APPENDIX I
Remedial Investigation Laboratory Data

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LABORATORIES

July 23, 2008

Ms. Victoria England
GeoEngineers, Inc.
600 Stewart St. Suite 1700
Seattle, WA 98101

Dear Ms. England,

On June 18th, 2008, 7 water samples were received from your Anacortes project. This project was identified with the client identification of 5147-006-01 and was assigned our identification number 806108

The sample identification and requested analyses are outlined on the attached CCI chain of custody record.

Our laboratory does not perform certain of the analyses requested. These analyses, which include herbicides and low level metals were subcontracted to Analytical Resources, Inc. Carbaryl was subcontracted to Pacific Agricultural Laboratory and Dioxins/Furans were subcontracted to Pace Analytical. The data package for these analyses is also being forwarded along with our report. The Pace Analytical report should be viewed as separate reports and the data has not been included in our report.

Per our discussion, we have revised the report previously submitted to lower the reporting limits for Carbon Tetrachloride. Bis(2-Chloroethyl) Ether by 8270 and certain PAH compounds reported by 8270 SIM are reported below our PQL and above our MDL as noted on the reports. The mercury results have been reported to an additional digit to reduce rounding uncertainty.

No abnormalities or nonconformances were observed during the analyses of the project samples.

I do hope this addresses all your needs. Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely

CCI Analytical Laboratories

Rick Bagan
Laboratory Director

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CERTIFICATE OF ANALYSIS

CLIENT: GEOENGINEERS, INC.
600 STEWART ST. PLAZA 600 BUILDING, SUITE 1700
SEATTLE, WA 98101

DATE: 7/23/2008
CCIL JOB #: 0806108
DATE RECEIVED: 6/18/2008
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: ANACORTES
CLIENT SAMPLE ID: 6/17/2008 10:00 MW-1
CCIL SAMPLE #: -01

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	ND	50	1	UG/L	6/18/2008	DLC
TPH-Diesel Range	NWTPH-DX W/CLEANUP	ND	130	1	UG/L	6/18/2008	EBS
TPH-Oil Range	NWTPH-DX W/CLEANUP	ND	250	1	UG/L	6/18/2008	EBS
Tetrachloroethylene	EPA-8260 SIM	ND	0.02	1	UG/L	6/20/2008	GAP
Dichlorodifluoromethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Chloromethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Vinyl Chloride	EPA-8260	ND	0.2	1	UG/L	6/19/2008	GAP
Bromomethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Chloroethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Trichlorofluoromethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Acetone	EPA-8260	ND	25	1	UG/L	6/19/2008	GAP
1,1-Dichloroethene	EPA-8260	ND	1	1	UG/L	6/19/2008	GAP
Methylene Chloride	EPA-8260	ND	5	1	UG/L	6/19/2008	GAP
Acrylonitrile	EPA-8260	ND	1	1	UG/L	6/19/2008	GAP
Methyl T-Butyl Ether	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Trans-1,2-Dichloroethene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,1-Dichloroethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
2-Butanone	EPA-8260	ND	10	1	UG/L	6/19/2008	GAP
Cis-1,2-Dichloroethene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
2,2-Dichloropropane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Bromochloromethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Chloroform	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,1,1-Trichloroethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,1-Dichloropropene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Carbon Tetrachloride	EPA-8260	ND	1.6	1	UG/L	6/19/2008	GAP
1,2-Dichloroethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Benzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Trichloroethene	EPA-8260	ND	1	1	UG/L	6/19/2008	GAP
1,2-Dichloropropane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Dibromomethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Bromodichloromethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Trans-1,3-Dichloropropene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
4-Methyl-2-Pentanone	EPA-8260	ND	10	1	UG/L	6/19/2008	GAP

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CLIENT PROJECT ID: ANACORTES
CLIENT SAMPLE ID: 6/17/2008 10:00 MW-1
CCIL SAMPLE #: -01

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Toluene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Cis-1,3-Dichloropropene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,1,2-Trichloroethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
2-Hexanone	EPA-8260	ND	10	1	UG/L	6/19/2008	GAP
1,3-Dichloropropane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Tetrachloroethylene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Dibromochloromethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,2-Dibromoethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Chlorobenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,1,1,2-Tetrachloroethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Ethylbenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
m,p-Xylene	EPA-8260	ND	4	1	UG/L	6/19/2008	GAP
Styrene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
o-Xylene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Bromoform	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Isopropylbenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,1,2,2-Tetrachloroethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,2,3-Trichloropropane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Bromobenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
N-Propyl Benzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
2-Chlorotoluene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,3,5-Trimethylbenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
4-Chlorotoluene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
T-Butyl Benzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,2,4-Trimethylbenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
S-Butyl Benzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
P-Isopropyltoluene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,3 Dichlorobenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,4-Dichlorobenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
N-Butylbenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,2-Dichlorobenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,2-Dibromo 3-Chloropropane	EPA-8260	ND	10	1	UG/L	6/19/2008	GAP
1,2,4-Trichlorobenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP

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DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Hexachlorobutadiene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Naphthalene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,2,3-Trichlorobenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Naphthalene	EPA-8270 SIM	ND	0.02	1	UG/L	6/20/2008	RAL
1-Methylnaphthalene	EPA-8270 SIM	ND	0.02	1	UG/L	6/20/2008	RAL
2-Methylnaphthalene	EPA-8270 SIM	ND	0.02	1	UG/L	6/20/2008	RAL
Acenaphthylene	EPA-8270 SIM	ND	0.02	1	UG/L	6/20/2008	RAL
Acenaphthene	EPA-8270 SIM	ND	0.02	1	UG/L	6/20/2008	RAL
Fluorene	EPA-8270 SIM	ND	0.02	1	UG/L	6/20/2008	RAL
Phenanthrene	EPA-8270 SIM	ND	0.02	1	UG/L	6/20/2008	RAL
Anthracene	EPA-8270 SIM	ND	0.02	1	UG/L	6/20/2008	RAL
Fluoranthene	EPA-8270 SIM	ND	0.02	1	UG/L	6/20/2008	RAL
Pyrene	EPA-8270 SIM	ND	0.02	1	UG/L	6/20/2008	RAL
Benzo[A]Anthracene	EPA-8270 SIM	ND	0.018	1	UG/L	6/20/2008	RAL
Chrysene	EPA-8270 SIM	ND	0.018	1	UG/L	6/20/2008	RAL
Benzo[B]Fluoranthene	EPA-8270 SIM	ND	0.018	1	UG/L	6/20/2008	RAL
Benzo[K]Fluoranthene	EPA-8270 SIM	ND	0.018*	1	UG/L	6/20/2008	RAL
Benzo(A)Pyrene	EPA-8270 SIM	ND	0.018*	1	UG/L	6/20/2008	RAL
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	ND	0.018	1	UG/L	6/20/2008	RAL
Dibenz[A,H]Anthracene	EPA-8270 SIM	ND	0.018	1	UG/L	6/20/2008	RAL
Benzo[G,H,I]Perylene	EPA-8270 SIM	ND	0.018	1	UG/L	6/20/2008	RAL
Pyridine	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
N-Nitrosodimethylamine	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Phenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Aniline	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Bis(2-Chloroethyl)Ether	EPA-8270	ND	0.53*	1	UG/L	6/19/2008	RAL
2-Chlorophenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
1,3-Dichlorobenzene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
1,4-Dichlorobenzene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Benzyl Alcohol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
1,2-Dichlorobenzene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2-Methylphenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Bis(2-Chloroisopropyl)Ether	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL

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DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
4-Methylphenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
N-Nitroso-Di-N-Propylamine	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Hexachloroethane	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Nitrobenzene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Isophorone	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2-Nitrophenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2,4-Dimethylphenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Benzoic Acid	EPA-8270	ND	10	1	UG/L	6/19/2008	RAL
Bis(2-Chloroethoxy)Methane	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2,4-Dichlorophenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
1,2,4-Trichlorobenzene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Naphthalene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
4-Chloroaniline	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2,6-Dichlorophenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Hexachlorobutadiene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
4-Chloro-3-Methylphenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2-Methylnaphthalene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
1-Methylnaphthalene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Hexachlorocyclopentadiene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2,4,6-Trichlorophenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2,4,5-Trichlorophenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2-Chloronaphthalene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2-Nitroaniline	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Acenaphthylene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Dimethylphthalate	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2,6-Dinitrotoluene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Acenaphthene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
3-Nitroaniline	EPA-8270	ND	5	1	UG/L	6/19/2008	RAL
2,4-Dinitrophenol	EPA-8270	ND	10	1	UG/L	6/19/2008	RAL
4-Nitrophenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Dibenzofuran	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2,4-Dinitrotoluene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2,3,4,6-Tetrachlorophenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL

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DATA RESULTS

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Diethylphthalate	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Fluorene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
4-Chlorophenyl-Phenylether	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
4-Nitroaniline	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
4,6-Dinitro-2-Methylphenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
N-Nitrosodiphenylamine	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Azobenzene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
4-Bromophenyl-Phenylether	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Hexachlorobenzene	EPA-8270	ND	1	1	UG/L	6/19/2008	RAL
Pentachlorophenol	EPA-8270	ND	5	1	UG/L	6/19/2008	RAL
Phenanthrene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Anthracene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Carbazole	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Di-N-Butylphthalate	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Fluoranthene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Pyrene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Butylbenzylphthalate	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
3,3'-Dichlorobenzidine	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Benzo[A]Anthracene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Chrysene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Bis(2-Ethylhexyl)Phthalate	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Di-N-Octylphthalate	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Benzo[B]Fluoranthene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Benzo[K]Fluoranthene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Benzo[A]Pyrene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Indeno[1,2,3-Cd]Pyrene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Dibenz[A,H]Anthracene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Benzo[G,H,I]Perylene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
A-BHC	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
G-BHC	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
B-BHC	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
Heptachlor	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
D-BHC	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL

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Aldrin	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
Heptachlor Epoxide	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
Chlordane	EPA-8081	ND	0.1	1	UG/L	6/20/2008	RAL
Endosulfan I	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
4,4' DDE	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
Dieldrin	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
Endrin	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
4,4' -DDD	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
Endosulfan II	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
4,4'-DDT	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
Endrin Aldehyde	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
Endosulfan Sulfate	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
Methoxychlor	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
Toxaphene	EPA-8081	ND	2	1	UG/L	6/20/2008	RAL
2,4,5-TP (Silvex)	EPA-8151	ND	1	1	UG/L	6/27/2008	ARI
2,4,5-T	EPA-8151	ND	1	1	UG/L	6/27/2008	ARI
Dinoseb	EPA-8151	ND	2	1	UG/L	6/27/2008	ARI
Dicamba	EPA-8151	ND	1	1	UG/L	6/27/2008	ARI
2,4-D	EPA-8151	ND	1	1	UG/L	6/27/2008	ARI
2,4-DB	EPA-8151	ND	5.0	1	UG/L	6/27/2008	ARI
Dalapon	EPA-8151	ND	1	1	UG/L	6/27/2008	ARI
MCPA	EPA-8151	ND	250	1	UG/L	6/27/2008	ARI
Dichloroprop	EPA-8151	ND	1	1	UG/L	6/27/2008	ARI
MCPP	EPA-8151	ND	250	1	UG/L	6/27/2008	ARI
Carbaryl	EPA-8321B	ND	0.01	1	UG/L	7/1/2008	PAL
Arsenic	EPA-200.8	4.8	0.2	1	UG/L	6/24/2008	ARI
Cadmium	EPA-200.8	ND	0.2	1	UG/L	6/24/2008	ARI
Chromium	EPA-200.8	11	0.5	1	UG/L	6/24/2008	ARI
Copper	EPA-200.8	7.0	0.5	1	UG/L	6/24/2008	ARI
Lead	EPA-200.8	ND	1	1	UG/L	6/24/2008	ARI
Mercury	EPA-7470	0.037	0.020	1	UG/L	6/23/2008	ARI
Nickel	EPA-200.8	3.2	0.5	1	UG/L	6/24/2008	ARI
Zinc	EPA-200.8	ND	4	1	UG/L	6/24/2008	ARI

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CERTIFICATE OF ANALYSIS

CLIENT: GEOENGINEERS, INC.
600 STEWART ST. PLAZA 600 BUILDING, SUITE 1700
SEATTLE, WA 98101

DATE: 7/23/2008
CCIL JOB #: 0806108
DATE RECEIVED: 6/18/2008
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: ANACORTES
CLIENT SAMPLE ID: 6/17/2008 10:00 MW-1
CCIL SAMPLE #: -01

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY

* DATA REPORTED BELOW THE PRACTICAL QUANTITATION LIMIT AND ABOVE THE MINIMUM DETECTION LIMIT.

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES.

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY:

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CCIL JOB #: 0806108
DATE RECEIVED: 6/18/2008
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: ANACORTES
CLIENT SAMPLE ID: 6/17/2008 16:00 MW-2
CCIL SAMPLE #: -02

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	ND	50	1	UG/L	6/18/2008	DLC
TPH-Diesel Range	NWTPH-DX W/CLEANUP	180	130	1	UG/L	6/18/2008	EBS
TPH-Oil Range	NWTPH-DX W/CLEANUP	ND	250	1	UG/L	6/18/2008	EBS
Tetrachloroethylene	EPA-8260 SIM	ND	0.02	1	UG/L	6/20/2008	GAP
Dichlorodifluoromethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Chloromethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Vinyl Chloride	EPA-8260	ND	0.2	1	UG/L	6/19/2008	GAP
Bromomethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Chloroethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Trichlorofluoromethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Acetone	EPA-8260	ND	25	1	UG/L	6/19/2008	GAP
1,1-Dichloroethene	EPA-8260	ND	1	1	UG/L	6/19/2008	GAP
Methylene Chloride	EPA-8260	ND	5	1	UG/L	6/19/2008	GAP
Acrylonitrile	EPA-8260	ND	1	1	UG/L	6/19/2008	GAP
Methyl T-Butyl Ether	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Trans-1,2-Dichloroethene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,1-Dichloroethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
2-Butanone	EPA-8260	ND	10	1	UG/L	6/19/2008	GAP
Cis-1,2-Dichloroethene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
2,2-Dichloropropane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Bromochloromethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Chloroform	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,1,1-Trichloroethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,1-Dichloropropene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Carbon Tetrachloride	EPA-8260	ND	1.6	1	UG/L	6/19/2008	GAP
1,2-Dichloroethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Benzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Trichloroethene	EPA-8260	ND	1	1	UG/L	6/19/2008	GAP
1,2-Dichloropropane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Dibromomethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Bromodichloromethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Trans-1,3-Dichloropropene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
4-Methyl-2-Pentanone	EPA-8260	ND	10	1	UG/L	6/19/2008	GAP

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SEATTLE, WA 98101

DATE: 7/23/2008
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WDOE ACCREDITATION #: C1336

CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: ANACORTES
CLIENT SAMPLE ID: 6/17/2008 16:00 MW-2
CCIL SAMPLE #: -02

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Toluene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Cis-1,3-Dichloropropene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,1,2-Trichloroethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
2-Hexanone	EPA-8260	ND	10	1	UG/L	6/19/2008	GAP
1,3-Dichloropropane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Tetrachloroethylene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Dibromochloromethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,2-Dibromoethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Chlorobenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,1,1,2-Tetrachloroethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Ethylbenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
m,p-Xylene	EPA-8260	ND	4	1	UG/L	6/19/2008	GAP
Styrene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
o-Xylene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Bromoform	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Isopropylbenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,1,2,2-Tetrachloroethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,2,3-Trichloropropane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Bromobenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
N-Propyl Benzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
2-Chlorotoluene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,3,5-Trimethylbenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
4-Chlorotoluene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
T-Butyl Benzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,2,4-Trimethylbenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
S-Butyl Benzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
P-Isopropyltoluene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,3 Dichlorobenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,4-Dichlorobenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
N-Butylbenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,2-Dichlorobenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,2-Dibromo 3-Chloropropane	EPA-8260	ND	10	1	UG/L	6/19/2008	GAP
1,2,4-Trichlorobenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP

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WDOE ACCREDITATION #: C1336

CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: ANACORTES
CLIENT SAMPLE ID: 6/17/2008 16:00 MW-2
CCIL SAMPLE #: -02

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Hexachlorobutadiene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Naphthalene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,2,3-Trichlorobenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Naphthalene	EPA-8270 SIM	0.02	0.02	1	UG/L	6/20/2008	RAL
1-Methylnaphthalene	EPA-8270 SIM	ND	0.02	1	UG/L	6/20/2008	RAL
2-Methylnaphthalene	EPA-8270 SIM	ND	0.02	1	UG/L	6/20/2008	RAL
Acenaphthylene	EPA-8270 SIM	0.03	0.02	1	UG/L	6/20/2008	RAL
Acenaphthene	EPA-8270 SIM	ND	0.02	1	UG/L	6/20/2008	RAL
Fluorene	EPA-8270 SIM	ND	0.02	1	UG/L	6/20/2008	RAL
Phenanthrene	EPA-8270 SIM	0.03	0.02	1	UG/L	6/20/2008	RAL
Anthracene	EPA-8270 SIM	0.05	0.02	1	UG/L	6/20/2008	RAL
Fluoranthene	EPA-8270 SIM	ND	0.02	1	UG/L	6/20/2008	RAL
Pyrene	EPA-8270 SIM	0.03	0.02	1	UG/L	6/20/2008	RAL
Benzo[A]Anthracene	EPA-8270 SIM	0.03	0.018	1	UG/L	6/20/2008	RAL
Chrysene	EPA-8270 SIM	ND	0.018	1	UG/L	6/20/2008	RAL
Benzo[B]Fluoranthene	EPA-8270 SIM	ND	0.018	1	UG/L	6/20/2008	RAL
Benzo[K]Fluoranthene	EPA-8270 SIM	ND	0.018*	1	UG/L	6/20/2008	RAL
Benzo(A)Pyrene	EPA-8270 SIM	ND	0.018*	1	UG/L	6/20/2008	RAL
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	ND	0.018	1	UG/L	6/20/2008	RAL
Dibenz[A,H]Anthracene	EPA-8270 SIM	ND	0.018	1	UG/L	6/20/2008	RAL
Benzo[G,H,I]Perylene	EPA-8270 SIM	ND	0.018	1	UG/L	6/20/2008	RAL
Pyridine	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
N-Nitrosodimethylamine	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Phenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Aniline	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Bis(2-Chloroethyl)Ether	EPA-8270	ND	0.53*	1	UG/L	6/19/2008	RAL
2-Chlorophenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
1,3-Dichlorobenzene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
1,4-Dichlorobenzene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Benzyl Alcohol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
1,2-Dichlorobenzene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2-Methylphenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Bis(2-Chloroisopropyl)Ether	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL

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CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: ANACORTES
CLIENT SAMPLE ID: 6/17/2008 16:00 MW-2
CCIL SAMPLE #: -02

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
4-Methylphenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
N-Nitroso-Di-N-Propylamine	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Hexachloroethane	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Nitrobenzene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Isophorone	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2-Nitrophenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2,4-Dimethylphenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Benzoic Acid	EPA-8270	ND	10	1	UG/L	6/19/2008	RAL
Bis(2-Chloroethoxy)Methane	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2,4-Dichlorophenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
1,2,4-Trichlorobenzene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Naphthalene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
4-Chloroaniline	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2,6-Dichlorophenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Hexachlorobutadiene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
4-Chloro-3-Methylphenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2-Methylnaphthalene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
1-Methylnaphthalene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Hexachlorocyclopentadiene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2,4,6-Trichlorophenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2,4,5-Trichlorophenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2-Chloronaphthalene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2-Nitroaniline	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Acenaphthylene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Dimethylphthalate	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2,6-Dinitrotoluene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Acenaphthene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
3-Nitroaniline	EPA-8270	ND	5	1	UG/L	6/19/2008	RAL
2,4-Dinitrophenol	EPA-8270	ND	10	1	UG/L	6/19/2008	RAL
4-Nitrophenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Dibenzofuran	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2,4-Dinitrotoluene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2,3,4,6-Tetrachlorophenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL

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CLIENT SAMPLE ID: 6/17/2008 16:00 MW-2
CCIL SAMPLE #: -02

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Diethylphthalate	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Fluorene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
4-Chlorophenyl-Phenylether	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
4-Nitroaniline	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
4,6-Dinitro-2-Methylphenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
N-Nitrosodiphenylamine	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Azobenzene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
4-Bromophenyl-Phenylether	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Hexachlorobenzene	EPA-8270	ND	1	1	UG/L	6/19/2008	RAL
Pentachlorophenol	EPA-8270	ND	5	1	UG/L	6/19/2008	RAL
Phenanthrene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Anthracene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Carbazole	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Di-N-Butylphthalate	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Fluoranthene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Pyrene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Butylbenzylphthalate	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
3,3'-Dichlorobenzidine	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Benzo[A]Anthracene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Chrysene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Bis(2-Ethylhexyl)Phthalate	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Di-N-Octylphthalate	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Benzo[B]Fluoranthene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Benzo[K]Fluoranthene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Benzo[A]Pyrene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Indeno[1,2,3-Cd]Pyrene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Dibenz[A,H]Anthracene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Benzo[G,H,I]Perylene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
A-BHC	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
G-BHC	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
B-BHC	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
Heptachlor	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
D-BHC	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL

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CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: ANACORTES
CLIENT SAMPLE ID: 6/17/2008 16:00 MW-2
CCIL SAMPLE #: -02

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Aldrin	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
Heptachlor Epoxide	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
Chlordane	EPA-8081	ND	0.1	1	UG/L	6/20/2008	RAL
Endosulfan I	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
4,4' DDE	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
Dieldrin	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
Endrin	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
4,4' -DDD	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
Endosulfan II	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
4,4'-DDT	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
Endrin Aldehyde	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
Endosulfan Sulfate	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
Methoxychlor	EPA-8081	ND	0.10	1	UG/L	6/20/2008	RAL
Toxaphene	EPA-8081	ND	2	1	UG/L	6/20/2008	RAL
2,4,5-TP (Silvex)	EPA-8151	ND	1	1	UG/L	6/27/2008	ARI
2,4,5-T	EPA-8151	ND	1	1	UG/L	6/27/2008	ARI
Dinoseb	EPA-8151	ND	2	1	UG/L	6/27/2008	ARI
Dicamba	EPA-8151	ND	1	1	UG/L	6/27/2008	ARI
2,4-D	EPA-8151	ND	1	1	UG/L	6/27/2008	ARI
2,4-DB	EPA-8151	ND	5.0	1	UG/L	6/27/2008	ARI
Dalapon	EPA-8151	ND	1	1	UG/L	6/27/2008	ARI
MCPA	EPA-8151	ND	250	1	UG/L	6/27/2008	ARI
Dichloroprop	EPA-8151	ND	1	1	UG/L	6/27/2008	ARI
MCPP	EPA-8151	ND	250	1	UG/L	6/27/2008	ARI
Carbaryl	EPA-8321B	ND	0.01	1	UG/L	7/1/2008	PAL
Arsenic	EPA-200.8	3.4	0.5	1	UG/L	6/24/2008	ARI
Cadmium	EPA-200.8	ND	0.2	1	UG/L	6/24/2008	ARI
Chromium	EPA-200.8	7.0	0.5	1	UG/L	6/24/2008	ARI
Copper	EPA-200.8	2.6	0.5	1	UG/L	6/24/2008	ARI
Lead	EPA-200.8	1	1	1	UG/L	6/24/2008	ARI
Mercury	EPA-7470	ND	0.020	1	UG/L	6/23/2008	ARI
Nickel	EPA-200.8	2.4	0.5	1	UG/L	6/24/2008	ARI
Zinc	EPA-200.8	ND	4	1	UG/L	6/24/2008	ARI

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CERTIFICATE OF ANALYSIS

CLIENT: GEOENGINEERS, INC.
600 STEWART ST. PLAZA 600 BUILDING, SUITE 1700
SEATTLE, WA 98101

DATE: 7/23/2008
CCIL JOB #: 0806108
DATE RECEIVED: 6/18/2008
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: ANACORTES
CLIENT SAMPLE ID: 6/17/2008 16:00 MW-2
CCIL SAMPLE #: -02

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY

NOTE: CHROMATOGRAM INDICATES SAMPLE CONTAINS PRODUCT WHICH IS LIKELY WEATHERED DIESEL FUEL.

* DATA REPORTED BELOW THE PRACTICAL QUANTITATION LIMIT AND ABOVE THE MINIMUM DETECTION LIMIT.

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES.

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY:

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CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: ANACORTES
CLIENT SAMPLE ID: 6/17/2008 17:30 MW-3
CCIL SAMPLE #: -03

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	ND	50	1	UG/L	6/18/2008	DLC
TPH-Diesel Range	NWTPH-DX W/CLEANUP	ND	130	1	UG/L	6/18/2008	EBS
TPH-Oil Range	NWTPH-DX W/CLEANUP	ND	250	1	UG/L	6/18/2008	EBS
Tetrachloroethylene	EPA-8260 SIM	ND	0.02	1	UG/L	6/20/2008	GAP
Dichlorodifluoromethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Chloromethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Vinyl Chloride	EPA-8260	ND	0.2	1	UG/L	6/19/2008	GAP
Bromomethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Chloroethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Trichlorofluoromethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Acetone	EPA-8260	ND	25	1	UG/L	6/19/2008	GAP
1,1-Dichloroethene	EPA-8260	ND	1	1	UG/L	6/19/2008	GAP
Methylene Chloride	EPA-8260	ND	5	1	UG/L	6/19/2008	GAP
Acrylonitrile	EPA-8260	ND	1	1	UG/L	6/19/2008	GAP
Methyl T-Butyl Ether	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Trans-1,2-Dichloroethene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,1-Dichloroethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
2-Butanone	EPA-8260	ND	10	1	UG/L	6/19/2008	GAP
Cis-1,2-Dichloroethene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
2,2-Dichloropropane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Bromochloromethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Chloroform	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,1,1-Trichloroethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,1-Dichloropropene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Carbon Tetrachloride	EPA-8260	ND	1.6	1	UG/L	6/19/2008	GAP
1,2-Dichloroethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Benzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Trichloroethene	EPA-8260	ND	1	1	UG/L	6/19/2008	GAP
1,2-Dichloropropane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Dibromomethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Bromodichloromethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Trans-1,3-Dichloropropene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
4-Methyl-2-Pentanone	EPA-8260	ND	10	1	UG/L	6/19/2008	GAP

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WDOE ACCREDITATION #: C1336

CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: ANACORTES
CLIENT SAMPLE ID: 6/17/2008 17:30 MW-3
CCIL SAMPLE #: -03

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Toluene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Cis-1,3-Dichloropropene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,1,2-Trichloroethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
2-Hexanone	EPA-8260	ND	10	1	UG/L	6/19/2008	GAP
1,3-Dichloropropane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Tetrachloroethylene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Dibromochloromethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,2-Dibromoethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Chlorobenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,1,1,2-Tetrachloroethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Ethylbenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
m,p-Xylene	EPA-8260	ND	4	1	UG/L	6/19/2008	GAP
Styrene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
o-Xylene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Bromoform	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Isopropylbenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,1,2,2-Tetrachloroethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,2,3-Trichloropropane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Bromobenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
N-Propyl Benzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
2-Chlorotoluene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,3,5-Trimethylbenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
4-Chlorotoluene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
T-Butyl Benzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,2,4-Trimethylbenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
S-Butyl Benzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
P-Isopropyltoluene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,3 Dichlorobenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,4-Dichlorobenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
N-Butylbenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,2-Dichlorobenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,2-Dibromo 3-Chloropropane	EPA-8260	ND	10	1	UG/L	6/19/2008	GAP
1,2,4-Trichlorobenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP

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600 STEWART ST. PLAZA 600 BUILDING, SUITE 1700
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WDOE ACCREDITATION #: C1336

CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: ANACORTES
CLIENT SAMPLE ID: 6/17/2008 17:30 MW-3
CCIL SAMPLE #: -03

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Hexachlorobutadiene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Naphthalene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,2,3-Trichlorobenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Naphthalene	EPA-8270 SIM	0.03	0.02	1	UG/L	6/20/2008	RAL
1-Methylnaphthalene	EPA-8270 SIM	ND	0.02	1	UG/L	6/20/2008	RAL
2-Methylnaphthalene	EPA-8270 SIM	ND	0.02	1	UG/L	6/20/2008	RAL
Acenaphthylene	EPA-8270 SIM	ND	0.02	1	UG/L	6/20/2008	RAL
Acenaphthene	EPA-8270 SIM	0.30	0.02	1	UG/L	6/20/2008	RAL
Fluorene	EPA-8270 SIM	0.07	0.02	1	UG/L	6/20/2008	RAL
Phenanthrene	EPA-8270 SIM	ND	0.02	1	UG/L	6/20/2008	RAL
Anthracene	EPA-8270 SIM	0.05	0.02	1	UG/L	6/20/2008	RAL
Fluoranthene	EPA-8270 SIM	0.07	0.02	1	UG/L	6/20/2008	RAL
Pyrene	EPA-8270 SIM	0.07	0.02	1	UG/L	6/20/2008	RAL
Benzo[A]Anthracene	EPA-8270 SIM	ND	0.018	1	UG/L	6/20/2008	RAL
Chrysene	EPA-8270 SIM	ND	0.018	1	UG/L	6/20/2008	RAL
Benzo[B]Fluoranthene	EPA-8270 SIM	ND	0.018	1	UG/L	6/20/2008	RAL
Benzo[K]Fluoranthene	EPA-8270 SIM	ND	0.018*	1	UG/L	6/20/2008	RAL
Benzo(A)Pyrene	EPA-8270 SIM	ND	0.018*	1	UG/L	6/20/2008	RAL
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	ND	0.018	1	UG/L	6/20/2008	RAL
Dibenz[A,H]Anthracene	EPA-8270 SIM	ND	0.018	1	UG/L	6/20/2008	RAL
Benzo[G,H,I]Perylene	EPA-8270 SIM	ND	0.018	1	UG/L	6/20/2008	RAL
Pyridine	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
N-Nitrosodimethylamine	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Phenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Aniline	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Bis(2-Chloroethyl)Ether	EPA-8270	ND	0.53*	1	UG/L	6/19/2008	RAL
2-Chlorophenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
1,3-Dichlorobenzene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
1,4-Dichlorobenzene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Benzyl Alcohol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
1,2-Dichlorobenzene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2-Methylphenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Bis(2-Chloroisopropyl)Ether	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL

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600 STEWART ST. PLAZA 600 BUILDING, SUITE 1700
SEATTLE, WA 98101

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CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: ANACORTES
CLIENT SAMPLE ID: 6/17/2008 17:30 MW-3
CCIL SAMPLE #: -03

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
4-Methylphenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
N-Nitroso-Di-N-Propylamine	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Hexachloroethane	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Nitrobenzene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Isophorone	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2-Nitrophenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2,4-Dimethylphenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Benzoic Acid	EPA-8270	ND	10	1	UG/L	6/19/2008	RAL
Bis(2-Chloroethoxy)Methane	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2,4-Dichlorophenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
1,2,4-Trichlorobenzene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Naphthalene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
4-Chloroaniline	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2,6-Dichlorophenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Hexachlorobutadiene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
4-Chloro-3-Methylphenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2-Methylnaphthalene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
1-Methylnaphthalene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Hexachlorocyclopentadiene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2,4,6-Trichlorophenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2,4,5-Trichlorophenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2-Chloronaphthalene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2-Nitroaniline	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Acenaphthylene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Dimethylphthalate	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2,6-Dinitrotoluene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Acenaphthene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
3-Nitroaniline	EPA-8270	ND	5	1	UG/L	6/19/2008	RAL
2,4-Dinitrophenol	EPA-8270	ND	10	1	UG/L	6/19/2008	RAL
4-Nitrophenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Dibenzofuran	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2,4-Dinitrotoluene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2,3,4,6-Tetrachlorophenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL

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DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Diethylphthalate	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Fluorene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
4-Chlorophenyl-Phenylether	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
4-Nitroaniline	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
4,6-Dinitro-2-Methylphenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
N-Nitrosodiphenylamine	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Azobenzene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
4-Bromophenyl-Phenylether	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Hexachlorobenzene	EPA-8270	ND	1	1	UG/L	6/19/2008	RAL
Pentachlorophenol	EPA-8270	ND	5	1	UG/L	6/19/2008	RAL
Phenanthrene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Anthracene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Carbazole	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Di-N-Butylphthalate	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Fluoranthene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Pyrene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Butylbenzylphthalate	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
3,3'-Dichlorobenzidine	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Benzo[A]Anthracene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Chrysene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Bis(2-Ethylhexyl)Phthalate	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Di-N-Octylphthalate	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Benzo[B]Fluoranthene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Benzo[K]Fluoranthene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Benzo[A]Pyrene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Indeno[1,2,3-Cd]Pyrene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Dibenz[A,H]Anthracene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Benzo[G,H,I]Perylene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
A-BHC	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
G-BHC	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
B-BHC	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
Heptachlor	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
D-BHC	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL

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CERTIFICATE OF ANALYSIS

CLIENT: GEOENGINEERS, INC.
600 STEWART ST. PLAZA 600 BUILDING, SUITE 1700
SEATTLE, WA 98101

DATE: 7/23/2008
CCIL JOB #: 0806108
DATE RECEIVED: 6/18/2008
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: ANACORTES
CLIENT SAMPLE ID: 6/17/2008 17:30 MW-3
CCIL SAMPLE #: -03

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Aldrin	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
Heptachlor Epoxide	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
Chlordane	EPA-8081	ND	0.1	1	UG/L	6/20/2008	RAL
Endosulfan I	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
4,4' DDE	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
Dieldrin	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
Endrin	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
4,4' -DDD	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
Endosulfan II	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
4,4'-DDT	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
Endrin Aldehyde	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
Endosulfan Sulfate	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
Methoxychlor	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
Toxaphene	EPA-8081	ND	2	1	UG/L	6/20/2008	RAL
2,4,5-TP (Silvex)	EPA-8151	ND	1	1	UG/L	6/27/2008	ARI
2,4,5-T	EPA-8151	ND	1	1	UG/L	6/27/2008	ARI
Dinoseb	EPA-8151	ND	2	1	UG/L	6/27/2008	ARI
Dicamba	EPA-8151	ND	1	1	UG/L	6/27/2008	ARI
2,4-D	EPA-8151	ND	1	1	UG/L	6/27/2008	ARI
2,4-DB	EPA-8151	ND	5.0	1	UG/L	6/27/2008	ARI
Dalapon	EPA-8151	ND	1	1	UG/L	6/27/2008	ARI
MCPA	EPA-8151	ND	250	1	UG/L	6/27/2008	ARI
Dichloroprop	EPA-8151	ND	1	1	UG/L	6/27/2008	ARI
MCPP	EPA-8151	ND	250	1	UG/L	6/27/2008	ARI
Carbaryl	EPA-8321B	ND	0.01	1	UG/L	7/1/2008	PAL
Arsenic	EPA-200.8	0.8	0.2	1	UG/L	6/24/2008	ARI
Cadmium	EPA-200.8	ND	0.2	1	UG/L	6/24/2008	ARI
Chromium	EPA-200.8	0.6	0.5	1	UG/L	6/24/2008	ARI
Copper	EPA-200.8	1.8	0.5	1	UG/L	6/24/2008	ARI
Lead	EPA-200.8	ND	1	1	UG/L	6/24/2008	ARI
Mercury	EPA-7470	ND	0.020	1	UG/L	6/23/2008	ARI
Nickel	EPA-200.8	2.2	0.5	1	UG/L	6/24/2008	ARI
Zinc	EPA-200.8	5	4	1	UG/L	6/24/2008	ARI

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CERTIFICATE OF ANALYSIS

CLIENT: GEOENGINEERS, INC.
600 STEWART ST. PLAZA 600 BUILDING, SUITE 1700
SEATTLE, WA 98101

DATE: 7/23/2008
CCIL JOB #: 0806108
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WDOE ACCREDITATION #: C1336

CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: ANACORTES
CLIENT SAMPLE ID: 6/17/2008 17:30 MW-3
CCIL SAMPLE #: -03

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY

* DATA REPORTED BELOW THE PRACTICAL QUANTITATION LIMIT AND ABOVE THE MINIMUM DETECTION LIMIT.

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES.

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY:

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WDOE ACCREDITATION #: C1336

CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: ANACORTES
CLIENT SAMPLE ID: 6/17/2008 14:30 MW-4
CCIL SAMPLE #: -04

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	ND	50	1	UG/L	6/18/2008	DLC
TPH-Diesel Range	NWTPH-DX W/CLEANUP	ND	130	1	UG/L	6/18/2008	EBS
TPH-Oil Range	NWTPH-DX W/CLEANUP	ND	250	1	UG/L	6/18/2008	EBS
Tetrachloroethylene	EPA-8260 SIM	ND	0.02	1	UG/L	6/20/2008	GAP
Dichlorodifluoromethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Chloromethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Vinyl Chloride	EPA-8260	ND	0.2	1	UG/L	6/19/2008	GAP
Bromomethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Chloroethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Trichlorofluoromethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Acetone	EPA-8260	ND	25	1	UG/L	6/19/2008	GAP
1,1-Dichloroethene	EPA-8260	ND	1	1	UG/L	6/19/2008	GAP
Methylene Chloride	EPA-8260	ND	5	1	UG/L	6/19/2008	GAP
Acrylonitrile	EPA-8260	ND	1	1	UG/L	6/19/2008	GAP
Methyl T-Butyl Ether	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Trans-1,2-Dichloroethene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,1-Dichloroethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
2-Butanone	EPA-8260	ND	10	1	UG/L	6/19/2008	GAP
Cis-1,2-Dichloroethene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
2,2-Dichloropropane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Bromochloromethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Chloroform	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,1,1-Trichloroethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,1-Dichloropropene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Carbon Tetrachloride	EPA-8260	ND	1.6	1	UG/L	6/19/2008	GAP
1,2-Dichloroethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Benzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Trichloroethene	EPA-8260	ND	1	1	UG/L	6/19/2008	GAP
1,2-Dichloropropane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Dibromomethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Bromodichloromethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Trans-1,3-Dichloropropene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
4-Methyl-2-Pentanone	EPA-8260	ND	10	1	UG/L	6/19/2008	GAP

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WDOE ACCREDITATION #: C1336

CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: ANACORTES
CLIENT SAMPLE ID: 6/17/2008 14:30 MW-4
CCIL SAMPLE #: -04

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Toluene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Cis-1,3-Dichloropropene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,1,2-Trichloroethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
2-Hexanone	EPA-8260	ND	10	1	UG/L	6/19/2008	GAP
1,3-Dichloropropane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Tetrachloroethylene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Dibromochloromethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,2-Dibromoethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Chlorobenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,1,1,2-Tetrachloroethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Ethylbenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
m,p-Xylene	EPA-8260	ND	4	1	UG/L	6/19/2008	GAP
Styrene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
o-Xylene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Bromoform	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Isopropylbenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,1,2,2-Tetrachloroethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,2,3-Trichloropropane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Bromobenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
N-Propyl Benzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
2-Chlorotoluene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,3,5-Trimethylbenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
4-Chlorotoluene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
T-Butyl Benzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,2,4-Trimethylbenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
S-Butyl Benzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
P-Isopropyltoluene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,3 Dichlorobenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,4-Dichlorobenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
N-Butylbenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,2-Dichlorobenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,2-Dibromo 3-Chloropropane	EPA-8260	ND	10	1	UG/L	6/19/2008	GAP
1,2,4-Trichlorobenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP

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CLIENT: GEOENGINEERS, INC.
600 STEWART ST. PLAZA 600 BUILDING, SUITE 1700
SEATTLE, WA 98101

DATE: 7/23/2008
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WDOE ACCREDITATION #: C1336

CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: ANACORTES
CLIENT SAMPLE ID: 6/17/2008 14:30 MW-4
CCIL SAMPLE #: -04

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Hexachlorobutadiene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Naphthalene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,2,3-Trichlorobenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Naphthalene	EPA-8270 SIM	ND	0.02	1	UG/L	6/20/2008	RAL
1-Methylnaphthalene	EPA-8270 SIM	ND	0.02	1	UG/L	6/20/2008	RAL
2-Methylnaphthalene	EPA-8270 SIM	ND	0.02	1	UG/L	6/20/2008	RAL
Acenaphthylene	EPA-8270 SIM	0.03	0.02	1	UG/L	6/20/2008	RAL
Acenaphthene	EPA-8270 SIM	0.08	0.02	1	UG/L	6/20/2008	RAL
Fluorene	EPA-8270 SIM	0.09	0.02	1	UG/L	6/20/2008	RAL
Phenanthrene	EPA-8270 SIM	0.14	0.02	1	UG/L	6/20/2008	RAL
Anthracene	EPA-8270 SIM	0.04	0.02	1	UG/L	6/20/2008	RAL
Fluoranthene	EPA-8270 SIM	0.03	0.02	1	UG/L	6/20/2008	RAL
Pyrene	EPA-8270 SIM	0.03	0.02	1	UG/L	6/20/2008	RAL
Benzo[A]Anthracene	EPA-8270 SIM	ND	0.018	1	UG/L	6/20/2008	RAL
Chrysene	EPA-8270 SIM	ND	0.018	1	UG/L	6/20/2008	RAL
Benzo[B]Fluoranthene	EPA-8270 SIM	ND	0.018	1	UG/L	6/20/2008	RAL
Benzo[K]Fluoranthene	EPA-8270 SIM	ND	0.018*	1	UG/L	6/20/2008	RAL
Benzo(A)Pyrene	EPA-8270 SIM	ND	0.018*	1	UG/L	6/20/2008	RAL
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	ND	0.018	1	UG/L	6/20/2008	RAL
Dibenz[A,H]Anthracene	EPA-8270 SIM	ND	0.018	1	UG/L	6/20/2008	RAL
Benzo[G,H,I]Perylene	EPA-8270 SIM	ND	0.018	1	UG/L	6/20/2008	RAL
Pyridine	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
N-Nitrosodimethylamine	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Phenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Aniline	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Bis(2-Chloroethyl)Ether	EPA-8270	ND	0.53*	1	UG/L	6/19/2008	RAL
2-Chlorophenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
1,3-Dichlorobenzene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
1,4-Dichlorobenzene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Benzyl Alcohol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
1,2-Dichlorobenzene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2-Methylphenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Bis(2-Chloroisopropyl)Ether	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL

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CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: ANACORTES
CLIENT SAMPLE ID: 6/17/2008 14:30 MW-4
CCIL SAMPLE #: -04

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
4-Methylphenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
N-Nitroso-Di-N-Propylamine	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Hexachloroethane	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Nitrobenzene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Isophorone	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2-Nitrophenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2,4-Dimethylphenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Benzoic Acid	EPA-8270	ND	10	1	UG/L	6/19/2008	RAL
Bis(2-Chloroethoxy)Methane	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2,4-Dichlorophenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
1,2,4-Trichlorobenzene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Naphthalene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
4-Chloroaniline	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2,6-Dichlorophenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Hexachlorobutadiene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
4-Chloro-3-Methylphenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2-Methylnaphthalene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
1-Methylnaphthalene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Hexachlorocyclopentadiene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2,4,6-Trichlorophenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2,4,5-Trichlorophenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2-Chloronaphthalene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2-Nitroaniline	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Acenaphthylene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Dimethylphthalate	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2,6-Dinitrotoluene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Acenaphthene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
3-Nitroaniline	EPA-8270	ND	5	1	UG/L	6/19/2008	RAL
2,4-Dinitrophenol	EPA-8270	ND	10	1	UG/L	6/19/2008	RAL
4-Nitrophenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Dibenzofuran	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2,4-Dinitrotoluene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2,3,4,6-Tetrachlorophenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL

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CCIL SAMPLE #: -04

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Diethylphthalate	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Fluorene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
4-Chlorophenyl-Phenylether	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
4-Nitroaniline	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
4,6-Dinitro-2-Methylphenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
N-Nitrosodiphenylamine	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Azobenzene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
4-Bromophenyl-Phenylether	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Hexachlorobenzene	EPA-8270	ND	1	1	UG/L	6/19/2008	RAL
Pentachlorophenol	EPA-8270	ND	5	1	UG/L	6/19/2008	RAL
Phenanthrene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Anthracene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Carbazole	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Di-N-Butylphthalate	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Fluoranthene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Pyrene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Butylbenzylphthalate	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
3,3'-Dichlorobenzidine	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Benzo[A]Anthracene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Chrysene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Bis(2-Ethylhexyl)Phthalate	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Di-N-Octylphthalate	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Benzo[B]Fluoranthene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Benzo[K]Fluoranthene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Benzo[A]Pyrene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Indeno[1,2,3-Cd]Pyrene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Dibenz[A,H]Anthracene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Benzo[G,H,I]Perylene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
A-BHC	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
G-BHC	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
B-BHC	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
Heptachlor	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
D-BHC	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL

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CERTIFICATE OF ANALYSIS

CLIENT: GEOENGINEERS, INC.
600 STEWART ST. PLAZA 600 BUILDING, SUITE 1700
SEATTLE, WA 98101

DATE: 7/23/2008
CCIL JOB #: 0806108
DATE RECEIVED: 6/18/2008
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: ANACORTES
CLIENT SAMPLE ID: 6/17/2008 14:30 MW-4
CCIL SAMPLE #: -04

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Aldrin	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
Heptachlor Epoxide	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
Chlordane	EPA-8081	ND	0.1	1	UG/L	6/20/2008	RAL
Endosulfan I	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
4,4' DDE	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
Dieldrin	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
Endrin	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
4,4' -DDD	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
Endosulfan II	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
4,4'-DDT	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
Endrin Aldehyde	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
Endosulfan Sulfate	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
Methoxychlor	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
Toxaphene	EPA-8081	ND	2	1	UG/L	6/20/2008	RAL
2,4,5-TP (Silvex)	EPA-8151	ND	1	1	UG/L	6/27/2008	ARI
2,4,5-T	EPA-8151	ND	1	1	UG/L	6/27/2008	ARI
Dinoseb	EPA-8151	ND	2	1	UG/L	6/27/2008	ARI
Dicamba	EPA-8151	ND	1	1	UG/L	6/27/2008	ARI
2,4-D	EPA-8151	ND	1	1	UG/L	6/27/2008	ARI
2,4-DB	EPA-8151	ND	5.0	1	UG/L	6/27/2008	ARI
Dalapon	EPA-8151	ND	1	1	UG/L	6/27/2008	ARI
MCPA	EPA-8151	ND	250	1	UG/L	6/27/2008	ARI
Dichloroprop	EPA-8151	ND	1	1	UG/L	6/27/2008	ARI
MCPP	EPA-8151	ND	250	1	UG/L	6/27/2008	ARI
Carbaryl	EPA-8321B	ND	0.01	1	UG/L	7/1/2008	PAL
Arsenic	EPA-200.8	8.1	0.5	1	UG/L	6/24/2008	ARI
Cadmium	EPA-200.8	ND	0.2	1	UG/L	6/24/2008	ARI
Chromium	EPA-200.8	2.2	0.5	1	UG/L	6/24/2008	ARI
Copper	EPA-200.8	1.8	0.5	1	UG/L	6/24/2008	ARI
Lead	EPA-200.8	2	1	1	UG/L	6/24/2008	ARI
Mercury	EPA-7470	ND	0.020	1	UG/L	6/23/2008	ARI
Nickel	EPA-200.8	1.1	0.5	1	UG/L	6/24/2008	ARI
Zinc	EPA-200.8	5	4	1	UG/L	6/24/2008	ARI

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CLIENT: GEOENGINEERS, INC.
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CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: ANACORTES
CLIENT SAMPLE ID: 6/17/2008 14:30 MW-4
CCIL SAMPLE #: -04

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY

* DATA REPORTED BELOW THE PRACTICAL QUANTITATION LIMIT AND ABOVE THE MINIMUM DETECTION LIMIT.

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES.

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY:

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CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: ANACORTES
CLIENT SAMPLE ID: 6/17/2008 12:00 MW-5
CCIL SAMPLE #: -05

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	ND	50	1	UG/L	6/19/2008	DLC
TPH-Diesel Range	NWTPH-DX W/CLEANUP	ND	130	1	UG/L	6/18/2008	EBS
TPH-Oil Range	NWTPH-DX W/CLEANUP	ND	250	1	UG/L	6/18/2008	EBS
Tetrachloroethylene	EPA-8260 SIM	ND	0.02	1	UG/L	6/20/2008	GAP
Dichlorodifluoromethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Chloromethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Vinyl Chloride	EPA-8260	ND	0.2	1	UG/L	6/19/2008	GAP
Bromomethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Chloroethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Trichlorofluoromethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Acetone	EPA-8260	ND	25	1	UG/L	6/19/2008	GAP
1,1-Dichloroethene	EPA-8260	ND	1	1	UG/L	6/19/2008	GAP
Methylene Chloride	EPA-8260	ND	5	1	UG/L	6/19/2008	GAP
Acrylonitrile	EPA-8260	ND	1	1	UG/L	6/19/2008	GAP
Methyl T-Butyl Ether	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Trans-1,2-Dichloroethene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,1-Dichloroethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
2-Butanone	EPA-8260	ND	10	1	UG/L	6/19/2008	GAP
Cis-1,2-Dichloroethene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
2,2-Dichloropropane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Bromochloromethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Chloroform	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,1,1-Trichloroethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,1-Dichloropropene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Carbon Tetrachloride	EPA-8260	ND	1.6	1	UG/L	6/19/2008	GAP
1,2-Dichloroethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Benzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Trichloroethene	EPA-8260	ND	1	1	UG/L	6/19/2008	GAP
1,2-Dichloropropane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Dibromomethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Bromodichloromethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Trans-1,3-Dichloropropene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
4-Methyl-2-Pentanone	EPA-8260	ND	10	1	UG/L	6/19/2008	GAP

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DATE: 7/23/2008
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WDOE ACCREDITATION #: C1336

CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: ANACORTES
CLIENT SAMPLE ID: 6/17/2008 12:00 MW-5
CCIL SAMPLE #: -05

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Toluene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Cis-1,3-Dichloropropene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,1,2-Trichloroethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
2-Hexanone	EPA-8260	ND	10	1	UG/L	6/19/2008	GAP
1,3-Dichloropropane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Tetrachloroethylene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Dibromochloromethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,2-Dibromoethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Chlorobenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,1,1,2-Tetrachloroethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Ethylbenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
m,p-Xylene	EPA-8260	ND	4	1	UG/L	6/19/2008	GAP
Styrene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
o-Xylene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Bromoform	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Isopropylbenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,1,2,2-Tetrachloroethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,2,3-Trichloropropane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Bromobenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
N-Propyl Benzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
2-Chlorotoluene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,3,5-Trimethylbenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
4-Chlorotoluene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
T-Butyl Benzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,2,4-Trimethylbenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
S-Butyl Benzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
P-Isopropyltoluene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,3 Dichlorobenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,4-Dichlorobenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
N-Butylbenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,2-Dichlorobenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,2-Dibromo 3-Chloropropane	EPA-8260	ND	10	1	UG/L	6/19/2008	GAP
1,2,4-Trichlorobenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP

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SEATTLE, WA 98101

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CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: ANACORTES
CLIENT SAMPLE ID: 6/17/2008 12:00 MW-5
CCIL SAMPLE #: -05

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Hexachlorobutadiene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Naphthalene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,2,3-Trichlorobenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Naphthalene	EPA-8270 SIM	ND	0.02	1	UG/L	6/20/2008	RAL
1-Methylnaphthalene	EPA-8270 SIM	ND	0.02	1	UG/L	6/20/2008	RAL
2-Methylnaphthalene	EPA-8270 SIM	ND	0.02	1	UG/L	6/20/2008	RAL
Acenaphthylene	EPA-8270 SIM	ND	0.02	1	UG/L	6/20/2008	RAL
Acenaphthene	EPA-8270 SIM	ND	0.02	1	UG/L	6/20/2008	RAL
Fluorene	EPA-8270 SIM	ND	0.02	1	UG/L	6/20/2008	RAL
Phenanthrene	EPA-8270 SIM	0.03	0.02	1	UG/L	6/20/2008	RAL
Anthracene	EPA-8270 SIM	ND	0.02	1	UG/L	6/20/2008	RAL
Fluoranthene	EPA-8270 SIM	ND	0.02	1	UG/L	6/20/2008	RAL
Pyrene	EPA-8270 SIM	ND	0.02	1	UG/L	6/20/2008	RAL
Benzo[A]Anthracene	EPA-8270 SIM	ND	0.018	1	UG/L	6/20/2008	RAL
Chrysene	EPA-8270 SIM	ND	0.018	1	UG/L	6/20/2008	RAL
Benzo[B]Fluoranthene	EPA-8270 SIM	ND	0.018	1	UG/L	6/20/2008	RAL
Benzo[K]Fluoranthene	EPA-8270 SIM	ND	0.018*	1	UG/L	6/20/2008	RAL
Benzo(A)Pyrene	EPA-8270 SIM	ND	0.018*	1	UG/L	6/20/2008	RAL
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	ND	0.018	1	UG/L	6/20/2008	RAL
Dibenz[A,H]Anthracene	EPA-8270 SIM	ND	0.018	1	UG/L	6/20/2008	RAL
Benzo[G,H,I]Perylene	EPA-8270 SIM	ND	0.018	1	UG/L	6/20/2008	RAL
Pyridine	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
N-Nitrosodimethylamine	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Phenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Aniline	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Bis(2-Chloroethyl)Ether	EPA-8270	ND	0.53*	1	UG/L	6/19/2008	RAL
2-Chlorophenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
1,3-Dichlorobenzene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
1,4-Dichlorobenzene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Benzyl Alcohol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
1,2-Dichlorobenzene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2-Methylphenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Bis(2-Chloroisopropyl)Ether	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL

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DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
4-Methylphenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
N-Nitroso-Di-N-Propylamine	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Hexachloroethane	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Nitrobenzene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Isophorone	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2-Nitrophenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2,4-Dimethylphenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Benzoic Acid	EPA-8270	ND	10	1	UG/L	6/19/2008	RAL
Bis(2-Chloroethoxy)Methane	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2,4-Dichlorophenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
1,2,4-Trichlorobenzene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Naphthalene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
4-Chloroaniline	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2,6-Dichlorophenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Hexachlorobutadiene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
4-Chloro-3-Methylphenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2-Methylnaphthalene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
1-Methylnaphthalene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Hexachlorocyclopentadiene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2,4,6-Trichlorophenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2,4,5-Trichlorophenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2-Chloronaphthalene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2-Nitroaniline	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Acenaphthylene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Dimethylphthalate	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2,6-Dinitrotoluene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Acenaphthene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
3-Nitroaniline	EPA-8270	ND	5	1	UG/L	6/19/2008	RAL
2,4-Dinitrophenol	EPA-8270	ND	10	1	UG/L	6/19/2008	RAL
4-Nitrophenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Dibenzofuran	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2,4-Dinitrotoluene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2,3,4,6-Tetrachlorophenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL

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CERTIFICATE OF ANALYSIS

CLIENT: GEOENGINEERS, INC.
600 STEWART ST. PLAZA 600 BUILDING, SUITE 1700
SEATTLE, WA 98101

DATE: 7/23/2008
CCIL JOB #: 0806108
DATE RECEIVED: 6/18/2008
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: ANACORTES
CLIENT SAMPLE ID: 6/17/2008 12:00 MW-5
CCIL SAMPLE #: -05

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Diethylphthalate	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Fluorene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
4-Chlorophenyl-Phenylether	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
4-Nitroaniline	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
4,6-Dinitro-2-Methylphenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
N-Nitrosodiphenylamine	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Azobenzene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
4-Bromophenyl-Phenylether	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Hexachlorobenzene	EPA-8270	ND	1	1	UG/L	6/19/2008	RAL
Pentachlorophenol	EPA-8270	ND	5	1	UG/L	6/19/2008	RAL
Phenanthrene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Anthracene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Carbazole	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Di-N-Butylphthalate	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Fluoranthene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Pyrene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Butylbenzylphthalate	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
3,3'-Dichlorobenzidine	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Benzo[A]Anthracene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Chrysene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Bis(2-Ethylhexyl)Phthalate	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Di-N-Octylphthalate	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Benzo[B]Fluoranthene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Benzo[K]Fluoranthene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Benzo[A]Pyrene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Indeno[1,2,3-Cd]Pyrene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Dibenz[A,H]Anthracene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Benzo[G,H,I]Perylene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
A-BHC	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
G-BHC	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
B-BHC	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
Heptachlor	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
D-BHC	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL

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CLIENT: GEOENGINEERS, INC.
600 STEWART ST. PLAZA 600 BUILDING, SUITE 1700
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DATE: 7/23/2008
CCIL JOB #: 0806108
DATE RECEIVED: 6/18/2008
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: ANACORTES
CLIENT SAMPLE ID: 6/17/2008 12:00 MW-5
CCIL SAMPLE #: -05

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Aldrin	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
Heptachlor Epoxide	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
Chlordane	EPA-8081	ND	0.1	1	UG/L	6/20/2008	RAL
Endosulfan I	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
4,4' DDE	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
Dieldrin	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
Endrin	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
4,4' -DDD	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
Endosulfan II	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
4,4'-DDT	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
Endrin Aldehyde	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
Endosulfan Sulfate	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
Methoxychlor	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
Toxaphene	EPA-8081	ND	2	1	UG/L	6/20/2008	RAL
2,4,5-TP (Silvex)	EPA-8151	ND	1	1	UG/L	6/27/2008	ARI
2,4,5-T	EPA-8151	ND	1	1	UG/L	6/27/2008	ARI
Dinoseb	EPA-8151	ND	2	1	UG/L	6/27/2008	ARI
Dicamba	EPA-8151	ND	1	1	UG/L	6/27/2008	ARI
2,4-D	EPA-8151	ND	1	1	UG/L	6/27/2008	ARI
2,4-DB	EPA-8151	ND	5.0	1	UG/L	6/27/2008	ARI
Dalapon	EPA-8151	ND	1	1	UG/L	6/27/2008	ARI
MCPA	EPA-8151	ND	250	1	UG/L	6/27/2008	ARI
Dichloroprop	EPA-8151	ND	1	1	UG/L	6/27/2008	ARI
MCPP	EPA-8151	ND	250	1	UG/L	6/27/2008	ARI
Carbaryl	EPA-8321B	ND	0.01	1	UG/L	7/1/2008	PAL
Arsenic	EPA-200.8	10	0.5	1	UG/L	6/24/2008	ARI
Cadmium	EPA-200.8	ND	0.2	1	UG/L	6/24/2008	ARI
Chromium	EPA-200.8	16	0.5	1	UG/L	6/24/2008	ARI
Copper	EPA-200.8	3.6	0.5	1	UG/L	6/24/2008	ARI
Lead	EPA-200.8	ND	1	1	UG/L	6/24/2008	ARI
Mercury	EPA-7470	ND	0.020	1	UG/L	6/23/2008	ARI
Nickel	EPA-200.8	5.2	0.5	1	UG/L	6/24/2008	ARI
Zinc	EPA-200.8	7	4	1	UG/L	6/24/2008	ARI

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CLIENT SAMPLE ID: 6/17/2008 12:00 MW-5
CCIL SAMPLE #: -05

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY

* DATA REPORTED BELOW THE PRACTICAL QUANTITATION LIMIT AND ABOVE THE MINIMUM DETECTION LIMIT.

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES.

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY:

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CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: ANACORTES
CLIENT SAMPLE ID: 6/17/2008 11:00 MW-6
CCIL SAMPLE #: -06

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	ND	50	1	UG/L	6/19/2008	DLC
TPH-Diesel Range	NWTPH-DX W/CLEANUP	ND	130	1	UG/L	6/18/2008	EBS
TPH-Oil Range	NWTPH-DX W/CLEANUP	ND	250	1	UG/L	6/18/2008	EBS
Tetrachloroethylene	EPA-8260 SIM	ND	0.02	1	UG/L	6/20/2008	GAP
Dichlorodifluoromethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Chloromethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Vinyl Chloride	EPA-8260	ND	0.2	1	UG/L	6/19/2008	GAP
Bromomethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Chloroethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Trichlorofluoromethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Acetone	EPA-8260	ND	25	1	UG/L	6/19/2008	GAP
1,1-Dichloroethene	EPA-8260	ND	1	1	UG/L	6/19/2008	GAP
Methylene Chloride	EPA-8260	ND	5	1	UG/L	6/19/2008	GAP
Acrylonitrile	EPA-8260	ND	1	1	UG/L	6/19/2008	GAP
Methyl T-Butyl Ether	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Trans-1,2-Dichloroethene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,1-Dichloroethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
2-Butanone	EPA-8260	ND	10	1	UG/L	6/19/2008	GAP
Cis-1,2-Dichloroethene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
2,2-Dichloropropane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Bromochloromethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Chloroform	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,1,1-Trichloroethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,1-Dichloropropene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Carbon Tetrachloride	EPA-8260	ND	1.6	1	UG/L	6/19/2008	GAP
1,2-Dichloroethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Benzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Trichloroethene	EPA-8260	ND	1	1	UG/L	6/19/2008	GAP
1,2-Dichloropropane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Dibromomethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Bromodichloromethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Trans-1,3-Dichloropropene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
4-Methyl-2-Pentanone	EPA-8260	ND	10	1	UG/L	6/19/2008	GAP

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CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: ANACORTES
CLIENT SAMPLE ID: 6/17/2008 11:00 MW-6
CCIL SAMPLE #: -06

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Toluene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Cis-1,3-Dichloropropene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,1,2-Trichloroethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
2-Hexanone	EPA-8260	ND	10	1	UG/L	6/19/2008	GAP
1,3-Dichloropropane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Tetrachloroethylene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Dibromochloromethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,2-Dibromoethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Chlorobenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,1,1,2-Tetrachloroethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Ethylbenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
m,p-Xylene	EPA-8260	ND	4	1	UG/L	6/19/2008	GAP
Styrene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
o-Xylene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Bromoform	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Isopropylbenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,1,2,2-Tetrachloroethane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,2,3-Trichloropropane	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Bromobenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
N-Propyl Benzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
2-Chlorotoluene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,3,5-Trimethylbenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
4-Chlorotoluene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
T-Butyl Benzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,2,4-Trimethylbenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
S-Butyl Benzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
P-Isopropyltoluene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,3 Dichlorobenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,4-Dichlorobenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
N-Butylbenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,2-Dichlorobenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,2-Dibromo 3-Chloropropane	EPA-8260	ND	10	1	UG/L	6/19/2008	GAP
1,2,4-Trichlorobenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP

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CCIL SAMPLE #: -06

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Hexachlorobutadiene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Naphthalene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
1,2,3-Trichlorobenzene	EPA-8260	ND	2	1	UG/L	6/19/2008	GAP
Naphthalene	EPA-8270 SIM	ND	0.02	1	UG/L	6/20/2008	RAL
1-Methylnaphthalene	EPA-8270 SIM	ND	0.02	1	UG/L	6/20/2008	RAL
2-Methylnaphthalene	EPA-8270 SIM	ND	0.02	1	UG/L	6/20/2008	RAL
Acenaphthylene	EPA-8270 SIM	ND	0.02	1	UG/L	6/20/2008	RAL
Acenaphthene	EPA-8270 SIM	ND	0.02	1	UG/L	6/20/2008	RAL
Fluorene	EPA-8270 SIM	ND	0.02	1	UG/L	6/20/2008	RAL
Phenanthrene	EPA-8270 SIM	ND	0.02	1	UG/L	6/20/2008	RAL
Anthracene	EPA-8270 SIM	ND	0.02	1	UG/L	6/20/2008	RAL
Fluoranthene	EPA-8270 SIM	ND	0.02	1	UG/L	6/20/2008	RAL
Pyrene	EPA-8270 SIM	0.03	0.02	1	UG/L	6/20/2008	RAL
Benzo[A]Anthracene	EPA-8270 SIM	ND	0.018	1	UG/L	6/20/2008	RAL
Chrysene	EPA-8270 SIM	ND	0.018	1	UG/L	6/20/2008	RAL
Benzo[B]Fluoranthene	EPA-8270 SIM	ND	0.018	1	UG/L	6/20/2008	RAL
Benzo[K]Fluoranthene	EPA-8270 SIM	ND	0.018*	1	UG/L	6/20/2008	RAL
Benzo(A)Pyrene	EPA-8270 SIM	ND	0.018*	1	UG/L	6/20/2008	RAL
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	ND	0.018	1	UG/L	6/20/2008	RAL
Dibenz[A,H]Anthracene	EPA-8270 SIM	ND	0.018	1	UG/L	6/20/2008	RAL
Benzo[G,H,I]Perylene	EPA-8270 SIM	ND	0.018	1	UG/L	6/20/2008	RAL
Pyridine	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
N-Nitrosodimethylamine	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Phenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Aniline	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Bis(2-Chloroethyl)Ether	EPA-8270	ND	0.53*	1	UG/L	6/19/2008	RAL
2-Chlorophenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
1,3-Dichlorobenzene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
1,4-Dichlorobenzene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Benzyl Alcohol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
1,2-Dichlorobenzene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2-Methylphenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Bis(2-Chloroisopropyl)Ether	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL

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DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
4-Methylphenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
N-Nitroso-Di-N-Propylamine	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Hexachloroethane	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Nitrobenzene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Isophorone	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2-Nitrophenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2,4-Dimethylphenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Benzoic Acid	EPA-8270	ND	10	1	UG/L	6/19/2008	RAL
Bis(2-Chloroethoxy)Methane	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2,4-Dichlorophenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
1,2,4-Trichlorobenzene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Naphthalene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
4-Chloroaniline	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2,6-Dichlorophenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Hexachlorobutadiene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
4-Chloro-3-Methylphenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2-Methylnaphthalene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
1-Methylnaphthalene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Hexachlorocyclopentadiene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2,4,6-Trichlorophenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2,4,5-Trichlorophenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2-Chloronaphthalene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2-Nitroaniline	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Acenaphthylene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Dimethylphthalate	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2,6-Dinitrotoluene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Acenaphthene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
3-Nitroaniline	EPA-8270	ND	5	1	UG/L	6/19/2008	RAL
2,4-Dinitrophenol	EPA-8270	ND	10	1	UG/L	6/19/2008	RAL
4-Nitrophenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Dibenzofuran	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2,4-Dinitrotoluene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
2,3,4,6-Tetrachlorophenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL

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SEATTLE, WA 98101

DATE: 7/23/2008
CCIL JOB #: 0806108
DATE RECEIVED: 6/18/2008
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: ANACORTES
CLIENT SAMPLE ID: 6/17/2008 11:00 MW-6
CCIL SAMPLE #: -06

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Diethylphthalate	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Fluorene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
4-Chlorophenyl-Phenylether	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
4-Nitroaniline	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
4,6-Dinitro-2-Methylphenol	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
N-Nitrosodiphenylamine	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Azobenzene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
4-Bromophenyl-Phenylether	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Hexachlorobenzene	EPA-8270	ND	1	1	UG/L	6/19/2008	RAL
Pentachlorophenol	EPA-8270	ND	5	1	UG/L	6/19/2008	RAL
Phenanthrene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Anthracene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Carbazole	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Di-N-Butylphthalate	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Fluoranthene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Pyrene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Butylbenzylphthalate	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
3,3'-Dichlorobenzidine	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Benzo[A]Anthracene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Chrysene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Bis(2-Ethylhexyl)Phthalate	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Di-N-Octylphthalate	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Benzo[B]Fluoranthene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Benzo[K]Fluoranthene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Benzo[A]Pyrene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Indeno[1,2,3-Cd]Pyrene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Dibenz[A,H]Anthracene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
Benzo[G,H,I]Perylene	EPA-8270	ND	2	1	UG/L	6/19/2008	RAL
A-BHC	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
G-BHC	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
B-BHC	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
Heptachlor	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
D-BHC	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL

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CLIENT SAMPLE ID: 6/17/2008 11:00 MW-6
CCIL SAMPLE #: -06

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Aldrin	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
Heptachlor Epoxide	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
Chlordane	EPA-8081	ND	0.1	1	UG/L	6/20/2008	RAL
Endosulfan I	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
4,4' DDE	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
Dieldrin	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
Endrin	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
4,4' -DDD	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
Endosulfan II	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
4,4'-DDT	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
Endrin Aldehyde	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
Endosulfan Sulfate	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
Methoxychlor	EPA-8081	ND	0.05	1	UG/L	6/20/2008	RAL
Toxaphene	EPA-8081	ND	2	1	UG/L	6/20/2008	RAL
2,4,5-TP (Silvex)	EPA-8151	ND	1	1	UG/L	6/27/2008	ARI
2,4,5-T	EPA-8151	ND	1	1	UG/L	6/27/2008	ARI
Dinoseb	EPA-8151	ND	2	1	UG/L	6/27/2008	ARI
Dicamba	EPA-8151	ND	1	1	UG/L	6/27/2008	ARI
2,4-D	EPA-8151	ND	1	1	UG/L	6/27/2008	ARI
2,4-DB	EPA-8151	ND	5.0	1	UG/L	6/27/2008	ARI
Dalapon	EPA-8151	ND	1	1	UG/L	6/27/2008	ARI
MCPA	EPA-8151	ND	250	1	UG/L	6/27/2008	ARI
Dichloroprop	EPA-8151	ND	1	1	UG/L	6/27/2008	ARI
MCPP	EPA-8151	ND	250	1	UG/L	6/27/2008	ARI
Carbaryl	EPA-8321B	ND	0.01	1	UG/L	7/1/2008	PAL
Arsenic	EPA-200.8	4.9	0.5	1	UG/L	6/24/2008	ARI
Cadmium	EPA-200.8	ND	0.2	1	UG/L	6/24/2008	ARI
Chromium	EPA-200.8	12	0.5	1	UG/L	6/24/2008	ARI
Copper	EPA-200.8	6.9	0.5	1	UG/L	6/24/2008	ARI
Lead	EPA-200.8	ND	1	1	UG/L	6/24/2008	ARI
Mercury	EPA-7470	0.034	0.020	1	UG/L	6/23/2008	ARI
Nickel	EPA-200.8	3.3	0.5	1	UG/L	6/24/2008	ARI
Zinc	EPA-200.8	6	4	1	UG/L	6/24/2008	ARI

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CCIL SAMPLE #: -06

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY

* DATA REPORTED BELOW THE PRACTICAL QUANTITATION LIMIT AND ABOVE THE MINIMUM DETECTION LIMIT.

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES.

