108	%REC	04/20/05	04/21/05
Client ID : <b>R2034-4-20-05</b>	TPH-E (Jet Fuel)	ND	5.0 mg/Kg	04/20/05	04/21/05
Lab ID : BMI05042145-02A	TPH-E (Diesel)	ND	5.0 mg/Kg	04/20/05	04/21/05
	TPH-E (Oil)	ND	10 mg/Kg	04/20/05	04/21/05
	Surr: Nonane	60	%REC	04/20/05	04/21/05
Client ID : <b>R2009RT-4-20-05</b>	TPH-E (Jet Fuel)	ND	5.0 mg/Kg	04/20/05	04/21/05
Lab ID : BMI05042145-03A	TPH-E (Diesel)	ND	5.0 mg/Kg	04/20/05	04/21/05
	TPH-E (Oil)	ND	10 mg/Kg	04/20/05	04/21/05
	Surr: Nonane	63	%REC	04/20/05	04/21/05

ND = Not Detected

Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer  
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / info@alpha-analytical.com

**4/22/05**  
**Report Date**



# Alpha Analytical, Inc.

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

## ANALYTICAL REPORT

Battelle Memorial Institute  
505 King Avenue  
Columbus, OH 43201  
Job#: G486090-T3

Attn: David Conner  
Phone: (626) 345-0598  
Fax: (760) 385-4613

Alpha Analytical Number: BMI05042145-01A  
Client I.D. Number: R2135-4-20-05

Sampled: 04/20/05  
Received: 04/21/05  
Analyzed: 04/22/05

### Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Chloromethane	ND	40 µg/Kg	26 Ethylbenzene	ND	5.0 µg/Kg
2 Vinyl chloride	ND	20 µg/Kg	27 m,p-Xylene	ND	5.0 µg/Kg
3 Chloroethane	ND	20 µg/Kg	28 Bromoform	ND	20 µg/Kg
4 Bromomethane	ND	40 µg/Kg	29 o-Xylene	ND	5.0 µg/Kg
5 Trichlorofluoromethane	ND	20 µg/Kg	30 1,1,2,2-Tetrachloroethane	ND	20 µg/Kg
6 1,1-Dichloroethene	ND	20 µg/Kg	31 1,3-Dichlorobenzene	ND	20 µg/Kg
7 Dichloromethane	ND	40 µg/Kg	32 1,4-Dichlorobenzene	ND	20 µg/Kg
8 trans-1,2-Dichloroethene	ND	20 µg/Kg	33 1,2-Dichlorobenzene	ND	20 µg/Kg
9 1,1-Dichloroethane	ND	20 µg/Kg	34 Surr: 1,2-Dichloroethane-d4	97	%REC
10 cis-1,2-Dichloroethene	ND	20 µg/Kg	35 Surr: Toluene-d8	102	%REC
11 Chloroform	ND	20 µg/Kg	36 Surr: 4-Bromofluorobenzene	95	%REC
12 1,2-Dichloroethane	ND	20 µg/Kg			
13 1,1,1-Trichloroethane	ND	20 µg/Kg			
14 Carbon tetrachloride	ND	20 µg/Kg			
15 Benzene	ND	5.0 µg/Kg			
16 1,2-Dichloropropane	ND	20 µg/Kg			
17 Trichloroethene	ND	20 µg/Kg			
18 Bromodichloromethane	ND	20 µg/Kg			
19 cis-1,3-Dichloropropene	ND	20 µg/Kg			
20 trans-1,3-Dichloropropene	ND	20 µg/Kg			
21 1,1,2-Trichloroethane	ND	20 µg/Kg			
22 Toluene	ND	5.0 µg/Kg			
23 Dibromochloromethane	ND	20 µg/Kg			
24 Tetrachloroethene	ND	20 µg/Kg			
25 Chlorobenzene	ND	20 µg/Kg			

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) 281-4848 / info@alpha-analytical.com

*CP*

4/22/05

Report Date

Page 1 of 1



# Alpha Analytical, Inc.

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

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

## ANALYTICAL REPORT

Battelle Memorial Institute  
505 King Avenue  
Columbus, OH 43201  
Job#: G486090-T3

Attn: David Conner  
Phone: (626) 345-0598  
Fax: (760) 385-4613

Alpha Analytical Number: BMI05042145-02A  
Client I.D. Number: R2034-4-20-05

Sampled: 04/20/05  
Received: 04/21/05  
Analyzed: 04/22/05

### Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Chloromethane	ND	40 µg/Kg	26 Ethylbenzene	ND	5.0 µg/Kg
2 Vinyl chloride	ND	20 µg/Kg	27 m,p-Xylene	ND	5.0 µg/Kg
3 Chloroethane	ND	20 µg/Kg	28 Bromoform	ND	20 µg/Kg
4 Bromomethane	ND	40 µg/Kg	29 o-Xylene	ND	5.0 µg/Kg
5 Trichlorofluoromethane	ND	20 µg/Kg	30 1,1,2,2-Tetrachloroethane	ND	20 µg/Kg
6 1,1-Dichloroethane	ND	20 µg/Kg	31 1,3-Dichlorobenzene	ND	20 µg/Kg
7 Dichloromethane	ND	40 µg/Kg	32 1,4-Dichlorobenzene	ND	20 µg/Kg
8 trans-1,2-Dichloroethene	ND	20 µg/Kg	33 1,2-Dichlorobenzene	ND	20 µg/Kg
9 1,1-Dichloroethane	ND	20 µg/Kg	34 Surr: 1,2-Dichloroethane-d4	98	%REC
10 cis-1,2-Dichloroethene	ND	20 µg/Kg	35 Surr: Toluene-d8	103	%REC
11 Chloroform	ND	20 µg/Kg	36 Surr: 4-Bromofluorobenzene	94	%REC
12 1,2-Dichloroethane	ND	20 µg/Kg			
13 1,1,1-Trichloroethane	ND	20 µg/Kg			
14 Carbon tetrachloride	ND	20 µg/Kg			
15 Benzene	ND	5.0 µg/Kg			
16 1,2-Dichloropropane	ND	20 µg/Kg			
17 Trichloroethene	ND	20 µg/Kg			
18 Bromodichloromethane	ND	20 µg/Kg			
19 cis-1,3-Dichloropropene	ND	20 µg/Kg			
20 trans-1,3-Dichloropropene	ND	20 µg/Kg			
21 1,1,2-Trichloroethane	ND	20 µg/Kg			
22 Toluene	ND	5.0 µg/Kg			
23 Dibromochloromethane	ND	20 µg/Kg			
24 Tetrachloroethene	ND	20 µg/Kg			
25 Chlorobenzene	ND	20 µg/Kg			

ND = Not Detected

Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer  
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / info@alpha-analytical.com

4/22/05

Report Date

Page 1 of 1



# Alpha Analytical, Inc.

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

## ANALYTICAL REPORT

Battelle Memorial Institute  
505 King Avenue  
Columbus, OH 43201  
Job#: G486090-T3

Attn: David Conner  
Phone: (626) 345-0598  
Fax: (760) 385-4613

Alpha Analytical Number: BMI05042145-03A  
Client I.D. Number: R2009RT-4-20-05

Sampled: 04/20/05  
Received: 04/21/05  
Analyzed: 04/22/05

### Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Chloromethane	ND	40 µg/Kg	26 Ethylbenzene	ND	5.0 µg/Kg
2 Vinyl chloride	ND	20 µg/Kg	27 m,p-Xylene	ND	5.0 µg/Kg
3 Chloroethane	ND	20 µg/Kg	28 Bromoform	ND	20 µg/Kg
4 Bromomethane	ND	40 µg/Kg	29 o-Xylene	ND	5.0 µg/Kg
5 Trichlorofluoromethane	ND	20 µg/Kg	30 1,1,2,2-Tetrachloroethane	ND	20 µg/Kg
6 1,1-Dichloroethene	ND	20 µg/Kg	31 1,3-Dichlorobenzene	ND	20 µg/Kg
7 Dichloromethane	ND	40 µg/Kg	32 1,4-Dichlorobenzene	ND	20 µg/Kg
8 trans-1,2-Dichloroethene	ND	20 µg/Kg	33 1,2-Dichlorobenzene	ND	20 µg/Kg
9 1,1-Dichloroethane	ND	20 µg/Kg	34 Surr: 1,2-Dichloroethane-d4	98	%REC
10 cis-1,2-Dichloroethene	ND	20 µg/Kg	35 Surr: Toluene-d8	102	%REC
11 Chloroform	ND	20 µg/Kg	36 Surr: 4-Bromofluorobenzene	97	%REC
12 1,2-Dichloroethane	ND	20 µg/Kg			
13 1,1,1-Trichloroethane	ND	20 µg/Kg			
14 Carbon tetrachloride	ND	20 µg/Kg			
15 Benzene	ND	5.0 µg/Kg			
16 1,2-Dichloropropane	ND	20 µg/Kg			
17 Trichloroethene	ND	20 µg/Kg			
18 Bromodichloromethane	ND	20 µg/Kg			
19 cis-1,3-Dichloropropene	ND	20 µg/Kg			
20 trans-1,3-Dichloropropene	ND	20 µg/Kg			
21 1,1,2-Trichloroethane	ND	20 µg/Kg			
22 Toluene	ND	5.0 µg/Kg			
23 Dibromochloromethane	ND	20 µg/Kg			
24 Tetrachloroethene	ND	20 µg/Kg			
25 Chlorobenzene	ND	20 µg/Kg			

ND = Not Detected

Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer  
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / info@alpha-analytical.com

4/22/05

Report Date

Page 1 of 1



# Alpha Analytical, Inc.

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

## ANALYTICAL REPORT

Battelle Memorial Institute  
505 King Avenue  
Columbus, OH 43201  
Job#: G486090-T3

Attn: David Conner  
Phone: (626) 345-0598  
Fax: (760) 385-4613

Alpha Analytical Number: BMI05042145-04A  
Client I.D. Number: Trip Blank

Sampled: 04/20/05  
Received: 04/21/05  
Analyzed: 04/21/05

### Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Chloromethane	ND	2.0 µg/L	26 Ethylbenzene	ND	0.50 µg/L
2 Vinyl chloride	ND	1.0 µg/L	27 m,p-Xylene	ND	0.50 µg/L
3 Chloroethane	ND	1.0 µg/L	28 Bromoform	ND	1.0 µg/L
4 Bromomethane	ND	2.0 µg/L	29 o-Xylene	ND	0.50 µg/L
5 Trichlorofluoromethane	ND	1.0 µg/L	30 1,1,2,2-Tetrachloroethane	ND	1.0 µg/L
6 1,1-Dichloroethene	ND	1.0 µg/L	31 1,3-Dichlorobenzene	ND	1.0 µg/L
7 Dichloromethane	ND	2.0 µg/L	32 1,4-Dichlorobenzene	ND	1.0 µg/L
8 trans-1,2-Dichloroethene	ND	1.0 µg/L	33 1,2-Dichlorobenzene	ND	1.0 µg/L
9 1,1-Dichloroethane	ND	1.0 µg/L	34 Surr: 1,2-Dichloroethane-d4	105	%REC
10 cis-1,2-Dichloroethene	ND	1.0 µg/L	35 Surr: Toluene-d8	99	%REC
11 Chloroform	ND	1.0 µg/L	36 Surr: 4-Bromofluorobenzene	111	%REC
12 1,2-Dichloroethane	ND	1.0 µg/L			
13 1,1,1-Trichloroethane	ND	1.0 µg/L			
14 Carbon tetrachloride	ND	1.0 µg/L			
15 Benzene	ND	0.50 µg/L			
16 1,2-Dichloropropane	ND	1.0 µg/L			
17 Trichloroethene	ND	1.0 µg/L			
18 Bromodichloromethane	ND	1.0 µg/L			
19 cis-1,3-Dichloropropene	ND	1.0 µg/L			
20 trans-1,3-Dichloropropene	ND	1.0 µg/L			
21 1,1,2-Trichloroethane	ND	1.0 µg/L			
22 Toluene	ND	0.50 µg/L			
23 Dibromochloromethane	ND	1.0 µg/L			
24 Tetrachloroethene	ND	1.0 µg/L			
25 Chlorobenzene	ND	1.0 µg/L			

ND = Not Detected

Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer  
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / info@alpha-analytical.com

4/22/05

Report Date

Page 1 of 1



# Alpha Analytical, Inc.

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

## ANALYTICAL REPORT

Battelle Memorial Institute  
505 King Avenue  
Columbus, OH 43201  
Job#: G486090-T3

Attn: David Conner  
Phone: (626) 345-0598  
Fax: (760) 385-4613

Alpha Analytical Number: BMI05042145-01A  
Client I.D. Number: R2135-4-20-05

Sampled: 04/20/05  
Received: 04/21/05  
Analyzed: 04/21/05

### Semivolatile Organics by GC/MS EPA Method SW8270C

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Phenol	ND	660 µg/Kg	36 Hexachlorobenzene	ND	660 µg/Kg
2 2-Chlorophenol	ND	660 µg/Kg	37 Pentachlorophenol	ND	3,300 µg/Kg
3 Bis(2-chloroethyl)ether	ND	660 µg/Kg	38 Phenanthrene	ND	660 µg/Kg
4 1,3-Dichlorobenzene	ND	1,300 µg/Kg	39 Anthracene	ND	660 µg/Kg
5 1,4-Dichlorobenzene	ND	1,300 µg/Kg	40 Di-n-butyl phthalate	ND	3,300 µg/Kg
6 1,2-Dichlorobenzene	ND	1,300 µg/Kg	41 Fluoranthene	ND	660 µg/Kg
7 Bis(2-chloroisopropyl)ether	ND	660 µg/Kg	42 Pyrene	ND	660 µg/Kg
8 N-Nitrosodi-n-propylamine	ND	660 µg/Kg	43 Butyl benzyl phthalate	ND	1,300 µg/Kg
9 Hexachloroethane	ND	1,300 µg/Kg	44 Benzo(a)anthracene	ND	660 µg/Kg
10 Nitrobenzene	ND	660 µg/Kg	45 3,3'-Dichlorobenzidine	ND	1,300 µg/Kg
11 Isophorone	ND	660 µg/Kg	46 Chrysene	ND	660 µg/Kg
12 2-Nitrophenol	ND	660 µg/Kg	47 Bis(2-ethylhexyl)phthalate	ND	3,300 µg/Kg
13 2,4-Dimethylphenol	ND	660 µg/Kg	48 Di-n-octyl phthalate	ND	1,300 µg/Kg
14 Bis(2-chloroethoxy)methane	ND	660 µg/Kg	49 Benzo(b)fluoranthene	ND	660 µg/Kg
15 2,4-Dichlorophenol	ND	660 µg/Kg	50 Benzo(k)fluoranthene	ND	660 µg/Kg
16 1,2,4-Trichlorobenzene	ND	660 µg/Kg	51 Benzo(a)pyrene	ND	660 µg/Kg
17 Naphthalene	ND	660 µg/Kg	52 Indeno(1,2,3-cd)pyrene	ND	660 µg/Kg
18 Hexachlorobutadiene	ND	1,300 µg/Kg	53 Dibenz(a,h)anthracene	ND	660 µg/Kg
19 4-Chloro-3-methylphenol	ND	1,300 µg/Kg	54 Benzo(g,h,i)perylene	ND	660 µg/Kg
20 Hexachlorocyclopentadiene	ND	6,600 µg/Kg	55 Surr: 2-Fluorophenol	66	%REC
21 2,4,6-Trichlorophenol	ND	660 µg/Kg	56 Surr: Phenol-d5	66	%REC
22 2-Chloronaphthalene	ND	660 µg/Kg	57 Surr: Nitrobenzene-d5	66	%REC
23 Dimethyl phthalate	ND	660 µg/Kg	58 Surr: 2-Fluorobiphenyl	67	%REC
24 Acenaphthylene	ND	660 µg/Kg	59 Surr: 2,4,6-Tribromophenol	51	%REC
25 2,6-Dinitrotoluene	ND	660 µg/Kg	60 Surr: 4-Terphenyl-d14	65	%REC
26 Acenaphthene	ND	660 µg/Kg			
27 2,4-Dinitrophenol	ND	6,600 µg/Kg			
28 4-Nitrophenol	ND	3,300 µg/Kg			
29 2,4-Dinitrotoluene	ND	660 µg/Kg			
30 Diethyl phthalate	ND	660 µg/Kg			
31 Fluorene	ND	660 µg/Kg			
32 4-Chlorophenyl phenyl ether	ND	660 µg/Kg			
33 4,6-Dinitro-2-methylphenol	ND	6,600 µg/Kg			
34 N-Nitrosodiphenylamine	ND	660 µg/Kg			
35 4-Bromophenyl phenyl ether	ND	660 µg/Kg			

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) 281-4848 / info@alpha-analytical.com

4/22/05

Report Date

Page 1 of 1





# Alpha Analytical, Inc.

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

## ANALYTICAL REPORT

Battelle Memorial Institute  
505 King Avenue  
Columbus, OH 43201  
Job#: G486090-T3