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY:

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CLIENT PROJECT ID: ANACORTES

QUALITY CONTROL RESULTS

SURROGATE RECOVERY

CCIL SAMPLE ID	METHOD	SUR ID	SPIKE AMOUNT	% RECV
0806108-01	NWTPH-GX	TFT	0.5 PPM	80
0806108-01	NWTPH-DX W/CLEANUP	C25	5 PPM	76
0806108-01	EPA-8260 SIM	1,2-Dichloroethane-d4	0.8 PPB	122
0806108-01	EPA-8260	1,2-Dichloroethane-d4	20 PPB	112
0806108-01	EPA-8260	Toluene-d8	20 PPB	101
0806108-01	EPA-8260	4-Bromofluorobenzene	20 PPB	103
0806108-01	EPA-8270 SIM	Terphenyl-d14	1 PPM	86
0806108-01	EPA-8270	2-Fluorophenol	50 PPB	53
0806108-01	EPA-8270	Phenol-d6	50 PPB	33
0806108-01	EPA-8270	Nitrobenzene-d5	25 PPB	90
0806108-01	EPA-8270	2-Fluorobiphenyl	25 PPB	86
0806108-01	EPA-8270	2,4,6-Tribromophenol	50 PPB	103
0806108-01	EPA-8270	Terphenyl-d14	25 PPB	96
0806108-01	EPA-8081	TCMX	0.5 PPB	74
0806108-01	EPA-8081	DCB	0.5 PPB	70
0806108-01	EPA-8151	2,4-Dichlorophenylacetic Acid	100 %	79
0806108-02	NWTPH-GX	TFT	0.5 PPM	93
0806108-02	NWTPH-DX W/CLEANUP	C25	5 PPM	84
0806108-02	EPA-8260 SIM	1,2-Dichloroethane-d4	0.8 PPB	105
0806108-02	EPA-8260	1,2-Dichloroethane-d4	20 PPB	109
0806108-02	EPA-8260	Toluene-d8	20 PPB	99
0806108-02	EPA-8260	4-Bromofluorobenzene	20 PPB	104
0806108-02	EPA-8270 SIM	Terphenyl-d14	1 PPM	85
0806108-02	EPA-8270	2-Fluorophenol	50 PPB	56
0806108-02	EPA-8270	Phenol-d6	50 PPB	35
0806108-02	EPA-8270	Nitrobenzene-d5	25 PPB	91
0806108-02	EPA-8270	2-Fluorobiphenyl	25 PPB	90
0806108-02	EPA-8270	2,4,6-Tribromophenol	50 PPB	115
0806108-02	EPA-8270	Terphenyl-d14	25 PPB	108
0806108-02	EPA-8081	TCMX	0.5 PPB	80
0806108-02	EPA-8081	DCB	0.5 PPB	85
0806108-02	EPA-8151	2,4-Dichlorophenylacetic Acid	100 %	82
0806108-03	NWTPH-GX	TFT	0.5 PPM	74
0806108-03	NWTPH-DX W/CLEANUP	C25	5 PPM	86

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QUALITY CONTROL RESULTS

SURROGATE RECOVERY

CCIL SAMPLE ID	METHOD	SUR ID	SPIKE AMOUNT	% RECV
0806108-03	EPA-8260 SIM	1,2-Dichloroethane-d4	0.8 PPB	113
0806108-03	EPA-8260	1,2-Dichloroethane-d4	20 PPB	114
0806108-03	EPA-8260	Toluene-d8	20 PPB	103
0806108-03	EPA-8260	4-Bromofluorobenzene	20 PPB	97
0806108-03	EPA-8270 SIM	Terphenyl-d14	1 PPM	95
0806108-03	EPA-8270	2-Fluorophenol	50 PPB	62
0806108-03	EPA-8270	Phenol-d6	50 PPB	37
0806108-03	EPA-8270	Nitrobenzene-d5	25 PPB	101
0806108-03	EPA-8270	2-Fluorobiphenyl	25 PPB	101
0806108-03	EPA-8270	2,4,6-Tribromophenol	50 PPB	127
0806108-03	EPA-8270	Terphenyl-d14	25 PPB	114
0806108-03	EPA-8081	TCMX	0.5 PPB	86
0806108-03	EPA-8081	DCB	0.5 PPB	92
0806108-03	EPA-8151	2,4-Dichlorophenylacetic Acid	100 %	80
0806108-04	NWTPH-GX	TFT	0.5 PPM	74
0806108-04	NWTPH-DX W/CLEANUP	C25	5 PPM	75
0806108-04	EPA-8260 SIM	1,2-Dichloroethane-d4	0.8 PPB	116
0806108-04	EPA-8260	1,2-Dichloroethane-d4	20 PPB	105
0806108-04	EPA-8260	Toluene-d8	20 PPB	100
0806108-04	EPA-8260	4-Bromofluorobenzene	20 PPB	102
0806108-04	EPA-8270 SIM	Terphenyl-d14	1 PPM	69
0806108-04	EPA-8270	2-Fluorophenol	50 PPB	41
0806108-04	EPA-8270	Phenol-d6	50 PPB	25
0806108-04	EPA-8270	Nitrobenzene-d5	25 PPB	68
0806108-04	EPA-8270	2-Fluorobiphenyl	25 PPB	72
0806108-04	EPA-8270	2,4,6-Tribromophenol	50 PPB	94
0806108-04	EPA-8270	Terphenyl-d14	25 PPB	83
0806108-04	EPA-8081	TCMX	0.5 PPB	78
0806108-04	EPA-8081	DCB	0.5 PPB	55
0806108-04	EPA-8151	2,4-Dichlorophenylacetic Acid	100 %	76
0806108-05	NWTPH-GX	TFT	0.5 PPM	84
0806108-05	NWTPH-DX W/CLEANUP	C25	5 PPM	89
0806108-05	EPA-8260 SIM	1,2-Dichloroethane-d4	0.8 PPB	126
0806108-05	EPA-8260	1,2-Dichloroethane-d4	20 PPB	112

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CCIL SAMPLE ID	METHOD	SUR ID	SPIKE AMOUNT	% RECV
0806108-05	EPA-8260	Toluene-d8	20 PPB	101
0806108-05	EPA-8260	4-Bromofluorobenzene	20 PPB	102
0806108-05	EPA-8270 SIM	Terphenyl-d14	1 PPM	86
0806108-05	EPA-8270	2-Fluorophenol	50 PPB	58
0806108-05	EPA-8270	Phenol-d6	50 PPB	37
0806108-05	EPA-8270	Nitrobenzene-d5	25 PPB	93
0806108-05	EPA-8270	2-Fluorobiphenyl	25 PPB	95
0806108-05	EPA-8270	2,4,6-Tribromophenol	50 PPB	129
0806108-05	EPA-8270	Terphenyl-d14	25 PPB	104
0806108-05	EPA-8081	TCMX	0.5 PPB	83
0806108-05	EPA-8081	DCB	0.5 PPB	88
0806108-05	EPA-8151	2,4-Dichlorophenylacetic Acid	100 %	62
0806108-06	NWTPH-GX	TFT	0.5 PPM	95
0806108-06	NWTPH-DX W/CLEANUP	C25	5 PPM	69
0806108-06	EPA-8260 SIM	1,2-Dichloroethane-d4	0.8 PPB	80
0806108-06	EPA-8260	1,2-Dichloroethane-d4	20 PPB	116
0806108-06	EPA-8260	Toluene-d8	20 PPB	102
0806108-06	EPA-8260	4-Bromofluorobenzene	20 PPB	102
0806108-06	EPA-8270 SIM	Terphenyl-d14	1 PPM	85
0806108-06	EPA-8270	2-Fluorophenol	50 PPB	48
0806108-06	EPA-8270	Phenol-d6	50 PPB	32
0806108-06	EPA-8270	Nitrobenzene-d5	25 PPB	91
0806108-06	EPA-8270	2-Fluorobiphenyl	25 PPB	88
0806108-06	EPA-8270	2,4,6-Tribromophenol	50 PPB	102
0806108-06	EPA-8270	Terphenyl-d14	25 PPB	92
0806108-06	EPA-8081	TCMX	0.5 PPB	86
0806108-06	EPA-8081	DCB	0.5 PPB	75
0806108-06	EPA-8151	2,4-Dichlorophenylacetic Acid	100 %	69

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QUALITY CONTROL RESULTS

BLANK RESULTS

METHOD	RESULT	ASSOCIATED SAMPLES
NWTPH-GX (TPH-Volatile Range)	ND(<50)	0806108 -01 to 06
NWTPH-DX (TPH-Diesel Range)	ND(<130)	0806108 -01 to 06
NWTPH-DX (TPH-Oil Range)	ND(<250)	0806108 -01 to 06
EPA-8260 SIM (Tetrachloroethylene)	ND(<0.02)	0806108 -01 to 06
EPA-8260 (Dichlorodifluoromethane)	ND(<2)	0806108 -01 to 06
EPA-8260 (Chloromethane)	ND(<2)	0806108 -01 to 06
EPA-8260 (Vinyl Chloride)	ND(<0.2)	0806108 -01 to 06
EPA-8260 (Bromomethane)	ND(<2)	0806108 -01 to 06
EPA-8260 (Chloroethane)	ND(<2)	0806108 -01 to 06
EPA-8260 (Trichlorofluoromethane)	ND(<2)	0806108 -01 to 06
EPA-8260 (Acetone)	ND(<25)	0806108 -01 to 06
EPA-8260 (1,1-Dichloroethene)	ND(<1)	0806108 -01 to 06
EPA-8260 (Methylene Chloride)	ND(<5)	0806108 -01 to 06
EPA-8260 (Acrylonitrile)	ND(<10)	0806108 -01 to 06
EPA-8260 (Methyl T-Butyl Ether)	ND(<2)	0806108 -01 to 06
EPA-8260 (Trans-1,2-Dichloroethene)	ND(<2)	0806108 -01 to 06
EPA-8260 (1,1-Dichloroethane)	ND(<2)	0806108 -01 to 06
EPA-8260 (2-Butanone)	ND(<10)	0806108 -01 to 06
EPA-8260 (Cis-1,2-Dichloroethene)	ND(<2)	0806108 -01 to 06
EPA-8260 (2,2-Dichloropropane)	ND(<2)	0806108 -01 to 06
EPA-8260 (Bromochloromethane)	ND(<2)	0806108 -01 to 06
EPA-8260 (Chloroform)	ND(<2)	0806108 -01 to 06
EPA-8260 (1,1,1-Trichloroethane)	ND(<2)	0806108 -01 to 06
EPA-8260 (1,1-Dichloropropene)	ND(<2)	0806108 -01 to 06
EPA-8260 (Carbon Tetrachloride)	ND(<1.6)	0806108 -01 to 06
EPA-8260 (1,2-Dichloroethane)	ND(<2)	0806108 -01 to 06
EPA-8260 (Benzene)	ND(<2)	0806108 -01 to 06
EPA-8260 (Trichloroethene)	ND(<1)	0806108 -01 to 06
EPA-8260 (1,2-Dichloropropane)	ND(<2)	0806108 -01 to 06
EPA-8260 (Dibromomethane)	ND(<2)	0806108 -01 to 06
EPA-8260 (Bromodichloromethane)	ND(<2)	0806108 -01 to 06
EPA-8260 (Trans-1,3-Dichloropropene)	ND(<2)	0806108 -01 to 06
EPA-8260 (4-Methyl-2-Pentanone)	ND(<10)	0806108 -01 to 06

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CERTIFICATE OF ANALYSIS

CLIENT: GEOENGINEERS, INC.
600 STEWART ST. PLAZA 600 BUILDING, SUITE 1700
SEATTLE, WA 98101

DATE: 7/23/2008
CCIL JOB #: 0806108
DATE RECEIVED: 6/18/2008
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: ANACORTES

QUALITY CONTROL RESULTS

BLANK RESULTS

METHOD	RESULT	ASSOCIATED SAMPLES
EPA-8260 (Toluene)	ND(<2)	0806108 -01 to 06
EPA-8260 (Cis-1,3-Dichloropropene)	ND(<2)	0806108 -01 to 06
EPA-8260 (1,1,2-Trichloroethane)	ND(<2)	0806108 -01 to 06
EPA-8260 (2-Hexanone)	ND(<10)	0806108 -01 to 06
EPA-8260 (1,3-Dichloropropane)	ND(<2)	0806108 -01 to 06
EPA-8260 (Tetrachloroethylene)	ND(<2)	0806108 -01 to 06
EPA-8260 (Dibromochloromethane)	ND(<2)	0806108 -01 to 06
EPA-8260 (1,2-Dibromoethane)	ND(<2)	0806108 -01 to 06
EPA-8260 (Chlorobenzene)	ND(<2)	0806108 -01 to 06
EPA-8260 (1,1,1,2-Tetrachloroethane)	ND(<2)	0806108 -01 to 06
EPA-8260 (Ethylbenzene)	ND(<2)	0806108 -01 to 06
EPA-8260 (m,p-Xylene)	ND(<4)	0806108 -01 to 06
EPA-8260 (Styrene)	ND(<2)	0806108 -01 to 06
EPA-8260 (o-Xylene)	ND(<2)	0806108 -01 to 06
EPA-8260 (Bromoform)	ND(<2)	0806108 -01 to 06
EPA-8260 (Isopropylbenzene)	ND(<2)	0806108 -01 to 06
EPA-8260 (1,1,2,2-Tetrachloroethane)	ND(<2)	0806108 -01 to 06
EPA-8260 (1,2,3-Trichloropropane)	ND(<2)	0806108 -01 to 06
EPA-8260 (Bromobenzene)	ND(<2)	0806108 -01 to 06
EPA-8260 (N-Propyl Benzene)	ND(<2)	0806108 -01 to 06
EPA-8260 (2-Chlorotoluene)	ND(<2)	0806108 -01 to 06
EPA-8260 (1,3,5-Trimethylbenzene)	ND(<2)	0806108 -01 to 06
EPA-8260 (4-Chlorotoluene)	ND(<2)	0806108 -01 to 06
EPA-8260 (T-Butyl Benzene)	ND(<2)	0806108 -01 to 06
EPA-8260 (1,2,4-Trimethylbenzene)	ND(<2)	0806108 -01 to 06
EPA-8260 (S-Butyl Benzene)	ND(<2)	0806108 -01 to 06
EPA-8260 (P-Isopropyltoluene)	ND(<2)	0806108 -01 to 06
EPA-8260 (1,3 Dichlorobenzene)	ND(<2)	0806108 -01 to 06
EPA-8260 (1,4-Dichlorobenzene)	ND(<2)	0806108 -01 to 06
EPA-8260 (N-Butylbenzene)	ND(<2)	0806108 -01 to 06
EPA-8260 (1,2-Dichlorobenzene)	ND(<2)	0806108 -01 to 06
EPA-8260 (1,2-Dibromo 3-Chloropropane)	ND(<10)	0806108 -01 to 06
EPA-8260 (1,2,4-Trichlorobenzene)	ND(<2)	0806108 -01 to 06

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METHOD	RESULT	ASSOCIATED SAMPLES
EPA-8260 (Hexachlorobutadiene)	ND(<2)	0806108 -01 to 06
EPA-8260 (Naphthalene)	ND(<2)	0806108 -01 to 06
EPA-8260 (1,2,3-Trichlorobenzene)	ND(<2)	0806108 -01 to 06
EPA-8270 SIM (Naphthalene)	ND(<0.02)	0806108 -01 to 06
EPA-8270 SIM (1-Methylnaphthalene)	ND(<0.02)	0806108 -01 to 06
EPA-8270 SIM (2-Methylnaphthalene)	ND(<0.02)	0806108 -01 to 06
EPA-8270 SIM (Acenaphthylene)	ND(<0.02)	0806108 -01 to 06
EPA-8270 SIM (Acenaphthene)	ND(<0.02)	0806108 -01 to 06
EPA-8270 SIM (Fluorene)	ND(<0.02)	0806108 -01 to 06
EPA-8270 SIM (Phenanthrene)	ND(<0.02)	0806108 -01 to 06
EPA-8270 SIM (Anthracene)	ND(<0.02)	0806108 -01 to 06
EPA-8270 SIM (Fluoranthene)	ND(<0.02)	0806108 -01 to 06
EPA-8270 SIM (Pyrene)	ND(<0.02)	0806108 -01 to 06
EPA-8270 SIM (Benzo[A]Anthracene)	ND(<0.018)	0806108 -01 to 06
EPA-8270 SIM (Chrysene)	ND(<0.018)	0806108 -01 to 06
EPA-8270 SIM (Benzo[B]Fluoranthene)	ND(<0.018)	0806108 -01 to 06
EPA-8270 SIM (Benzo[K]Fluoranthene)	ND(<0.018)*	0806108 -01 to 06
EPA-8270 SIM (Benzo(A)Pyrene)	ND(<0.018)*	0806108 -01 to 06
EPA-8270 SIM (Indeno[1,2,3-Cd]Pyrene)	ND(<0.018)	0806108 -01 to 06
EPA-8270 SIM (Dibenz[A,H]Anthracene)	ND(<0.018)	0806108 -01 to 06
EPA-8270 SIM (Benzo[G,H,I]Perylene)	ND(<0.018)	0806108 -01 to 06
EPA-8270 (Pyridine)	ND(<2)	0806108 -01 to 06
EPA-8270 (N-Nitrosodimethylamine)	ND(<2)	0806108 -01 to 06
EPA-8270 (Phenol)	ND(<2)	0806108 -01 to 06
EPA-8270 (Aniline)	ND(<2)	0806108 -01 to 06
EPA-8270 (Bis(2-Chloroethyl)Ether)	ND(<0.53)*	0806108 -01 to 06
EPA-8270 (2-Chlorophenol)	ND(<2)	0806108 -01 to 06
EPA-8270 (1,3-Dichlorobenzene)	ND(<2)	0806108 -01 to 06
EPA-8270 (1,4-Dichlorobenzene)	ND(<2)	0806108 -01 to 06
EPA-8270 (Benzyl Alcohol)	ND(<2)	0806108 -01 to 06
EPA-8270 (1,2-Dichlorobenzene)	ND(<2)	0806108 -01 to 06
EPA-8270 (2-Methylphenol)	ND(<2)	0806108 -01 to 06
EPA-8270 (Bis(2-Chloroisopropyl)Ether)	ND(<2)	0806108 -01 to 06

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QUALITY CONTROL RESULTS

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METHOD	RESULT	ASSOCIATED SAMPLES
EPA-8270 (4-Methylphenol)	ND(<2)	0806108 -01 to 06
EPA-8270 (N-Nitroso-Di-N-Propylamine)	ND(<2)	0806108 -01 to 06
EPA-8270 (Hexachloroethane)	ND(<2)	0806108 -01 to 06
EPA-8270 (Nitrobenzene)	ND(<2)	0806108 -01 to 06
EPA-8270 (Isophorone)	ND(<2)	0806108 -01 to 06
EPA-8270 (2-Nitrophenol)	ND(<2)	0806108 -01 to 06
EPA-8270 (2,4-Dimethylphenol)	ND(<2)	0806108 -01 to 06
EPA-8270 (Benzoic Acid)	ND(<10)	0806108 -01 to 06
EPA-8270 (Bis(2-Chloroethoxy)Methane)	ND(<2)	0806108 -01 to 06
EPA-8270 (2,4-Dichlorophenol)	ND(<2)	0806108 -01 to 06
EPA-8270 (1,2,4-Trichlorobenzene)	ND(<2)	0806108 -01 to 06
EPA-8270 (Naphthalene)	ND(<2)	0806108 -01 to 06
EPA-8270 (4-Chloroaniline)	ND(<2)	0806108 -01 to 06
EPA-8270 (2,6-Dichlorophenol)	ND(<2)	0806108 -01 to 06
EPA-8270 (Hexachlorobutadiene)	ND(<2)	0806108 -01 to 06
EPA-8270 (4-Chloro-3-Methylphenol)	ND(<2)	0806108 -01 to 06
EPA-8270 (2-Methylnaphthalene)	ND(<2)	0806108 -01 to 06
EPA-8270 (1-Methylnaphthalene)	ND(<2)	0806108 -01 to 06
EPA-8270 (Hexachlorocyclopentadiene)	ND(<2)	0806108 -01 to 06
EPA-8270 (2,4,6-Trichlorophenol)	ND(<2)	0806108 -01 to 06
EPA-8270 (2,4,5-Trichlorophenol)	ND(<2)	0806108 -01 to 06
EPA-8270 (2-Chloronaphthalene)	ND(<2)	0806108 -01 to 06
EPA-8270 (2-Nitroaniline)	ND(<2)	0806108 -01 to 06
EPA-8270 (Acenaphthylene)	ND(<2)	0806108 -01 to 06
EPA-8270 (Dimethylphthalate)	ND(<2)	0806108 -01 to 06
EPA-8270 (2,6-Dinitrotoluene)	ND(<2)	0806108 -01 to 06
EPA-8270 (Acenaphthene)	ND(<2)	0806108 -01 to 06
EPA-8270 (3-Nitroaniline)	ND(<5)	0806108 -01 to 06
EPA-8270 (2,4-Dinitrophenol)	ND(<10)	0806108 -01 to 06
EPA-8270 (4-Nitrophenol)	ND(<2)	0806108 -01 to 06
EPA-8270 (Dibenzofuran)	ND(<2)	0806108 -01 to 06
EPA-8270 (2,4-Dinitrotoluene)	ND(<2)	0806108 -01 to 06
EPA-8270 (2,3,4,6-Tetrachlorophenol)	ND(<2)	0806108 -01 to 06

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QUALITY CONTROL RESULTS

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METHOD	RESULT	ASSOCIATED SAMPLES
EPA-8270 (Diethylphthalate)	ND(<2)	0806108 -01 to 06
EPA-8270 (Fluorene)	ND(<2)	0806108 -01 to 06
EPA-8270 (4-Chlorophenyl-Phenylether)	ND(<2)	0806108 -01 to 06
EPA-8270 (4-Nitroaniline)	ND(<2)	0806108 -01 to 06
EPA-8270 (4,6-Dinitro-2-Methylphenol)	ND(<2)	0806108 -01 to 06
EPA-8270 (N-Nitrosodiphenylamine)	ND(<2)	0806108 -01 to 06
EPA-8270 (Azobenzene)	ND(<2)	0806108 -01 to 06
EPA-8270 (4-Bromophenyl-Phenylether)	ND(<2)	0806108 -01 to 06
EPA-8270 (Hexachlorobenzene)	ND(<2)	0806108 -01 to 06
EPA-8270 (Pentachlorophenol)	ND(<5)	0806108 -01 to 06
EPA-8270 (Phenanthrene)	ND(<2)	0806108 -01 to 06
EPA-8270 (Anthracene)	ND(<2)	0806108 -01 to 06
EPA-8270 (Carbazole)	ND(<2)	0806108 -01 to 06
EPA-8270 (Di-N-Butylphthalate)	ND(<2)	0806108 -01 to 06
EPA-8270 (Fluoranthene)	ND(<2)	0806108 -01 to 06
EPA-8270 (Pyrene)	ND(<2)	0806108 -01 to 06
EPA-8270 (Butylbenzylphthalate)	ND(<2)	0806108 -01 to 06
EPA-8270 (3,3'-Dichlorobenzidine)	ND(<2)	0806108 -01 to 06
EPA-8270 (Benzo[A]Anthracene)	ND(<2)	0806108 -01 to 06
EPA-8270 (Chrysene)	ND(<2)	0806108 -01 to 06
EPA-8270 (Bis(2-Ethylhexyl)Phthalate)	ND(<2)	0806108 -01 to 06
EPA-8270 (Di-N-Octylphthalate)	ND(<2)	0806108 -01 to 06
EPA-8270 (Benzo[B]Fluoranthene)	ND(<2)	0806108 -01 to 06
EPA-8270 (Benzo[K]Fluoranthene)	ND(<2)	0806108 -01 to 06
EPA-8270 (Benzo[A]Pyrene)	ND(<2)	0806108 -01 to 06
EPA-8270 (Indeno[1,2,3-Cd]Pyrene)	ND(<2)	0806108 -01 to 06
EPA-8270 (Dibenz[A,H]Anthracene)	ND(<2)	0806108 -01 to 06
EPA-8270 (Benzo[G,H,I]Perylene)	ND(<2)	0806108 -01 to 06
EPA-8081 (A-BHC)	ND(<0.05)	0806108 -01 to 06
EPA-8081 (G-BHC)	ND(<0.05)	0806108 -01 to 06
EPA-8081 (B-BHC)	ND(<0.05)	0806108 -01 to 06
EPA-8081 (Heptachlor)	ND(<0.05)	0806108 -01 to 06
EPA-8081 (D-BHC)	ND(<0.05)	0806108 -01 to 06

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METHOD	RESULT	ASSOCIATED SAMPLES
EPA-8081 (Aldrin)	ND(<0.05)	0806108 -01 to 06
EPA-8081 (Heptachlor Epoxide)	ND(<0.05)	0806108 -01 to 06
EPA-8081 (Chlordane)	ND(<0.1)	0806108 -01 to 06
EPA-8081 (Endosulfan I)	ND(<0.05)	0806108 -01 to 06
EPA-8081 (4,4' DDE)	ND(<0.05)	0806108 -01 to 06
EPA-8081 (Dieldrin)	ND(<0.05)	0806108 -01 to 06
EPA-8081 (Endrin)	ND(<0.05)	0806108 -01 to 06
EPA-8081 (4,4' -DDD)	ND(<0.05)	0806108 -01 to 06
EPA-8081 (Endosulfan II)	ND(<0.05)	0806108 -01 to 06
EPA-8081 (4,4'-DDT)	ND(<0.05)	0806108 -01 to 06
EPA-8081 (Endrin Aldehyde)	ND(<0.05)	0806108 -01 to 06
EPA-8081 (Endosulfan Sulfate)	ND(<0.05)	0806108 -01 to 06
EPA-8081 (Methoxychlor)	ND(<0.05)	0806108 -01 to 06
EPA-8081 (Toxaphene)	ND(<2)	0806108 -01 to 06
EPA-8151 (2,4,5-TP (Silvex))	ND(<0.25)	0806108 -01 to 06
EPA-8151 (2,4,5-T)	ND(<0.25)	0806108 -01 to 06
EPA-8151 (Dinoseb)	ND(<0.5)	0806108 -01 to 06
EPA-8151 (Dicamba)	ND(<0.5)	0806108 -01 to 06
EPA-8151 (2,4-D)	ND(<1.0)	0806108 -01 to 06
EPA-8151 (2,4-DB)	ND(<5.0)	0806108 -01 to 06
EPA-8151 (Dalapon)	ND(<1.0)	0806108 -01 to 06
EPA-8151 (MCPA)	ND(<250)	0806108 -01 to 06
EPA-8151 (Dichloroprop)	ND(<1.0)	0806108 -01 to 06
EPA-8151 (MCPP)	ND(<250)	0806108 -01 to 06
EPA-8321B (Carbaryl)	ND(<0.012)	0806108 -01 to 06
EPA-200.8 (Arsenic)	ND(<0.2)	0806108 -01 to 06
EPA-200.8 (Cadmium)	ND(<0.2)	0806108 -01 to 06
EPA-200.8 (Chromium)	ND(<0.5)	0806108 -01 to 06
EPA-200.8 (Copper)	ND(<0.5)	0806108 -01 to 06
EPA-200.8 (Lead)	ND(<1)	0806108 -01 to 06
EPA-7470 (Mercury)	ND(<0.020)	0806108 -01 to 06
EPA-200.8 (Nickel)	ND(<0.5)	0806108 -01 to 06
EPA-200.8 (Zinc)	ND(<4)	0806108 -01 to 06

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QUALITY CONTROL RESULTS

SPIKE/SPIKE DUPLICATE RESULTS

METHOD	ANALYTE	ASSOCIATED SAMPLES	SPIKE AMOUNT	DILUTION FACTOR	SPIKE RECOVERY	SPIKE DUP RECOVERY	RPD
NWTPH-GX	TPH-Volatile Range	0806108 -01 to 06	500 UG/L	1	81 %	81 %	0
NWTPH-DX	TPH-Diesel Range	0806108 -01 to 06	1250 UG/L	1	82 %	85 %	4
EPA-8260 SIM	1,1-Dichloroethene	0806108 -01 to 06	0.1 UG/L	1	99 %	106 %	7
EPA-8260	1,1-Dichloroethene	0806108 -01 to 06	10 UG/L	1	102 %	105 %	3
EPA-8260	Benzene	0806108 -01 to 06	10 UG/L	1	113 %	112 %	1
EPA-8260	Trichloroethene	0806108 -01 to 06	10 UG/L	1	115 %	112 %	3
EPA-8260	Toluene	0806108 -01 to 06	10 UG/L	1	105 %	104 %	1
EPA-8260	Chlorobenzene	0806108 -01 to 06	10 UG/L	1	101 %	101 %	0
EPA-8270	Phenol	0806108 -01 to 06	50 UG/L	1	37 %	37 %	0
EPA-8270	2-Chlorophenol	0806108 -01 to 06	50 UG/L	1	78 %	81 %	4
EPA-8270	1,4-Dichlorobenzene	0806108 -01 to 06	25 UG/L	1	42 %	46 %	8
EPA-8270	N-Nitroso-Di-N-Propylamine	0806108 -01 to 06	25 UG/L	1	70 %	72 %	3
EPA-8270	1,2,4-Trichlorobenzene	0806108 -01 to 06	25 UG/L	1	46 %	49 %	5
EPA-8270	4-Chloro-3-Methylphenol	0806108 -01 to 06	50 UG/L	1	79 %	81 %	3
EPA-8270	Acenaphthene	0806108 -01 to 06	25 UG/L	1	72 %	77 %	7
EPA-8270	4-Nitrophenol	0806108 -01 to 06	50 UG/L	1	29 %	29 %	1
EPA-8270	2,4-Dinitrotoluene	0806108 -01 to 06	25 UG/L	1	67 %	67 %	1
EPA-8270	Pentachlorophenol	0806108 -01 to 06	50 UG/L	1	76 %	74 %	4
EPA-8270	Pyrene	0806108 -01 to 06	25 UG/L	1	88 %	90 %	2
EPA-8081	G-BHC	0806108 -01 to 06	0.05 UG/L	1	115 %	115 %	0
EPA-8081	Heptachlor	0806108 -01 to 06	0.05 UG/L	1	92 %	87 %	6
EPA-8081	Aldrin	0806108 -01 to 06	0.05 UG/L	1	82 %	73 %	12
EPA-8081	Dieldrin	0806108 -01 to 06	0.13 UG/L	1	124 %	122 %	2
EPA-8081	Endrin	0806108 -01 to 06	0.13 UG/L	1	121 %	121 %	0
EPA-8081	4,4'-DDT	0806108 -01 to 06	0.13 UG/L	1	132 %	130 %	2
EPA-8151	2,4,5-TP (Silvex)	0806108 -01 to 06	1 UG/L	1	93 %	99 %	6
EPA-8151	2,4,5-T	0806108 -01 to 06	0.5 UG/L	1	96 %	101 %	5
EPA-8151	Dinoseb	0806108 -01 to 06	1 UG/L	1	70 %	63 %	10
EPA-8151	Dicamba	0806108 -01 to 06	1 UG/L	1	85 %	90 %	5
EPA-8151	2,4-D	0806108 -01 to 06	2 UG/L	1	69 %	73 %	5
EPA-8151	2,4-DB	0806108 -01 to 06	10 UG/L	1	104 %	116 %	11
EPA-8151	Dalapon	0806108 -01 to 06	2 UG/L	1	42 %	47 %	13
EPA-8151	MCPA	0806108 -01 to 06	500 UG/L	1	74 %	76 %	2

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SPIKE/SPIKE DUPLICATE RESULTS

METHOD	ANALYTE	ASSOCIATED SAMPLES	SPIKE AMOUNT	DILUTION FACTOR	SPIKE RECOVERY	SPIKE DUP RECOVERY	RPD
EPA-8151	Dichloroprop	0806108 -01 to 06	2 UG/L	1	82 %	88 %	7
EPA-8151	MCPP	0806108 -01 to 06	500 UG/L	1	95 %	103 %	8
EPA-8321B	Carbaryl	0806108 -01 to 06	1 UG/L	1	85 %	81 %	4
EPA-200.8	Arsenic	0806108 -01 to 06	25 UG/L	1	102 %	NA	NA
EPA-200.8	Cadmium	0806108 -01 to 06	25 UG/L	1	100 %	NA	NA
EPA-200.8	Chromium	0806108 -01 to 06	25 UG/L	1	97 %	NA	NA
EPA-200.8	Copper	0806108 -01 to 06	25 UG/L	1	105 %	NA	NA
EPA-200.8	Lead	0806108 -01 to 06	25 UG/L	1	101 %	NA	NA
EPA-7470	Mercury	0806108 -01 to 06	0.2 UG/L	1	118 %	NA	NA
EPA-200.8	Nickel	0806108 -01 to 06	25 UG/L	1	101 %	NA	NA
EPA-200.8	Zinc	0806108 -01 to 06	80 UG/L	1	104 %	NA	NA

* DATA REPORTED BELOW THE PRACTICAL QUANTITATION LIMIT AND ABOVE THE MINIMUM DETECTION LIMIT.

APPROVED BY:

8620 Holly Drive Suite 100 Everett, WA 98208 425 356-2600 FAX 425 356-2626 Seattle 206 292-9059

CCI Analytical Laboratories
8620 Holly Drive
Everett, WA 98208
Phone (425) 356-2600
(206) 292-9059 Seattle
(425) 356-2626 Fax
http://www.ccilabs.com

Chain Of Custody/ Laboratory Analysis Request

CCI Job# (Laboratory Use Only) 806108

Date 06/17/08 Page 1 Of 1

PROJECT ID: Anacortes
REPORT TO COMPANY: GeoEngineers, Inc.
PROJECT MANAGER: Victoria England
ADDRESS: 600 Stewart St., Suite 1700
Seattle, WA 98101
PHONE: 206-239-3226 FAX: 206-728-2732
P.O. NUMBER: 5147-006-01 E-MAIL: vengland@geoengineers.com
INVOICE TO COMPANY:
ATTENTION:
ADDRESS:

ANALYSIS REQUESTED / OTHER (Specify)

	SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX + Cleanup	NWTPH-GX	BTEX by EPA-8021	MTBE by EPA-8021 ☐ EPA-8260 ☐	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water) PCE only	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270 + PAH by SIM	Polycyclic Aromatic Hydrocarbons (PAH) by EPA-8270 SIM ☐	PCB ☐ Pesticides ☐ by EPA 8081/8082	Metals-MTCA-5 ☐ RCRA-8 ☒ Pri Pol ☒ TAL ☐	Metals Other (Specify)	~~TCLP~~-Metals ☐ VOA ☐ Semi-Vol ☐ Pest ☒ Herbs ☒	Dioxins/Furans EPA 8290		Carbaryl by 8321B					NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1.	MW-1	06/17/08	1000	water	1		X	X				X	X		X			X		X	X		X					~~13~~	12
2.	MW-2	↓	1600	↓	2		X	X				X	X		X			X		X			X					~~11~~	12
3.	MW-3	↓	1730	↓	3		X	X				X	X		X			X		X			X					11	
4.	MW-4	↓	1430	↓	4		X	X				X	X		X			X		X			X					11	
5.	MW-5	↓	1200	↓	5		X	X				X	X		X			X		X			X					11	
6.	MW-6	↓	1100	↓	6		X	X				X	X		X			X		X			X					11	
7.	Trip Blank	6/17/08		W	7																								
8.																													
9.																													
10.																													

SPECIAL INSTRUCTIONS Organochlorine pesticides including carbaryl

CCI Analytical Laboratories, Inc accepts and processes this request on the terms and conditions set forth on the reverse side. By its signature hereon, Customer accepts these terms and conditions.

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: [signature] GeoEngineers 06/18/08 0750
Received By: [signature] CCIAL 6/18/08 0750
2. Relinquished By:
Received By:

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: ~~10~~ Standard | 5 | 3 | 2 | 1 | SAME DAY

Fuels & Hydrocarbon Analysis: ~~5~~ Standard | 3 | 1 | SAME DAY

OTHER:
Specify:

* Turnaround request less than standard may incur Rush Charges

LABORATORY COPY

Pace Analytical Services, Inc.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

www.pacelabs.com

Report Prepared for:

Rick Bagan
CCI Analytical Laboratories
8620 Holly Drive, Suite 100
Everett WA 98208

REPORT OF LABORATORY ANALYSIS FOR PCDD/PCDF

Report Information:

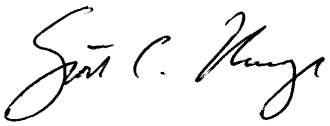
Pace Project #: 1075486
Sample Receipt Date: 06/19/2008
Client Project #: 806108
Client Sub PO #: N/A
State Cert #: C218

Invoicing & Reporting Options:

The report provided has been invoiced as a Level 2 PCDD/PCDF Report. If an upgrade of this report package is requested, an additional charge may be applied.

Please review the attached invoice for accuracy and forward any questions to Scott Unze, your Pace Project Manager.

This report has been reviewed and prepared by:



Scott Unze, Project Manager
(612) 607-6383
(612) 607-6444 (fax)
scott.unze@pacelabs.com

Report Prepared Date:
July 11, 2008

Report of Laboratory Analysis

This report should not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc.

The results relate only to the samples included in this report.

Pace Analytical Services, Inc.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

DISCUSSION

This report presents the results from the analyses performed on one sample submitted by a representative of CCI Analytical Laboratories. The sample was analyzed for the presence or absence of polychlorodibenzo-p-dioxins (PCDDs) and polychlorodibenzofurans (PCDFs) using a modified version of USEPA Method 8290. Reporting limits were set to correspond to one-fifth of the lowest calibration point. The sample was received outside of the recommended temperature range of 0-6 degrees Celsius.

The recoveries of the isotopically-labeled PCDD/PCDF internal standards in the sample extract ranged from 66-98%. All of the labeled standard recoveries obtained for this project were within the 40-135% target range specified in Method 8290. Also, since the quantification of the native 2,3,7,8-substituted isomers was based on isotope dilution, the data were automatically corrected for variation in recovery and accurate values were obtained.

A laboratory method blank was prepared and analyzed with the sample batch as part of our routine quality control procedures. The results show the blank to be free of PCDDs and PCDFs at the reporting limits, with the exception of a trace level of OCDF. This was below the calibration range for this method. Also, OCDF was not detected in the field sample. These results indicate that the sample processing steps did not significantly impact the results reported for the field sample.

Laboratory spike samples were also prepared with the sample batch using clean water that had been fortified with native standard materials. The results show that the spiked native compounds were recovered at 81-103%, with relative percent differences of 3.1-8.6%. These results indicate high degrees of accuracy and precision for these determinations. Matrix spikes were not prepared with the extraction batch.

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Appendix A

Sample Management

CCI Analytical Laboratories
8620 Holly Drive
Everett, WA 98208
Phone (425) 356-2600
(206) 292-9059 Seattle
(425) 356-2626 Fax
http://www.ccilabs.com

i118

Chain Of Custody/ Laboratory Analysis Request

1075486

CCI Job# (Laboratory Use Only)

Date 6/18/08 Page 1 Of 1

PROJECT ID:	806108
REPORT TO COMPANY:	CCI Analytical Laboratories
PROJECT MANAGER:	Rick Bagan
ADDRESS:	8620 Holly Drive #100
	Everett WA 98208
PHONE:	425 356 2600 FAX:
P.O. NUMBER:	E-MAIL: rickb@ccilabs.com
INVOICE TO COMPANY:	
ATTENTION:	SAME
ADDRESS:	

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA-8021	MTBE by EPA-8021 ☐ EPA-8260 ☐	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA-8270 SIM ☐	PCB ☐ Pesticides ☐ by EPA 8081/8082	Metals-MTCA-5 ☐ RCRA-8 ☐ Pri Pol ☐ TAL ☐	Metals Other (Specify)	TCLP-Metals ☐ VOA ☐ Semi-Vol ☐ Pest ☐ Herbs ☐	OTHER (Specify)								NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
																				Dioxins/Furans by 8290 *								
1. 806108-1L	6/17/08	10:00	water																X								1	
2.																												
3.																												
4.																												
5.																												
6.																												
7.																												
8.																												
9.																												
10.																												

SPECIAL INSTRUCTIONS * See attached desired reporting limits Please email results by noon 7/10/08

CCI Analytical Laboratories, Inc accepts and processes this request on the terms and conditions set forth on the reverse side. By its signature hereon, Customer accepts these terms and conditions.

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: CCIAL 6/18/08 12:00
   Received By: Alex Kyan T=6.8C° 6/19/08 0930
2. Relinquished By:
   Received By:

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: 10 Standard | 5 | 3 | 2 | 1 | SAME DAY

Fuels & Hydrocarbon Analysis: 5 Standard | 3 | 1 | SAME DAY

OTHER: Specify:

* Turnaround request less than standard may incur Rush Charges

LABORATORY COPY 4 of 11

Report No.....1075486_8290

Sample Condition Upon Receipt

Pace Analytical

Client Name: CCI

Project # 1075486

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other _____

Tracking #: 8558 1-7497-0056

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☑ no

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other _____

Thermometer Used 230194010, 72310129 Type of Ice: ~~Wet~~ Blue None ☐ Samples on Ice, cooling process has begun

Cooler Temperature 6.8 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Date and initials of person examining contents: CK 6/19

Comments:

Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☐Yes ☑No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A CK 6/19	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: WT		
All containers needing preservation have been checked.	☐Yes ☐No ☑N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☑N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☑No	Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	15.
Trip Blank Present:	☐Yes ☐No ☑N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Carl Date/Time: 06/19/08

Comments/ Resolution:

Waived temp. req.

Project Manager Review: [signature] **Date:** 06/19/08

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

Appendix B

Sample Analysis Summary

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - CCI Analytical Laboratories

Client's Sample ID	806108-1L		
Lab Sample ID	1075486001		
Filename	F80629A_08		
Injected By	BAL		
Total Amount Extracted	1060 mL	Matrix	Water
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	06/17/2008
ICAL ID	F80624	Received	06/19/2008
CCal Filename(s)	F80628A_16 & F80629A_16	Extracted	06/27/2008
Method Blank ID	BLANK-16790	Analyzed	06/29/2008 10:18

Native Isomers	Conc pg/L	EMPC pg/L	RL pg/L	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	1.9	2,3,7,8-TCDF-13C	2.00	74
Total TCDF	ND	-----	1.9	2,3,7,8-TCDD-13C	2.00	83
				1,2,3,7,8-PeCDF-13C	2.00	68
2,3,7,8-TCDD	ND	-----	1.9	2,3,4,7,8-PeCDF-13C	2.00	66
Total TCDD	ND	-----	1.9	1,2,3,7,8-PeCDD-13C	2.00	85
				1,2,3,4,7,8-HxCDF-13C	2.00	68
1,2,3,7,8-PeCDF	ND	-----	9.5	1,2,3,6,7,8-HxCDF-13C	2.00	69
2,3,4,7,8-PeCDF	ND	-----	9.5	2,3,4,6,7,8-HxCDF-13C	2.00	68
Total PeCDF	ND	-----	9.5	1,2,3,7,8,9-HxCDF-13C	2.00	70
				1,2,3,4,7,8-HxCDD-13C	2.00	81
1,2,3,7,8-PeCDD	ND	-----	9.5	1,2,3,6,7,8-HxCDD-13C	2.00	81
Total PeCDD	ND	-----	9.5	1,2,3,4,6,7,8-HpCDF-13C	2.00	81
				1,2,3,4,7,8,9-HpCDF-13C	2.00	77
1,2,3,4,7,8-HxCDF	ND	-----	9.5	1,2,3,4,6,7,8-HpCDD-13C	2.00	98
1,2,3,6,7,8-HxCDF	ND	-----	9.5	OCDD-13C	4.00	76
2,3,4,6,7,8-HxCDF	ND	-----	9.5			
1,2,3,7,8,9-HxCDF	ND	-----	9.5	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	9.5	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	9.5	2,3,7,8-TCDD-37Cl4	0.20	86
1,2,3,6,7,8-HxCDD	ND	-----	9.5			
1,2,3,7,8,9-HxCDD	ND	-----	9.5			
Total HxCDD	ND	-----	9.5			
1,2,3,4,6,7,8-HpCDF	ND	-----	9.5	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	9.5	Equivalence: 11 pg/L		
Total HpCDF	ND	-----	9.5	(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	ND	-----	9.5			
Total HpCDD	ND	-----	9.5			
OCDF	ND	-----	19.0			
OCDD	ND	-----	19.0			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit.

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Blank Analysis Results

Lab Sample ID	BLANK-16790	Matrix	Water
Filename	F80629B_06	Dilution	NA
Total Amount Extracted	998 mL	Extracted	06/27/2008
ICAL ID	F80624	Analyzed	06/29/2008 22:25
CCal Filename(s)	F80629B_01 & F80629B_17	Injected By	BAL

Native Isomers	Conc pg/L	EMPC pg/L	RL pg/L	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	2.0	2,3,7,8-TCDF-13C	2.00	57
Total TCDF	ND	-----	2.0	2,3,7,8-TCDD-13C	2.00	68
				1,2,3,7,8-PeCDF-13C	2.00	61
2,3,7,8-TCDD	ND	-----	2.0	2,3,4,7,8-PeCDF-13C	2.00	58
Total TCDD	ND	-----	2.0	1,2,3,7,8-PeCDD-13C	2.00	74
				1,2,3,4,7,8-HxCDF-13C	2.00	62
1,2,3,7,8-PeCDF	ND	-----	10.0	1,2,3,6,7,8-HxCDF-13C	2.00	64
2,3,4,7,8-PeCDF	ND	-----	10.0	2,3,4,6,7,8-HxCDF-13C	2.00	61
Total PeCDF	ND	-----	10.0	1,2,3,7,8,9-HxCDF-13C	2.00	60
				1,2,3,4,7,8-HxCDD-13C	2.00	71
1,2,3,7,8-PeCDD	ND	-----	10.0	1,2,3,6,7,8-HxCDD-13C	2.00	74
Total PeCDD	ND	-----	10.0	1,2,3,4,6,7,8-HpCDF-13C	2.00	74
				1,2,3,4,7,8,9-HpCDF-13C	2.00	67
1,2,3,4,7,8-HxCDF	ND	-----	10.0	1,2,3,4,6,7,8-HpCDD-13C	2.00	89
1,2,3,6,7,8-HxCDF	ND	-----	10.0	OCDD-13C	4.00	63
2,3,4,6,7,8-HxCDF	ND	-----	10.0			
1,2,3,7,8,9-HxCDF	ND	-----	10.0	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	10.0	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	10.0	2,3,7,8-TCDD-37Cl4	0.20	68
1,2,3,6,7,8-HxCDD	ND	-----	10.0			
1,2,3,7,8,9-HxCDD	ND	-----	10.0			
Total HxCDD	ND	-----	10.0			
1,2,3,4,6,7,8-HpCDF	ND	-----	10.0	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	10.0	Equivalence: 11 pg/L		
Total HpCDF	ND	-----	10.0	(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	ND	-----	10.0			
Total HpCDD	ND	-----	10.0			
OCDF	41	-----	20.0 J			
OCDD	ND	-----	20.0			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

J = Value below calibration range

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Laboratory Control Spike Results

Lab Sample ID	LCS-16791		
Filename	F80629B_02	Matrix	Water
Total Amount Extracted	1020 mL	Dilution	NA
ICAL ID	F80624	Extracted	06/27/2008
CCal Filename(s)	F80629B_01 & F80629B_17	Analyzed	06/29/2008 19:09
Method Blank ID	BLANK-16790	Injected By	BAL

Native Isomers	Qs (ng)	Qm (ng)	% Rec.	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.20	0.17	86	2,3,7,8-TCDF-13C	2.00	68
Total TCDF				2,3,7,8-TCDD-13C	2.00	80
				1,2,3,7,8-PeCDF-13C	2.00	71
2,3,7,8-TCDD	0.20	0.17	85	2,3,4,7,8-PeCDF-13C	2.00	67
Total TCDD				1,2,3,7,8-PeCDD-13C	2.00	85
				1,2,3,4,7,8-HxCDF-13C	2.00	71
1,2,3,7,8-PeCDF	1.00	0.93	93	1,2,3,6,7,8-HxCDF-13C	2.00	74
2,3,4,7,8-PeCDF	1.00	0.90	90	2,3,4,6,7,8-HxCDF-13C	2.00	71
Total PeCDF				1,2,3,7,8,9-HxCDF-13C	2.00	72
				1,2,3,4,7,8-HxCDD-13C	2.00	82
1,2,3,7,8-PeCDD	1.00	0.81	81	1,2,3,6,7,8-HxCDD-13C	2.00	84
Total PeCDD				1,2,3,4,6,7,8-HpCDF-13C	2.00	86
				1,2,3,4,7,8,9-HpCDF-13C	2.00	80
1,2,3,4,7,8-HxCDF	1.00	0.89	89	1,2,3,4,6,7,8-HpCDD-13C	2.00	105
1,2,3,6,7,8-HxCDF	1.00	0.94	94	OCDD-13C	4.00	75
2,3,4,6,7,8-HxCDF	1.00	0.91	91			
1,2,3,7,8,9-HxCDF	1.00	0.91	91	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF				1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	1.00	0.89	89	2,3,7,8-TCDD-37Cl4	0.20	76
1,2,3,6,7,8-HxCDD	1.00	0.89	89			
1,2,3,7,8,9-HxCDD	1.00	0.87	87			
Total HxCDD						
1,2,3,4,6,7,8-HpCDF	1.00	0.93	93			
1,2,3,4,7,8,9-HpCDF	1.00	0.97	97			
Total HpCDF						
1,2,3,4,6,7,8-HpCDD	1.00	0.86	86			
Total HpCDD						
OCDF	2.00	1.85	93			
OCDD	2.00	1.95	98			

Qs = Quantity Spiked
Qm = Quantity Measured
Rec. = Recovery (Expressed as Percent)
P = Recovery outside of target range
X = Background subtracted value
Nn = Value obtained from additional analysis
NA = Not Applicable
* = See Discussion

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Laboratory Control Spike Results

Lab Sample ID	LCSD-16792		
Filename	F80629B_03	Matrix	Water
Total Amount Extracted	993 mL	Dilution	NA
ICAL ID	F80624	Extracted	06/27/2008
CCal Filename(s)	F80629B_01 & F80629B_17	Analyzed	06/29/2008 19:56
Method Blank ID	BLANK-16790	Injected By	BAL

Native Isomers	Qs (ng)	Qm (ng)	% Rec.	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.20	0.18	91	2,3,7,8-TCDF-13C	2.00	65
Total TCDF				2,3,7,8-TCDD-13C	2.00	78
				1,2,3,7,8-PeCDF-13C	2.00	67
2,3,7,8-TCDD	0.20	0.18	92	2,3,4,7,8-PeCDF-13C	2.00	63
Total TCDD				1,2,3,7,8-PeCDD-13C	2.00	79
				1,2,3,4,7,8-HxCDF-13C	2.00	64
1,2,3,7,8-PeCDF	1.00	0.98	98	1,2,3,6,7,8-HxCDF-13C	2.00	72
2,3,4,7,8-PeCDF	1.00	0.94	94	2,3,4,6,7,8-HxCDF-13C	2.00	66
Total PeCDF				1,2,3,7,8,9-HxCDF-13C	2.00	66
				1,2,3,4,7,8-HxCDD-13C	2.00	73
1,2,3,7,8-PeCDD	1.00	0.86	86	1,2,3,6,7,8-HxCDD-13C	2.00	82
Total PeCDD				1,2,3,4,6,7,8-HpCDF-13C	2.00	81
				1,2,3,4,7,8,9-HpCDF-13C	2.00	74
1,2,3,4,7,8-HxCDF	1.00	0.97	97	1,2,3,4,6,7,8-HpCDD-13C	2.00	100
1,2,3,6,7,8-HxCDF	1.00	0.97	97	OCDD-13C	4.00	69
2,3,4,6,7,8-HxCDF	1.00	0.96	96			
1,2,3,7,8,9-HxCDF	1.00	0.96	96	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF				1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	1.00	0.94	94	2,3,7,8-TCDD-37Cl4	0.20	75
1,2,3,6,7,8-HxCDD	1.00	0.95	95			
1,2,3,7,8,9-HxCDD	1.00	0.93	93			
Total HxCDD						
1,2,3,4,6,7,8-HpCDF	1.00	0.99	99			
1,2,3,4,7,8,9-HpCDF	1.00	1.01	101			
Total HpCDF						
1,2,3,4,6,7,8-HpCDD	1.00	0.91	91			
Total HpCDD						
OCDF	2.00	1.99	100			
OCDD	2.00	2.05	103			

Qs = Quantity Spiked
Qm = Quantity Measured
Rec. = Recovery (Expressed as Percent)
P = Recovery outside of target range
X = Background subtracted value
Nn = Value obtained from additional analysis
NA = Not Applicable
* = See Discussion

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
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Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290

Spike Recovery Relative Percent Difference (RPD) Results

Client	CCI Analytical Laboratories		
Spike 1 ID	LCS-16791	Spike 2 ID	LCSD-16792
Spike 1 Filename	F80629B_02	Spike 2 Filename	F80629B_03

Compound	Spike 1 %REC	Spike 2 %REC	%RPD
2,3,7,8-TCDF	86	91	5.6
2,3,7,8-TCDD	85	92	7.9
1,2,3,7,8-PeCDF	93	98	5.2
2,3,4,7,8-PeCDF	90	94	4.3
1,2,3,7,8-PeCDD	81	86	6.0
1,2,3,4,7,8-HxCDF	89	97	8.6
1,2,3,6,7,8-HxCDF	94	97	3.1
2,3,4,6,7,8-HxCDF	91	96	5.3
1,2,3,7,8,9-HxCDF	91	96	5.3
1,2,3,4,7,8-HxCDD	89	94	5.5
1,2,3,6,7,8-HxCDD	89	95	6.5
1,2,3,7,8,9-HxCDD	87	93	6.7
1,2,3,4,6,7,8-HpCDF	93	99	6.3
1,2,3,4,7,8,9-HpCDF	97	101	4.0
1,2,3,4,6,7,8-HpCDD	86	91	5.6
OCDF	93	100	7.3
OCDD	98	103	5.0

%REC = Percent Recovered
RPD = The difference between the two values divided by the mean value

REPORT OF LABORATORY ANALYSIS

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OnSite Environmental Inc.

14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

June 15, 2012

Robert Trahan
GeoEngineers, Inc.
600 Stewart, Suite 1700
Seattle, WA 98101-1233

Re: Analytical Data for Project 5147-006-08
Laboratory Reference No. 1205-244

Dear Robert:

Enclosed are the analytical results and associated quality control data for samples submitted on May 24, 2012.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

Case Narrative

Samples were collected on May 23, 2012 and received by the laboratory on May 24, 2012. They were maintained at the laboratory at a temperature of 2°C to 6°C.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Total Metals EPA 6010B/200.8/7470A Analysis

The practical quantitation limit for Arsenic in Samples MW-1, MW-2A, MW-4, MW-3A, DUP, MW-6 and MW-7 are elevated due to interferences present in the sample.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

Dissolved Metals EPA 6010B/200.8/7470A Analysis

The practical quantitation limit for Arsenic in Samples MW-1, MW-2A, MW-4, MW-3A, DUP and MW-7 are elevated due to interferences present in the sample.

Arsenic for samples MW-4, MW-3A, DUP and MW-6 is being reported with an alternative correction due to interferences in the sample.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

Chlorinated Acid Herbicides EPA 8151A Analysis

Due to negative effects of the matrix on the instrument, values for the analytes MCPA and 2,4-DB in the closing continuing calibration verification standard (CCVs) were low. Therefore, values for these compounds can be greater than reported. Since the degradation of the CCV standards was reproducible after re-injecting the sample extracts, the CCV degradation problem was attributed to the matrix of these samples. No further action was performed.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

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Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
MW-1	05-244-01	Water	5-23-12	5-24-12	
MW-2A	05-244-02	Water	5-23-12	5-24-12	
MW-4	05-244-03	Water	5-23-12	5-24-12	
MW-3A	05-244-04	Water	5-23-12	5-24-12	
DUP	05-244-05	Water	5-23-12	5-24-12	
MW-6	05-244-06	Water	5-23-12	5-24-12	
MW-7	05-244-07	Water	5-23-12	5-24-12	
TRIP BLANK	05-244-08	Water	---	5-24-12	

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Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

NWTPH-Gx

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-1**					
Laboratory ID:	05-244-01					
Gasoline	**ND**	100	NWTPH-Gx	5-29-12	5-29-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*90*	*73-121*				
Client ID:	**MW-2A**					
Laboratory ID:	05-244-02					
Gasoline	**ND**	100	NWTPH-Gx	5-29-12	5-29-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*84*	*73-121*				
Client ID:	**MW-4**					
Laboratory ID:	05-244-03					
Gasoline	**ND**	100	NWTPH-Gx	5-29-12	5-29-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*90*	*73-121*				
Client ID:	**MW-3A**					
Laboratory ID:	05-244-04					
Gasoline	**ND**	100	NWTPH-Gx	5-29-12	5-29-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*88*	*73-121*				
Client ID:	**DUP**					
Laboratory ID:	05-244-05					
Gasoline	**ND**	100	NWTPH-Gx	5-29-12	5-29-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*87*	*73-121*				
Client ID:	**MW-6**					
Laboratory ID:	05-244-06					
Gasoline	**ND**	100	NWTPH-Gx	5-29-12	5-29-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*87*	*73-121*				

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Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

NWTPH-Gx

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-7**					
Laboratory ID:	05-244-07					
Gasoline	**ND**	100	NWTPH-Gx	5-29-12	5-29-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*88*	*73-121*				

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Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

NWTPH-Dx
(with acid/silica gel clean-up)

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-1**					
Laboratory ID:	05-244-01					
Diesel Range Organics	**ND**	0.26	NWTPH-Dx	5-30-12	5-30-12	
Lube Oil Range Organics	**ND**	0.41	NWTPH-Dx	5-30-12	5-30-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*80*	*50-150*				
Client ID:	**MW-2A**					
Laboratory ID:	05-244-02					
Diesel Range Organics	**ND**	0.25	NWTPH-Dx	5-30-12	5-30-12	
Lube Oil Range Organics	**ND**	0.40	NWTPH-Dx	5-30-12	5-30-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*84*	*50-150*				
Client ID:	**MW-4**					
Laboratory ID:	05-244-03					
Diesel Range Organics	**ND**	0.26	NWTPH-Dx	5-30-12	5-30-12	
Lube Oil Range Organics	**ND**	0.42	NWTPH-Dx	5-30-12	5-30-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*84*	*50-150*				
Client ID:	**MW-3A**					
Laboratory ID:	05-244-04					
Diesel Range Organics	**ND**	0.25	NWTPH-Dx	5-30-12	5-30-12	
Lube Oil Range Organics	**ND**	0.40	NWTPH-Dx	5-30-12	5-30-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*90*	*50-150*				
Client ID:	**DUP**					
Laboratory ID:	05-244-05					
Diesel Range Organics	**ND**	0.26	NWTPH-Dx	5-30-12	5-30-12	
Lube Oil Range Organics	**ND**	0.41	NWTPH-Dx	5-30-12	5-30-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*97*	*50-150*				
Client ID:	**MW-6**					
Laboratory ID:	05-244-06					
Diesel Range Organics	**ND**	0.25	NWTPH-Dx	5-30-12	5-30-12	
Lube Oil Range Organics	**ND**	0.40	NWTPH-Dx	5-30-12	5-30-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*87*	*50-150*				

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Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

NWTPH-Dx
(with acid/silica gel clean-up)

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-7**					
Laboratory ID:	05-244-07					
Diesel Range Organics	**ND**	0.25	NWTPH-Dx	5-30-12	5-30-12	
Lube Oil Range Organics	**ND**	0.41	NWTPH-Dx	5-30-12	5-30-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*93*	*50-150*				

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Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

VOLATILES by EPA 8260B
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-3A**					
Laboratory ID:	05-244-04					
Dichlorodifluoromethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
Chloromethane	ND	1.0	EPA 8260	5-25-12	5-25-12	
Vinyl Chloride	ND	0.20	EPA 8260	5-25-12	5-25-12	
Bromomethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
Chloroethane	ND	1.0	EPA 8260	5-25-12	5-25-12	
Trichlorofluoromethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,1-Dichloroethene	ND	0.20	EPA 8260	5-25-12	5-25-12	
Acetone	ND	5.0	EPA 8260	5-25-12	5-25-12	
Iodomethane	ND	1.0	EPA 8260	5-25-12	5-25-12	
Carbon Disulfide	ND	0.20	EPA 8260	5-25-12	5-25-12	
Methylene Chloride	ND	1.0	EPA 8260	5-25-12	5-25-12	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260	5-25-12	5-25-12	
Methyl t-Butyl Ether	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,1-Dichloroethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
Vinyl Acetate	ND	2.0	EPA 8260	5-25-12	5-25-12	
2,2-Dichloropropane	ND	0.20	EPA 8260	5-25-12	5-25-12	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260	5-25-12	5-25-12	
2-Butanone	ND	5.0	EPA 8260	5-25-12	5-25-12	
Bromochloromethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
Chloroform	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,1,1-Trichloroethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
Carbon Tetrachloride	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,1-Dichloropropene	ND	0.20	EPA 8260	5-25-12	5-25-12	
Benzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,2-Dichloroethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
Trichloroethene	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,2-Dichloropropane	ND	0.20	EPA 8260	5-25-12	5-25-12	
Dibromomethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
Bromodichloromethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260	5-25-12	5-25-12	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260	5-25-12	5-25-12	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260	5-25-12	5-25-12	
Toluene	ND	1.0	EPA 8260	5-25-12	5-25-12	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260	5-25-12	5-25-12	

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Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

VOLATILES by EPA 8260B
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-3A**					
Laboratory ID:	05-244-04					
1,1,2-Trichloroethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
Tetrachloroethene	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,3-Dichloropropane	ND	0.20	EPA 8260	5-25-12	5-25-12	
2-Hexanone	ND	2.0	EPA 8260	5-25-12	5-25-12	
Dibromochloromethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,2-Dibromoethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
Chlorobenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
Ethylbenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
m,p-Xylene	ND	0.40	EPA 8260	5-25-12	5-25-12	
o-Xylene	ND	0.20	EPA 8260	5-25-12	5-25-12	
Styrene	ND	0.20	EPA 8260	5-25-12	5-25-12	
Bromoform	ND	1.0	EPA 8260	5-25-12	5-25-12	
Isopropylbenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
Bromobenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,2,3-Trichloropropane	ND	0.20	EPA 8260	5-25-12	5-25-12	
n-Propylbenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
2-Chlorotoluene	ND	0.20	EPA 8260	5-25-12	5-25-12	
4-Chlorotoluene	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
tert-Butylbenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
sec-Butylbenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,3-Dichlorobenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
p-Isopropyltoluene	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,4-Dichlorobenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,2-Dichlorobenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
n-Butylbenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260	5-25-12	5-25-12	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
Hexachlorobutadiene	ND	0.20	EPA 8260	5-25-12	5-25-12	
Naphthalene	ND	1.0	EPA 8260	5-25-12	5-25-12	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*92*	*68-120*				
Toluene-d8	*92*	*73-120*				
4-Bromofluorobenzene	*82*	*65-120*				

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Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

VOLATILES by EPA 8260B
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**DUP**					
Laboratory ID:	05-244-05					
Dichlorodifluoromethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
Chloromethane	ND	1.0	EPA 8260	5-25-12	5-25-12	
Vinyl Chloride	ND	0.20	EPA 8260	5-25-12	5-25-12	
Bromomethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
Chloroethane	ND	1.0	EPA 8260	5-25-12	5-25-12	
Trichlorofluoromethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,1-Dichloroethene	ND	0.20	EPA 8260	5-25-12	5-25-12	
Acetone	ND	5.0	EPA 8260	5-25-12	5-25-12	
Iodomethane	ND	1.0	EPA 8260	5-25-12	5-25-12	
Carbon Disulfide	ND	0.20	EPA 8260	5-25-12	5-25-12	
Methylene Chloride	ND	1.0	EPA 8260	5-25-12	5-25-12	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260	5-25-12	5-25-12	
Methyl t-Butyl Ether	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,1-Dichloroethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
Vinyl Acetate	ND	2.0	EPA 8260	5-25-12	5-25-12	
2,2-Dichloropropane	ND	0.20	EPA 8260	5-25-12	5-25-12	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260	5-25-12	5-25-12	
2-Butanone	ND	5.0	EPA 8260	5-25-12	5-25-12	
Bromochloromethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
Chloroform	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,1,1-Trichloroethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
Carbon Tetrachloride	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,1-Dichloropropene	ND	0.20	EPA 8260	5-25-12	5-25-12	
Benzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,2-Dichloroethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
Trichloroethene	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,2-Dichloropropane	ND	0.20	EPA 8260	5-25-12	5-25-12	
Dibromomethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
Bromodichloromethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260	5-25-12	5-25-12	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260	5-25-12	5-25-12	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260	5-25-12	5-25-12	
Toluene	ND	1.0	EPA 8260	5-25-12	5-25-12	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260	5-25-12	5-25-12	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

VOLATILES by EPA 8260B
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**DUP**					
Laboratory ID:	05-244-05					
1,1,2-Trichloroethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
Tetrachloroethene	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,3-Dichloropropane	ND	0.20	EPA 8260	5-25-12	5-25-12	
2-Hexanone	ND	2.0	EPA 8260	5-25-12	5-25-12	
Dibromochloromethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,2-Dibromoethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
Chlorobenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
Ethylbenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
m,p-Xylene	ND	0.40	EPA 8260	5-25-12	5-25-12	
o-Xylene	ND	0.20	EPA 8260	5-25-12	5-25-12	
Styrene	ND	0.20	EPA 8260	5-25-12	5-25-12	
Bromoform	ND	1.0	EPA 8260	5-25-12	5-25-12	
Isopropylbenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
Bromobenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,2,3-Trichloropropane	ND	0.20	EPA 8260	5-25-12	5-25-12	
n-Propylbenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
2-Chlorotoluene	ND	0.20	EPA 8260	5-25-12	5-25-12	
4-Chlorotoluene	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
tert-Butylbenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
sec-Butylbenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,3-Dichlorobenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
p-Isopropyltoluene	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,4-Dichlorobenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,2-Dichlorobenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
n-Butylbenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260	5-25-12	5-25-12	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
Hexachlorobutadiene	ND	0.20	EPA 8260	5-25-12	5-25-12	
Naphthalene	ND	1.0	EPA 8260	5-25-12	5-25-12	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*91*	*68-120*				
Toluene-d8	*96*	*73-120*				
4-Bromofluorobenzene	*87*	*65-120*				

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and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

VOLATILES by EPA 8260B
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-6**					
Laboratory ID:	05-244-06					
Dichlorodifluoromethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
Chloromethane	ND	1.0	EPA 8260	5-25-12	5-25-12	
Vinyl Chloride	ND	0.20	EPA 8260	5-25-12	5-25-12	
Bromomethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
Chloroethane	ND	1.0	EPA 8260	5-25-12	5-25-12	
Trichlorofluoromethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,1-Dichloroethene	ND	0.20	EPA 8260	5-25-12	5-25-12	
Acetone	ND	5.0	EPA 8260	5-25-12	5-25-12	
Iodomethane	ND	1.0	EPA 8260	5-25-12	5-25-12	
Carbon Disulfide	ND	0.20	EPA 8260	5-25-12	5-25-12	
Methylene Chloride	ND	1.0	EPA 8260	5-25-12	5-25-12	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260	5-25-12	5-25-12	
Methyl t-Butyl Ether	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,1-Dichloroethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
Vinyl Acetate	ND	2.0	EPA 8260	5-25-12	5-25-12	
2,2-Dichloropropane	ND	0.20	EPA 8260	5-25-12	5-25-12	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260	5-25-12	5-25-12	
2-Butanone	ND	5.0	EPA 8260	5-25-12	5-25-12	
Bromochloromethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
Chloroform	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,1,1-Trichloroethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
Carbon Tetrachloride	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,1-Dichloropropene	ND	0.20	EPA 8260	5-25-12	5-25-12	
Benzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,2-Dichloroethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
Trichloroethene	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,2-Dichloropropane	ND	0.20	EPA 8260	5-25-12	5-25-12	
Dibromomethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
Bromodichloromethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260	5-25-12	5-25-12	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260	5-25-12	5-25-12	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260	5-25-12	5-25-12	
Toluene	ND	1.0	EPA 8260	5-25-12	5-25-12	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260	5-25-12	5-25-12	

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Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

VOLATILES by EPA 8260B
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-6**					
Laboratory ID:	05-244-06					
1,1,2-Trichloroethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
Tetrachloroethene	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,3-Dichloropropane	ND	0.20	EPA 8260	5-25-12	5-25-12	
2-Hexanone	ND	2.0	EPA 8260	5-25-12	5-25-12	
Dibromochloromethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,2-Dibromoethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
Chlorobenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
Ethylbenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
m,p-Xylene	ND	0.40	EPA 8260	5-25-12	5-25-12	
o-Xylene	ND	0.20	EPA 8260	5-25-12	5-25-12	
Styrene	ND	0.20	EPA 8260	5-25-12	5-25-12	
Bromoform	ND	1.0	EPA 8260	5-25-12	5-25-12	
Isopropylbenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
Bromobenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,2,3-Trichloropropane	ND	0.20	EPA 8260	5-25-12	5-25-12	
n-Propylbenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
2-Chlorotoluene	ND	0.20	EPA 8260	5-25-12	5-25-12	
4-Chlorotoluene	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
tert-Butylbenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
sec-Butylbenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,3-Dichlorobenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
p-Isopropyltoluene	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,4-Dichlorobenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,2-Dichlorobenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
n-Butylbenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260	5-25-12	5-25-12	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
Hexachlorobutadiene	ND	0.20	EPA 8260	5-25-12	5-25-12	
Naphthalene	ND	1.0	EPA 8260	5-25-12	5-25-12	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*93*	*68-120*				
Toluene-d8	*89*	*73-120*				
4-Bromofluorobenzene	*86*	*65-120*				

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and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

VOLATILES by EPA 8260B
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-7**					
Laboratory ID:	05-244-07					
Dichlorodifluoromethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
Chloromethane	ND	1.0	EPA 8260	5-25-12	5-25-12	
Vinyl Chloride	ND	0.20	EPA 8260	5-25-12	5-25-12	
Bromomethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
Chloroethane	ND	1.0	EPA 8260	5-25-12	5-25-12	
Trichlorofluoromethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,1-Dichloroethene	ND	0.20	EPA 8260	5-25-12	5-25-12	
Acetone	ND	5.0	EPA 8260	5-25-12	5-25-12	
Iodomethane	ND	1.0	EPA 8260	5-25-12	5-25-12	
Carbon Disulfide	ND	0.20	EPA 8260	5-25-12	5-25-12	
Methylene Chloride	ND	1.0	EPA 8260	5-25-12	5-25-12	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260	5-25-12	5-25-12	
Methyl t-Butyl Ether	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,1-Dichloroethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
Vinyl Acetate	ND	2.0	EPA 8260	5-25-12	5-25-12	
2,2-Dichloropropane	ND	0.20	EPA 8260	5-25-12	5-25-12	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260	5-25-12	5-25-12	
2-Butanone	ND	5.0	EPA 8260	5-25-12	5-25-12	
Bromochloromethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
Chloroform	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,1,1-Trichloroethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
Carbon Tetrachloride	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,1-Dichloropropene	ND	0.20	EPA 8260	5-25-12	5-25-12	
Benzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,2-Dichloroethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
Trichloroethene	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,2-Dichloropropane	ND	0.20	EPA 8260	5-25-12	5-25-12	
Dibromomethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
Bromodichloromethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260	5-25-12	5-25-12	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260	5-25-12	5-25-12	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260	5-25-12	5-25-12	
Toluene	ND	1.0	EPA 8260	5-25-12	5-25-12	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260	5-25-12	5-25-12	

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Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

VOLATILES by EPA 8260B
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-7**					
Laboratory ID:	05-244-07					
1,1,2-Trichloroethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
Tetrachloroethene	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,3-Dichloropropane	ND	0.20	EPA 8260	5-25-12	5-25-12	
2-Hexanone	ND	2.0	EPA 8260	5-25-12	5-25-12	
Dibromochloromethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,2-Dibromoethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
Chlorobenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
Ethylbenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
m,p-Xylene	ND	0.40	EPA 8260	5-25-12	5-25-12	
o-Xylene	ND	0.20	EPA 8260	5-25-12	5-25-12	
Styrene	ND	0.20	EPA 8260	5-25-12	5-25-12	
Bromoform	ND	1.0	EPA 8260	5-25-12	5-25-12	
Isopropylbenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
Bromobenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,2,3-Trichloropropane	ND	0.20	EPA 8260	5-25-12	5-25-12	
n-Propylbenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
2-Chlorotoluene	ND	0.20	EPA 8260	5-25-12	5-25-12	
4-Chlorotoluene	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
tert-Butylbenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
sec-Butylbenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,3-Dichlorobenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
p-Isopropyltoluene	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,4-Dichlorobenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,2-Dichlorobenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
n-Butylbenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260	5-25-12	5-25-12	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
Hexachlorobutadiene	ND	0.20	EPA 8260	5-25-12	5-25-12	
Naphthalene	ND	1.0	EPA 8260	5-25-12	5-25-12	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*90*	*68-120*				
Toluene-d8	*90*	*73-120*				
4-Bromofluorobenzene	*85*	*65-120*				

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

VOLATILES by EPA 8260B
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TRIP BLANK**					
Laboratory ID:	05-244-08					
Dichlorodifluoromethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
Chloromethane	ND	1.0	EPA 8260	5-25-12	5-25-12	
Vinyl Chloride	ND	0.20	EPA 8260	5-25-12	5-25-12	
Bromomethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
Chloroethane	ND	1.0	EPA 8260	5-25-12	5-25-12	
Trichlorofluoromethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,1-Dichloroethene	ND	0.20	EPA 8260	5-25-12	5-25-12	
Acetone	ND	5.0	EPA 8260	5-25-12	5-25-12	
Iodomethane	ND	1.0	EPA 8260	5-25-12	5-25-12	
Carbon Disulfide	ND	0.20	EPA 8260	5-25-12	5-25-12	
Methylene Chloride	ND	1.0	EPA 8260	5-25-12	5-25-12	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260	5-25-12	5-25-12	
Methyl t-Butyl Ether	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,1-Dichloroethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
Vinyl Acetate	ND	2.0	EPA 8260	5-25-12	5-25-12	
2,2-Dichloropropane	ND	0.20	EPA 8260	5-25-12	5-25-12	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260	5-25-12	5-25-12	
2-Butanone	ND	5.0	EPA 8260	5-25-12	5-25-12	
Bromochloromethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
Chloroform	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,1,1-Trichloroethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
Carbon Tetrachloride	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,1-Dichloropropene	ND	0.20	EPA 8260	5-25-12	5-25-12	
Benzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,2-Dichloroethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
Trichloroethene	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,2-Dichloropropane	ND	0.20	EPA 8260	5-25-12	5-25-12	
Dibromomethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
Bromodichloromethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260	5-25-12	5-25-12	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260	5-25-12	5-25-12	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260	5-25-12	5-25-12	
Toluene	ND	1.0	EPA 8260	5-25-12	5-25-12	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260	5-25-12	5-25-12	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

VOLATILES by EPA 8260B
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TRIP BLANK**					
Laboratory ID:	05-244-08					
1,1,2-Trichloroethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
Tetrachloroethene	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,3-Dichloropropane	ND	0.20	EPA 8260	5-25-12	5-25-12	
2-Hexanone	ND	2.0	EPA 8260	5-25-12	5-25-12	
Dibromochloromethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,2-Dibromoethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
Chlorobenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
Ethylbenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
m,p-Xylene	ND	0.40	EPA 8260	5-25-12	5-25-12	
o-Xylene	ND	0.20	EPA 8260	5-25-12	5-25-12	
Styrene	ND	0.20	EPA 8260	5-25-12	5-25-12	
Bromoform	ND	1.0	EPA 8260	5-25-12	5-25-12	
Isopropylbenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
Bromobenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,2,3-Trichloropropane	ND	0.20	EPA 8260	5-25-12	5-25-12	
n-Propylbenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
2-Chlorotoluene	ND	0.20	EPA 8260	5-25-12	5-25-12	
4-Chlorotoluene	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
tert-Butylbenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
sec-Butylbenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,3-Dichlorobenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
p-Isopropyltoluene	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,4-Dichlorobenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,2-Dichlorobenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
n-Butylbenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260	5-25-12	5-25-12	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
Hexachlorobutadiene	ND	0.20	EPA 8260	5-25-12	5-25-12	
Naphthalene	ND	1.0	EPA 8260	5-25-12	5-25-12	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*81*	*68-120*				
Toluene-d8	*91*	*73-120*				
4-Bromofluorobenzene	*82*	*65-120*				

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

SEMIVOLATILES by EPA 8270D/SIM
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-3A**					
Laboratory ID:	05-244-04					
n-Nitrosodimethylamine	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
Pyridine	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
Phenol	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
Aniline	**ND**	4.7	EPA 8270	5-25-12	5-25-12	
bis(2-Chloroethyl)ether	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
2-Chlorophenol	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
1,3-Dichlorobenzene	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
1,4-Dichlorobenzene	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
Benzyl alcohol	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
1,2-Dichlorobenzene	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
2-Methylphenol (o-Cresol)	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
bis(2-Chloroisopropyl)ether	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
n-Nitroso-di-n-propylamine	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
Hexachloroethane	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
Nitrobenzene	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
Isophorone	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
2-Nitrophenol	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
2,4-Dimethylphenol	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
bis(2-Chloroethoxy)methane	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
2,4-Dichlorophenol	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
1,2,4-Trichlorobenzene	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
Naphthalene	**ND**	0.094	EPA 8270/SIM	5-25-12	5-25-12	
4-Chloroaniline	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
Hexachlorobutadiene	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
4-Chloro-3-methylphenol	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
2-Methylnaphthalene	**ND**	0.094	EPA 8270/SIM	5-25-12	5-25-12	
1-Methylnaphthalene	**ND**	0.094	EPA 8270/SIM	5-25-12	5-25-12	
Hexachlorocyclopentadiene	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
2,4,6-Trichlorophenol	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
2,3-Dichloroaniline	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
2,4,5-Trichlorophenol	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
2-Chloronaphthalene	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
2-Nitroaniline	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
1,4-Dinitrobenzene	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
Dimethylphthalate	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
1,3-Dinitrobenzene	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
2,6-Dinitrotoluene	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
1,2-Dinitrobenzene	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
Acenaphthylene	**ND**	0.094	EPA 8270/SIM	5-25-12	5-25-12	
3-Nitroaniline	**ND**	0.94	EPA 8270	5-25-12	5-25-12	

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Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

SEMIVOLATILES by EPA 8270D/SIM
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-3A**					
Laboratory ID:	05-244-04					
2,4-Dinitrophenol	**ND**	4.7	EPA 8270	5-25-12	5-25-12	
Acenaphthene	**ND**	0.094	EPA 8270/SIM	5-25-12	5-25-12	
4-Nitrophenol	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
2,4-Dinitrotoluene	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
Dibenzofuran	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
2,3,5,6-Tetrachlorophenol	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
2,3,4,6-Tetrachlorophenol	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
Diethylphthalate	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
4-Chlorophenyl-phenylether	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
4-Nitroaniline	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
Fluorene	**ND**	0.094	EPA 8270/SIM	5-25-12	5-25-12	
4,6-Dinitro-2-methylphenol	**ND**	4.7	EPA 8270	5-25-12	5-25-12	
n-Nitrosodiphenylamine	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
1,2-Diphenylhydrazine	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
4-Bromophenyl-phenylether	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
Hexachlorobenzene	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
Pentachlorophenol	**ND**	4.7	EPA 8270	5-25-12	5-25-12	
Phenanthrene	**ND**	0.094	EPA 8270/SIM	5-25-12	5-25-12	
Anthracene	**ND**	0.094	EPA 8270/SIM	5-25-12	5-25-12	
Carbazole	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
Di-n-butylphthalate	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
Fluoranthene	**ND**	0.094	EPA 8270/SIM	5-25-12	5-25-12	
Benzidine	**ND**	4.7	EPA 8270	5-25-12	5-25-12	
Pyrene	**ND**	0.094	EPA 8270/SIM	5-25-12	5-25-12	
Butylbenzylphthalate	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
bis-2-Ethylhexyladipate	**ND**	4.7	EPA 8270	5-25-12	5-25-12	
3,3'-Dichlorobenzidine	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
Benzo[a]anthracene	**ND**	0.0094	EPA 8270/SIM	5-25-12	5-25-12	
Chrysene	**ND**	0.0094	EPA 8270/SIM	5-25-12	5-25-12	
bis(2-Ethylhexyl)phthalate	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
Di-n-octylphthalate	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
Benzo[b]fluoranthene	**ND**	0.0094	EPA 8270/SIM	5-25-12	5-25-12	
Benzo(j,k)fluoranthene	**ND**	0.0094	EPA 8270/SIM	5-25-12	5-25-12	
Benzo[a]pyrene	**ND**	0.0094	EPA 8270/SIM	5-25-12	5-25-12	
Indeno[1,2,3-cd]pyrene	**ND**	0.0094	EPA 8270/SIM	5-25-12	5-25-12	
Dibenz[a,h]anthracene	**ND**	0.0094	EPA 8270/SIM	5-25-12	5-25-12	
Benzo[g,h,i]perylene	**ND**	0.0094	EPA 8270/SIM	5-25-12	5-25-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*46*	*18 - 86*				
Phenol-d6	*44*	*10 - 100*				
Nitrobenzene-d5	*66*	*37 - 112*				
2-Fluorobiphenyl	*67*	*42 - 108*				
2,4,6-Tribromophenol	*67*	*39 - 118*				
Terphenyl-d14	*77*	*49 - 122*				

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Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

SEMIVOLATILES by EPA 8270D/SIM
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**DUP**					
Laboratory ID:	05-244-05					
n-Nitrosodimethylamine	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
Pyridine	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
Phenol	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
Aniline	**ND**	4.7	EPA 8270	5-25-12	5-25-12	
bis(2-Chloroethyl)ether	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
2-Chlorophenol	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
1,3-Dichlorobenzene	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
1,4-Dichlorobenzene	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
Benzyl alcohol	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
1,2-Dichlorobenzene	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
2-Methylphenol (o-Cresol)	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
bis(2-Chloroisopropyl)ether	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
n-Nitroso-di-n-propylamine	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
Hexachloroethane	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
Nitrobenzene	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
Isophorone	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
2-Nitrophenol	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
2,4-Dimethylphenol	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
bis(2-Chloroethoxy)methane	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
2,4-Dichlorophenol	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
1,2,4-Trichlorobenzene	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
Naphthalene	**ND**	0.094	EPA 8270/SIM	5-25-12	5-25-12	
4-Chloroaniline	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
Hexachlorobutadiene	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
4-Chloro-3-methylphenol	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
2-Methylnaphthalene	**ND**	0.094	EPA 8270/SIM	5-25-12	5-25-12	
1-Methylnaphthalene	**ND**	0.094	EPA 8270/SIM	5-25-12	5-25-12	
Hexachlorocyclopentadiene	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
2,4,6-Trichlorophenol	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
2,3-Dichloroaniline	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
2,4,5-Trichlorophenol	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
2-Chloronaphthalene	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
2-Nitroaniline	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
1,4-Dinitrobenzene	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
Dimethylphthalate	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
1,3-Dinitrobenzene	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
2,6-Dinitrotoluene	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
1,2-Dinitrobenzene	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
Acenaphthylene	**ND**	0.094	EPA 8270/SIM	5-25-12	5-25-12	
3-Nitroaniline	**ND**	0.94	EPA 8270	5-25-12	5-25-12	