Attn: David Conner  
Phone: (626) 345-0598  
Fax: (760) 385-4613

Alpha Analytical Number: BMI05042145-02A  
Client I.D. Number: R2034-4-20-05

Sampled: 04/20/05  
Received: 04/21/05  
Analyzed: 04/21/05

### Semivolatile Organics by GC/MS EPA Method SW8270C

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Phenol	ND	660 µg/Kg	36 Hexachlorobenzene	ND	660 µg/Kg
2 2-Chlorophenol	ND	660 µg/Kg	37 Pentachlorophenol	ND	3,300 µg/Kg
3 Bis(2-chloroethyl)ether	ND	660 µg/Kg	38 Phenanthrene	ND	660 µg/Kg
4 1,3-Dichlorobenzene	ND	1,300 µg/Kg	39 Anthracene	ND	660 µg/Kg
5 1,4-Dichlorobenzene	ND	1,300 µg/Kg	40 Di-n-butyl phthalate	ND	3,300 µg/Kg
6 1,2-Dichlorobenzene	ND	1,300 µg/Kg	41 Fluoranthene	ND	660 µg/Kg
7 Bis(2-chloroisopropyl)ether	ND	660 µg/Kg	42 Pyrene	ND	660 µg/Kg
8 N-Nitrosodi-n-propylamine	ND	660 µg/Kg	43 Butyl benzyl phthalate	ND	1,300 µg/Kg
9 Hexachloroethane	ND	1,300 µg/Kg	44 Benzo(a)anthracene	ND	660 µg/Kg
10 Nitrobenzene	ND	660 µg/Kg	45 3,3'-Dichlorobenzidine	ND	1,300 µg/Kg
11 Isophorone	ND	660 µg/Kg	46 Chrysene	ND	660 µg/Kg
12 2-Nitrophenol	ND	660 µg/Kg	47 Bis(2-ethylhexyl)phthalate	ND	3,300 µg/Kg
13 2,4-Dimethylphenol	ND	660 µg/Kg	48 Di-n-octyl phthalate	ND	1,300 µg/Kg
14 Bis(2-chloroethoxy)methane	ND	660 µg/Kg	49 Benzo(b)fluoranthene	ND	660 µg/Kg
15 2,4-Dichlorophenol	ND	660 µg/Kg	50 Benzo(k)fluoranthene	ND	660 µg/Kg
16 1,2,4-Trichlorobenzene	ND	660 µg/Kg	51 Benzo(a)pyrene	ND	660 µg/Kg
17 Naphthalene	ND	660 µg/Kg	52 Indeno(1,2,3-cd)pyrene	ND	660 µg/Kg
18 Hexachlorobutadiene	ND	1,300 µg/Kg	53 Dibenzo(a,h)anthracene	ND	660 µg/Kg
19 4-Chloro-3-methylphenol	ND	1,300 µg/Kg	54 Benzo(g,h,i)perylene	ND	660 µg/Kg
20 Hexachlorocyclopentadiene	ND	6,600 µg/Kg	55 Surr: 2-Fluorophenol	1.8 S53	%REC
21 2,4,6-Trichlorophenol	ND	660 µg/Kg	56 Surr: Phenol-d5	23 S53	%REC
22 2-Chloronaphthalene	ND	660 µg/Kg	57 Surr: Nitrobenzene-d5	43 S53	%REC
23 Dimethyl phthalate	ND	660 µg/Kg	58 Surr: 2-Fluorobiphenyl	43 S53	%REC
24 Acenaphthylene	ND	660 µg/Kg	59 Surr: 2,4,6-Tribromophenol	1.1 S53	%REC
25 2,6-Dinitrotoluene	ND	660 µg/Kg	60 Surr: 4-Terphenyl-d14	41 S53	%REC
26 Acenaphthene	ND	660 µg/Kg			
27 2,4-Dinitrophenol	ND	6,600 µg/Kg			
28 4-Nitrophenol	ND	3,300 µg/Kg			
29 2,4-Dinitrotoluene	ND	660 µg/Kg			
30 Diethyl phthalate	ND	660 µg/Kg			
31 Fluorene	ND	660 µg/Kg			
32 4-Chlorophenyl phenyl ether	ND	660 µg/Kg			
33 4,6-Dinitro-2-methylphenol	ND	6,600 µg/Kg			
34 N-Nitrosodiphenylamine	ND	660 µg/Kg			
35 4-Bromophenyl phenyl ether	ND	660 µg/Kg			

S53=Surrogate recovery was below laboratory acceptance limits. Probable matrix effect.

ND = Not Detected

Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer  
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / info@alpha-analytical.com

4/22/05

Report Date

Page 1 of 1



# Alpha Analytical, Inc.

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

## ANALYTICAL REPORT

Battelle Memorial Institute  
505 King Avenue  
Columbus, OH 43201  
Job#: G486090-T3

Attn: David Conner  
Phone: (626) 345-0598  
Fax: (760) 385-4613

Alpha Analytical Number: BMI05042145-03A  
Client I.D. Number: R2009RT-4-20-05

Sampled: 04/20/05  
Received: 04/21/05  
Analyzed: 04/21/05

### Semivolatile Organics by GC/MS EPA Method SW8270C

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Phenol	ND	660 µg/Kg	36 Hexachlorobenzene	ND	660 µg/Kg
2 2-Chlorophenol	ND	660 µg/Kg	37 Pentachlorophenol	ND	3,300 µg/Kg
3 Bis(2-chloroethyl)ether	ND	660 µg/Kg	38 Phenanthrene	ND	660 µg/Kg
4 1,3-Dichlorobenzene	ND	1,300 µg/Kg	39 Anthracene	ND	660 µg/Kg
5 1,4-Dichlorobenzene	ND	1,300 µg/Kg	40 Di-n-butyl phthalate	ND	3,300 µg/Kg
6 1,2-Dichlorobenzene	ND	1,300 µg/Kg	41 Fluoranthene	ND	660 µg/Kg
7 Bis(2-chloroisopropyl)ether	ND	660 µg/Kg	42 Pyrene	ND	660 µg/Kg
8 N-Nitrosodi-n-propylamine	ND	660 µg/Kg	43 Butyl benzyl phthalate	ND	1,300 µg/Kg
9 Hexachloroethane	ND	1,300 µg/Kg	44 Benzo(a)anthracene	ND	660 µg/Kg
10 Nitrobenzene	ND	660 µg/Kg	45 3,3'-Dichlorobenzidine	ND	1,300 µg/Kg
11 Isophorone	ND	660 µg/Kg	46 Chrysene	ND	660 µg/Kg
12 2-Nitrophenol	ND	660 µg/Kg	47 Bis(2-ethylhexyl)phthalate	ND	3,300 µg/Kg
13 2,4-Dimethylphenol	ND	660 µg/Kg	48 Di-n-octyl phthalate	ND	1,300 µg/Kg
14 Bis(2-chloroethoxy)methane	ND	660 µg/Kg	49 Benzo(b)fluoranthene	ND	660 µg/Kg
15 2,4-Dichlorophenol	ND	660 µg/Kg	50 Benzo(k)fluoranthene	ND	660 µg/Kg
16 1,2,4-Trichlorobenzene	ND	660 µg/Kg	51 Benzo(a)pyrene	ND	660 µg/Kg
17 Naphthalene	ND	660 µg/Kg	52 Indeno(1,2,3-cd)pyrene	ND	660 µg/Kg
18 Hexachlorobutadiene	ND	1,300 µg/Kg	53 Dibenz(a,h)anthracene	ND	660 µg/Kg
19 4-Chloro-3-methylphenol	ND	1,300 µg/Kg	54 Benzo(g,h,i)perylene	ND	660 µg/Kg
20 Hexachlorocyclopentadiene	ND	6,600 µg/Kg	55 Surr: 2-Fluorophenol	53	%REC
21 2,4,6-Trichlorophenol	ND	660 µg/Kg	56 Surr: Phenol-d5	52 S53	%REC
22 2-Chloronaphthalene	ND	660 µg/Kg	57 Surr: Nitrobenzene-d5	49 S53	%REC
23 Dimethyl phthalate	ND	660 µg/Kg	58 Surr: 2-Fluorobiphenyl	51 S53	%REC
24 Acenaphthylene	ND	660 µg/Kg	59 Surr: 2,4,6-Tribromophenol	39	%REC
25 2,6-Dinitrotoluene	ND	660 µg/Kg	60 Surr: 4-Terphenyl-d14	48 S53	%REC
26 Acenaphthene	ND	660 µg/Kg			
27 2,4-Dinitrophenol	ND	6,600 µg/Kg			
28 4-Nitrophenol	ND	3,300 µg/Kg			
29 2,4-Dinitrotoluene	ND	660 µg/Kg			
30 Diethyl phthalate	ND	660 µg/Kg			
31 Fluorene	ND	660 µg/Kg			
32 4-Chlorophenyl phenyl ether	ND	660 µg/Kg			
33 4,6-Dinitro-2-methylphenol	ND	6,600 µg/Kg			
34 N-Nitrosodiphenylamine	ND	660 µg/Kg			
35 4-Bromophenyl phenyl ether	ND	660 µg/Kg			

S53=Surrogate recovery was below laboratory acceptance limits. Probable matrix effect.