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Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

SEMIVOLATILES by EPA 8270D/SIM
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**DUP**					
Laboratory ID:	05-244-05					
2,4-Dinitrophenol	**ND**	4.7	EPA 8270	5-25-12	5-25-12	
Acenaphthene	**ND**	0.094	EPA 8270/SIM	5-25-12	5-25-12	
4-Nitrophenol	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
2,4-Dinitrotoluene	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
Dibenzofuran	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
2,3,5,6-Tetrachlorophenol	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
2,3,4,6-Tetrachlorophenol	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
Diethylphthalate	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
4-Chlorophenyl-phenylether	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
4-Nitroaniline	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
Fluorene	**ND**	0.094	EPA 8270/SIM	5-25-12	5-25-12	
4,6-Dinitro-2-methylphenol	**ND**	4.7	EPA 8270	5-25-12	5-25-12	
n-Nitrosodiphenylamine	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
1,2-Diphenylhydrazine	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
4-Bromophenyl-phenylether	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
Hexachlorobenzene	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
Pentachlorophenol	**ND**	4.7	EPA 8270	5-25-12	5-25-12	
Phenanthrene	**ND**	0.094	EPA 8270/SIM	5-25-12	5-25-12	
Anthracene	**ND**	0.094	EPA 8270/SIM	5-25-12	5-25-12	
Carbazole	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
Di-n-butylphthalate	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
Fluoranthene	**ND**	0.094	EPA 8270/SIM	5-25-12	5-25-12	
Benzidine	**ND**	4.7	EPA 8270	5-25-12	5-25-12	
Pyrene	**ND**	0.094	EPA 8270/SIM	5-25-12	5-25-12	
Butylbenzylphthalate	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
bis-2-Ethylhexyladipate	**ND**	4.7	EPA 8270	5-25-12	5-25-12	
3,3'-Dichlorobenzidine	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
Benzo[a]anthracene	**ND**	0.0094	EPA 8270/SIM	5-25-12	5-25-12	
Chrysene	**ND**	0.0094	EPA 8270/SIM	5-25-12	5-25-12	
bis(2-Ethylhexyl)phthalate	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
Di-n-octylphthalate	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
Benzo[b]fluoranthene	**ND**	0.0094	EPA 8270/SIM	5-25-12	5-25-12	
Benzo(j,k)fluoranthene	**ND**	0.0094	EPA 8270/SIM	5-25-12	5-25-12	
Benzo[a]pyrene	**ND**	0.0094	EPA 8270/SIM	5-25-12	5-25-12	
Indeno[1,2,3-cd]pyrene	**ND**	0.0094	EPA 8270/SIM	5-25-12	5-25-12	
Dibenz[a,h]anthracene	**ND**	0.0094	EPA 8270/SIM	5-25-12	5-25-12	
Benzo[g,h,i]perylene	**ND**	0.0094	EPA 8270/SIM	5-25-12	5-25-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*57*	*18 - 86*				
Phenol-d6	*52*	*10 - 100*				
Nitrobenzene-d5	*82*	*37 - 112*				
2-Fluorobiphenyl	*75*	*42 - 108*				
2,4,6-Tribromophenol	*70*	*39 - 118*				
Terphenyl-d14	*81*	*49 - 122*				

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

SEMIVOLATILES by EPA 8270D/SIM
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-6**					
Laboratory ID:	05-244-06					
n-Nitrosodimethylamine	**ND**	0.93	EPA 8270	5-25-12	5-25-12	
Pyridine	**ND**	0.93	EPA 8270	5-25-12	5-25-12	
Phenol	**ND**	0.93	EPA 8270	5-25-12	5-25-12	
Aniline	**ND**	4.7	EPA 8270	5-25-12	5-25-12	
bis(2-Chloroethyl)ether	**ND**	0.93	EPA 8270	5-25-12	5-25-12	
2-Chlorophenol	**ND**	0.93	EPA 8270	5-25-12	5-25-12	
1,3-Dichlorobenzene	**ND**	0.93	EPA 8270	5-25-12	5-25-12	
1,4-Dichlorobenzene	**ND**	0.93	EPA 8270	5-25-12	5-25-12	
Benzyl alcohol	**ND**	0.93	EPA 8270	5-25-12	5-25-12	
1,2-Dichlorobenzene	**ND**	0.93	EPA 8270	5-25-12	5-25-12	
2-Methylphenol (o-Cresol)	**ND**	0.93	EPA 8270	5-25-12	5-25-12	
bis(2-Chloroisopropyl)ether	**ND**	0.93	EPA 8270	5-25-12	5-25-12	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.93	EPA 8270	5-25-12	5-25-12	
n-Nitroso-di-n-propylamine	**ND**	0.93	EPA 8270	5-25-12	5-25-12	
Hexachloroethane	**ND**	0.93	EPA 8270	5-25-12	5-25-12	
Nitrobenzene	**ND**	0.93	EPA 8270	5-25-12	5-25-12	
Isophorone	**ND**	0.93	EPA 8270	5-25-12	5-25-12	
2-Nitrophenol	**ND**	0.93	EPA 8270	5-25-12	5-25-12	
2,4-Dimethylphenol	**ND**	0.93	EPA 8270	5-25-12	5-25-12	
bis(2-Chloroethoxy)methane	**ND**	0.93	EPA 8270	5-25-12	5-25-12	
2,4-Dichlorophenol	**ND**	0.93	EPA 8270	5-25-12	5-25-12	
1,2,4-Trichlorobenzene	**ND**	0.93	EPA 8270	5-25-12	5-25-12	
Naphthalene	**ND**	0.093	EPA 8270/SIM	5-25-12	5-25-12	
4-Chloroaniline	**ND**	0.93	EPA 8270	5-25-12	5-25-12	
Hexachlorobutadiene	**ND**	0.93	EPA 8270	5-25-12	5-25-12	
4-Chloro-3-methylphenol	**ND**	0.93	EPA 8270	5-25-12	5-25-12	
2-Methylnaphthalene	**ND**	0.093	EPA 8270/SIM	5-25-12	5-25-12	
1-Methylnaphthalene	**ND**	0.093	EPA 8270/SIM	5-25-12	5-25-12	
Hexachlorocyclopentadiene	**ND**	0.93	EPA 8270	5-25-12	5-25-12	
2,4,6-Trichlorophenol	**ND**	0.93	EPA 8270	5-25-12	5-25-12	
2,3-Dichloroaniline	**ND**	0.93	EPA 8270	5-25-12	5-25-12	
2,4,5-Trichlorophenol	**ND**	0.93	EPA 8270	5-25-12	5-25-12	
2-Chloronaphthalene	**ND**	0.93	EPA 8270	5-25-12	5-25-12	
2-Nitroaniline	**ND**	0.93	EPA 8270	5-25-12	5-25-12	
1,4-Dinitrobenzene	**ND**	0.93	EPA 8270	5-25-12	5-25-12	
Dimethylphthalate	**ND**	0.93	EPA 8270	5-25-12	5-25-12	
1,3-Dinitrobenzene	**ND**	0.93	EPA 8270	5-25-12	5-25-12	
2,6-Dinitrotoluene	**ND**	0.93	EPA 8270	5-25-12	5-25-12	
1,2-Dinitrobenzene	**ND**	0.93	EPA 8270	5-25-12	5-25-12	
Acenaphthylene	**ND**	0.093	EPA 8270/SIM	5-25-12	5-25-12	
3-Nitroaniline	**ND**	0.93	EPA 8270	5-25-12	5-25-12	

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

SEMIVOLATILES by EPA 8270D/SIM
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-6**					
Laboratory ID:	05-244-06					
2,4-Dinitrophenol	**ND**	4.7	EPA 8270	5-25-12	5-25-12	
Acenaphthene	**0.14**	0.093	EPA 8270/SIM	5-25-12	5-25-12	
4-Nitrophenol	**ND**	0.93	EPA 8270	5-25-12	5-25-12	
2,4-Dinitrotoluene	**ND**	0.93	EPA 8270	5-25-12	5-25-12	
Dibenzofuran	**ND**	0.93	EPA 8270	5-25-12	5-25-12	
2,3,5,6-Tetrachlorophenol	**ND**	0.93	EPA 8270	5-25-12	5-25-12	
2,3,4,6-Tetrachlorophenol	**ND**	0.93	EPA 8270	5-25-12	5-25-12	
Diethylphthalate	**ND**	0.93	EPA 8270	5-25-12	5-25-12	
4-Chlorophenyl-phenylether	**ND**	0.93	EPA 8270	5-25-12	5-25-12	
4-Nitroaniline	**ND**	0.93	EPA 8270	5-25-12	5-25-12	
Fluorene	**ND**	0.093	EPA 8270/SIM	5-25-12	5-25-12	
4,6-Dinitro-2-methylphenol	**ND**	4.7	EPA 8270	5-25-12	5-25-12	
n-Nitrosodiphenylamine	**ND**	0.93	EPA 8270	5-25-12	5-25-12	
1,2-Diphenylhydrazine	**ND**	0.93	EPA 8270	5-25-12	5-25-12	
4-Bromophenyl-phenylether	**ND**	0.93	EPA 8270	5-25-12	5-25-12	
Hexachlorobenzene	**ND**	0.93	EPA 8270	5-25-12	5-25-12	
Pentachlorophenol	**ND**	4.7	EPA 8270	5-25-12	5-25-12	
Phenanthrene	**ND**	0.093	EPA 8270/SIM	5-25-12	5-25-12	
Anthracene	**ND**	0.093	EPA 8270/SIM	5-25-12	5-25-12	
Carbazole	**ND**	0.93	EPA 8270	5-25-12	5-25-12	
Di-n-butylphthalate	**ND**	0.93	EPA 8270	5-25-12	5-25-12	
Fluoranthene	**0.11**	0.093	EPA 8270/SIM	5-25-12	5-25-12	
Benzidine	**ND**	4.7	EPA 8270	5-25-12	5-25-12	
Pyrene	**ND**	0.093	EPA 8270/SIM	5-25-12	5-25-12	
Butylbenzylphthalate	**ND**	0.93	EPA 8270	5-25-12	5-25-12	
bis-2-Ethylhexyladipate	**ND**	4.7	EPA 8270	5-25-12	5-25-12	
3,3'-Dichlorobenzidine	**ND**	0.93	EPA 8270	5-25-12	5-25-12	
Benzo[a]anthracene	**0.010**	0.0093	EPA 8270/SIM	5-25-12	5-25-12	
Chrysene	**ND**	0.0093	EPA 8270/SIM	5-25-12	5-25-12	
bis(2-Ethylhexyl)phthalate	**ND**	0.93	EPA 8270	5-25-12	5-25-12	
Di-n-octylphthalate	**ND**	0.93	EPA 8270	5-25-12	5-25-12	
Benzo[b]fluoranthene	**ND**	0.0093	EPA 8270/SIM	5-25-12	5-25-12	
Benzo(j,k)fluoranthene	**ND**	0.0093	EPA 8270/SIM	5-25-12	5-25-12	
Benzo[a]pyrene	**ND**	0.0093	EPA 8270/SIM	5-25-12	5-25-12	
Indeno[1,2,3-cd]pyrene	**ND**	0.0093	EPA 8270/SIM	5-25-12	5-25-12	
Dibenz[a,h]anthracene	**ND**	0.0093	EPA 8270/SIM	5-25-12	5-25-12	
Benzo[g,h,i]perylene	**ND**	0.0093	EPA 8270/SIM	5-25-12	5-25-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*53*	*18 - 86*				
Phenol-d6	*48*	*10 - 100*				
Nitrobenzene-d5	*72*	*37 - 112*				
2-Fluorobiphenyl	*65*	*42 - 108*				
2,4,6-Tribromophenol	*65*	*39 - 118*				
Terphenyl-d14	*77*	*49 - 122*				

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

SEMIVOLATILES by EPA 8270D/SIM
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-7**					
Laboratory ID:	05-244-07					
n-Nitrosodimethylamine	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
Pyridine	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
Phenol	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
Aniline	**ND**	4.7	EPA 8270	5-25-12	5-25-12	
bis(2-Chloroethyl)ether	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
2-Chlorophenol	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
1,3-Dichlorobenzene	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
1,4-Dichlorobenzene	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
Benzyl alcohol	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
1,2-Dichlorobenzene	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
2-Methylphenol (o-Cresol)	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
bis(2-Chloroisopropyl)ether	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
n-Nitroso-di-n-propylamine	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
Hexachloroethane	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
Nitrobenzene	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
Isophorone	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
2-Nitrophenol	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
2,4-Dimethylphenol	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
bis(2-Chloroethoxy)methane	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
2,4-Dichlorophenol	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
1,2,4-Trichlorobenzene	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
Naphthalene	**ND**	0.094	EPA 8270/SIM	5-25-12	5-25-12	
4-Chloroaniline	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
Hexachlorobutadiene	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
4-Chloro-3-methylphenol	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
2-Methylnaphthalene	**ND**	0.094	EPA 8270/SIM	5-25-12	5-25-12	
1-Methylnaphthalene	**ND**	0.094	EPA 8270/SIM	5-25-12	5-25-12	
Hexachlorocyclopentadiene	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
2,4,6-Trichlorophenol	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
2,3-Dichloroaniline	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
2,4,5-Trichlorophenol	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
2-Chloronaphthalene	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
2-Nitroaniline	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
1,4-Dinitrobenzene	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
Dimethylphthalate	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
1,3-Dinitrobenzene	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
2,6-Dinitrotoluene	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
1,2-Dinitrobenzene	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
Acenaphthylene	**ND**	0.094	EPA 8270/SIM	5-25-12	5-25-12	
3-Nitroaniline	**ND**	0.94	EPA 8270	5-25-12	5-25-12	

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

SEMIVOLATILES by EPA 8270D/SIM
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-7**					
Laboratory ID:	05-244-07					
2,4-Dinitrophenol	**ND**	4.7	EPA 8270	5-25-12	5-25-12	
Acenaphthene	**ND**	0.094	EPA 8270/SIM	5-25-12	5-25-12	
4-Nitrophenol	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
2,4-Dinitrotoluene	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
Dibenzofuran	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
2,3,5,6-Tetrachlorophenol	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
2,3,4,6-Tetrachlorophenol	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
Diethylphthalate	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
4-Chlorophenyl-phenylether	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
4-Nitroaniline	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
Fluorene	**ND**	0.094	EPA 8270/SIM	5-25-12	5-25-12	
4,6-Dinitro-2-methylphenol	**ND**	4.7	EPA 8270	5-25-12	5-25-12	
n-Nitrosodiphenylamine	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
1,2-Diphenylhydrazine	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
4-Bromophenyl-phenylether	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
Hexachlorobenzene	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
Pentachlorophenol	**ND**	4.7	EPA 8270	5-25-12	5-25-12	
Phenanthrene	**ND**	0.094	EPA 8270/SIM	5-25-12	5-25-12	
Anthracene	**ND**	0.094	EPA 8270/SIM	5-25-12	5-25-12	
Carbazole	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
Di-n-butylphthalate	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
Fluoranthene	**ND**	0.094	EPA 8270/SIM	5-25-12	5-25-12	
Benzidine	**ND**	4.7	EPA 8270	5-25-12	5-25-12	
Pyrene	**ND**	0.094	EPA 8270/SIM	5-25-12	5-25-12	
Butylbenzylphthalate	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
bis-2-Ethylhexyladipate	**ND**	4.7	EPA 8270	5-25-12	5-25-12	
3,3'-Dichlorobenzidine	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
Benzo[a]anthracene	**ND**	0.0094	EPA 8270/SIM	5-25-12	5-25-12	
Chrysene	**ND**	0.0094	EPA 8270/SIM	5-25-12	5-25-12	
bis(2-Ethylhexyl)phthalate	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
Di-n-octylphthalate	**ND**	0.94	EPA 8270	5-25-12	5-25-12	
Benzo[b]fluoranthene	**ND**	0.0094	EPA 8270/SIM	5-25-12	5-25-12	
Benzo(j,k)fluoranthene	**ND**	0.0094	EPA 8270/SIM	5-25-12	5-25-12	
Benzo[a]pyrene	**ND**	0.0094	EPA 8270/SIM	5-25-12	5-25-12	
Indeno[1,2,3-cd]pyrene	**ND**	0.0094	EPA 8270/SIM	5-25-12	5-25-12	
Dibenz[a,h]anthracene	**ND**	0.0094	EPA 8270/SIM	5-25-12	5-25-12	
Benzo[g,h,i]perylene	**ND**	0.0094	EPA 8270/SIM	5-25-12	5-25-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*49*	*18 - 86*				
Phenol-d6	*41*	*10 - 100*				
Nitrobenzene-d5	*74*	*37 - 112*				
2-Fluorobiphenyl	*68*	*42 - 108*				
2,4,6-Tribromophenol	*67*	*39 - 118*				
Terphenyl-d14	*84*	*49 - 122*				

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

PAHs by EPA 8270D/SIM
(with silica gel clean-up)

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-1**					
Laboratory ID:	05-244-01					
Naphthalene	**ND**	0.095	EPA 8270/SIM	5-24-12	5-26-12	
2-Methylnaphthalene	**ND**	0.095	EPA 8270/SIM	5-24-12	5-26-12	
1-Methylnaphthalene	**ND**	0.095	EPA 8270/SIM	5-24-12	5-26-12	
Acenaphthylene	**ND**	0.095	EPA 8270/SIM	5-24-12	5-26-12	
Acenaphthene	**ND**	0.095	EPA 8270/SIM	5-24-12	5-26-12	
Fluorene	**ND**	0.095	EPA 8270/SIM	5-24-12	5-26-12	
Phenanthrene	**ND**	0.095	EPA 8270/SIM	5-24-12	5-26-12	
Anthracene	**ND**	0.095	EPA 8270/SIM	5-24-12	5-26-12	
Fluoranthene	**ND**	0.095	EPA 8270/SIM	5-24-12	5-26-12	
Pyrene	**ND**	0.095	EPA 8270/SIM	5-24-12	5-26-12	
Benzo[a]anthracene	**ND**	0.0095	EPA 8270/SIM	5-24-12	5-26-12	
Chrysene	**ND**	0.0095	EPA 8270/SIM	5-24-12	5-26-12	
Benzo[b]fluoranthene	**ND**	0.0095	EPA 8270/SIM	5-24-12	5-26-12	
Benzo(j,k)fluoranthene	**ND**	0.0095	EPA 8270/SIM	5-24-12	5-26-12	
Benzo[a]pyrene	**ND**	0.0095	EPA 8270/SIM	5-24-12	5-26-12	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0095	EPA 8270/SIM	5-24-12	5-26-12	
Dibenz[a,h]anthracene	**ND**	0.0095	EPA 8270/SIM	5-24-12	5-26-12	
Benzo[g,h,i]perylene	**ND**	0.0095	EPA 8270/SIM	5-24-12	5-26-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*84*	*38 - 105*				
Pyrene-d10	*93*	*37 - 121*				
Terphenyl-d14	*101*	*32 - 112*				

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

PAHs by EPA 8270D/SIM
(with silica gel clean-up)

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-2A**					
Laboratory ID:	05-244-02					
Naphthalene	**ND**	0.094	EPA 8270/SIM	5-24-12	5-26-12	
2-Methylnaphthalene	**ND**	0.094	EPA 8270/SIM	5-24-12	5-26-12	
1-Methylnaphthalene	**ND**	0.094	EPA 8270/SIM	5-24-12	5-26-12	
Acenaphthylene	**ND**	0.094	EPA 8270/SIM	5-24-12	5-26-12	
Acenaphthene	**ND**	0.094	EPA 8270/SIM	5-24-12	5-26-12	
Fluorene	**ND**	0.094	EPA 8270/SIM	5-24-12	5-26-12	
Phenanthrene	**ND**	0.094	EPA 8270/SIM	5-24-12	5-26-12	
Anthracene	**ND**	0.094	EPA 8270/SIM	5-24-12	5-26-12	
Fluoranthene	**ND**	0.094	EPA 8270/SIM	5-24-12	5-26-12	
Pyrene	**ND**	0.094	EPA 8270/SIM	5-24-12	5-26-12	
Benzo[a]anthracene	**ND**	0.0094	EPA 8270/SIM	5-24-12	5-26-12	
Chrysene	**ND**	0.0094	EPA 8270/SIM	5-24-12	5-26-12	
Benzo[b]fluoranthene	**ND**	0.0094	EPA 8270/SIM	5-24-12	5-26-12	
Benzo(j,k)fluoranthene	**ND**	0.0094	EPA 8270/SIM	5-24-12	5-26-12	
Benzo[a]pyrene	**ND**	0.0094	EPA 8270/SIM	5-24-12	5-26-12	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0094	EPA 8270/SIM	5-24-12	5-26-12	
Dibenz[a,h]anthracene	**ND**	0.0094	EPA 8270/SIM	5-24-12	5-26-12	
Benzo[g,h,i]perylene	**ND**	0.0094	EPA 8270/SIM	5-24-12	5-26-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*87*	*38 - 105*				
Pyrene-d10	*91*	*37 - 121*				
Terphenyl-d14	*105*	*32 - 112*				

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

PAHs by EPA 8270D/SIM
(with silica gel clean-up)

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-4**					
Laboratory ID:	05-244-03					
Naphthalene	**ND**	0.095	EPA 8270/SIM	5-24-12	5-26-12	
2-Methylnaphthalene	**ND**	0.095	EPA 8270/SIM	5-24-12	5-26-12	
1-Methylnaphthalene	**ND**	0.095	EPA 8270/SIM	5-24-12	5-26-12	
Acenaphthylene	**ND**	0.095	EPA 8270/SIM	5-24-12	5-26-12	
Acenaphthene	**ND**	0.095	EPA 8270/SIM	5-24-12	5-26-12	
Fluorene	**ND**	0.095	EPA 8270/SIM	5-24-12	5-26-12	
Phenanthrene	**ND**	0.095	EPA 8270/SIM	5-24-12	5-26-12	
Anthracene	**ND**	0.095	EPA 8270/SIM	5-24-12	5-26-12	
Fluoranthene	**ND**	0.095	EPA 8270/SIM	5-24-12	5-26-12	
Pyrene	**ND**	0.095	EPA 8270/SIM	5-24-12	5-26-12	
Benzo[a]anthracene	**ND**	0.0095	EPA 8270/SIM	5-24-12	5-26-12	
Chrysene	**ND**	0.0095	EPA 8270/SIM	5-24-12	5-26-12	
Benzo[b]fluoranthene	**ND**	0.0095	EPA 8270/SIM	5-24-12	5-26-12	
Benzo(j,k)fluoranthene	**ND**	0.0095	EPA 8270/SIM	5-24-12	5-26-12	
Benzo[a]pyrene	**ND**	0.0095	EPA 8270/SIM	5-24-12	5-26-12	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0095	EPA 8270/SIM	5-24-12	5-26-12	
Dibenz[a,h]anthracene	**ND**	0.0095	EPA 8270/SIM	5-24-12	5-26-12	
Benzo[g,h,i]perylene	**ND**	0.0095	EPA 8270/SIM	5-24-12	5-26-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*87*	*38 - 105*				
Pyrene-d10	*105*	*37 - 121*				
Terphenyl-d14	*102*	*32 - 112*				

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

ORGANOCHLORINE PESTICIDES by EPA 8081A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-3A**					
Laboratory ID:	05-244-04					
alpha-BHC	**ND**	0.0047	EPA 8081	5-25-12	5-29-12	
gamma-BHC	**ND**	0.0047	EPA 8081	5-25-12	5-29-12	
beta-BHC	**ND**	0.0047	EPA 8081	5-25-12	5-29-12	
delta-BHC	**ND**	0.0047	EPA 8081	5-25-12	5-29-12	
Heptachlor	**ND**	0.0047	EPA 8081	5-25-12	5-29-12	
Aldrin	**ND**	0.0047	EPA 8081	5-25-12	5-29-12	
Heptachlor Epoxide	**ND**	0.0047	EPA 8081	5-25-12	5-29-12	
gamma-Chlordane	**ND**	0.0047	EPA 8081	5-25-12	5-29-12	
alpha-Chlordane	**ND**	0.0047	EPA 8081	5-25-12	5-29-12	
4,4'-DDE	**ND**	0.0047	EPA 8081	5-25-12	5-29-12	
Endosulfan I	**ND**	0.0047	EPA 8081	5-25-12	5-29-12	
Dieldrin	**ND**	0.0047	EPA 8081	5-25-12	5-29-12	
Endrin	**ND**	0.0047	EPA 8081	5-25-12	5-29-12	
4,4'-DDD	**ND**	0.0047	EPA 8081	5-25-12	5-29-12	
Endosulfan II	**ND**	0.0047	EPA 8081	5-25-12	5-29-12	
4,4'-DDT	**ND**	0.0047	EPA 8081	5-25-12	5-29-12	
Endrin Aldehyde	**ND**	0.0047	EPA 8081	5-25-12	5-29-12	
Methoxychlor	**ND**	0.0094	EPA 8081	5-25-12	5-29-12	
Endosulfan Sulfate	**ND**	0.0047	EPA 8081	5-25-12	5-29-12	
Endrin Ketone	**ND**	0.019	EPA 8081	5-25-12	5-29-12	
Toxaphene	**ND**	0.047	EPA 8081	5-25-12	5-29-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*75*	*30-88*				
DCB	*80*	*39-111*				

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Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

ORGANOCHLORINE PESTICIDES by EPA 8081A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**DUP**					
Laboratory ID:	05-244-05					
alpha-BHC	**ND**	0.0047	EPA 8081	5-25-12	5-29-12	
gamma-BHC	**ND**	0.0047	EPA 8081	5-25-12	5-29-12	
beta-BHC	**ND**	0.0047	EPA 8081	5-25-12	5-29-12	
delta-BHC	**ND**	0.0047	EPA 8081	5-25-12	5-29-12	
Heptachlor	**ND**	0.0047	EPA 8081	5-25-12	5-29-12	
Aldrin	**ND**	0.0047	EPA 8081	5-25-12	5-29-12	
Heptachlor Epoxide	**ND**	0.0047	EPA 8081	5-25-12	5-29-12	
gamma-Chlordane	**ND**	0.0047	EPA 8081	5-25-12	5-29-12	
alpha-Chlordane	**ND**	0.0047	EPA 8081	5-25-12	5-29-12	
4,4'-DDE	**ND**	0.0047	EPA 8081	5-25-12	5-29-12	
Endosulfan I	**ND**	0.0047	EPA 8081	5-25-12	5-29-12	
Dieldrin	**ND**	0.0047	EPA 8081	5-25-12	5-29-12	
Endrin	**ND**	0.0047	EPA 8081	5-25-12	5-29-12	
4,4'-DDD	**ND**	0.0047	EPA 8081	5-25-12	5-29-12	
Endosulfan II	**ND**	0.0047	EPA 8081	5-25-12	5-29-12	
4,4'-DDT	**ND**	0.0047	EPA 8081	5-25-12	5-29-12	
Endrin Aldehyde	**ND**	0.0047	EPA 8081	5-25-12	5-29-12	
Methoxychlor	**ND**	0.0094	EPA 8081	5-25-12	5-29-12	
Endosulfan Sulfate	**ND**	0.0047	EPA 8081	5-25-12	5-29-12	
Endrin Ketone	**ND**	0.019	EPA 8081	5-25-12	5-29-12	
Toxaphene	**ND**	0.047	EPA 8081	5-25-12	5-29-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*76*	*30-88*				
DCB	*81*	*39-111*				

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Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

ORGANOCHLORINE PESTICIDES by EPA 8081A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-6**					
Laboratory ID:	05-244-06					
alpha-BHC	**ND**	0.0046	EPA 8081	5-25-12	5-29-12	
gamma-BHC	**ND**	0.0046	EPA 8081	5-25-12	5-29-12	
beta-BHC	**ND**	0.0046	EPA 8081	5-25-12	5-29-12	
delta-BHC	**ND**	0.0046	EPA 8081	5-25-12	5-29-12	
Heptachlor	**ND**	0.0046	EPA 8081	5-25-12	5-29-12	
Aldrin	**ND**	0.0046	EPA 8081	5-25-12	5-29-12	
Heptachlor Epoxide	**ND**	0.0046	EPA 8081	5-25-12	5-29-12	
gamma-Chlordane	**ND**	0.0046	EPA 8081	5-25-12	5-29-12	
alpha-Chlordane	**ND**	0.0046	EPA 8081	5-25-12	5-29-12	
4,4'-DDE	**ND**	0.0046	EPA 8081	5-25-12	5-29-12	
Endosulfan I	**ND**	0.0046	EPA 8081	5-25-12	5-29-12	
Dieldrin	**ND**	0.0046	EPA 8081	5-25-12	5-29-12	
Endrin	**ND**	0.0046	EPA 8081	5-25-12	5-29-12	
4,4'-DDD	**ND**	0.0046	EPA 8081	5-25-12	5-29-12	
Endosulfan II	**ND**	0.0046	EPA 8081	5-25-12	5-29-12	
4,4'-DDT	**ND**	0.0046	EPA 8081	5-25-12	5-29-12	
Endrin Aldehyde	**ND**	0.0046	EPA 8081	5-25-12	5-29-12	
Methoxychlor	**ND**	0.0093	EPA 8081	5-25-12	5-29-12	
Endosulfan Sulfate	**ND**	0.0046	EPA 8081	5-25-12	5-29-12	
Endrin Ketone	**ND**	0.019	EPA 8081	5-25-12	5-29-12	
Toxaphene	**ND**	0.046	EPA 8081	5-25-12	5-29-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*76*	*30-88*				
DCB	*82*	*39-111*				

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Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

ORGANOCHLORINE PESTICIDES by EPA 8081A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-7**					
Laboratory ID:	05-244-07					
alpha-BHC	**ND**	0.0047	EPA 8081	5-25-12	5-29-12	
gamma-BHC	**ND**	0.0047	EPA 8081	5-25-12	5-29-12	
beta-BHC	**ND**	0.0047	EPA 8081	5-25-12	5-29-12	
delta-BHC	**ND**	0.0047	EPA 8081	5-25-12	5-29-12	
Heptachlor	**ND**	0.0047	EPA 8081	5-25-12	5-29-12	
Aldrin	**ND**	0.0047	EPA 8081	5-25-12	5-29-12	
Heptachlor Epoxide	**ND**	0.0047	EPA 8081	5-25-12	5-29-12	
gamma-Chlordane	**ND**	0.0047	EPA 8081	5-25-12	5-29-12	
alpha-Chlordane	**ND**	0.0047	EPA 8081	5-25-12	5-29-12	
4,4'-DDE	**ND**	0.0047	EPA 8081	5-25-12	5-29-12	
Endosulfan I	**ND**	0.0047	EPA 8081	5-25-12	5-29-12	
Dieldrin	**ND**	0.0047	EPA 8081	5-25-12	5-29-12	
Endrin	**ND**	0.0047	EPA 8081	5-25-12	5-29-12	
4,4'-DDD	**ND**	0.0047	EPA 8081	5-25-12	5-29-12	
Endosulfan II	**ND**	0.0047	EPA 8081	5-25-12	5-29-12	
4,4'-DDT	**ND**	0.0047	EPA 8081	5-25-12	5-29-12	
Endrin Aldehyde	**ND**	0.0047	EPA 8081	5-25-12	5-29-12	
Methoxychlor	**ND**	0.0095	EPA 8081	5-25-12	5-29-12	
Endosulfan Sulfate	**ND**	0.0047	EPA 8081	5-25-12	5-29-12	
Endrin Ketone	**ND**	0.019	EPA 8081	5-25-12	5-29-12	
Toxaphene	**ND**	0.047	EPA 8081	5-25-12	5-29-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*71*	*30-88*				
DCB	*84*	*39-111*				

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Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

TOTAL METALS
EPA 200.8/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	05-244-01					
Client ID:	**MW-1**					
Arsenic	**ND**	17	200.8	5-31-12	6-4-12	U1
Copper	**10**	10	200.8	5-31-12	6-4-12	
Mercury	**ND**	0.50	7470A	5-29-12	5-29-12	
Nickel	**ND**	20	200.8	5-31-12	6-4-12	
Silver	**ND**	10	200.8	5-31-12	6-4-12	
Zinc	**ND**	25	200.8	5-31-12	6-4-12	
Lab ID:	05-244-02					
Client ID:	**MW-2A**					
Arsenic	**ND**	12	200.8	5-31-12	6-4-12	U1
Copper	**ND**	10	200.8	5-31-12	6-4-12	
Mercury	**ND**	0.50	7470A	5-29-12	5-29-12	
Nickel	**ND**	20	200.8	5-31-12	6-4-12	
Silver	**ND**	10	200.8	5-31-12	6-4-12	
Zinc	**ND**	25	200.8	5-31-12	6-4-12	
Lab ID:	05-244-03					
Client ID:	**MW-4**					
Arsenic	**ND**	9.0	200.8	5-31-12	6-4-12	U1
Copper	**ND**	10	200.8	5-31-12	6-4-12	
Mercury	**ND**	0.50	7470A	5-29-12	5-29-12	
Nickel	**ND**	20	200.8	5-31-12	6-4-12	
Silver	**ND**	10	200.8	5-31-12	6-4-12	
Zinc	**ND**	25	200.8	5-31-12	6-4-12	

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

TOTAL METALS
EPA 200.8/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	05-244-04					
Client ID:	**MW-3A**					
Arsenic	**ND**	4.0	200.8	5-31-12	6-4-12	U1
Cadmium	**ND**	4.0	200.8	5-31-12	6-4-12	
Chromium	**ND**	10	200.8	5-31-12	6-4-12	
Copper	**11**	10	200.8	5-31-12	6-4-12	
Lead	**ND**	1.0	200.8	5-31-12	6-4-12	
Mercury	**ND**	0.50	7470A	5-29-12	5-29-12	
Nickel	**ND**	20	200.8	5-31-12	6-4-12	
Silver	**ND**	10	200.8	5-31-12	6-4-12	
Zinc	**ND**	25	200.8	5-31-12	6-4-12	
Lab ID:	05-244-05					
Client ID:	**DUP**					
Arsenic	**ND**	5.3	200.8	5-31-12	6-4-12	U1
Cadmium	**ND**	4.0	200.8	5-31-12	6-4-12	
Chromium	**ND**	10	200.8	5-31-12	6-4-12	
Copper	**12**	10	200.8	5-31-12	6-4-12	
Lead	**ND**	1.0	200.8	5-31-12	6-4-12	
Mercury	**ND**	0.50	7470A	5-29-12	5-29-12	
Nickel	**ND**	20	200.8	5-31-12	6-4-12	
Silver	**ND**	10	200.8	5-31-12	6-4-12	
Zinc	**ND**	25	200.8	5-31-12	6-4-12	

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Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

TOTAL METALS
EPA 200.8/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	05-244-06					
Client ID:	**MW-6**					
Arsenic	**ND**	3.5	200.8	5-31-12	6-4-12	U1
Cadmium	**ND**	4.0	200.8	5-31-12	6-4-12	
Chromium	**ND**	10	200.8	5-31-12	6-4-12	
Copper	**20**	10	200.8	5-31-12	6-4-12	
Lead	**ND**	1.0	200.8	5-31-12	6-4-12	
Mercury	**ND**	0.50	7470A	5-29-12	5-29-12	
Nickel	**ND**	20	200.8	5-31-12	6-4-12	
Silver	**ND**	10	200.8	5-31-12	6-4-12	
Zinc	**ND**	25	200.8	5-31-12	6-4-12	
Lab ID:	05-244-07					
Client ID:	**MW-7**					
Arsenic	**ND**	11	200.8	5-31-12	6-4-12	U1
Cadmium	**ND**	4.0	200.8	5-31-12	6-4-12	
Chromium	**ND**	10	200.8	5-31-12	6-4-12	
Copper	**ND**	10	200.8	5-31-12	6-4-12	
Lead	**ND**	1.0	200.8	5-31-12	6-4-12	
Mercury	**ND**	0.50	7470A	5-29-12	5-29-12	
Nickel	**ND**	20	200.8	5-31-12	6-4-12	
Silver	**ND**	10	200.8	5-31-12	6-4-12	
Zinc	**ND**	25	200.8	5-31-12	6-4-12	

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Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

DISSOLVED METALS
EPA 200.8/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	05-244-01					
Client ID:	**MW-1**					
Arsenic	**ND**	15	200.8		6-4-12	U1
Copper	**ND**	10	200.8		6-4-12	
Mercury	**ND**	0.50	7470A		5-29-12	
Nickel	**ND**	20	200.8		6-4-12	
Silver	**ND**	10	200.8		6-5-12	
Zinc	**ND**	25	200.8		6-4-12	
Lab ID:	05-244-02					
Client ID:	**MW-2A**					
Arsenic	**ND**	11	200.8		6-4-12	U1
Copper	**ND**	10	200.8		6-4-12	
Mercury	**ND**	0.50	7470A		5-29-12	
Nickel	**ND**	20	200.8		6-4-12	
Silver	**ND**	10	200.8		6-5-12	
Zinc	**ND**	25	200.8		6-4-12	
Lab ID:	05-244-03					
Client ID:	**MW-4**					
Arsenic	**ND**	9.5	200.8		6-4-12	U1
Copper	**ND**	10	200.8		6-4-12	
Mercury	**ND**	0.50	7470A		5-29-12	
Nickel	**ND**	20	200.8		6-4-12	
Silver	**ND**	10	200.8		6-5-12	
Zinc	**ND**	25	200.8		6-4-12	

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Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

DISSOLVED METALS
EPA 200.8/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	05-244-04					
Client ID:	**MW-3A**					
Arsenic	**ND**	4.5	200.8		6-4-12	U1
Cadmium	**ND**	4.0	200.8		6-4-12	
Chromium	**ND**	10	200.8		6-4-12	
Copper	**12**	10	200.8		6-4-12	
Lead	**ND**	1.0	200.8		6-4-12	
Mercury	**ND**	0.50	7470A		5-29-12	
Nickel	**ND**	20	200.8		6-4-12	
Silver	**ND**	10	200.8		6-5-12	
Zinc	**ND**	25	200.8		6-4-12	
Lab ID:	05-244-05					
Client ID:	**DUP**					
Arsenic	**ND**	4.8	200.8		6-4-12	U1
Cadmium	**ND**	4.0	200.8		6-4-12	
Chromium	**ND**	10	200.8		6-4-12	
Copper	**14**	10	200.8		6-4-12	
Lead	**ND**	1.0	200.8		6-4-12	
Mercury	**ND**	0.50	7470A		5-29-12	
Nickel	**ND**	20	200.8		6-4-12	
Silver	**ND**	10	200.8		6-5-12	
Zinc	**ND**	25	200.8		6-4-12	

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Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

DISSOLVED METALS
EPA 200.8/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	05-244-06					
Client ID:	**MW-6**					
Arsenic	**ND**	3.0	200.8		6-4-12	
Cadmium	**ND**	4.0	200.8		6-4-12	
Chromium	**ND**	10	200.8		6-4-12	
Copper	**15**	10	200.8		6-4-12	
Lead	**ND**	1.0	200.8		6-4-12	
Mercury	**ND**	0.50	7470A		5-29-12	
Nickel	**ND**	20	200.8		6-4-12	
Silver	**ND**	10	200.8		6-5-12	
Zinc	**ND**	25	200.8		6-4-12	
Lab ID:	05-244-07					
Client ID:	**MW-7**					
Arsenic	**ND**	9.8	200.8		6-4-12	U1
Cadmium	**ND**	4.0	200.8		6-4-12	
Chromium	**ND**	10	200.8		6-4-12	
Copper	**ND**	10	200.8		6-4-12	
Lead	**ND**	1.0	200.8		6-4-12	
Mercury	**ND**	0.50	7470A		5-29-12	
Nickel	**ND**	20	200.8		6-4-12	
Silver	**ND**	10	200.8		6-5-12	
Zinc	**ND**	25	200.8		6-4-12	

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Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

EDB by EPA 8011

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-3A**					
Laboratory ID:	05-244-04					
EDB	**ND**	0.0094	EPA 8011	6-5-12	6-5-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*78*	*31-144*				
Client ID:	**DUP**					
Laboratory ID:	05-244-05					
EDB	**ND**	0.0093	EPA 8011	6-5-12	6-5-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*70*	*31-144*				
Client ID:	**MW-6**					
Laboratory ID:	05-244-06					
EDB	**ND**	0.0094	EPA 8011	6-5-12	6-5-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*53*	*31-144*				
Client ID:	**MW-7**					
Laboratory ID:	05-244-07					
EDB	**ND**	0.0095	EPA 8011	6-5-12	6-5-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*77*	*31-144*				

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Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

CHLORINATED ACID HERBICIDES by EPA 8151A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-3A**					
Laboratory ID:	05-244-04					
Dalapon	**ND**	0.21	EPA 8151	5-25-12	5-25-12	
Dicamba	**ND**	0.022	EPA 8151	5-25-12	5-25-12	
MCPP	**ND**	4.4	EPA 8151	5-25-12	5-25-12	
MCPA	**ND**	4.4	EPA 8151	5-25-12	5-25-12	
Dichlorprop	**ND**	0.022	EPA 8151	5-25-12	5-25-12	
2,4-D	**ND**	0.022	EPA 8151	5-25-12	5-25-12	
Pentachlorophenol	**ND**	0.0089	EPA 8151	5-25-12	5-25-12	
2,4,5-TP (Silvex)	**ND**	0.022	EPA 8151	5-25-12	5-25-12	
2,4,5-T	**ND**	0.022	EPA 8151	5-25-12	5-25-12	
2,4-DB	**ND**	0.044	EPA 8151	5-25-12	5-25-12	
Dinoseb	**ND**	0.022	EPA 8151	5-25-12	5-25-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCAA	*42*	*30-93*				
Client ID:	**DUP**					
Laboratory ID:	05-244-05					
Dalapon	**ND**	0.21	EPA 8151	5-25-12	5-25-12	
Dicamba	**ND**	0.022	EPA 8151	5-25-12	5-25-12	
MCPP	**ND**	4.3	EPA 8151	5-25-12	5-25-12	
MCPA	**ND**	4.3	EPA 8151	5-25-12	5-25-12	
Dichlorprop	**ND**	0.022	EPA 8151	5-25-12	5-25-12	
2,4-D	**ND**	0.022	EPA 8151	5-25-12	5-25-12	
Pentachlorophenol	**ND**	0.0088	EPA 8151	5-25-12	5-25-12	
2,4,5-TP (Silvex)	**ND**	0.022	EPA 8151	5-25-12	5-25-12	
2,4,5-T	**ND**	0.022	EPA 8151	5-25-12	5-25-12	
2,4-DB	**ND**	0.044	EPA 8151	5-25-12	5-25-12	
Dinoseb	**ND**	0.022	EPA 8151	5-25-12	5-25-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCAA	*38*	*30-93*				

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Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

CHLORINATED ACID HERBICIDES by EPA 8151A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-6**					
Laboratory ID:	05-244-06					
Dalapon	**ND**	0.22	EPA 8151	5-25-12	5-25-12	
Dicamba	**ND**	0.022	EPA 8151	5-25-12	5-25-12	
MCPP	**ND**	4.4	EPA 8151	5-25-12	5-25-12	
MCPA	**ND**	4.4	EPA 8151	5-25-12	5-25-12	
Dichlorprop	**0.030**	0.022	EPA 8151	5-25-12	5-25-12	
2,4-D	**ND**	0.022	EPA 8151	5-25-12	5-25-12	
Pentachlorophenol	**ND**	0.0090	EPA 8151	5-25-12	5-25-12	
2,4,5-TP (Silvex)	**ND**	0.023	EPA 8151	5-25-12	5-25-12	
2,4,5-T	**ND**	0.022	EPA 8151	5-25-12	5-25-12	
2,4-DB	**ND**	0.045	EPA 8151	5-25-12	5-25-12	
Dinoseb	**ND**	0.022	EPA 8151	5-25-12	5-25-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCAA	*39*	*30-93*				
Client ID:	**MW-7**					
Laboratory ID:	05-244-07					
Dalapon	**ND**	0.21	EPA 8151	5-25-12	5-25-12	
Dicamba	**ND**	0.022	EPA 8151	5-25-12	5-25-12	
MCPP	**ND**	4.4	EPA 8151	5-25-12	5-25-12	
MCPA	**ND**	4.4	EPA 8151	5-25-12	5-25-12	
Dichlorprop	**0.033**	0.022	EPA 8151	5-25-12	5-25-12	
2,4-D	**ND**	0.022	EPA 8151	5-25-12	5-25-12	
Pentachlorophenol	**ND**	0.0089	EPA 8151	5-25-12	5-25-12	
2,4,5-TP (Silvex)	**ND**	0.022	EPA 8151	5-25-12	5-25-12	
2,4,5-T	**ND**	0.022	EPA 8151	5-25-12	5-25-12	
2,4-DB	**ND**	0.044	EPA 8151	5-25-12	5-25-12	
Dinoseb	**ND**	0.022	EPA 8151	5-25-12	5-25-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCAA	*41*	*30-93*				

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Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

NWTPH-Gx
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0529W2					
Gasoline	**ND**	100	NWTPH-Gx	5-29-12	5-29-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*94*	*73-121*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	05-264-01										
	ORIG	DUP									
Gasoline	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*91*	*91*	*73-121*			

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Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

NWTPH-Gx
CONTINUING CALIBRATION SUMMARY

Lab ID	True Value (ppm)	Calc. Value	Percent Difference	Control Limits
CCVH0529G-1	5.00	5.09	-2	+/- 20%
CCVH0529G-2	5.00	4.85	3	+/- 20%
CCVD0530G-1	5.00	5.32	-6	+/- 20%
CCVD0530G-2	5.00	5.27	-5	+/- 20%

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Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

NWTPH-Dx
QUALITY CONTROL
(with acid/silica gel clean-up)

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0530W1					
Diesel Range Organics	**ND**	0.25	NWTPH-Dx	5-30-12	5-30-12	
Lube Oil Range Organics	**ND**	0.40	NWTPH-Dx	5-30-12	5-30-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*86*	*50-150*				

Analyte	Result		Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE							
Laboratory ID:	05-244-02						
	ORIG	DUP					
Diesel Range Organics	**ND**	**ND**			NA	NA	
Lube Oil Range Organics	**ND**	**ND**			NA	NA	
Surrogate:							
o-Terphenyl			*84* *92*	*50-150*			

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Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

NWTPH-Dx
CONTINUING CALIBRATION SUMMARY
(with acid/silica gel clean-up)

Lab ID	True Value (ppm)	Calc. Value	Percent Difference	Contol Limits
CCV0530R-T1	100	90.8	9.2	+/-15%
CCV0530R-T2	100	91.2	8.8	+/-15%
CCV0530R-T3	100	92.5	7.5	+/-15%

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Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

VOLATILES by EPA 8260B
METHOD BLANK QUALITY CONTROL
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0525W1					
Dichlorodifluoromethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
Chloromethane	ND	1.0	EPA 8260	5-25-12	5-25-12	
Vinyl Chloride	ND	0.20	EPA 8260	5-25-12	5-25-12	
Bromomethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
Chloroethane	ND	1.0	EPA 8260	5-25-12	5-25-12	
Trichlorofluoromethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,1-Dichloroethene	ND	0.20	EPA 8260	5-25-12	5-25-12	
Acetone	ND	5.0	EPA 8260	5-25-12	5-25-12	
Iodomethane	ND	1.0	EPA 8260	5-25-12	5-25-12	
Carbon Disulfide	ND	0.20	EPA 8260	5-25-12	5-25-12	
Methylene Chloride	ND	1.0	EPA 8260	5-25-12	5-25-12	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260	5-25-12	5-25-12	
Methyl t-Butyl Ether	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,1-Dichloroethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
Vinyl Acetate	ND	2.0	EPA 8260	5-25-12	5-25-12	
2,2-Dichloropropane	ND	0.20	EPA 8260	5-25-12	5-25-12	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260	5-25-12	5-25-12	
2-Butanone	ND	5.0	EPA 8260	5-25-12	5-25-12	
Bromochloromethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
Chloroform	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,1,1-Trichloroethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
Carbon Tetrachloride	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,1-Dichloropropene	ND	0.20	EPA 8260	5-25-12	5-25-12	
Benzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,2-Dichloroethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
Trichloroethene	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,2-Dichloropropane	ND	0.20	EPA 8260	5-25-12	5-25-12	
Dibromomethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
Bromodichloromethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260	5-25-12	5-25-12	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260	5-25-12	5-25-12	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260	5-25-12	5-25-12	
Toluene	ND	1.0	EPA 8260	5-25-12	5-25-12	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260	5-25-12	5-25-12	

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Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

VOLATILES by EPA 8260B
METHOD BLANK QUALITY CONTROL
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0525W1					
1,1,2-Trichloroethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
Tetrachloroethene	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,3-Dichloropropane	ND	0.20	EPA 8260	5-25-12	5-25-12	
2-Hexanone	ND	2.0	EPA 8260	5-25-12	5-25-12	
Dibromochloromethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,2-Dibromoethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
Chlorobenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
Ethylbenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
m,p-Xylene	ND	0.40	EPA 8260	5-25-12	5-25-12	
o-Xylene	ND	0.20	EPA 8260	5-25-12	5-25-12	
Styrene	ND	0.20	EPA 8260	5-25-12	5-25-12	
Bromoform	ND	1.0	EPA 8260	5-25-12	5-25-12	
Isopropylbenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
Bromobenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,2,3-Trichloropropane	ND	0.20	EPA 8260	5-25-12	5-25-12	
n-Propylbenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
2-Chlorotoluene	ND	0.20	EPA 8260	5-25-12	5-25-12	
4-Chlorotoluene	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
tert-Butylbenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
sec-Butylbenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,3-Dichlorobenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
p-Isopropyltoluene	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,4-Dichlorobenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,2-Dichlorobenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
n-Butylbenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260	5-25-12	5-25-12	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
Hexachlorobutadiene	ND	0.20	EPA 8260	5-25-12	5-25-12	
Naphthalene	ND	1.0	EPA 8260	5-25-12	5-25-12	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260	5-25-12	5-25-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*90*	*68-120*				
Toluene-d8	*84*	*73-120*				
4-Bromofluorobenzene	*87*	*65-120*				

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Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

VOLATILES by EPA 8260B
SB/SBD QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0525W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**10.6**	**10.5**	10.0	10.0	106	105	70-130	1	11	
Benzene	**9.43**	**9.57**	10.0	10.0	94	96	75-123	1	8	
Trichloroethene	**9.34**	**9.34**	10.0	10.0	93	93	80-113	0	9	
Toluene	**9.47**	**9.67**	10.0	10.0	95	97	80-113	2	8	
Chlorobenzene	**10.6**	**10.7**	10.0	10.0	106	107	80-115	1	8	
Surrogate:										
Dibromofluoromethane					*83*	*85*	*68-120*			
Toluene-d8					*78*	*80*	*73-120*			
4-Bromofluorobenzene					*79*	*82*	*65-120*			

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Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

SEMIVOLATILES by EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0525W1					
n-Nitrosodimethylamine	**ND**	1.0	EPA 8270	5-25-12	5-25-12	
Pyridine	**ND**	1.0	EPA 8270	5-25-12	5-25-12	
Phenol	**ND**	1.0	EPA 8270	5-25-12	5-25-12	
Aniline	**ND**	5.0	EPA 8270	5-25-12	5-25-12	
bis(2-Chloroethyl)ether	**ND**	1.0	EPA 8270	5-25-12	5-25-12	
2-Chlorophenol	**ND**	1.0	EPA 8270	5-25-12	5-25-12	
1,3-Dichlorobenzene	**ND**	1.0	EPA 8270	5-25-12	5-25-12	
1,4-Dichlorobenzene	**ND**	1.0	EPA 8270	5-25-12	5-25-12	
Benzyl alcohol	**ND**	1.0	EPA 8270	5-25-12	5-25-12	
1,2-Dichlorobenzene	**ND**	1.0	EPA 8270	5-25-12	5-25-12	
2-Methylphenol (o-Cresol)	**ND**	1.0	EPA 8270	5-25-12	5-25-12	
bis(2-Chloroisopropyl)ether	**ND**	1.0	EPA 8270	5-25-12	5-25-12	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	1.0	EPA 8270	5-25-12	5-25-12	
n-Nitroso-di-n-propylamine	**ND**	1.0	EPA 8270	5-25-12	5-25-12	
Hexachloroethane	**ND**	1.0	EPA 8270	5-25-12	5-25-12	
Nitrobenzene	**ND**	1.0	EPA 8270	5-25-12	5-25-12	
Isophorone	**ND**	1.0	EPA 8270	5-25-12	5-25-12	
2-Nitrophenol	**ND**	1.0	EPA 8270	5-25-12	5-25-12	
2,4-Dimethylphenol	**ND**	1.0	EPA 8270	5-25-12	5-25-12	
bis(2-Chloroethoxy)methane	**ND**	1.0	EPA 8270	5-25-12	5-25-12	
2,4-Dichlorophenol	**ND**	1.0	EPA 8270	5-25-12	5-25-12	
1,2,4-Trichlorobenzene	**ND**	1.0	EPA 8270	5-25-12	5-25-12	
Naphthalene	**ND**	0.10	EPA 8270/SIM	5-25-12	5-25-12	
4-Chloroaniline	**ND**	1.0	EPA 8270	5-25-12	5-25-12	
Hexachlorobutadiene	**ND**	1.0	EPA 8270	5-25-12	5-25-12	
4-Chloro-3-methylphenol	**ND**	1.0	EPA 8270	5-25-12	5-25-12	
2-Methylnaphthalene	**ND**	0.10	EPA 8270/SIM	5-25-12	5-25-12	
1-Methylnaphthalene	**ND**	0.10	EPA 8270/SIM	5-25-12	5-25-12	
Hexachlorocyclopentadiene	**ND**	1.0	EPA 8270	5-25-12	5-25-12	
2,4,6-Trichlorophenol	**ND**	1.0	EPA 8270	5-25-12	5-25-12	
2,3-Dichloroaniline	**ND**	1.0	EPA 8270	5-25-12	5-25-12	
2,4,5-Trichlorophenol	**ND**	1.0	EPA 8270	5-25-12	5-25-12	
2-Chloronaphthalene	**ND**	1.0	EPA 8270	5-25-12	5-25-12	
2-Nitroaniline	**ND**	1.0	EPA 8270	5-25-12	5-25-12	
1,4-Dinitrobenzene	**ND**	1.0	EPA 8270	5-25-12	5-25-12	
Dimethylphthalate	**ND**	1.0	EPA 8270	5-25-12	5-25-12	
1,3-Dinitrobenzene	**ND**	1.0	EPA 8270	5-25-12	5-25-12	
2,6-Dinitrotoluene	**ND**	1.0	EPA 8270	5-25-12	5-25-12	
1,2-Dinitrobenzene	**ND**	1.0	EPA 8270	5-25-12	5-25-12	
Acenaphthylene	**ND**	0.10	EPA 8270/SIM	5-25-12	5-25-12	
3-Nitroaniline	**ND**	1.0	EPA 8270	5-25-12	5-25-12	

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Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

SEMIVOLATILES by EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0525W1					
2,4-Dinitrophenol	**ND**	5.0	EPA 8270	5-25-12	5-25-12	
Acenaphthene	**ND**	0.10	EPA 8270/SIM	5-25-12	5-25-12	
4-Nitrophenol	**ND**	1.0	EPA 8270	5-25-12	5-25-12	
2,4-Dinitrotoluene	**ND**	1.0	EPA 8270	5-25-12	5-25-12	
Dibenzofuran	**ND**	1.0	EPA 8270	5-25-12	5-25-12	
2,3,5,6-Tetrachlorophenol	**ND**	1.0	EPA 8270	5-25-12	5-25-12	
2,3,4,6-Tetrachlorophenol	**ND**	1.0	EPA 8270	5-25-12	5-25-12	
Diethylphthalate	**ND**	1.0	EPA 8270	5-25-12	5-25-12	
4-Chlorophenyl-phenylether	**ND**	1.0	EPA 8270	5-25-12	5-25-12	
4-Nitroaniline	**ND**	1.0	EPA 8270	5-25-12	5-25-12	
Fluorene	**ND**	0.10	EPA 8270/SIM	5-25-12	5-25-12	
4,6-Dinitro-2-methylphenol	**ND**	5.0	EPA 8270	5-25-12	5-25-12	
n-Nitrosodiphenylamine	**ND**	1.0	EPA 8270	5-25-12	5-25-12	
1,2-Diphenylhydrazine	**ND**	1.0	EPA 8270	5-25-12	5-25-12	
4-Bromophenyl-phenylether	**ND**	1.0	EPA 8270	5-25-12	5-25-12	
Hexachlorobenzene	**ND**	1.0	EPA 8270	5-25-12	5-25-12	
Pentachlorophenol	**ND**	5.0	EPA 8270	5-25-12	5-25-12	
Phenanthrene	**ND**	0.10	EPA 8270/SIM	5-25-12	5-25-12	
Anthracene	**ND**	0.10	EPA 8270/SIM	5-25-12	5-25-12	
Carbazole	**ND**	1.0	EPA 8270	5-25-12	5-25-12	
Di-n-butylphthalate	**ND**	1.0	EPA 8270	5-25-12	5-25-12	
Fluoranthene	**ND**	0.10	EPA 8270/SIM	5-25-12	5-25-12	
Benzidine	**ND**	5.0	EPA 8270	5-25-12	5-25-12	
Pyrene	**ND**	0.10	EPA 8270/SIM	5-25-12	5-25-12	
Butylbenzylphthalate	**ND**	1.0	EPA 8270	5-25-12	5-25-12	
bis-2-Ethylhexyladipate	**ND**	5.0	EPA 8270	5-25-12	5-25-12	
3,3'-Dichlorobenzidine	**ND**	1.0	EPA 8270	5-25-12	5-25-12	
Benzo[a]anthracene	**ND**	0.010	EPA 8270/SIM	5-25-12	5-25-12	
Chrysene	**ND**	0.010	EPA 8270/SIM	5-25-12	5-25-12	
bis(2-Ethylhexyl)phthalate	**ND**	1.0	EPA 8270	5-25-12	5-25-12	
Di-n-octylphthalate	**ND**	1.0	EPA 8270	5-25-12	5-25-12	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270/SIM	5-25-12	5-25-12	
Benzo(j,k)fluoranthene	**ND**	0.010	EPA 8270/SIM	5-25-12	5-25-12	
Benzo[a]pyrene	**ND**	0.010	EPA 8270/SIM	5-25-12	5-25-12	
Indeno[1,2,3-cd]pyrene	**ND**	0.010	EPA 8270/SIM	5-25-12	5-25-12	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270/SIM	5-25-12	5-25-12	
Benzo[g,h,i]perylene	**ND**	0.010	EPA 8270/SIM	5-25-12	5-25-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*54*	*18 - 86*				
Phenol-d6	*43*	*10 - 100*				
Nitrobenzene-d5	*76*	*37 - 112*				
2-Fluorobiphenyl	*73*	*42 - 108*				
2,4,6-Tribromophenol	*69*	*39 - 118*				
Terphenyl-d14	*83*	*49 - 122*				

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Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

SEMIVOLATILES by EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0525W1									
	SB	SBD	SB	SBD	SB	SBD				
Phenol	**17.8**	**20.3**	40.0	40.0	45	51	26 - 70	13	29	
2-Chlorophenol	**29.3**	**33.5**	40.0	40.0	73	84	46 - 104	13	34	
1,4-Dichlorobenzene	**12.4**	**14.6**	20.0	20.0	62	73	46 - 92	16	29	
n-Nitroso-di-n-propylamine	**15.8**	**17.8**	20.0	20.0	79	89	30 - 102	12	25	
1,2,4-Trichlorobenzene	**13.0**	**14.6**	20.0	20.0	65	73	45 - 92	12	25	
4-Chloro-3-methylphenol	**36.9**	**38.0**	40.0	40.0	92	95	53 - 108	3	18	
Acenaphthene	**16.3**	**17.1**	20.0	20.0	82	86	57 - 103	5	15	
4-Nitrophenol	**22.8**	**22.7**	40.0	40.0	57	57	21 - 85	0	33	
2,4-Dinitrotoluene	**17.6**	**17.7**	20.0	20.0	88	89	60 - 118	1	20	
Pentachlorophenol	**36.8**	**37.5**	40.0	40.0	92	94	48 - 119	2	31	
Pyrene	**18.5**	**18.7**	20.0	20.0	93	94	62 - 111	1	19	
Surrogate:										
2-Fluorophenol					*49*	*57*	*18 - 86*			
Phenol-d6					*41*	*47*	*10 - 100*			
Nitrobenzene-d5					*72*	*81*	*37 - 112*			
2-Fluorobiphenyl					*70*	*76*	*42 - 108*			
2,4,6-Tribromophenol					*71*	*70*	*39 - 118*			
Terphenyl-d14					*85*	*84*	*49 - 122*			

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Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

PAHs by EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
(with silica gel clean-up)

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0524W1					
Naphthalene	**ND**	0.10	EPA 8270/SIM	5-24-12	5-25-12	
2-Methylnaphthalene	**ND**	0.10	EPA 8270/SIM	5-24-12	5-25-12	
1-Methylnaphthalene	**ND**	0.10	EPA 8270/SIM	5-24-12	5-25-12	
Acenaphthylene	**ND**	0.10	EPA 8270/SIM	5-24-12	5-25-12	
Acenaphthene	**ND**	0.10	EPA 8270/SIM	5-24-12	5-25-12	
Fluorene	**ND**	0.10	EPA 8270/SIM	5-24-12	5-25-12	
Phenanthrene	**ND**	0.10	EPA 8270/SIM	5-24-12	5-25-12	
Anthracene	**ND**	0.10	EPA 8270/SIM	5-24-12	5-25-12	
Fluoranthene	**ND**	0.10	EPA 8270/SIM	5-24-12	5-25-12	
Pyrene	**ND**	0.10	EPA 8270/SIM	5-24-12	5-25-12	
Benzo[a]anthracene	**ND**	0.010	EPA 8270/SIM	5-24-12	5-25-12	
Chrysene	**ND**	0.010	EPA 8270/SIM	5-24-12	5-25-12	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270/SIM	5-24-12	5-25-12	
Benzo(j,k)fluoranthene	**ND**	0.010	EPA 8270/SIM	5-24-12	5-25-12	
Benzo[a]pyrene	**ND**	0.010	EPA 8270/SIM	5-24-12	5-25-12	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270/SIM	5-24-12	5-25-12	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270/SIM	5-24-12	5-25-12	
Benzo[g,h,i]perylene	**ND**	0.010	EPA 8270/SIM	5-24-12	5-25-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*61*	*38 - 105*				
Pyrene-d10	*96*	*37 - 121*				
Terphenyl-d14	*100*	*32 - 112*				

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Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

PAHs by EPA 8270D/SIM
SB/SBD QUALITY CONTROL
(with silica gel clean-up)

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0524W1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	**0.356**	**0.352**	0.500	0.500	71	70	38 - 110	1	35	
Acenaphthylene	**0.387**	**0.381**	0.500	0.500	77	76	47 - 120	2	30	
Acenaphthene	**0.478**	**0.465**	0.500	0.500	96	93	46 - 113	3	26	
Fluorene	**0.414**	**0.420**	0.500	0.500	83	84	58 - 104	1	25	
Phenanthrene	**0.416**	**0.433**	0.500	0.500	83	87	61 - 99	4	19	
Anthracene	**0.387**	**0.400**	0.500	0.500	77	80	55 - 122	3	19	
Fluoranthene	**0.485**	**0.511**	0.500	0.500	97	102	58 - 129	5	18	
Pyrene	**0.591**	**0.584**	0.500	0.500	118	117	57 - 126	1	25	
Benzo[a]anthracene	**0.453**	**0.473**	0.500	0.500	91	95	51 - 124	4	18	
Chrysene	**0.440**	**0.462**	0.500	0.500	88	92	53 - 123	5	20	
Benzo[b]fluoranthene	**0.524**	**0.552**	0.500	0.500	105	110	53 - 126	5	18	
Benzo(j,k)fluoranthene	**0.510**	**0.538**	0.500	0.500	102	108	51 - 126	5	23	
Benzo[a]pyrene	**0.510**	**0.524**	0.500	0.500	102	105	52 - 127	3	21	
Indeno(1,2,3-c,d)pyrene	**0.450**	**0.473**	0.500	0.500	90	95	49 - 123	5	26	
Dibenz[a,h]anthracene	**0.541**	**0.567**	0.500	0.500	108	113	39 - 125	5	31	
Benzo[g,h,i]perylene	**0.517**	**0.542**	0.500	0.500	103	108	40 - 125	5	30	
Surrogate:										
2-Fluorobiphenyl					*84*	*82*	*38 - 105*			
Pyrene-d10					*97*	*101*	*37 - 121*			
Terphenyl-d14					*102*	*106*	*32 - 112*			

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Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

ORGANOCHLORINE PESTICIDES by EPA 8081A METHOD BLANK QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0525W2					
alpha-BHC	**ND**	0.0050	EPA 8081	5-25-12	5-29-12	
gamma-BHC	**ND**	0.0050	EPA 8081	5-25-12	5-29-12	
beta-BHC	**ND**	0.0050	EPA 8081	5-25-12	5-29-12	
delta-BHC	**ND**	0.0050	EPA 8081	5-25-12	5-29-12	
Heptachlor	**ND**	0.0050	EPA 8081	5-25-12	5-29-12	
Aldrin	**ND**	0.0050	EPA 8081	5-25-12	5-29-12	
Heptachlor Epoxide	**ND**	0.0050	EPA 8081	5-25-12	5-29-12	
gamma-Chlordane	**ND**	0.0050	EPA 8081	5-25-12	5-29-12	
alpha-Chlordane	**ND**	0.0050	EPA 8081	5-25-12	5-29-12	
4,4'-DDE	**ND**	0.0050	EPA 8081	5-25-12	5-29-12	
Endosulfan I	**ND**	0.0050	EPA 8081	5-25-12	5-29-12	
Dieldrin	**ND**	0.0050	EPA 8081	5-25-12	5-29-12	
Endrin	**ND**	0.0050	EPA 8081	5-25-12	5-29-12	
4,4'-DDD	**ND**	0.0050	EPA 8081	5-25-12	5-29-12	
Endosulfan II	**ND**	0.0050	EPA 8081	5-25-12	5-29-12	
4,4'-DDT	**ND**	0.0050	EPA 8081	5-25-12	5-29-12	
Endrin Aldehyde	**ND**	0.0050	EPA 8081	5-25-12	5-29-12	
Methoxychlor	**ND**	0.010	EPA 8081	5-25-12	5-29-12	
Endosulfan Sulfate	**ND**	0.0050	EPA 8081	5-25-12	5-29-12	
Endrin Ketone	**ND**	0.020	EPA 8081	5-25-12	5-29-12	
Toxaphene	**ND**	0.050	EPA 8081	5-25-12	5-29-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*75*	*30-88*				
DCB	*76*	*39-111*				

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Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

ORGANOCHLORINE PESTICIDES by EPA 8081A SB/SBD QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS											
Laboratory ID:	SB0525W2										
	SB	SBD	SB	SBD		SB	SBD				
gamma-BHC	**0.0301**	**0.0307**	0.0500	0.0500	N/A	**60**	**61**	21-89	2	10	
Heptachlor	**0.0406**	**0.0415**	0.0500	0.0500	N/A	**81**	**83**	28-98	2	13	
Aldrin	**0.0435**	**0.0437**	0.0500	0.0500	N/A	**87**	**87**	32-86	0	11	
Dieldrin	**0.105**	**0.107**	0.125	0.125	N/A	**84**	**85**	32-86	2	11	
Endrin	**0.112**	**0.115**	0.125	0.125	N/A	**90**	**92**	53-96	3	9	
4,4'-DDT	**0.104**	**0.103**	0.125	0.125	N/A	**83**	**82**	46-107	1	16	
Surrogate:											
TCMX						*77*	*75*	*30-88*			
DCB						*77*	*78*	*39-111*			

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Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

TOTAL METALS
EPA 200.8/7470A
METHOD BLANK QUALITY CONTROL

Date Extracted:	5-29&31-12
Date Analyzed:	5-29&6-4-12
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	MB0531WH1

Analyte	Method	Result	PQL
Arsenic	200.8	**ND**	3.0
Cadmium	200.8	**ND**	4.0
Chromium	200.8	**ND**	10
Copper	200.8	**ND**	10
Lead	200.8	**ND**	1.0
Mercury	7470A	**ND**	0.50
Nickel	200.8	**ND**	20
Silver	200.8	**ND**	10
Zinc	200.8	**ND**	25

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Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

TOTAL METALS
EPA 200.8/7470A
DUPLICATE QUALITY CONTROL

Date Extracted: 5-29&31-12
Date Analyzed: 5-29&6-4-12

Matrix: Water
Units: ug/L (ppb)

Lab ID: 05-244-07

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**ND**	**ND**	NA	11	
Cadmium	**ND**	**ND**	NA	4.0	
Chromium	**ND**	**ND**	NA	10	
Copper	**ND**	**ND**	NA	10	
Lead	**ND**	**ND**	NA	1.0	
Mercury	**ND**	**ND**	NA	0.50	
Nickel	**ND**	**ND**	NA	20	
Silver	**ND**	**ND**	NA	10	
Zinc	**ND**	**ND**	NA	25	

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Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

TOTAL METALS
EPA 200.8/7470A
MS/MSD QUALITY CONTROL

Date Extracted: 5-29&31-12
Date Analyzed: 5-29&6-4-12

Matrix: Water
Units: ug/L (ppb)

Lab ID: 05-244-07

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	200	**206**	103	**204**	102	1	
Cadmium	200	**189**	94	**185**	93	2	
Chromium	200	**189**	95	**186**	93	2	
Copper	200	**187**	94	**189**	95	1	
Lead	200	**185**	93	**184**	92	1	
Mercury	12.5	**12.3**	98	**12.9**	103	5	
Nickel	200	**204**	102	**203**	101	1	
Silver	200	**161**	81	**171**	86	6	
Zinc	200	**189**	94	**187**	94	1	

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Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

TOTAL METALS
EPA 200.8/7470A
CONTINUING CALIBRATION SUMMARY

Analyte	Lab ID	True Value (ppm)	Calc. Value	Percent Difference	Control Limits
Arsenic	ICV060412E	0.0500	0.0503	-0.60	+/- 10%
Cadmium	ICV060412E	0.0500	0.0501	-0.20	+/- 10%
Chromium	ICV060412E	0.0500	0.0498	0.40	+/- 10%
Copper	ICV060412E	0.0500	0.0500	0	+/- 10%
Lead	ICV060412E	0.0500	0.0511	-2.2	+/- 10%
Mercury	ICV052912Y	0.00500	0.00507	-1.4	+/- 10%
Nickel	ICV060412E	0.0500	0.0498	0.40	+/- 10%
Silver	ICV060412E	0.0500	0.0505	-1.0	+/- 10%
Zinc	ICV060412E	0.0500	0.0500	0	+/- 10%
Arsenic	CCV1060412E	0.100	0.100	0	+/- 10%
Cadmium	CCV1060412E	0.100	0.0997	0.30	+/- 10%
Chromium	CCV1060412E	0.100	0.101	-1.0	+/- 10%
Copper	CCV1060412E	0.100	0.101	-1.0	+/- 10%
Lead	CCV1060412E	0.100	0.101	-1.0	+/- 10%
Mercury	CCV1052912Y	0.00500	0.00499	0.20	+/- 20%
Nickel	CCV1060412E	0.100	0.100	0	+/- 10%
Silver	CCV1060412E	0.100	0.102	-2.0	+/- 10%
Zinc	CCV1060412E	0.100	0.101	-1.0	+/- 10%
Arsenic	CCV1060412E	0.0400	0.0397	0.75	+/- 10%
Cadmium	CCV1060412E	0.0400	0.0403	-0.75	+/- 10%
Chromium	CCV1060412E	0.0400	0.0398	0.50	+/- 10%
Copper	CCV1060412E	0.0400	0.0408	-2.0	+/- 10%
Lead	CCV1060412E	0.0400	0.0407	-1.8	+/- 10%
Nickel	CCV1060412E	0.0400	0.0399	0.25	+/- 10%
Silver	CCV1060412E	0.0400	0.0407	-1.8	+/- 10%
Zinc	CCV1060412E	0.0400	0.0404	-1.0	+/- 10%
Arsenic	CCV2060412E	0.100	0.101	-1.0	+/- 10%
Cadmium	CCV2060412E	0.100	0.0997	0.30	+/- 10%
Chromium	CCV2060412E	0.100	0.100	0	+/- 10%
Copper	CCV2060412E	0.100	0.103	-3.0	+/- 10%
Lead	CCV2060412E	0.100	0.0992	0.80	+/- 10%
Mercury	CCV2052912Y	0.00500	0.00535	-7.0	+/- 20%
Nickel	CCV2060412E	0.100	0.0992	0.80	+/- 10%
Silver	CCV2060412E	0.100	0.102	-2.0	+/- 10%
Zinc	CCV2060412E	0.100	0.101	-1.0	+/- 10%

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

TOTAL METALS
EPA 200.8/7470A
CONTINUING CALIBRATION SUMMARY

Analyte	Lab ID	True Value (ppm)	Calc. Value	Percent Difference	Control Limits
Arsenic	CCV2060412E	0.0400	0.0398	0.50	+/- 10%
Cadmium	CCV2060412E	0.0400	0.0410	-2.5	+/- 10%
Chromium	CCV2060412E	0.0400	0.0405	-1.3	+/- 10%
Copper	CCV2060412E	0.0400	0.0403	-0.75	+/- 10%
Lead	CCV2060412E	0.0400	0.0402	-0.50	+/- 10%
Nickel	CCV2060412E	0.0400	0.0398	0.50	+/- 10%
Silver	CCV2060412E	0.0400	0.0411	-2.7	+/- 10%
Zinc	CCV2060412E	0.0400	0.0403	-0.75	+/- 10%
Arsenic	CCV3060412E	0.100	0.101	-1.0	+/- 10%
Cadmium	CCV3060412E	0.100	0.0994	0.60	+/- 10%
Chromium	CCV3060412E	0.100	0.0992	0.80	+/- 10%
Copper	CCV3060412E	0.100	0.101	-1.0	+/- 10%
Lead	CCV3060412E	0.100	0.0991	0.90	+/- 10%
Mercury	CCV3052912Y	0.00500	0.00487	2.6	+/- 20%
Nickel	CCV3060412E	0.100	0.100	0	+/- 10%
Silver	CCV3060412E	0.100	0.102	-2.0	+/- 10%
Zinc	CCV3060412E	0.100	0.100	0	+/- 10%
Arsenic	CCV3060412E	0.0400	0.0399	0.25	+/- 10%
Cadmium	CCV3060412E	0.0400	0.0407	-1.8	+/- 10%
Chromium	CCV3060412E	0.0400	0.0398	0.50	+/- 10%
Copper	CCV3060412E	0.0400	0.0405	-1.3	+/- 10%
Lead	CCV3060412E	0.0400	0.0403	-0.75	+/- 10%
Nickel	CCV3060412E	0.0400	0.0400	0	+/- 10%
Silver	CCV3060412E	0.0400	0.0414	-3.5	+/- 10%
Zinc	CCV3060412E	0.0400	0.0404	-1.0	+/- 10%
Arsenic	CCV4060412E	0.100	0.101	-1.0	+/- 10%
Cadmium	CCV4060412E	0.100	0.100	0	+/- 10%
Chromium	CCV4060412E	0.100	0.0985	1.5	+/- 10%
Copper	CCV4060412E	0.100	0.101	-1.0	+/- 10%
Lead	CCV4060412E	0.100	0.0991	0.90	+/- 10%
Mercury	CCV4052912Y	0.00500	0.00506	-1.2	+/- 20%
Nickel	CCV4060412E	0.100	0.0989	1.1	+/- 10%
Silver	CCV4060412E	0.100	0.104	-4.0	+/- 10%
Zinc	CCV4060412E	0.100	0.101	-1.0	+/- 10%

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Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