ND = Not Detected

Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer  
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / info@alpha-analytical.com

4/22/05

Report Date

Page 1 of 1



# Alpha Analytical, Inc.

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

## ANALYTICAL REPORT

Battelle Memorial Institute  
505 King Avenue  
Columbus, OH 43201

Attn: David Conner  
Phone: (626) 345-0598  
Fax: (760) 385-4613  
Date Received : 04/21/05

Job#: G486090-T3

Metals by ICPMS  
EPA Method SW6020 / SW6020A

Parameter	Concentration	Reporting Limit	Date Sampled	Date Analyzed
Client ID :	<b>R2135-4-20-05</b>			
Lab ID :	BMI05042145-01A			
Beryllium (Be)	ND	1.0 mg/Kg	04/20/05	04/22/05
Chromium (Cr)	5.4	1.0 mg/Kg	04/20/05	04/22/05
Nickel (Ni)	2.8	1.0 mg/Kg	04/20/05	04/22/05
Copper (Cu)	5.0	2.0 mg/Kg	04/20/05	04/22/05
Zinc (Zn)	ND	20 mg/Kg	04/20/05	04/22/05
Arsenic (As)	2.4	1.0 mg/Kg	04/20/05	04/22/05
Selenium (Se)	ND	1.0 mg/Kg	04/20/05	04/22/05
Strontium (Sr)	ND	10 mg/Kg	04/20/05	04/22/05
Silver (Ag)	ND	1.0 mg/Kg	04/20/05	04/22/05
Cadmium (Cd)	ND	1.0 mg/Kg	04/20/05	04/22/05
Antimony (Sb)	ND	1.0 mg/Kg	04/20/05	04/22/05
Mercury (Hg)	ND	0.20 mg/Kg	04/20/05	04/22/05
Thallium (Tl)	ND	1.0 mg/Kg	04/20/05	04/22/05
Lead (Pb)	1.9	1.0 mg/Kg	04/20/05	04/22/05
Client ID :	<b>R2034-4-20-05</b>			
Lab ID :	BMI05042145-02A			
Beryllium (Be)	ND	1.0 mg/Kg	04/20/05	04/22/05
Chromium (Cr)	4.5	1.0 mg/Kg	04/20/05	04/22/05
Nickel (Ni)	3.4	1.0 mg/Kg	04/20/05	04/22/05
Copper (Cu)	5.9	2.0 mg/Kg	04/20/05	04/22/05
Zinc (Zn)	ND	20 mg/Kg	04/20/05	04/22/05
Arsenic (As)	3.2	1.0 mg/Kg	04/20/05	04/22/05
Selenium (Se)	ND	1.0 mg/Kg	04/20/05	04/22/05
Strontium (Sr)	ND	10 mg/Kg	04/20/05	04/22/05
Silver (Ag)	ND	1.0 mg/Kg	04/20/05	04/22/05
Cadmium (Cd)	ND	1.0 mg/Kg	04/20/05	04/22/05
Antimony (Sb)	ND	1.0 mg/Kg	04/20/05	04/22/05
Mercury (Hg)	ND	0.20 mg/Kg	04/20/05	04/22/05
Thallium (Tl)	ND	1.0 mg/Kg	04/20/05	04/22/05
Lead (Pb)	3.1	1.0 mg/Kg	04/20/05	04/22/05



# Alpha Analytical, Inc.

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

Client ID : **R2009RT-4-20-05**

Lab ID : BMI05042145-03A

Beryllium (Be)	ND	1.0 mg/Kg	04/20/05	04/22/05
Chromium (Cr)	4.3	1.0 mg/Kg	04/20/05	04/22/05
Nickel (Ni)	2.9	1.0 mg/Kg	04/20/05	04/22/05
Copper (Cu)	4.9	2.0 mg/Kg	04/20/05	04/22/05
Zinc (Zn)	20	20 mg/Kg	04/20/05	04/22/05
Arsenic (As)	1.1	1.0 mg/Kg	04/20/05	04/22/05
Selenium (Se)	ND	1.0 mg/Kg	04/20/05	04/22/05
Strontium (Sr)	ND	10 mg/Kg	04/20/05	04/22/05
Silver (Ag)	ND	1.0 mg/Kg	04/20/05	04/22/05
Cadmium (Cd)	ND	1.0 mg/Kg	04/20/05	04/22/05
Antimony (Sb)	ND	1.0 mg/Kg	04/20/05	04/22/05
Mercury (Hg)	ND	0.20 mg/Kg	04/20/05	04/22/05
Thallium (Tl)	ND	1.0 mg/Kg	04/20/05	04/22/05
Lead (Pb)	1.8	1.0 mg/Kg	04/20/05	04/22/05

ND = Not Detected

Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer  
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / info@alpha-analytical.com

4/22/05

**Report Date**

# CALIFORNIA LABORATORY SERVICES

3249 Fitzgerald Road Rancho Cordova, CA 95742

April 27, 2005

**CLS Work Order #: COD0781**  
**COC #: BMI05042145**

E. Fruciano  
Alpha Analytical, Inc.-Sparks  
255 Glendale Ave.; Suite 21  
Sparks, NV 89431

**Project Name: BMI05042145**

Enclosed are the results of analyses for samples received by the laboratory on 04/22/05 12:30. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. I certify that the results are in compliance both technically and for completeness.

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,

James Liang, Ph.D.  
Laboratory Director

CA DOHS ELAP Accreditation/Registration number 1233

# CALIFORNIA LABORATORY SERVICES

04/27/05 09:25

Alpha Analytical, Inc.-Sparks  
255 Glendale Ave.; Suite 21  
Sparks NV, 89431

Project: BMI05042145  
Project Number: BMI05042145  
Project Manager: E. Fruciano

**CLS Work Order #: COD0781**  
COC #: BMI05042145

## Conventional Chemistry Parameters by APHA/EPA Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>BMI05042145-01A R2135-4-20-05 (COD0781-01) Soil Sampled: 04/20/05 09:45 Received: 04/22/05 12:30</b>									
Hexavalent Chromium	ND	10	µg/kg	1	CO03086	04/25/05	04/25/05	EPA 7199	
<b>BMI05042145-03A R2009RT-4-20-05 (COD0781-02) Soil Sampled: 04/20/05 10:15 Received: 04/22/05 12:30</b>									
Hexavalent Chromium	ND	10	µg/kg	1	CO03086	04/25/05	04/25/05	EPA 7199	

CA DOHS ELAP Accreditation/Registration Number 1233

3249 Fitzgerald Road Rancho Cordova, CA 95742    [www.californialab.com](http://www.californialab.com)    916-638-7301    Fax: 916-638-4510

# CALIFORNIA LABORATORY SERVICES

04/27/05 09:25

Alpha Analytical, Inc.-Sparks 255 Glendale Ave.; Suite 21 Sparks NV, 89431	Project: BMI05042145 Project Number: BMI05042145 Project Manager: E. Fruciano	CLS Work Order #: COD0781 COC #: BMI05042145
--	---	---

## Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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### Batch CO03086 - General Prep

<b>Blank (CO03086-BLK1)</b>				Prepared & Analyzed: 04/25/05						
Hexavalent Chromium	ND	10	µg/kg							
<b>LCS (CO03086-BS1)</b>				Prepared & Analyzed: 04/25/05						
Hexavalent Chromium	49.0	10	µg/kg	50.0		98.0	80-120			
<b>LCS Dup (CO03086-BSD1)</b>				Prepared & Analyzed: 04/25/05						
Hexavalent Chromium	52.8	10	µg/kg	50.0		106	80-120	7.47	20	
<b>Matrix Spike (CO03086-MS1)</b>				Prepared & Analyzed: 04/25/05						
Hexavalent Chromium	51.0	10	µg/kg	50.0	ND	102	75-125			
<b>Matrix Spike Dup (CO03086-MSD1)</b>				Prepared & Analyzed: 04/25/05						
Hexavalent Chromium	52.5	10	µg/kg	50.0	ND	105	75-125	2.90	25	

CA DOHS ELAP Accreditation/Registration Number 1233

3249 Fitzgerald Road Rancho Cordova, CA 95742    www.californialab.com    916-638-7301    Fax: 916-638-4510

# CALIFORNIA LABORATORY SERVICES

04/27/05 09:25

Alpha Analytical, Inc.-Sparks  
255 Glendale Ave.; Suite 21  
Sparks NV, 89431

Project: BMI05042145  
Project Number: BMI05042145  
Project Manager: E. Fruciano

**CLS Work Order #: COD0781**  
COC #: BMI05042145

## Notes and Definitions

DET Analyte DETECTED  
ND Analyte NOT DETECTED at or above the reporting limit  
NR Not Reported  
dry Sample results reported on a dry weight basis  
RPD Relative Percent Difference



# CALIFORNIA LABORATORY SERVICES

3249 Fitzgerald Road Rancho Cordova, CA 95742

April 29, 2005

**CLS Work Order #: COD0840**  
**COC #: BMI05042145**

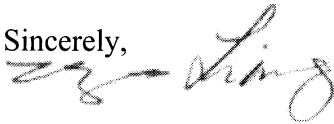
E. Fruciano  
Alpha Analytical, Inc.-Sparks  
255 Glendale Ave.; Suite 21  
Sparks, NV 89431

**Project Name: BMI05042145**

Enclosed are the results of analyses for samples received by the laboratory on 04/26/05 09:30. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. I certify that the results are in compliance both technically and for completeness.