TOTAL METALS
EPA 200.8/7470A
CONTINUING CALIBRATION SUMMARY

Analyte	Lab ID	True Value (ppm)	Calc. Value	Percent Difference	Control Limits
Arsenic	CCV4060412E	0.0400	0.0405	-1.3	+/- 10%
Cadmium	CCV4060412E	0.0400	0.0401	-0.25	+/- 10%
Chromium	CCV4060412E	0.0400	0.0403	-0.75	+/- 10%
Copper	CCV4060412E	0.0400	0.0404	-1.0	+/- 10%
Lead	CCV4060412E	0.0400	0.0400	0	+/- 10%
Nickel	CCV4060412E	0.0400	0.0395	1.3	+/- 10%
Silver	CCV4060412E	0.0400	0.0411	-2.7	+/- 10%
Zinc	CCV4060412E	0.0400	0.0399	0.25	+/- 10%
Mercury	CCV5052912Y	0.00500	0.00533	-6.6	+/- 20%
Mercury	CCV6052912Y	0.00500	0.00531	-6.2	+/- 20%
Mercury	CCV7052912Y	0.00500	0.00531	-6.2	+/- 20%

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Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

DISSOLVED METALS
EPA 200.8/7470A
METHOD BLANK QUALITY CONTROL

Date Analyzed: 05-29,6-4&5-12

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB0531D1

Analyte	Method	Result	PQL
Arsenic	200.8	**ND**	3.0
Cadmium	200.8	**ND**	4.0
Chromium	200.8	**ND**	10
Copper	200.8	**ND**	10
Lead	200.8	**ND**	1.0
Mercury	7470A	**ND**	0.50
Nickel	200.8	**ND**	20
Silver	200.8	**ND**	10
Zinc	200.8	**ND**	25

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Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

DISSOLVED METALS
EPA 200.8/7470A
METHOD BLANK QUALITY CONTROL

Date Analyzed: 6-4-12

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB0531D1

Analyte	Method	Result	PQL
Arsenic	200.8	**ND**	3.0

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Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

DISSOLVED METALS
EPA 200.8/7470A
DUPLICATE QUALITY CONTROL

Date Analyzed: 05-29,6-4&5-12

Matrix: Water
Units: ug/L (ppb)

Lab ID: 05-244-07

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**ND**	**ND**	NA	10	
Cadmium	**ND**	**ND**	NA	4.0	
Chromium	**ND**	**ND**	NA	10	
Copper	**ND**	**ND**	NA	10	
Lead	**ND**	**ND**	NA	1.0	
Mercury	**ND**	**ND**	NA	0.50	
Nickel	**ND**	**ND**	NA	20	
Silver	**ND**	**ND**	NA	10	
Zinc	**ND**	**ND**	NA	25	

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Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

DISSOLVED METALS
EPA 200.8/7470A
DUPLICATE QUALITY CONTROL

Date Analyzed: 6-4-12

Matrix: Water
Units: ug/L (ppb)

Lab ID: 05-244-07

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**ND**	**ND**	NA	3.0	

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Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

DISSOLVED METALS
EPA 200.8/7470A
MS/MSD QUALITY CONTROL

Date Analyzed: 05-29,6-4&5-12

Matrix: Water
Units: ug/L (ppb)

Lab ID: 05-244-07

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	200	**211**	106	**211**	106	0	
Cadmium	200	**193**	96	**192**	96	0	
Chromium	200	**196**	98	**192**	96	2	
Copper	200	**194**	97	**194**	97	0	
Lead	200	**193**	96	**190**	95	1	
Mercury	12.5	**13.9**	111	**13.8**	111	0	
Nickel	200	**207**	104	**207**	103	0	
Silver	200	**150**	75	**157**	79	4	
Zinc	200	**194**	97	**192**	96	1	

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Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

DISSOLVED METALS
EPA 200.8/7470A
MS/MSD QUALITY CONTROL

Date Analyzed: 6-4-12

Matrix: Water
Units: ug/L (ppb)

Lab ID: 05-244-07

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	200	**212**	106	**213**	106	0	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

DISSOLVED METALS
EPA 200.8/7470A
CONTINUING CALIBRATION SUMMARY

Analyte	Lab ID	True Value (ppm)	Calc. Value	Percent Difference	Control Limits
Arsenic	ICV060412E	0.0500	0.0502	-0.40	+/- 10%
Cadmium	ICV060412E	0.0500	0.0501	-0.20	+/- 10%
Chromium	ICV060412E	0.0500	0.0498	0.40	+/- 10%
Copper	ICV060412E	0.0500	0.0500	0	+/- 10%
Lead	ICV060412E	0.0500	0.0511	-2.2	+/- 10%
Mercury	ICV052912Y	0.00500	0.00507	-1.4	+/- 10%
Nickel	ICV060412E	0.0500	0.0498	0.40	+/- 10%
Silver	ICV060512E	0.0500	0.0506	-1.2	+/- 10%
Zinc	ICV060412E	0.0500	0.0500	0	+/- 10%
Arsenic	CCV1060412E	0.100	0.0997	0.30	+/- 10%
Cadmium	CCV1060412E	0.100	0.0997	0.30	+/- 10%
Chromium	CCV1060412E	0.100	0.101	-1.0	+/- 10%
Copper	CCV1060412E	0.100	0.101	-1.0	+/- 10%
Lead	CCV1060412E	0.100	0.101	-1.0	+/- 10%
Mercury	CCV1052912Y	0.00500	0.00499	0.20	+/- 20%
Nickel	CCV1060412E	0.100	0.100	0	+/- 10%
Silver	CCV1060512E	0.100	0.102	-2.0	+/- 10%
Zinc	CCV1060412E	0.100	0.101	-1.0	+/- 10%
Arsenic	CCV1060412E	0.0400	0.0398	0.50	+/- 10%
Cadmium	CCV1060412E	0.0400	0.0403	-0.75	+/- 10%
Chromium	CCV1060412E	0.0400	0.0398	0.50	+/- 10%
Copper	CCV1060412E	0.0400	0.0408	-2.0	+/- 10%
Lead	CCV1060412E	0.0400	0.0407	-1.8	+/- 10%
Nickel	CCV1060412E	0.0400	0.0399	0.25	+/- 10%
Silver	CCV1060512E	0.0400	0.0393	1.8	+/- 10%
Zinc	CCV1060412E	0.0400	0.0404	-1.0	+/- 10%
Arsenic	CCV2060412E	0.100	0.100	0	+/- 10%
Cadmium	CCV2060412E	0.100	0.0997	0.30	+/- 10%
Chromium	CCV2060412E	0.100	0.100	0	+/- 10%
Copper	CCV2060412E	0.100	0.103	-3.0	+/- 10%
Lead	CCV2060412E	0.100	0.0992	0.80	+/- 10%
Mercury	CCV2052912Y	0.00500	0.00535	-7.0	+/- 20%
Nickel	CCV2060412E	0.100	0.0992	0.80	+/- 10%
Silver	CCV2060512E	0.100	0.106	-6.0	+/- 10%
Zinc	CCV2060412E	0.100	0.101	-1.0	+/- 10%

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Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

DISSOLVED METALS
EPA 200.8/7470A
CONTINUING CALIBRATION SUMMARY

Analyte	Lab ID	True Value (ppm)	Calc. Value	Percent Difference	Control Limits
Arsenic	CCV2060412E	0.0400	0.0399	0.25	+/- 10%
Cadmium	CCV2060412E	0.0400	0.0410	-2.5	+/- 10%
Chromium	CCV2060412E	0.0400	0.0405	-1.3	+/- 10%
Copper	CCV2060412E	0.0400	0.0403	-0.75	+/- 10%
Lead	CCV2060412E	0.0400	0.0402	-0.50	+/- 10%
Nickel	CCV2060412E	0.0400	0.0398	0.50	+/- 10%
Silver	CCV2060512E	0.0400	0.0402	-0.50	+/- 10%
Zinc	CCV2060412E	0.0400	0.0403	-0.75	+/- 10%
Arsenic	CCV3060412E	0.100	0.101	-1.0	+/- 10%
Cadmium	CCV3060412E	0.100	0.0994	0.60	+/- 10%
Chromium	CCV3060412E	0.100	0.0992	0.80	+/- 10%
Copper	CCV3060412E	0.100	0.101	-1.0	+/- 10%
Lead	CCV3060412E	0.100	0.0991	0.90	+/- 10%
Mercury	CCV3052912Y	0.00500	0.00487	2.6	+/- 20%
Nickel	CCV3060412E	0.100	0.100	0	+/- 10%
Silver	CCV3060512E	0.100	0.104	-4.0	+/- 10%
Zinc	CCV3060412E	0.100	0.100	0	+/- 10%
Arsenic	CCV3060412E	0.0400	0.0405	-1.3	+/- 10%
Cadmium	CCV3060412E	0.0400	0.0407	-1.8	+/- 10%
Chromium	CCV3060412E	0.0400	0.0398	0.50	+/- 10%
Copper	CCV3060412E	0.0400	0.0405	-1.3	+/- 10%
Lead	CCV3060412E	0.0400	0.0403	-0.75	+/- 10%
Nickel	CCV3060412E	0.0400	0.0400	0	+/- 10%
Silver	CCV3060512E	0.0400	0.0402	-0.50	+/- 10%
Zinc	CCV3060412E	0.0400	0.0404	-1.0	+/- 10%
Mercury	CCV4052912Y	0.00500	0.00506	-1.2	+/- 20%
Mercury	CCV5052912Y	0.00500	0.00533	-6.6	+/- 20%
Mercury	CCV6052912Y	0.00500	0.00531	-6.2	+/- 20%
Mercury	CCV7052912Y	0.00500	0.00531	-6.2	+/- 20%

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Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

DISSOLVED METALS
EPA 200.8/7470A
CONTINUING CALIBRATION SUMMARY

Analyte	Lab ID	True Value (ppm)	Calc. Value	Percent Difference	Control Limits
Arsenic	ICV060412E	0.0500	0.0503	-0.60	+/- 10%
Arsenic	CCV1060412E	0.100	0.100	0	+/- 10%
Arsenic	CCV1060412E	0.0400	0.0397	0.75	+/- 10%
Arsenic	CCV2060412E	0.100	0.101	-1.0	+/- 10%
Arsenic	CCV2060412E	0.0400	0.0398	0.50	+/- 10%
Arsenic	CCV3060412E	0.100	0.101	-1.0	+/- 10%
Arsenic	CCV3060412E	0.0400	0.0399	0.25	+/- 10%
Arsenic	CCV4060412E	0.100	0.100	0	+/- 10%
Arsenic	CCV4060412E	0.0400	0.0405	-1.3	+/- 10%

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Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

EDB by EPA 8011
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0605W1					
EDB	**ND**	0.010	EPA 8011	6-5-12	6-5-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*96*	*31-144*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS											
Laboratory ID:	SB0605W1										
	SB	SBD	SB	SBD		SB	SBD				
EDB	**0.111**	**0.106**	0.100	0.100	N/A	**111**	**106**	78-122	5	8	
Surrogate:											
TCMX						*103*	*98*	*31-144*			

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Date of Report: June 15, 2012
Samples Submitted: May 24, 2012
Laboratory Reference: 1205-244
Project: 5147-006-08

CHLORINATED ACID HERBICIDES by EPA 8151A
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0525W1					
Dalapon	**ND**	0.23	EPA 8151	5-25-12	5-25-12	
Dicamba	**ND**	0.024	EPA 8151	5-25-12	5-25-12	
MCPP	**ND**	4.7	EPA 8151	5-25-12	5-25-12	
MCPA	**ND**	4.7	EPA 8151	5-25-12	5-25-12	
Dichlorprop	**ND**	0.024	EPA 8151	5-25-12	5-25-12	
2,4-D	**ND**	0.024	EPA 8151	5-25-12	5-25-12	
Pentachlorophenol	**ND**	0.0095	EPA 8151	5-25-12	5-25-12	
2,4,5-TP (Silvex)	**ND**	0.024	EPA 8151	5-25-12	5-25-12	
2,4,5-T	**ND**	0.024	EPA 8151	5-25-12	5-25-12	
2,4-DB	**ND**	0.047	EPA 8151	5-25-12	5-25-12	
Dinoseb	**ND**	0.024	EPA 8151	5-25-12	5-25-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCAA	*38*	*30-93*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS											
Laboratory ID:	SB0525W1										
	SB	SBD	SB	SBD		SB	SBD				
Dicamba	**0.714**	**0.696**	1.00	1.00	N/A	**71**	**70**	32-90	3	15	
2,4-D	**0.614**	**0.535**	1.00	1.00	N/A	**61**	**53**	25-97	14	14	
Pentachlorophenol	**0.0744**	**0.0721**	0.100	0.100	N/A	**74**	**72**	45-90	3	19	
2,4,5-T	**0.763**	**0.766**	1.00	1.00	N/A	**76**	**77**	27-95	0	18	
2,4-DB	**1.06**	**1.01**	1.00	1.00	N/A	**106**	**101**	28-100	5	16	
Surrogate:											
DCAA						*65*	*61*	*30-93*			

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OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

Y - Sample extract treated with an acid/silica gel cleanup procedure.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Chain of Custody

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: GEOENGINEERS INC.
Project Number: 5147-006-08
Project Name: DCI
Project Manager: ROBERT TRAHAN
Sampled by: ABHIJIT JOSHI

Turnaround Request (in working days)

(Check One)

- ☐ Same Day
- ☐ 1 Day
- ☐ 2 Days
- ☐ 3 Days
- ☒ Standard (7 Days) (TPH analysis 5 Days)
- ☐ _____ (other)

Laboratory Number: 05-244

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	No. of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260B	Halogenated Volatiles 8260B	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082	Organochlorine Pesticides 8081A	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	~~Total MTCA Metals~~ DIOXIN/FURANS	TCLP Metals	HEM (oil and grease) 1664	Metal Group A (see comment)	Metal Group B (see comment)	MTBE, EDB and EDC	HERBICIDES	% Moisture
1	MW-1	05/23/12	1730	WATER	13			X	X				X									X				
2	MW-2A	↓	1630	↓	13			↓	↓				↓									↓				
3	MW-4		1830		13								↓									↓				
4	MW-3A		1530		19					X		X			X				(X)				X	X	X	
5	DUP		1535		19					↓		↓			↓				(X)				↓	↓	↓	
6	MW-6		1430		19														(X)							
7	MW-7	↓	1220	↓	19			↓	↓	↓		↓			↓				(X)				↓	↓	↓	
8	TRIP BLANK	—	—	WATER	6					X																

	Signature	Company	Date	Time
Relinquished		GEI	05/24/12	1305
Received		OSE	5/24/12	1305
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

METAL GROUP A: TOTAL AND DISSOLVE (AS, Cu, Hg, Ni, Ag, Zn)

METAL GROUP B: TOTAL AND DISSOLVE (AS, Cd, Cr, Cu, Pb, Hg, Ni, Ag, Zn)

SAMPLES ARE FIELD FILTERED FOR DISSOLVED METALS ANALYSIS

(X) Added 5/24/12. DB (STA)

Chromatograms with final report ☐

Data Package: Level III ☐ Level IV ☐ Electronic Data Deliverables (EDDs) ☐ _____

Sample/Cooler Receipt and Acceptance Checklist

Client: GES

Client Project Name/Number: 5147-006-08

OnSite Project Number: 05-244

Initiated by: MMDB

Date Initiated: 5/24/12

1.0 Cooler Verification

1.1 Were there custody seals on the outside of the cooler?	Yes	No	N/A	1 2 3 4	
1.2 Were the custody seals intact?	Yes	No	N/A	1 2 3 4	
1.3 Were the custody seals signed and dated by last custodian?	Yes	No	N/A	1 2 3 4	
1.4 Were the samples delivered on ice or blue ice?	Yes	No		1 2 3 4	
1.5 Were samples received between 0-6 degrees Celsius?	Yes	No	Temperature: 5,6,5,8,10,8,7		
1.6 Have shipping bills (if any) been attached to the back of this form?	Yes	N/A			
1.7 How were the samples delivered?	Client	Courier	UPS/FedEx	OSE Pickup	Other

2.0 Chain of Custody Verification

2.1 Was a Chain of Custody submitted with the samples?	Yes	No		1 2 3 4
2.2 Was the COC legible and written in permanent ink?	Yes	No		1 2 3 4
2.3 Have samples been relinquished and accepted by each custodian?	Yes	No		1 2 3 4
2.4 Did the sample labels (ID, date, time, preservative) agree with COC?	Yes	No		1 2 3 4
2.5 Were all of the samples listed on the COC submitted?	Yes	No		1 2 3 4
2.6 Were any of the samples submitted omitted from the COC?	Yes	No		1 2 3 4

3.0 Sample Verification

3.1 Were any sample containers broken or compromised?	Yes	No		1 2 3 4
3.2 Were any sample labels missing or illegible?	Yes	No		1 2 3 4
3.3 Have the correct containers been used for each analysis requested?	Yes	No		1 2 3 4
3.4 Have the samples been correctly preserved?	Yes	No	N/A	1 2 3 4
3.5 Are volatiles samples free from headspace and air bubbles?	Yes	No	N/A	1 2 3 4
3.6 Is there sufficient sample submitted to perform requested analyses?	Yes	No		1 2 3 4
3.7 Have any holding times already expired or will expire in 24 hours?	Yes	No		1 2 3 4
3.8 Was method 5035A used?	Yes	No	N/A	1 2 3 4
3.9 If 5035A was used, which sampling option was used (#1, 2, or 3).	#		N/A	1 2 3 4

Explain any discrepancies:

2.6) Trip Blanks not on COC
1.5) Voas were received @ 7°C
Sample MW-3A containers received @ 8°C
Sample MW-6 containers received @ 10°C
Sample MW-7 containers received @ 8°C

1 - Discuss issue in Case Narrative
2 - Process Sample As-is
3 - Client contacted to discuss problem
4 - Sample cannot be analyzed or client does not wish to proceed

Pace Analytical Services, Inc.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

www.pacelabs.com

Report Prepared for:

David Baumeister
Onsite Environmental, Inc.
14648 NE 95th Street
Redmond WA 98052

REPORT OF LABORATORY ANALYSIS FOR PCDD/PCDF

Report Prepared Date:
June 15, 2012

Report Information:

Pace Project #: 10194071
Sample Receipt Date: 05/31/2012
Client Project #: 5147-006-08
Client Sub PO #: N/A
State Cert #: C755

Invoicing & Reporting Options:

The report provided has been invoiced as a Level 2 PCDD/PCDF Report. If an upgrade of this report package is requested, an additional charge may be applied.

Please review the attached invoice for accuracy and forward any questions to Scott Unze, your Pace Project Manager.

This report has been reviewed by:

June 15, 2012

Scott Unze, Project Manager
(612) 607-6383
(612) 607-6444 (fax)
scott.unze@pacelabs.com

ACCREDITED IN ACCORDANCE WITH nelac

Report of Laboratory Analysis

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The results relate only to the samples included in this report.

Pace Analytical Services, Inc.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

DISCUSSION

This report presents the results from the analyses performed on four samples submitted by a representative of Onsite Environmental, Inc. The samples were analyzed for the presence or absence of polychlorodibenzo-p-dioxins (PCDDs) and polychlorodibenzofurans (PCDFs) using a modified version of USEPA Method 8290. The reporting limits were based on signal-to-noise measurements.

The recoveries of the isotopically-labeled PCDD/PCDF internal standards in the sample extracts ranged from 58-109%. Except for one low value, which was flagged "R" on the results table, the labeled internal standard recoveries obtained for this project were within the 40-135% target range specified in Method 8290. Also, since the quantification of the native 2,3,7,8-substituted congeners was based on isotope dilution, the data were automatically corrected for variation in recovery and accurate values were obtained.

In some cases, interfering substances impacted the determinations of PCDD or PCDF congeners. The affected values were flagged "I" where incorrect isotope ratios were obtained.

A laboratory method blank was prepared and analyzed with the sample batch as part of our routine quality control procedures. The results show the blank to contain a trace level of OCDD. This level was below the calibration range of the method. Sample levels similar to the corresponding blank level were flagged "B" and may be, at least partially, attributed to the background. It should be noted that levels less than ten times the background are not generally considered to be statistically different from the background.

Laboratory spike samples were also prepared with the sample batch using clean water that had been fortified with native standard materials. The results show that the spiked native compounds were recovered at 82-108%, with relative percent differences of 0.0-9.7%. These results indicate high degrees of accuracy and precision for these determinations. Matrix spikes were not prepared with the sample batch.

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Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Minnesota Laboratory Certifications

Authority	Certificate #	Authority	Certificate #
Alabama	40770	Montana	92
Alaska	MN00064	Nebraska	
Arizona	AZ0014	Nevada	MN_00064_200
Arkansas	88-0680	New Jersey (NE	MN002
California	01155CA	New Mexico	MN00064
Colorado	MN00064	New York (NEL	11647
Connecticut	PH-0256	North Carolina	27700
EPA Region 5	WD-15J	North Dakota	R-036
EPA Region 8	8TMS-Q	Ohio	4150
Florida (NELAP	E87605	Ohio VAP	CL101 9507
Georgia (DNR)	959	Oklahoma	D9922
Guam	959	Oregon (ELAP)	MN200001-005
Hawaii	SLD	Oregon (OREL	MN300001-001
Idaho	MN00064	Pennsylvania	68-00563
Illinois	200012	Saipan	MP0003
Indiana	C-MN-01	South Carolina	74003001
Indiana	C-MN-01	Tennesee	2818
Iowa	368	Tennessee	02818
Kansas	E-10167	Texas	T104704192-08
Kentucky	90062	Utah (NELAP)	PAM
Louisiana	03086	Virginia	00251
Maine	2007029	Washington	C755
Maryland	322	West Virginia	9952C
Michigan	9909	Wisconsin	999407970
Minnesota	027-053-137	Wyoming	8TMS-Q
Mississippi	MN00064		

REPORT OF LABORATORY ANALYSIS

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Appendix A

Sample Management

1128

Report No....10194071_8290

OnSite Environmental Inc.

14648 NE 95th Street, Redmond, WA 98052 · (425) 883-3881

10194071

Laboratory Reference #: 05-244

Subcontract Laboratory: Pace Analytical Service, Inc.

Contact Person: Scott Unze / Dioxin Manger

Address: 1700 Elm St. Ste. 200 Minneapolis, MN 55414

Phone Number: (612) 607-6383

Date/Time: _____

Turnaround Request:

1 Day 2 Day 3 Day

(Standard)

Other: _____

Project Manager: David Baumeister

email: dbaumeister@onsite-env.com

Project Number: 5147-006-08

Project Name: _____

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	Requested Analysis
	MW-3A	5/23/12	1530	W	1	Dioxin/Furans
	DUP	↓	1535	↓	↓	↓
	MW-6		1430			
	MW-7	↓	1220	↓	↓	↓

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished by:		OSE	5/30/12	1530	Please return cooler & blue ice.
Received by:		UPS			
Relinquished by:		PACE	5/31/12	9:25	T=3.6
Received by:					
Relinquished by:					
Received by:					

Pace Analytical®	Document Name: **Sample Condition Upon Receipt Form**	Revised Date: 15Feb2012 Page 1 of 1
	Document Number: **F-MN-L-213-rev.02**	Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: On Site Enviro Project # 10194071

Courier: ☐ Fed Ex ☑ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other _____

Tracking #: 1Z684E1W0191786823

Optional
Proj. Due Date:
Proj. Name:

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Packing Material: ☑ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other _____ Temp Blank: Yes ____ No ✓

Thermometer Used 80344042 or 80512447 **Type of Ice:** (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 3.6 **Biological Tissue is Frozen:** Yes No

Temp should be above freezing to 6°C **Comments:**

Date and Initials of person examining contents: AL 5/31/12

Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☐Yes ☑No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☐Yes ☑No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix: WT	☑Yes ☐No ☐N/A	12.
All containers needing acid/base preservation have been checked. Noncompliance are noted in 13.	☐Yes ☐No ☑N/A	13. ☐ HNO3 ☐ H2SO4 ☐ NaOH ☐ HCl Samp #
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4, HCL<2; NaOH >12)	☐Yes ☐No ☑N/A	
Exceptions: VOA,Coliform, TOC, Oil and Grease, WI-DRO (water)	☐Yes ☑No	Initial when completed ____ Lot # of added preservative ____
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	14.
Trip Blank Present:	☐Yes ☐No ☑N/A	15.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased): ____		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ **Date:** 06/01/12

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Reporting Flags

A = Reporting Limit based on signal to noise

B = Less than 10x higher than method blank level

C = Result obtained from confirmation analysis

D = Result obtained from analysis of diluted sample

E = Exceeds calibration range

I = Interference present

J = Estimated value

Nn = Value obtained from additional analysis

P = PCDE Interference

R = Recovery outside target range

S = Peak saturated

U = Analyte not detected

V = Result verified by confirmation analysis

X = %D Exceeds limits

Y = Calculated using average of daily RFs

* = See Discussion

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Appendix B

Sample Analysis Summary

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - Onsite Environmental, Inc.

Client's Sample ID	MW-3A		
Lab Sample ID	10194071001		
Filename	P120614B_06		
Injected By	SMT		
Total Amount Extracted	1050 mL	Matrix	Water
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	05/23/2012 15:30
ICAL ID	P120530	Received	05/31/2012 09:25
CCal Filename(s)	P120614B_01 & P120614B_21	Extracted	06/11/2012 15:00
Method Blank ID	BLANK-32925	Analyzed	06/14/2012 12:21

Native Isomers	Conc pg/L	EMPC pg/L	RL pg/L		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	0.72		2,3,7,8-TCDF-13C	2.00	74
Total TCDF	ND	-----	0.72		2,3,7,8-TCDD-13C	2.00	74
					1,2,3,7,8-PeCDF-13C	2.00	81
2,3,7,8-TCDD	ND	-----	0.83		2,3,4,7,8-PeCDF-13C	2.00	87
Total TCDD	ND	-----	0.83		1,2,3,7,8-PeCDD-13C	2.00	102
					1,2,3,4,7,8-HxCDF-13C	2.00	78
1,2,3,7,8-PeCDF	ND	-----	0.75		1,2,3,6,7,8-HxCDF-13C	2.00	80
2,3,4,7,8-PeCDF	ND	-----	0.68		2,3,4,6,7,8-HxCDF-13C	2.00	81
Total PeCDF	ND	-----	0.72		1,2,3,7,8,9-HxCDF-13C	2.00	72
					1,2,3,4,7,8-HxCDD-13C	2.00	88
1,2,3,7,8-PeCDD	ND	-----	0.77		1,2,3,6,7,8-HxCDD-13C	2.00	83
Total PeCDD	ND	-----	0.77		1,2,3,4,6,7,8-HpCDF-13C	2.00	71
					1,2,3,4,7,8,9-HpCDF-13C	2.00	68
1,2,3,4,7,8-HxCDF	ND	-----	0.65		1,2,3,4,6,7,8-HpCDD-13C	2.00	79
1,2,3,6,7,8-HxCDF	ND	-----	0.59		OCDD-13C	4.00	62
2,3,4,6,7,8-HxCDF	ND	-----	0.58				
1,2,3,7,8,9-HxCDF	ND	-----	0.79		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	0.65		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.83		2,3,7,8-TCDD-37Cl4	0.20	66
1,2,3,6,7,8-HxCDD	ND	-----	0.77				
1,2,3,7,8,9-HxCDD	ND	-----	0.76				
Total HxCDD	ND	-----	0.79				
1,2,3,4,6,7,8-HpCDF	ND	-----	1.10		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	1.50		Equivalence: 1.2 pg/L		
Total HpCDF	ND	-----	1.30		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	-----	0.90	0.78	I			
Total HpCDD	1.4	-----	0.78	J			
OCDF	ND	-----	1.50				
OCDD	7.9	-----	2.30	BJ			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit.

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

J = Estimated value
B = Less than 10x higher than method blank level
I = Interference present

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - Onsite Environmental, Inc.

Client's Sample ID	DUP		
Lab Sample ID	10194071002		
Filename	P120614B_07		
Injected By	SMT		
Total Amount Extracted	1050 mL	Matrix	Water
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	05/23/2012 15:35
ICAL ID	P120530	Received	05/31/2012 09:25
CCal Filename(s)	P120614B_01 & P120614B_21	Extracted	06/11/2012 15:00
Method Blank ID	BLANK-32925	Analyzed	06/14/2012 13:04

Native Isomers	Conc pg/L	EMPC pg/L	RL pg/L		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	0.75		2,3,7,8-TCDF-13C	2.00	76
Total TCDF	ND	-----	0.75		2,3,7,8-TCDD-13C	2.00	64
					1,2,3,7,8-PeCDF-13C	2.00	83
2,3,7,8-TCDD	ND	-----	1.10		2,3,4,7,8-PeCDF-13C	2.00	90
Total TCDD	ND	-----	1.10		1,2,3,7,8-PeCDD-13C	2.00	107
					1,2,3,4,7,8-HxCDF-13C	2.00	80
1,2,3,7,8-PeCDF	ND	-----	0.77		1,2,3,6,7,8-HxCDF-13C	2.00	85
2,3,4,7,8-PeCDF	ND	-----	0.69		2,3,4,6,7,8-HxCDF-13C	2.00	84
Total PeCDF	ND	-----	0.73		1,2,3,7,8,9-HxCDF-13C	2.00	75
					1,2,3,4,7,8-HxCDD-13C	2.00	90
1,2,3,7,8-PeCDD	ND	-----	0.64		1,2,3,6,7,8-HxCDD-13C	2.00	88
Total PeCDD	ND	-----	0.64		1,2,3,4,6,7,8-HpCDF-13C	2.00	74
					1,2,3,4,7,8,9-HpCDF-13C	2.00	69
1,2,3,4,7,8-HxCDF	ND	-----	0.67		1,2,3,4,6,7,8-HpCDD-13C	2.00	80
1,2,3,6,7,8-HxCDF	ND	-----	0.60		OCDD-13C	4.00	64
2,3,4,6,7,8-HxCDF	ND	-----	0.59				
1,2,3,7,8,9-HxCDF	ND	-----	0.80		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	0.67		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.91		2,3,7,8-TCDD-37Cl4	0.20	56
1,2,3,6,7,8-HxCDD	ND	-----	0.93				
1,2,3,7,8,9-HxCDD	ND	-----	0.78				
Total HxCDD	ND	-----	0.87				
1,2,3,4,6,7,8-HpCDF	ND	-----	1.30		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	1.90		Equivalence: 1.3 pg/L		
Total HpCDF	ND	-----	1.60		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	1.5	-----	1.00	J			
Total HpCDD	1.5	-----	1.00	J			
OCDF	ND	-----	1.80				
OCDD	6.7	-----	2.70	BJ			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit.

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

J = Estimated value
B = Less than 10x higher than method blank level

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - Onsite Environmental, Inc.

Client's Sample ID	MW-6		
Lab Sample ID	10194071003		
Filename	P120614B_08		
Injected By	SMT		
Total Amount Extracted	1030 mL	Matrix	Water
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	05/23/2012 14:30
ICAL ID	P120530	Received	05/31/2012 09:25
CCal Filename(s)	P120614B_01 & P120614B_21	Extracted	06/11/2012 15:00
Method Blank ID	BLANK-32925	Analyzed	06/14/2012 13:48

Native Isomers	Conc pg/L	EMPC pg/L	RL pg/L		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	0.78		2,3,7,8-TCDF-13C	2.00	75
Total TCDF	ND	-----	0.78		2,3,7,8-TCDD-13C	2.00	85
					1,2,3,7,8-PeCDF-13C	2.00	81
2,3,7,8-TCDD	ND	-----	0.83		2,3,4,7,8-PeCDF-13C	2.00	87
Total TCDD	ND	-----	0.83		1,2,3,7,8-PeCDD-13C	2.00	101
					1,2,3,4,7,8-HxCDF-13C	2.00	78
1,2,3,7,8-PeCDF	ND	-----	0.68		1,2,3,6,7,8-HxCDF-13C	2.00	81
2,3,4,7,8-PeCDF	ND	-----	0.57		2,3,4,6,7,8-HxCDF-13C	2.00	81
Total PeCDF	ND	-----	0.63		1,2,3,7,8,9-HxCDF-13C	2.00	73
					1,2,3,4,7,8-HxCDD-13C	2.00	86
1,2,3,7,8-PeCDD	ND	-----	0.59		1,2,3,6,7,8-HxCDD-13C	2.00	84
Total PeCDD	ND	-----	0.59		1,2,3,4,6,7,8-HpCDF-13C	2.00	71
					1,2,3,4,7,8,9-HpCDF-13C	2.00	66
1,2,3,4,7,8-HxCDF	ND	-----	0.83		1,2,3,4,6,7,8-HpCDD-13C	2.00	78
1,2,3,6,7,8-HxCDF	ND	-----	0.65		OCDD-13C	4.00	58
2,3,4,6,7,8-HxCDF	ND	-----	0.65				
1,2,3,7,8,9-HxCDF	ND	-----	1.00		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	0.79		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.96		2,3,7,8-TCDD-37Cl4	0.20	75
1,2,3,6,7,8-HxCDD	ND	-----	1.10				
1,2,3,7,8,9-HxCDD	ND	-----	0.94				
Total HxCDD	ND	-----	0.99				
1,2,3,4,6,7,8-HpCDF	ND	-----	1.70		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	2.00		Equivalence: 1.2 pg/L		
Total HpCDF	ND	-----	1.90		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	-----	1.2	1.00	I			
Total HpCDD	ND	-----	1.00				
OCDF	ND	-----	2.50				
OCDD	7.5	-----	3.40	BJ			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit.

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

J = Estimated value
B = Less than 10x higher than method blank level
I = Interference present

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - Onsite Environmental, Inc.

Client's Sample ID	MW-7		
Lab Sample ID	10194071004		
Filename	P120614B_09		
Injected By	SMT		
Total Amount Extracted	1040 mL	Matrix	Water
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	05/23/2012 12:20
ICAL ID	P120530	Received	05/31/2012 09:25
CCal Filename(s)	P120614B_01 & P120614B_21	Extracted	06/11/2012 15:00
Method Blank ID	BLANK-32925	Analyzed	06/14/2012 14:31

Native Isomers	Conc pg/L	EMPC pg/L	RL pg/L		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	0.60		2,3,7,8-TCDF-13C	2.00	80
Total TCDF	ND	-----	0.60		2,3,7,8-TCDD-13C	2.00	88
					1,2,3,7,8-PeCDF-13C	2.00	85
2,3,7,8-TCDD	ND	-----	0.65		2,3,4,7,8-PeCDF-13C	2.00	91
Total TCDD	ND	-----	0.65		1,2,3,7,8-PeCDD-13C	2.00	109
					1,2,3,4,7,8-HxCDF-13C	2.00	83
1,2,3,7,8-PeCDF	ND	-----	0.63		1,2,3,6,7,8-HxCDF-13C	2.00	90
2,3,4,7,8-PeCDF	ND	-----	0.57		2,3,4,6,7,8-HxCDF-13C	2.00	88
Total PeCDF	ND	-----	0.60		1,2,3,7,8,9-HxCDF-13C	2.00	81
					1,2,3,4,7,8-HxCDD-13C	2.00	95
1,2,3,7,8-PeCDD	ND	-----	0.68		1,2,3,6,7,8-HxCDD-13C	2.00	92
Total PeCDD	ND	-----	0.68		1,2,3,4,6,7,8-HpCDF-13C	2.00	79
					1,2,3,4,7,8,9-HpCDF-13C	2.00	74
1,2,3,4,7,8-HxCDF	ND	-----	0.63		1,2,3,4,6,7,8-HpCDD-13C	2.00	83
1,2,3,6,7,8-HxCDF	ND	-----	0.54		OCDD-13C	4.00	63
2,3,4,6,7,8-HxCDF	ND	-----	0.56				
1,2,3,7,8,9-HxCDF	ND	-----	0.78		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	0.63		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.94		2,3,7,8-TCDD-37Cl4	0.20	77
1,2,3,6,7,8-HxCDD	ND	-----	1.00				
1,2,3,7,8,9-HxCDD	ND	-----	1.00				
Total HxCDD	ND	-----	0.99				
1,2,3,4,6,7,8-HpCDF	ND	-----	1.30		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	1.70		Equivalence: 1.1 pg/L		
Total HpCDF	ND	-----	1.50		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	-----	1.1	0.93	I			
Total HpCDD	1.4	-----	0.93	J			
OCDF	ND	-----	1.60				
OCDD	4.5	-----	2.60	BJ			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit.

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

J = Estimated value
B = Less than 10x higher than method blank level
I = Interference present

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Blank Analysis Results

Lab Sample ID	BLANK-32925	Matrix	Water
Filename	P120613A_10	Dilution	NA
Total Amount Extracted	966 mL	Extracted	06/11/2012 15:00
ICAL ID	P120530	Analyzed	06/13/2012 16:32
CCal Filename(s)	P120613A_06 & P120613A_21	Injected By	SMT

Native Isomers	Conc pg/L	EMPC pg/L	RL pg/L	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	1.4	2,3,7,8-TCDF-13C	2.00	59
Total TCDF	ND	-----	1.4	2,3,7,8-TCDD-13C	2.00	27 R
				1,2,3,7,8-PeCDF-13C	2.00	61
2,3,7,8-TCDD	ND	-----	4.5	2,3,4,7,8-PeCDF-13C	2.00	68
Total TCDD	ND	-----	4.5	1,2,3,7,8-PeCDD-13C	2.00	79
				1,2,3,4,7,8-HxCDF-13C	2.00	71
1,2,3,7,8-PeCDF	ND	-----	1.3	1,2,3,6,7,8-HxCDF-13C	2.00	76
2,3,4,7,8-PeCDF	ND	-----	1.1	2,3,4,6,7,8-HxCDF-13C	2.00	71
Total PeCDF	ND	-----	1.2	1,2,3,7,8,9-HxCDF-13C	2.00	56
				1,2,3,4,7,8-HxCDD-13C	2.00	75
1,2,3,7,8-PeCDD	ND	-----	1.5	1,2,3,6,7,8-HxCDD-13C	2.00	76
Total PeCDD	ND	-----	1.5	1,2,3,4,6,7,8-HpCDF-13C	2.00	61
				1,2,3,4,7,8,9-HpCDF-13C	2.00	53
1,2,3,4,7,8-HxCDF	ND	-----	1.5	1,2,3,4,6,7,8-HpCDD-13C	2.00	62
1,2,3,6,7,8-HxCDF	ND	-----	1.4	OCDD-13C	4.00	58 Y
2,3,4,6,7,8-HxCDF	ND	-----	1.4			
1,2,3,7,8,9-HxCDF	ND	-----	2.4	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	1.7	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	1.9	2,3,7,8-TCDD-37Cl4	0.20	25
1,2,3,6,7,8-HxCDD	ND	-----	2.1			
1,2,3,7,8,9-HxCDD	ND	-----	2.0			
Total HxCDD	ND	-----	2.0			
1,2,3,4,6,7,8-HpCDF	ND	-----	3.1	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	4.7	Equivalence: 3.9 pg/L		
Total HpCDF	ND	-----	3.9	(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	ND	-----	3.1			
Total HpCDD	ND	-----	3.1			
OCDF	ND	-----	5.1			
OCDD	9.2	-----	6.1 J			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

J = Estimated value
R = Recovery outside target range
Y = Calculated using average of daily RFs

REPORT OF LABORATORY ANALYSIS

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1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Laboratory Control Spike Results

Lab Sample ID	LCS-32926		
Filename	P120613A_19	Matrix	Water
Total Amount Extracted	963 mL	Dilution	NA
ICAL ID	P120530	Extracted	06/11/2012 15:00
CCal Filename(s)	P120613A_06 & P120613A_21	Analyzed	06/13/2012 23:01
Method Blank ID	BLANK-32925	Injected By	SMT

Native Isomers	Qs (ng)	Qm (ng)	% Rec.	Internal Standards	ng's Added	Percent Recovery	
2,3,7,8-TCDF	0.20	0.18	91	2,3,7,8-TCDF-13C	2.0	70	
Total TCDF				2,3,7,8-TCDD-13C	2.0	58	
				1,2,3,7,8-PeCDF-13C	2.0	77	
2,3,7,8-TCDD	0.20	0.18	88	2,3,4,7,8-PeCDF-13C	2.0	84	
Total TCDD				1,2,3,7,8-PeCDD-13C	2.0	96	
				1,2,3,4,7,8-HxCDF-13C	2.0	76	
1,2,3,7,8-PeCDF	1.0	0.91	91	1,2,3,6,7,8-HxCDF-13C	2.0	82	
2,3,4,7,8-PeCDF	1.0	0.91	91	2,3,4,6,7,8-HxCDF-13C	2.0	78	
Total PeCDF				1,2,3,7,8,9-HxCDF-13C	2.0	64	
				1,2,3,4,7,8-HxCDD-13C	2.0	84	
1,2,3,7,8-PeCDD	1.0	0.88	88	1,2,3,6,7,8-HxCDD-13C	2.0	81	
Total PeCDD				1,2,3,4,6,7,8-HpCDF-13C	2.0	67	
				1,2,3,4,7,8,9-HpCDF-13C	2.0	56	
1,2,3,4,7,8-HxCDF	1.0	1.0	102	1,2,3,4,6,7,8-HpCDD-13C	2.0	65	
1,2,3,6,7,8-HxCDF	1.0	0.94	94	OCDD-13C	4.0	60	Y
2,3,4,6,7,8-HxCDF	1.0	0.97	97				
1,2,3,7,8,9-HxCDF	1.0	0.97	97	1,2,3,4-TCDD-13C	2.0	NA	
Total HxCDF				1,2,3,7,8,9-HxCDD-13C	2.0	NA	
1,2,3,4,7,8-HxCDD	1.0	0.98	98	2,3,7,8-TCDD-37Cl4	0.20	50	
1,2,3,6,7,8-HxCDD	1.0	1.1	108				
1,2,3,7,8,9-HxCDD	1.0	0.95	95				
Total HxCDD							
1,2,3,4,6,7,8-HpCDF	1.0	1.1	106				
1,2,3,4,7,8,9-HpCDF	1.0	0.99	99				
Total HpCDF							
1,2,3,4,6,7,8-HpCDD	1.0	0.95	95				
Total HpCDD							
OCDF	2.0	2.0	102				
OCDD	2.0	2.1	103				

Qs = Quantity Spiked
Qm = Quantity Measured
Rec. = Recovery (Expressed as Percent)
R = Recovery outside of target range

Y = RF averaging used in calculations
Nn = Value obtained from additional analysis
NA = Not Applicable
* = See Discussion

REPORT OF LABORATORY ANALYSIS

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Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Laboratory Control Spike Results

Lab Sample ID	LCSD-32932		
Filename	P120613A_20	Matrix	Water
Total Amount Extracted	899 mL	Dilution	NA
ICAL ID	P120530	Extracted	06/11/2012 15:00
CCal Filename(s)	P120613A_06 & P120613A_21	Analyzed	06/13/2012 23:44
Method Blank ID	BLANK-32925	Injected By	SMT

Native Isomers	Qs (ng)	Qm (ng)	% Rec.	Internal Standards	ng's Added	Percent Recovery	
2,3,7,8-TCDF	0.20	0.18	91	2,3,7,8-TCDF-13C	2.0	76	
Total TCDF				2,3,7,8-TCDD-13C	2.0	78	
				1,2,3,7,8-PeCDF-13C	2.0	83	
2,3,7,8-TCDD	0.20	0.16	82	2,3,4,7,8-PeCDF-13C	2.0	90	
Total TCDD				1,2,3,7,8-PeCDD-13C	2.0	107	
				1,2,3,4,7,8-HxCDF-13C	2.0	80	
1,2,3,7,8-PeCDF	1.0	0.91	91	1,2,3,6,7,8-HxCDF-13C	2.0	86	
2,3,4,7,8-PeCDF	1.0	0.84	84	2,3,4,6,7,8-HxCDF-13C	2.0	82	
Total PeCDF				1,2,3,7,8,9-HxCDF-13C	2.0	75	
				1,2,3,4,7,8-HxCDD-13C	2.0	87	
1,2,3,7,8-PeCDD	1.0	0.82	82	1,2,3,6,7,8-HxCDD-13C	2.0	88	
Total PeCDD				1,2,3,4,6,7,8-HpCDF-13C	2.0	72	
				1,2,3,4,7,8,9-HpCDF-13C	2.0	65	
1,2,3,4,7,8-HxCDF	1.0	0.96	96	1,2,3,4,6,7,8-HpCDD-13C	2.0	73	
1,2,3,6,7,8-HxCDF	1.0	0.87	87	OCDD-13C	4.0	74	Y
2,3,4,6,7,8-HxCDF	1.0	0.92	92				
1,2,3,7,8,9-HxCDF	1.0	0.91	91	1,2,3,4-TCDD-13C	2.0	NA	
Total HxCDF				1,2,3,7,8,9-HxCDD-13C	2.0	NA	
1,2,3,4,7,8-HxCDD	1.0	0.94	94	2,3,7,8-TCDD-37Cl4	0.20	66	
1,2,3,6,7,8-HxCDD	1.0	0.98	98				
1,2,3,7,8,9-HxCDD	1.0	0.93	93				
Total HxCDD							
1,2,3,4,6,7,8-HpCDF	1.0	0.99	99				
1,2,3,4,7,8,9-HpCDF	1.0	0.93	93				
Total HpCDF							
1,2,3,4,6,7,8-HpCDD	1.0	0.90	90				
Total HpCDD							
OCDF	2.0	2.0	99				
OCDD	2.0	2.0	102				

Qs = Quantity Spiked
Qm = Quantity Measured
Rec. = Recovery (Expressed as Percent)
R = Recovery outside of target range

Y = RF averaging used in calculations
Nn = Value obtained from additional analysis
NA = Not Applicable
* = See Discussion

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1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290

Spike Recovery Relative Percent Difference (RPD) Results

Client	Onsite Environmental, Inc.		
Spike 1 ID	LCS-32926	Spike 2 ID	LCSD-32932
Spike 1 Filename	P120613A_19	Spike 2 Filename	P120613A_20

Compound	Spike 1 %REC	Spike 2 %REC	%RPD
2,3,7,8-TCDF	91	91	0.0
2,3,7,8-TCDD	88	82	7.1
1,2,3,7,8-PeCDF	91	91	0.0
2,3,4,7,8-PeCDF	91	84	8.0
1,2,3,7,8-PeCDD	88	82	7.1
1,2,3,4,7,8-HxCDF	102	96	6.1
1,2,3,6,7,8-HxCDF	94	87	7.7
2,3,4,6,7,8-HxCDF	97	92	5.3
1,2,3,7,8,9-HxCDF	97	91	6.4
1,2,3,4,7,8-HxCDD	98	94	4.2
1,2,3,6,7,8-HxCDD	108	98	9.7
1,2,3,7,8,9-HxCDD	95	93	2.1
1,2,3,4,6,7,8-HpCDF	106	99	6.8
1,2,3,4,7,8,9-HpCDF	99	93	6.3
1,2,3,4,6,7,8-HpCDD	95	90	5.4
OCDF	102	99	3.0
OCDD	103	102	1.0

%REC = Percent Recovered
RPD = The difference between the two values divided by the mean value

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OnSite Environmental Inc.

14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

September 11, 2012

Robert Trahan
GeoEngineers, Inc.
600 Stewart, Suite 1700
Seattle, WA 98101-1233

Re: Analytical Data for Project 5147-006-08
Laboratory Reference No. 1208-139

Dear Robert:

Enclosed are the analytical results and associated quality control data for samples submitted on August 17, 2012.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 11, 2012
Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

Case Narrative

Samples were collected on August 16, 2012 and received by the laboratory on August 17, 2012. They were maintained at the laboratory at a temperature of 2°C to 6°C.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

NWTPH-Dx Analysis

One of the continuing calibration verification (CCV) standards was higher than our method criteria. Another CCV was injected immediately after, which passed. The impacted samples MW-1 and MW-2A, were non-detect. Because our failed CCV reported a high bias, and the following CCV passed, the data was considered valid.

EDB by EPA 8011 Analysis

Values for the analyte EDB in the continuing calibration verification standard (CCV) were high on both columns. Since the samples were non-detect for EDB, no further action was performed.

Please note that any other QA/QC issues associated with these extractions and analyses will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 11, 2012
Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
MW-1	08-139-01	Water	8-16-12	8-17-12	
MW-2A	08-139-02	Water	8-16-12	8-17-12	
MW-4	08-139-03	Water	8-16-12	8-17-12	
MW-3A	08-139-04	Water	8-16-12	8-17-12	
DUP	08-139-05	Water	8-16-12	8-17-12	
MW-6	08-139-06	Water	8-16-12	8-17-12	
MW-7	08-139-07	Water	8-16-12	8-17-12	
TRIP BLANK	08-139-08	Water	8-16-12	8-17-12	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 11, 2012
Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

NWTPH-Gx

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-1**					
Laboratory ID:	08-139-01					
Gasoline	**ND**	100	NWTPH-Gx	8-20-12	8-20-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*81*	*71-116*				
Client ID:	**MW-2A**					
Laboratory ID:	08-139-02					
Gasoline	**ND**	100	NWTPH-Gx	8-20-12	8-20-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*76*	*71-116*				
Client ID:	**MW-4**					
Laboratory ID:	08-139-03					
Gasoline	**ND**	100	NWTPH-Gx	8-20-12	8-20-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*80*	*71-116*				
Client ID:	**MW-3A**					
Laboratory ID:	08-139-04					
Gasoline	**ND**	100	NWTPH-Gx	8-20-12	8-20-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*81*	*71-116*				
Client ID:	**DUP**					
Laboratory ID:	08-139-05					
Gasoline	**ND**	100	NWTPH-Gx	8-20-12	8-20-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*80*	*71-116*				
Client ID:	**MW-6**					
Laboratory ID:	08-139-06					
Gasoline	**ND**	100	NWTPH-Gx	8-20-12	8-20-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*82*	*71-116*				
Client ID:	**MW-7**					
Laboratory ID:	08-139-07					
Gasoline	**ND**	100	NWTPH-Gx	8-20-12	8-20-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*81*	*71-116*				

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Date of Report: September 11, 2012
Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

NWTPH-Dx
(with acid/silica gel clean-up)

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-1**					
Laboratory ID:	08-139-01					
Diesel Range Organics	**ND**	0.26	NWTPH-Dx	8-23-12	8-23-12	
Lube Oil Range Organics	**ND**	0.41	NWTPH-Dx	8-23-12	8-23-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*104*	*50-150*				
Client ID:	**MW-2A**					
Laboratory ID:	08-139-02					
Diesel Range Organics	**ND**	0.25	NWTPH-Dx	8-23-12	8-23-12	
Lube Oil Range Organics	**ND**	0.40	NWTPH-Dx	8-23-12	8-23-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*112*	*50-150*				
Client ID:	**MW-4**					
Laboratory ID:	08-139-03					
Diesel Range Organics	**ND**	0.26	NWTPH-Dx	8-23-12	8-23-12	
Lube Oil Range Organics	**ND**	0.42	NWTPH-Dx	8-23-12	8-23-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*106*	*50-150*				
Client ID:	**MW-3A**					
Laboratory ID:	08-139-04					
Diesel Range Organics	**ND**	0.25	NWTPH-Dx	8-23-12	8-23-12	
Lube Oil Range Organics	**ND**	0.40	NWTPH-Dx	8-23-12	8-23-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*96*	*50-150*				
Client ID:	**DUP**					
Laboratory ID:	08-139-05					
Diesel Range Organics	**ND**	0.25	NWTPH-Dx	8-23-12	8-23-12	
Lube Oil Range Organics	**ND**	0.40	NWTPH-Dx	8-23-12	8-23-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*107*	*50-150*				
Client ID:	**MW-6**					
Laboratory ID:	08-139-06					
Diesel Range Organics	**ND**	0.25	NWTPH-Dx	8-23-12	8-23-12	
Lube Oil Range Organics	**ND**	0.40	NWTPH-Dx	8-23-12	8-23-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*104*	*50-150*				
Client ID:	**MW-7**					
Laboratory ID:	08-139-07					
Diesel Range Organics	**ND**	0.26	NWTPH-Dx	8-23-12	8-23-12	
Lube Oil Range Organics	**ND**	0.41	NWTPH-Dx	8-23-12	8-23-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*109*	*50-150*				

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Date of Report: September 11, 2012
Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

VOLATILES by EPA 8260B
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-3A**					
Laboratory ID:	08-139-04					
Dichlorodifluoromethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
Chloromethane	ND	1.0	EPA 8260	8-21-12	8-21-12	
Vinyl Chloride	ND	0.20	EPA 8260	8-21-12	8-21-12	
Bromomethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
Chloroethane	ND	1.0	EPA 8260	8-21-12	8-21-12	
Trichlorofluoromethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,1-Dichloroethene	ND	0.20	EPA 8260	8-21-12	8-21-12	
Acetone	ND	5.0	EPA 8260	8-21-12	8-21-12	
Iodomethane	ND	1.0	EPA 8260	8-21-12	8-21-12	
Carbon Disulfide	ND	0.20	EPA 8260	8-21-12	8-21-12	
Methylene Chloride	ND	1.0	EPA 8260	8-21-12	8-21-12	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260	8-21-12	8-21-12	
Methyl t-Butyl Ether	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,1-Dichloroethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
Vinyl Acetate	ND	2.0	EPA 8260	8-21-12	8-21-12	
2,2-Dichloropropane	ND	0.20	EPA 8260	8-21-12	8-21-12	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260	8-21-12	8-21-12	
2-Butanone	ND	5.0	EPA 8260	8-21-12	8-21-12	
Bromochloromethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
Chloroform	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,1,1-Trichloroethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
Carbon Tetrachloride	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,1-Dichloropropene	ND	0.20	EPA 8260	8-21-12	8-21-12	
Benzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,2-Dichloroethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
Trichloroethene	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,2-Dichloropropane	ND	0.20	EPA 8260	8-21-12	8-21-12	
Dibromomethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
Bromodichloromethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260	8-21-12	8-21-12	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260	8-21-12	8-21-12	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260	8-21-12	8-21-12	
Toluene	ND	1.0	EPA 8260	8-21-12	8-21-12	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260	8-21-12	8-21-12	

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Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

VOLATILES by EPA 8260B
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-3A**					
Laboratory ID:	08-139-04					
1,1,2-Trichloroethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
Tetrachloroethene	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,3-Dichloropropane	ND	0.20	EPA 8260	8-21-12	8-21-12	
2-Hexanone	ND	2.0	EPA 8260	8-21-12	8-21-12	
Dibromochloromethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,2-Dibromoethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
Chlorobenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
Ethylbenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
m,p-Xylene	ND	0.40	EPA 8260	8-21-12	8-21-12	
o-Xylene	ND	0.20	EPA 8260	8-21-12	8-21-12	
Styrene	ND	0.20	EPA 8260	8-21-12	8-21-12	
Bromoform	ND	1.0	EPA 8260	8-21-12	8-21-12	
Isopropylbenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
Bromobenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,2,3-Trichloropropane	ND	0.20	EPA 8260	8-21-12	8-21-12	
n-Propylbenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
2-Chlorotoluene	ND	0.20	EPA 8260	8-21-12	8-21-12	
4-Chlorotoluene	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
tert-Butylbenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
sec-Butylbenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,3-Dichlorobenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
p-Isopropyltoluene	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,4-Dichlorobenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,2-Dichlorobenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
n-Butylbenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260	8-21-12	8-21-12	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
Hexachlorobutadiene	ND	0.20	EPA 8260	8-21-12	8-21-12	
Naphthalene	ND	1.0	EPA 8260	8-21-12	8-21-12	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*94*	*66-120*				
Toluene-d8	*97*	*70-120*				
4-Bromofluorobenzene	*100*	*63-120*				

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Date of Report: September 11, 2012
Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

VOLATILES by EPA 8260B
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**DUP**					
Laboratory ID:	08-139-05					
Dichlorodifluoromethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
Chloromethane	ND	1.0	EPA 8260	8-21-12	8-21-12	
Vinyl Chloride	ND	0.20	EPA 8260	8-21-12	8-21-12	
Bromomethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
Chloroethane	ND	1.0	EPA 8260	8-21-12	8-21-12	
Trichlorofluoromethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,1-Dichloroethene	ND	0.20	EPA 8260	8-21-12	8-21-12	
Acetone	ND	5.0	EPA 8260	8-21-12	8-21-12	
Iodomethane	ND	1.0	EPA 8260	8-21-12	8-21-12	
Carbon Disulfide	ND	0.20	EPA 8260	8-21-12	8-21-12	
Methylene Chloride	ND	1.0	EPA 8260	8-21-12	8-21-12	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260	8-21-12	8-21-12	
Methyl t-Butyl Ether	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,1-Dichloroethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
Vinyl Acetate	ND	2.0	EPA 8260	8-21-12	8-21-12	
2,2-Dichloropropane	ND	0.20	EPA 8260	8-21-12	8-21-12	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260	8-21-12	8-21-12	
2-Butanone	ND	5.0	EPA 8260	8-21-12	8-21-12	
Bromochloromethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
Chloroform	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,1,1-Trichloroethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
Carbon Tetrachloride	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,1-Dichloropropene	ND	0.20	EPA 8260	8-21-12	8-21-12	
Benzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,2-Dichloroethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
Trichloroethene	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,2-Dichloropropane	ND	0.20	EPA 8260	8-21-12	8-21-12	
Dibromomethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
Bromodichloromethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260	8-21-12	8-21-12	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260	8-21-12	8-21-12	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260	8-21-12	8-21-12	
Toluene	ND	1.0	EPA 8260	8-21-12	8-21-12	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260	8-21-12	8-21-12	

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Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

VOLATILES by EPA 8260B
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**DUP**					
Laboratory ID:	08-139-05					
1,1,2-Trichloroethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
Tetrachloroethene	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,3-Dichloropropane	ND	0.20	EPA 8260	8-21-12	8-21-12	
2-Hexanone	ND	2.0	EPA 8260	8-21-12	8-21-12	
Dibromochloromethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,2-Dibromoethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
Chlorobenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
Ethylbenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
m,p-Xylene	ND	0.40	EPA 8260	8-21-12	8-21-12	
o-Xylene	ND	0.20	EPA 8260	8-21-12	8-21-12	
Styrene	ND	0.20	EPA 8260	8-21-12	8-21-12	
Bromoform	ND	1.0	EPA 8260	8-21-12	8-21-12	
Isopropylbenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
Bromobenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,2,3-Trichloropropane	ND	0.20	EPA 8260	8-21-12	8-21-12	
n-Propylbenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
2-Chlorotoluene	ND	0.20	EPA 8260	8-21-12	8-21-12	
4-Chlorotoluene	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
tert-Butylbenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
sec-Butylbenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,3-Dichlorobenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
p-Isopropyltoluene	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,4-Dichlorobenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,2-Dichlorobenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
n-Butylbenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260	8-21-12	8-21-12	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
Hexachlorobutadiene	ND	0.20	EPA 8260	8-21-12	8-21-12	
Naphthalene	ND	1.0	EPA 8260	8-21-12	8-21-12	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*94*	*66-120*				
Toluene-d8	*97*	*70-120*				
4-Bromofluorobenzene	*99*	*63-120*				

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Date of Report: September 11, 2012
Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

VOLATILES by EPA 8260B
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-6**					
Laboratory ID:	08-139-06					
Dichlorodifluoromethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
Chloromethane	ND	1.0	EPA 8260	8-21-12	8-21-12	
Vinyl Chloride	ND	0.20	EPA 8260	8-21-12	8-21-12	
Bromomethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
Chloroethane	ND	1.0	EPA 8260	8-21-12	8-21-12	
Trichlorofluoromethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,1-Dichloroethene	ND	0.20	EPA 8260	8-21-12	8-21-12	
Acetone	ND	5.0	EPA 8260	8-21-12	8-21-12	
Iodomethane	ND	1.0	EPA 8260	8-21-12	8-21-12	
Carbon Disulfide	ND	0.20	EPA 8260	8-21-12	8-21-12	
Methylene Chloride	ND	1.0	EPA 8260	8-21-12	8-21-12	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260	8-21-12	8-21-12	
Methyl t-Butyl Ether	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,1-Dichloroethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
Vinyl Acetate	ND	2.0	EPA 8260	8-21-12	8-21-12	
2,2-Dichloropropane	ND	0.20	EPA 8260	8-21-12	8-21-12	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260	8-21-12	8-21-12	
2-Butanone	ND	5.0	EPA 8260	8-21-12	8-21-12	
Bromochloromethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
Chloroform	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,1,1-Trichloroethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
Carbon Tetrachloride	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,1-Dichloropropene	ND	0.20	EPA 8260	8-21-12	8-21-12	
Benzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,2-Dichloroethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
Trichloroethene	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,2-Dichloropropane	ND	0.20	EPA 8260	8-21-12	8-21-12	
Dibromomethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
Bromodichloromethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260	8-21-12	8-21-12	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260	8-21-12	8-21-12	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260	8-21-12	8-21-12	
Toluene	ND	1.0	EPA 8260	8-21-12	8-21-12	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260	8-21-12	8-21-12	

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Laboratory Reference: 1208-139
Project: 5147-006-08

VOLATILES by EPA 8260B
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-6**					
Laboratory ID:	08-139-06					
1,1,2-Trichloroethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
Tetrachloroethene	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,3-Dichloropropane	ND	0.20	EPA 8260	8-21-12	8-21-12	
2-Hexanone	ND	2.0	EPA 8260	8-21-12	8-21-12	
Dibromochloromethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,2-Dibromoethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
Chlorobenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
Ethylbenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
m,p-Xylene	ND	0.40	EPA 8260	8-21-12	8-21-12	
o-Xylene	ND	0.20	EPA 8260	8-21-12	8-21-12	
Styrene	ND	0.20	EPA 8260	8-21-12	8-21-12	
Bromoform	ND	1.0	EPA 8260	8-21-12	8-21-12	
Isopropylbenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
Bromobenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,2,3-Trichloropropane	ND	0.20	EPA 8260	8-21-12	8-21-12	
n-Propylbenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
2-Chlorotoluene	ND	0.20	EPA 8260	8-21-12	8-21-12	
4-Chlorotoluene	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
tert-Butylbenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
sec-Butylbenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,3-Dichlorobenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
p-Isopropyltoluene	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,4-Dichlorobenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,2-Dichlorobenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
n-Butylbenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260	8-21-12	8-21-12	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
Hexachlorobutadiene	ND	0.20	EPA 8260	8-21-12	8-21-12	
Naphthalene	ND	1.0	EPA 8260	8-21-12	8-21-12	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*91*	*66-120*				
Toluene-d8	*96*	*70-120*				
4-Bromofluorobenzene	*99*	*63-120*				

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Date of Report: September 11, 2012
Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

VOLATILES by EPA 8260B
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-7**					
Laboratory ID:	08-139-07					
Dichlorodifluoromethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
Chloromethane	ND	1.0	EPA 8260	8-21-12	8-21-12	
Vinyl Chloride	ND	0.20	EPA 8260	8-21-12	8-21-12	
Bromomethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
Chloroethane	ND	1.0	EPA 8260	8-21-12	8-21-12	
Trichlorofluoromethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,1-Dichloroethene	ND	0.20	EPA 8260	8-21-12	8-21-12	
Acetone	ND	5.0	EPA 8260	8-21-12	8-21-12	
Iodomethane	ND	1.0	EPA 8260	8-21-12	8-21-12	
Carbon Disulfide	ND	0.20	EPA 8260	8-21-12	8-21-12	
Methylene Chloride	ND	1.0	EPA 8260	8-21-12	8-21-12	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260	8-21-12	8-21-12	
Methyl t-Butyl Ether	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,1-Dichloroethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
Vinyl Acetate	ND	2.0	EPA 8260	8-21-12	8-21-12	
2,2-Dichloropropane	ND	0.20	EPA 8260	8-21-12	8-21-12	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260	8-21-12	8-21-12	
2-Butanone	ND	5.0	EPA 8260	8-21-12	8-21-12	
Bromochloromethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
Chloroform	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,1,1-Trichloroethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
Carbon Tetrachloride	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,1-Dichloropropene	ND	0.20	EPA 8260	8-21-12	8-21-12	
Benzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,2-Dichloroethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
Trichloroethene	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,2-Dichloropropane	ND	0.20	EPA 8260	8-21-12	8-21-12	
Dibromomethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
Bromodichloromethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260	8-21-12	8-21-12	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260	8-21-12	8-21-12	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260	8-21-12	8-21-12	
Toluene	ND	1.0	EPA 8260	8-21-12	8-21-12	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260	8-21-12	8-21-12	

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Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

VOLATILES by EPA 8260B
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-7**					
Laboratory ID:	08-139-07					
1,1,2-Trichloroethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
Tetrachloroethene	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,3-Dichloropropane	ND	0.20	EPA 8260	8-21-12	8-21-12	
2-Hexanone	ND	2.0	EPA 8260	8-21-12	8-21-12	
Dibromochloromethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,2-Dibromoethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
Chlorobenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
Ethylbenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
m,p-Xylene	ND	0.40	EPA 8260	8-21-12	8-21-12	
o-Xylene	ND	0.20	EPA 8260	8-21-12	8-21-12	
Styrene	ND	0.20	EPA 8260	8-21-12	8-21-12	
Bromoform	ND	1.0	EPA 8260	8-21-12	8-21-12	
Isopropylbenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
Bromobenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,2,3-Trichloropropane	ND	0.20	EPA 8260	8-21-12	8-21-12	
n-Propylbenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
2-Chlorotoluene	ND	0.20	EPA 8260	8-21-12	8-21-12	
4-Chlorotoluene	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
tert-Butylbenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
sec-Butylbenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,3-Dichlorobenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
p-Isopropyltoluene	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,4-Dichlorobenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,2-Dichlorobenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
n-Butylbenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260	8-21-12	8-21-12	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
Hexachlorobutadiene	ND	0.20	EPA 8260	8-21-12	8-21-12	
Naphthalene	ND	1.0	EPA 8260	8-21-12	8-21-12	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*91*	*66-120*				
Toluene-d8	*94*	*70-120*				
4-Bromofluorobenzene	*96*	*63-120*				

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Date of Report: September 11, 2012
Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

VOLATILES by EPA 8260B
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Trip Blank**					
Laboratory ID:	08-139-08					
Dichlorodifluoromethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
Chloromethane	ND	1.0	EPA 8260	8-21-12	8-21-12	
Vinyl Chloride	ND	0.20	EPA 8260	8-21-12	8-21-12	
Bromomethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
Chloroethane	ND	1.0	EPA 8260	8-21-12	8-21-12	
Trichlorofluoromethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,1-Dichloroethene	ND	0.20	EPA 8260	8-21-12	8-21-12	
Acetone	ND	5.0	EPA 8260	8-21-12	8-21-12	
Iodomethane	ND	1.0	EPA 8260	8-21-12	8-21-12	
Carbon Disulfide	ND	0.20	EPA 8260	8-21-12	8-21-12	
Methylene Chloride	ND	1.0	EPA 8260	8-21-12	8-21-12	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260	8-21-12	8-21-12	
Methyl t-Butyl Ether	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,1-Dichloroethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
Vinyl Acetate	ND	2.0	EPA 8260	8-21-12	8-21-12	
2,2-Dichloropropane	ND	0.20	EPA 8260	8-21-12	8-21-12	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260	8-21-12	8-21-12	
2-Butanone	ND	5.0	EPA 8260	8-21-12	8-21-12	
Bromochloromethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
Chloroform	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,1,1-Trichloroethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
Carbon Tetrachloride	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,1-Dichloropropene	ND	0.20	EPA 8260	8-21-12	8-21-12	
Benzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,2-Dichloroethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
Trichloroethene	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,2-Dichloropropane	ND	0.20	EPA 8260	8-21-12	8-21-12	
Dibromomethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
Bromodichloromethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260	8-21-12	8-21-12	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260	8-21-12	8-21-12	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260	8-21-12	8-21-12	
Toluene	ND	1.0	EPA 8260	8-21-12	8-21-12	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260	8-21-12	8-21-12	

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Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

VOLATILES by EPA 8260B
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Trip Blank**					
Laboratory ID:	08-139-08					
1,1,2-Trichloroethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
Tetrachloroethene	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,3-Dichloropropane	ND	0.20	EPA 8260	8-21-12	8-21-12	
2-Hexanone	ND	2.0	EPA 8260	8-21-12	8-21-12	
Dibromochloromethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,2-Dibromoethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
Chlorobenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
Ethylbenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
m,p-Xylene	ND	0.40	EPA 8260	8-21-12	8-21-12	
o-Xylene	ND	0.20	EPA 8260	8-21-12	8-21-12	
Styrene	ND	0.20	EPA 8260	8-21-12	8-21-12	
Bromoform	ND	1.0	EPA 8260	8-21-12	8-21-12	
Isopropylbenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
Bromobenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,2,3-Trichloropropane	ND	0.20	EPA 8260	8-21-12	8-21-12	
n-Propylbenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
2-Chlorotoluene	ND	0.20	EPA 8260	8-21-12	8-21-12	
4-Chlorotoluene	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
tert-Butylbenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
sec-Butylbenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,3-Dichlorobenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
p-Isopropyltoluene	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,4-Dichlorobenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,2-Dichlorobenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
n-Butylbenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260	8-21-12	8-21-12	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
Hexachlorobutadiene	ND	0.20	EPA 8260	8-21-12	8-21-12	
Naphthalene	ND	1.0	EPA 8260	8-21-12	8-21-12	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*94*	*66-120*				
Toluene-d8	*97*	*70-120*				
4-Bromofluorobenzene	*98*	*63-120*				

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Date of Report: September 11, 2012
Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

SEMIVOLATILES EPA 8270D/SIM
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-3A**					
Laboratory ID:	08-139-04					
n-Nitrosodimethylamine	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
Pyridine	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
Phenol	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
Aniline	**ND**	4.7	EPA 8270	8-20-12	8-20-12	
bis(2-Chloroethyl)ether	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
2-Chlorophenol	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
1,3-Dichlorobenzene	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
1,4-Dichlorobenzene	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
Benzyl alcohol	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
1,2-Dichlorobenzene	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
2-Methylphenol (o-Cresol)	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
bis(2-Chloroisopropyl)ether	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
n-Nitroso-di-n-propylamine	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
Hexachloroethane	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
Nitrobenzene	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
Isophorone	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
2-Nitrophenol	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
2,4-Dimethylphenol	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
bis(2-Chloroethoxy)methane	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
2,4-Dichlorophenol	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
1,2,4-Trichlorobenzene	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
Naphthalene	**ND**	0.094	EPA 8270/SIM	8-20-12	8-22-12	
4-Chloroaniline	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
Hexachlorobutadiene	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
4-Chloro-3-methylphenol	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
2-Methylnaphthalene	**ND**	0.094	EPA 8270/SIM	8-20-12	8-22-12	
1-Methylnaphthalene	**ND**	0.094	EPA 8270/SIM	8-20-12	8-22-12	
Hexachlorocyclopentadiene	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
2,4,6-Trichlorophenol	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
2,3-Dichloroaniline	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
2,4,5-Trichlorophenol	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
2-Chloronaphthalene	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
2-Nitroaniline	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
1,4-Dinitrobenzene	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
Dimethylphthalate	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
1,3-Dinitrobenzene	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
2,6-Dinitrotoluene	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
1,2-Dinitrobenzene	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
Acenaphthylene	**ND**	0.094	EPA 8270/SIM	8-20-12	8-22-12	
3-Nitroaniline	**ND**	0.94	EPA 8270	8-20-12	8-20-12	

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Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

SEMIVOLATILES EPA 8270D/SIM
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-3A**					
Laboratory ID:	08-139-04					
2,4-Dinitrophenol	**ND**	4.7	EPA 8270	8-20-12	8-20-12	
Acenaphthene	**ND**	0.094	EPA 8270/SIM	8-20-12	8-22-12	
4-Nitrophenol	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
2,4-Dinitrotoluene	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
Dibenzofuran	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
2,3,5,6-Tetrachlorophenol	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
2,3,4,6-Tetrachlorophenol	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
Diethylphthalate	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
4-Chlorophenyl-phenylether	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
4-Nitroaniline	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
Fluorene	**ND**	0.094	EPA 8270/SIM	8-20-12	8-22-12	
4,6-Dinitro-2-methylphenol	**ND**	4.7	EPA 8270	8-20-12	8-20-12	
n-Nitrosodiphenylamine	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
1,2-Diphenylhydrazine	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
4-Bromophenyl-phenylether	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
Hexachlorobenzene	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
Pentachlorophenol	**ND**	4.7	EPA 8270	8-20-12	8-20-12	
Phenanthrene	**ND**	0.094	EPA 8270/SIM	8-20-12	8-22-12	
Anthracene	**ND**	0.094	EPA 8270/SIM	8-20-12	8-22-12	
Carbazole	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
Di-n-butylphthalate	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
Fluoranthene	**ND**	0.094	EPA 8270/SIM	8-20-12	8-22-12	
Benzidine	**ND**	4.7	EPA 8270	8-20-12	8-20-12	
Pyrene	**ND**	0.094	EPA 8270/SIM	8-20-12	8-22-12	
Butylbenzylphthalate	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
bis-2-Ethylhexyladipate	**ND**	4.7	EPA 8270	8-20-12	8-20-12	
3,3'-Dichlorobenzidine	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
Benzo[a]anthracene	**ND**	0.0094	EPA 8270/SIM	8-20-12	8-22-12	
Chrysene	**ND**	0.0094	EPA 8270/SIM	8-20-12	8-22-12	
bis(2-Ethylhexyl)phthalate	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
Di-n-octylphthalate	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
Benzo[b]fluoranthene	**ND**	0.0094	EPA 8270/SIM	8-20-12	8-22-12	
Benzo(j,k)fluoranthene	**ND**	0.0094	EPA 8270/SIM	8-20-12	8-22-12	
Benzo[a]pyrene	**ND**	0.0094	EPA 8270/SIM	8-20-12	8-22-12	
Indeno[1,2,3-cd]pyrene	**ND**	0.0094	EPA 8270/SIM	8-20-12	8-22-12	
Dibenz[a,h]anthracene	**ND**	0.0094	EPA 8270/SIM	8-20-12	8-22-12	
Benzo[g,h,i]perylene	**ND**	0.0094	EPA 8270/SIM	8-20-12	8-22-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*51*	*17 - 81*				
Phenol-d6	*50*	*10 - 89*				
Nitrobenzene-d5	*76*	*35 - 110*				
2-Fluorobiphenyl	*75*	*45 - 103*				
2,4,6-Tribromophenol	*71*	*39 - 125*				
Terphenyl-d14	*98*	*58 - 111*				

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 11, 2012
Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

SEMIVOLATILES EPA 8270D/SIM
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**DUP**					
Laboratory ID:	08-139-05					
n-Nitrosodimethylamine	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
Pyridine	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
Phenol	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
Aniline	**ND**	4.7	EPA 8270	8-20-12	8-20-12	
bis(2-Chloroethyl)ether	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
2-Chlorophenol	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
1,3-Dichlorobenzene	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
1,4-Dichlorobenzene	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
Benzyl alcohol	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
1,2-Dichlorobenzene	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
2-Methylphenol (o-Cresol)	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
bis(2-Chloroisopropyl)ether	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
n-Nitroso-di-n-propylamine	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
Hexachloroethane	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
Nitrobenzene	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
Isophorone	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
2-Nitrophenol	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
2,4-Dimethylphenol	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
bis(2-Chloroethoxy)methane	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
2,4-Dichlorophenol	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
1,2,4-Trichlorobenzene	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
Naphthalene	**ND**	0.093	EPA 8270/SIM	8-20-12	8-22-12	
4-Chloroaniline	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
Hexachlorobutadiene	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
4-Chloro-3-methylphenol	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
2-Methylnaphthalene	**ND**	0.093	EPA 8270/SIM	8-20-12	8-22-12	
1-Methylnaphthalene	**ND**	0.093	EPA 8270/SIM	8-20-12	8-22-12	
Hexachlorocyclopentadiene	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
2,4,6-Trichlorophenol	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
2,3-Dichloroaniline	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
2,4,5-Trichlorophenol	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
2-Chloronaphthalene	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
2-Nitroaniline	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
1,4-Dinitrobenzene	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
Dimethylphthalate	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
1,3-Dinitrobenzene	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
2,6-Dinitrotoluene	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
1,2-Dinitrobenzene	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
Acenaphthylene	**ND**	0.093	EPA 8270/SIM	8-20-12	8-22-12	
3-Nitroaniline	**ND**	0.93	EPA 8270	8-20-12	8-20-12	

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Date of Report: September 11, 2012
Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