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,



James Liang, Ph.D.  
Laboratory Director

CA DOHS ELAP Accreditation/Registration number 1233

# CALIFORNIA LABORATORY SERVICES

04/29/05 14:32

Alpha Analytical, Inc.-Sparks  
255 Glendale Ave.; Suite 21  
Sparks, NV 89431

Project: BMI05042145  
Project Number: BMI05042145  
Project Manager: E. Fruciano

**CLS Work Order #: COD0840**  
COC #: BMI05042145

## Conventional Chemistry Parameters by APHA/EPA Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>BMI05042145-02A R2034-4-20-05 (COD0840-01) Soil Sampled: 04/20/05 10:00 Received: 04/26/05 09:30</b>									
Hexavalent Chromium	270	10	µg/kg	1	CO03153	04/26/05	04/26/05	EPA 7199	

CA DOHS ELAP Accreditation/Registration Number 1233

# CALIFORNIA LABORATORY SERVICES

04/29/05 14:32

Alpha Analytical, Inc.-Sparks 255 Glendale Ave.; Suite 21 Sparks, NV 89431	Project: BMI05042145 Project Number: BMI05042145 Project Manager: E. Fruciano	CLS Work Order #: COD0840 COC #: BMI05042145
--	---	---

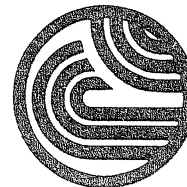
## Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch CO03153 - General Prep</b>										
<b>Blank (CO03153-BLK1)</b>										
Hexavalent Chromium	ND	10	µg/kg							Prepared & Analyzed: 04/26/05
<b>LCS (CO03153-BS1)</b>										
Hexavalent Chromium	53.7	10	µg/kg	50.0		107	80-120			Prepared & Analyzed: 04/26/05
<b>LCS Dup (CO03153-BSD1)</b>										
Hexavalent Chromium	54.7	10	µg/kg	50.0		109	80-120	1.85	20	Prepared & Analyzed: 04/26/05
<b>Matrix Spike (CO03153-MS1)</b>										
Hexavalent Chromium	280	10	µg/kg	50.0	270	20.0	75-125			Source: COD0840-01 Prepared & Analyzed: 04/26/05 QM-05
<b>Matrix Spike Dup (CO03153-MSD1)</b>										
Hexavalent Chromium	277	10	µg/kg	50.0	270	14.0	75-125	1.08	25	Source: COD0840-01 Prepared & Analyzed: 04/26/05 QM-05

CA DOHS ELAP Accreditation/Registration Number 1233

# Laboratory Report

## Report ID: 67683



Sierra  
Environmental  
Monitoring, Inc.

Alpha Analytical

255 Glendale Avenue Suite 21  
Sparks, NV 89431

**Date:** 4/29/2005

**Client:** ALP-855

**Taken by:** Client

**PO #:**

Dear Alpha Analytical,

It is the policy of Sierra Environmental Monitoring, Inc to strictly adhere to a comprehensive Quality Assurance Plan that insures the data presented in this report are both accurate and precise. Sierra Environmental Monitoring, Inc. maintains accreditation in the State of Nevada (NV-15) and the State of California (ELAP 2526).

The data presented in this report were obtained from the analysis of samples received under a chain of custody. Unless otherwise noted below, samples were received in good condition, properly preserved and within the hold time for the requested analyses. Any anomalies associated with the analysis of the samples have been flagged with appropriate explanation in the Analysis Report section of this Laboratory Report.

### General Comments:

- There are no general comments for this report.

### Individual Sample Comments:

- S200504-1104 - Total CN- value is on wet weight basis
- S200504-1105 - Total CN- value is on wet weight basis
- S200504-1106 - Total CN- value is on wet weight basis

**Approved By:**

A handwritten signature in black ink, appearing to read "John Kobza", is written over a horizontal line.

Sierra Environmental Monitoring, Inc.

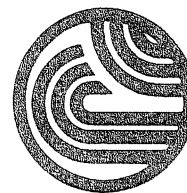
**Date:**

4/29/2005

**This report is applicable only to the sample received by the laboratory. The liability of the laboratory is limited to the amount paid for this report. This report is for the exclusive use of the client to whom it is addressed and upon the condition that the client assumes all liability for the further distribution of the report or its contents.**

# Laboratory Report

## Report ID: 67683



**Sierra  
Environmental  
Monitoring, Inc.**

Alpha Analytical  
  
255 Glendale Avenue Suite 21  
Sparks, NV 89431

**Date:** 4/29/2005  
**Client:** ALP-855  
**Taken by:** Client  
**PO #:**

### *Analysis Report*

Sample ID:	Customer Sample ID	Date Sampled	Time Sampled	Date Received			
S200504-1104	BMI05042145-01 - R2135-4-20-05	4/20/2005	9:45 AM	4/21/2005			
Parameter	Method	Result	Units	Reporting Limit	Analyst	Date Analyzed	Data Flag
Cyanide, Total	SM 4500 CN C	<0.5	mg/Kg	0.5	Hellmann	4/21/2005	

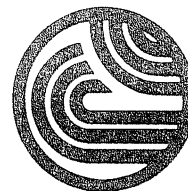
Sample ID:	Customer Sample ID	Date Sampled	Time Sampled	Date Received			
S200504-1105	BMI05042145-02 - R2034-4-20-05	4/20/2005	10:00 AM	4/21/2005			
Parameter	Method	Result	Units	Reporting Limit	Analyst	Date Analyzed	Data Flag
Cyanide, Total	SM 4500 CN C	<0.5	mg/Kg	0.5	Hellmann	4/21/2005	

Sample ID:	Customer Sample ID	Date Sampled	Time Sampled	Date Received			
S200504-1106	BMI05042145-03 - R2009-4-20-05	4/20/2005	10:15 AM	4/21/2005			
Parameter	Method	Result	Units	Reporting Limit	Analyst	Date Analyzed	Data Flag
Cyanide, Total	SM 4500 CN C	<0.5	mg/Kg	0.5	Hellmann	4/21/2005	

**Data Flag Legend:**

# Laboratory Report

## Report ID: 67683



Sierra  
Environmental  
Monitoring, Inc.

Alpha Analytical  
  
255 Glendale Avenue Suite 21  
Sparks, NV 89431

Date: 4/29/2005  
Client: ALP-855  
Taken by: Client  
PO #:

### *Quality Control Report*

<i>Parameter</i>	<i>LCS, % Recovery</i>	<i>MS, % Recovery</i>	<i>MSD, % Recovery</i>	<i>RPD, %</i>	<i>Method Blank</i>
Cyanide, Total	97.0				<0.005 mg/Kg

**Legend:** *LCS- Laboratory Control Standard*      *MS- Matrix Spike*      *MSD- Matrix Spike Duplicate*  
*RPD- Relative Percent Difference*

Billing Information :  
 Battelle  
 505 King Avenue  
 Columbus, OH 43201

# CHAIN-OF-CUSTODY RECORD

## Alpha Analytical, Inc.

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

**RUSH!**  
 CA Page: 1 of 1

WorkOrder : BMI05050405

Report Due By : 5:00 PM On : 05-May-05

*Rest due 05/18/05*

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

David Conner  
 TEL : (626) 345-0598 x  
 FAX : (760) 385-4613  
 EMail connerd@battelle.org

EDD Required : Yes

Sampled by : D Conner

Report Attention : David Conner

Job : G486111-T3

Cooler Temp : 4 °C

Date Printed:

CC Report :

PO : 187831

Client's COC # : 08917

04-May-05

QC Level : DS3 = DOD QC Required : Final Rpt, MBLK, LCS, MS/MSD With Surrogates

Alpha Sample ID	Client Sample ID	Collection Matrix	Collection Date	No. of Bottles			314_W	524_DW	BNA_W	Requested Tests					TPH/E_W	Sample Remarks
				ORG	SUB	TAT				PWS #	CONDUCTIVITY	CYANIDE_TOTAT	METALS_A_Q	METALS_C_R6_W		
BMI05050405-01A	BKRV-025697-5-3-05	AQ	05/03/05 15:45	13	0	1	Perchlorate		8270	Perchlorate	Cyanide-SEM	Special List	Cr6	TPH/E_C	Cyanide subbed to SEM.	
BMI05050405-02A	Water Source-5-3-05	AQ	05/03/05 16:15	6	0	10	Perchlorate	524		Perchlorate						
BMI05050405-03A	Trip Blank	AQ	05/03/05 00:00	1	0	10									Reno TB 04/01/05	

Comments: No security seals-frozen ice. 24hr TAT on sample 01A, std TAT on rest due 05/18/05. Samples should be used as the control spike sample if possible (I.E.: MS/MSD).