SEMIVOLATILES EPA 8270D/SIM
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**DUP**					
Laboratory ID:	08-139-05					
2,4-Dinitrophenol	**ND**	4.7	EPA 8270	8-20-12	8-20-12	
Acenaphthene	**ND**	0.093	EPA 8270/SIM	8-20-12	8-22-12	
4-Nitrophenol	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
2,4-Dinitrotoluene	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
Dibenzofuran	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
2,3,5,6-Tetrachlorophenol	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
2,3,4,6-Tetrachlorophenol	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
Diethylphthalate	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
4-Chlorophenyl-phenylether	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
4-Nitroaniline	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
Fluorene	**ND**	0.093	EPA 8270/SIM	8-20-12	8-22-12	
4,6-Dinitro-2-methylphenol	**ND**	4.7	EPA 8270	8-20-12	8-20-12	
n-Nitrosodiphenylamine	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
1,2-Diphenylhydrazine	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
4-Bromophenyl-phenylether	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
Hexachlorobenzene	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
Pentachlorophenol	**ND**	4.7	EPA 8270	8-20-12	8-20-12	
Phenanthrene	**ND**	0.093	EPA 8270/SIM	8-20-12	8-22-12	
Anthracene	**ND**	0.093	EPA 8270/SIM	8-20-12	8-22-12	
Carbazole	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
Di-n-butylphthalate	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
Fluoranthene	**ND**	0.093	EPA 8270/SIM	8-20-12	8-22-12	
Benzidine	**ND**	4.7	EPA 8270	8-20-12	8-20-12	
Pyrene	**ND**	0.093	EPA 8270/SIM	8-20-12	8-22-12	
Butylbenzylphthalate	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
bis-2-Ethylhexyladipate	**ND**	4.7	EPA 8270	8-20-12	8-20-12	
3,3'-Dichlorobenzidine	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
Benzo[a]anthracene	**ND**	0.0093	EPA 8270/SIM	8-20-12	8-22-12	
Chrysene	**ND**	0.0093	EPA 8270/SIM	8-20-12	8-22-12	
bis(2-Ethylhexyl)phthalate	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
Di-n-octylphthalate	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
Benzo[b]fluoranthene	**ND**	0.0093	EPA 8270/SIM	8-20-12	8-22-12	
Benzo(j,k)fluoranthene	**ND**	0.0093	EPA 8270/SIM	8-20-12	8-22-12	
Benzo[a]pyrene	**ND**	0.0093	EPA 8270/SIM	8-20-12	8-22-12	
Indeno[1,2,3-cd]pyrene	**ND**	0.0093	EPA 8270/SIM	8-20-12	8-22-12	
Dibenz[a,h]anthracene	**ND**	0.0093	EPA 8270/SIM	8-20-12	8-22-12	
Benzo[g,h,i]perylene	**ND**	0.0093	EPA 8270/SIM	8-20-12	8-22-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*42*	*17 - 81*				
Phenol-d6	*43*	*10 - 89*				
Nitrobenzene-d5	*65*	*35 - 110*				
2-Fluorobiphenyl	*72*	*45 - 103*				
2,4,6-Tribromophenol	*71*	*39 - 125*				
Terphenyl-d14	*92*	*58 - 111*				

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Date of Report: September 11, 2012
Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

SEMIVOLATILES EPA 8270D/SIM
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-6**					
Laboratory ID:	08-139-06					
n-Nitrosodimethylamine	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
Pyridine	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
Phenol	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
Aniline	**ND**	4.7	EPA 8270	8-20-12	8-20-12	
bis(2-Chloroethyl)ether	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
2-Chlorophenol	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
1,3-Dichlorobenzene	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
1,4-Dichlorobenzene	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
Benzyl alcohol	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
1,2-Dichlorobenzene	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
2-Methylphenol (o-Cresol)	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
bis(2-Chloroisopropyl)ether	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
n-Nitroso-di-n-propylamine	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
Hexachloroethane	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
Nitrobenzene	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
Isophorone	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
2-Nitrophenol	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
2,4-Dimethylphenol	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
bis(2-Chloroethoxy)methane	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
2,4-Dichlorophenol	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
1,2,4-Trichlorobenzene	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
Naphthalene	**ND**	0.093	EPA 8270/SIM	8-20-12	8-22-12	
4-Chloroaniline	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
Hexachlorobutadiene	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
4-Chloro-3-methylphenol	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
2-Methylnaphthalene	**ND**	0.093	EPA 8270/SIM	8-20-12	8-22-12	
1-Methylnaphthalene	**ND**	0.093	EPA 8270/SIM	8-20-12	8-22-12	
Hexachlorocyclopentadiene	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
2,4,6-Trichlorophenol	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
2,3-Dichloroaniline	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
2,4,5-Trichlorophenol	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
2-Chloronaphthalene	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
2-Nitroaniline	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
1,4-Dinitrobenzene	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
Dimethylphthalate	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
1,3-Dinitrobenzene	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
2,6-Dinitrotoluene	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
1,2-Dinitrobenzene	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
Acenaphthylene	**ND**	0.093	EPA 8270/SIM	8-20-12	8-22-12	
3-Nitroaniline	**ND**	0.93	EPA 8270	8-20-12	8-20-12	

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Date of Report: September 11, 2012
Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

SEMIVOLATILES EPA 8270D/SIM
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-6**					
Laboratory ID:	08-139-06					
2,4-Dinitrophenol	**ND**	4.7	EPA 8270	8-20-12	8-20-12	
Acenaphthene	**ND**	0.093	EPA 8270/SIM	8-20-12	8-22-12	
4-Nitrophenol	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
2,4-Dinitrotoluene	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
Dibenzofuran	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
2,3,5,6-Tetrachlorophenol	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
2,3,4,6-Tetrachlorophenol	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
Diethylphthalate	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
4-Chlorophenyl-phenylether	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
4-Nitroaniline	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
Fluorene	**ND**	0.093	EPA 8270/SIM	8-20-12	8-22-12	
4,6-Dinitro-2-methylphenol	**ND**	4.7	EPA 8270	8-20-12	8-20-12	
n-Nitrosodiphenylamine	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
1,2-Diphenylhydrazine	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
4-Bromophenyl-phenylether	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
Hexachlorobenzene	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
Pentachlorophenol	**ND**	4.7	EPA 8270	8-20-12	8-20-12	
Phenanthrene	**ND**	0.093	EPA 8270/SIM	8-20-12	8-22-12	
Anthracene	**ND**	0.093	EPA 8270/SIM	8-20-12	8-22-12	
Carbazole	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
Di-n-butylphthalate	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
Fluoranthene	**ND**	0.093	EPA 8270/SIM	8-20-12	8-22-12	
Benzidine	**ND**	4.7	EPA 8270	8-20-12	8-20-12	
Pyrene	**ND**	0.093	EPA 8270/SIM	8-20-12	8-22-12	
Butylbenzylphthalate	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
bis-2-Ethylhexyladipate	**ND**	4.7	EPA 8270	8-20-12	8-20-12	
3,3'-Dichlorobenzidine	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
Benzo[a]anthracene	**ND**	0.0093	EPA 8270/SIM	8-20-12	8-22-12	
Chrysene	**ND**	0.0093	EPA 8270/SIM	8-20-12	8-22-12	
bis(2-Ethylhexyl)phthalate	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
Di-n-octylphthalate	**ND**	0.93	EPA 8270	8-20-12	8-20-12	
Benzo[b]fluoranthene	**ND**	0.0093	EPA 8270/SIM	8-20-12	8-22-12	
Benzo(j,k)fluoranthene	**ND**	0.0093	EPA 8270/SIM	8-20-12	8-22-12	
Benzo[a]pyrene	**ND**	0.0093	EPA 8270/SIM	8-20-12	8-22-12	
Indeno[1,2,3-cd]pyrene	**ND**	0.0093	EPA 8270/SIM	8-20-12	8-22-12	
Dibenz[a,h]anthracene	**ND**	0.0093	EPA 8270/SIM	8-20-12	8-22-12	
Benzo[g,h,i]perylene	**ND**	0.0093	EPA 8270/SIM	8-20-12	8-22-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*46*	*17 - 81*				
Phenol-d6	*46*	*10 - 89*				
Nitrobenzene-d5	*70*	*35 - 110*				
2-Fluorobiphenyl	*73*	*45 - 103*				
2,4,6-Tribromophenol	*75*	*39 - 125*				
Terphenyl-d14	*97*	*58 - 111*				

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Project: 5147-006-08

SEMIVOLATILES EPA 8270D/SIM
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-7**					
Laboratory ID:	08-139-07					
n-Nitrosodimethylamine	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
Pyridine	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
Phenol	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
Aniline	**ND**	4.7	EPA 8270	8-20-12	8-20-12	
bis(2-Chloroethyl)ether	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
2-Chlorophenol	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
1,3-Dichlorobenzene	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
1,4-Dichlorobenzene	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
Benzyl alcohol	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
1,2-Dichlorobenzene	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
2-Methylphenol (o-Cresol)	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
bis(2-Chloroisopropyl)ether	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
n-Nitroso-di-n-propylamine	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
Hexachloroethane	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
Nitrobenzene	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
Isophorone	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
2-Nitrophenol	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
2,4-Dimethylphenol	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
bis(2-Chloroethoxy)methane	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
2,4-Dichlorophenol	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
1,2,4-Trichlorobenzene	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
Naphthalene	**ND**	0.094	EPA 8270/SIM	8-20-12	8-22-12	
4-Chloroaniline	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
Hexachlorobutadiene	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
4-Chloro-3-methylphenol	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
2-Methylnaphthalene	**ND**	0.094	EPA 8270/SIM	8-20-12	8-22-12	
1-Methylnaphthalene	**ND**	0.094	EPA 8270/SIM	8-20-12	8-22-12	
Hexachlorocyclopentadiene	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
2,4,6-Trichlorophenol	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
2,3-Dichloroaniline	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
2,4,5-Trichlorophenol	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
2-Chloronaphthalene	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
2-Nitroaniline	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
1,4-Dinitrobenzene	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
Dimethylphthalate	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
1,3-Dinitrobenzene	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
2,6-Dinitrotoluene	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
1,2-Dinitrobenzene	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
Acenaphthylene	**ND**	0.094	EPA 8270/SIM	8-20-12	8-22-12	
3-Nitroaniline	**ND**	0.94	EPA 8270	8-20-12	8-20-12	

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: September 11, 2012
Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

SEMIVOLATILES EPA 8270D/SIM
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-7**					
Laboratory ID:	08-139-07					
2,4-Dinitrophenol	**ND**	4.7	EPA 8270	8-20-12	8-20-12	
Acenaphthene	**ND**	0.094	EPA 8270/SIM	8-20-12	8-22-12	
4-Nitrophenol	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
2,4-Dinitrotoluene	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
Dibenzofuran	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
2,3,5,6-Tetrachlorophenol	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
2,3,4,6-Tetrachlorophenol	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
Diethylphthalate	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
4-Chlorophenyl-phenylether	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
4-Nitroaniline	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
Fluorene	**ND**	0.094	EPA 8270/SIM	8-20-12	8-22-12	
4,6-Dinitro-2-methylphenol	**ND**	4.7	EPA 8270	8-20-12	8-20-12	
n-Nitrosodiphenylamine	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
1,2-Diphenylhydrazine	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
4-Bromophenyl-phenylether	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
Hexachlorobenzene	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
Pentachlorophenol	**ND**	4.7	EPA 8270	8-20-12	8-20-12	
Phenanthrene	**ND**	0.094	EPA 8270/SIM	8-20-12	8-22-12	
Anthracene	**ND**	0.094	EPA 8270/SIM	8-20-12	8-22-12	
Carbazole	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
Di-n-butylphthalate	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
Fluoranthene	**ND**	0.094	EPA 8270/SIM	8-20-12	8-22-12	
Benzidine	**ND**	4.7	EPA 8270	8-20-12	8-20-12	
Pyrene	**ND**	0.094	EPA 8270/SIM	8-20-12	8-22-12	
Butylbenzylphthalate	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
bis-2-Ethylhexyladipate	**ND**	4.7	EPA 8270	8-20-12	8-20-12	
3,3'-Dichlorobenzidine	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
Benzo[a]anthracene	**0.027**	0.0094	EPA 8270/SIM	8-20-12	8-22-12	
Chrysene	**0.014**	0.0094	EPA 8270/SIM	8-20-12	8-22-12	
bis(2-Ethylhexyl)phthalate	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
Di-n-octylphthalate	**ND**	0.94	EPA 8270	8-20-12	8-20-12	
Benzo[b]fluoranthene	**0.014**	0.0094	EPA 8270/SIM	8-20-12	8-22-12	
Benzo(j,k)fluoranthene	**ND**	0.0094	EPA 8270/SIM	8-20-12	8-22-12	
Benzo[a]pyrene	**ND**	0.0094	EPA 8270/SIM	8-20-12	8-22-12	
Indeno[1,2,3-cd]pyrene	**ND**	0.0094	EPA 8270/SIM	8-20-12	8-22-12	
Dibenz[a,h]anthracene	**ND**	0.0094	EPA 8270/SIM	8-20-12	8-22-12	
Benzo[g,h,i]perylene	**ND**	0.0094	EPA 8270/SIM	8-20-12	8-22-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*39*	*17 - 81*				
Phenol-d6	*36*	*10 - 89*				
Nitrobenzene-d5	*65*	*35 - 110*				
2-Fluorobiphenyl	*81*	*45 - 103*				
2,4,6-Tribromophenol	*75*	*39 - 125*				
Terphenyl-d14	*91*	*58 - 111*				

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Date of Report: September 11, 2012
Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

PAHs by EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-1**					
Laboratory ID:	08-139-01					
Naphthalene	**ND**	0.094	EPA 8270/SIM	8-17-12	8-22-12	
2-Methylnaphthalene	**ND**	0.094	EPA 8270/SIM	8-17-12	8-22-12	
1-Methylnaphthalene	**ND**	0.094	EPA 8270/SIM	8-17-12	8-22-12	
Acenaphthylene	**ND**	0.094	EPA 8270/SIM	8-17-12	8-22-12	
Acenaphthene	**ND**	0.094	EPA 8270/SIM	8-17-12	8-22-12	
Fluorene	**ND**	0.094	EPA 8270/SIM	8-17-12	8-22-12	
Phenanthrene	**ND**	0.094	EPA 8270/SIM	8-17-12	8-22-12	
Anthracene	**ND**	0.094	EPA 8270/SIM	8-17-12	8-22-12	
Fluoranthene	**ND**	0.094	EPA 8270/SIM	8-17-12	8-22-12	
Pyrene	**ND**	0.094	EPA 8270/SIM	8-17-12	8-22-12	
Benzo[a]anthracene	**ND**	0.0094	EPA 8270/SIM	8-17-12	8-22-12	
Chrysene	**ND**	0.0094	EPA 8270/SIM	8-17-12	8-22-12	
Benzo[b]fluoranthene	**ND**	0.0094	EPA 8270/SIM	8-17-12	8-22-12	
Benzo(j,k)fluoranthene	**ND**	0.0094	EPA 8270/SIM	8-17-12	8-22-12	
Benzo[a]pyrene	**ND**	0.0094	EPA 8270/SIM	8-17-12	8-22-12	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0094	EPA 8270/SIM	8-17-12	8-22-12	
Dibenz[a,h]anthracene	**ND**	0.0094	EPA 8270/SIM	8-17-12	8-22-12	
Benzo[g,h,i]perylene	**ND**	0.0094	EPA 8270/SIM	8-17-12	8-22-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*78*	*40 - 107*				
Pyrene-d10	*84*	*41 - 106*				
Terphenyl-d14	*101*	*44 - 124*				

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Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

PAHs by EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-2A**					
Laboratory ID:	08-139-02					
Naphthalene	**ND**	0.095	EPA 8270/SIM	8-17-12	8-22-12	
2-Methylnaphthalene	**ND**	0.095	EPA 8270/SIM	8-17-12	8-22-12	
1-Methylnaphthalene	**ND**	0.095	EPA 8270/SIM	8-17-12	8-22-12	
Acenaphthylene	**ND**	0.095	EPA 8270/SIM	8-17-12	8-22-12	
Acenaphthene	**ND**	0.095	EPA 8270/SIM	8-17-12	8-22-12	
Fluorene	**ND**	0.095	EPA 8270/SIM	8-17-12	8-22-12	
Phenanthrene	**ND**	0.095	EPA 8270/SIM	8-17-12	8-22-12	
Anthracene	**ND**	0.095	EPA 8270/SIM	8-17-12	8-22-12	
Fluoranthene	**ND**	0.095	EPA 8270/SIM	8-17-12	8-22-12	
Pyrene	**ND**	0.095	EPA 8270/SIM	8-17-12	8-22-12	
Benzo[a]anthracene	**ND**	0.0095	EPA 8270/SIM	8-17-12	8-22-12	
Chrysene	**ND**	0.0095	EPA 8270/SIM	8-17-12	8-22-12	
Benzo[b]fluoranthene	**ND**	0.0095	EPA 8270/SIM	8-17-12	8-22-12	
Benzo(j,k)fluoranthene	**ND**	0.0095	EPA 8270/SIM	8-17-12	8-22-12	
Benzo[a]pyrene	**ND**	0.0095	EPA 8270/SIM	8-17-12	8-22-12	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0095	EPA 8270/SIM	8-17-12	8-22-12	
Dibenz[a,h]anthracene	**ND**	0.0095	EPA 8270/SIM	8-17-12	8-22-12	
Benzo[g,h,i]perylene	**ND**	0.0095	EPA 8270/SIM	8-17-12	8-22-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*96*	*40 - 107*				
Pyrene-d10	*104*	*41 - 106*				
Terphenyl-d14	*110*	*44 - 124*				

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Date of Report: September 11, 2012
Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

PAHs by EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-4**					
Laboratory ID:	08-139-03					
Naphthalene	**ND**	0.095	EPA 8270/SIM	8-17-12	8-22-12	
2-Methylnaphthalene	**ND**	0.095	EPA 8270/SIM	8-17-12	8-22-12	
1-Methylnaphthalene	**ND**	0.095	EPA 8270/SIM	8-17-12	8-22-12	
Acenaphthylene	**ND**	0.095	EPA 8270/SIM	8-17-12	8-22-12	
Acenaphthene	**ND**	0.095	EPA 8270/SIM	8-17-12	8-22-12	
Fluorene	**ND**	0.095	EPA 8270/SIM	8-17-12	8-22-12	
Phenanthrene	**ND**	0.095	EPA 8270/SIM	8-17-12	8-22-12	
Anthracene	**ND**	0.095	EPA 8270/SIM	8-17-12	8-22-12	
Fluoranthene	**ND**	0.095	EPA 8270/SIM	8-17-12	8-22-12	
Pyrene	**ND**	0.095	EPA 8270/SIM	8-17-12	8-22-12	
Benzo[a]anthracene	**ND**	0.0095	EPA 8270/SIM	8-17-12	8-22-12	
Chrysene	**ND**	0.0095	EPA 8270/SIM	8-17-12	8-22-12	
Benzo[b]fluoranthene	**ND**	0.0095	EPA 8270/SIM	8-17-12	8-22-12	
Benzo(j,k)fluoranthene	**ND**	0.0095	EPA 8270/SIM	8-17-12	8-22-12	
Benzo[a]pyrene	**ND**	0.0095	EPA 8270/SIM	8-17-12	8-22-12	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0095	EPA 8270/SIM	8-17-12	8-22-12	
Dibenz[a,h]anthracene	**ND**	0.0095	EPA 8270/SIM	8-17-12	8-22-12	
Benzo[g,h,i]perylene	**ND**	0.0095	EPA 8270/SIM	8-17-12	8-22-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*102*	*40 - 107*				
Pyrene-d10	*94*	*41 - 106*				
Terphenyl-d14	*113*	*44 - 124*				

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Date of Report: September 11, 2012
Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

ORGANOCHLORINE PESTICIDES by EPA 8081A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-3A**					
Laboratory ID:	08-139-04					
alpha-BHC	**ND**	0.0047	EPA 8081	8-20-12	8-21-12	
gamma-BHC	**ND**	0.0047	EPA 8081	8-20-12	8-21-12	
beta-BHC	**ND**	0.0047	EPA 8081	8-20-12	8-21-12	
delta-BHC	**ND**	0.0047	EPA 8081	8-20-12	8-21-12	
Heptachlor	**ND**	0.0047	EPA 8081	8-20-12	8-21-12	
Aldrin	**ND**	0.0047	EPA 8081	8-20-12	8-21-12	
Heptachlor Epoxide	**ND**	0.0047	EPA 8081	8-20-12	8-21-12	
gamma-Chlordane	**ND**	0.0047	EPA 8081	8-20-12	8-21-12	
alpha-Chlordane	**ND**	0.0047	EPA 8081	8-20-12	8-21-12	
4,4'-DDE	**ND**	0.0047	EPA 8081	8-20-12	8-21-12	
Endosulfan I	**ND**	0.0047	EPA 8081	8-20-12	8-21-12	
Dieldrin	**ND**	0.0047	EPA 8081	8-20-12	8-21-12	
Endrin	**ND**	0.0047	EPA 8081	8-20-12	8-21-12	
4,4'-DDD	**ND**	0.0047	EPA 8081	8-20-12	8-21-12	
Endosulfan II	**ND**	0.0047	EPA 8081	8-20-12	8-21-12	
4,4'-DDT	**ND**	0.0047	EPA 8081	8-20-12	8-21-12	
Endrin Aldehyde	**ND**	0.0047	EPA 8081	8-20-12	8-21-12	
Methoxychlor	**ND**	0.0093	EPA 8081	8-20-12	8-21-12	
Endosulfan Sulfate	**ND**	0.0047	EPA 8081	8-20-12	8-21-12	
Endrin Ketone	**ND**	0.019	EPA 8081	8-20-12	8-21-12	
Toxaphene	**ND**	0.047	EPA 8081	8-20-12	8-21-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*72*	*34-88*				
DCB	*80*	*48-115*				

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Date of Report: September 11, 2012
Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

ORGANOCHLORINE PESTICIDES by EPA 8081A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**DUP**					
Laboratory ID:	08-139-05					
alpha-BHC	**ND**	0.0047	EPA 8081	8-20-12	8-21-12	
gamma-BHC	**ND**	0.0047	EPA 8081	8-20-12	8-21-12	
beta-BHC	**ND**	0.0047	EPA 8081	8-20-12	8-21-12	
delta-BHC	**ND**	0.0047	EPA 8081	8-20-12	8-21-12	
Heptachlor	**ND**	0.0047	EPA 8081	8-20-12	8-21-12	
Aldrin	**ND**	0.0047	EPA 8081	8-20-12	8-21-12	
Heptachlor Epoxide	**ND**	0.0047	EPA 8081	8-20-12	8-21-12	
gamma-Chlordane	**ND**	0.0047	EPA 8081	8-20-12	8-21-12	
alpha-Chlordane	**ND**	0.0047	EPA 8081	8-20-12	8-21-12	
4,4'-DDE	**ND**	0.0047	EPA 8081	8-20-12	8-21-12	
Endosulfan I	**ND**	0.0047	EPA 8081	8-20-12	8-21-12	
Dieldrin	**ND**	0.0047	EPA 8081	8-20-12	8-21-12	
Endrin	**ND**	0.0047	EPA 8081	8-20-12	8-21-12	
4,4'-DDD	**ND**	0.0047	EPA 8081	8-20-12	8-21-12	
Endosulfan II	**ND**	0.0047	EPA 8081	8-20-12	8-21-12	
4,4'-DDT	**ND**	0.0047	EPA 8081	8-20-12	8-21-12	
Endrin Aldehyde	**ND**	0.0047	EPA 8081	8-20-12	8-21-12	
Methoxychlor	**ND**	0.0093	EPA 8081	8-20-12	8-21-12	
Endosulfan Sulfate	**ND**	0.0047	EPA 8081	8-20-12	8-21-12	
Endrin Ketone	**ND**	0.019	EPA 8081	8-20-12	8-21-12	
Toxaphene	**ND**	0.047	EPA 8081	8-20-12	8-21-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*71*	*34-88*				
DCB	*77*	*48-115*				

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Date of Report: September 11, 2012
Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

ORGANOCHLORINE PESTICIDES by EPA 8081A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-6**					
Laboratory ID:	08-139-06					
alpha-BHC	**ND**	0.0047	EPA 8081	8-20-12	8-21-12	
gamma-BHC	**ND**	0.0047	EPA 8081	8-20-12	8-21-12	
beta-BHC	**ND**	0.0047	EPA 8081	8-20-12	8-21-12	
delta-BHC	**ND**	0.0047	EPA 8081	8-20-12	8-21-12	
Heptachlor	**ND**	0.0047	EPA 8081	8-20-12	8-21-12	
Aldrin	**ND**	0.0047	EPA 8081	8-20-12	8-21-12	
Heptachlor Epoxide	**ND**	0.0047	EPA 8081	8-20-12	8-21-12	
gamma-Chlordane	**ND**	0.0047	EPA 8081	8-20-12	8-21-12	
alpha-Chlordane	**ND**	0.0047	EPA 8081	8-20-12	8-21-12	
4,4'-DDE	**ND**	0.0047	EPA 8081	8-20-12	8-21-12	
Endosulfan I	**ND**	0.0047	EPA 8081	8-20-12	8-21-12	
Dieldrin	**ND**	0.0047	EPA 8081	8-20-12	8-21-12	
Endrin	**ND**	0.0047	EPA 8081	8-20-12	8-21-12	
4,4'-DDD	**ND**	0.0047	EPA 8081	8-20-12	8-21-12	
Endosulfan II	**ND**	0.0047	EPA 8081	8-20-12	8-21-12	
4,4'-DDT	**ND**	0.0047	EPA 8081	8-20-12	8-21-12	
Endrin Aldehyde	**ND**	0.0047	EPA 8081	8-20-12	8-21-12	
Methoxychlor	**ND**	0.0094	EPA 8081	8-20-12	8-21-12	
Endosulfan Sulfate	**ND**	0.0047	EPA 8081	8-20-12	8-21-12	
Endrin Ketone	**ND**	0.019	EPA 8081	8-20-12	8-21-12	
Toxaphene	**ND**	0.047	EPA 8081	8-20-12	8-21-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*74*	*34-88*				
DCB	*77*	*48-115*				

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Date of Report: September 11, 2012
Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

ORGANOCHLORINE PESTICIDES by EPA 8081A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-7**					
Laboratory ID:	08-139-07					
alpha-BHC	**ND**	0.0048	EPA 8081	8-20-12	8-21-12	
gamma-BHC	**ND**	0.0048	EPA 8081	8-20-12	8-21-12	
beta-BHC	**ND**	0.0048	EPA 8081	8-20-12	8-21-12	
delta-BHC	**ND**	0.0048	EPA 8081	8-20-12	8-21-12	
Heptachlor	**ND**	0.0048	EPA 8081	8-20-12	8-21-12	
Aldrin	**ND**	0.0048	EPA 8081	8-20-12	8-21-12	
Heptachlor Epoxide	**ND**	0.0048	EPA 8081	8-20-12	8-21-12	
gamma-Chlordane	**ND**	0.0048	EPA 8081	8-20-12	8-21-12	
alpha-Chlordane	**ND**	0.0048	EPA 8081	8-20-12	8-21-12	
4,4'-DDE	**ND**	0.0048	EPA 8081	8-20-12	8-21-12	
Endosulfan I	**ND**	0.0048	EPA 8081	8-20-12	8-21-12	
Dieldrin	**ND**	0.0048	EPA 8081	8-20-12	8-21-12	
Endrin	**ND**	0.0048	EPA 8081	8-20-12	8-21-12	
4,4'-DDD	**ND**	0.0048	EPA 8081	8-20-12	8-21-12	
Endosulfan II	**ND**	0.0048	EPA 8081	8-20-12	8-21-12	
4,4'-DDT	**ND**	0.0048	EPA 8081	8-20-12	8-21-12	
Endrin Aldehyde	**ND**	0.0048	EPA 8081	8-20-12	8-21-12	
Methoxychlor	**ND**	0.0097	EPA 8081	8-20-12	8-21-12	
Endosulfan Sulfate	**ND**	0.0048	EPA 8081	8-20-12	8-21-12	
Endrin Ketone	**ND**	0.019	EPA 8081	8-20-12	8-21-12	
Toxaphene	**ND**	0.048	EPA 8081	8-20-12	8-21-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*65*	*34-88*				
DCB	*72*	*48-115*				

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Date of Report: September 11, 2012
Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

TOTAL METALS
EPA 200.8/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	08-139-01					
Client ID:	**MW-1**					
Arsenic	**15**	7.5	200.8	8-23-12	8-27-12	
Copper	**13**	10	200.8	8-23-12	8-27-12	
Mercury	**ND**	0.025	7470A	8-21-12	8-21-12	
Nickel	**ND**	8.0	200.8	8-23-12	8-27-12	
Silver	**ND**	10	200.8	8-23-12	8-27-12	
Zinc	**ND**	25	200.8	8-23-12	8-27-12	
Lab ID:	08-139-02					
Client ID:	**MW-2A**					
Arsenic	**ND**	7.5	200.8	8-23-12	8-27-12	
Copper	**ND**	10	200.8	8-23-12	8-27-12	
Mercury	**ND**	0.025	7470A	8-21-12	8-21-12	
Nickel	**17**	8.0	200.8	8-23-12	8-27-12	
Silver	**ND**	10	200.8	8-23-12	8-27-12	
Zinc	**ND**	25	200.8	8-23-12	8-27-12	
Lab ID:	08-139-03					
Client ID:	**MW-4**					
Arsenic	**11**	7.5	200.8	8-23-12	8-27-12	
Copper	**ND**	10	200.8	8-23-12	8-27-12	
Mercury	**ND**	0.025	7470A	8-21-12	8-21-12	
Nickel	**ND**	8.0	200.8	8-23-12	8-27-12	
Silver	**ND**	10	200.8	8-23-12	8-27-12	
Zinc	**ND**	25	200.8	8-23-12	8-27-12	

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Date of Report: September 11, 2012
Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

TOTAL METALS
EPA 200.8/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	08-139-04					
Client ID:	**MW-3A**					
Arsenic	**ND**	7.5	200.8	8-23-12	8-27-12	
Cadmium	**ND**	4.0	200.8	8-23-12	8-27-12	
Chromium	**ND**	10	200.8	8-23-12	8-27-12	
Copper	**14**	10	200.8	8-23-12	8-27-12	
Lead	**ND**	1.0	200.8	8-23-12	8-27-12	
Mercury	**ND**	0.025	7470A	8-21-12	8-21-12	
Nickel	**19**	8.0	200.8	8-23-12	8-27-12	
Silver	**ND**	10	200.8	8-23-12	8-27-12	
Zinc	**27**	25	200.8	8-23-12	8-27-12	
Lab ID:	08-139-05					
Client ID:	**DUP**					
Arsenic	**ND**	7.5	200.8	8-23-12	8-27-12	
Cadmium	**ND**	4.0	200.8	8-23-12	8-27-12	
Chromium	**ND**	10	200.8	8-23-12	8-27-12	
Copper	**14**	10	200.8	8-23-12	8-27-12	
Lead	**ND**	1.0	200.8	8-23-12	8-27-12	
Mercury	**ND**	0.025	7470A	8-21-12	8-21-12	
Nickel	**17**	8.0	200.8	8-23-12	8-27-12	
Silver	**ND**	10	200.8	8-23-12	8-27-12	
Zinc	**30**	25	200.8	8-23-12	8-27-12	

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Date of Report: September 11, 2012
Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

TOTAL METALS
EPA 200.8/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	08-139-06					
Client ID:	**MW-6**					
Arsenic	**ND**	7.5	200.8	8-23-12	8-27-12	
Cadmium	**ND**	4.0	200.8	8-23-12	8-27-12	
Chromium	**ND**	10	200.8	8-23-12	8-27-12	
Copper	**19**	10	200.8	8-23-12	8-27-12	
Lead	**ND**	1.0	200.8	8-23-12	8-27-12	
Mercury	**ND**	0.025	7470A	8-21-12	8-21-12	
Nickel	**18**	8.0	200.8	8-23-12	8-27-12	
Silver	**ND**	10	200.8	8-23-12	8-27-12	
Zinc	**ND**	25	200.8	8-23-12	8-27-12	
Lab ID:	08-139-07					
Client ID:	**MW-7**					
Arsenic	**10**	7.5	200.8	8-23-12	8-27-12	
Cadmium	**ND**	4.0	200.8	8-23-12	8-27-12	
Chromium	**ND**	10	200.8	8-23-12	8-27-12	
Copper	**ND**	10	200.8	8-23-12	8-27-12	
Lead	**ND**	1.0	200.8	8-23-12	8-27-12	
Mercury	**ND**	0.025	7470A	8-21-12	8-21-12	
Nickel	**27**	8.0	200.8	8-23-12	8-27-12	
Silver	**ND**	10	200.8	8-23-12	8-27-12	
Zinc	**ND**	25	200.8	8-23-12	8-27-12	

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Date of Report: September 11, 2012
Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

DISSOLVED METALS
EPA 200.8/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	08-139-01					
Client ID:	**MW-1**					
Arsenic	**15**	7.5	200.8		8-27-12	
Copper	**ND**	10	200.8		8-27-12	
Mercury	**ND**	0.025	7470A		8-21-12	
Nickel	**ND**	8.0	200.8		8-27-12	
Silver	**ND**	10	200.8		8-27-12	
Zinc	**ND**	25	200.8		8-27-12	
Lab ID:	08-139-02					
Client ID:	**MW-2A**					
Arsenic	**ND**	7.5	200.8		8-27-12	
Copper	**ND**	10	200.8		8-27-12	
Mercury	**ND**	0.025	7470A		8-21-12	
Nickel	**16**	8.0	200.8		8-27-12	
Silver	**ND**	10	200.8		8-27-12	
Zinc	**ND**	25	200.8		8-27-12	
Lab ID:	08-139-03					
Client ID:	**MW-4**					
Arsenic	**10**	7.5	200.8		8-27-12	
Copper	**ND**	10	200.8		8-27-12	
Mercury	**ND**	0.025	7470A		8-21-12	
Nickel	**ND**	8.0	200.8		8-27-12	
Silver	**ND**	10	200.8		8-27-12	
Zinc	**ND**	25	200.8		8-27-12	

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Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

DISSOLVED METALS
EPA 200.8/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	08-139-04					
Client ID:	**MW-3A**					
Arsenic	**ND**	7.5	200.8		8-27-12	
Cadmium	**ND**	4.0	200.8		8-27-12	
Chromium	**ND**	10	200.8		8-27-12	
Copper	**12**	10	200.8		8-27-12	
Lead	**ND**	1.0	200.8		8-27-12	
Mercury	**ND**	0.025	7470A		8-21-12	
Nickel	**17**	8.0	200.8		8-27-12	
Silver	**ND**	10	200.8		8-27-12	
Zinc	**27**	25	200.8		8-27-12	
Lab ID:	08-139-05					
Client ID:	**DUP**					
Arsenic	**ND**	7.5	200.8		8-27-12	
Cadmium	**ND**	4.0	200.8		8-27-12	
Chromium	**ND**	10	200.8		8-27-12	
Copper	**14**	10	200.8		8-27-12	
Lead	**ND**	1.0	200.8		8-27-12	
Mercury	**ND**	0.025	7470A		8-21-12	
Nickel	**18**	8.0	200.8		8-27-12	
Silver	**ND**	10	200.8		8-27-12	
Zinc	**28**	25	200.8		8-27-12	

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Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

DISSOLVED METALS
EPA 200.8/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	08-139-06					
Client ID:	**MW-6**					
Arsenic	**ND**	7.5	200.8		8-27-12	
Cadmium	**ND**	4.0	200.8		8-27-12	
Chromium	**ND**	10	200.8		8-27-12	
Copper	**17**	10	200.8		8-27-12	
Lead	**ND**	1.0	200.8		8-27-12	
Mercury	**ND**	0.025	7470A		8-21-12	
Nickel	**19**	8.0	200.8		8-27-12	
Silver	**ND**	10	200.8		8-27-12	
Zinc	**ND**	25	200.8		8-27-12	
Lab ID:	08-139-07					
Client ID:	**MW-7**					
Arsenic	**9.3**	7.5	200.8		8-27-12	
Cadmium	**ND**	4.0	200.8		8-27-12	
Chromium	**ND**	10	200.8		8-27-12	
Copper	**ND**	10	200.8		8-27-12	
Lead	**ND**	1.0	200.8		8-27-12	
Mercury	**ND**	0.025	7470A		8-21-12	
Nickel	**27**	8.0	200.8		8-27-12	
Silver	**ND**	10	200.8		8-27-12	
Zinc	**ND**	25	200.8		8-27-12	

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Laboratory Reference: 1208-139
Project: 5147-006-08

EDB by EPA 8011

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-3A**					
Laboratory ID:	08-139-04					
EDB	**ND**	0.0095	EPA 8011	8-29-12	8-29-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*65*	*30-158*				
Client ID:	**DUP**					
Laboratory ID:	08-139-05					
EDB	**ND**	0.0095	EPA 8011	8-29-12	8-29-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*64*	*30-158*				
Client ID:	**MW-6**					
Laboratory ID:	08-139-06					
EDB	**ND**	0.0095	EPA 8011	8-29-12	8-29-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*66*	*30-158*				
Client ID:	**MW-7**					
Laboratory ID:	08-139-07					
EDB	**ND**	0.0095	EPA 8011	8-29-12	8-29-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*82*	*30-158*				

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Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

CHLORINATED ACID HERBICIDES by EPA 8151A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-3A**					
Laboratory ID:	08-139-04					
Dalapon	**ND**	0.21	EPA 8151	8-17-12	8-20-12	
Dicamba	**ND**	0.022	EPA 8151	8-17-12	8-20-12	
MCPP	**ND**	4.3	EPA 8151	8-17-12	8-20-12	
MCPA	**ND**	4.3	EPA 8151	8-17-12	8-20-12	
Dichlorprop	**ND**	0.022	EPA 8151	8-17-12	8-20-12	
2,4-D	**ND**	0.022	EPA 8151	8-17-12	8-20-12	
Pentachlorophenol	**ND**	0.019	EPA 8151	8-17-12	8-20-12	
2,4,5-TP (Silvex)	**ND**	0.022	EPA 8151	8-17-12	8-20-12	
2,4,5-T	**ND**	0.022	EPA 8151	8-17-12	8-20-12	
2,4-DB	**ND**	0.044	EPA 8151	8-17-12	8-20-12	
Dinoseb	**ND**	0.022	EPA 8151	8-17-12	8-20-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCAA	*51*	*30-98*				
Client ID:	**DUP**					
Laboratory ID:	08-139-05					
Dalapon	**ND**	0.22	EPA 8151	8-17-12	8-20-12	
Dicamba	**ND**	0.022	EPA 8151	8-17-12	8-20-12	
MCPP	**ND**	4.4	EPA 8151	8-17-12	8-20-12	
MCPA	**ND**	4.4	EPA 8151	8-17-12	8-20-12	
Dichlorprop	**ND**	0.022	EPA 8151	8-17-12	8-20-12	
2,4-D	**ND**	0.022	EPA 8151	8-17-12	8-20-12	
Pentachlorophenol	**ND**	0.020	EPA 8151	8-17-12	8-20-12	
2,4,5-TP (Silvex)	**ND**	0.022	EPA 8151	8-17-12	8-20-12	
2,4,5-T	**ND**	0.022	EPA 8151	8-17-12	8-20-12	
2,4-DB	**ND**	0.045	EPA 8151	8-17-12	8-20-12	
Dinoseb	**ND**	0.022	EPA 8151	8-17-12	8-20-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCAA	*48*	*30-98*				

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Date of Report: September 11, 2012
Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

CHLORINATED ACID HERBICIDES by EPA 8151A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-6**					
Laboratory ID:	08-139-06					
Dalapon	**ND**	0.21	EPA 8151	8-17-12	8-20-12	
Dicamba	**ND**	0.022	EPA 8151	8-17-12	8-20-12	
MCPP	**ND**	4.3	EPA 8151	8-17-12	8-20-12	
MCPA	**ND**	4.3	EPA 8151	8-17-12	8-20-12	
Dichlorprop	**ND**	0.022	EPA 8151	8-17-12	8-20-12	
2,4-D	**ND**	0.022	EPA 8151	8-17-12	8-20-12	
Pentachlorophenol	**ND**	0.019	EPA 8151	8-17-12	8-20-12	
2,4,5-TP (Silvex)	**ND**	0.022	EPA 8151	8-17-12	8-20-12	
2,4,5-T	**ND**	0.022	EPA 8151	8-17-12	8-20-12	
2,4-DB	**ND**	0.044	EPA 8151	8-17-12	8-20-12	
Dinoseb	**ND**	0.022	EPA 8151	8-17-12	8-20-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCAA	*58*	*30-98*				
Client ID:	**MW-7**					
Laboratory ID:	08-139-07					
Dalapon	**ND**	0.22	EPA 8151	8-17-12	8-20-12	
Dicamba	**ND**	0.022	EPA 8151	8-17-12	8-20-12	
MCPP	**ND**	4.4	EPA 8151	8-17-12	8-20-12	
MCPA	**ND**	4.4	EPA 8151	8-17-12	8-20-12	
Dichlorprop	**ND**	0.022	EPA 8151	8-17-12	8-20-12	
2,4-D	**ND**	0.022	EPA 8151	8-17-12	8-20-12	
Pentachlorophenol	**ND**	0.020	EPA 8151	8-17-12	8-20-12	
2,4,5-TP (Silvex)	**ND**	0.022	EPA 8151	8-17-12	8-20-12	
2,4,5-T	**ND**	0.022	EPA 8151	8-17-12	8-20-12	
2,4-DB	**ND**	0.045	EPA 8151	8-17-12	8-20-12	
Dinoseb	**ND**	0.022	EPA 8151	8-17-12	8-20-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCAA	*58*	*30-98*				

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Date of Report: September 11, 2012
Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

NWTPH-Gx
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0820W1					
Gasoline	**ND**	100	NWTPH-Gx	8-20-12	8-20-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*82*	*71-116*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	08-139-05										
	ORIG	DUP									
Gasoline	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*80*	*85*	*71-116*			

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Date of Report: September 11, 2012
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Laboratory Reference: 1208-139
Project: 5147-006-08

NWTPH-Gx
CONTINUING CALIBRATION SUMMARY

Lab ID	True Value (ppm)	Calc. Value	Percent Difference	Control Limits
CCVH0820G-1	5.00	5.02	0	+/- 20%
CCVH0820G-2	5.00	4.82	4	+/- 20%
CCVD0820G-1	5.00	4.46	11	+/- 20%
CCVD0820G-2	5.00	4.59	8	+/- 20%

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Date of Report: September 11, 2012
Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

NWTPH-Dx
QUALITY CONTROL
(with acid/silica gel clean-up)

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0823W1					
Diesel Range Organics	**ND**	0.25	NWTPH-Dx	8-23-12	8-23-12	
Lube Oil Range Organics	**ND**	0.40	NWTPH-Dx	8-23-12	8-23-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*108*	*50-150*				

Analyte	Result		Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE							
Laboratory ID:	08-139-01						
	ORIG	DUP					
Diesel Range Organics	**ND**	**ND**			NA	NA	
Lube Oil Range Organics	**ND**	**ND**			NA	NA	
Surrogate:							
o-Terphenyl			*104* *112*	*50-150*			

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Date of Report: September 11, 2012
Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

NWTPH-Dx
CONTINUING CALIBRATION SUMMARY
(with acid/silica gel clean-up)

Lab ID	True Value (ppm)	Calc. Value	Percent Difference	Contol Limits
CCV0823F-T1	100	110	-10.0	+/-15%
CCV0823F-T2	100	103	-3.0	+/-15%
CCV0823F-T3	100	106	-6.0	+/-15%
CCV0823F-T4	100	118	-18.0	+/-15%
CCV0823F-T5	100	106	-6.0	+/-15%
CCV0823R-T2	100	87.5	12.5	+/-15%
CCV0823R-T3	100	89.6	10.4	+/-15%

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Date of Report: September 11, 2012
Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

VOLATILES by EPA 8260B
METHOD BLANK QUALITY CONTROL
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0821W1					
Dichlorodifluoromethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
Chloromethane	ND	1.0	EPA 8260	8-21-12	8-21-12	
Vinyl Chloride	ND	0.20	EPA 8260	8-21-12	8-21-12	
Bromomethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
Chloroethane	ND	1.0	EPA 8260	8-21-12	8-21-12	
Trichlorofluoromethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,1-Dichloroethene	ND	0.20	EPA 8260	8-21-12	8-21-12	
Acetone	ND	5.0	EPA 8260	8-21-12	8-21-12	
Iodomethane	ND	1.0	EPA 8260	8-21-12	8-21-12	
Carbon Disulfide	ND	0.20	EPA 8260	8-21-12	8-21-12	
Methylene Chloride	ND	1.0	EPA 8260	8-21-12	8-21-12	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260	8-21-12	8-21-12	
Methyl t-Butyl Ether	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,1-Dichloroethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
Vinyl Acetate	ND	2.0	EPA 8260	8-21-12	8-21-12	
2,2-Dichloropropane	ND	0.20	EPA 8260	8-21-12	8-21-12	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260	8-21-12	8-21-12	
2-Butanone	ND	5.0	EPA 8260	8-21-12	8-21-12	
Bromochloromethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
Chloroform	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,1,1-Trichloroethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
Carbon Tetrachloride	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,1-Dichloropropene	ND	0.20	EPA 8260	8-21-12	8-21-12	
Benzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,2-Dichloroethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
Trichloroethene	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,2-Dichloropropane	ND	0.20	EPA 8260	8-21-12	8-21-12	
Dibromomethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
Bromodichloromethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260	8-21-12	8-21-12	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260	8-21-12	8-21-12	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260	8-21-12	8-21-12	
Toluene	ND	1.0	EPA 8260	8-21-12	8-21-12	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260	8-21-12	8-21-12	

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Date of Report: September 11, 2012
Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

VOLATILES by EPA 8260B
METHOD BLANK QUALITY CONTROL
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0821W1					
1,1,2-Trichloroethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
Tetrachloroethene	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,3-Dichloropropane	ND	0.20	EPA 8260	8-21-12	8-21-12	
2-Hexanone	ND	2.0	EPA 8260	8-21-12	8-21-12	
Dibromochloromethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,2-Dibromoethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
Chlorobenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
Ethylbenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
m,p-Xylene	ND	0.40	EPA 8260	8-21-12	8-21-12	
o-Xylene	ND	0.20	EPA 8260	8-21-12	8-21-12	
Styrene	ND	0.20	EPA 8260	8-21-12	8-21-12	
Bromoform	ND	1.0	EPA 8260	8-21-12	8-21-12	
Isopropylbenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
Bromobenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,2,3-Trichloropropane	ND	0.20	EPA 8260	8-21-12	8-21-12	
n-Propylbenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
2-Chlorotoluene	ND	0.20	EPA 8260	8-21-12	8-21-12	
4-Chlorotoluene	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
tert-Butylbenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
sec-Butylbenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,3-Dichlorobenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
p-Isopropyltoluene	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,4-Dichlorobenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,2-Dichlorobenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
n-Butylbenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260	8-21-12	8-21-12	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
Hexachlorobutadiene	ND	0.20	EPA 8260	8-21-12	8-21-12	
Naphthalene	ND	1.0	EPA 8260	8-21-12	8-21-12	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260	8-21-12	8-21-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*92*	*66-120*				
Toluene-d8	*95*	*70-120*				
4-Bromofluorobenzene	*94*	*63-120*				

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Date of Report: September 11, 2012
Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

VOLATILES by EPA 8260B
MS/MSD QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES											
Laboratory ID:	08-148-02										
	MS	MSD	MS	MSD		MS	MSD				
1,1-Dichloroethene	**10.6**	**10.7**	10.0	10.0	ND	106	107	62-141	1	15	
Benzene	**10.5**	**10.7**	10.0	10.0	ND	105	107	78-118	2	15	
Trichloroethene	**53.6**	**53.4**	10.0	10.0	42.2	114	112	80-115	2	15	
Toluene	**10.5**	**10.8**	10.0	10.0	ND	105	108	80-116	3	15	
Chlorobenzene	**11.1**	**11.6**	10.0	10.0	ND	111	116	80-118	4	15	
Surrogate:											
Dibromofluoromethane						*92*	*88*	*66-120*			
Toluene-d8						*96*	*95*	*70-120*			
4-Bromofluorobenzene						*97*	*95*	*63-120*			

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Laboratory Reference: 1208-139
Project: 5147-006-08

SEMIVOLATILES EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0820W1					
n-Nitrosodimethylamine	**ND**	1.0	EPA 8270	8-20-12	8-20-12	
Pyridine	**ND**	1.0	EPA 8270	8-20-12	8-20-12	
Phenol	**ND**	1.0	EPA 8270	8-20-12	8-20-12	
Aniline	**ND**	5.0	EPA 8270	8-20-12	8-20-12	
bis(2-Chloroethyl)ether	**ND**	1.0	EPA 8270	8-20-12	8-20-12	
2-Chlorophenol	**ND**	1.0	EPA 8270	8-20-12	8-20-12	
1,3-Dichlorobenzene	**ND**	1.0	EPA 8270	8-20-12	8-20-12	
1,4-Dichlorobenzene	**ND**	1.0	EPA 8270	8-20-12	8-20-12	
Benzyl alcohol	**ND**	1.0	EPA 8270	8-20-12	8-20-12	
1,2-Dichlorobenzene	**ND**	1.0	EPA 8270	8-20-12	8-20-12	
2-Methylphenol (o-Cresol)	**ND**	1.0	EPA 8270	8-20-12	8-20-12	
bis(2-Chloroisopropyl)ether	**ND**	1.0	EPA 8270	8-20-12	8-20-12	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	1.0	EPA 8270	8-20-12	8-20-12	
n-Nitroso-di-n-propylamine	**ND**	1.0	EPA 8270	8-20-12	8-20-12	
Hexachloroethane	**ND**	1.0	EPA 8270	8-20-12	8-20-12	
Nitrobenzene	**ND**	1.0	EPA 8270	8-20-12	8-20-12	
Isophorone	**ND**	1.0	EPA 8270	8-20-12	8-20-12	
2-Nitrophenol	**ND**	1.0	EPA 8270	8-20-12	8-20-12	
2,4-Dimethylphenol	**ND**	1.0	EPA 8270	8-20-12	8-20-12	
bis(2-Chloroethoxy)methane	**ND**	1.0	EPA 8270	8-20-12	8-20-12	
2,4-Dichlorophenol	**ND**	1.0	EPA 8270	8-20-12	8-20-12	
1,2,4-Trichlorobenzene	**ND**	1.0	EPA 8270	8-20-12	8-20-12	
Naphthalene	**ND**	0.10	EPA 8270/SIM	8-20-12	8-22-12	
4-Chloroaniline	**ND**	1.0	EPA 8270	8-20-12	8-20-12	
Hexachlorobutadiene	**ND**	1.0	EPA 8270	8-20-12	8-20-12	
4-Chloro-3-methylphenol	**ND**	1.0	EPA 8270	8-20-12	8-20-12	
2-Methylnaphthalene	**ND**	0.10	EPA 8270/SIM	8-20-12	8-22-12	
1-Methylnaphthalene	**ND**	0.10	EPA 8270/SIM	8-20-12	8-22-12	
Hexachlorocyclopentadiene	**ND**	1.0	EPA 8270	8-20-12	8-20-12	
2,4,6-Trichlorophenol	**ND**	1.0	EPA 8270	8-20-12	8-20-12	
2,3-Dichloroaniline	**ND**	1.0	EPA 8270	8-20-12	8-20-12	
2,4,5-Trichlorophenol	**ND**	1.0	EPA 8270	8-20-12	8-20-12	
2-Chloronaphthalene	**ND**	1.0	EPA 8270	8-20-12	8-20-12	
2-Nitroaniline	**ND**	1.0	EPA 8270	8-20-12	8-20-12	
1,4-Dinitrobenzene	**ND**	1.0	EPA 8270	8-20-12	8-20-12	
Dimethylphthalate	**ND**	1.0	EPA 8270	8-20-12	8-20-12	
1,3-Dinitrobenzene	**ND**	1.0	EPA 8270	8-20-12	8-20-12	
2,6-Dinitrotoluene	**ND**	1.0	EPA 8270	8-20-12	8-20-12	
1,2-Dinitrobenzene	**ND**	1.0	EPA 8270	8-20-12	8-20-12	
Acenaphthylene	**ND**	0.10	EPA 8270/SIM	8-20-12	8-22-12	
3-Nitroaniline	**ND**	1.0	EPA 8270	8-20-12	8-20-12	

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Laboratory Reference: 1208-139
Project: 5147-006-08

SEMIVOLATILES EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0820W1					
2,4-Dinitrophenol	**ND**	5.0	EPA 8270	8-20-12	8-20-12	
Acenaphthene	**ND**	0.10	EPA 8270/SIM	8-20-12	8-22-12	
4-Nitrophenol	**ND**	1.0	EPA 8270	8-20-12	8-20-12	
2,4-Dinitrotoluene	**ND**	1.0	EPA 8270	8-20-12	8-20-12	
Dibenzofuran	**ND**	1.0	EPA 8270	8-20-12	8-20-12	
2,3,5,6-Tetrachlorophenol	**ND**	1.0	EPA 8270	8-20-12	8-20-12	
2,3,4,6-Tetrachlorophenol	**ND**	1.0	EPA 8270	8-20-12	8-20-12	
Diethylphthalate	**ND**	1.0	EPA 8270	8-20-12	8-20-12	
4-Chlorophenyl-phenylether	**ND**	1.0	EPA 8270	8-20-12	8-20-12	
4-Nitroaniline	**ND**	1.0	EPA 8270	8-20-12	8-20-12	
Fluorene	**ND**	0.10	EPA 8270/SIM	8-20-12	8-22-12	
4,6-Dinitro-2-methylphenol	**ND**	5.0	EPA 8270	8-20-12	8-20-12	
n-Nitrosodiphenylamine	**ND**	1.0	EPA 8270	8-20-12	8-20-12	
1,2-Diphenylhydrazine	**ND**	1.0	EPA 8270	8-20-12	8-20-12	
4-Bromophenyl-phenylether	**ND**	1.0	EPA 8270	8-20-12	8-20-12	
Hexachlorobenzene	**ND**	1.0	EPA 8270	8-20-12	8-20-12	
Pentachlorophenol	**ND**	5.0	EPA 8270	8-20-12	8-20-12	
Phenanthrene	**ND**	0.10	EPA 8270/SIM	8-20-12	8-22-12	
Anthracene	**ND**	0.10	EPA 8270/SIM	8-20-12	8-22-12	
Carbazole	**ND**	1.0	EPA 8270	8-20-12	8-20-12	
Di-n-butylphthalate	**ND**	1.0	EPA 8270	8-20-12	8-20-12	
Fluoranthene	**ND**	0.10	EPA 8270/SIM	8-20-12	8-22-12	
Benzidine	**ND**	5.0	EPA 8270	8-20-12	8-20-12	
Pyrene	**ND**	0.10	EPA 8270/SIM	8-20-12	8-22-12	
Butylbenzylphthalate	**ND**	1.0	EPA 8270	8-20-12	8-20-12	
bis-2-Ethylhexyladipate	**ND**	5.0	EPA 8270	8-20-12	8-20-12	
3,3'-Dichlorobenzidine	**ND**	1.0	EPA 8270	8-20-12	8-20-12	
Benzo[a]anthracene	**ND**	0.010	EPA 8270/SIM	8-20-12	8-22-12	
Chrysene	**ND**	0.010	EPA 8270/SIM	8-20-12	8-22-12	
bis(2-Ethylhexyl)phthalate	**ND**	1.0	EPA 8270	8-20-12	8-20-12	
Di-n-octylphthalate	**ND**	1.0	EPA 8270	8-20-12	8-20-12	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270/SIM	8-20-12	8-22-12	
Benzo(j,k)fluoranthene	**ND**	0.010	EPA 8270/SIM	8-20-12	8-22-12	
Benzo[a]pyrene	**ND**	0.010	EPA 8270/SIM	8-20-12	8-22-12	
Indeno[1,2,3-cd]pyrene	**ND**	0.010	EPA 8270/SIM	8-20-12	8-22-12	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270/SIM	8-20-12	8-22-12	
Benzo[g,h,i]perylene	**ND**	0.010	EPA 8270/SIM	8-20-12	8-22-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*62*	*17 - 81*				
Phenol-d6	*51*	*10 - 89*				
Nitrobenzene-d5	*89*	*35 - 110*				
2-Fluorobiphenyl	*88*	*45 - 103*				
2,4,6-Tribromophenol	*73*	*39 - 125*				
Terphenyl-d14	*96*	*58 - 111*				

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Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08September 11, 2012
August 17, 2012
1208-139
5147-006-08

SEMIVOLATILES EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0820W1									
	SB	SBD	SB	SBD	SB	SBD				
Phenol	**16.9**	**18.5**	40.0	40.0	42	46	28 - 70	9	30	
2-Chlorophenol	**27.8**	**30.2**	40.0	40.0	70	76	41 - 100	8	34	
1,4-Dichlorobenzene	**12.0**	**13.2**	20.0	20.0	60	66	34 - 95	10	33	
n-Nitroso-di-n-propylamine	**14.8**	**16.5**	20.0	20.0	74	83	48 - 98	11	30	
1,2,4-Trichlorobenzene	**11.6**	**13.3**	20.0	20.0	58	67	34 - 97	14	30	
4-Chloro-3-methylphenol	**34.6**	**38.0**	40.0	40.0	87	95	60 - 116	9	27	
Acenaphthene	**15.7**	**16.9**	20.0	20.0	79	85	51 - 100	7	25	
4-Nitrophenol	**20.6**	**21.2**	40.0	40.0	52	53	26 - 74	3	40	
2,4-Dinitrotoluene	**16.9**	**18.5**	20.0	20.0	85	93	59 - 117	9	28	
Pentachlorophenol	**26.7**	**29.6**	40.0	40.0	67	74	29 - 133	10	39	
Pyrene	**17.7**	**19.1**	20.0	20.0	89	96	58 - 121	8	28	
Surrogate:										
2-Fluorophenol					*50*	*53*	*17 - 81*			
Phenol-d6					*41*	*45*	*10 - 89*			
Nitrobenzene-d5					*71*	*80*	*35 - 110*			
2-Fluorobiphenyl					*74*	*80*	*45 - 103*			
2,4,6-Tribromophenol					*65*	*69*	*39 - 125*			
Terphenyl-d14					*84*	*90*	*58 - 111*			

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Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

PAHs by EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0817W1					
Naphthalene	**ND**	0.10	EPA 8270/SIM	8-17-12	8-21-12	
2-Methylnaphthalene	**ND**	0.10	EPA 8270/SIM	8-17-12	8-21-12	
1-Methylnaphthalene	**ND**	0.10	EPA 8270/SIM	8-17-12	8-21-12	
Acenaphthylene	**ND**	0.10	EPA 8270/SIM	8-17-12	8-21-12	
Acenaphthene	**ND**	0.10	EPA 8270/SIM	8-17-12	8-21-12	
Fluorene	**ND**	0.10	EPA 8270/SIM	8-17-12	8-21-12	
Phenanthrene	**ND**	0.10	EPA 8270/SIM	8-17-12	8-21-12	
Anthracene	**ND**	0.10	EPA 8270/SIM	8-17-12	8-21-12	
Fluoranthene	**ND**	0.10	EPA 8270/SIM	8-17-12	8-21-12	
Pyrene	**ND**	0.10	EPA 8270/SIM	8-17-12	8-21-12	
Benzo[a]anthracene	**ND**	0.010	EPA 8270/SIM	8-17-12	8-21-12	
Chrysene	**ND**	0.010	EPA 8270/SIM	8-17-12	8-21-12	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270/SIM	8-17-12	8-21-12	
Benzo(j,k)fluoranthene	**ND**	0.010	EPA 8270/SIM	8-17-12	8-21-12	
Benzo[a]pyrene	**ND**	0.010	EPA 8270/SIM	8-17-12	8-21-12	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270/SIM	8-17-12	8-21-12	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270/SIM	8-17-12	8-21-12	
Benzo[g,h,i]perylene	**ND**	0.010	EPA 8270/SIM	8-17-12	8-21-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*84*	*40 - 107*				
Pyrene-d10	*83*	*41 - 106*				
Terphenyl-d14	*99*	*44 - 124*				

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: September 11, 2012
Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

PAHs by EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0817W1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	**0.426**	**0.384**	0.500	0.500	85	77	31 - 110	10	46	
Acenaphthylene	**0.395**	**0.335**	0.500	0.500	79	67	40 - 118	16	43	
Acenaphthene	**0.436**	**0.402**	0.500	0.500	87	80	38 - 112	8	40	
Fluorene	**0.423**	**0.404**	0.500	0.500	85	81	45 - 114	5	41	
Phenanthrene	**0.454**	**0.418**	0.500	0.500	91	84	47 - 112	8	36	
Anthracene	**0.459**	**0.434**	0.500	0.500	92	87	46 - 122	6	37	
Fluoranthene	**0.474**	**0.445**	0.500	0.500	95	89	51 - 127	6	35	
Pyrene	**0.470**	**0.471**	0.500	0.500	94	94	50 - 125	0	37	
Benzo[a]anthracene	**0.507**	**0.487**	0.500	0.500	101	97	46 - 123	4	34	
Chrysene	**0.452**	**0.428**	0.500	0.500	90	86	49 - 120	5	34	
Benzo[b]fluoranthene	**0.487**	**0.461**	0.500	0.500	97	92	46 - 126	5	37	
Benzo(j,k)fluoranthene	**0.492**	**0.469**	0.500	0.500	98	94	43 - 125	5	39	
Benzo[a]pyrene	**0.513**	**0.489**	0.500	0.500	103	98	44 - 129	5	37	
Indeno(1,2,3-c,d)pyrene	**0.492**	**0.472**	0.500	0.500	98	94	40 - 124	4	42	
Dibenz[a,h]anthracene	**0.484**	**0.470**	0.500	0.500	97	94	35 - 122	3	44	
Benzo[g,h,i]perylene	**0.497**	**0.480**	0.500	0.500	99	96	37 - 122	3	45	
Surrogate:										
2-Fluorobiphenyl					*92*	*73*	*40 - 107*			
Pyrene-d10					*87*	*85*	*41 - 106*			
Terphenyl-d14					*109*	*101*	*44 - 124*			

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Date of Report: September 11, 2012
Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

ORGANOCHLORINE PESTICIDES by EPA 8081A METHOD BLANK QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0820W1					
alpha-BHC	**ND**	0.0050	EPA 8081	8-20-12	8-21-12	
gamma-BHC	**ND**	0.0050	EPA 8081	8-20-12	8-21-12	
beta-BHC	**ND**	0.0050	EPA 8081	8-20-12	8-21-12	
delta-BHC	**ND**	0.0050	EPA 8081	8-20-12	8-21-12	
Heptachlor	**ND**	0.0050	EPA 8081	8-20-12	8-21-12	
Aldrin	**ND**	0.0050	EPA 8081	8-20-12	8-21-12	
Heptachlor Epoxide	**ND**	0.0050	EPA 8081	8-20-12	8-21-12	
gamma-Chlordane	**ND**	0.0050	EPA 8081	8-20-12	8-21-12	
alpha-Chlordane	**ND**	0.0050	EPA 8081	8-20-12	8-21-12	
4,4'-DDE	**ND**	0.0050	EPA 8081	8-20-12	8-21-12	
Endosulfan I	**ND**	0.0050	EPA 8081	8-20-12	8-21-12	
Dieldrin	**ND**	0.0050	EPA 8081	8-20-12	8-21-12	
Endrin	**ND**	0.0050	EPA 8081	8-20-12	8-21-12	
4,4'-DDD	**ND**	0.0050	EPA 8081	8-20-12	8-21-12	
Endosulfan II	**ND**	0.0050	EPA 8081	8-20-12	8-21-12	
4,4'-DDT	**ND**	0.0050	EPA 8081	8-20-12	8-21-12	
Endrin Aldehyde	**ND**	0.0050	EPA 8081	8-20-12	8-21-12	
Methoxychlor	**ND**	0.010	EPA 8081	8-20-12	8-21-12	
Endosulfan Sulfate	**ND**	0.0050	EPA 8081	8-20-12	8-21-12	
Endrin Ketone	**ND**	0.020	EPA 8081	8-20-12	8-21-12	
Toxaphene	**ND**	0.050	EPA 8081	8-20-12	8-21-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*63*	*34-88*				
DCB	*78*	*48-115*				

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Date of Report: September 11, 2012
Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

ORGANOCHLORINE PESTICIDES by EPA 8081A SB/SBD QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS											
Laboratory ID:	SB0820W1										
	SB	SBD	SB	SBD		SB	SBD				
gamma-BHC	**0.0431**	**0.0451**	0.0500	0.0500	N/A	**86**	**90**	22-113	5	15	
Heptachlor	**0.0390**	**0.0417**	0.0500	0.0500	N/A	**78**	**83**	55-104	7	15	
Aldrin	**0.0415**	**0.0432**	0.0500	0.0500	N/A	**83**	**86**	54-99	4	15	
Dieldrin	**0.103**	**0.106**	0.125	0.125	N/A	**82**	**85**	60-100	3	15	
Endrin	**0.116**	**0.121**	0.125	0.125	N/A	**93**	**96**	62-105	4	15	
4,4'-DDT	**0.111**	**0.117**	0.125	0.125	N/A	**89**	**94**	43-114	5	15	
Surrogate:											
TCMX						*67*	*69*	*34-88*			
DCB						*77*	*78*	*48-115*			

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Date of Report: September 11, 2012
Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

TOTAL METALS
EPA 200.8
METHOD BLANK QUALITY CONTROL

Date Extracted:	8-23-12
Date Analyzed:	8-27-12
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	MB0823WH2

Analyte	Method	Result	PQL
Arsenic	200.8	**ND**	7.5
Cadmium	200.8	**ND**	4.0
Chromium	200.8	**ND**	10
Copper	200.8	**ND**	10
Lead	200.8	**ND**	1.0
Nickel	200.8	**ND**	8.0
Silver	200.8	**ND**	10
Zinc	200.8	**ND**	25

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Date of Report: September 11, 2012
Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

TOTAL MERCURY
EPA 7470A
METHOD BLANK QUALITY CONTROL

Date Extracted:	8-21-12
Date Analyzed:	8-21-12
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	MB0821W1

Analyte	Method	Result	PQL
Mercury	7470A	**ND**	0.025

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Date of Report: September 11, 2012
Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

TOTAL METALS
EPA 200.8
DUPLICATE QUALITY CONTROL

Date Extracted: 8-23-12
Date Analyzed: 8-27-12

Matrix: Water
Units: ug/L (ppb)

Lab ID: 08-139-04

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**ND**	**ND**	NA	7.5	
Cadmium	**ND**	**ND**	NA	4.0	
Chromium	**ND**	**ND**	NA	10	
Copper	**14.1**	**14.4**	2	10	
Lead	**ND**	**ND**	NA	1.0	
Nickel	**19.1**	**18.9**	1	8.0	
Silver	**ND**	**ND**	NA	10	
Zinc	**26.9**	**27.0**	1	25	

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Date of Report: September 11, 2012
Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

TOTAL MERCURY
EPA 7470A
DUPLICATE QUALITY CONTROL

Date Extracted: 8-21-12
Date Analyzed: 8-21-12

Matrix: Water
Units: ug/L (ppb)

Lab ID: 08-139-07

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Mercury	**ND**	**ND**	NA	0.025	

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Date of Report: September 11, 2012
Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

TOTAL METALS
EPA 200.8
MS/MSD QUALITY CONTROL

Date Extracted: 8-23-12
Date Analyzed: 8-27-12

Matrix: Water
Units: ug/L (ppb)

Lab ID: 08-139-04

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	**101**	101	**103**	103	2	
Cadmium	100	**91.9**	92	**90.7**	91	1	
Chromium	100	**94.3**	94	**92.7**	93	2	
Copper	100	**105**	91	**105**	91	1	
Lead	100	**88.8**	89	**88.2**	88	1	
Nickel	100	**110**	91	**113**	94	3	
Silver	100	**79.6**	80	**83.9**	84	5	
Zinc	100	**116**	89	**116**	89	0	

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Date of Report: September 11, 2012
Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

TOTAL MERCURY
EPA 7470A
MS/MSD QUALITY CONTROL

Date Extracted: 8-21-12
Date Analyzed: 8-21-12

Matrix: Water
Units: ug/L (ppb)

Lab ID: 08-139-07

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Mercury	6.25	**5.93**	95	**5.98**	96	1	

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Date of Report: September 11, 2012
Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

TOTAL METALS
EPA 200.8
SPIKE BLANK QUALITY CONTROL

Date Extracted: 8-23-12
Date Analyzed: 8-27-12

Matrix: Water
Units: ug/L (ppb)

Lab ID: SB0823WH2

Analyte	Method	Spike Level	SB Result	Percent Recovery
Arsenic	200.8	100	**96.3**	96
Cadmium	200.8	100	**98.2**	98
Chromium	200.8	100	**102**	102
Copper	200.8	100	**100**	100
Lead	200.8	100	**99.8**	100
Nickel	200.8	100	**97.8**	98
Silver	200.8	100	**92.7**	93
Zinc	200.8	100	**95.1**	95

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Date of Report: September 11, 2012
Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

TOTAL MERCURY
EPA 7470A
SPIKE BLANK QUALITY CONTROL

Date Extracted: 8-21-12
Date Analyzed: 8-21-12

Matrix: Water
Units: ug/L (ppb)

Lab ID: SB0821W1

Analyte	Method	Spike Level	SB Result	Percent Recovery
Mercury	7470A	6.25	**6.17**	99

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Date of Report: September 11, 2012
Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

TOTAL METALS
EPA 200.8/7470A
CONTINUING CALIBRATION SUMMARY

Analyte	Lab ID	True Value (ppm)	Calc. Value	Percent Difference	Control Limits
Arsenic	ICV082712E	0.0500	0.0501	-0.20	+/- 10%
Cadmium	ICV082712E	0.0500	0.0507	-1.4	+/- 10%
Chromium	ICV082712E	0.0500	0.0513	-2.6	+/- 10%
Copper	ICV082712E	0.0500	0.0506	-1.2	+/- 10%
Lead	ICV082712E	0.0500	0.0497	0.60	+/- 10%
Mercury	ICV082112Y	0.00250	0.00231	7.6	+/- 10%
Nickel	ICV082712E	0.0500	0.0505	-1.0	+/- 10%
Silver	ICV082712E	0.0500	0.0521	-4.2	+/- 10%
Zinc	ICV082712E	0.0500	0.0511	-2.2	+/- 10%
Arsenic	CCV1082712E	0.100	0.100	0	+/- 10%
Cadmium	CCV1082712E	0.100	0.102	-2.0	+/- 10%
Chromium	CCV1082712E	0.100	0.0994	0.60	+/- 10%
Copper	CCV1082712E	0.100	0.0987	1.3	+/- 10%
Lead	CCV1082712E	0.100	0.100	0	+/- 10%
Mercury	CCV1082112Y	0.00250	0.00238	4.8	+/- 20%
Nickel	CCV1082712E	0.100	0.0980	2.0	+/- 10%
Silver	CCV1082712E	0.100	0.100	0	+/- 10%
Zinc	CCV1082712E	0.100	0.0993	0.70	+/- 10%
Arsenic	CCV1082712E	0.0400	0.0393	1.8	+/- 10%
Cadmium	CCV1082712E	0.0400	0.0405	-1.3	+/- 10%
Chromium	CCV1082712E	0.0400	0.0402	-0.50	+/- 10%
Copper	CCV1082712E	0.0400	0.0399	0.25	+/- 10%
Lead	CCV1082712E	0.0400	0.0404	-1.0	+/- 10%
Nickel	CCV1082712E	0.0400	0.0392	2.0	+/- 10%
Silver	CCV1082712E	0.0400	0.0404	-1.0	+/- 10%
Zinc	CCV1082712E	0.0400	0.0398	0.50	+/- 10%
Arsenic	CCV2082712E	0.100	0.100	0	+/- 10%
Cadmium	CCV2082712E	0.100	0.101	-1.0	+/- 10%
Chromium	CCV2082712E	0.100	0.0985	1.5	+/- 10%
Copper	CCV2082712E	0.100	0.100	0	+/- 10%
Lead	CCV2082712E	0.100	0.102	-2.0	+/- 10%
Mercury	CCV2082112Y	0.00250	0.00253	-1.2	+/- 20%
Nickel	CCV2082712E	0.100	0.101	-1.0	+/- 10%
Silver	CCV2082712E	0.100	0.103	-3.0	+/- 10%
Zinc	CCV2082712E	0.100	0.101	-1.0	+/- 10%

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Date of Report: September 11, 2012
Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

TOTAL METALS
EPA 200.8/7470A
CONTINUING CALIBRATION SUMMARY

Analyte	Lab ID	True Value (ppm)	Calc. Value	Percent Difference	Control Limits
Arsenic	CCV2082712E	0.0400	0.0398	0.50	+/- 10%
Cadmium	CCV2082712E	0.0400	0.0406	-1.5	+/- 10%
Chromium	CCV2082712E	0.0400	0.0401	-0.25	+/- 10%
Copper	CCV2082712E	0.0400	0.0406	-1.5	+/- 10%
Lead	CCV2082712E	0.0400	0.0399	0.25	+/- 10%
Nickel	CCV2082712E	0.0400	0.0401	-0.25	+/- 10%
Silver	CCV2082712E	0.0400	0.0405	-1.3	+/- 10%
Zinc	CCV2082712E	0.0400	0.0406	-1.5	+/- 10%
Arsenic	CCV3082712E	0.100	0.101	-1.0	+/- 10%
Cadmium	CCV3082712E	0.100	0.102	-2.0	+/- 10%
Chromium	CCV3082712E	0.100	0.0995	0.50	+/- 10%
Copper	CCV3082712E	0.100	0.100	0	+/- 10%
Lead	CCV3082712E	0.100	0.101	-1.0	+/- 10%
Mercury	CCV3082112Y	0.00250	0.00250	0	+/- 20%
Nickel	CCV3082712E	0.100	0.101	-1.0	+/- 10%
Silver	CCV3082712E	0.100	0.101	-1.0	+/- 10%
Zinc	CCV3082712E	0.100	0.101	-1.0	+/- 10%
Arsenic	CCV3082712E	0.0400	0.0398	0.50	+/- 10%
Cadmium	CCV3082712E	0.0400	0.0410	-2.5	+/- 10%
Chromium	CCV3082712E	0.0400	0.0400	0	+/- 10%
Copper	CCV3082712E	0.0400	0.0405	-1.3	+/- 10%
Lead	CCV3082712E	0.0400	0.0409	-2.3	+/- 10%
Nickel	CCV3082712E	0.0400	0.0408	-2.0	+/- 10%
Silver	CCV3082712E	0.0400	0.0413	-3.3	+/- 10%
Zinc	CCV3082712E	0.0400	0.0408	-2.0	+/- 10%
Arsenic	CCV4082712E	0.100	0.102	-2.0	+/- 10%
Cadmium	CCV4082712E	0.100	0.101	-1.0	+/- 10%
Chromium	CCV4082712E	0.100	0.104	-4.0	+/- 10%
Copper	CCV4082712E	0.100	0.101	-1.0	+/- 10%
Lead	CCV4082712E	0.100	0.101	-1.0	+/- 10%
Mercury	CCV4082112Y	0.00250	0.00251	-0.40	+/- 20%
Nickel	CCV4082712E	0.100	0.0990	1.0	+/- 10%
Silver	CCV4082712E	0.100	0.101	-1.0	+/- 10%
Zinc	CCV4082712E	0.100	0.101	-1.0	+/- 10%

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Date of Report: September 11, 2012
Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

TOTAL METALS
EPA 200.8
CONTINUING CALIBRATION SUMMARY

Analyte	Lab ID	True Value (ppm)	Calc. Value	Percent Difference	Control Limits
Arsenic	CCV4082712E	0.0400	0.0407	-1.8	+/- 10%
Cadmium	CCV4082712E	0.0400	0.0408	-2.0	+/- 10%
Chromium	CCV4082712E	0.0400	0.0418	-4.5	+/- 10%
Copper	CCV4082712E	0.0400	0.0407	-1.8	+/- 10%
Lead	CCV4082712E	0.0400	0.0397	0.75	+/- 10%
Nickel	CCV4082712E	0.0400	0.0399	0.25	+/- 10%
Silver	CCV4082712E	0.0400	0.0407	-1.8	+/- 10%
Zinc	CCV4082712E	0.0400	0.0402	-0.50	+/- 10%
Arsenic	CCV5082712E	0.100	0.101	-1.0	+/- 10%
Cadmium	CCV5082712E	0.100	0.102	-2.0	+/- 10%
Chromium	CCV5082712E	0.100	0.105	-5.0	+/- 10%
Copper	CCV5082712E	0.100	0.102	-2.0	+/- 10%
Lead	CCV5082712E	0.100	0.100	0	+/- 10%
Nickel	CCV5082712E	0.100	0.0983	1.7	+/- 10%
Silver	CCV5082712E	0.100	0.104	-4.0	+/- 10%
Zinc	CCV5082712E	0.100	0.101	-1.0	+/- 10%
Arsenic	CCV5082712E	0.0400	0.0406	-1.5	+/- 10%
Cadmium	CCV5082712E	0.0400	0.0405	-1.3	+/- 10%
Chromium	CCV5082712E	0.0400	0.0429	-7.3	+/- 10%
Copper	CCV5082712E	0.0400	0.0411	-2.7	+/- 10%
Lead	CCV5082712E	0.0400	0.0403	-0.75	+/- 10%
Nickel	CCV5082712E	0.0400	0.0397	0.75	+/- 10%
Silver	CCV5082712E	0.0400	0.0412	-3.0	+/- 10%
Zinc	CCV5082712E	0.0400	0.0404	-1.0	+/- 10%
Arsenic	CCV6082712E	0.100	0.0997	0.30	+/- 10%
Cadmium	CCV6082712E	0.100	0.102	-2.0	+/- 10%
Chromium	CCV6082712E	0.100	0.104	-4.0	+/- 10%
Copper	CCV6082712E	0.100	0.101	-1.0	+/- 10%
Lead	CCV6082712E	0.100	0.0987	1.3	+/- 10%
Nickel	CCV6082712E	0.100	0.0970	3.0	+/- 10%
Silver	CCV6082712E	0.100	0.101	-1.0	+/- 10%
Zinc	CCV6082712E	0.100	0.101	-1.0	+/- 10%

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Date of Report: September 11, 2012
Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

TOTAL METALS
EPA 200.8
CONTINUING CALIBRATION SUMMARY

Analyte	Lab ID	True Value (ppm)	Calc. Value	Percent Difference	Control Limits
Arsenic	CCV6082712E	0.0400	0.0398	0.50	+/- 10%
Cadmium	CCV6082712E	0.0400	0.0401	-0.25	+/- 10%
Chromium	CCV6082712E	0.0400	0.0418	-4.5	+/- 10%
Copper	CCV6082712E	0.0400	0.0406	-1.5	+/- 10%
Lead	CCV6082712E	0.0400	0.0395	1.3	+/- 10%
Nickel	CCV6082712E	0.0400	0.0391	2.3	+/- 10%
Silver	CCV6082712E	0.0400	0.0405	-1.3	+/- 10%
Zinc	CCV6082712E	0.0400	0.0403	-0.75	+/- 10%

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Date of Report: September 11, 2012
Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

DISSOLVED METALS
EPA 200.8
METHOD BLANK QUALITY CONTROL

Date Analyzed: 8-27-12

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB0823D1

Analyte	Method	Result	PQL
Arsenic	200.8	**ND**	7.5
Cadmium	200.8	**ND**	4.0
Chromium	200.8	**ND**	10
Copper	200.8	**ND**	10
Lead	200.8	**ND**	1.0
Nickel	200.8	**ND**	8.0
Silver	200.8	**ND**	10
Zinc	200.8	**ND**	25

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Date of Report: September 11, 2012
Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

DISSOLVED MERCURY
EPA 7470A
METHOD BLANK QUALITY CONTROL

Date Analyzed: 8-21-12

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB0821D1

Analyte	Method	Result	PQL
Mercury	7470A	**ND**	0.50

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Date of Report: September 11, 2012
Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

DISSOLVED METALS
EPA 200.8
DUPLICATE QUALITY CONTROL

Date Analyzed: 8-27-12

Matrix: Water
Units: ug/L (ppb)

Lab ID: 08-139-04

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**ND**	**ND**	NA	7.5	
Cadmium	**ND**	**ND**	NA	4.0	
Chromium	**ND**	**ND**	NA	10	
Copper	**12.0**	**13.5**	11	10	
Lead	**ND**	**ND**	NA	1.0	
Nickel	**17.0**	**18.3**	7	8.0	
Silver	**ND**	**ND**	NA	10	
Zinc	**26.7**	**27.8**	4	25	

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Date of Report: September 11, 2012
Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

DISSOLVED MERCURY
EPA 7470A
DUPLICATE QUALITY CONTROL

Date Analyzed: 8-21-12

Matrix: Water
Units: ug/L (ppb)

Lab ID: 08-139-07

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Mercury	**ND**	**ND**	NA	0.5	

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Date of Report: September 11, 2012
Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

DISSOLVED METALS
EPA 200.8
MS/MSD QUALITY CONTROL

Date Analyzed: 8-27-12

Matrix: Water
Units: ug/L (ppb)

Lab ID: 08-139-04

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	**101**	101	**103**	103	2	
Cadmium	100	**89.9**	90	**91.2**	91	1	
Chromium	100	**97.0**	97	**98.1**	98	1	
Copper	100	**103**	91	**105**	93	2	
Lead	100	**87.6**	88	**86.9**	87	1	
Nickel	100	**109**	92	**110**	93	1	
Silver	100	**76.0**	76	**81.6**	82	7	
Zinc	100	**114**	88	**115**	88	1	

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Date of Report: September 11, 2012
Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

DISSOLVED MERCURY
EPA 7470A
MS/MSD QUALITY CONTROL

Date Analyzed: 8-21-12

Matrix: Water
Units: ug/L (ppb)

Lab ID: 08-139-07

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Mercury	6.25	**5.73**	92	**5.54**	89	3	

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Date of Report: September 11, 2012
Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

DISSOLVED METALS
EPA 200.8
SPIKE BLANK QUALITY CONTROL

Date Analyzed: 8-27-12

Matrix: Water
Units: ug/L (ppb)

Lab ID: SB0823D1

Analyte	Method	Spike Level	SB Result	Percent Recovery
Arsenic	200.8	100	**97.5**	98
Cadmium	200.8	100	**100**	100
Chromium	200.8	100	**99.0**	99
Copper	200.8	100	**101**	101
Lead	200.8	100	**101**	101
Nickel	200.8	100	**102**	102
Silver	200.8	100	**98.4**	98
Zinc	200.8	100	**97.9**	98

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Date of Report: September 11, 2012
Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

DISSOLVED MERCURY
EPA 7470A
SPIKE BLANK QUALITY CONTROL

Date Analyzed: 8-21-12

Matrix: Water
Units: ug/L (ppb)

Lab ID: SB0821D1

Analyte	Method	Spike Level	SB Result	Percent Recovery
Mercury	7470A	6.25	**6.18**	99

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Date of Report: September 11, 2012
Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

DISSOLVED METALS
EPA 200.8/7470A
CONTINUING CALIBRATION SUMMARY

Analyte	Lab ID	True Value (ppm)	Calc. Value	Percent Difference	Control Limits
Arsenic	ICV082712E	0.0500	0.0501	-0.20	+/- 10%
Cadmium	ICV082712E	0.0500	0.0507	-1.4	+/- 10%
Chromium	ICV082712E	0.0500	0.0513	-2.6	+/- 10%
Copper	ICV082712E	0.0500	0.0506	-1.2	+/- 10%
Lead	ICV082712E	0.0500	0.0497	0.60	+/- 10%
Mercury	ICV082112Y	0.00250	0.00231	7.6	+/- 10%
Nickel	ICV082712E	0.0500	0.0505	-1.0	+/- 10%
Silver	ICV082712E	0.0500	0.0521	-4.2	+/- 10%
Zinc	ICV082712E	0.0500	0.0511	-2.2	+/- 10%
Arsenic	CCV1082712E	0.100	0.100	0	+/- 10%
Cadmium	CCV1082712E	0.100	0.102	-2.0	+/- 10%
Chromium	CCV1082712E	0.100	0.0994	0.60	+/- 10%
Copper	CCV1082712E	0.100	0.0987	1.3	+/- 10%
Lead	CCV1082712E	0.100	0.100	0	+/- 10%
Mercury	CCV1082112Y	0.00250	0.00238	4.8	+/- 20%
Nickel	CCV1082712E	0.100	0.0980	2.0	+/- 10%
Silver	CCV1082712E	0.100	0.100	0	+/- 10%
Zinc	CCV1082712E	0.100	0.0993	0.70	+/- 10%
Arsenic	CCV1082712E	0.0400	0.0393	1.8	+/- 10%
Cadmium	CCV1082712E	0.0400	0.0405	-1.3	+/- 10%
Chromium	CCV1082712E	0.0400	0.0402	-0.50	+/- 10%
Copper	CCV1082712E	0.0400	0.0399	0.25	+/- 10%
Lead	CCV1082712E	0.0400	0.0404	-1.0	+/- 10%
Nickel	CCV1082712E	0.0400	0.0392	2.0	+/- 10%
Silver	CCV1082712E	0.0400	0.0404	-1.0	+/- 10%
Zinc	CCV1082712E	0.0400	0.0398	0.50	+/- 10%
Arsenic	CCV2082712E	0.100	0.100	0	+/- 10%
Cadmium	CCV2082712E	0.100	0.101	-1.0	+/- 10%
Chromium	CCV2082712E	0.100	0.0985	1.5	+/- 10%
Copper	CCV2082712E	0.100	0.100	0	+/- 10%
Lead	CCV2082712E	0.100	0.102	-2.0	+/- 10%
Mercury	CCV2082112Y	0.00250	0.00253	-1.2	+/- 20%
Nickel	CCV2082712E	0.100	0.101	-1.0	+/- 10%
Silver	CCV2082712E	0.100	0.103	-3.0	+/- 10%
Zinc	CCV2082712E	0.100	0.101	-1.0	+/- 10%

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Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

DISSOLVED METALS
EPA 200.8/7470A
CONTINUING CALIBRATION SUMMARY

Analyte	Lab ID	True Value (ppm)	Calc. Value	Percent Difference	Control Limits
Arsenic	CCV2082712E	0.0400	0.0398	0.50	+/- 10%
Cadmium	CCV2082712E	0.0400	0.0406	-1.5	+/- 10%
Chromium	CCV2082712E	0.0400	0.0401	-0.25	+/- 10%
Copper	CCV2082712E	0.0400	0.0406	-1.5	+/- 10%
Lead	CCV2082712E	0.0400	0.0399	0.25	+/- 10%
Nickel	CCV2082712E	0.0400	0.0401	-0.25	+/- 10%
Silver	CCV2082712E	0.0400	0.0405	-1.3	+/- 10%
Zinc	CCV2082712E	0.0400	0.0406	-1.5	+/- 10%
Arsenic	CCV3082712E	0.100	0.101	-1.0	+/- 10%
Cadmium	CCV3082712E	0.100	0.102	-2.0	+/- 10%
Chromium	CCV3082712E	0.100	0.0995	0.50	+/- 10%
Copper	CCV3082712E	0.100	0.100	0	+/- 10%
Lead	CCV3082712E	0.100	0.101	-1.0	+/- 10%
Mercury	CCV3082112Y	0.00250	0.00250	0	+/- 20%
Nickel	CCV3082712E	0.100	0.101	-1.0	+/- 10%
Silver	CCV3082712E	0.100	0.101	-1.0	+/- 10%
Zinc	CCV3082712E	0.100	0.101	-1.0	+/- 10%
Arsenic	CCV3082712E	0.0400	0.0398	0.50	+/- 10%
Cadmium	CCV3082712E	0.0400	0.0410	-2.5	+/- 10%
Chromium	CCV3082712E	0.0400	0.0400	0	+/- 10%
Copper	CCV3082712E	0.0400	0.0405	-1.3	+/- 10%
Lead	CCV3082712E	0.0400	0.0409	-2.3	+/- 10%
Nickel	CCV3082712E	0.0400	0.0408	-2.0	+/- 10%
Silver	CCV3082712E	0.0400	0.0413	-3.3	+/- 10%
Zinc	CCV3082712E	0.0400	0.0408	-2.0	+/- 10%
Arsenic	CCV4082712E	0.100	0.102	-2.0	+/- 10%
Cadmium	CCV4082712E	0.100	0.101	-1.0	+/- 10%
Chromium	CCV4082712E	0.100	0.104	-4.0	+/- 10%
Copper	CCV4082712E	0.100	0.101	-1.0	+/- 10%
Lead	CCV4082712E	0.100	0.101	-1.0	+/- 10%
Mercury	CCV4082112Y	0.00250	0.00251	-0.40	+/- 20%
Nickel	CCV4082712E	0.100	0.0990	1.0	+/- 10%
Silver	CCV4082712E	0.100	0.101	-1.0	+/- 10%
Zinc	CCV4082712E	0.100	0.101	-1.0	+/- 10%

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Samples Submitted: August 17, 2012
Laboratory Reference: 1208-139
Project: 5147-006-08

DISSOLVED METALS
EPA 200.8
CONTINUING CALIBRATION SUMMARY

Analyte	Lab ID	True Value (ppm)	Calc. Value	Percent Difference	Control Limits
Arsenic	CCV4082712E	0.0400	0.0407	-1.8	+/- 10%
Cadmium	CCV4082712E	0.0400	0.0408	-2.0	+/- 10%
Chromium	CCV4082712E	0.0400	0.0418	-4.5	+/- 10%
Copper	CCV4082712E	0.0400	0.0407	-1.8	+/- 10%
Lead	CCV4082712E	0.0400	0.0397	0.75	+/- 10%
Nickel	CCV4082712E	0.0400	0.0399	0.25	+/- 10%
Silver	CCV4082712E	0.0400	0.0407	-1.8	+/- 10%
Zinc	CCV4082712E	0.0400	0.0402	-0.50	+/- 10%
Arsenic	CCV5082712E	0.100	0.101	-1.0	+/- 10%
Cadmium	CCV5082712E	0.100	0.102	-2.0	+/- 10%
Chromium	CCV5082712E	0.100	0.105	-5.0	+/- 10%
Copper	CCV5082712E	0.100	0.102	-2.0	+/- 10%
Lead	CCV5082712E	0.100	0.100	0	+/- 10%
Mercury	CCV5082112Y	0.00250	0.00253	-1.2	+/- 20%
Nickel	CCV5082712E	0.100	0.0983	1.7	+/- 10%
Silver	CCV5082712E	0.100	0.104	-4.0	+/- 10%
Zinc	CCV5082712E	0.100	0.101	-1.0	+/- 10%
Arsenic	CCV5082712E	0.0400	0.0406	-1.5	+/- 10%
Cadmium	CCV5082712E	0.0400	0.0405	-1.3	+/- 10%
Chromium	CCV5082712E	0.0400	0.0429	-7.3	+/- 10%
Copper	CCV5082712E	0.0400	0.0411	-2.7	+/- 10%
Lead	CCV5082712E	0.0400	0.0403	-0.75	+/- 10%
Nickel	CCV5082712E	0.0400	0.0397	0.75	+/- 10%
Silver	CCV5082712E	0.0400	0.0412	-3.0	+/- 10%
Zinc	CCV5082712E	0.0400	0.0404	-1.0	+/- 10%

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Project: 5147-006-08

EDB by EPA 8011
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0829W1					
EDB	**ND**	0.010	EPA 8011	8-29-12	8-29-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*99*	*30-158*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS											
Laboratory ID:	SB0829W1										
	SB	SBD	SB	SBD		SB	SBD				
EDB	**0.110**	**0.0999**	0.100	0.100	N/A	**110**	**100**	72-127	10	15	
Surrogate:											
TCMX						*108*	*100*	*30-158*			

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Project: 5147-006-08

CHLORINATED ACID HERBICIDES by EPA 8151A
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0817W1					
Dalapon	**ND**	0.23	EPA 8151	8-17-12	8-20-12	
Dicamba	**ND**	0.024	EPA 8151	8-17-12	8-20-12	
MCPP	**ND**	4.7	EPA 8151	8-17-12	8-20-12	
MCPA	**ND**	4.7	EPA 8151	8-17-12	8-20-12	
Dichlorprop	**ND**	0.024	EPA 8151	8-17-12	8-20-12	
2,4-D	**ND**	0.024	EPA 8151	8-17-12	8-20-12	
Pentachlorophenol	**ND**	0.021	EPA 8151	8-17-12	8-20-12	
2,4,5-TP (Silvex)	**ND**	0.024	EPA 8151	8-17-12	8-20-12	
2,4,5-T	**ND**	0.024	EPA 8151	8-17-12	8-20-12	
2,4-DB	**ND**	0.047	EPA 8151	8-17-12	8-20-12	
Dinoseb	**ND**	0.024	EPA 8151	8-17-12	8-20-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCAA	*54*	*30-98*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS											
Laboratory ID:	SB0817W1										
	SB	SBD	SB	SBD		SB	SBD				
Dicamba	**0.582**	**0.529**	1.00	1.00	N/A	**58**	**53**	37-88	10	15	
2,4-D	**0.512**	**0.453**	1.00	1.00	N/A	**51**	**45**	30-81	12	17	
Pentachlorophenol	**0.0599**	**0.0585**	0.100	0.100	N/A	**60**	**59**	49-98	2	16	
2,4,5-T	**0.562**	**0.517**	1.00	1.00	N/A	**56**	**52**	37-83	8	12	
2,4-DB	**0.481**	**0.440**	1.00	1.00	N/A	**48**	**44**	31-84	9	18	
Surrogate:											
DCAA						*62*	*60*	*30-98*			

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OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

Y - Sample extract treated with an acid/silica gel cleanup procedure.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

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Pace Analytical™

www.pacelabs.com

Pace Analytical Services, Inc.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

Report Prepared for:

David Baumeister
Onsite Environmental, Inc.
14648 NE 95th Street
Redmond WA 98052

REPORT OF LABORATORY ANALYSIS FOR PCDD/PCDF

Report Information:

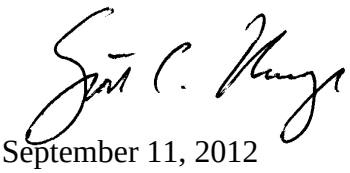
Pace Project #: 10203072
Sample Receipt Date: 08/21/2012
Client Project #: 5147-006-08
Client Sub PO #: N/A
State Cert #: C755

Invoicing & Reporting Options:

The report provided has been invoiced as a Level 2 PCDD/PCDF Report. If an upgrade of this report package is requested, an additional charge may be applied.

Please review the attached invoice for accuracy and forward any questions to Scott Unze, your Pace Project Manager.

This report has been reviewed by:



September 11, 2012

Scott Unze, Project Manager
(612) 607-6383
(612) 607-6444 (fax)
scott.unze@pacelabs.com

Report Prepared Date:
September 11, 2012

ACCREDITED IN ACCORDANCE WITH nelac

Report of Laboratory Analysis

This report should not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc.

The results relate only to the samples included in this report.

Pace Analytical Services, Inc.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

DISCUSSION

This report presents the results from the analyses performed on four samples submitted by a representative of OnSite Environmental, Inc. The samples were analyzed for the presence or absence of polychlorodibenzo-p-dioxins (PCDDs) and polychlorodibenzofurans (PCDFs) using a modified version of USEPA Method 8290. The reporting limits were based on signal-to-noise measurements.

The recoveries of the isotopically-labeled PCDD/PCDF internal standards in the sample extracts ranged from 66-122%. All of the labeled internal standard recoveries obtained for this project were within the 40-135% target range specified in Method 8290. Also, since the quantification of the native 2,3,7,8-substituted congeners was based on isotope dilution, the data were automatically corrected for variation in recovery and accurate values were obtained.

In some cases, interfering substances impacted the determinations of PCDD or PCDF congeners. The affected values were flagged "I" where incorrect isotope ratios were obtained.

A laboratory method blank was prepared and analyzed with the sample batch as part of our routine quality control procedures. The results show the blank to contain a trace level of 1,2,3,4,6,7,8-HpCDD. This level was below the calibration range of the method. Also, this congener was not detected in the field samples.

Laboratory spike samples were also prepared with the sample batch using clean water that had been fortified with native standard materials. The results show that the spiked native compounds were recovered at 96-129%, with relative percent differences of 0.9-10.6%. These results indicate high degrees of accuracy and precision for these determinations. Matrix spikes were not prepared with the sample batch.

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Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

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Fax: 612- 607-6444

Minnesota Laboratory Certifications

Authority	Certificate #	Authority	Certificate #
Alabama	40770	Montana	92
Alaska	MN00064	Nebraska	
Arizona	AZ0014	Nevada	MN_00064_200
Arkansas	88-0680	New Jersey (NE	MN002
California	01155CA	New Mexico	MN00064
Colorado	MN00064	New York (NEL	11647
Connecticut	PH-0256	North Carolina	27700
EPA Region 5	WD-15J	North Dakota	R-036
EPA Region 8	8TMS-Q	Ohio	4150
Florida (NELAP	E87605	Ohio VAP	CL101 9507
Georgia (DNR)	959	Oklahoma	D9922
Guam	959	Oregon (ELAP)	MN200001-005
Hawaii	SLD	Oregon (OREL	MN300001-001
Idaho	MN00064	Pennsylvania	68-00563
Illinois	200012	Saipan	MP0003
Indiana	C-MN-01	South Carolina	74003001
Indiana	C-MN-01	Tennesee	2818
Iowa	368	Tennessee	02818
Kansas	E-10167	Texas	T104704192-08
Kentucky	90062	Utah (NELAP)	PAM
Louisiana	03086	Virginia	00251
Maine	2007029	Washington	C755
Maryland	322	West Virginia	9952C
Michigan	9909	Wisconsin	999407970
Minnesota	027-053-137	Wyoming	8TMS-Q
Mississippi	MN00064		

REPORT OF LABORATORY ANALYSIS

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Appendix A

Sample Management

Report No....10203072_8290

1128

OnSite Environmental Inc.

14648 NE 95th Street, Redmond, WA 98052 · (425) 883-3881

Laboratory Reference #: 08-139

Subcontract Laboratory: Pace Analytical Service, Inc.

Contact Person: Scott Unze / Dioxin Manger

Address: 1700 Elm St. Ste. 200 Minneapolis, MN 55414

Phone Number: (612) 607-6383

Date/Time: _____

Turnaround Request:

1 Day 2 Day 3 Day

(Standard)

Other: _____

Project Manager: David Baumeister

email: dbaumeister@onsite-env.com

Project Number: 5147-006-08

Project Name: _____

10203072

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	Requested Analysis	
	MW-3A	8/16/12	1130	W		DIOXINS/FURANS	001
	DUP	↓	1135	↓		↓	002
	MW-6		0950				003
	MW-7	↓	1545	↓		↓	004

Signature	Company	Date	Time
Relinquished by:	OSE	8/17/12	1530
Received by:	UPS	8/17/12	930
Relinquished by:			
Received by:			
Relinquished by:			
Received by:			

Comments/Special Instructions

TIER 3 EDDs

WA STATE FORMAT

PLEASE RETURN ICE & COOLER

Pace Analytical	Document Name: **Sample Condition Upon Receipt Form**	Document Revised: 19Jun2012 Page 1 of 1
	Document No.: **F-MN-L-213-rev.03**	Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: Onsite Environmental

Project #: WO# : 10203072

10203072

Courier: ☐ Fed Ex ☑ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other:

Tracking Number: 12 6E4 K1W 01 9342 0393

Custody Seal on Cooler/Box Present? ☐ Yes ☑ No **Seals Intact?** ☐ Yes ☑ No

Optional: Proj. Due Date: Proj. Name:

Packing Material: ☑ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other: **Temp Blank?** ☐ Yes ☑ No

Thermometer Used: ☐ 80344042 ☑ 80512447 **Type of Ice:** ☐ Wet ☑ Blue ☐ None ☑ Samples on ice, cooling process has begun

Cooler Temperature: 3.2 **Biological Tissue Frozen?** ☐ Yes ☐ No **Date and Initials of Person Examining Contents:** SE 8/21/12

Temp should be above freezing to 6°C

				Comments:
Chain of Custody Present?	☑ Yes	☐ No	☐ N/A	1.
Chain of Custody Filled Out?	☑ Yes	☐ No	☐ N/A	2.
Chain of Custody Relinquished?	☑ Yes	☐ No	☐ N/A	3.
Sampler Name and Signature on COC?	☐ Yes	☑ No	☐ N/A	4.
Samples Arrived within Hold Time?	☑ Yes	☐ No	☐ N/A	5.
Short Hold Time Analysis (<72 hr)?	☐ Yes	☑ No	☐ N/A	6.
Rush Turn Around Time Requested?	☐ Yes	☑ No	☐ N/A	7.
Sufficient Volume?	☑ Yes	☐ No	☐ N/A	8.
Correct Containers Used?	☑ Yes	☐ No	☐ N/A	9.
-Pace Containers Used?	☑ Yes	☐ No	☐ N/A	
Containers Intact?	☑ Yes	☐ No	☐ N/A	10.
Filtered Volume Received for Dissolved Tests?	☐ Yes	☑ No	☐ N/A	11.
Sample Labels Match COC? -Includes Date/Time/ID/Analysis Matrix: Cut	☑ Yes	☐ No	☐ N/A	12.
All containers needing acid/base preservation have been checked? Noncompliances are noted in 13.	☐ Yes	☐ No	☑ N/A	13. ☐ HNO_3 ☐ H_2SO_4 ☐ NaOH ☐ HCl
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, HCl<2; NaOH>12)	☐ Yes	☐ No	☑ N/A	Sample #
Exceptions: VOA, Coliform, TOC, Oil and Grease, WI-DRO (water)	☐ Yes	☑ No		Initial when completed: Lot # of added preservative:
Headspace in VOA Vials (>6mm)?	☐ Yes	☐ No	☑ N/A	14.
Trip Blank Present?	☐ Yes	☐ No	☑ N/A	15.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☑ N/A	
Pace Trip Blank Lot # (if purchased):				

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** ☐ Yes ☐ No

Person Contacted: Date/Time:

Comments/Resolution:

Project Manager Review: [signature] **Date:** 08/21/12

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Reporting Flags

A = Reporting Limit based on signal to noise

B = Less than 10x higher than method blank level

C = Result obtained from confirmation analysis

D = Result obtained from analysis of diluted sample

E = Exceeds calibration range

I = Interference present

J = Estimated value

Nn = Value obtained from additional analysis

P = PCDE Interference

R = Recovery outside target range

S = Peak saturated

U = Analyte not detected

V = Result verified by confirmation analysis

X = %D Exceeds limits

Y = Calculated using average of daily RFs

* = See Discussion

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Appendix B

Sample Analysis Summary

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - Onsite Environmental, Inc.

Client's Sample ID	MW-3A		
Lab Sample ID	10203072001		
Filename	U120908A_09		
Injected By	BAL		
Total Amount Extracted	1040 mL	Matrix	Water
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	08/16/2012 11:30
ICAL ID	U120831	Received	08/21/2012 09:30
CCal Filename(s)	U120908A_02 & U120908A_18	Extracted	09/06/2012 17:45
Method Blank ID	BLANK-33828	Analyzed	09/08/2012 21:41

Native Isomers	Conc pg/L	EMPC pg/L	RL pg/L		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	1.50		2,3,7,8-TCDF-13C	2.00	76
Total TCDF	ND	-----	1.50		2,3,7,8-TCDD-13C	2.00	95
					1,2,3,7,8-PeCDF-13C	2.00	67
2,3,7,8-TCDD	ND	-----	1.50		2,3,4,7,8-PeCDF-13C	2.00	65
Total TCDD	ND	-----	1.50		1,2,3,7,8-PeCDD-13C	2.00	82
					1,2,3,4,7,8-HxCDF-13C	2.00	73
1,2,3,7,8-PeCDF	ND	-----	1.00		1,2,3,6,7,8-HxCDF-13C	2.00	74
2,3,4,7,8-PeCDF	ND	-----	0.87		2,3,4,6,7,8-HxCDF-13C	2.00	78
Total PeCDF	ND	-----	0.96		1,2,3,7,8,9-HxCDF-13C	2.00	74
					1,2,3,4,7,8-HxCDD-13C	2.00	86
1,2,3,7,8-PeCDD	ND	-----	1.20		1,2,3,6,7,8-HxCDD-13C	2.00	80
Total PeCDD	ND	-----	1.20		1,2,3,4,6,7,8-HpCDF-13C	2.00	88
					1,2,3,4,7,8,9-HpCDF-13C	2.00	98
1,2,3,4,7,8-HxCDF	ND	-----	1.30		1,2,3,4,6,7,8-HpCDD-13C	2.00	114
1,2,3,6,7,8-HxCDF	ND	-----	1.30		OCDD-13C	4.00	95
2,3,4,6,7,8-HxCDF	ND	-----	1.20				
1,2,3,7,8,9-HxCDF	ND	-----	1.60		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	1.30		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	1.30		2,3,7,8-TCDD-37Cl4	0.20	91
1,2,3,6,7,8-HxCDD	ND	-----	1.60				
1,2,3,7,8,9-HxCDD	ND	-----	1.50				
Total HxCDD	ND	-----	1.50				
1,2,3,4,6,7,8-HpCDF	ND	-----	1.20		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	1.30		Equivalence: 2.0 pg/L		
Total HpCDF	ND	-----	1.20		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	ND	-----	1.50				
Total HpCDD	2.5	-----	1.50	J			
OCDF	ND	-----	2.10				
OCDD	3.0	-----	2.30	J			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit.

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

J = Estimated value

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - Onsite Environmental, Inc.

Client's Sample ID	DUP		
Lab Sample ID	10203072002		
Filename	U120908A_10		
Injected By	BAL		
Total Amount Extracted	1050 mL	Matrix	Water
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	08/16/2012 11:35
ICAL ID	U120831	Received	08/21/2012 09:30
CCal Filename(s)	U120908A_02 & U120908A_18	Extracted	09/06/2012 17:45
Method Blank ID	BLANK-33828	Analyzed	09/08/2012 22:29

Native Isomers	Conc pg/L	EMPC pg/L	RL pg/L		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	2.00		2,3,7,8-TCDF-13C	2.00	77
Total TCDF	ND	-----	2.00		2,3,7,8-TCDD-13C	2.00	96
					1,2,3,7,8-PeCDF-13C	2.00	68
2,3,7,8-TCDD	ND	-----	1.60		2,3,4,7,8-PeCDF-13C	2.00	67
Total TCDD	ND	-----	1.60		1,2,3,7,8-PeCDD-13C	2.00	81
					1,2,3,4,7,8-HxCDF-13C	2.00	74
1,2,3,7,8-PeCDF	ND	-----	1.20		1,2,3,6,7,8-HxCDF-13C	2.00	75
2,3,4,7,8-PeCDF	ND	-----	1.00		2,3,4,6,7,8-HxCDF-13C	2.00	80
Total PeCDF	ND	-----	1.10		1,2,3,7,8,9-HxCDF-13C	2.00	76
					1,2,3,4,7,8-HxCDD-13C	2.00	90
1,2,3,7,8-PeCDD	ND	-----	1.10		1,2,3,6,7,8-HxCDD-13C	2.00	81
Total PeCDD	ND	-----	1.10		1,2,3,4,6,7,8-HpCDF-13C	2.00	94
					1,2,3,4,7,8,9-HpCDF-13C	2.00	101
1,2,3,4,7,8-HxCDF	ND	-----	1.20		1,2,3,4,6,7,8-HpCDD-13C	2.00	122
1,2,3,6,7,8-HxCDF	ND	-----	1.20		OCDD-13C	4.00	98
2,3,4,6,7,8-HxCDF	ND	-----	0.85				
1,2,3,7,8,9-HxCDF	ND	-----	1.10		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	1.10		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	1.10		2,3,7,8-TCDD-37Cl4	0.20	89
1,2,3,6,7,8-HxCDD	ND	-----	1.30				
1,2,3,7,8,9-HxCDD	ND	-----	1.40				
Total HxCDD	ND	-----	1.30				
1,2,3,4,6,7,8-HpCDF	ND	-----	1.30		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	1.30		Equivalence: 2.0 pg/L		
Total HpCDF	ND	-----	1.30		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	ND	-----	1.60				
Total HpCDD	ND	-----	1.60				
OCDF	ND	-----	1.40				
OCDD	-----	1.5	0.99	I			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit.

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

I = Interference present

REPORT OF LABORATORY ANALYSIS

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1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - Onsite Environmental, Inc.

Client's Sample ID	MW-6		
Lab Sample ID	10203072003		
Filename	U120908A_11		
Injected By	BAL		
Total Amount Extracted	1050 mL	Matrix	Water
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	08/16/2012 09:50
ICAL ID	U120831	Received	08/21/2012 09:30
CCal Filename(s)	U120908A_02 & U120908A_18	Extracted	09/06/2012 17:45
Method Blank ID	BLANK-33828	Analyzed	09/08/2012 23:16

Native Isomers	Conc pg/L	EMPC pg/L	RL pg/L		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	1.20		2,3,7,8-TCDF-13C	2.00	80
Total TCDF	ND	-----	1.20		2,3,7,8-TCDD-13C	2.00	102
					1,2,3,7,8-PeCDF-13C	2.00	71
2,3,7,8-TCDD	ND	-----	1.20		2,3,4,7,8-PeCDF-13C	2.00	70
Total TCDD	ND	-----	1.20		1,2,3,7,8-PeCDD-13C	2.00	89
					1,2,3,4,7,8-HxCDF-13C	2.00	79
1,2,3,7,8-PeCDF	ND	-----	1.10		1,2,3,6,7,8-HxCDF-13C	2.00	81
2,3,4,7,8-PeCDF	ND	-----	1.00		2,3,4,6,7,8-HxCDF-13C	2.00	84
Total PeCDF	ND	-----	1.00		1,2,3,7,8,9-HxCDF-13C	2.00	81
					1,2,3,4,7,8-HxCDD-13C	2.00	93
1,2,3,7,8-PeCDD	ND	-----	1.20		1,2,3,6,7,8-HxCDD-13C	2.00	86
Total PeCDD	ND	-----	1.20		1,2,3,4,6,7,8-HpCDF-13C	2.00	95
					1,2,3,4,7,8,9-HpCDF-13C	2.00	99
1,2,3,4,7,8-HxCDF	ND	-----	0.55		1,2,3,4,6,7,8-HpCDD-13C	2.00	120
1,2,3,6,7,8-HxCDF	ND	-----	0.57		OCDD-13C	4.00	94
2,3,4,6,7,8-HxCDF	ND	-----	0.60				
1,2,3,7,8,9-HxCDF	ND	-----	0.83		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	0.64		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	1.20		2,3,7,8-TCDD-37Cl4	0.20	91
1,2,3,6,7,8-HxCDD	ND	-----	1.10				
1,2,3,7,8,9-HxCDD	ND	-----	1.20				
Total HxCDD	ND	-----	1.20				
1,2,3,4,6,7,8-HpCDF	ND	-----	1.00		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	1.20		Equivalence: 1.8 pg/L		
Total HpCDF	ND	-----	1.10		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	ND	-----	1.60				
Total HpCDD	ND	-----	1.60				
OCDF	ND	-----	1.70				
OCDD	-----	2.6	2.10	I			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit.

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

I = Interference present

REPORT OF LABORATORY ANALYSIS

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Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - Onsite Environmental, Inc.

Client's Sample ID	MW-7		
Lab Sample ID	10203072004		
Filename	U120908A_12		
Injected By	BAL		
Total Amount Extracted	1030 mL	Matrix	Water
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	08/16/2012 15:45
ICAL ID	U120831	Received	08/21/2012 09:30
CCal Filename(s)	U120908A_02 & U120908A_18	Extracted	09/06/2012 17:45
Method Blank ID	BLANK-33828	Analyzed	09/09/2012 00:04

Native Isomers	**Conc** pg/L	**EMPC** pg/L	**RL** pg/L		**Internal Standards**	**ng's Added**	**Percent Recovery**
2,3,7,8-TCDF	ND	-----	1.30		2,3,7,8-TCDF-13C	2.00	77
Total TCDF	ND	-----	1.30		2,3,7,8-TCDD-13C	2.00	97
					1,2,3,7,8-PeCDF-13C	2.00	68
2,3,7,8-TCDD	ND	-----	1.30		2,3,4,7,8-PeCDF-13C	2.00	66
Total TCDD	ND	-----	1.30		1,2,3,7,8-PeCDD-13C	2.00	83
					1,2,3,4,7,8-HxCDF-13C	2.00	74
1,2,3,7,8-PeCDF	ND	-----	1.00		1,2,3,6,7,8-HxCDF-13C	2.00	77
2,3,4,7,8-PeCDF	ND	-----	1.10		2,3,4,6,7,8-HxCDF-13C	2.00	79
Total PeCDF	ND	-----	1.10		1,2,3,7,8,9-HxCDF-13C	2.00	75
					1,2,3,4,7,8-HxCDD-13C	2.00	90
1,2,3,7,8-PeCDD	ND	-----	1.20		1,2,3,6,7,8-HxCDD-13C	2.00	80
Total PeCDD	ND	-----	1.20		1,2,3,4,6,7,8-HpCDF-13C	2.00	87
					1,2,3,4,7,8,9-HpCDF-13C	2.00	91
1,2,3,4,7,8-HxCDF	ND	-----	0.91		1,2,3,4,6,7,8-HpCDD-13C	2.00	111
1,2,3,6,7,8-HxCDF	ND	-----	1.00		OCDD-13C	4.00	84
2,3,4,6,7,8-HxCDF	ND	-----	0.97				
1,2,3,7,8,9-HxCDF	ND	-----	1.30		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	1.00		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	1.30		2,3,7,8-TCDD-37Cl4	0.20	88
1,2,3,6,7,8-HxCDD	ND	-----	1.70				
1,2,3,7,8,9-HxCDD	ND	-----	1.30				
Total HxCDD	ND	-----	1.40				
1,2,3,4,6,7,8-HpCDF	ND	-----	1.80		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	1.80		Equivalence: 2.0 pg/L		
Total HpCDF	ND	-----	1.80		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	ND	-----	2.30				
Total HpCDD	7.1	-----	2.30	J			
OCDF	ND	-----	2.40				
OCDD	ND	-----	2.60				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit.

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

J = Estimated value

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Blank Analysis Results

Lab Sample ID	BLANK-33828	Matrix	Water
Filename	F120908B_11	Dilution	NA
Total Amount Extracted	1010 mL	Extracted	09/06/2012 17:45
ICAL ID	F120614	Analyzed	09/08/2012 23:04
CCal Filename(s)	F120908B_02 & F120908B_20	Injected By	BAL

Native Isomers	Conc pg/L	EMPC pg/L	RL pg/L	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	0.62	2,3,7,8-TCDF-13C	2.00	82
Total TCDF	ND	-----	0.62	2,3,7,8-TCDD-13C	2.00	85
				1,2,3,7,8-PeCDF-13C	2.00	78
2,3,7,8-TCDD	ND	-----	0.74	2,3,4,7,8-PeCDF-13C	2.00	73
Total TCDD	ND	-----	0.74	1,2,3,7,8-PeCDD-13C	2.00	70
				1,2,3,4,7,8-HxCDF-13C	2.00	88
1,2,3,7,8-PeCDF	ND	-----	0.88	1,2,3,6,7,8-HxCDF-13C	2.00	104
2,3,4,7,8-PeCDF	ND	-----	0.75	2,3,4,6,7,8-HxCDF-13C	2.00	104
Total PeCDF	ND	-----	0.82	1,2,3,7,8,9-HxCDF-13C	2.00	98
				1,2,3,4,7,8-HxCDD-13C	2.00	76
1,2,3,7,8-PeCDD	ND	-----	1.30	1,2,3,6,7,8-HxCDD-13C	2.00	85
Total PeCDD	ND	-----	1.30	1,2,3,4,6,7,8-HpCDF-13C	2.00	83
				1,2,3,4,7,8,9-HpCDF-13C	2.00	81
1,2,3,4,7,8-HxCDF	ND	-----	0.52	1,2,3,4,6,7,8-HpCDD-13C	2.00	62 Y
1,2,3,6,7,8-HxCDF	ND	-----	0.47	OCDD-13C	4.00	67 Y
2,3,4,6,7,8-HxCDF	ND	-----	0.47			
1,2,3,7,8,9-HxCDF	ND	-----	0.56	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	0.50	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.74	2,3,7,8-TCDD-37Cl4	0.20	91
1,2,3,6,7,8-HxCDD	ND	-----	0.58			
1,2,3,7,8,9-HxCDD	ND	-----	0.65			
Total HxCDD	ND	-----	0.65			
1,2,3,4,6,7,8-HpCDF	ND	-----	0.45	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.67	Equivalence: 1.4 pg/L		
Total HpCDF	ND	-----	0.56	(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	0.97	-----	0.95 J			
Total HpCDD	0.97	-----	0.95 J			
OCDF	ND	-----	1.20			
OCDD	-----	1.7	1.10 I			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

J = Estimated value
I = Interference present
Y = Calculated using average of daily RFs

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Laboratory Control Spike Results

Lab Sample ID	LCS-33829		
Filename	F120908B_05	Matrix	Water
Total Amount Extracted	1010 mL	Dilution	NA
ICAL ID	F120614	Extracted	09/06/2012 17:45
CCal Filename(s)	F120908B_02 & F120908B_20	Analyzed	09/08/2012 18:38
Method Blank ID	BLANK-33828	Injected By	BAL

Native Isomers	**Qs** (ng)	**Qm** (ng)	% Rec.	**Internal Standards**	**ng's Added**	**Percent Recovery**	
2,3,7,8-TCDF	0.20	0.24	118	2,3,7,8-TCDF-13C	2.0	88	
Total TCDF				2,3,7,8-TCDD-13C	2.0	90	
				1,2,3,7,8-PeCDF-13C	2.0	81	
2,3,7,8-TCDD	0.20	0.20	98	2,3,4,7,8-PeCDF-13C	2.0	77	
Total TCDD				1,2,3,7,8-PeCDD-13C	2.0	74	
				1,2,3,4,7,8-HxCDF-13C	2.0	92	
1,2,3,7,8-PeCDF	1.0	1.2	117	1,2,3,6,7,8-HxCDF-13C	2.0	109	
2,3,4,7,8-PeCDF	1.0	1.1	113	2,3,4,6,7,8-HxCDF-13C	2.0	109	
Total PeCDF				1,2,3,7,8,9-HxCDF-13C	2.0	103	
				1,2,3,4,7,8-HxCDD-13C	2.0	88	
1,2,3,7,8-PeCDD	1.0	1.0	103	1,2,3,6,7,8-HxCDD-13C	2.0	86	
Total PeCDD				1,2,3,4,6,7,8-HpCDF-13C	2.0	72	
				1,2,3,4,7,8,9-HpCDF-13C	2.0	87	
1,2,3,4,7,8-HxCDF	1.0	1.2	122	1,2,3,4,6,7,8-HpCDD-13C	2.0	73	Y
1,2,3,6,7,8-HxCDF	1.0	1.1	112	OCDD-13C	4.0	75	Y
2,3,4,6,7,8-HxCDF	1.0	1.1	113				
1,2,3,7,8,9-HxCDF	1.0	1.2	117	1,2,3,4-TCDD-13C	2.0	NA	
Total HxCDF				1,2,3,7,8,9-HxCDD-13C	2.0	NA	
1,2,3,4,7,8-HxCDD	1.0	1.1	114	2,3,7,8-TCDD-37Cl4	0.20	95	
1,2,3,6,7,8-HxCDD	1.0	1.3	126				
1,2,3,7,8,9-HxCDD	1.0	1.2	120				
Total HxCDD							
1,2,3,4,6,7,8-HpCDF	1.0	1.2	119				
1,2,3,4,7,8,9-HpCDF	1.0	1.1	106				
Total HpCDF							
1,2,3,4,6,7,8-HpCDD	1.0	1.1	108				
Total HpCDD							
OCDF	2.0	2.6	129				
OCDD	2.0	2.3	113				

Qs = Quantity Spiked
Qm = Quantity Measured
Rec. = Recovery (Expressed as Percent)
R = Recovery outside of target range

Y = RF averaging used in calculations
Nn = Value obtained from additional analysis
NA = Not Applicable
* = See Discussion

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Laboratory Control Spike Results

Lab Sample ID	LCSD-33837		
Filename	F120910A_06	Matrix	Water
Total Amount Extracted	1020 mL	Dilution	NA
ICAL ID	F120614	Extracted	09/06/2012 17:45
CCal Filename(s)	F120910A_04 & F120910B_01	Analyzed	09/10/2012 13:14
Method Blank ID	BLANK-33828	Injected By	SMT

Native Isomers	**Qs** (ng)	**Qm** (ng)	% Rec.	**Internal Standards**	**ng's Added**	**Percent Recovery**	
2,3,7,8-TCDF	0.20	0.23	114	2,3,7,8-TCDF-13C	2.0	89	
Total TCDF				2,3,7,8-TCDD-13C	2.0	93	
				1,2,3,7,8-PeCDF-13C	2.0	78	
2,3,7,8-TCDD	0.20	0.19	96	2,3,4,7,8-PeCDF-13C	2.0	74	
Total TCDD				1,2,3,7,8-PeCDD-13C	2.0	74	
				1,2,3,4,7,8-HxCDF-13C	2.0	85	
1,2,3,7,8-PeCDF	1.0	1.1	114	1,2,3,6,7,8-HxCDF-13C	2.0	108	
2,3,4,7,8-PeCDF	1.0	1.1	110	2,3,4,6,7,8-HxCDF-13C	2.0	107	
Total PeCDF				1,2,3,7,8,9-HxCDF-13C	2.0	101	
				1,2,3,4,7,8-HxCDD-13C	2.0	83	
1,2,3,7,8-PeCDD	1.0	0.98	98	1,2,3,6,7,8-HxCDD-13C	2.0	84	
Total PeCDD				1,2,3,4,6,7,8-HpCDF-13C	2.0	86	
				1,2,3,4,7,8,9-HpCDF-13C	2.0	102	
1,2,3,4,7,8-HxCDF	1.0	1.1	113	1,2,3,4,6,7,8-HpCDD-13C	2.0	101	
1,2,3,6,7,8-HxCDF	1.0	1.1	111	OCDD-13C	4.0	84	Y
2,3,4,6,7,8-HxCDF	1.0	1.1	109				
1,2,3,7,8,9-HxCDF	1.0	1.1	114	1,2,3,4-TCDD-13C	2.0	NA	
Total HxCDF				1,2,3,7,8,9-HxCDD-13C	2.0	NA	
1,2,3,4,7,8-HxCDD	1.0	1.1	109	2,3,7,8-TCDD-37Cl4	0.20	94	
1,2,3,6,7,8-HxCDD	1.0	1.2	118				
1,2,3,7,8,9-HxCDD	1.0	1.2	117				
Total HxCDD							
1,2,3,4,6,7,8-HpCDF	1.0	1.1	110				
1,2,3,4,7,8,9-HpCDF	1.0	0.99	99				
Total HpCDF							
1,2,3,4,6,7,8-HpCDD	1.0	0.98	98				
Total HpCDD							
OCDF	2.0	2.3	116				
OCDD	2.0	2.1	107				

Qs = Quantity Spiked
Qm = Quantity Measured
Rec. = Recovery (Expressed as Percent)
R = Recovery outside of target range

Y = RF averaging used in calculations
Nn = Value obtained from additional analysis
NA = Not Applicable
* = See Discussion

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290

Spike Recovery Relative Percent Difference (RPD) Results

Client	Onsite Environmental, Inc.		
Spike 1 ID	LCS-33829	Spike 2 ID	LCSD-33837
Spike 1 Filename	F120908B_05	Spike 2 Filename	F120910A_06

Compound	Spike 1 %REC	Spike 2 %REC	%RPD
2,3,7,8-TCDF	118	114	3.4
2,3,7,8-TCDD	98	96	2.1
1,2,3,7,8-PeCDF	117	114	2.6
2,3,4,7,8-PeCDF	113	110	2.7
1,2,3,7,8-PeCDD	103	98	5.0
1,2,3,4,7,8-HxCDF	122	113	7.7
1,2,3,6,7,8-HxCDF	112	111	0.9
2,3,4,6,7,8-HxCDF	113	109	3.6
1,2,3,7,8,9-HxCDF	117	114	2.6
1,2,3,4,7,8-HxCDD	114	109	4.5
1,2,3,6,7,8-HxCDD	126	118	6.6
1,2,3,7,8,9-HxCDD	120	117	2.5
1,2,3,4,6,7,8-HpCDF	119	110	7.9
1,2,3,4,7,8,9-HpCDF	106	99	6.8
1,2,3,4,6,7,8-HpCDD	108	98	9.7
OCDF	129	116	10.6
OCDD	113	107	5.5

%REC = Percent Recovered
RPD = The difference between the two values divided by the mean value

REPORT OF LABORATORY ANALYSIS

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Chain of Custody

Page 1 of 1

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: GeoEngineers Inc.
Project Number: 5147-006-08
Project Name: DCI
Project Manager: Robert Trahan
Sampled by: Abhijit Joshi

Turnaround Request (in working days)

(Check One)

☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 08-139

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	No. of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260B	Halogenated Volatiles 8260B	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082	Organochlorine Pesticides 8081A	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	~~Total~~ RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664	Metal Group A	Metal Group B	MTBE, EDB, EDC	Herbicides	% Moisture
1	MW-1	08/16/12	1450	Water	8			X	X				X					Dioxins/Furans				X				
2	MW-2A		1310		8																					
3	MW-4		1645		8																					
4	MW-3A		1130		19					X		X			X			X					X	X	X	
5	DUP		1135		19																					
6	MW-6		0950		18 BK																					
7	MW-7		1545		19																					
8	Trip Blank BK				5					X														X		

	Signature	Company	Date	Time
Relinquished		GEI	08/17/12	1030
Received		OSE	8/17/12	1030
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Metal group A: Total & Dissolve (As, Cu, Hg, Ni, Ag, Zn)

Metal group B: Total & Dissolve (As, Cd, Cr, Cu, Pb, Hg, Ni, Ag, Zn)

Samples are field filtered for dissolved metals analysis

Chromatograms with final report ☐

Data Package: Level III ☐ Level IV ☐ Electronic Data Deliverables (EDDs) ☐ _____

Sample/Cooler Receipt and Acceptance Checklist

Client: GES

Client Project Name/Number: 5147-006-08

OnSite Project Number: 08-139

Initiated by: MV

Date Initiated: 8/17/12

1.0 Cooler Verification

1.1 Were there custody seals on the outside of the cooler?	Yes	No	(N/A)	1 2 3 4
1.2 Were the custody seals intact?	Yes	No	(N/A)	1 2 3 4
1.3 Were the custody seals signed and dated by last custodian?	Yes	No	(N/A)	1 2 3 4
1.4 Were the samples delivered on ice or blue ice?	(Yes)	No		1 2 3 4
1.5 Were samples received between 0-6 degrees Celsius?	(Yes)	No	Temperature: 0,1,4,5,5,3	
1.6 Have shipping bills (if any) been attached to the back of this form?	Yes	(N/A)		
1.7 How were the samples delivered?	(Client)	Courier	UPS/FedEx	OSE Pickup Other

2.0 Chain of Custody Verification

2.1 Was a Chain of Custody submitted with the samples?	(Yes)	No		1 2 3 4
2.2 Was the COC legible and written in permanent ink?	(Yes)	No		1 2 3 4
2.3 Have samples been relinquished and accepted by each custodian?	(Yes)	No		1 2 3 4
2.4 Did the sample labels (ID, date, time, preservative) agree with COC?	(Yes)	No		1 2 3 4
2.5 Were all of the samples listed on the COC submitted?	Yes	(No)		1 2 3 4
2.6 Were any of the samples submitted omitted from the COC?	(Yes)	(No)		1 2 3 4

3.0 Sample Verification

3.1 Were any sample containers broken or compromised?	Yes	(No)		1 2 3 4
3.2 Were any sample labels missing or illegible?	Yes	(No)		1 2 3 4
3.3 Have the correct containers been used for each analysis requested?	(Yes)	No		1 2 3 4
3.4 Have the samples been correctly preserved?	(Yes)	No	N/A	1 2 3 4
3.5 Are volatiles samples free from headspace and air bubbles?	(Yes)	No	N/A	1 2 3 4
3.6 Is there sufficient sample submitted to perform requested analyses?	(Yes)	No		1 2 3 4
3.7 Have any holding times already expired or will expire in 24 hours?	Yes	(No)		1 2 3 4
3.8 Was method 5035A used?	Yes	No	(N/A)	1 2 3 4
3.9 If 5035A was used, which sampling option was used (#1, 2, or 3).	#		(N/A)	1 2 3 4

Explain any discrepancies:

2.5) Sample 6) MW-6 8/16/12 0950 on COC missing 1-1L amber

2.6) Trip Blanks not on COC (5)

1 - Discuss issue in Case Narrative

2 - Process Sample As-is

3 - Client contacted to discuss problem

4 - Sample cannot be analyzed or client does not wish to proceed

OnSite Environmental Inc.

14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

November 30, 2012

Robert Trahan
GeoEngineers, Inc.
600 Stewart, Suite 1700
Seattle, WA 98101-1233

Re: Analytical Data for Project 5147-006-08
Laboratory Reference No. 1211-109

Dear Robert:

Enclosed are the analytical results and associated quality control data for samples submitted on November 14, 2012.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: November 30, 2012
Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

Case Narrative

Samples were collected on November 13, 2012 and received by the laboratory on November 14, 2012. They were maintained at the laboratory at a temperature of 2°C to 6°C.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Total Metals EPA 200.8/7470A Analysis

The practical quantitation limit for arsenic is elevated in samples MW-1, MW-2A, MW-4, MW-7 due to interferences present in the sample.

Dissolved Metals EPA 200.8/7470A Analysis

The practical quantitation limit for arsenic is elevated in samples MW-1, MW-2A, MW-4, MW-7 due to interferences present in the sample.

Please note that any other QA/QC issues associated with these extractions and analyses will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: November 30, 2012
Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
MW-1	11-109-01	Water	11-13-12	11-14-12	
MW-2A	11-109-02	Water	11-13-12	11-14-12	
MW-4	11-109-03	Water	11-13-12	11-14-12	
MW-3A	11-109-04	Water	11-13-12	11-14-12	
DUP	11-109-05	Water	11-13-12	11-14-12	
MW-6	11-109-06	Water	11-13-12	11-14-12	
MW-7	11-109-07	Water	11-13-12	11-14-12	
TRIP BLANK	11-109-08	Water	11-13-12	11-14-12	

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: November 30, 2012
Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

NWTPH-Gx

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-1**					
Laboratory ID:	11-109-01					
Gasoline	**ND**	100	NWTPH-Gx	11-15-12	11-15-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*86*	*71-116*				
Client ID:	**MW-2A**					
Laboratory ID:	11-109-02					
Gasoline	**ND**	100	NWTPH-Gx	11-15-12	11-15-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*86*	*71-116*				
Client ID:	**MW-4**					
Laboratory ID:	11-109-03					
Gasoline	**ND**	100	NWTPH-Gx	11-15-12	11-15-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*88*	*71-116*				
Client ID:	**MW-3A**					
Laboratory ID:	11-109-04					
Gasoline	**ND**	100	NWTPH-Gx	11-15-12	11-15-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*87*	*71-116*				
Client ID:	**DUP**					
Laboratory ID:	11-109-05					
Gasoline	**ND**	100	NWTPH-Gx	11-15-12	11-15-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*87*	*71-116*				
Client ID:	**MW-6**					
Laboratory ID:	11-109-06					
Gasoline	**ND**	100	NWTPH-Gx	11-15-12	11-15-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*87*	*71-116*				

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: November 30, 2012
Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

NWTPH-Gx

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-7**					
Laboratory ID:	11-109-07					
Gasoline	**ND**	100	NWTPH-Gx	11-15-12	11-15-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*85*	*71-116*				
Client ID:	**TRIP BLANK**					
Laboratory ID:	11-109-08					
Gasoline	**ND**	100	NWTPH-Gx	11-15-12	11-15-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*86*	*71-116*				

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: November 30, 2012
Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

NWTPH-Dx
(with acid/silica gel clean-up)

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-1**					
Laboratory ID:	11-109-01					
Diesel Range Organics	**ND**	0.26	NWTPH-Dx	11-15-12	11-15-12	
Lube Oil Range Organics	**ND**	0.41	NWTPH-Dx	11-15-12	11-15-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*97*	*50-150*				
Client ID:	**MW-2A**					
Laboratory ID:	11-109-02					
Diesel Range Organics	**ND**	0.25	NWTPH-Dx	11-15-12	11-15-12	
Lube Oil Range Organics	**ND**	0.40	NWTPH-Dx	11-15-12	11-15-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*100*	*50-150*				
Client ID:	**MW-4**					
Laboratory ID:	11-109-03					
Diesel Range Organics	**ND**	0.26	NWTPH-Dx	11-15-12	11-15-12	
Lube Oil Range Organics	**ND**	0.41	NWTPH-Dx	11-15-12	11-15-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*98*	*50-150*				
Client ID:	**MW-3A**					
Laboratory ID:	11-109-04					
Diesel Range Organics	**ND**	0.25	NWTPH-Dx	11-15-12	11-15-12	
Lube Oil Range Organics	**ND**	0.40	NWTPH-Dx	11-15-12	11-15-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*100*	*50-150*				
Client ID:	**DUP**					
Laboratory ID:	11-109-05					
Diesel Range Organics	**ND**	0.25	NWTPH-Dx	11-15-12	11-15-12	
Lube Oil Range Organics	**ND**	0.40	NWTPH-Dx	11-15-12	11-15-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*110*	*50-150*				
Client ID:	**MW-6**					
Laboratory ID:	11-109-06					
Diesel Range Organics	**ND**	0.25	NWTPH-Dx	11-15-12	11-15-12	
Lube Oil Range Organics	**ND**	0.40	NWTPH-Dx	11-15-12	11-15-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*126*	*50-150*				
Client ID:	**MW-7**					
Laboratory ID:	11-109-07					
Diesel Range Organics	**ND**	0.25	NWTPH-Dx	11-15-12	11-15-12	
Lube Oil Range Organics	**ND**	0.41	NWTPH-Dx	11-15-12	11-15-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*125*	*50-150*				

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Date of Report: November 30, 2012
Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

VOLATILES by EPA 8260C
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-3A**					
Laboratory ID:	11-109-04					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Chloromethane	ND	1.0	EPA 8260C	11-15-12	11-15-12	
Vinyl Chloride	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Bromomethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Chloroethane	ND	1.0	EPA 8260C	11-15-12	11-15-12	
Trichlorofluoromethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,1-Dichloroethene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Acetone	ND	5.0	EPA 8260C	11-15-12	11-15-12	
Iodomethane	ND	1.0	EPA 8260C	11-15-12	11-15-12	
Carbon Disulfide	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Methylene Chloride	ND	1.0	EPA 8260C	11-15-12	11-15-12	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,1-Dichloroethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Vinyl Acetate	ND	2.0	EPA 8260C	11-15-12	11-15-12	
2,2-Dichloropropane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
2-Butanone	ND	5.0	EPA 8260C	11-15-12	11-15-12	
Bromochloromethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Chloroform	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Carbon Tetrachloride	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,1-Dichloropropene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Benzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,2-Dichloroethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Trichloroethene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,2-Dichloropropane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Dibromomethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Bromodichloromethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
2-Chloroethyl Vinyl Ether	ND	2.0	EPA 8260C	11-15-12	11-15-12	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	11-15-12	11-15-12	
Toluene	ND	1.0	EPA 8260C	11-15-12	11-15-12	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	11-15-12	11-15-12	

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Laboratory Reference: 1211-109
Project: 5147-006-08

VOLATILES by EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-3A**					
Laboratory ID:	11-109-04					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Tetrachloroethene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,3-Dichloropropane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
2-Hexanone	ND	2.0	EPA 8260C	11-15-12	11-15-12	
Dibromochloromethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,2-Dibromoethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Chlorobenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Ethylbenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
m,p-Xylene	ND	0.40	EPA 8260C	11-15-12	11-15-12	
o-Xylene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Styrene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Bromoform	ND	1.0	EPA 8260C	11-15-12	11-15-12	
Isopropylbenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Bromobenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,2,3-Trichloropropane	ND	1.0	EPA 8260C	11-15-12	11-15-12	
n-Propylbenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
2-Chlorotoluene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
4-Chlorotoluene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
tert-Butylbenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
sec-Butylbenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
p-Isopropyltoluene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
n-Butylbenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	11-15-12	11-15-12	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Hexachlorobutadiene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Naphthalene	ND	1.0	EPA 8260C	11-15-12	11-15-12	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*113*	*66-120*				
Toluene-d8	*98*	*70-120*				
4-Bromofluorobenzene	*95*	*63-120*				

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Date of Report: November 30, 2012
Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

VOLATILES by EPA 8260C
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**DUP**					
Laboratory ID:	11-109-05					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Chloromethane	ND	1.0	EPA 8260C	11-15-12	11-15-12	
Vinyl Chloride	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Bromomethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Chloroethane	ND	1.0	EPA 8260C	11-15-12	11-15-12	
Trichlorofluoromethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,1-Dichloroethene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Acetone	ND	5.0	EPA 8260C	11-15-12	11-15-12	
Iodomethane	ND	1.0	EPA 8260C	11-15-12	11-15-12	
Carbon Disulfide	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Methylene Chloride	ND	1.0	EPA 8260C	11-15-12	11-15-12	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,1-Dichloroethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Vinyl Acetate	ND	2.0	EPA 8260C	11-15-12	11-15-12	
2,2-Dichloropropane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
2-Butanone	ND	5.0	EPA 8260C	11-15-12	11-15-12	
Bromochloromethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Chloroform	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Carbon Tetrachloride	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,1-Dichloropropene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Benzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,2-Dichloroethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Trichloroethene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,2-Dichloropropane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Dibromomethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Bromodichloromethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
2-Chloroethyl Vinyl Ether	ND	2.0	EPA 8260C	11-15-12	11-15-12	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	11-15-12	11-15-12	
Toluene	ND	1.0	EPA 8260C	11-15-12	11-15-12	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	11-15-12	11-15-12	

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Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

VOLATILES by EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**DUP**					
Laboratory ID:	11-109-05					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Tetrachloroethene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,3-Dichloropropane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
2-Hexanone	ND	2.0	EPA 8260C	11-15-12	11-15-12	
Dibromochloromethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,2-Dibromoethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Chlorobenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Ethylbenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
m,p-Xylene	ND	0.40	EPA 8260C	11-15-12	11-15-12	
o-Xylene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Styrene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Bromoform	ND	1.0	EPA 8260C	11-15-12	11-15-12	
Isopropylbenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Bromobenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,2,3-Trichloropropane	ND	1.0	EPA 8260C	11-15-12	11-15-12	
n-Propylbenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
2-Chlorotoluene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
4-Chlorotoluene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
tert-Butylbenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
sec-Butylbenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
p-Isopropyltoluene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
n-Butylbenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	11-15-12	11-15-12	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Hexachlorobutadiene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Naphthalene	ND	1.0	EPA 8260C	11-15-12	11-15-12	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*114*	*66-120*				
Toluene-d8	*105*	*70-120*				
4-Bromofluorobenzene	*107*	*63-120*				

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Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

VOLATILES by EPA 8260C
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-6**					
Laboratory ID:	11-109-06					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Chloromethane	ND	1.0	EPA 8260C	11-15-12	11-15-12	
Vinyl Chloride	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Bromomethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Chloroethane	ND	1.0	EPA 8260C	11-15-12	11-15-12	
Trichlorofluoromethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,1-Dichloroethene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Acetone	ND	5.0	EPA 8260C	11-15-12	11-15-12	
Iodomethane	ND	1.0	EPA 8260C	11-15-12	11-15-12	
Carbon Disulfide	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Methylene Chloride	ND	1.0	EPA 8260C	11-15-12	11-15-12	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,1-Dichloroethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Vinyl Acetate	ND	2.0	EPA 8260C	11-15-12	11-15-12	
2,2-Dichloropropane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
2-Butanone	ND	5.0	EPA 8260C	11-15-12	11-15-12	
Bromochloromethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Chloroform	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Carbon Tetrachloride	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,1-Dichloropropene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Benzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,2-Dichloroethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Trichloroethene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,2-Dichloropropane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Dibromomethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Bromodichloromethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
2-Chloroethyl Vinyl Ether	ND	2.0	EPA 8260C	11-15-12	11-15-12	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	11-15-12	11-15-12	
Toluene	ND	1.0	EPA 8260C	11-15-12	11-15-12	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	11-15-12	11-15-12	

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Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

VOLATILES by EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-6**					
Laboratory ID:	11-109-06					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Tetrachloroethene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,3-Dichloropropane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
2-Hexanone	ND	2.0	EPA 8260C	11-15-12	11-15-12	
Dibromochloromethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,2-Dibromoethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Chlorobenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Ethylbenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
m,p-Xylene	ND	0.40	EPA 8260C	11-15-12	11-15-12	
o-Xylene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Styrene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Bromoform	ND	1.0	EPA 8260C	11-15-12	11-15-12	
Isopropylbenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Bromobenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,2,3-Trichloropropane	ND	1.0	EPA 8260C	11-15-12	11-15-12	
n-Propylbenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
2-Chlorotoluene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
4-Chlorotoluene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
tert-Butylbenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
sec-Butylbenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
p-Isopropyltoluene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
n-Butylbenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	11-15-12	11-15-12	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Hexachlorobutadiene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Naphthalene	ND	1.0	EPA 8260C	11-15-12	11-15-12	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*118*	*66-120*				
Toluene-d8	*107*	*70-120*				
4-Bromofluorobenzene	*105*	*63-120*				

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: November 30, 2012
Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

VOLATILES by EPA 8260C
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-7**					
Laboratory ID:	11-109-07					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Chloromethane	ND	1.0	EPA 8260C	11-15-12	11-15-12	
Vinyl Chloride	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Bromomethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Chloroethane	ND	1.0	EPA 8260C	11-15-12	11-15-12	
Trichlorofluoromethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,1-Dichloroethene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Acetone	ND	5.0	EPA 8260C	11-15-12	11-15-12	
Iodomethane	ND	1.0	EPA 8260C	11-15-12	11-15-12	
Carbon Disulfide	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Methylene Chloride	ND	1.0	EPA 8260C	11-15-12	11-15-12	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,1-Dichloroethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Vinyl Acetate	ND	2.0	EPA 8260C	11-15-12	11-15-12	
2,2-Dichloropropane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
2-Butanone	ND	5.0	EPA 8260C	11-15-12	11-15-12	
Bromochloromethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Chloroform	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Carbon Tetrachloride	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,1-Dichloropropene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Benzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,2-Dichloroethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Trichloroethene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,2-Dichloropropane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Dibromomethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Bromodichloromethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
2-Chloroethyl Vinyl Ether	ND	2.0	EPA 8260C	11-15-12	11-15-12	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	11-15-12	11-15-12	
Toluene	ND	1.0	EPA 8260C	11-15-12	11-15-12	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	11-15-12	11-15-12	

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Date of Report: November 30, 2012
Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

VOLATILES by EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-7**					
Laboratory ID:	11-109-07					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Tetrachloroethene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,3-Dichloropropane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
2-Hexanone	ND	2.0	EPA 8260C	11-15-12	11-15-12	
Dibromochloromethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,2-Dibromoethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Chlorobenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Ethylbenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
m,p-Xylene	ND	0.40	EPA 8260C	11-15-12	11-15-12	
o-Xylene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Styrene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Bromoform	ND	1.0	EPA 8260C	11-15-12	11-15-12	
Isopropylbenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Bromobenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,2,3-Trichloropropane	ND	1.0	EPA 8260C	11-15-12	11-15-12	
n-Propylbenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
2-Chlorotoluene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
4-Chlorotoluene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
tert-Butylbenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
sec-Butylbenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
p-Isopropyltoluene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
n-Butylbenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	11-15-12	11-15-12	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Hexachlorobutadiene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Naphthalene	ND	1.0	EPA 8260C	11-15-12	11-15-12	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*120*	*66-120*				
Toluene-d8	*103*	*70-120*				
4-Bromofluorobenzene	*105*	*63-120*				

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Date of Report: November 30, 2012
Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

VOLATILES by EPA 8260C
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TRIP BLANK**					
Laboratory ID:	11-109-08					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Chloromethane	ND	1.0	EPA 8260C	11-15-12	11-15-12	
Vinyl Chloride	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Bromomethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Chloroethane	ND	1.0	EPA 8260C	11-15-12	11-15-12	
Trichlorofluoromethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,1-Dichloroethene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Acetone	ND	5.0	EPA 8260C	11-15-12	11-15-12	
Iodomethane	ND	1.0	EPA 8260C	11-15-12	11-15-12	
Carbon Disulfide	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Methylene Chloride	ND	1.0	EPA 8260C	11-15-12	11-15-12	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,1-Dichloroethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Vinyl Acetate	ND	2.0	EPA 8260C	11-15-12	11-15-12	
2,2-Dichloropropane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
2-Butanone	ND	5.0	EPA 8260C	11-15-12	11-15-12	
Bromochloromethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Chloroform	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Carbon Tetrachloride	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,1-Dichloropropene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Benzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,2-Dichloroethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Trichloroethene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,2-Dichloropropane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Dibromomethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Bromodichloromethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
2-Chloroethyl Vinyl Ether	ND	2.0	EPA 8260C	11-15-12	11-15-12	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	11-15-12	11-15-12	
Toluene	ND	1.0	EPA 8260C	11-15-12	11-15-12	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	11-15-12	11-15-12	

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Date of Report: November 30, 2012
Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

VOLATILES by EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TRIP BLANK**					
Laboratory ID:	11-109-08					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Tetrachloroethene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,3-Dichloropropane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
2-Hexanone	ND	2.0	EPA 8260C	11-15-12	11-15-12	
Dibromochloromethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,2-Dibromoethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Chlorobenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Ethylbenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
m,p-Xylene	ND	0.40	EPA 8260C	11-15-12	11-15-12	
o-Xylene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Styrene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Bromoform	ND	1.0	EPA 8260C	11-15-12	11-15-12	
Isopropylbenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Bromobenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,2,3-Trichloropropane	ND	1.0	EPA 8260C	11-15-12	11-15-12	
n-Propylbenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
2-Chlorotoluene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
4-Chlorotoluene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
tert-Butylbenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
sec-Butylbenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
p-Isopropyltoluene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
n-Butylbenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	11-15-12	11-15-12	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Hexachlorobutadiene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Naphthalene	ND	1.0	EPA 8260C	11-15-12	11-15-12	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*103*	*66-120*				
Toluene-d8	*103*	*70-120*				
4-Bromofluorobenzene	*101*	*63-120*				

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Date of Report: November 30, 2012
Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

SEMIVOLATILES EPA 8270D/SIM
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-3A**					
Laboratory ID:	11-109-04					
n-Nitrosodimethylamine	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
Pyridine	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
Phenol	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
Aniline	**ND**	4.6	EPA 8270D	11-15-12	11-16-12	
bis(2-Chloroethyl)ether	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
2-Chlorophenol	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
1,3-Dichlorobenzene	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
1,4-Dichlorobenzene	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
Benzyl alcohol	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
1,2-Dichlorobenzene	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
2-Methylphenol (o-Cresol)	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
bis(2-Chloroisopropyl)ether	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
n-Nitroso-di-n-propylamine	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
Hexachloroethane	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
Nitrobenzene	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
Isophorone	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
2-Nitrophenol	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
2,4-Dimethylphenol	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
bis(2-Chloroethoxy)methane	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
2,4-Dichlorophenol	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
1,2,4-Trichlorobenzene	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
Naphthalene	**ND**	0.093	EPA 8270/SIM	11-15-12	11-19-12	
4-Chloroaniline	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
Hexachlorobutadiene	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
4-Chloro-3-methylphenol	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
2-Methylnaphthalene	**ND**	0.093	EPA 8270/SIM	11-15-12	11-19-12	
1-Methylnaphthalene	**ND**	0.093	EPA 8270/SIM	11-15-12	11-19-12	
Hexachlorocyclopentadiene	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
2,4,6-Trichlorophenol	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
2,3-Dichloroaniline	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
2,4,5-Trichlorophenol	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
2-Chloronaphthalene	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
2-Nitroaniline	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
1,4-Dinitrobenzene	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
Dimethylphthalate	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
1,3-Dinitrobenzene	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
2,6-Dinitrotoluene	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
1,2-Dinitrobenzene	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
Acenaphthylene	**ND**	0.093	EPA 8270/SIM	11-15-12	11-19-12	
3-Nitroaniline	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	

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Date of Report: November 30, 2012
Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

SEMIVOLATILES EPA 8270D/SIM
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-3A**					
Laboratory ID:	11-109-04					
2,4-Dinitrophenol	**ND**	4.6	EPA 8270D	11-15-12	11-16-12	
Acenaphthene	**ND**	0.093	EPA 8270/SIM	11-15-12	11-19-12	
4-Nitrophenol	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
2,4-Dinitrotoluene	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
Dibenzofuran	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
2,3,5,6-Tetrachlorophenol	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
2,3,4,6-Tetrachlorophenol	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
Diethylphthalate	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
4-Chlorophenyl-phenylether	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
4-Nitroaniline	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
Fluorene	**ND**	0.093	EPA 8270/SIM	11-15-12	11-19-12	
4,6-Dinitro-2-methylphenol	**ND**	4.6	EPA 8270D	11-15-12	11-16-12	
n-Nitrosodiphenylamine	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
1,2-Diphenylhydrazine	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
4-Bromophenyl-phenylether	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
Hexachlorobenzene	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
Pentachlorophenol	**ND**	4.6	EPA 8270D	11-15-12	11-16-12	
Phenanthrene	**ND**	0.093	EPA 8270/SIM	11-15-12	11-19-12	
Anthracene	**ND**	0.093	EPA 8270/SIM	11-15-12	11-19-12	
Carbazole	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
Di-n-butylphthalate	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
Fluoranthene	**ND**	0.093	EPA 8270/SIM	11-15-12	11-19-12	
Benzidine	**ND**	4.6	EPA 8270D	11-15-12	11-16-12	
Pyrene	**ND**	0.093	EPA 8270/SIM	11-15-12	11-19-12	
Butylbenzylphthalate	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
bis-2-Ethylhexyladipate	**ND**	4.6	EPA 8270D	11-15-12	11-16-12	
3,3'-Dichlorobenzidine	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
Benzo[a]anthracene	**ND**	0.0093	EPA 8270/SIM	11-15-12	11-19-12	
Chrysene	**ND**	0.0093	EPA 8270/SIM	11-15-12	11-19-12	
bis(2-Ethylhexyl)phthalate	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
Di-n-octylphthalate	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
Benzo[b]fluoranthene	**ND**	0.0093	EPA 8270/SIM	11-15-12	11-19-12	
Benzo(j,k)fluoranthene	**ND**	0.0093	EPA 8270/SIM	11-15-12	11-19-12	
Benzo[a]pyrene	**ND**	0.0093	EPA 8270/SIM	11-15-12	11-19-12	
Indeno[1,2,3-cd]pyrene	**ND**	0.0093	EPA 8270/SIM	11-15-12	11-19-12	
Dibenz[a,h]anthracene	**ND**	0.0093	EPA 8270/SIM	11-15-12	11-19-12	
Benzo[g,h,i]perylene	**ND**	0.0093	EPA 8270/SIM	11-15-12	11-19-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*43*	*17 - 81*				
Phenol-d6	*43*	*10 - 89*				
Nitrobenzene-d5	*58*	*35 - 110*				
2-Fluorobiphenyl	*71*	*45 - 110*				
2,4,6-Tribromophenol	*80*	*39 - 125*				
Terphenyl-d14	*87*	*58 - 111*				

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: November 30, 2012
Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

SEMIVOLATILES EPA 8270D/SIM
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**DUP**					
Laboratory ID:	11-109-05					
n-Nitrosodimethylamine	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
Pyridine	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
Phenol	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
Aniline	**ND**	4.6	EPA 8270D	11-15-12	11-16-12	
bis(2-Chloroethyl)ether	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
2-Chlorophenol	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
1,3-Dichlorobenzene	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
1,4-Dichlorobenzene	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
Benzyl alcohol	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
1,2-Dichlorobenzene	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
2-Methylphenol (o-Cresol)	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
bis(2-Chloroisopropyl)ether	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
n-Nitroso-di-n-propylamine	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
Hexachloroethane	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
Nitrobenzene	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
Isophorone	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
2-Nitrophenol	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
2,4-Dimethylphenol	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
bis(2-Chloroethoxy)methane	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
2,4-Dichlorophenol	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
1,2,4-Trichlorobenzene	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
Naphthalene	**ND**	0.093	EPA 8270/SIM	11-15-12	11-19-12	
4-Chloroaniline	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
Hexachlorobutadiene	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
4-Chloro-3-methylphenol	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
2-Methylnaphthalene	**ND**	0.093	EPA 8270/SIM	11-15-12	11-19-12	
1-Methylnaphthalene	**ND**	0.093	EPA 8270/SIM	11-15-12	11-19-12	
Hexachlorocyclopentadiene	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
2,4,6-Trichlorophenol	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
2,3-Dichloroaniline	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
2,4,5-Trichlorophenol	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
2-Chloronaphthalene	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
2-Nitroaniline	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
1,4-Dinitrobenzene	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
Dimethylphthalate	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
1,3-Dinitrobenzene	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
2,6-Dinitrotoluene	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
1,2-Dinitrobenzene	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
Acenaphthylene	**ND**	0.093	EPA 8270/SIM	11-15-12	11-19-12	
3-Nitroaniline	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	