Received by:	<i>Stacy M Strock</i> Signature	<i>Stacy Strock</i> Print Name	Alpha Analytical, Inc. Company	5/4/05 11:00 Date/Time
--------------	------------------------------------	-----------------------------------	-----------------------------------	---------------------------

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 :**

Battelle  
505 King Avenue

Columbus, OH 43201

# CHAIN-OF-CUSTODY RECORD

## Alpha Analytical, Inc.

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

TEL: (775) 355-1044 FAX: (775) 355-0406

# CA

### WorkOrder : BMI05050405

**Report Due By : 5:00 PM On : 05-May-05**

*Rest due : 05/18/05*

**Client:**

Battelle Memorial Institute  
505 King Avenue

Columbus, OH 43201

David Conner

TEL : (626) 345-0598 x

FAX : (760) 385-4613

EEmail connerd@battelle.org

EDD Required : Yes

Sampled by : D Conner

**Report Attention :** David Conner

Job : G486111-T3

Cooler Temp : 4 °C

Date Printed:

**CC Report :**

PO : 187831

Client's COC # : 08917

**04-May-05**

QC Level : DS3 = DOD QC Required : Final Rpt, MBLK, LCS, MS/MSD With Surrogates

Alpha Sample ID	Client Sample ID	Collection Matrix	Collection Date	No. of Bottles			VOC_W	Requested Tests	Sample Remarks
				ORG	SUB	TAT			
BMI05050405-01A	BKRV-025697-5-3-05	AQ	05/03/05 15:45	13	0	1	8260_Cs		Cyanide subbed to SEM.
BMI05050405-02A	Water Source-5-3-05	AQ	05/03/05 16:15	6	0	10			
BMI05050405-03A	Trip Blank	AQ	05/03/05 00:00	1	0	10	8260_Cs		Reno TB 04/01/05

**Comments:** No security seals-frozen ice. 24hr TAT on sample 01A, std TAT on rest due 05/18/05. Samples should be used as the control spike sample if possible (I.E.: MS/MSD).

Signature

Print Name

Company

Date/Time

Received by:

Alpha Analytical, Inc.

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report.

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

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



**Billing Information:**

Name Jerry Tompkins  
 Address 505 King Ave.  
 City, State, Zip Columbus, OH 43201  
 Phone Number 614-424-4849 Fax 614-458-4849



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

**Samples Collected From Which State?**

AZ  CA  NV  WA   
 ID  OR  OTHER  Page # 1 of 1

Client Name		P.O. #		Job #		Analyses Required										08917					
Battelle		187831		G486111-T3		VOCs (8260B) SVOCs (8270C) Title 26 Metals Hex. Chrome + Strontium Lead + Cadmium Perchlorate (3140) Cyanide (4500CN) TPH-E Jet/Direct Dil (6015B) VOCs (524.2)										Required QC Level?					
Address 505 King Ave.		E-Mail Address connerd@battelle.org		Phone # 619-726-7311												Fax # 619-260-0882		I	II	III	IV
City, State, Zip Columbus, OH 43201		Report Attention D. Conner		Total and type of containers ** See below		EDD / EDF? YES	NO	Global ID #	REMARKS												
Time Sampled	Date Sampled	Matrix* See Key Below	Office Use Only	Sampled by	Lab ID Number	Sample Description	TAT	Field Filtered													
15:45	5-3-05	AQ		D. Conner	6M10SD50405-01	BKRU-025697-5-3-05	24	*	X	X	X	X	X	X	X						
16:15	5-3-05	AQ			-02	WATER SOURCE - 5-3-05		*				X				X					Standard TAT
					-03	Tip Blank		IVDA	X												

**ADDITIONAL INSTRUCTIONS:** \*VOCs: 3 VOA SW/HCL; SVOCs: 1-L Amber non-pres; Title 26 Metals plus Hex. Chrome + Strontium; 1-L NaOH; Perchlorate: 3-VOAs non-pres; Cyanide: 500 mL Poly HNO3; TPH-E: 3 VOA non-pres; VOCs (524.2): 3 VOA 2 wraps HCL.

Signature	Print Name	Company	Date	Time
	David J. Conner	Battelle	5-3-05	16:30
	Stacy Stock	Alpha	5/4/05	11:00
Relinquished by				
Received by				
Relinquished by				
Received by				

\*Key: AQ - Aqueous SO - Soil WA - Waste OT - Other \*\*: 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

## ANALYTICAL REPORT

Battelle Memorial Institute  
505 King Avenue  
Columbus, OH 43201  
Job#: G486111-T3

Attn: David Conner  
Phone: (626) 345-0598  
Fax: (760) 385-4613

Alpha Analytical Number: BMI05050405-03A  
Client I.D. Number: Trip Blank

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

### Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Chloromethane	ND	2.0 µg/L	26 Ethylbenzene	ND	0.50 µg/L
2 Vinyl chloride	ND	1.0 µg/L	27 m,p-Xylene	ND	0.50 µg/L
3 Chloroethane	ND	1.0 µg/L	28 Bromoform	ND	1.0 µg/L
4 Bromomethane	ND	2.0 µg/L	29 o-Xylene	ND	0.50 µg/L
5 Trichlorofluoromethane	ND	1.0 µg/L	30 1,1,2,2-Tetrachloroethane	ND	1.0 µg/L
6 1,1-Dichloroethene	ND	1.0 µg/L	31 1,3-Dichlorobenzene	ND	1.0 µg/L
7 Dichloromethane	ND	2.0 µg/L	32 1,4-Dichlorobenzene	ND	1.0 µg/L
8 trans-1,2-Dichloroethene	ND	1.0 µg/L	33 1,2-Dichlorobenzene	ND	1.0 µg/L
9 1,1-Dichloroethane	ND	1.0 µg/L	34 Surr: 1,2-Dichloroethane-d4	102	%REC
10 cis-1,2-Dichloroethene	ND	1.0 µg/L	35 Surr: Toluene-d8	97	%REC
11 Chloroform	ND	1.0 µg/L	36 Surr: 4-Bromofluorobenzene	97	%REC
12 1,2-Dichloroethane	ND	1.0 µg/L			
13 1,1,1-Trichloroethane	ND	1.0 µg/L			
14 Carbon tetrachloride	ND	1.0 µg/L			
15 Benzene	ND	0.50 µg/L			
16 1,2-Dichloropropane	ND	1.0 µg/L			
17 Trichloroethene	ND	1.0 µg/L			
18 Bromodichloromethane	ND	1.0 µg/L			
19 cis-1,3-Dichloropropene	ND	1.0 µg/L			
20 trans-1,3-Dichloropropene	ND	1.0 µg/L			
21 1,1,2-Trichloroethane	ND	1.0 µg/L			
22 Toluene	ND	0.50 µg/L			
23 Dibromochloromethane	ND	1.0 µg/L			
24 Tetrachloroethene	ND	1.0 µg/L			
25 Chlorobenzene	ND	1.0 µg/L			

ND = Not Detected

*Roger Scholl*

*Randy Gardner*

*Walter Hinchman*

Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer  
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / info@alpha-analytical.com

*CSH*

5/17/05

Report Date

Page 1 of 1



# Alpha Analytical, Inc.

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

## ANALYTICAL REPORT

Battelle Memorial Institute  
505 King Avenue  
Columbus, OH 43201  
Job#: G486111-T3

Attn: David Conner  
Phone: (626) 345-0598  
Fax: (760) 385-4613

Alpha Analytical Number: BMI05050405-02A  
Client I.D. Number: Water Source-5-3-05

Sampled: 05/03/05  
Received: 05/04/05  
Analyzed: 05/16/05

### SDWA Volatiles (plus Lists 1 & 3 Unregulated) EPA Method 524.2

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Benzene	ND	0.500 µg/L	36 1,3-Dichloropropane	ND	0.500 µg/L
2 Vinyl chloride	ND	0.500 µg/L	37 cis-1,3-Dichloropropene	ND	0.500 µg/L
3 Carbon tetrachloride	ND	0.500 µg/L	38 trans-1,3-Dichloropropene	ND	0.500 µg/L
4 1,2-Dichloroethane	ND	0.500 µg/L	39 2,2-Dichloropropane	ND	0.500 µg/L
5 Trichloroethene	ND	0.500 µg/L	40 1,1,1,2-Tetrachloroethane	ND	0.500 µg/L
6 1,4-Dichlorobenzene	ND	0.500 µg/L	41 1,1,2,2-Tetrachloroethane	ND	0.500 µg/L
7 1,1-Dichloroethene	ND	0.500 µg/L	42 1,2,3-Trichloropropane	ND	0.500 µg/L
8 1,1,1-Trichloroethane	ND	0.500 µg/L	43 Bromochloromethane	ND	0.500 µg/L
9 cis-1,2-Dichloroethene	ND	0.500 µg/L	44 n-Butylbenzene	ND	0.500 µg/L
10 1,2-Dichloropropane	ND	0.500 µg/L	45 Dichlorodifluoromethane	ND	0.500 µg/L
11 Ethylbenzene	ND	0.500 µg/L	46 Trichlorofluoromethane	ND	0.500 µg/L
12 Chlorobenzene	ND	0.500 µg/L	47 Hexachlorobutadiene	ND	0.500 µg/L
13 1,2-Dichlorobenzene	ND	0.500 µg/L	48 Isopropylbenzene	ND	0.500 µg/L
14 Styrene	ND	0.500 µg/L	49 4-Isopropyltoluene	ND	0.500 µg/L
15 Tetrachloroethene	ND	0.500 µg/L	50 Naphthalene	ND	0.500 µg/L
16 Toluene	ND	0.500 µg/L	51 n-Propylbenzene	ND	0.500 µg/L
17 trans-1,2-Dichloroethene	ND	0.500 µg/L	52 sec-Butylbenzene	ND	0.500 µg/L
18 Xylenes, total	ND	0.500 µg/L	53 tert-Butylbenzene	ND	0.500 µg/L
19 Dichloromethane	ND	0.500 µg/L	54 1,2,3-Trichlorobenzene	ND	0.500 µg/L
20 1,1,2-Trichloroethane	ND	0.500 µg/L	55 1,2,4-Trimethylbenzene	ND	0.500 µg/L
21 1,2,4-Trichlorobenzene	ND	0.500 µg/L	56 1,3,5-Trimethylbenzene	ND	0.500 µg/L
22 Bromobenzene	ND	0.500 µg/L	57 Surr: 1,2-Dichlorobenzene-d4	89	%REC
23 Bromodichloromethane	11.2	0.500 µg/L	58 Surr: 4-Bromofluorobenzene	97	%REC
24 Bromoform	3.60	0.500 µg/L			
25 Bromomethane	ND	0.500 µg/L			
26 Dibromochloromethane	10.8	0.500 µg/L			
27 Chloroethane	ND	0.500 µg/L			
28 Chloroform	10.1	0.500 µg/L			
29 Chloromethane	0.900	0.500 µg/L			
30 2-Chlorotoluene	ND	0.500 µg/L			
31 4-Chlorotoluene	ND	0.500 µg/L			
32 Dibromomethane	ND	0.500 µg/L			
33 1,3-Dichlorobenzene	ND	0.500 µg/L			
34 1,1-Dichloroethane	ND	0.500 µg/L			
35 1,1-Dichloropropene	ND	0.500 µg/L			