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Date of Report: November 30, 2012
Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

SEMIVOLATILES EPA 8270D/SIM
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**DUP**					
Laboratory ID:	11-109-05					
2,4-Dinitrophenol	**ND**	4.6	EPA 8270D	11-15-12	11-16-12	
Acenaphthene	**ND**	0.093	EPA 8270/SIM	11-15-12	11-19-12	
4-Nitrophenol	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
2,4-Dinitrotoluene	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
Dibenzofuran	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
2,3,5,6-Tetrachlorophenol	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
2,3,4,6-Tetrachlorophenol	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
Diethylphthalate	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
4-Chlorophenyl-phenylether	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
4-Nitroaniline	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
Fluorene	**ND**	0.093	EPA 8270/SIM	11-15-12	11-19-12	
4,6-Dinitro-2-methylphenol	**ND**	4.6	EPA 8270D	11-15-12	11-16-12	
n-Nitrosodiphenylamine	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
1,2-Diphenylhydrazine	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
4-Bromophenyl-phenylether	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
Hexachlorobenzene	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
Pentachlorophenol	**ND**	4.6	EPA 8270D	11-15-12	11-16-12	
Phenanthrene	**ND**	0.093	EPA 8270/SIM	11-15-12	11-19-12	
Anthracene	**ND**	0.093	EPA 8270/SIM	11-15-12	11-19-12	
Carbazole	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
Di-n-butylphthalate	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
Fluoranthene	**ND**	0.093	EPA 8270/SIM	11-15-12	11-19-12	
Benzidine	**ND**	4.6	EPA 8270D	11-15-12	11-16-12	
Pyrene	**ND**	0.093	EPA 8270/SIM	11-15-12	11-19-12	
Butylbenzylphthalate	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
bis-2-Ethylhexyladipate	**ND**	4.6	EPA 8270D	11-15-12	11-16-12	
3,3'-Dichlorobenzidine	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
Benzo[a]anthracene	**ND**	0.0093	EPA 8270/SIM	11-15-12	11-19-12	
Chrysene	**ND**	0.0093	EPA 8270/SIM	11-15-12	11-19-12	
bis(2-Ethylhexyl)phthalate	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
Di-n-octylphthalate	**ND**	0.93	EPA 8270D	11-15-12	11-16-12	
Benzo[b]fluoranthene	**ND**	0.0093	EPA 8270/SIM	11-15-12	11-19-12	
Benzo(j,k)fluoranthene	**ND**	0.0093	EPA 8270/SIM	11-15-12	11-19-12	
Benzo[a]pyrene	**ND**	0.0093	EPA 8270/SIM	11-15-12	11-19-12	
Indeno[1,2,3-cd]pyrene	**ND**	0.0093	EPA 8270/SIM	11-15-12	11-19-12	
Dibenz[a,h]anthracene	**ND**	0.0093	EPA 8270/SIM	11-15-12	11-19-12	
Benzo[g,h,i]perylene	**ND**	0.0093	EPA 8270/SIM	11-15-12	11-19-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*37*	*17 - 81*				
Phenol-d6	*38*	*10 - 89*				
Nitrobenzene-d5	*54*	*35 - 110*				
2-Fluorobiphenyl	*68*	*45 - 110*				
2,4,6-Tribromophenol	*84*	*39 - 125*				
Terphenyl-d14	*89*	*58 - 111*				

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Date of Report: November 30, 2012
Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

SEMIVOLATILES EPA 8270D/SIM
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-6**					
Laboratory ID:	11-109-06					
n-Nitrosodimethylamine	**ND**	0.92	EPA 8270D	11-15-12	11-16-12	
Pyridine	**ND**	0.92	EPA 8270D	11-15-12	11-16-12	
Phenol	**ND**	0.92	EPA 8270D	11-15-12	11-16-12	
Aniline	**ND**	4.6	EPA 8270D	11-15-12	11-16-12	
bis(2-Chloroethyl)ether	**ND**	0.92	EPA 8270D	11-15-12	11-16-12	
2-Chlorophenol	**ND**	0.92	EPA 8270D	11-15-12	11-16-12	
1,3-Dichlorobenzene	**ND**	0.92	EPA 8270D	11-15-12	11-16-12	
1,4-Dichlorobenzene	**ND**	0.92	EPA 8270D	11-15-12	11-16-12	
Benzyl alcohol	**ND**	0.92	EPA 8270D	11-15-12	11-16-12	
1,2-Dichlorobenzene	**ND**	0.92	EPA 8270D	11-15-12	11-16-12	
2-Methylphenol (o-Cresol)	**ND**	0.92	EPA 8270D	11-15-12	11-16-12	
bis(2-Chloroisopropyl)ether	**ND**	0.92	EPA 8270D	11-15-12	11-16-12	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.92	EPA 8270D	11-15-12	11-16-12	
n-Nitroso-di-n-propylamine	**ND**	0.92	EPA 8270D	11-15-12	11-16-12	
Hexachloroethane	**ND**	0.92	EPA 8270D	11-15-12	11-16-12	
Nitrobenzene	**ND**	0.92	EPA 8270D	11-15-12	11-16-12	
Isophorone	**ND**	0.92	EPA 8270D	11-15-12	11-16-12	
2-Nitrophenol	**ND**	0.92	EPA 8270D	11-15-12	11-16-12	
2,4-Dimethylphenol	**ND**	0.92	EPA 8270D	11-15-12	11-16-12	
bis(2-Chloroethoxy)methane	**ND**	0.92	EPA 8270D	11-15-12	11-16-12	
2,4-Dichlorophenol	**ND**	0.92	EPA 8270D	11-15-12	11-16-12	
1,2,4-Trichlorobenzene	**ND**	0.92	EPA 8270D	11-15-12	11-16-12	
Naphthalene	**ND**	0.092	EPA 8270/SIM	11-15-12	11-19-12	
4-Chloroaniline	**ND**	0.92	EPA 8270D	11-15-12	11-16-12	
Hexachlorobutadiene	**ND**	0.92	EPA 8270D	11-15-12	11-16-12	
4-Chloro-3-methylphenol	**ND**	0.92	EPA 8270D	11-15-12	11-16-12	
2-Methylnaphthalene	**ND**	0.092	EPA 8270/SIM	11-15-12	11-19-12	
1-Methylnaphthalene	**ND**	0.092	EPA 8270/SIM	11-15-12	11-19-12	
Hexachlorocyclopentadiene	**ND**	0.92	EPA 8270D	11-15-12	11-16-12	
2,4,6-Trichlorophenol	**ND**	0.92	EPA 8270D	11-15-12	11-16-12	
2,3-Dichloroaniline	**ND**	0.92	EPA 8270D	11-15-12	11-16-12	
2,4,5-Trichlorophenol	**ND**	0.92	EPA 8270D	11-15-12	11-16-12	
2-Chloronaphthalene	**ND**	0.92	EPA 8270D	11-15-12	11-16-12	
2-Nitroaniline	**ND**	0.92	EPA 8270D	11-15-12	11-16-12	
1,4-Dinitrobenzene	**ND**	0.92	EPA 8270D	11-15-12	11-16-12	
Dimethylphthalate	**ND**	0.92	EPA 8270D	11-15-12	11-16-12	
1,3-Dinitrobenzene	**ND**	0.92	EPA 8270D	11-15-12	11-16-12	
2,6-Dinitrotoluene	**ND**	0.92	EPA 8270D	11-15-12	11-16-12	
1,2-Dinitrobenzene	**ND**	0.92	EPA 8270D	11-15-12	11-16-12	
Acenaphthylene	**ND**	0.092	EPA 8270/SIM	11-15-12	11-19-12	
3-Nitroaniline	**ND**	0.92	EPA 8270D	11-15-12	11-16-12	

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Date of Report: November 30, 2012
Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

SEMIVOLATILES EPA 8270D/SIM
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-6**					
Laboratory ID:	11-109-06					
2,4-Dinitrophenol	**ND**	4.6	EPA 8270D	11-15-12	11-16-12	
Acenaphthene	**ND**	0.092	EPA 8270/SIM	11-15-12	11-19-12	
4-Nitrophenol	**ND**	0.92	EPA 8270D	11-15-12	11-16-12	
2,4-Dinitrotoluene	**ND**	0.92	EPA 8270D	11-15-12	11-16-12	
Dibenzofuran	**ND**	0.92	EPA 8270D	11-15-12	11-16-12	
2,3,5,6-Tetrachlorophenol	**ND**	0.92	EPA 8270D	11-15-12	11-16-12	
2,3,4,6-Tetrachlorophenol	**ND**	0.92	EPA 8270D	11-15-12	11-16-12	
Diethylphthalate	**ND**	0.92	EPA 8270D	11-15-12	11-16-12	
4-Chlorophenyl-phenylether	**ND**	0.92	EPA 8270D	11-15-12	11-16-12	
4-Nitroaniline	**ND**	0.92	EPA 8270D	11-15-12	11-16-12	
Fluorene	**ND**	0.092	EPA 8270/SIM	11-15-12	11-19-12	
4,6-Dinitro-2-methylphenol	**ND**	4.6	EPA 8270D	11-15-12	11-16-12	
n-Nitrosodiphenylamine	**ND**	0.92	EPA 8270D	11-15-12	11-16-12	
1,2-Diphenylhydrazine	**ND**	0.92	EPA 8270D	11-15-12	11-16-12	
4-Bromophenyl-phenylether	**ND**	0.92	EPA 8270D	11-15-12	11-16-12	
Hexachlorobenzene	**ND**	0.92	EPA 8270D	11-15-12	11-16-12	
Pentachlorophenol	**ND**	4.6	EPA 8270D	11-15-12	11-16-12	
Phenanthrene	**ND**	0.092	EPA 8270/SIM	11-15-12	11-19-12	
Anthracene	**ND**	0.092	EPA 8270/SIM	11-15-12	11-19-12	
Carbazole	**ND**	0.92	EPA 8270D	11-15-12	11-16-12	
Di-n-butylphthalate	**ND**	0.92	EPA 8270D	11-15-12	11-16-12	
Fluoranthene	**ND**	0.092	EPA 8270/SIM	11-15-12	11-19-12	
Benzidine	**ND**	4.6	EPA 8270D	11-15-12	11-16-12	
Pyrene	**ND**	0.092	EPA 8270/SIM	11-15-12	11-19-12	
Butylbenzylphthalate	**ND**	0.92	EPA 8270D	11-15-12	11-16-12	
bis-2-Ethylhexyladipate	**ND**	4.6	EPA 8270D	11-15-12	11-16-12	
3,3'-Dichlorobenzidine	**ND**	0.92	EPA 8270D	11-15-12	11-16-12	
Benzo[a]anthracene	**ND**	0.0092	EPA 8270/SIM	11-15-12	11-19-12	
Chrysene	**ND**	0.0092	EPA 8270/SIM	11-15-12	11-19-12	
bis(2-Ethylhexyl)phthalate	**ND**	0.92	EPA 8270D	11-15-12	11-16-12	
Di-n-octylphthalate	**ND**	0.92	EPA 8270D	11-15-12	11-16-12	
Benzo[b]fluoranthene	**ND**	0.0092	EPA 8270/SIM	11-15-12	11-19-12	
Benzo(j,k)fluoranthene	**ND**	0.0092	EPA 8270/SIM	11-15-12	11-19-12	
Benzo[a]pyrene	**ND**	0.0092	EPA 8270/SIM	11-15-12	11-19-12	
Indeno[1,2,3-cd]pyrene	**ND**	0.0092	EPA 8270/SIM	11-15-12	11-19-12	
Dibenz[a,h]anthracene	**ND**	0.0092	EPA 8270/SIM	11-15-12	11-19-12	
Benzo[g,h,i]perylene	**ND**	0.0092	EPA 8270/SIM	11-15-12	11-19-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*38*	*17 - 81*				
Phenol-d6	*39*	*10 - 89*				
Nitrobenzene-d5	*54*	*35 - 110*				
2-Fluorobiphenyl	*66*	*45 - 110*				
2,4,6-Tribromophenol	*79*	*39 - 125*				
Terphenyl-d14	*84*	*58 - 111*				

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Date of Report: November 30, 2012
Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

SEMIVOLATILES EPA 8270D/SIM
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-7**					
Laboratory ID:	11-109-07					
n-Nitrosodimethylamine	**ND**	0.94	EPA 8270D	11-15-12	11-17-12	
Pyridine	**ND**	0.94	EPA 8270D	11-15-12	11-17-12	
Phenol	**ND**	0.94	EPA 8270D	11-15-12	11-17-12	
Aniline	**ND**	4.7	EPA 8270D	11-15-12	11-17-12	
bis(2-Chloroethyl)ether	**ND**	0.94	EPA 8270D	11-15-12	11-17-12	
2-Chlorophenol	**ND**	0.94	EPA 8270D	11-15-12	11-17-12	
1,3-Dichlorobenzene	**ND**	0.94	EPA 8270D	11-15-12	11-17-12	
1,4-Dichlorobenzene	**ND**	0.94	EPA 8270D	11-15-12	11-17-12	
Benzyl alcohol	**ND**	0.94	EPA 8270D	11-15-12	11-17-12	
1,2-Dichlorobenzene	**ND**	0.94	EPA 8270D	11-15-12	11-17-12	
2-Methylphenol (o-Cresol)	**ND**	0.94	EPA 8270D	11-15-12	11-17-12	
bis(2-Chloroisopropyl)ether	**ND**	0.94	EPA 8270D	11-15-12	11-17-12	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.94	EPA 8270D	11-15-12	11-17-12	
n-Nitroso-di-n-propylamine	**ND**	0.94	EPA 8270D	11-15-12	11-17-12	
Hexachloroethane	**ND**	0.94	EPA 8270D	11-15-12	11-17-12	
Nitrobenzene	**ND**	0.94	EPA 8270D	11-15-12	11-17-12	
Isophorone	**ND**	0.94	EPA 8270D	11-15-12	11-17-12	
2-Nitrophenol	**ND**	0.94	EPA 8270D	11-15-12	11-17-12	
2,4-Dimethylphenol	**ND**	0.94	EPA 8270D	11-15-12	11-17-12	
bis(2-Chloroethoxy)methane	**ND**	0.94	EPA 8270D	11-15-12	11-17-12	
2,4-Dichlorophenol	**ND**	0.94	EPA 8270D	11-15-12	11-17-12	
1,2,4-Trichlorobenzene	**ND**	0.94	EPA 8270D	11-15-12	11-17-12	
Naphthalene	**ND**	0.094	EPA 8270/SIM	11-15-12	11-19-12	
4-Chloroaniline	**ND**	0.94	EPA 8270D	11-15-12	11-17-12	
Hexachlorobutadiene	**ND**	0.94	EPA 8270D	11-15-12	11-17-12	
4-Chloro-3-methylphenol	**ND**	0.94	EPA 8270D	11-15-12	11-17-12	
2-Methylnaphthalene	**ND**	0.094	EPA 8270/SIM	11-15-12	11-19-12	
1-Methylnaphthalene	**ND**	0.094	EPA 8270/SIM	11-15-12	11-19-12	
Hexachlorocyclopentadiene	**ND**	0.94	EPA 8270D	11-15-12	11-17-12	
2,4,6-Trichlorophenol	**ND**	0.94	EPA 8270D	11-15-12	11-17-12	
2,3-Dichloroaniline	**ND**	0.94	EPA 8270D	11-15-12	11-17-12	
2,4,5-Trichlorophenol	**ND**	0.94	EPA 8270D	11-15-12	11-17-12	
2-Chloronaphthalene	**ND**	0.94	EPA 8270D	11-15-12	11-17-12	
2-Nitroaniline	**ND**	0.94	EPA 8270D	11-15-12	11-17-12	
1,4-Dinitrobenzene	**ND**	0.94	EPA 8270D	11-15-12	11-17-12	
Dimethylphthalate	**ND**	0.94	EPA 8270D	11-15-12	11-17-12	
1,3-Dinitrobenzene	**ND**	0.94	EPA 8270D	11-15-12	11-17-12	
2,6-Dinitrotoluene	**ND**	0.94	EPA 8270D	11-15-12	11-17-12	
1,2-Dinitrobenzene	**ND**	0.94	EPA 8270D	11-15-12	11-17-12	
Acenaphthylene	**ND**	0.094	EPA 8270/SIM	11-15-12	11-19-12	
3-Nitroaniline	**ND**	0.94	EPA 8270D	11-15-12	11-17-12	

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Date of Report: November 30, 2012
Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

SEMIVOLATILES EPA 8270D/SIM
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-7**					
Laboratory ID:	11-109-07					
2,4-Dinitrophenol	**ND**	4.7	EPA 8270D	11-15-12	11-17-12	
Acenaphthene	**ND**	0.094	EPA 8270/SIM	11-15-12	11-19-12	
4-Nitrophenol	**ND**	0.94	EPA 8270D	11-15-12	11-17-12	
2,4-Dinitrotoluene	**ND**	0.94	EPA 8270D	11-15-12	11-17-12	
Dibenzofuran	**ND**	0.94	EPA 8270D	11-15-12	11-17-12	
2,3,5,6-Tetrachlorophenol	**ND**	0.94	EPA 8270D	11-15-12	11-17-12	
2,3,4,6-Tetrachlorophenol	**ND**	0.94	EPA 8270D	11-15-12	11-17-12	
Diethylphthalate	**ND**	0.94	EPA 8270D	11-15-12	11-17-12	
4-Chlorophenyl-phenylether	**ND**	0.94	EPA 8270D	11-15-12	11-17-12	
4-Nitroaniline	**ND**	0.94	EPA 8270D	11-15-12	11-17-12	
Fluorene	**ND**	0.094	EPA 8270/SIM	11-15-12	11-19-12	
4,6-Dinitro-2-methylphenol	**ND**	4.7	EPA 8270D	11-15-12	11-17-12	
n-Nitrosodiphenylamine	**ND**	0.94	EPA 8270D	11-15-12	11-17-12	
1,2-Diphenylhydrazine	**ND**	0.94	EPA 8270D	11-15-12	11-17-12	
4-Bromophenyl-phenylether	**ND**	0.94	EPA 8270D	11-15-12	11-17-12	
Hexachlorobenzene	**ND**	0.94	EPA 8270D	11-15-12	11-17-12	
Pentachlorophenol	**ND**	4.7	EPA 8270D	11-15-12	11-17-12	
Phenanthrene	**ND**	0.094	EPA 8270/SIM	11-15-12	11-19-12	
Anthracene	**ND**	0.094	EPA 8270/SIM	11-15-12	11-19-12	
Carbazole	**ND**	0.94	EPA 8270D	11-15-12	11-17-12	
Di-n-butylphthalate	**ND**	0.94	EPA 8270D	11-15-12	11-17-12	
Fluoranthene	**ND**	0.094	EPA 8270/SIM	11-15-12	11-19-12	
Benzidine	**ND**	4.7	EPA 8270D	11-15-12	11-17-12	
Pyrene	**ND**	0.094	EPA 8270/SIM	11-15-12	11-19-12	
Butylbenzylphthalate	**ND**	0.94	EPA 8270D	11-15-12	11-17-12	
bis-2-Ethylhexyladipate	**ND**	4.7	EPA 8270D	11-15-12	11-17-12	
3,3'-Dichlorobenzidine	**ND**	0.94	EPA 8270D	11-15-12	11-17-12	
Benzo[a]anthracene	**0.013**	0.0094	EPA 8270/SIM	11-15-12	11-19-12	
Chrysene	**ND**	0.0094	EPA 8270/SIM	11-15-12	11-19-12	
bis(2-Ethylhexyl)phthalate	**ND**	0.94	EPA 8270D	11-15-12	11-17-12	
Di-n-octylphthalate	**ND**	0.94	EPA 8270D	11-15-12	11-17-12	
Benzo[b]fluoranthene	**ND**	0.0094	EPA 8270/SIM	11-15-12	11-19-12	
Benzo(j,k)fluoranthene	**ND**	0.0094	EPA 8270/SIM	11-15-12	11-19-12	
Benzo[a]pyrene	**0.0097**	0.0094	EPA 8270/SIM	11-15-12	11-19-12	
Indeno[1,2,3-cd]pyrene	**ND**	0.0094	EPA 8270/SIM	11-15-12	11-19-12	
Dibenz[a,h]anthracene	**ND**	0.0094	EPA 8270/SIM	11-15-12	11-19-12	
Benzo[g,h,i]perylene	**ND**	0.0094	EPA 8270/SIM	11-15-12	11-19-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*49*	*17 - 81*				
Phenol-d6	*40*	*10 - 89*				
Nitrobenzene-d5	*71*	*35 - 110*				
2-Fluorobiphenyl	*80*	*45 - 110*				
2,4,6-Tribromophenol	*91*	*39 - 125*				
Terphenyl-d14	*94*	*58 - 111*				

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Date of Report: November 30, 2012
Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

PAHs by EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-1**					
Laboratory ID:	11-109-01					
Naphthalene	**ND**	0.095	EPA 8270D/SIM	11-15-12	11-15-12	
2-Methylnaphthalene	**ND**	0.095	EPA 8270D/SIM	11-15-12	11-15-12	
1-Methylnaphthalene	**ND**	0.095	EPA 8270D/SIM	11-15-12	11-15-12	
Acenaphthylene	**ND**	0.095	EPA 8270D/SIM	11-15-12	11-15-12	
Acenaphthene	**ND**	0.095	EPA 8270D/SIM	11-15-12	11-15-12	
Fluorene	**ND**	0.095	EPA 8270D/SIM	11-15-12	11-15-12	
Phenanthrene	**ND**	0.095	EPA 8270D/SIM	11-15-12	11-15-12	
Anthracene	**ND**	0.095	EPA 8270D/SIM	11-15-12	11-15-12	
Fluoranthene	**ND**	0.095	EPA 8270D/SIM	11-15-12	11-15-12	
Pyrene	**ND**	0.095	EPA 8270D/SIM	11-15-12	11-15-12	
Benzo[a]anthracene	**ND**	0.0095	EPA 8270D/SIM	11-15-12	11-15-12	
Chrysene	**ND**	0.0095	EPA 8270D/SIM	11-15-12	11-15-12	
Benzo[b]fluoranthene	**ND**	0.0095	EPA 8270D/SIM	11-15-12	11-15-12	
Benzo(j,k)fluoranthene	**ND**	0.0095	EPA 8270D/SIM	11-15-12	11-15-12	
Benzo[a]pyrene	**ND**	0.0095	EPA 8270D/SIM	11-15-12	11-15-12	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0095	EPA 8270D/SIM	11-15-12	11-15-12	
Dibenz[a,h]anthracene	**ND**	0.0095	EPA 8270D/SIM	11-15-12	11-15-12	
Benzo[g,h,i]perylene	**ND**	0.0095	EPA 8270D/SIM	11-15-12	11-15-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*96*	*40 - 107*				
Pyrene-d10	*95*	*41 - 106*				
Terphenyl-d14	*109*	*44 - 124*				

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Date of Report: November 30, 2012
Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

PAHs by EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-2A**					
Laboratory ID:	11-109-02					
Naphthalene	**ND**	0.093	EPA 8270D/SIM	11-15-12	11-15-12	
2-Methylnaphthalene	**ND**	0.093	EPA 8270D/SIM	11-15-12	11-15-12	
1-Methylnaphthalene	**ND**	0.093	EPA 8270D/SIM	11-15-12	11-15-12	
Acenaphthylene	**ND**	0.093	EPA 8270D/SIM	11-15-12	11-15-12	
Acenaphthene	**ND**	0.093	EPA 8270D/SIM	11-15-12	11-15-12	
Fluorene	**ND**	0.093	EPA 8270D/SIM	11-15-12	11-15-12	
Phenanthrene	**ND**	0.093	EPA 8270D/SIM	11-15-12	11-15-12	
Anthracene	**ND**	0.093	EPA 8270D/SIM	11-15-12	11-15-12	
Fluoranthene	**ND**	0.093	EPA 8270D/SIM	11-15-12	11-15-12	
Pyrene	**ND**	0.093	EPA 8270D/SIM	11-15-12	11-15-12	
Benzo[a]anthracene	**ND**	0.0093	EPA 8270D/SIM	11-15-12	11-15-12	
Chrysene	**ND**	0.0093	EPA 8270D/SIM	11-15-12	11-15-12	
Benzo[b]fluoranthene	**ND**	0.0093	EPA 8270D/SIM	11-15-12	11-15-12	
Benzo(j,k)fluoranthene	**ND**	0.0093	EPA 8270D/SIM	11-15-12	11-15-12	
Benzo[a]pyrene	**ND**	0.0093	EPA 8270D/SIM	11-15-12	11-15-12	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0093	EPA 8270D/SIM	11-15-12	11-15-12	
Dibenz[a,h]anthracene	**ND**	0.0093	EPA 8270D/SIM	11-15-12	11-15-12	
Benzo[g,h,i]perylene	**ND**	0.0093	EPA 8270D/SIM	11-15-12	11-15-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*75*	*40 - 107*				
Pyrene-d10	*75*	*41 - 106*				
Terphenyl-d14	*99*	*44 - 124*				

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Date of Report: November 30, 2012
Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

PAHs by EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-4**					
Laboratory ID:	11-109-03					
Naphthalene	**ND**	0.095	EPA 8270D/SIM	11-15-12	11-15-12	
2-Methylnaphthalene	**ND**	0.095	EPA 8270D/SIM	11-15-12	11-15-12	
1-Methylnaphthalene	**ND**	0.095	EPA 8270D/SIM	11-15-12	11-15-12	
Acenaphthylene	**ND**	0.095	EPA 8270D/SIM	11-15-12	11-15-12	
Acenaphthene	**ND**	0.095	EPA 8270D/SIM	11-15-12	11-15-12	
Fluorene	**ND**	0.095	EPA 8270D/SIM	11-15-12	11-15-12	
Phenanthrene	**ND**	0.095	EPA 8270D/SIM	11-15-12	11-15-12	
Anthracene	**ND**	0.095	EPA 8270D/SIM	11-15-12	11-15-12	
Fluoranthene	**ND**	0.095	EPA 8270D/SIM	11-15-12	11-15-12	
Pyrene	**ND**	0.095	EPA 8270D/SIM	11-15-12	11-15-12	
Benzo[a]anthracene	**0.033**	0.0095	EPA 8270D/SIM	11-15-12	11-15-12	
Chrysene	**0.021**	0.0095	EPA 8270D/SIM	11-15-12	11-15-12	
Benzo[b]fluoranthene	**0.021**	0.0095	EPA 8270D/SIM	11-15-12	11-15-12	
Benzo(j,k)fluoranthene	**0.018**	0.0095	EPA 8270D/SIM	11-15-12	11-15-12	
Benzo[a]pyrene	**0.020**	0.0095	EPA 8270D/SIM	11-15-12	11-15-12	
Indeno(1,2,3-c,d)pyrene	**0.021**	0.0095	EPA 8270D/SIM	11-15-12	11-15-12	
Dibenz[a,h]anthracene	**0.018**	0.0095	EPA 8270D/SIM	11-15-12	11-15-12	
Benzo[g,h,i]perylene	**0.020**	0.0095	EPA 8270D/SIM	11-15-12	11-15-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*94*	*40 - 107*				
Pyrene-d10	*72*	*41 - 106*				
Terphenyl-d14	*96*	*44 - 124*				

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Date of Report: November 30, 2012
Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

ORGANOCHLORINE PESTICIDES by EPA 8081B

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-3A**					
Laboratory ID:	11-109-04					
alpha-BHC	**ND**	0.0046	EPA 8081B	11-15-12	11-16-12	
gamma-BHC	**ND**	0.0046	EPA 8081B	11-15-12	11-16-12	
beta-BHC	**ND**	0.0046	EPA 8081B	11-15-12	11-16-12	
delta-BHC	**ND**	0.0046	EPA 8081B	11-15-12	11-16-12	
Heptachlor	**ND**	0.0046	EPA 8081B	11-15-12	11-16-12	
Aldrin	**ND**	0.0046	EPA 8081B	11-15-12	11-16-12	
Heptachlor Epoxide	**ND**	0.0046	EPA 8081B	11-15-12	11-16-12	
gamma-Chlordane	**ND**	0.0046	EPA 8081B	11-15-12	11-16-12	
alpha-Chlordane	**ND**	0.0046	EPA 8081B	11-15-12	11-16-12	
4,4'-DDE	**ND**	0.0046	EPA 8081B	11-15-12	11-16-12	
Endosulfan I	**ND**	0.0046	EPA 8081B	11-15-12	11-16-12	
Dieldrin	**ND**	0.0046	EPA 8081B	11-15-12	11-16-12	
Endrin	**ND**	0.0046	EPA 8081B	11-15-12	11-16-12	
4,4'-DDD	**ND**	0.0046	EPA 8081B	11-15-12	11-16-12	
Endosulfan II	**ND**	0.0046	EPA 8081B	11-15-12	11-16-12	
4,4'-DDT	**ND**	0.0046	EPA 8081B	11-15-12	11-16-12	
Endrin Aldehyde	**ND**	0.0046	EPA 8081B	11-15-12	11-16-12	
Methoxychlor	**ND**	0.0093	EPA 8081B	11-15-12	11-16-12	
Endosulfan Sulfate	**ND**	0.0046	EPA 8081B	11-15-12	11-16-12	
Endrin Ketone	**ND**	0.019	EPA 8081B	11-15-12	11-16-12	
Toxaphene	**ND**	0.046	EPA 8081B	11-15-12	11-16-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*77*	*34-88*				
DCB	*78*	*48-115*				

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Date of Report: November 30, 2012
Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

ORGANOCHLORINE PESTICIDES by EPA 8081B

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**DUP**					
Laboratory ID:	11-109-05					
alpha-BHC	**ND**	0.0047	EPA 8081B	11-15-12	11-16-12	
gamma-BHC	**ND**	0.0047	EPA 8081B	11-15-12	11-16-12	
beta-BHC	**ND**	0.0047	EPA 8081B	11-15-12	11-16-12	
delta-BHC	**ND**	0.0047	EPA 8081B	11-15-12	11-16-12	
Heptachlor	**ND**	0.0047	EPA 8081B	11-15-12	11-16-12	
Aldrin	**ND**	0.0047	EPA 8081B	11-15-12	11-16-12	
Heptachlor Epoxide	**ND**	0.0047	EPA 8081B	11-15-12	11-16-12	
gamma-Chlordane	**ND**	0.0047	EPA 8081B	11-15-12	11-16-12	
alpha-Chlordane	**ND**	0.0047	EPA 8081B	11-15-12	11-16-12	
4,4'-DDE	**ND**	0.0047	EPA 8081B	11-15-12	11-16-12	
Endosulfan I	**ND**	0.0047	EPA 8081B	11-15-12	11-16-12	
Dieldrin	**ND**	0.0047	EPA 8081B	11-15-12	11-16-12	
Endrin	**ND**	0.0047	EPA 8081B	11-15-12	11-16-12	
4,4'-DDD	**ND**	0.0047	EPA 8081B	11-15-12	11-16-12	
Endosulfan II	**ND**	0.0047	EPA 8081B	11-15-12	11-16-12	
4,4'-DDT	**ND**	0.0047	EPA 8081B	11-15-12	11-16-12	
Endrin Aldehyde	**ND**	0.0047	EPA 8081B	11-15-12	11-16-12	
Methoxychlor	**ND**	0.0093	EPA 8081B	11-15-12	11-16-12	
Endosulfan Sulfate	**ND**	0.0047	EPA 8081B	11-15-12	11-16-12	
Endrin Ketone	**ND**	0.019	EPA 8081B	11-15-12	11-16-12	
Toxaphene	**ND**	0.047	EPA 8081B	11-15-12	11-16-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*72*	*34-88*				
DCB	*75*	*48-115*				

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Date of Report: November 30, 2012
Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

ORGANOCHLORINE PESTICIDES by EPA 8081B

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-6**					
Laboratory ID:	11-109-06					
alpha-BHC	**ND**	0.0046	EPA 8081B	11-15-12	11-16-12	
gamma-BHC	**ND**	0.0046	EPA 8081B	11-15-12	11-16-12	
beta-BHC	**ND**	0.0046	EPA 8081B	11-15-12	11-16-12	
delta-BHC	**ND**	0.0046	EPA 8081B	11-15-12	11-16-12	
Heptachlor	**ND**	0.0046	EPA 8081B	11-15-12	11-16-12	
Aldrin	**ND**	0.0046	EPA 8081B	11-15-12	11-16-12	
Heptachlor Epoxide	**ND**	0.0046	EPA 8081B	11-15-12	11-16-12	
gamma-Chlordane	**ND**	0.0046	EPA 8081B	11-15-12	11-16-12	
alpha-Chlordane	**ND**	0.0046	EPA 8081B	11-15-12	11-16-12	
4,4'-DDE	**ND**	0.0046	EPA 8081B	11-15-12	11-16-12	
Endosulfan I	**ND**	0.0046	EPA 8081B	11-15-12	11-16-12	
Dieldrin	**ND**	0.0046	EPA 8081B	11-15-12	11-16-12	
Endrin	**ND**	0.0046	EPA 8081B	11-15-12	11-16-12	
4,4'-DDD	**ND**	0.0046	EPA 8081B	11-15-12	11-16-12	
Endosulfan II	**ND**	0.0046	EPA 8081B	11-15-12	11-16-12	
4,4'-DDT	**ND**	0.0046	EPA 8081B	11-15-12	11-16-12	
Endrin Aldehyde	**ND**	0.0046	EPA 8081B	11-15-12	11-16-12	
Methoxychlor	**ND**	0.0092	EPA 8081B	11-15-12	11-16-12	
Endosulfan Sulfate	**ND**	0.0046	EPA 8081B	11-15-12	11-16-12	
Endrin Ketone	**ND**	0.018	EPA 8081B	11-15-12	11-16-12	
Toxaphene	**ND**	0.046	EPA 8081B	11-15-12	11-16-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*72*	*34-88*				
DCB	*75*	*48-115*				

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Date of Report: November 30, 2012
Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

ORGANOCHLORINE PESTICIDES by EPA 8081B

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-7**					
Laboratory ID:	11-109-07					
alpha-BHC	**ND**	0.0047	EPA 8081B	11-15-12	11-16-12	
gamma-BHC	**ND**	0.0047	EPA 8081B	11-15-12	11-16-12	
beta-BHC	**ND**	0.0047	EPA 8081B	11-15-12	11-16-12	
delta-BHC	**ND**	0.0047	EPA 8081B	11-15-12	11-16-12	
Heptachlor	**ND**	0.0047	EPA 8081B	11-15-12	11-16-12	
Aldrin	**ND**	0.0047	EPA 8081B	11-15-12	11-16-12	
Heptachlor Epoxide	**ND**	0.0047	EPA 8081B	11-15-12	11-16-12	
gamma-Chlordane	**ND**	0.0047	EPA 8081B	11-15-12	11-16-12	
alpha-Chlordane	**ND**	0.0047	EPA 8081B	11-15-12	11-16-12	
4,4'-DDE	**ND**	0.0047	EPA 8081B	11-15-12	11-16-12	
Endosulfan I	**ND**	0.0047	EPA 8081B	11-15-12	11-16-12	
Dieldrin	**ND**	0.0047	EPA 8081B	11-15-12	11-16-12	
Endrin	**ND**	0.0047	EPA 8081B	11-15-12	11-16-12	
4,4'-DDD	**ND**	0.0047	EPA 8081B	11-15-12	11-16-12	
Endosulfan II	**ND**	0.0047	EPA 8081B	11-15-12	11-16-12	
4,4'-DDT	**ND**	0.0047	EPA 8081B	11-15-12	11-16-12	
Endrin Aldehyde	**ND**	0.0047	EPA 8081B	11-15-12	11-16-12	
Methoxychlor	**ND**	0.0095	EPA 8081B	11-15-12	11-16-12	
Endosulfan Sulfate	**ND**	0.0047	EPA 8081B	11-15-12	11-16-12	
Endrin Ketone	**ND**	0.019	EPA 8081B	11-15-12	11-16-12	
Toxaphene	**ND**	0.047	EPA 8081B	11-15-12	11-16-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*59*	*34-88*				
DCB	*70*	*48-115*				

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Date of Report: November 30, 2012
Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

TOTAL METALS
EPA 200.8/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	11-109-01					
Client ID:	**MW-1**					
Arsenic	**ND**	16	200.8	11-19-12	11-26-12	U1
Copper	**ND**	20	200.8	11-19-12	11-26-12	
Mercury	**ND**	0.038	7470A	11-21-12	11-21-12	
Nickel	**5.4**	5.0	200.8	11-19-12	11-26-12	
Silver	**ND**	10	200.8	11-19-12	11-26-12	
Zinc	**ND**	50	200.8	11-19-12	11-26-12	
Lab ID:	11-109-02					
Client ID:	**MW-2A**					
Arsenic	**ND**	10	200.8	11-19-12	11-26-12	U1
Copper	**ND**	20	200.8	11-19-12	11-26-12	
Mercury	**ND**	0.038	7470A	11-21-12	11-21-12	
Nickel	**13**	5.0	200.8	11-19-12	11-26-12	
Silver	**ND**	10	200.8	11-19-12	11-26-12	
Zinc	**ND**	50	200.8	11-19-12	11-26-12	

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Date of Report: November 30, 2012
Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

TOTAL METALS
EPA 200.8/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	11-109-03					
Client ID:	**MW-4**					
Arsenic	**ND**	10	200.8	11-19-12	11-26-12	U1
Copper	**ND**	20	200.8	11-19-12	11-26-12	
Mercury	**ND**	0.038	7470A	11-21-12	11-21-12	
Nickel	**ND**	5.0	200.8	11-19-12	11-26-12	
Silver	**ND**	10	200.8	11-19-12	11-26-12	
Zinc	**ND**	50	200.8	11-19-12	11-26-12	
Lab ID:	11-109-04					
Client ID:	**MW-3A**					
Arsenic	**ND**	8.0	200.8	11-19-12	11-26-12	
Cadmium	**ND**	8.0	200.8	11-19-12	11-26-12	
Chromium	**ND**	20	200.8	11-19-12	11-26-12	
Copper	**ND**	20	200.8	11-19-12	11-26-12	
Lead	**ND**	2.0	200.8	11-19-12	11-26-12	
Mercury	**ND**	0.038	7470A	11-21-12	11-21-12	
Nickel	**16**	5.0	200.8	11-19-12	11-26-12	
Silver	**ND**	10	200.8	11-19-12	11-26-12	
Zinc	**ND**	50	200.8	11-19-12	11-26-12	

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Date of Report: November 30, 2012
Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

TOTAL METALS
EPA 200.8/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	11-109-05					
Client ID:	**DUP**					
Arsenic	**ND**	8.0	200.8	11-19-12	11-26-12	
Cadmium	**ND**	8.0	200.8	11-19-12	11-26-12	
Chromium	**ND**	20	200.8	11-19-12	11-26-12	
Copper	**ND**	20	200.8	11-19-12	11-26-12	
Lead	**ND**	2.0	200.8	11-19-12	11-26-12	
Mercury	**ND**	0.038	7470A	11-21-12	11-21-12	
Nickel	**18**	5.0	200.8	11-19-12	11-26-12	
Silver	**ND**	10	200.8	11-19-12	11-26-12	
Zinc	**ND**	50	200.8	11-19-12	11-26-12	
Lab ID:	11-109-06					
Client ID:	**MW-6**					
Arsenic	**ND**	8.0	200.8	11-19-12	11-26-12	
Cadmium	**ND**	8.0	200.8	11-19-12	11-26-12	
Chromium	**ND**	20	200.8	11-19-12	11-26-12	
Copper	**ND**	20	200.8	11-19-12	11-26-12	
Lead	**ND**	2.0	200.8	11-19-12	11-26-12	
Mercury	**ND**	0.038	7470A	11-21-12	11-21-12	
Nickel	**18**	5.0	200.8	11-19-12	11-26-12	
Silver	**ND**	10	200.8	11-19-12	11-26-12	
Zinc	**ND**	50	200.8	11-19-12	11-26-12	

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Date of Report: November 30, 2012
Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

TOTAL METALS
EPA 200.8/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	11-109-07					
Client ID:	**MW-7**					
Arsenic	**ND**	13	200.8	11-19-12	11-26-12	U1
Cadmium	**ND**	8.0	200.8	11-19-12	11-26-12	
Chromium	**ND**	20	200.8	11-19-12	11-26-12	
Copper	**ND**	20	200.8	11-19-12	11-26-12	
Lead	**ND**	2.0	200.8	11-19-12	11-26-12	
Mercury	**ND**	0.038	7470A	11-21-12	11-21-12	
Nickel	**18**	5.0	200.8	11-19-12	11-26-12	
Silver	**ND**	10	200.8	11-19-12	11-26-12	
Zinc	**ND**	50	200.8	11-19-12	11-26-12	

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Date of Report: November 30, 2012
Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

DISSOLVED METALS
EPA 200.8/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	11-109-01					
Client ID:	**MW-1**					
Arsenic	**ND**	16	200.8		11-26-12	U1
Copper	**ND**	20	200.8		11-26-12	
Mercury	**ND**	0.038	7470A		11-21-12	
Nickel	**ND**	5.0	200.8		11-26-12	
Silver	**ND**	10	200.8		11-26-12	
Zinc	**ND**	50	200.8		11-26-12	
Lab ID:	11-109-02					
Client ID:	**MW-2A**					
Arsenic	**ND**	10	200.8		11-26-12	U1
Copper	**ND**	20	200.8		11-26-12	
Mercury	**ND**	0.038	7470A		11-21-12	
Nickel	**13**	5.0	200.8		11-26-12	
Silver	**ND**	10	200.8		11-26-12	
Zinc	**ND**	50	200.8		11-26-12	

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Date of Report: November 30, 2012
Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

DISSOLVED METALS
EPA 200.8/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	11-109-03					
Client ID:	**MW-4**					
Arsenic	**ND**	10	200.8		11-26-12	U1
Copper	**ND**	20	200.8		11-26-12	
Mercury	**ND**	0.038	7470A		11-21-12	
Nickel	**ND**	5.0	200.8		11-26-12	
Silver	**ND**	10	200.8		11-26-12	
Zinc	**ND**	50	200.8		11-26-12	
Lab ID:	11-109-04					
Client ID:	**MW-3A**					
Arsenic	**ND**	8.0	200.8		11-26-12	
Cadmium	**ND**	8.0	200.8		11-26-12	
Chromium	**ND**	20	200.8		11-26-12	
Copper	**ND**	20	200.8		11-26-12	
Lead	**ND**	2.0	200.8		11-26-12	
Mercury	**ND**	0.038	7470A		11-21-12	
Nickel	**17**	5.0	200.8		11-26-12	
Silver	**ND**	10	200.8		11-26-12	
Zinc	**ND**	50	200.8		11-26-12	

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Date of Report: November 30, 2012
Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

DISSOLVED METALS
EPA 200.8/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	11-109-05					
Client ID:	**DUP**					
Arsenic	**ND**	8.0	200.8		11-26-12	
Cadmium	**ND**	8.0	200.8		11-26-12	
Chromium	**ND**	20	200.8		11-26-12	
Copper	**ND**	20	200.8		11-26-12	
Lead	**ND**	2.0	200.8		11-26-12	
Mercury	**ND**	0.038	7470A		11-21-12	
Nickel	**17**	5.0	200.8		11-26-12	
Silver	**ND**	10	200.8		11-26-12	
Zinc	**ND**	50	200.8		11-26-12	
Lab ID:	11-109-06					
Client ID:	**MW-6**					
Arsenic	**ND**	8.0	200.8		11-26-12	
Cadmium	**ND**	8.0	200.8		11-26-12	
Chromium	**ND**	20	200.8		11-26-12	
Copper	**ND**	20	200.8		11-26-12	
Lead	**ND**	2.0	200.8		11-26-12	
Mercury	**ND**	0.038	7470A		11-21-12	
Nickel	**18**	5.0	200.8		11-26-12	
Silver	**ND**	10	200.8		11-26-12	
Zinc	**ND**	50	200.8		11-26-12	

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Date of Report: November 30, 2012
Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

DISSOLVED METALS
EPA 200.8/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	11-109-07					
Client ID:	**MW-7**					
Arsenic	**ND**	13	200.8		11-26-12	U1
Cadmium	**ND**	8.0	200.8		11-26-12	
Chromium	**ND**	20	200.8		11-26-12	
Copper	**ND**	20	200.8		11-26-12	
Lead	**ND**	2.0	200.8		11-26-12	
Mercury	**ND**	0.038	7470A		11-21-12	
Nickel	**19**	5.0	200.8		11-26-12	
Silver	**ND**	10	200.8		11-26-12	
Zinc	**ND**	50	200.8		11-26-12	

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Date of Report: November 30, 2012
Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

EDB by EPA 8011

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-3A**					
Laboratory ID:	11-109-04					
EDB	**ND**	0.0094	EPA 8011	11-26-12	11-26-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*81*	*30-158*				
Client ID:	**DUP**					
Laboratory ID:	11-109-05					
EDB	**ND**	0.0094	EPA 8011	11-26-12	11-26-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*81*	*30-158*				
Client ID:	**MW-6**					
Laboratory ID:	11-109-06					
EDB	**ND**	0.0094	EPA 8011	11-26-12	11-26-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*79*	*30-158*				
Client ID:	**MW-7**					
Laboratory ID:	11-109-07					
EDB	**ND**	0.0097	EPA 8011	11-26-12	11-26-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*95*	*30-158*				
Client ID:	**TRIP BLANK**					
Laboratory ID:	11-109-08					
EDB	**ND**	0.0097	EPA 8011	11-26-12	11-26-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*120*	*30-158*				

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Date of Report: November 30, 2012
Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

CHLORINATED ACID HERBICIDES by EPA 8151A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-3A**					
Laboratory ID:	11-109-04					
Dalapon	**ND**	0.21	EPA 8151A	11-20-12	11-20-12	
Dicamba	**ND**	0.022	EPA 8151A	11-20-12	11-20-12	
MCPP	**ND**	4.3	EPA 8151A	11-20-12	11-20-12	
MCPA	**ND**	4.3	EPA 8151A	11-20-12	11-20-12	
Dichlorprop	**ND**	0.022	EPA 8151A	11-20-12	11-20-12	
2,4-D	**ND**	0.022	EPA 8151A	11-20-12	11-20-12	
Pentachlorophenol	**ND**	0.0088	EPA 8151A	11-20-12	11-20-12	
2,4,5-TP (Silvex)	**ND**	0.022	EPA 8151A	11-20-12	11-20-12	
2,4,5-T	**ND**	0.022	EPA 8151A	11-20-12	11-20-12	
2,4-DB	**ND**	0.044	EPA 8151A	11-20-12	11-20-12	
Dinoseb	**ND**	0.022	EPA 8151A	11-20-12	11-20-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCAA	*55*	*30-98*				
Client ID:	**DUP**					
Laboratory ID:	11-109-05					
Dalapon	**ND**	0.22	EPA 8151A	11-20-12	11-20-12	
Dicamba	**ND**	0.022	EPA 8151A	11-20-12	11-20-12	
MCPP	**ND**	4.4	EPA 8151A	11-20-12	11-20-12	
MCPA	**ND**	4.4	EPA 8151A	11-20-12	11-20-12	
Dichlorprop	**ND**	0.022	EPA 8151A	11-20-12	11-20-12	
2,4-D	**ND**	0.022	EPA 8151A	11-20-12	11-20-12	
Pentachlorophenol	**ND**	0.0090	EPA 8151A	11-20-12	11-20-12	
2,4,5-TP (Silvex)	**ND**	0.022	EPA 8151A	11-20-12	11-20-12	
2,4,5-T	**ND**	0.022	EPA 8151A	11-20-12	11-20-12	
2,4-DB	**ND**	0.045	EPA 8151A	11-20-12	11-20-12	
Dinoseb	**ND**	0.022	EPA 8151A	11-20-12	11-20-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCAA	*54*	*30-98*				

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Date of Report: November 30, 2012
Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

CHLORINATED ACID HERBICIDES by EPA 8151A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-6**					
Laboratory ID:	11-109-06					
Dalapon	**ND**	0.21	EPA 8151A	11-20-12	11-20-12	
Dicamba	**ND**	0.022	EPA 8151A	11-20-12	11-20-12	
MCPP	**ND**	4.3	EPA 8151A	11-20-12	11-20-12	
MCPA	**ND**	4.3	EPA 8151A	11-20-12	11-20-12	
Dichlorprop	**ND**	0.022	EPA 8151A	11-20-12	11-20-12	
2,4-D	**ND**	0.022	EPA 8151A	11-20-12	11-20-12	
Pentachlorophenol	**ND**	0.0088	EPA 8151A	11-20-12	11-20-12	
2,4,5-TP (Silvex)	**ND**	0.022	EPA 8151A	11-20-12	11-20-12	
2,4,5-T	**ND**	0.022	EPA 8151A	11-20-12	11-20-12	
2,4-DB	**ND**	0.044	EPA 8151A	11-20-12	11-20-12	
Dinoseb	**ND**	0.022	EPA 8151A	11-20-12	11-20-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCAA	*58*	*30-98*				
Client ID:	**MW-7**					
Laboratory ID:	11-109-07					
Dalapon	**ND**	0.21	EPA 8151A	11-20-12	11-20-12	
Dicamba	**ND**	0.022	EPA 8151A	11-20-12	11-20-12	
MCPP	**ND**	4.3	EPA 8151A	11-20-12	11-20-12	
MCPA	**ND**	4.3	EPA 8151A	11-20-12	11-20-12	
Dichlorprop	**ND**	0.022	EPA 8151A	11-20-12	11-20-12	
2,4-D	**ND**	0.022	EPA 8151A	11-20-12	11-20-12	
Pentachlorophenol	**ND**	0.0088	EPA 8151A	11-20-12	11-20-12	
2,4,5-TP (Silvex)	**ND**	0.022	EPA 8151A	11-20-12	11-20-12	
2,4,5-T	**ND**	0.022	EPA 8151A	11-20-12	11-20-12	
2,4-DB	**ND**	0.044	EPA 8151A	11-20-12	11-20-12	
Dinoseb	**ND**	0.022	EPA 8151A	11-20-12	11-20-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCAA	*69*	*30-98*				

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Date of Report: November 30, 2012
Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

NWTPH-Gx
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1115W2					
Gasoline	**ND**	100	NWTPH-Gx	11-15-12	11-15-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*87*	*71-116*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	11-109-07										
	ORIG	DUP									
Gasoline	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*85*	*85*	*71-116*			

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Laboratory Reference: 1211-109
Project: 5147-006-08

NWTPH-Gx
CONTINUING CALIBRATION SUMMARY

Lab ID	True Value (ppm)	Calc. Value	Percent Difference	Control Limits
CCVH1115G-1	5.00	4.98	0	+/- 20%
CCVH1115G-2	5.00	4.93	1	+/- 20%

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Project: 5147-006-08

NWTPH-Dx
QUALITY CONTROL
(with acid/silica gel clean-up)

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1115W1					
Diesel Range Organics	**ND**	0.25	NWTPH-Dx	11-15-12	11-15-12	
Lube Oil Range Organics	**ND**	0.40	NWTPH-Dx	11-15-12	11-15-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*86*	*50-150*				

Analyte	Result		Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE							
Laboratory ID:	11-109-07						
	ORIG	DUP					
Diesel Range Organics	**ND**	**ND**			NA	NA	
Lube Oil Range Organics	**ND**	**ND**			NA	NA	
Surrogate:							
o-Terphenyl			*125*	*50-150*			

Analyte	Result	Spike Level	Percent Recovery	Recovery Limits	Flags
SPIKE BLANK					
Laboratory ID:	SB1115W1				
Diesel Fuel #2	**0.760**	1.00	**76**	NA	
Surrogate:					
o-Terphenyl			*73*	*50-150*	

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Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

NWTPH-Dx
CONTINUING CALIBRATION SUMMARY

Lab ID	True Value (ppm)	Calc. Value	Percent Difference	Contol Limits
CCV1115R-V1	100	98.9	1.1	+/-15%
CCV1115R-V2	100	95.2	4.8	+/-15%
CCV1115F-V2	100	97.1	2.9	+/-15%
CCV1115F-V3	100	101	-1.0	+/-15%

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Date of Report: November 30, 2012
Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

VOLATILES by EPA 8260C
METHOD BLANK QUALITY CONTROL
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1115W1					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Chloromethane	ND	1.0	EPA 8260C	11-15-12	11-15-12	
Vinyl Chloride	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Bromomethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Chloroethane	ND	1.0	EPA 8260C	11-15-12	11-15-12	
Trichlorofluoromethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,1-Dichloroethene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Acetone	ND	5.0	EPA 8260C	11-15-12	11-15-12	
Iodomethane	ND	1.0	EPA 8260C	11-15-12	11-15-12	
Carbon Disulfide	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Methylene Chloride	ND	1.0	EPA 8260C	11-15-12	11-15-12	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,1-Dichloroethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Vinyl Acetate	ND	2.0	EPA 8260C	11-15-12	11-15-12	
2,2-Dichloropropane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
2-Butanone	ND	5.0	EPA 8260C	11-15-12	11-15-12	
Bromochloromethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Chloroform	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Carbon Tetrachloride	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,1-Dichloropropene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Benzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,2-Dichloroethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Trichloroethene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,2-Dichloropropane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Dibromomethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Bromodichloromethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
2-Chloroethyl Vinyl Ether	ND	2.0	EPA 8260C	11-15-12	11-15-12	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	11-15-12	11-15-12	
Toluene	ND	1.0	EPA 8260C	11-15-12	11-15-12	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	11-15-12	11-15-12	

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Project: 5147-006-08

VOLATILES by EPA 8260C
METHOD BLANK QUALITY CONTROL
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1115W1					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Tetrachloroethene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,3-Dichloropropane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
2-Hexanone	ND	2.0	EPA 8260C	11-15-12	11-15-12	
Dibromochloromethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,2-Dibromoethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Chlorobenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Ethylbenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
m,p-Xylene	ND	0.40	EPA 8260C	11-15-12	11-15-12	
o-Xylene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Styrene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Bromoform	ND	1.0	EPA 8260C	11-15-12	11-15-12	
Isopropylbenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Bromobenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,2,3-Trichloropropane	ND	1.0	EPA 8260C	11-15-12	11-15-12	
n-Propylbenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
2-Chlorotoluene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
4-Chlorotoluene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
tert-Butylbenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
sec-Butylbenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
p-Isopropyltoluene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
n-Butylbenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	11-15-12	11-15-12	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Hexachlorobutadiene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Naphthalene	ND	1.0	EPA 8260C	11-15-12	11-15-12	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	11-15-12	11-15-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*100*	*66-120*				
Toluene-d8	*96*	*70-120*				
4-Bromofluorobenzene	*96*	*63-120*				

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Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

VOLATILES by EPA 8260C
SB/SBD QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB1115W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**8.99**	**8.15**	10.0	10.0	90	82	65-141	10	15	
Benzene	**9.86**	**9.41**	10.0	10.0	99	94	77-125	5	15	
Trichloroethene	**9.68**	**9.12**	10.0	10.0	97	91	80-125	6	15	
Toluene	**9.74**	**9.24**	10.0	10.0	97	92	80-125	5	15	
Chlorobenzene	**11.0**	**9.93**	10.0	10.0	110	99	80-140	10	15	
Surrogate:										
Dibromofluoromethane					*98*	*100*	*66-120*			
Toluene-d8					*98*	*100*	*70-120*			
4-Bromofluorobenzene					*94*	*91*	*63-120*			

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Project: 5147-006-08

SEMIVOLATILES by EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1115W2					
n-Nitrosodimethylamine	**ND**	1.0	EPA 8270D	11-15-12	11-16-12	
Pyridine	**ND**	1.0	EPA 8270D	11-15-12	11-16-12	
Phenol	**ND**	1.0	EPA 8270D	11-15-12	11-16-12	
Aniline	**ND**	5.0	EPA 8270D	11-15-12	11-16-12	
bis(2-Chloroethyl)ether	**ND**	1.0	EPA 8270D	11-15-12	11-16-12	
2-Chlorophenol	**ND**	1.0	EPA 8270D	11-15-12	11-16-12	
1,3-Dichlorobenzene	**ND**	1.0	EPA 8270D	11-15-12	11-16-12	
1,4-Dichlorobenzene	**ND**	1.0	EPA 8270D	11-15-12	11-16-12	
Benzyl alcohol	**ND**	1.0	EPA 8270D	11-15-12	11-16-12	
1,2-Dichlorobenzene	**ND**	1.0	EPA 8270D	11-15-12	11-16-12	
2-Methylphenol (o-Cresol)	**ND**	1.0	EPA 8270D	11-15-12	11-16-12	
bis(2-Chloroisopropyl)ether	**ND**	1.0	EPA 8270D	11-15-12	11-16-12	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	1.0	EPA 8270D	11-15-12	11-16-12	
n-Nitroso-di-n-propylamine	**ND**	1.0	EPA 8270D	11-15-12	11-16-12	
Hexachloroethane	**ND**	1.0	EPA 8270D	11-15-12	11-16-12	
Nitrobenzene	**ND**	1.0	EPA 8270D	11-15-12	11-16-12	
Isophorone	**ND**	1.0	EPA 8270D	11-15-12	11-16-12	
2-Nitrophenol	**ND**	1.0	EPA 8270D	11-15-12	11-16-12	
2,4-Dimethylphenol	**ND**	1.0	EPA 8270D	11-15-12	11-16-12	
bis(2-Chloroethoxy)methane	**ND**	1.0	EPA 8270D	11-15-12	11-16-12	
2,4-Dichlorophenol	**ND**	1.0	EPA 8270D	11-15-12	11-16-12	
1,2,4-Trichlorobenzene	**ND**	1.0	EPA 8270D	11-15-12	11-16-12	
Naphthalene	**ND**	0.10	EPA 8270/SIM	11-15-12	11-19-12	
4-Chloroaniline	**ND**	1.0	EPA 8270D	11-15-12	11-16-12	
Hexachlorobutadiene	**ND**	1.0	EPA 8270D	11-15-12	11-16-12	
4-Chloro-3-methylphenol	**ND**	1.0	EPA 8270D	11-15-12	11-16-12	
2-Methylnaphthalene	**ND**	0.10	EPA 8270/SIM	11-15-12	11-19-12	
1-Methylnaphthalene	**ND**	0.10	EPA 8270/SIM	11-15-12	11-19-12	
Hexachlorocyclopentadiene	**ND**	1.0	EPA 8270D	11-15-12	11-16-12	
2,4,6-Trichlorophenol	**ND**	1.0	EPA 8270D	11-15-12	11-16-12	
2,3-Dichloroaniline	**ND**	1.0	EPA 8270D	11-15-12	11-16-12	
2,4,5-Trichlorophenol	**ND**	1.0	EPA 8270D	11-15-12	11-16-12	
2-Chloronaphthalene	**ND**	1.0	EPA 8270D	11-15-12	11-16-12	
2-Nitroaniline	**ND**	1.0	EPA 8270D	11-15-12	11-16-12	
1,4-Dinitrobenzene	**ND**	1.0	EPA 8270D	11-15-12	11-16-12	
Dimethylphthalate	**ND**	1.0	EPA 8270D	11-15-12	11-16-12	
1,3-Dinitrobenzene	**ND**	1.0	EPA 8270D	11-15-12	11-16-12	
2,6-Dinitrotoluene	**ND**	1.0	EPA 8270D	11-15-12	11-16-12	
1,2-Dinitrobenzene	**ND**	1.0	EPA 8270D	11-15-12	11-16-12	
Acenaphthylene	**ND**	0.10	EPA 8270/SIM	11-15-12	11-19-12	
3-Nitroaniline	**ND**	1.0	EPA 8270D	11-15-12	11-16-12	

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Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

SEMIVOLATILES by EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1115W2					
2,4-Dinitrophenol	**ND**	5.0	EPA 8270D	11-15-12	11-16-12	
Acenaphthene	**ND**	0.10	EPA 8270/SIM	11-15-12	11-19-12	
4-Nitrophenol	**ND**	1.0	EPA 8270D	11-15-12	11-16-12	
2,4-Dinitrotoluene	**ND**	1.0	EPA 8270D	11-15-12	11-16-12	
Dibenzofuran	**ND**	1.0	EPA 8270D	11-15-12	11-16-12	
2,3,5,6-Tetrachlorophenol	**ND**	1.0	EPA 8270D	11-15-12	11-16-12	
2,3,4,6-Tetrachlorophenol	**ND**	1.0	EPA 8270D	11-15-12	11-16-12	
Diethylphthalate	**ND**	1.0	EPA 8270D	11-15-12	11-16-12	
4-Chlorophenyl-phenylether	**ND**	1.0	EPA 8270D	11-15-12	11-16-12	
4-Nitroaniline	**ND**	1.0	EPA 8270D	11-15-12	11-16-12	
Fluorene	**ND**	0.10	EPA 8270/SIM	11-15-12	11-19-12	
4,6-Dinitro-2-methylphenol	**ND**	5.0	EPA 8270D	11-15-12	11-16-12	
n-Nitrosodiphenylamine	**ND**	1.0	EPA 8270D	11-15-12	11-16-12	
1,2-Diphenylhydrazine	**ND**	1.0	EPA 8270D	11-15-12	11-16-12	
4-Bromophenyl-phenylether	**ND**	1.0	EPA 8270D	11-15-12	11-16-12	
Hexachlorobenzene	**ND**	1.0	EPA 8270D	11-15-12	11-16-12	
Pentachlorophenol	**ND**	5.0	EPA 8270D	11-15-12	11-16-12	
Phenanthrene	**ND**	0.10	EPA 8270/SIM	11-15-12	11-19-12	
Anthracene	**ND**	0.10	EPA 8270/SIM	11-15-12	11-19-12	
Carbazole	**ND**	1.0	EPA 8270D	11-15-12	11-16-12	
Di-n-butylphthalate	**ND**	1.0	EPA 8270D	11-15-12	11-16-12	
Fluoranthene	**ND**	0.10	EPA 8270/SIM	11-15-12	11-19-12	
Benzidine	**ND**	5.0	EPA 8270D	11-15-12	11-16-12	
Pyrene	**ND**	0.10	EPA 8270/SIM	11-15-12	11-19-12	
Butylbenzylphthalate	**ND**	1.0	EPA 8270D	11-15-12	11-16-12	
bis-2-Ethylhexyladipate	**ND**	5.0	EPA 8270D	11-15-12	11-16-12	
3,3'-Dichlorobenzidine	**ND**	1.0	EPA 8270D	11-15-12	11-16-12	
Benzo[a]anthracene	**ND**	0.010	EPA 8270/SIM	11-15-12	11-19-12	
Chrysene	**ND**	0.010	EPA 8270/SIM	11-15-12	11-19-12	
bis(2-Ethylhexyl)phthalate	**ND**	1.0	EPA 8270D	11-15-12	11-16-12	
Di-n-octylphthalate	**ND**	1.0	EPA 8270D	11-15-12	11-16-12	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270/SIM	11-15-12	11-19-12	
Benzo(j,k)fluoranthene	**ND**	0.010	EPA 8270/SIM	11-15-12	11-19-12	
Benzo[a]pyrene	**ND**	0.010	EPA 8270/SIM	11-15-12	11-19-12	
Indeno[1,2,3-cd]pyrene	**ND**	0.010	EPA 8270/SIM	11-15-12	11-19-12	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270/SIM	11-15-12	11-19-12	
Benzo[g,h,i]perylene	**ND**	0.010	EPA 8270/SIM	11-15-12	11-19-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*43*	*17 - 81*				
Phenol-d6	*35*	*10 - 89*				
Nitrobenzene-d5	*58*	*35 - 110*				
2-Fluorobiphenyl	*67*	*45 - 110*				
2,4,6-Tribromophenol	*74*	*39 - 125*				
Terphenyl-d14	*86*	*58 - 111*				

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Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

SEMIVOLATILES by EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB1115W2									
	SB	SBD	SB	SBD	SB	SBD				
Phenol	**20.8**	**20.7**	40.0	40.0	52	52	28 - 70	0	30	
2-Chlorophenol	**33.6**	**34.0**	40.0	40.0	84	85	41 - 100	1	34	
1,4-Dichlorobenzene	**16.5**	**16.4**	20.0	20.0	83	82	34 - 95	1	33	
n-Nitroso-di-n-propylamine	**16.7**	**16.8**	20.0	20.0	84	84	48 - 98	1	30	
1,2,4-Trichlorobenzene	**16.7**	**16.3**	20.0	20.0	84	82	34 - 97	2	30	
4-Chloro-3-methylphenol	**36.6**	**38.4**	40.0	40.0	92	96	60 - 116	5	27	
Acenaphthene	**17.6**	**18.2**	20.0	20.0	88	91	51 - 100	3	25	
4-Nitrophenol	**24.5**	**24.1**	40.0	40.0	61	60	26 - 74	2	40	
2,4-Dinitrotoluene	**18.7**	**20.0**	20.0	20.0	94	100	59 - 117	7	28	
Pentachlorophenol	**31.7**	**34.1**	40.0	40.0	79	85	29 - 133	7	39	
Pyrene	**19.4**	**20.7**	20.0	20.0	97	104	58 - 121	6	28	
Surrogate:										
2-Fluorophenol					*58*	*59*	*17 - 81*			
Phenol-d6					*48*	*48*	*10 - 89*			
Nitrobenzene-d5					*78*	*79*	*35 - 110*			
2-Fluorobiphenyl					*82*	*83*	*45 - 110*			
2,4,6-Tribromophenol					*86*	*92*	*39 - 125*			
Terphenyl-d14					*89*	*93*	*58 - 111*			

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Date of Report: November 30, 2012
Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

PAHs by EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1115W1					
Naphthalene	**ND**	0.10	EPA 8270D/SIM	11-15-12	11-15-12	
2-Methylnaphthalene	**ND**	0.10	EPA 8270D/SIM	11-15-12	11-15-12	
1-Methylnaphthalene	**ND**	0.10	EPA 8270D/SIM	11-15-12	11-15-12	
Acenaphthylene	**ND**	0.10	EPA 8270D/SIM	11-15-12	11-15-12	
Acenaphthene	**ND**	0.10	EPA 8270D/SIM	11-15-12	11-15-12	
Fluorene	**ND**	0.10	EPA 8270D/SIM	11-15-12	11-15-12	
Phenanthrene	**ND**	0.10	EPA 8270D/SIM	11-15-12	11-15-12	
Anthracene	**ND**	0.10	EPA 8270D/SIM	11-15-12	11-15-12	
Fluoranthene	**ND**	0.10	EPA 8270D/SIM	11-15-12	11-15-12	
Pyrene	**ND**	0.10	EPA 8270D/SIM	11-15-12	11-15-12	
Benzo[a]anthracene	**ND**	0.010	EPA 8270D/SIM	11-15-12	11-15-12	
Chrysene	**ND**	0.010	EPA 8270D/SIM	11-15-12	11-15-12	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270D/SIM	11-15-12	11-15-12	
Benzo(j,k)fluoranthene	**ND**	0.010	EPA 8270D/SIM	11-15-12	11-15-12	
Benzo[a]pyrene	**ND**	0.010	EPA 8270D/SIM	11-15-12	11-15-12	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270D/SIM	11-15-12	11-15-12	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270D/SIM	11-15-12	11-15-12	
Benzo[g,h,i]perylene	**ND**	0.010	EPA 8270D/SIM	11-15-12	11-15-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*95*	*40 - 107*				
Pyrene-d10	*85*	*41 - 106*				
Terphenyl-d14	*91*	*44 - 124*				

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Date of Report: November 30, 2012
Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

PAHs by EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB1115W1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	**0.332**	**0.418**	0.500	0.500	66	84	31 - 110	23	46	
Acenaphthylene	**0.375**	**0.391**	0.500	0.500	75	78	40 - 118	4	43	
Acenaphthene	**0.394**	**0.419**	0.500	0.500	79	84	38 - 112	6	40	
Fluorene	**0.410**	**0.426**	0.500	0.500	82	85	45 - 114	4	41	
Phenanthrene	**0.376**	**0.362**	0.500	0.500	75	72	47 - 112	4	36	
Anthracene	**0.500**	**0.506**	0.500	0.500	100	101	46 - 122	1	37	
Fluoranthene	**0.477**	**0.464**	0.500	0.500	95	93	51 - 127	3	35	
Pyrene	**0.450**	**0.434**	0.500	0.500	90	87	50 - 125	4	37	
Benzo[a]anthracene	**0.465**	**0.439**	0.500	0.500	93	88	46 - 123	6	34	
Chrysene	**0.508**	**0.496**	0.500	0.500	102	99	49 - 120	2	34	
Benzo[b]fluoranthene	**0.476**	**0.451**	0.500	0.500	95	90	46 - 126	5	37	
Benzo(j,k)fluoranthene	**0.471**	**0.455**	0.500	0.500	94	91	43 - 125	3	39	
Benzo[a]pyrene	**0.474**	**0.453**	0.500	0.500	95	91	44 - 129	5	37	
Indeno(1,2,3-c,d)pyrene	**0.488**	**0.468**	0.500	0.500	98	94	40 - 124	4	42	
Dibenz[a,h]anthracene	**0.455**	**0.429**	0.500	0.500	91	86	35 - 122	6	44	
Benzo[g,h,i]perylene	**0.481**	**0.466**	0.500	0.500	96	93	37 - 122	3	45	
Surrogate:										
2-Fluorobiphenyl					*68*	*79*	*40 - 107*			
Pyrene-d10					*85*	*83*	*41 - 106*			
Terphenyl-d14					*97*	*91*	*44 - 124*			

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Date of Report: November 30, 2012
Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

ORGANOCHLORINE PESTICIDES by EPA 8081B METHOD BLANK QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1115W1					
alpha-BHC	**ND**	0.0050	EPA 8081B	11-15-12	11-16-12	
gamma-BHC	**ND**	0.0050	EPA 8081B	11-15-12	11-16-12	
beta-BHC	**ND**	0.0050	EPA 8081B	11-15-12	11-16-12	
delta-BHC	**ND**	0.0050	EPA 8081B	11-15-12	11-16-12	
Heptachlor	**ND**	0.0050	EPA 8081B	11-15-12	11-16-12	
Aldrin	**ND**	0.0050	EPA 8081B	11-15-12	11-16-12	
Heptachlor Epoxide	**ND**	0.0050	EPA 8081B	11-15-12	11-16-12	
gamma-Chlordane	**ND**	0.0050	EPA 8081B	11-15-12	11-16-12	
alpha-Chlordane	**ND**	0.0050	EPA 8081B	11-15-12	11-16-12	
4,4'-DDE	**ND**	0.0050	EPA 8081B	11-15-12	11-16-12	
Endosulfan I	**ND**	0.0050	EPA 8081B	11-15-12	11-16-12	
Dieldrin	**ND**	0.0050	EPA 8081B	11-15-12	11-16-12	
Endrin	**ND**	0.0050	EPA 8081B	11-15-12	11-16-12	
4,4'-DDD	**ND**	0.0050	EPA 8081B	11-15-12	11-16-12	
Endosulfan II	**ND**	0.0050	EPA 8081B	11-15-12	11-16-12	
4,4'-DDT	**ND**	0.0050	EPA 8081B	11-15-12	11-16-12	
Endrin Aldehyde	**ND**	0.0050	EPA 8081B	11-15-12	11-16-12	
Methoxychlor	**ND**	0.010	EPA 8081B	11-15-12	11-16-12	
Endosulfan Sulfate	**ND**	0.0050	EPA 8081B	11-15-12	11-16-12	
Endrin Ketone	**ND**	0.020	EPA 8081B	11-15-12	11-16-12	
Toxaphene	**ND**	0.050	EPA 8081B	11-15-12	11-16-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*71*	*34-88*				
DCB	*75*	*48-115*				

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Date of Report: November 30, 2012
Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

ORGANOCHLORINE PESTICIDES by EPA 8081B SB/SBD QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS											
Laboratory ID:	SB1115W1										
	SB	SBD	SB	SBD		SB	SBD				
gamma-BHC	**0.0412**	**0.0415**	0.0500	0.0500	N/A	**82**	**83**	22-113	1	15	
Heptachlor	**0.0426**	**0.0440**	0.0500	0.0500	N/A	**85**	**88**	55-104	3	15	
Aldrin	**0.0427**	**0.0442**	0.0500	0.0500	N/A	**85**	**88**	54-99	3	15	
Dieldrin	**0.111**	**0.111**	0.125	0.125	N/A	**89**	**89**	60-100	0	15	
Endrin	**0.116**	**0.116**	0.125	0.125	N/A	**93**	**93**	62-105	0	15	
4,4'-DDT	**0.111**	**0.113**	0.125	0.125	N/A	**89**	**91**	43-114	2	15	
Surrogate:											
TCMX						*73*	*75*	*34-88*			
DCB						*75*	*74*	*48-115*			

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Date of Report: November 30, 2012
Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

TOTAL METALS
EPA 200.8/7470A
METHOD BLANK QUALITY CONTROL

Date Extracted:	11-19&21-12
Date Analyzed:	11-21&26-12
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	MB1119WH1&MB1121W1

Analyte	Method	Result	PQL
Arsenic	200.8	**ND**	8.0
Cadmium	200.8	**ND**	8.0
Chromium	200.8	**ND**	20
Copper	200.8	**ND**	20
Lead	200.8	**ND**	2.0
Mercury	7470A	**ND**	0.038
Nickel	200.8	**ND**	5.0
Silver	200.8	**ND**	10
Zinc	200.8	**ND**	50

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Date of Report: November 30, 2012
Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

TOTAL METALS
EPA 200.8/7470A
DUPLICATE QUALITY CONTROL

Date Extracted: 11-19&21-12
Date Analyzed: 11-21&26-12

Matrix: Water
Units: ug/L (ppb)

Lab ID: 11-109-07

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**ND**	**ND**	NA	13	U1
Cadmium	**ND**	**ND**	NA	8.0	
Chromium	**ND**	**ND**	NA	20	
Copper	**ND**	**ND**	NA	20	
Lead	**ND**	**ND**	NA	2.0	
Mercury	**ND**	**ND**	NA	0.038	
Nickel	**18.0**	**18.4**	2	5.0	
Silver	**ND**	**ND**	NA	10	
Zinc	**ND**	**ND**	NA	50	

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Date of Report: November 30, 2012
Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

TOTAL METALS
EPA 200.8/7470A
MS/MSD QUALITY CONTROL

Date Extracted: 11-19&21-12
Date Analyzed: 11-21&26-12

Matrix: Water
Units: ug/L (ppb)

Lab ID: 11-109-07

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	200	**205**	103	**205**	103	0	
Cadmium	200	**190**	95	**189**	95	0	
Chromium	200	**181**	90	**183**	91	1	
Copper	200	**190**	95	**191**	96	1	
Lead	200	**187**	93	**186**	93	0	
Mercury	6.25	**5.82**	93	**5.92**	95	2	
Nickel	200	**212**	97	**212**	97	0	
Silver	200	**156**	78	**165**	82	5	
Zinc	200	**188**	94	**189**	95	1	

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Date of Report: November 30, 2012
Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

TOTAL METALS
EPA 200.8/7470A
SPIKE BLANK QUALITY CONTROL

Date Extracted: 11-19&21-12
Date Analyzed: 11-21&26-12

Matrix: Water
Units: ug/L (ppb)

Lab ID: SB1119WH1&SB1121W1

Analyte	Method	Spike Level	SB Result	Percent Recovery
Arsenic	200.8	200	**188**	94
Cadmium	200.8	200	**190**	95
Chromium	200.8	200	**196**	98
Copper	200.8	200	**207**	103
Lead	200.8	200	**194**	97
Mercury	7470A	6.25	**6.03**	96
Nickel	200.8	200	**201**	100
Silver	200.8	200	**194**	97
Zinc	200.8	200	**191**	95

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Date of Report: November 30, 2012
Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