pH = 2, Ascorbic acid = Not Present

ND = Not Detected

Phase I Regulated Compounds (1-8); Phase II Regulated Compounds (9-18); Phase V Regulated Compounds (19-21); List 1 Unregulated Compounds (22-41); List 3 Unregulated Compounds (42-56); and, Additionally Requested Compounds (57+)

*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) 281-4848 / info@alpha-analytical.com

5/17/05

Report Date

Page 1 of 1



# Alpha Analytical, Inc.

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

## ANALYTICAL REPORT

Battelle Memorial Institute  
505 King Avenue  
Columbus, OH 43201

Attn: David Conner  
Phone: (626) 345-0598  
Fax: (760) 385-4613  
Date Received : 05/04/05

Job#: G486111-T3

Chromium VI  
EPA Method 7196A/SM3500Cr-D

Parameter	Concentration	Reporting Limit	Date Sampled	Date Analyzed
Chromium, Hexavalent (+6)	ND	0.020 mg/L	05/03/05	05/04/05

Client ID : **BKRV-025697-5-3-05**

Lab ID : BMI05050405-01A

ND = Not Detected

Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer  
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / info@alpha-analytical.com

5/5/05

**Report Date**



# Alpha Analytical, Inc.

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

Battelle Memorial Institute  
505 King Avenue  
Columbus, OH 43201

Attn: David Conner  
Phone: (626) 345-0598  
Fax: (760) 385-4613  
Date Received : 05/04/05

Job#: G486111-T3

Conductivity (Specific Conductance at 25°C)  
EPA Method 120.1 / SM2510B /SW9050A

Parameter	Concentration	Reporting Limit	Date Sampled	Date Analyzed
Client ID : <b>BKRV-025697-5-3-05</b> Lab ID : BMI05050405-01A	Conductivity	830	10 µS/cm	05/03/05 05/04/05
Client ID : <b>Water Source-5-3-05</b> Lab ID : BMI05050405-02A	Conductivity	620	10 µS/cm	05/03/05 05/04/05

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) 281-4848 / info@alpha-analytical.com

5/5/05

**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  
505 King Avenue  
Columbus, OH 43201

Attn: David Conner  
Phone: (626) 345-0598  
Fax: (760) 385-4613  
Date Received : 05/04/05

Job#: G486111-T3

Perchlorate by Ion Chromatography  
EPA Method 314.0

Client ID :	Parameter	Concentration	Reporting Limit	Date Sampled	Date Analyzed
<b>BKRV-025697-5-3-05</b>					
Lab ID : BMI05050405-01A	Perchlorate	ND	2.0 µg/L	05/03/05	05/04/05
<b>Water Source-5-3-05</b>					
Lab ID : BMI05050405-02A	Perchlorate	ND	2.0 µg/L	05/03/05	05/04/05

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) 281-4848 / info@alpha-analytical.com

5/5/05

**Report Date**



# Alpha Analytical, Inc.

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

## ANALYTICAL REPORT

Battelle Memorial Institute  
505 King Avenue  
Columbus, OH 43201

Attn: David Conner  
Phone: (626) 345-0598  
Fax: (760) 385-4613  
Date Received : 05/04/05

Job#: G486111-T3

Metals by ICPMS  
EPA Method SW6020

Parameter	Concentration	Reporting Limit	Date Sampled	Date Analyzed
Beryllium (Be)	ND	0.0040 mg/L	05/03/05	05/05/05
Vanadium (V)	0.0090	0.0030 mg/L	05/03/05	05/05/05
Chromium (Cr)	ND	0.0050 mg/L	05/03/05	05/05/05
Cobalt (Co)	ND	0.0050 mg/L	05/03/05	05/05/05
Nickel (Ni)	ND	0.0050 mg/L	05/03/05	05/05/05
Copper (Cu)	ND	0.010 mg/L	05/03/05	05/05/05
Zinc (Zn)	0.19	0.10 mg/L	05/03/05	05/05/05
Arsenic (As)	ND	0.0050 mg/L	05/03/05	05/05/05
Selenium (Se)	ND	0.0050 mg/L	05/03/05	05/05/05
Strontium (Sr)	0.73	0.050 mg/L	05/03/05	05/05/05
Molybdenum (Mo)	0.0089	0.0050 mg/L	05/03/05	05/05/05
Silver (Ag)	ND	0.0050 mg/L	05/03/05	05/05/05
Cadmium (Cd)	ND	0.0050 mg/L	05/03/05	05/05/05
Antimony (Sb)	ND	0.0050 mg/L	05/03/05	05/05/05
Barium (Ba)	0.14	0.0050 mg/L	05/03/05	05/05/05
Mercury (Hg)	ND	0.0010 mg/L	05/03/05	05/05/05
Thallium (Tl)	0.0063	0.0020 mg/L	05/03/05	05/05/05
Lead (Pb)	ND	0.0050 mg/L	05/03/05	05/05/05

Client ID : **BKRV-025697-5-3-05**  
Lab ID : BMI05050405-01A

ND = Not Detected

Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer  
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / info@alpha-analytical.com

5/5/05  
Report Date



# Alpha Analytical, Inc.

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

## ANALYTICAL REPORT

Battelle Memorial Institute  
505 King Avenue  
Columbus, OH 43201

Attn: David Conner  
Phone: (626) 345-0598  
Fax: (760) 385-4613  
Date Received 05/04/05

Job#: G486111-T3

### Total Petroleum Hydrocarbons - Extractable (TPH-E) EPA Method SW8015B/DHS LUFT Manual

	Parameter	Concentration	Reporting Limit	Date Sampled	Date Analyzed	
Client ID :	BKRV-025697-5-3-05	TPH-E (Jet Fuel)	ND	0.050 mg/L	05/03/05	05/04/05
Lab ID :	BMI05050405-01A	TPH-E (Diesel)	ND	0.050 mg/L	05/03/05	05/04/05
		TPH-E (Oil)	ND	0.50 mg/L	05/03/05	05/04/05
		Surr: Nonane	88	%REC	05/03/05	05/04/05

ND = Not Detected

Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer  
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / info@alpha-analytical.com

5/5/05  
Report Date





# Alpha Analytical, Inc.

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

## ANALYTICAL REPORT

Battelle Memorial Institute  
505 King Avenue  
Columbus, OH 43201  
Job#: G486111-T3

Attn: David Conner  
Phone: (626) 345-0598  
Fax: (760) 385-4613

Alpha Analytical Number: BMI05050405-01A  
Client I.D. Number: BKR-025697-5-3-05

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

### Semivolatile Organics by GC/MS EPA Method SW8270C

Reporting			Reporting		
Compound	Concentration	Limit	Compound	Concentration	Limit
1 Phenol	ND	10 µg/L	36 Hexachlorobenzene	ND	10 µg/L
2 2-Chlorophenol	ND	10 µg/L	37 Pentachlorophenol	ND	50 µg/L
3 Bis(2-chloroethyl)ether	ND	10 µg/L	38 Phenanthrene	ND	10 µg/L
4 1,3-Dichlorobenzene	ND	20 µg/L	39 Anthracene	ND	10 µg/L
5 1,4-Dichlorobenzene	ND	20 µg/L	40 Di-n-butyl phthalate	ND	50 µg/L
6 1,2-Dichlorobenzene	ND	20 µg/L	41 Fluoranthene	ND	10 µg/L
7 Bis(2-chloroisopropyl)ether	ND	10 µg/L	42 Pyrene	ND	10 µg/L
8 N-Nitrosodi-n-propylamine	ND	10 µg/L	43 Butyl benzyl phthalate	ND	20 µg/L
9 Hexachloroethane	ND	20 µg/L	44 Benzo(a)anthracene	ND	10 µg/L
10 Nitrobenzene	ND	10 µg/L	45 3,3'-Dichlorobenzidine	ND	20 µg/L
11 Isophorone	ND	10 µg/L	46 Chrysene	ND	10 µg/L
12 2-Nitrophenol	ND	10 µg/L	47 Bis(2-ethylhexyl)phthalate	ND	50 µg/L
13 2,4-Dimethylphenol	ND	10 µg/L	48 Di-n-octyl phthalate	ND	20 µg/L
14 Bis(2-chloroethoxy)methane	ND	10 µg/L	49 Benzo(b)fluoranthene	ND	10 µg/L
15 2,4-Dichlorophenol	ND	10 µg/L	50 Benzo(k)fluoranthene	ND	10 µg/L
16 1,2,4-Trichlorobenzene	ND	10 µg/L	51 Benzo(a)pyrene	ND	10 µg/L
17 Naphthalene	ND	10 µg/L	52 Indeno(1,2,3-cd)pyrene	ND	10 µg/L
18 Hexachlorobutadiene	ND	20 µg/L	53 Dibenz(a,h)anthracene	ND	10 µg/L
19 4-Chloro-3-methylphenol	ND	20 µg/L	54 Benzo(g,h,i)perylene	ND	10 µg/L
20 Hexachlorocyclopentadiene	ND	100 µg/L	55 Surr: 2-Fluorophenol	55	%REC
21 2,4,6-Trichlorophenol	ND	10 µg/L	56 Surr: Phenol-d5	36	%REC
22 2-Chloronaphthalene	ND	10 µg/L	57 Surr: Nitrobenzene-d5	85	%REC
23 Dimethyl phthalate	ND	10 µg/L	58 Surr: 2-Fluorobiphenyl	70	%REC
24 Acenaphthylene	ND	10 µg/L	59 Surr: 2,4,6-Tribromophenol	82	%REC
25 2,6-Dinitrotoluene	ND	10 µg/L	60 Surr: 4-Terphenyl-d14	72	%REC
26 Acenaphthene	ND	10 µg/L			
27 2,4-Dinitrophenol	ND	100 µg/L			
28 4-Nitrophenol	ND	50 µg/L			
29 2,4-Dinitrotoluene	ND	10 µg/L			
30 Diethyl phthalate	ND	10 µg/L			
31 Fluorene	ND	10 µg/L			
32 4-Chlorophenyl phenyl ether	ND	10 µg/L			
33 4,6-Dinitro-2-methylphenol	ND	100 µg/L			
34 N-Nitrosodiphenylamine	ND	10 µg/L			
35 4-Bromophenyl phenyl ether	ND	10 µg/L			

ND = Not Detected

*Roger Scholl*

*Randy Gardner*

*Walter Hinchman*

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

5/5/05

Report Date

Page 1 of 1



# Alpha Analytical, Inc.

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

## ANALYTICAL REPORT

Battelle Memorial Institute  
505 King Avenue  
Columbus, OH 43201  
Job#: G486111-T3

Attn: David Conner  
Phone: (626) 345-0598  
Fax: (760) 385-4613

Alpha Analytical Number: BMI05050405-01A  
Client I.D. Number: BKRv-025697-5-3-05

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

### Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Chloromethane	ND	2.0 µg/L	26 Ethylbenzene	ND	0.50 µg/L
2 Vinyl chloride	ND	1.0 µg/L	27 m,p-Xylene	ND	0.50 µg/L
3 Chloroethane	ND	1.0 µg/L	28 Bromoform	ND	1.0 µg/L
4 Bromomethane	ND	2.0 µg/L	29 o-Xylene	ND	0.50 µg/L
5 Trichlorofluoromethane	ND	1.0 µg/L	30 1,1,2,2-Tetrachloroethane	ND	1.0 µg/L
6 1,1-Dichloroethene	ND	1.0 µg/L	31 1,3-Dichlorobenzene	ND	1.0 µg/L
7 Dichloromethane	ND	2.0 µg/L	32 1,4-Dichlorobenzene	ND	1.0 µg/L
8 trans-1,2-Dichloroethene	ND	1.0 µg/L	33 1,2-Dichlorobenzene	ND	1.0 µg/L
9 1,1-Dichloroethane	ND	1.0 µg/L	34 Surr: 1,2-Dichloroethane-d4	100	%REC
10 cis-1,2-Dichloroethene	ND	1.0 µg/L	35 Surr: Toluene-d8	95	%REC
11 Chloroform	ND	1.0 µg/L	36 Surr: 4-Bromofluorobenzene	95	%REC
12 1,2-Dichloroethane	ND	1.0 µg/L			
13 1,1,1-Trichloroethane	ND	1.0 µg/L			
14 Carbon tetrachloride	ND	1.0 µg/L			
15 Benzene	ND	0.50 µg/L			
16 1,2-Dichloropropane	ND	1.0 µg/L			
17 Trichloroethene	ND	1.0 µg/L			
18 Bromodichloromethane	ND	1.0 µg/L			
19 cis-1,3-Dichloropropene	ND	1.0 µg/L			
20 trans-1,3-Dichloropropene	ND	1.0 µg/L			
21 1,1,2-Trichloroethane	ND	1.0 µg/L			
22 Toluene	ND	0.50 µg/L			
23 Dibromochloromethane	ND	1.0 µg/L			
24 Tetrachloroethene	ND	1.0 µg/L			
25 Chlorobenzene	ND	1.0 µg/L			

ND = Not Detected

Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer  
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5/5/05

Report Date

Page 1 of 1



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## VOC Sample Preservation Report

**Work Order** BMI05050405

**Project:** G486111-T3

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Alpha's Sample ID	Client's Sample ID	Matrix	pH
05050405-01A	BKRV-025697-5-3-05	Aqueous	2

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5/5/05  
**Report Date**

**Laboratory Report**  
**Report ID: 67943**



**Sierra  
Environmental  
Monitoring, Inc.**

Alpha Analytical

255 Glendale Avenue Suite 21  
Sparks, NV 89431

**Date:** 5/9/2005  
**Client:** ALP-855  
**Taken by:** Client  
**PO #:**

Dear Alpha Analytical,

It is the policy of Sierra Environmental Monitoring, Inc to strictly adhere to a comprehensive Quality Assurance Plan that insures the data presented in this report are both accurate and precise. Sierra Environmental Monitoring, Inc. maintains accreditation in the State of Nevada (NV-15) and the State of California (ELAP 2526).

The data presented in this report were obtained from the analysis of samples received under a chain of custody. Unless otherwise noted below, samples were received in good condition, properly preserved and within the hold time for the requested analyses. Any anomalies associated with the analysis of the samples have been flagged with appropriate explanation in the Analysis Report section of this Laboratory Report.

General Comments:

- There are no general comments for this report.

Individual Sample Comments:

- There are no specific comments that are associated with these samples.

**Approved By:**

A handwritten signature in black ink, appearing to read "John Kobza", is written over a horizontal line.

Sierra Environmental Monitoring, Inc.

**Date:**

5/9/2005

**This report is applicable only to the sample received by the laboratory. The liability of the laboratory is limited to the amount paid for this report. This report is for the exclusive use of the client to whom it is addressed and upon the condition that the client assumes all liability for the further distribution of the report or its contents.**

# Laboratory Report

## Report ID: 67943



Sierra  
Environmental  
Monitoring, Inc.

Alpha Analytical

255 Glendale Avenue Suite 21  
Sparks, NV 89431

Date: 5/9/2005  
Client: ALP-855  
Taken by: Client  
PO #:

### *Analysis Report*

Sample ID:	Customer Sample ID	Date Sampled	Time Sampled	Date Received	Reporting Limit	Analyst	Date Analyzed	Data Flag
S200505-0217	BMI05050405-01 - BKR V-025697-5-3-05	5/3/2005	3:45 PM	5/4/2005	0.005	Hellmann	5/5/2005	
Parameter	Method	Result	Units	Reporting Limit	Analyst	Date Analyzed	Data Flag	
Cyanide, Total	SM 4500 CN C	<0.005	mg/L	0.005	Hellmann	5/5/2005		

*Data Flag Legend:*

# Laboratory Report

## Report ID: 67943



Sierra  
Environmental  
Monitoring, Inc.

Alpha Analytical

255 Glendale Avenue Suite 21  
Sparks, NV 89431

Date: 5/9/2005  
Client: ALP-855  
Taken by: Client  
PO #:

### *Quality Control Report*

<i>Parameter</i>	<i>LCS, % Recovery</i>	<i>MS, % Recovery</i>	<i>MSD, % Recovery</i>	<i>RPD, %</i>	<i>Method Blank</i>
Cyanide, Total	95.0	93.0			<0.005 mg/L

**Legend:** *LCS- Laboratory Control Standard*      *MS- Matrix Spike*      *MSD- Matrix Spike Duplicate*  
*RPD- Relative Percent Difference*