TOTAL METALS
EPA 200.8/7470A
CONTINUING CALIBRATION SUMMARY

Analyte	Lab ID	True Value (ppb)	Calc. Value	Percent Difference	Control Limits
Arsenic	ICV112612E	50.0	49.6	0.80	+/- 10%
Cadmium	ICV112612E	50.0	50.5	-1.0	+/- 10%
Chromium	ICV112612E	50.0	49.5	1.0	+/- 10%
Copper	ICV112612E	50.0	49.9	0.20	+/- 10%
Lead	ICV112612E	50.0	50.2	-0.40	+/- 10%
Mercury	ICV112112Y	2.50	2.37	5.2	+/- 10%
Nickel	ICV112612E	50.0	50.2	-0.40	+/- 10%
Silver	ICV112612E	50.0	47.7	4.6	+/- 10%
Zinc	ICV112612E	50.0	51.1	-2.2	+/- 10%
Arsenic	CCV1112612E	100	100	0	+/- 10%
Cadmium	CCV1112612E	100	100	0	+/- 10%
Chromium	CCV1112612E	100	99.0	1.0	+/- 10%
Copper	CCV1112612E	100	99.2	0.80	+/- 10%
Lead	CCV1112612E	100	100	0.20	+/- 10%
Mercury	CCV1112112Y	2.50	2.60	-4.0	+/- 20%
Nickel	CCV1112612E	100	100	0	+/- 10%
Silver	CCV1112612E	100	101	-1.0	+/- 10%
Zinc	CCV1112612E	100	99.9	0.10	+/- 10%
Arsenic	CCV1112612E	40.0	40.1	-0.25	+/- 10%
Cadmium	CCV1112612E	40.0	40.5	-1.3	+/- 10%
Chromium	CCV1112612E	40.0	39.5	1.3	+/- 10%
Copper	CCV1112612E	40.0	40.1	-0.25	+/- 10%
Lead	CCV1112612E	40.0	40.4	-1.0	+/- 10%
Nickel	CCV1112612E	40.0	40.1	-0.25	+/- 10%
Silver	CCV1112612E	40.0	40.0	0	+/- 10%
Zinc	CCV1112612E	40.0	40.4	-1.0	+/- 10%
Arsenic	CCV2112612E	100	99.1	0.90	+/- 10%
Cadmium	CCV2112612E	100	100	0	+/- 10%
Chromium	CCV2112612E	100	97.3	2.7	+/- 10%
Copper	CCV2112612E	100	100	0	+/- 10%
Lead	CCV2112612E	100	98.2	1.8	+/- 10%
Mercury	CCV2112112Y	2.50	2.73	-9.2	+/- 20%
Nickel	CCV2112612E	100	101	-1.0	+/- 10%
Silver	CCV2112612E	100	100	0	+/- 10%
Zinc	CCV2112612E	100	102	-2.0	+/- 10%

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Date of Report: November 30, 2012
Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

TOTAL METALS
EPA 200.8/7470A
CONTINUING CALIBRATION SUMMARY

Analyte	Lab ID	True Value (ppb)	Calc. Value	Percent Difference	Control Limits
Arsenic	CCV2112612E	40.0	40.0	0	+/- 10%
Cadmium	CCV2112612E	40.0	40.5	-1.3	+/- 10%
Chromium	CCV2112612E	40.0	39.3	1.8	+/- 10%
Copper	CCV2112612E	40.0	40.1	-0.25	+/- 10%
Lead	CCV2112612E	40.0	39.6	1.0	+/- 10%
Nickel	CCV2112612E	40.0	39.7	0.75	+/- 10%
Silver	CCV2112612E	40.0	40.4	-1.0	+/- 10%
Zinc	CCV2112612E	40.0	40.6	-1.5	+/- 10%
Arsenic	CCV3112612E	100	99.2	0.80	+/- 10%
Cadmium	CCV3112612E	100	102	-2.0	+/- 10%
Chromium	CCV3112612E	100	97.4	2.6	+/- 10%
Copper	CCV3112612E	100	100	0	+/- 10%
Lead	CCV3112612E	100	97.9	2.1	+/- 10%
Mercury	CCV3112112Y	2.50	2.68	-7.2	+/- 20%
Nickel	CCV3112612E	100	101	-1.0	+/- 10%
Silver	CCV3112612E	100	102	-2.0	+/- 10%
Zinc	CCV3112612E	100	102	-2.0	+/- 10%
Arsenic	CCV3112612E	40.0	39.8	0.50	+/- 10%
Cadmium	CCV3112612E	40.0	40.5	-1.3	+/- 10%
Chromium	CCV3112612E	40.0	39.4	1.5	+/- 10%
Copper	CCV3112612E	40.0	40.4	-1.0	+/- 10%
Lead	CCV3112612E	40.0	39.4	1.5	+/- 10%
Nickel	CCV3112612E	40.0	40.1	-0.25	+/- 10%
Silver	CCV3112612E	40.0	40.4	-1.0	+/- 10%
Zinc	CCV3112612E	40.0	40.8	-2.0	+/- 10%
Arsenic	CCV4112612E	100	99.0	1.0	+/- 10%
Cadmium	CCV4112612E	100	100	0	+/- 10%
Chromium	CCV4112612E	100	97.7	2.3	+/- 10%
Copper	CCV4112612E	100	101	-1.0	+/- 10%
Lead	CCV4112612E	100	97.2	2.8	+/- 10%
Mercury	CCV4112112Y	2.50	2.69	-7.6	+/- 20%
Nickel	CCV4112612E	100	99.9	0.10	+/- 10%
Silver	CCV4112612E	100	100	0	+/- 10%
Zinc	CCV4112612E	100	102	-2.0	+/- 10%

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Date of Report: November 30, 2012
Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

TOTAL METALS
EPA 200.8/7470A
CONTINUING CALIBRATION SUMMARY

Analyte	Lab ID	True Value (ppb)	Calc. Value	Percent Difference	Control Limits
Arsenic	CCV4112612E	40.0	40.1	-0.25	+/- 10%
Cadmium	CCV4112612E	40.0	40.2	-0.50	+/- 10%
Chromium	CCV4112612E	40.0	38.9	2.8	+/- 10%
Copper	CCV4112612E	40.0	40.6	-1.5	+/- 10%
Lead	CCV4112612E	40.0	39.2	2.0	+/- 10%
Nickel	CCV4112612E	40.0	40.1	-0.25	+/- 10%
Silver	CCV4112612E	40.0	40.3	-0.75	+/- 10%
Zinc	CCV4112612E	40.0	41.4	-3.5	+/- 10%
Arsenic	CCV5112612E	100	100	0	+/- 10%
Cadmium	CCV5112612E	100	101	-1.0	+/- 10%
Chromium	CCV5112612E	100	103	-3.0	+/- 10%
Copper	CCV5112612E	100	100	0	+/- 10%
Lead	CCV5112612E	100	100	0	+/- 10%
Mercury	CCV5112112Y	2.50	2.66	-6.4	+/- 20%
Nickel	CCV5112612E	100	98.7	1.3	+/- 10%
Silver	CCV5112612E	100	101	-1.0	+/- 10%
Zinc	CCV5112612E	100	101	-1.0	+/- 10%
Arsenic	CCV5112612E	40.0	40.3	-0.75	+/- 10%
Cadmium	CCV5112612E	40.0	40.1	-0.25	+/- 10%
Chromium	CCV5112612E	40.0	41.4	-3.5	+/- 10%
Copper	CCV5112612E	40.0	40.0	0	+/- 10%
Lead	CCV5112612E	40.0	40.2	-0.50	+/- 10%
Nickel	CCV5112612E	40.0	39.4	1.5	+/- 10%
Silver	CCV5112612E	40.0	40.6	-1.5	+/- 10%
Zinc	CCV5112612E	40.0	40.6	-1.5	+/- 10%

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Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

DISSOLVED METALS
EPA 200.8/7470A
METHOD BLANK QUALITY CONTROL

Date Analyzed: 11-21&26-12

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB1119D1&MB1121D1

Analyte	Method	Result	PQL
Arsenic	200.8	**ND**	8.0
Cadmium	200.8	**ND**	8.0
Chromium	200.8	**ND**	20
Copper	200.8	**ND**	20
Lead	200.8	**ND**	2.0
Mercury	7470A	**ND**	0.038
Nickel	200.8	**ND**	5.0
Silver	200.8	**ND**	10
Zinc	200.8	**ND**	50

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: November 30, 2012
Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

DISSOLVED METALS
EPA 200.8/7470A
DUPLICATE QUALITY CONTROL

Date Analyzed: 11-21&26-12

Matrix: Water
Units: ug/L (ppb)

Lab ID: 11-109-07

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**ND**	**ND**	NA	13	**U1**
Cadmium	**ND**	**ND**	NA	8.0	
Chromium	**ND**	**ND**	NA	20	
Copper	**ND**	**ND**	NA	20	
Lead	**ND**	**ND**	NA	2.0	
Mercury	**ND**	**ND**	NA	0.038	
Nickel	**19.2**	**18.5**	4	5.0	
Silver	**ND**	**ND**	NA	10	
Zinc	**ND**	**ND**	NA	50	

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Date of Report: November 30, 2012
Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

DISSOLVED METALS
EPA 200.8/7470A
MS/MSD QUALITY CONTROL

Date Analyzed: 11-21&26-12

Matrix: Water
Units: ug/L (ppb)

Lab ID: 11-109-07

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	200	**206**	103	**206**	103	0	
Cadmium	200	**191**	95	**190**	95	1	
Chromium	200	**182**	91	**183**	91	0	
Copper	200	**194**	97	**197**	99	2	
Lead	200	**187**	93	**185**	92	1	
Mercury	6.25	**5.72**	92	**5.95**	95	4	
Nickel	200	**216**	98	**214**	97	1	
Silver	200	**155**	78	**162**	81	5	
Zinc	200	**197**	98	**199**	99	1	

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Date of Report: November 30, 2012
Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

DISSOLVED METALS
EPA 200.8/7470A
SPIKE BLANK QUALITY CONTROL

Date Analyzed: 11-21&26-12

Matrix: Water
Units: ug/L (ppb)

Lab ID: SB1119D1&SB1121D1

Analyte	Method	Spike Level	SB Result	Percent Recovery
Arsenic	200.8	200	**193**	97
Cadmium	200.8	200	**196**	98
Chromium	200.8	200	**200**	100
Copper	200.8	200	**207**	103
Lead	200.8	200	**198**	99
Mercury	7470A	6.25	**6.15**	98
Nickel	200.8	200	**206**	103
Silver	200.8	200	**200**	100
Zinc	200.8	200	**193**	96

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Date of Report: November 30, 2012
Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

DISSOLVED METALS
EPA 200.8/7470A
CONTINUING CALIBRATION SUMMARY

Analyte	Lab ID	True Value (ppb)	Calc. Value	Percent Difference	Control Limits
Arsenic	ICV112612E	50.0	49.6	0.80	+/- 10%
Cadmium	ICV112612E	50.0	50.5	-1.0	+/- 10%
Chromium	ICV112612E	50.0	49.5	1.0	+/- 10%
Copper	ICV112612E	50.0	49.9	0.20	+/- 10%
Lead	ICV112612E	50.0	50.2	-0.40	+/- 10%
Mercury	ICV112112Y	2.50	2.37	5.2	+/- 10%
Nickel	ICV112612E	50.0	50.2	-0.40	+/- 10%
Silver	ICV112612E	50.0	47.7	4.6	+/- 10%
Zinc	ICV112612E	50.0	51.1	-2.2	+/- 10%
Arsenic	CCV1112612E	100	100	0	+/- 10%
Cadmium	CCV1112612E	100	100	0	+/- 10%
Chromium	CCV1112612E	100	99.0	1.0	+/- 10%
Copper	CCV1112612E	100	99.2	0.80	+/- 10%
Lead	CCV1112612E	100	100	0.20	+/- 10%
Mercury	CCV1112112Y	2.50	2.60	-4.0	+/- 20%
Nickel	CCV1112612E	100	100	0	+/- 10%
Silver	CCV1112612E	100	101	-1.0	+/- 10%
Zinc	CCV1112612E	100	99.9	0.10	+/- 10%
Arsenic	CCV1112612E	40.0	40.1	-0.25	+/- 10%
Cadmium	CCV1112612E	40.0	40.5	-1.3	+/- 10%
Chromium	CCV1112612E	40.0	39.5	1.3	+/- 10%
Copper	CCV1112612E	40.0	40.1	-0.25	+/- 10%
Lead	CCV1112612E	40.0	40.4	-1.0	+/- 10%
Nickel	CCV1112612E	40.0	40.1	-0.25	+/- 10%
Silver	CCV1112612E	40.0	40.0	0	+/- 10%
Zinc	CCV1112612E	40.0	40.4	-1.0	+/- 10%
Arsenic	CCV2112612E	100	99.1	0.90	+/- 10%
Cadmium	CCV2112612E	100	100	0	+/- 10%
Chromium	CCV2112612E	100	97.3	2.7	+/- 10%
Copper	CCV2112612E	100	100	0	+/- 10%
Lead	CCV2112612E	100	98.2	1.8	+/- 10%
Mercury	CCV2112112Y	2.50	2.73	-9.2	+/- 20%
Nickel	CCV2112612E	100	101	-1.0	+/- 10%
Silver	CCV2112612E	100	100	0	+/- 10%
Zinc	CCV2112612E	100	102	-2.0	+/- 10%

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Date of Report: November 30, 2012
Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

DISSOLVED METALS
EPA 200.8/7470A
CONTINUING CALIBRATION SUMMARY

Analyte	Lab ID	True Value (ppb)	Calc. Value	Percent Difference	Control Limits
Arsenic	CCV2112612E	40.0	40.0	0	+/- 10%
Cadmium	CCV2112612E	40.0	40.5	-1.3	+/- 10%
Chromium	CCV2112612E	40.0	39.3	1.8	+/- 10%
Copper	CCV2112612E	40.0	40.1	-0.25	+/- 10%
Lead	CCV2112612E	40.0	39.6	1.0	+/- 10%
Nickel	CCV2112612E	40.0	39.7	0.75	+/- 10%
Silver	CCV2112612E	40.0	40.4	-1.0	+/- 10%
Zinc	CCV2112612E	40.0	40.6	-1.5	+/- 10%
Arsenic	CCV3112612E	100	99.2	0.80	+/- 10%
Cadmium	CCV3112612E	100	102	-2.0	+/- 10%
Chromium	CCV3112612E	100	97.4	2.6	+/- 10%
Copper	CCV3112612E	100	100	0	+/- 10%
Lead	CCV3112612E	100	97.9	2.1	+/- 10%
Mercury	CCV3112112Y	2.50	2.68	-7.2	+/- 20%
Nickel	CCV3112612E	100	101	-1.0	+/- 10%
Silver	CCV3112612E	100	102	-2.0	+/- 10%
Zinc	CCV3112612E	100	102	-2.0	+/- 10%
Arsenic	CCV3112612E	40.0	39.8	0.50	+/- 10%
Cadmium	CCV3112612E	40.0	40.5	-1.3	+/- 10%
Chromium	CCV3112612E	40.0	39.4	1.5	+/- 10%
Copper	CCV3112612E	40.0	40.4	-1.0	+/- 10%
Lead	CCV3112612E	40.0	39.4	1.5	+/- 10%
Nickel	CCV3112612E	40.0	40.1	-0.25	+/- 10%
Silver	CCV3112612E	40.0	40.4	-1.0	+/- 10%
Zinc	CCV3112612E	40.0	40.8	-2.0	+/- 10%
Arsenic	CCV4112612E	100	99.0	1.0	+/- 10%
Cadmium	CCV4112612E	100	100	0	+/- 10%
Chromium	CCV4112612E	100	97.7	2.3	+/- 10%
Copper	CCV4112612E	100	101	-1.0	+/- 10%
Lead	CCV4112612E	100	97.2	2.8	+/- 10%
Mercury	CCV4112112Y	2.50	2.69	-7.6	+/- 20%
Nickel	CCV4112612E	100	99.9	0.10	+/- 10%
Silver	CCV4112612E	100	100	0	+/- 10%
Zinc	CCV4112612E	100	102	-2.0	+/- 10%

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Date of Report: November 30, 2012
Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

DISSOLVED METALS
EPA 200.8/7470A
CONTINUING CALIBRATION SUMMARY

Analyte	Lab ID	True Value (ppb)	Calc. Value	Percent Difference	Control Limits
Arsenic	CCV4112612E	40.0	40.1	-0.25	+/- 10%
Cadmium	CCV4112612E	40.0	40.2	-0.50	+/- 10%
Chromium	CCV4112612E	40.0	38.9	2.8	+/- 10%
Copper	CCV4112612E	40.0	40.6	-1.5	+/- 10%
Lead	CCV4112612E	40.0	39.2	2.0	+/- 10%
Nickel	CCV4112612E	40.0	40.1	-0.25	+/- 10%
Silver	CCV4112612E	40.0	40.3	-0.75	+/- 10%
Zinc	CCV4112612E	40.0	41.4	-3.5	+/- 10%
Arsenic	CCV5112612E	100	100	0	+/- 10%
Cadmium	CCV5112612E	100	101	-1.0	+/- 10%
Chromium	CCV5112612E	100	103	-3.0	+/- 10%
Copper	CCV5112612E	100	100	0	+/- 10%
Lead	CCV5112612E	100	100	0	+/- 10%
Mercury	CCV5112112Y	2.50	2.66	-6.4	+/- 20%
Nickel	CCV5112612E	100	98.7	1.3	+/- 10%
Silver	CCV5112612E	100	101	-1.0	+/- 10%
Zinc	CCV5112612E	100	101	-1.0	+/- 10%
Arsenic	CCV5112612E	40.0	40.3	-0.75	+/- 10%
Cadmium	CCV5112612E	40.0	40.1	-0.25	+/- 10%
Chromium	CCV5112612E	40.0	41.4	-3.5	+/- 10%
Copper	CCV5112612E	40.0	40.0	0	+/- 10%
Lead	CCV5112612E	40.0	40.2	-0.50	+/- 10%
Nickel	CCV5112612E	40.0	39.4	1.5	+/- 10%
Silver	CCV5112612E	40.0	40.6	-1.5	+/- 10%
Zinc	CCV5112612E	40.0	40.6	-1.5	+/- 10%
Arsenic	CCV6112612E	100	101	-1.0	+/- 10%
Cadmium	CCV6112612E	100	100	0	+/- 10%
Chromium	CCV6112612E	100	101	-1.0	+/- 10%
Copper	CCV6112612E	100	101	-1.0	+/- 10%
Lead	CCV6112612E	100	101	-1.0	+/- 10%
Nickel	CCV6112612E	100	100	0	+/- 10%
Silver	CCV6112612E	100	101	-1.0	+/- 10%
Zinc	CCV6112612E	100	102	-2.0	+/- 10%

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Date of Report: November 30, 2012
Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

DISSOLVED METALS
EPA 200.8
CONTINUING CALIBRATION SUMMARY

Analyte	Lab ID	True Value (ppb)	Calc. Value	Percent Difference	Control Limits
Arsenic	CCV6112612E	40.0	40.0	0	+/- 10%
Cadmium	CCV6112612E	40.0	40.8	-2.0	+/- 10%
Chromium	CCV6112612E	40.0	40.1	-0.25	+/- 10%
Copper	CCV6112612E	40.0	40.3	-0.75	+/- 10%
Lead	CCV6112612E	40.0	39.6	1.0	+/- 10%
Nickel	CCV6112612E	40.0	39.8	0.50	+/- 10%
Silver	CCV6112612E	40.0	41.0	-2.5	+/- 10%
Zinc	CCV6112612E	40.0	40.7	-1.8	+/- 10%

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Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

EDB by EPA 8011
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1126W1					
EDB	**ND**	0.010	EPA 8011	11-26-12	11-26-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*127*	*30-158*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS											
Laboratory ID:	SB1126W1										
	SB	SBD	SB	SBD		SB	SBD				
EDB	**0.0973**	**0.0965**	0.100	0.100	N/A	**97**	**97**	72-127	1	15	
Surrogate:											
TCMX						*125*	*114*	*30-158*			

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Date of Report: November 30, 2012
Samples Submitted: November 14, 2012
Laboratory Reference: 1211-109
Project: 5147-006-08

CHLORINATED ACID HERBICIDES by EPA 8151A
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1120W1					
Dalapon	**ND**	0.23	EPA 8151A	11-20-12	11-20-12	
Dicamba	**ND**	0.024	EPA 8151A	11-20-12	11-20-12	
MCPP	**ND**	4.7	EPA 8151A	11-20-12	11-20-12	
MCPA	**ND**	4.7	EPA 8151A	11-20-12	11-20-12	
Dichlorprop	**ND**	0.024	EPA 8151A	11-20-12	11-20-12	
2,4-D	**ND**	0.024	EPA 8151A	11-20-12	11-20-12	
Pentachlorophenol	**ND**	0.0095	EPA 8151A	11-20-12	11-20-12	
2,4,5-TP (Silvex)	**ND**	0.024	EPA 8151A	11-20-12	11-20-12	
2,4,5-T	**ND**	0.024	EPA 8151A	11-20-12	11-20-12	
2,4-DB	**ND**	0.047	EPA 8151A	11-20-12	11-20-12	
Dinoseb	**ND**	0.024	EPA 8151A	11-20-12	11-20-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCAA	*56*	*30-98*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS											
Laboratory ID:	SB1120W1										
	SB	SBD	SB	SBD		SB	SBD				
Dicamba	**0.677**	**0.683**	1.00	1.00	N/A	**68**	**68**	37-88	1	15	
2,4-D	**0.565**	**0.515**	1.00	1.00	N/A	**56**	**51**	30-81	9	17	
Pentachlorophenol	**0.0798**	**0.0850**	0.100	0.100	N/A	**80**	**85**	49-98	6	16	
2,4,5-T	**0.660**	**0.614**	1.00	1.00	N/A	**66**	**61**	37-83	7	12	
2,4-DB	**0.629**	**0.554**	1.00	1.00	N/A	**63**	**55**	31-84	13	18	
Surrogate:											
DCAA						*79*	*73*	*30-98*			

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OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

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Pace Analytical Services, Inc.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

www.pacelabs.com

Report Prepared for:

David Baumeister
Onsite Environmental, Inc.
14648 NE 95th Street
Redmond WA 98052

REPORT OF LABORATORY ANALYSIS FOR PCDD/PCDF

Report Information:

Pace Project #: 10212624
Sample Receipt Date: 11/15/2012
Client Project #: 5147-003-08
Client Sub PO #: N/A
State Cert #: C755

Invoicing & Reporting Options:

The report provided has been invoiced as a Level 2 PCDD/PCDF Report. If an upgrade of this report package is requested, an additional charge may be applied.

Please review the attached invoice for accuracy and forward any questions to Scott Unze, your Pace Project Manager.

This report has been reviewed by:

November 30, 2012

Scott Unze, Project Manager
(612) 607-6383
(612) 607-6444 (fax)
scott.unze@pacelabs.com

Report Prepared Date:
November 30, 2012

Report of Laboratory Analysis

This report should not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc.

The results relate only to the samples included in this report.

Pace Analytical Services, Inc.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

DISCUSSION

This report presents the results from the analyses performed on four samples submitted by a representative of OnSite Environmental, Inc. The samples were analyzed for the presence or absence of polychlorodibenzo-p-dioxins (PCDDs) and polychlorodibenzofurans (PCDFs) using a modified version of USEPA Method 8290. The reporting limits were based on signal-to-noise measurements.

The recoveries of the isotopically-labeled PCDD/PCDF internal standards in the sample extracts ranged from 68-109%. All of the labeled internal standard recoveries obtained for this project were within the 40-135% target range specified in Method 8290. Also, since the quantification of the native 2,3,7,8-substituted congeners was based on isotope dilution, the data were automatically corrected for variation in recovery and accurate values were obtained.

In some cases, interfering substances impacted the determinations of PCDD or PCDF congeners. The affected values were flagged "I" where incorrect isotope ratios were obtained.

A laboratory method blank was prepared and analyzed with the sample batch as part of our routine quality control procedures. The results show the blank to contain trace levels of selected congeners. These levels were below the calibration range of the method. Also, the affected congeners were not detected in the field samples.

Laboratory spike samples were also prepared with the sample batch using clean water that had been fortified with native standard materials. The results show that the spiked native compounds were recovered at 83-119%, with relative percent differences of 0.0-6.5%. These results indicate high degrees of accuracy and precision for these determinations. Matrix spikes were not prepared with the sample batch.

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Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Minnesota Laboratory Certifications

Authority	Certificate #	Authority	Certificate #
Alabama	40770	Montana	92
Alaska	MN00064	Nebraska	
Arizona	AZ0014	Nevada	MN_00064_200
Arkansas	88-0680	New Jersey (NE	MN002
California	01155CA	New Mexico	MN00064
Colorado	MN00064	New York (NEL	11647
Connecticut	PH-0256	North Carolina	27700
EPA Region 5	WD-15J	North Dakota	R-036
EPA Region 8	8TMS-Q	Ohio	4150
Florida (NELAP	E87605	Ohio VAP	CL101 9507
Georgia (DNR)	959	Oklahoma	D9922
Guam	959	Oregon (ELAP)	MN200001-005
Hawaii	SLD	Oregon (OREL	MN300001-001
Idaho	MN00064	Pennsylvania	68-00563
Illinois	200012	Saipan	MP0003
Indiana	C-MN-01	South Carolina	74003001
Indiana	C-MN-01	Tennesee	2818
Iowa	368	Tennessee	02818
Kansas	E-10167	Texas	T104704192-08
Kentucky	90062	Utah (NELAP)	PAM
Louisiana	03086	Virginia	00251
Maine	2007029	Washington	C755
Maryland	322	West Virginia	9952C
Michigan	9909	Wisconsin	999407970
Minnesota	027-053-137	Wyoming	8TMS-Q
Mississippi	MN00064		

REPORT OF LABORATORY ANALYSIS

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Appendix A

Sample Management

1155 10212624

Page 1 of 1

OnSite Environmental Inc.

14648 NE 95th Street, Redmond, WA 98052 · (425) 883-3881

Laboratory Reference #: 11-109

Subcontract Laboratory: Pace Analytical Service, Inc.

Contact Person: Scott Unze / Dioxin Manger

Address: 1700 Elm St. Ste. 200 Minneapolis, MN 55414

Phone Number: (612) 607-6383

Date/Time: _____

Turnaround Request:

1 Day 2 Day 3 Day

Standard

Other: _____

Project Manager: David Baumeister

email: dbaumeister@onsite-env.com

Project Number: 5147-006-08

Project Name: _____

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	Requested Analysis	
	MW-3A	11/13/12	1015	W	2	Dioxin/Furans	001
	DUP	↓	1020	↓	↓	↓	002
	MW-6	↓	1200	↓	↓	↓	003
	MW-7	↓	1435	↓	↓	↓	004

Signature	Company	Date	Time
Relinquished by: [signature]	OSE	11/14/12	1530
Received by:	UPS		
Relinquished by:			
Received by: CSI	Pace	11-15-12	9:25
Relinquished by:			
Received by:			

Comments/Special Instructions

EDDs WA format

TIER 3

T= 0.68

Pace Analytical®	Document Name: **Sample Condition Upon Receipt Form**	Document Revised: 13Nov2012 Page 1 of 1
	Document No.: **F-MN-L-213-rev.05**	Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: Onsite

Project #: WO#: 10212624

10212624

Courier: ☐ Fed Ex ☑ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other:

Tracking Number: 126841W 019982431

Custody Seal on Cooler/Box Present? ☐ Yes ☑ No **Seals Intact?** ☐ Yes ☑ No

Optional: Proj. Due Date: Proj. Name:

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☐ None ☑ Other: foam **Temp Blank?** ☐ Yes ☑ No

Thermometer Used: ☑ B88A912167504 ☐ 80512447 **Type of Ice:** ☑ Wet ☑ Blue ☐ None ☐ Samples on ice, cooling process has begun

Cooler Temp Read (°C): 0-3 **Cooler Temp Corrected (°C):** 0-6 **Biological Tissue Frozen?** ☐ Yes ☐ No

Temp should be above freezing to 6°C **Date and Initials of Person Examining Contents:** CJ 11-15-12

				Comments:
Chain of Custody Present?	☑ Yes	☐ No	☐ N/A	1.
Chain of Custody Filled Out?	☑ Yes	☐ No	☐ N/A	2.
Chain of Custody Relinquished?	☑ Yes	☐ No	☐ N/A	3.
Sampler Name and/or Signature on COC?	☐ Yes	☑ No	☐ N/A	4.
Samples Arrived within Hold Time?	☑ Yes	☐ No	☐ N/A	5.
Short Hold Time Analysis (<72 hr)?	☐ Yes	☑ No	☐ N/A	6.
Rush Turn Around Time Requested?	☐ Yes	☑ No	☐ N/A	7.
Sufficient Volume?	☑ Yes	☐ No	☐ N/A	8.
Correct Containers Used?	☑ Yes	☐ No	☐ N/A	9.
-Pace Containers Used?	☑ Yes	☐ No	☐ N/A	
Containers Intact?	☑ Yes	☐ No	☐ N/A	10.
Filtered Volume Received for Dissolved Tests?	☐ Yes	☑ No	☐ N/A	11.
Sample Labels Match COC?	☑ Yes	☐ No	☐ N/A	12.
-Includes Date/Time/ID/Analysis Matrix: WI				
All containers needing acid/base preservation have been checked? Noncompliances are noted in 13.	☐ Yes	☑ No	☐ N/A	13. ☐ HNO_3 ☐ H_2SO_4 ☐ NaOH ☐ HCl
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, HCl<2; NaOH>12)	☐ Yes	☑ No	☐ N/A	Sample #
Exceptions: VOA, Coliform, TOC, Oil and Grease, WI-DRO (water)	☐ Yes	☑ No		Initial when completed: Lot # of added preservative:
Headspace in VOA Vials (>6mm)?	☐ Yes	☑ No	☐ N/A	14.
Trip Blank Present?	☐ Yes	☑ No	☐ N/A	15.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☐ N/A	
Pace Trip Blank Lot # (if purchased):				

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** ☐ Yes ☐ No

Person Contacted: Date/Time:

Comments/Resolution:

Project Manager Review: Date: 11/16/12

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Reporting Flags

A = Reporting Limit based on signal to noise

B = Less than 10x higher than method blank level

C = Result obtained from confirmation analysis

D = Result obtained from analysis of diluted sample

E = Exceeds calibration range

I = Interference present

J = Estimated value

Nn = Value obtained from additional analysis

P = PCDE Interference

R = Recovery outside target range

S = Peak saturated

U = Analyte not detected

V = Result verified by confirmation analysis

X = %D Exceeds limits

Y = Calculated using average of daily RFs

* = See Discussion

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Appendix B

Sample Analysis Summary

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - Onsite Environmental, Inc.

Client's Sample ID	MW-3A		
Lab Sample ID	10212624001		
Filename	F121129A_06		
Injected By	SMT		
Total Amount Extracted	1050 mL	Matrix	Water
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	11/13/2012 10:15
ICAL ID	F121120	Received	11/15/2012 09:25
CCal Filename(s)	F121129A_01 & F121129A_12	Extracted	11/26/2012 14:30
Method Blank ID	BLANK-34702	Analyzed	11/29/2012 08:11

Native Isomers	**Conc** pg/L	**EMPC** pg/L	**RL** pg/L		**Internal Standards**	**ng's Added**	**Percent Recovery**
2,3,7,8-TCDF	ND	-----	0.91		2,3,7,8-TCDF-13C	2.00	72
Total TCDF	ND	-----	0.91		2,3,7,8-TCDD-13C	2.00	84
					1,2,3,7,8-PeCDF-13C	2.00	79
2,3,7,8-TCDD	ND	-----	0.65		2,3,4,7,8-PeCDF-13C	2.00	80
Total TCDD	ND	-----	0.65		1,2,3,7,8-PeCDD-13C	2.00	92
					1,2,3,4,7,8-HxCDF-13C	2.00	86
1,2,3,7,8-PeCDF	ND	-----	0.63		1,2,3,6,7,8-HxCDF-13C	2.00	82
2,3,4,7,8-PeCDF	ND	-----	0.48		2,3,4,6,7,8-HxCDF-13C	2.00	84
Total PeCDF	ND	-----	0.56		1,2,3,7,8,9-HxCDF-13C	2.00	87
					1,2,3,4,7,8-HxCDD-13C	2.00	93
1,2,3,7,8-PeCDD	ND	-----	0.54		1,2,3,6,7,8-HxCDD-13C	2.00	76
Total PeCDD	ND	-----	0.54		1,2,3,4,6,7,8-HpCDF-13C	2.00	83
					1,2,3,4,7,8,9-HpCDF-13C	2.00	91
1,2,3,4,7,8-HxCDF	ND	-----	0.58		1,2,3,4,6,7,8-HpCDD-13C	2.00	105
1,2,3,6,7,8-HxCDF	ND	-----	0.54		OCDD-13C	4.00	83
2,3,4,6,7,8-HxCDF	ND	-----	0.46				
1,2,3,7,8,9-HxCDF	ND	-----	0.51		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	0.52		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.60		2,3,7,8-TCDD-37Cl4	0.20	92
1,2,3,6,7,8-HxCDD	ND	-----	0.65				
1,2,3,7,8,9-HxCDD	ND	-----	0.60				
Total HxCDD	ND	-----	0.62				
1,2,3,4,6,7,8-HpCDF	ND	-----	0.71		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.81		Equivalence: 0.93 pg/L		
Total HpCDF	ND	-----	0.76		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	-----	0.79	0.57	I			
Total HpCDD	ND	-----	0.57				
OCDF	-----	1.80	0.86	I			
OCDD	7.2	-----	1.30	J			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit.

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

J = Estimated value
I = Interference present

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - Onsite Environmental, Inc.

Client's Sample ID	DUP		
Lab Sample ID	10212624002		
Filename	F121129A_07		
Injected By	SMT		
Total Amount Extracted	1070 mL	Matrix	Water
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	11/13/2012 10:20
ICAL ID	F121120	Received	11/15/2012 09:25
CCal Filename(s)	F121129A_01 & F121129A_12	Extracted	11/26/2012 14:30
Method Blank ID	BLANK-34702	Analyzed	11/29/2012 08:55

Native Isomers	Conc pg/L	EMPC pg/L	RL pg/L		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	0.70		2,3,7,8-TCDF-13C	2.00	70
Total TCDF	ND	-----	0.70		2,3,7,8-TCDD-13C	2.00	84
					1,2,3,7,8-PeCDF-13C	2.00	77
2,3,7,8-TCDD	ND	-----	0.87		2,3,4,7,8-PeCDF-13C	2.00	79
Total TCDD	ND	-----	0.87		1,2,3,7,8-PeCDD-13C	2.00	89
					1,2,3,4,7,8-HxCDF-13C	2.00	82
1,2,3,7,8-PeCDF	ND	-----	0.62		1,2,3,6,7,8-HxCDF-13C	2.00	76
2,3,4,7,8-PeCDF	ND	-----	0.66		2,3,4,6,7,8-HxCDF-13C	2.00	81
Total PeCDF	ND	-----	0.64		1,2,3,7,8,9-HxCDF-13C	2.00	82
					1,2,3,4,7,8-HxCDD-13C	2.00	89
1,2,3,7,8-PeCDD	ND	-----	0.62		1,2,3,6,7,8-HxCDD-13C	2.00	73
Total PeCDD	ND	-----	0.62		1,2,3,4,6,7,8-HpCDF-13C	2.00	79
					1,2,3,4,7,8,9-HpCDF-13C	2.00	87
1,2,3,4,7,8-HxCDF	ND	-----	0.50		1,2,3,4,6,7,8-HpCDD-13C	2.00	100
1,2,3,6,7,8-HxCDF	ND	-----	0.50		OCDD-13C	4.00	78
2,3,4,6,7,8-HxCDF	ND	-----	0.59				
1,2,3,7,8,9-HxCDF	ND	-----	0.56		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	0.54		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.63		2,3,7,8-TCDD-37Cl4	0.20	91
1,2,3,6,7,8-HxCDD	ND	-----	0.77				
1,2,3,7,8,9-HxCDD	ND	-----	0.57				
Total HxCDD	ND	-----	0.66				
1,2,3,4,6,7,8-HpCDF	ND	-----	0.56		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.71		Equivalence: 1.1 pg/L		
Total HpCDF	ND	-----	0.64		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	-----	0.64	0.59	I			
Total HpCDD	1.1	-----	0.59	J			
OCDF	-----	1.60	0.77	I			
OCDD	-----	2.10	1.00	I			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
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NC = Not Calculated

J = Estimated value
I = Interference present

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - Onsite Environmental, Inc.

Client's Sample ID	MW-6		
Lab Sample ID	10212624003		
Filename	F121129A_08		
Injected By	SMT		
Total Amount Extracted	1050 mL	Matrix	Water
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	11/13/2012 12:00
ICAL ID	F121120	Received	11/15/2012 09:25
CCal Filename(s)	F121129A_01 & F121129A_12	Extracted	11/26/2012 14:30
Method Blank ID	BLANK-34702	Analyzed	11/29/2012 09:39

Native Isomers	Conc pg/L	EMPC pg/L	RL pg/L		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	1.10		2,3,7,8-TCDF-13C	2.00	68
Total TCDF	ND	-----	1.10		2,3,7,8-TCDD-13C	2.00	82
					1,2,3,7,8-PeCDF-13C	2.00	82
2,3,7,8-TCDD	ND	-----	0.69		2,3,4,7,8-PeCDF-13C	2.00	81
Total TCDD	ND	-----	0.69		1,2,3,7,8-PeCDD-13C	2.00	92
					1,2,3,4,7,8-HxCDF-13C	2.00	83
1,2,3,7,8-PeCDF	ND	-----	0.91		1,2,3,6,7,8-HxCDF-13C	2.00	79
2,3,4,7,8-PeCDF	ND	-----	0.78		2,3,4,6,7,8-HxCDF-13C	2.00	83
Total PeCDF	ND	-----	0.85		1,2,3,7,8,9-HxCDF-13C	2.00	83
					1,2,3,4,7,8-HxCDD-13C	2.00	89
1,2,3,7,8-PeCDD	ND	-----	0.64		1,2,3,6,7,8-HxCDD-13C	2.00	75
Total PeCDD	ND	-----	0.64		1,2,3,4,6,7,8-HpCDF-13C	2.00	83
					1,2,3,4,7,8,9-HpCDF-13C	2.00	87
1,2,3,4,7,8-HxCDF	ND	-----	0.56		1,2,3,4,6,7,8-HpCDD-13C	2.00	100
1,2,3,6,7,8-HxCDF	ND	-----	0.43		OCDD-13C	4.00	81
2,3,4,6,7,8-HxCDF	ND	-----	0.42				
1,2,3,7,8,9-HxCDF	ND	-----	0.47		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	0.47		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.61		2,3,7,8-TCDD-37Cl4	0.20	90
1,2,3,6,7,8-HxCDD	ND	-----	0.58				
1,2,3,7,8,9-HxCDD	ND	-----	0.55				
Total HxCDD	ND	-----	0.58				
1,2,3,4,6,7,8-HpCDF	ND	-----	0.61		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.61		Equivalence: 1.0 pg/L		
Total HpCDF	ND	-----	0.61		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	-----	0.63	0.50	I			
Total HpCDD	ND	-----	0.50				
OCDF	ND	-----	0.68				
OCDD	-----	3.90	1.30	I			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit.

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NC = Not Calculated

I = Interference present

REPORT OF LABORATORY ANALYSIS

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1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - Onsite Environmental, Inc.

Client's Sample ID	MW-7		
Lab Sample ID	10212624004		
Filename	F121129A_09		
Injected By	SMT		
Total Amount Extracted	1040 mL	Matrix	Water
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	11/13/2012 14:35
ICAL ID	F121120	Received	11/15/2012 09:25
CCal Filename(s)	F121129A_01 & F121129A_12	Extracted	11/26/2012 14:30
Method Blank ID	BLANK-34702	Analyzed	11/29/2012 10:24

Native Isomers	Conc pg/L	EMPC pg/L	RL pg/L		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	1.20		2,3,7,8-TCDF-13C	2.00	75
Total TCDF	ND	-----	1.20		2,3,7,8-TCDD-13C	2.00	91
					1,2,3,7,8-PeCDF-13C	2.00	86
2,3,7,8-TCDD	ND	-----	0.88		2,3,4,7,8-PeCDF-13C	2.00	87
Total TCDD	ND	-----	0.88		1,2,3,7,8-PeCDD-13C	2.00	99
					1,2,3,4,7,8-HxCDF-13C	2.00	90
1,2,3,7,8-PeCDF	ND	-----	0.80		1,2,3,6,7,8-HxCDF-13C	2.00	87
2,3,4,7,8-PeCDF	ND	-----	0.62		2,3,4,6,7,8-HxCDF-13C	2.00	92
Total PeCDF	ND	-----	0.71		1,2,3,7,8,9-HxCDF-13C	2.00	90
					1,2,3,4,7,8-HxCDD-13C	2.00	98
1,2,3,7,8-PeCDD	ND	-----	0.75		1,2,3,6,7,8-HxCDD-13C	2.00	81
Total PeCDD	ND	-----	0.75		1,2,3,4,6,7,8-HpCDF-13C	2.00	87
					1,2,3,4,7,8,9-HpCDF-13C	2.00	95
1,2,3,4,7,8-HxCDF	ND	-----	0.48		1,2,3,4,6,7,8-HpCDD-13C	2.00	109
1,2,3,6,7,8-HxCDF	ND	-----	0.54		OCDD-13C	4.00	83
2,3,4,6,7,8-HxCDF	ND	-----	0.49				
1,2,3,7,8,9-HxCDF	ND	-----	0.52		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	0.51		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.83		2,3,7,8-TCDD-37Cl4	0.20	87
1,2,3,6,7,8-HxCDD	ND	-----	0.86				
1,2,3,7,8,9-HxCDD	ND	-----	0.81				
Total HxCDD	ND	-----	0.83				
1,2,3,4,6,7,8-HpCDF	ND	-----	0.58		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.81		Equivalence: 1.2 pg/L		
Total HpCDF	ND	-----	0.69		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	ND	-----	0.66				
Total HpCDD	ND	-----	0.66				
OCDF	ND	-----	0.83				
OCDD	-----	1.5	1.30	I			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit.

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NC = Not Calculated

I = Interference present

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Blank Analysis Results

Lab Sample ID	BLANK-34702	Matrix	Water
Filename	F121129A_05	Dilution	NA
Total Amount Extracted	1030 mL	Extracted	11/26/2012 14:30
ICAL ID	F121120	Analyzed	11/29/2012 07:26
CCal Filename(s)	F121129A_01 & F121129A_12	Injected By	SMT

Native Isomers	Conc pg/L	EMPC pg/L	RL pg/L		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	0.79		2,3,7,8-TCDF-13C	2.00	59
Total TCDF	1.2	-----	0.79	J	2,3,7,8-TCDD-13C	2.00	72
					1,2,3,7,8-PeCDF-13C	2.00	68
2,3,7,8-TCDD	ND	-----	0.74		2,3,4,7,8-PeCDF-13C	2.00	69
Total TCDD	ND	-----	0.74		1,2,3,7,8-PeCDD-13C	2.00	77
					1,2,3,4,7,8-HxCDF-13C	2.00	74
1,2,3,7,8-PeCDF	ND	-----	1.00		1,2,3,6,7,8-HxCDF-13C	2.00	70
2,3,4,7,8-PeCDF	ND	-----	0.64		2,3,4,6,7,8-HxCDF-13C	2.00	73
Total PeCDF	1.1	-----	0.82	J	1,2,3,7,8,9-HxCDF-13C	2.00	72
					1,2,3,4,7,8-HxCDD-13C	2.00	77
1,2,3,7,8-PeCDD	ND	-----	0.84		1,2,3,6,7,8-HxCDD-13C	2.00	64
Total PeCDD	ND	-----	0.84		1,2,3,4,6,7,8-HpCDF-13C	2.00	70
					1,2,3,4,7,8,9-HpCDF-13C	2.00	76
1,2,3,4,7,8-HxCDF	ND	-----	0.56		1,2,3,4,6,7,8-HpCDD-13C	2.00	89
1,2,3,6,7,8-HxCDF	ND	-----	0.56		OCDD-13C	4.00	69
2,3,4,6,7,8-HxCDF	ND	-----	0.48				
1,2,3,7,8,9-HxCDF	ND	-----	0.57		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	0.55		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.65		2,3,7,8-TCDD-37Cl4	0.20	90
1,2,3,6,7,8-HxCDD	ND	-----	0.72				
1,2,3,7,8,9-HxCDD	ND	-----	0.68				
Total HxCDD	ND	-----	0.68				
1,2,3,4,6,7,8-HpCDF	ND	-----	0.73		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.79		Equivalence: 1.2 pg/L		
Total HpCDF	ND	-----	0.76		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	ND	-----	0.69				
Total HpCDD	ND	-----	0.69				
OCDF	1.3	-----	0.97	J			
OCDD	-----	4.2	1.30	I			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

J = Estimated value
I = Interference present

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Laboratory Control Spike Results

Lab Sample ID	LCS-34703		
Filename	F121129A_02	Matrix	Water
Total Amount Extracted	1020 mL	Dilution	NA
ICAL ID	F121120	Extracted	11/26/2012 14:30
CCal Filename(s)	F121129A_01 & F121129A_12	Analyzed	11/29/2012 05:13
Method Blank ID	BLANK-34702	Injected By	SMT

Native Isomers	**Qs** (ng)	**Qm** (ng)	% Rec.	**Internal Standards**	**ng's Added**	**Percent Recovery**
2,3,7,8-TCDF	0.20	0.21	105	2,3,7,8-TCDF-13C	2.0	77
Total TCDF				2,3,7,8-TCDD-13C	2.0	94
				1,2,3,7,8-PeCDF-13C	2.0	88
2,3,7,8-TCDD	0.20	0.17	83	2,3,4,7,8-PeCDF-13C	2.0	91
Total TCDD				1,2,3,7,8-PeCDD-13C	2.0	103
				1,2,3,4,7,8-HxCDF-13C	2.0	93
1,2,3,7,8-PeCDF	1.0	1.1	109	1,2,3,6,7,8-HxCDF-13C	2.0	88
2,3,4,7,8-PeCDF	1.0	1.1	107	2,3,4,6,7,8-HxCDF-13C	2.0	95
Total PeCDF				1,2,3,7,8,9-HxCDF-13C	2.0	93
				1,2,3,4,7,8-HxCDD-13C	2.0	100
1,2,3,7,8-PeCDD	1.0	0.95	95	1,2,3,6,7,8-HxCDD-13C	2.0	83
Total PeCDD				1,2,3,4,6,7,8-HpCDF-13C	2.0	91
				1,2,3,4,7,8,9-HpCDF-13C	2.0	100
1,2,3,4,7,8-HxCDF	1.0	1.1	109	1,2,3,4,6,7,8-HpCDD-13C	2.0	114
1,2,3,6,7,8-HxCDF	1.0	1.0	104	OCDD-13C	4.0	95
2,3,4,6,7,8-HxCDF	1.0	1.0	103			
1,2,3,7,8,9-HxCDF	1.0	1.1	105	1,2,3,4-TCDD-13C	2.0	NA
Total HxCDF				1,2,3,7,8,9-HxCDD-13C	2.0	NA
1,2,3,4,7,8-HxCDD	1.0	1.1	110	2,3,7,8-TCDD-37Cl4	0.20	92
1,2,3,6,7,8-HxCDD	1.0	1.2	116			
1,2,3,7,8,9-HxCDD	1.0	1.1	114			
Total HxCDD						
1,2,3,4,6,7,8-HpCDF	1.0	1.1	108			
1,2,3,4,7,8,9-HpCDF	1.0	0.98	98			
Total HpCDF						
1,2,3,4,6,7,8-HpCDD	1.0	0.93	93			
Total HpCDD						
OCDF	2.0	2.1	103			
OCDD	2.0	2.1	107			

Qs = Quantity Spiked
Qm = Quantity Measured
Rec. = Recovery (Expressed as Percent)
R = Recovery outside of target range

Y = RF averaging used in calculations
Nn = Value obtained from additional analysis
NA = Not Applicable
* = See Discussion

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Laboratory Control Spike Results

Lab Sample ID	LCSD-34704		
Filename	F121129A_03	Matrix	Water
Total Amount Extracted	1030 mL	Dilution	NA
ICAL ID	F121120	Extracted	11/26/2012 14:30
CCal Filename(s)	F121129A_01 & F121129A_12	Analyzed	11/29/2012 05:57
Method Blank ID	BLANK-34702	Injected By	SMT

Native Isomers	**Qs** (ng)	**Qm** (ng)	% Rec.	**Internal Standards**	**ng's Added**	**Percent Recovery**
2,3,7,8-TCDF	0.20	0.22	112	2,3,7,8-TCDF-13C	2.0	72
Total TCDF				2,3,7,8-TCDD-13C	2.0	87
				1,2,3,7,8-PeCDF-13C	2.0	82
2,3,7,8-TCDD	0.20	0.17	85	2,3,4,7,8-PeCDF-13C	2.0	82
Total TCDD				1,2,3,7,8-PeCDD-13C	2.0	94
				1,2,3,4,7,8-HxCDF-13C	2.0	89
1,2,3,7,8-PeCDF	1.0	1.1	110	1,2,3,6,7,8-HxCDF-13C	2.0	86
2,3,4,7,8-PeCDF	1.0	1.1	107	2,3,4,6,7,8-HxCDF-13C	2.0	89
Total PeCDF				1,2,3,7,8,9-HxCDF-13C	2.0	89
				1,2,3,4,7,8-HxCDD-13C	2.0	97
1,2,3,7,8-PeCDD	1.0	0.97	97	1,2,3,6,7,8-HxCDD-13C	2.0	77
Total PeCDD				1,2,3,4,6,7,8-HpCDF-13C	2.0	86
				1,2,3,4,7,8,9-HpCDF-13C	2.0	95
1,2,3,4,7,8-HxCDF	1.0	1.1	112	1,2,3,4,6,7,8-HpCDD-13C	2.0	109
1,2,3,6,7,8-HxCDF	1.0	1.0	105	OCDD-13C	4.0	89
2,3,4,6,7,8-HxCDF	1.0	1.1	106			
1,2,3,7,8,9-HxCDF	1.0	1.1	110	1,2,3,4-TCDD-13C	2.0	NA
Total HxCDF				1,2,3,7,8,9-HxCDD-13C	2.0	NA
1,2,3,4,7,8-HxCDD	1.0	1.1	107	2,3,7,8-TCDD-37Cl4	0.20	84
1,2,3,6,7,8-HxCDD	1.0	1.2	119			
1,2,3,7,8,9-HxCDD	1.0	1.2	115			
Total HxCDD						
1,2,3,4,6,7,8-HpCDF	1.0	1.1	110			
1,2,3,4,7,8,9-HpCDF	1.0	1.00	100			
Total HpCDF						
1,2,3,4,6,7,8-HpCDD	1.0	0.94	94			
Total HpCDD						
OCDF	2.0	2.2	109			
OCDD	2.0	2.2	111			

Qs = Quantity Spiked
Qm = Quantity Measured
Rec. = Recovery (Expressed as Percent)
R = Recovery outside of target range

Y = RF averaging used in calculations
Nn = Value obtained from additional analysis
NA = Not Applicable
* = See Discussion

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290

Spike Recovery Relative Percent Difference (RPD) Results

Client	Onsite Environmental, Inc.		
Spike 1 ID	LCS-34703	Spike 2 ID	LCSD-34704
Spike 1 Filename	F121129A_02	Spike 2 Filename	F121129A_03

Compound	Spike 1 %REC	Spike 2 %REC	%RPD
2,3,7,8-TCDF	105	112	6.5
2,3,7,8-TCDD	83	85	2.4
1,2,3,7,8-PeCDF	109	110	0.9
2,3,4,7,8-PeCDF	107	107	0.0
1,2,3,7,8-PeCDD	95	97	2.1
1,2,3,4,7,8-HxCDF	109	112	2.7
1,2,3,6,7,8-HxCDF	104	105	1.0
2,3,4,6,7,8-HxCDF	103	106	2.9
1,2,3,7,8,9-HxCDF	105	110	4.7
1,2,3,4,7,8-HxCDD	110	107	2.8
1,2,3,6,7,8-HxCDD	116	119	2.6
1,2,3,7,8,9-HxCDD	114	115	0.9
1,2,3,4,6,7,8-HpCDF	108	110	1.8
1,2,3,4,7,8,9-HpCDF	98	100	2.0
1,2,3,4,6,7,8-HpCDD	93	94	1.1
OCDF	103	109	5.7
OCDD	107	111	3.7

%REC = Percent Recovered
RPD = The difference between the two values divided by the mean value

REPORT OF LABORATORY ANALYSIS

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Chain of Custody

Page 1 of 1

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: GEI
Project Number: 5147-006-08
Project Name: DC1
Project Manager: ROBERT T.
Sampled by: ABHIJIT

Turnaround Request (in working days)

(Check One)

- ☐ Same Day
- ☐ 1 Day
- ☐ 2 Days
- ☐ 3 Days
- ☒ Standard (7 Days) (TPH analysis 5 Days)
- ☐ _____ (other)

Laboratory Number: 11-109

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	No. of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260B	Halogenated Volatiles 8260B	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082	Organochlorine Pesticides 8081A	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	~~Total MTCA Metals~~ Dioxin/Furans	TCLP Metals	HEM (oil and grease) 1664	Metal Group A (see comment)	Metal Group B (see comment)	MTBE, EDB & EDC	HERBICIDES	% Moisture
1	MW-1	11/13/12	1310	WATER	8			X	X				X									X				
2	MW-2A		0910		8																					
3	MW-4		1545		8																					
4	MW-3A		1015		19					X		X			X				X				X	X	X	
5	DUP		1020		19																					
6	MW-6		1200		19																					
7	MW-7		1435		19																					
8	TRIP BLANK		—		6			X		X														X		

	Signature	Company	Date	Time
Relinquished		GEI	11/14/12	0955
Received		CDE	11/14/12	0955
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

METAL GROUP A: TOTAL & DISSOLVE (As, Cu, Hg, Ni, Ag, Zn)

Metal Group B: TOTAL & DISSOLVE (As, Cd, Cr, Cu, Pb, Hg, Ni, Ag, Zn)

Samples are field filtered for dissolved metals analyses

Chromatograms with final report ☐

Data Package: Level III ☐ Level IV ☐ Electronic Data Deliverables (EDDs) ☐ _____

Sample/Cooler Receipt and Acceptance Checklist

Client: GES

Client Project Name/Number: 5147-006-08

OnSite Project Number: 11-109

Initiated by: MR

Date Initiated: 11/14/12

1.0 Cooler Verification

1.1 Were there custody seals on the outside of the cooler?	**Yes**	No	**N/A**	1 2 3 4
1.2 Were the custody seals intact?	**Yes**	No	**N/A**	1 2 3 4
1.3 Were the custody seals signed and dated by last custodian?	**Yes**	No	**N/A**	1 2 3 4
1.4 Were the samples delivered on ice or blue ice?	**Yes**	No		1 2 3 4
1.5 Were samples received between 0-6 degrees Celsius?	**Yes**	No	Temperature: 2,2,2,1,1,1	
1.6 Have shipping bills (if any) been attached to the back of this form?	**Yes**	**N/A**		
1.7 How were the samples delivered?	**Client**	**Courier**	**UPS/FedEx**	**OSE Pickup** **Other**

2.0 Chain of Custody Verification

2.1 Was a Chain of Custody submitted with the samples?	**Yes**	No	1 2 3 4
2.2 Was the COC legible and written in permanent ink?	**Yes**	No	1 2 3 4
2.3 Have samples been relinquished and accepted by each custodian?	**Yes**	No	1 2 3 4
2.4 Did the sample labels (ID, date, time, preservative) agree with COC?	**Yes**	No	1 2 3 4
2.5 Were all of the samples listed on the COC submitted?	**Yes**	No	1 2 3 4
2.6 Were any of the samples submitted omitted from the COC?	Yes	**No**	1 2 3 4

3.0 Sample Verification

3.1 Were any sample containers broken or compromised?	Yes	**No**		1 2 3 4
3.2 Were any sample labels missing or illegible?	Yes	**No**		1 2 3 4
3.3 Have the correct containers been used for each analysis requested?	**Yes**	No		1 2 3 4
3.4 Have the samples been correctly preserved?	**Yes**	No	**N/A**	1 2 3 4
3.5 Are volatiles samples free from headspace and air bubbles?	**Yes**	No	**N/A**	1 2 3 4
3.6 Is there sufficient sample submitted to perform requested analyses?	**Yes**	No		1 2 3 4
3.7 Have any holding times already expired or will expire in 24 hours?	Yes	**No**		1 2 3 4
3.8 Was method 5035A used?	**Yes**	No	**N/A**	1 2 3 4
3.9 If 5035A was used, which sampling option was used (#1, 2, or 3).	#		**N/A**	1 2 3 4

Explain any discrepancies:

1 - Discuss issue in Case Narrative

2 - Process Sample As-is

3 - Client contacted to discuss problem

4 - Sample cannot be analyzed or client does not wish to proceed

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

February 28, 2013

Robert Trahan
GeoEngineers, Inc.
600 Stewart, Suite 1700
Seattle, WA 98101-1233

Re: Analytical Data for Project 5147-006-08
Laboratory Reference No. 1302-095

Dear Robert:

Enclosed are the analytical results and associated quality control data for samples submitted on February 14, 2013.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: February 28, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

Case Narrative

Samples were collected on February 13, 2013 and received by the laboratory on February 14, 2013. They were maintained at the laboratory at a temperature of 2°C to 6°C.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Total and Dissolved Metals EPA 200.8/7470A Analysis

The practical quantitation limit for Arsenic is elevated in samples MW-1, MW-2A, and MW-7 due to interferences present in the sample.

Nickel is being reported from an alternate isotope for samples MW-1, MW-2, and MW-6 due to interferences present in the sample.

The Nickel isotope reported for all samples was independently verified using the ICP-OES due to interferences present in the sample.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: February 28, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
MW-1	02-095-01	Water	2-13-13	2-14-13	
MW-2A	02-095-02	Water	2-13-13	2-14-13	
MW-3A	02-095-03	Water	2-13-13	2-14-13	
DUP	02-095-04	Water	2-13-13	2-14-13	
MW-4	02-095-05	Water	2-13-13	2-14-13	
MW-6	02-095-06	Water	2-13-13	2-14-13	
MW-7	02-095-07	Water	2-13-13	2-14-13	
TRIP BLANK	02-095-08	Water	2-13-13	2-14-13	

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Date of Report: February 28, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

NWTPH-Gx

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-1**					
Laboratory ID:	02-095-01					
Gasoline	**ND**	100	NWTPH-Gx	2-15-13	2-15-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*92*	*71-116*				
Client ID:	**MW-2A**					
Laboratory ID:	02-095-02					
Gasoline	**ND**	100	NWTPH-Gx	2-15-13	2-15-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*91*	*71-116*				
Client ID:	**MW-3A**					
Laboratory ID:	02-095-03					
Gasoline	**ND**	100	NWTPH-Gx	2-15-13	2-15-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*92*	*71-116*				
Client ID:	**DUP**					
Laboratory ID:	02-095-04					
Gasoline	**ND**	100	NWTPH-Gx	2-15-13	2-15-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*90*	*71-116*				
Client ID:	**MW-4**					
Laboratory ID:	02-095-05					
Gasoline	**ND**	100	NWTPH-Gx	2-15-13	2-15-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*91*	*71-116*				
Client ID:	**MW-6**					
Laboratory ID:	02-095-06					
Gasoline	**ND**	100	NWTPH-Gx	2-15-13	2-15-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*91*	*71-116*				

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: February 28, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

NWTPH-Gx

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-7**					
Laboratory ID:	02-095-07					
Gasoline	**ND**	100	NWTPH-Gx	2-15-13	2-15-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*90*	*71-116*				
Client ID:	**TRIP BLANK**					
Laboratory ID:	02-095-08					
Gasoline	**ND**	100	NWTPH-Gx	2-15-13	2-15-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*92*	*71-116*				

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: February 28, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

NWTPH-Dx
(with acid/silica gel clean-up)

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-1**					
Laboratory ID:	02-095-01					
Diesel Range Organics	**ND**	0.26	NWTPH-Dx	2-20-13	2-21-13	
Lube Oil Range Organics	**ND**	0.41	NWTPH-Dx	2-20-13	2-21-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*71*	*50-150*				
Client ID:	**MW-2A**					
Laboratory ID:	02-095-02					
Diesel Range Organics	**ND**	0.26	NWTPH-Dx	2-20-13	2-20-13	
Lube Oil Range Organics	**ND**	0.41	NWTPH-Dx	2-20-13	2-20-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*98*	*50-150*				
Client ID:	**MW-3A**					
Laboratory ID:	02-095-03					
Diesel Range Organics	**ND**	0.25	NWTPH-Dx	2-20-13	2-20-13	
Lube Oil Range Organics	**ND**	0.40	NWTPH-Dx	2-20-13	2-20-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*97*	*50-150*				
Client ID:	**DUP**					
Laboratory ID:	02-095-04					
Diesel Range Organics	**ND**	0.25	NWTPH-Dx	2-20-13	2-20-13	
Lube Oil Range Organics	**ND**	0.40	NWTPH-Dx	2-20-13	2-20-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*98*	*50-150*				
Client ID:	**MW-4**					
Laboratory ID:	02-095-05					
Diesel Range Organics	**ND**	0.26	NWTPH-Dx	2-20-13	2-20-13	
Lube Oil Range Organics	**ND**	0.41	NWTPH-Dx	2-20-13	2-20-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*89*	*50-150*				
Client ID:	**MW-6**					
Laboratory ID:	02-095-06					
Diesel Range Organics	**ND**	0.25	NWTPH-Dx	2-20-13	2-20-13	
Lube Oil Range Organics	**ND**	0.40	NWTPH-Dx	2-20-13	2-20-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*102*	*50-150*				

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: February 28, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

NWTPH-Dx
(with acid/silica gel clean-up)

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-7**					
Laboratory ID:	02-095-07					
Diesel Range Organics	**ND**	0.25	NWTPH-Dx	2-20-13	2-20-13	
Lube Oil Range Organics	**ND**	0.40	NWTPH-Dx	2-20-13	2-20-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*98*	*50-150*				

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Date of Report: February 28, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

VOLATILES by EPA 8260C
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-3A**					
Laboratory ID:	02-095-03					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Chloromethane	ND	1.0	EPA 8260C	2-15-13	2-15-13	
Vinyl Chloride	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Bromomethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Chloroethane	ND	1.0	EPA 8260C	2-15-13	2-15-13	
Trichlorofluoromethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,1-Dichloroethene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Acetone	ND	5.0	EPA 8260C	2-15-13	2-15-13	
Iodomethane	ND	1.0	EPA 8260C	2-15-13	2-15-13	
Carbon Disulfide	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Methylene Chloride	ND	1.0	EPA 8260C	2-15-13	2-15-13	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,1-Dichloroethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Vinyl Acetate	ND	1.0	EPA 8260C	2-15-13	2-15-13	
2,2-Dichloropropane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
2-Butanone	ND	5.0	EPA 8260C	2-15-13	2-15-13	
Bromochloromethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Chloroform	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Carbon Tetrachloride	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,1-Dichloropropene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Benzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,2-Dichloroethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Trichloroethene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,2-Dichloropropane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Dibromomethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Bromodichloromethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	2-15-13	2-15-13	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	2-15-13	2-15-13	
Toluene	ND	1.0	EPA 8260C	2-15-13	2-15-13	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	2-15-13	2-15-13	

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Date of Report: February 28, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

VOLATILES by EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-3A**					
Laboratory ID:	02-095-03					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Tetrachloroethene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,3-Dichloropropane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
2-Hexanone	ND	2.0	EPA 8260C	2-15-13	2-15-13	
Dibromochloromethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,2-Dibromoethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Chlorobenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Ethylbenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
m,p-Xylene	ND	0.40	EPA 8260C	2-15-13	2-15-13	
o-Xylene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Styrene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Bromoform	ND	1.0	EPA 8260C	2-15-13	2-15-13	
Isopropylbenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Bromobenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
n-Propylbenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
2-Chlorotoluene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
4-Chlorotoluene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
tert-Butylbenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
sec-Butylbenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
p-Isopropyltoluene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
n-Butylbenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	2-15-13	2-15-13	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Hexachlorobutadiene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Naphthalene	ND	1.0	EPA 8260C	2-15-13	2-15-13	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*117*	*66-120*				
Toluene-d8	*107*	*70-120*				
4-Bromofluorobenzene	*95*	*63-120*				

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Date of Report: February 28, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

VOLATILES by EPA 8260C
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**DUP**					
Laboratory ID:	02-095-04					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Chloromethane	ND	1.0	EPA 8260C	2-15-13	2-15-13	
Vinyl Chloride	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Bromomethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Chloroethane	ND	1.0	EPA 8260C	2-15-13	2-15-13	
Trichlorofluoromethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,1-Dichloroethene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Acetone	ND	5.0	EPA 8260C	2-15-13	2-15-13	
Iodomethane	ND	1.0	EPA 8260C	2-15-13	2-15-13	
Carbon Disulfide	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Methylene Chloride	ND	1.0	EPA 8260C	2-15-13	2-15-13	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,1-Dichloroethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Vinyl Acetate	ND	1.0	EPA 8260C	2-15-13	2-15-13	
2,2-Dichloropropane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
2-Butanone	ND	5.0	EPA 8260C	2-15-13	2-15-13	
Bromochloromethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Chloroform	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Carbon Tetrachloride	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,1-Dichloropropene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Benzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,2-Dichloroethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Trichloroethene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,2-Dichloropropane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Dibromomethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Bromodichloromethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	2-15-13	2-15-13	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	2-15-13	2-15-13	
Toluene	ND	1.0	EPA 8260C	2-15-13	2-15-13	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	2-15-13	2-15-13	

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Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

VOLATILES by EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**DUP**					
Laboratory ID:	02-095-04					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Tetrachloroethene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,3-Dichloropropane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
2-Hexanone	ND	2.0	EPA 8260C	2-15-13	2-15-13	
Dibromochloromethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,2-Dibromoethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Chlorobenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Ethylbenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
m,p-Xylene	ND	0.40	EPA 8260C	2-15-13	2-15-13	
o-Xylene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Styrene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Bromoform	ND	1.0	EPA 8260C	2-15-13	2-15-13	
Isopropylbenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Bromobenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
n-Propylbenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
2-Chlorotoluene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
4-Chlorotoluene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
tert-Butylbenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
sec-Butylbenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
p-Isopropyltoluene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
n-Butylbenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	2-15-13	2-15-13	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Hexachlorobutadiene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Naphthalene	ND	1.0	EPA 8260C	2-15-13	2-15-13	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*113*	*66-120*				
Toluene-d8	*100*	*70-120*				
4-Bromofluorobenzene	*92*	*63-120*				

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Date of Report: February 28, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

VOLATILES by EPA 8260C
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-6**					
Laboratory ID:	02-095-06					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Chloromethane	ND	1.0	EPA 8260C	2-15-13	2-15-13	
Vinyl Chloride	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Bromomethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Chloroethane	ND	1.0	EPA 8260C	2-15-13	2-15-13	
Trichlorofluoromethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,1-Dichloroethene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Acetone	ND	5.0	EPA 8260C	2-15-13	2-15-13	
Iodomethane	ND	1.0	EPA 8260C	2-15-13	2-15-13	
Carbon Disulfide	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Methylene Chloride	ND	1.0	EPA 8260C	2-15-13	2-15-13	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,1-Dichloroethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Vinyl Acetate	ND	1.0	EPA 8260C	2-15-13	2-15-13	
2,2-Dichloropropane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
2-Butanone	ND	5.0	EPA 8260C	2-15-13	2-15-13	
Bromochloromethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Chloroform	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Carbon Tetrachloride	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,1-Dichloropropene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Benzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,2-Dichloroethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Trichloroethene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,2-Dichloropropane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Dibromomethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Bromodichloromethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	2-15-13	2-15-13	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	2-15-13	2-15-13	
Toluene	ND	1.0	EPA 8260C	2-15-13	2-15-13	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	2-15-13	2-15-13	

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Laboratory Reference: 1302-095
Project: 5147-006-08

VOLATILES by EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-6**					
Laboratory ID:	02-095-06					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Tetrachloroethene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,3-Dichloropropane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
2-Hexanone	ND	2.0	EPA 8260C	2-15-13	2-15-13	
Dibromochloromethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,2-Dibromoethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Chlorobenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Ethylbenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
m,p-Xylene	ND	0.40	EPA 8260C	2-15-13	2-15-13	
o-Xylene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Styrene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Bromoform	ND	1.0	EPA 8260C	2-15-13	2-15-13	
Isopropylbenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Bromobenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
n-Propylbenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
2-Chlorotoluene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
4-Chlorotoluene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
tert-Butylbenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
sec-Butylbenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
p-Isopropyltoluene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
n-Butylbenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	2-15-13	2-15-13	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Hexachlorobutadiene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Naphthalene	ND	1.0	EPA 8260C	2-15-13	2-15-13	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*114*	*66-120*				
Toluene-d8	*95*	*70-120*				
4-Bromofluorobenzene	*95*	*63-120*				

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Date of Report: February 28, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

VOLATILES by EPA 8260C
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-7**					
Laboratory ID:	02-095-07					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Chloromethane	ND	1.0	EPA 8260C	2-15-13	2-15-13	
Vinyl Chloride	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Bromomethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Chloroethane	ND	1.0	EPA 8260C	2-15-13	2-15-13	
Trichlorofluoromethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,1-Dichloroethene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Acetone	ND	5.0	EPA 8260C	2-15-13	2-15-13	
Iodomethane	ND	1.0	EPA 8260C	2-15-13	2-15-13	
Carbon Disulfide	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Methylene Chloride	ND	1.0	EPA 8260C	2-15-13	2-15-13	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,1-Dichloroethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Vinyl Acetate	ND	1.0	EPA 8260C	2-15-13	2-15-13	
2,2-Dichloropropane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
2-Butanone	ND	5.0	EPA 8260C	2-15-13	2-15-13	
Bromochloromethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Chloroform	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Carbon Tetrachloride	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,1-Dichloropropene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Benzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,2-Dichloroethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Trichloroethene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,2-Dichloropropane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Dibromomethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Bromodichloromethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	2-15-13	2-15-13	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	2-15-13	2-15-13	
Toluene	ND	1.0	EPA 8260C	2-15-13	2-15-13	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	2-15-13	2-15-13	

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Date of Report: February 28, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

VOLATILES by EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-7**					
Laboratory ID:	02-095-07					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Tetrachloroethene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,3-Dichloropropane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
2-Hexanone	ND	2.0	EPA 8260C	2-15-13	2-15-13	
Dibromochloromethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,2-Dibromoethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Chlorobenzene	0.20	0.20	EPA 8260C	2-15-13	2-15-13	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Ethylbenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
m,p-Xylene	ND	0.40	EPA 8260C	2-15-13	2-15-13	
o-Xylene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Styrene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Bromoform	ND	1.0	EPA 8260C	2-15-13	2-15-13	
Isopropylbenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Bromobenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
n-Propylbenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
2-Chlorotoluene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
4-Chlorotoluene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
tert-Butylbenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
sec-Butylbenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
p-Isopropyltoluene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
n-Butylbenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	2-15-13	2-15-13	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Hexachlorobutadiene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Naphthalene	ND	1.0	EPA 8260C	2-15-13	2-15-13	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*101*	*66-120*				
Toluene-d8	*99*	*70-120*				
4-Bromofluorobenzene	*94*	*63-120*				

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Date of Report: February 28, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

VOLATILES by EPA 8260C
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TRIP BLANK**					
Laboratory ID:	02-095-08					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Chloromethane	ND	1.0	EPA 8260C	2-15-13	2-15-13	
Vinyl Chloride	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Bromomethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Chloroethane	ND	1.0	EPA 8260C	2-15-13	2-15-13	
Trichlorofluoromethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,1-Dichloroethene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Acetone	ND	5.0	EPA 8260C	2-15-13	2-15-13	
Iodomethane	ND	1.0	EPA 8260C	2-15-13	2-15-13	
Carbon Disulfide	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Methylene Chloride	ND	1.0	EPA 8260C	2-15-13	2-15-13	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,1-Dichloroethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Vinyl Acetate	ND	1.0	EPA 8260C	2-15-13	2-15-13	
2,2-Dichloropropane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
2-Butanone	ND	5.0	EPA 8260C	2-15-13	2-15-13	
Bromochloromethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Chloroform	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Carbon Tetrachloride	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,1-Dichloropropene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Benzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,2-Dichloroethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Trichloroethene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,2-Dichloropropane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Dibromomethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Bromodichloromethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	2-15-13	2-15-13	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	2-15-13	2-15-13	
Toluene	ND	1.0	EPA 8260C	2-15-13	2-15-13	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	2-15-13	2-15-13	

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Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

VOLATILES by EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TRIP BLANK**					
Laboratory ID:	02-095-08					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Tetrachloroethene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,3-Dichloropropane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
2-Hexanone	ND	2.0	EPA 8260C	2-15-13	2-15-13	
Dibromochloromethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,2-Dibromoethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Chlorobenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Ethylbenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
m,p-Xylene	ND	0.40	EPA 8260C	2-15-13	2-15-13	
o-Xylene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Styrene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Bromoform	ND	1.0	EPA 8260C	2-15-13	2-15-13	
Isopropylbenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Bromobenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
n-Propylbenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
2-Chlorotoluene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
4-Chlorotoluene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
tert-Butylbenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
sec-Butylbenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
p-Isopropyltoluene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
n-Butylbenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	2-15-13	2-15-13	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Hexachlorobutadiene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Naphthalene	ND	1.0	EPA 8260C	2-15-13	2-15-13	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*98*	*66-120*				
Toluene-d8	*96*	*70-120*				
4-Bromofluorobenzene	*89*	*63-120*				

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Date of Report: February 28, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

SEMIVOLATILES EPA 8270D/SIM
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-3A**					
Laboratory ID:	02-095-03					
n-Nitrosodimethylamine	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
Pyridine	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
Phenol	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
Aniline	**ND**	4.7	EPA 8270D	2-15-13	2-16-13	
bis(2-Chloroethyl)ether	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
2-Chlorophenol	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
1,3-Dichlorobenzene	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
1,4-Dichlorobenzene	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
Benzyl alcohol	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
1,2-Dichlorobenzene	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
2-Methylphenol (o-Cresol)	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
bis(2-Chloroisopropyl)ether	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
n-Nitroso-di-n-propylamine	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
Hexachloroethane	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
Nitrobenzene	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
Isophorone	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
2-Nitrophenol	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
2,4-Dimethylphenol	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
bis(2-Chloroethoxy)methane	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
2,4-Dichlorophenol	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
1,2,4-Trichlorobenzene	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
Naphthalene	**ND**	0.093	EPA 8270/SIM	2-15-13	2-15-13	
4-Chloroaniline	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
Hexachlorobutadiene	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
4-Chloro-3-methylphenol	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
2-Methylnaphthalene	**ND**	0.093	EPA 8270/SIM	2-15-13	2-15-13	
1-Methylnaphthalene	**ND**	0.093	EPA 8270/SIM	2-15-13	2-15-13	
Hexachlorocyclopentadiene	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
2,4,6-Trichlorophenol	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
2,3-Dichloroaniline	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
2,4,5-Trichlorophenol	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
2-Chloronaphthalene	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
2-Nitroaniline	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
1,4-Dinitrobenzene	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
Dimethylphthalate	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
1,3-Dinitrobenzene	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
2,6-Dinitrotoluene	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
1,2-Dinitrobenzene	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
Acenaphthylene	**ND**	0.093	EPA 8270/SIM	2-15-13	2-15-13	
3-Nitroaniline	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	

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Date of Report: February 28, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

SEMIVOLATILES EPA 8270D/SIM
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-3A**					
Laboratory ID:	02-095-03					
2,4-Dinitrophenol	**ND**	4.7	EPA 8270D	2-15-13	2-16-13	
Acenaphthene	**ND**	0.093	EPA 8270/SIM	2-15-13	2-15-13	
4-Nitrophenol	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
2,4-Dinitrotoluene	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
Dibenzofuran	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
2,3,5,6-Tetrachlorophenol	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
2,3,4,6-Tetrachlorophenol	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
Diethylphthalate	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
4-Chlorophenyl-phenylether	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
4-Nitroaniline	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
Fluorene	**ND**	0.093	EPA 8270/SIM	2-15-13	2-15-13	
4,6-Dinitro-2-methylphenol	**ND**	4.7	EPA 8270D	2-15-13	2-16-13	
n-Nitrosodiphenylamine	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
1,2-Diphenylhydrazine	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
4-Bromophenyl-phenylether	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
Hexachlorobenzene	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
Pentachlorophenol	**ND**	4.7	EPA 8270D	2-15-13	2-16-13	
Phenanthrene	**ND**	0.093	EPA 8270/SIM	2-15-13	2-15-13	
Anthracene	**ND**	0.093	EPA 8270/SIM	2-15-13	2-15-13	
Carbazole	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
Di-n-butylphthalate	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
Fluoranthene	**ND**	0.093	EPA 8270/SIM	2-15-13	2-15-13	
Benzidine	**ND**	4.7	EPA 8270D	2-15-13	2-16-13	
Pyrene	**ND**	0.093	EPA 8270/SIM	2-15-13	2-15-13	
Butylbenzylphthalate	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
bis-2-Ethylhexyladipate	**ND**	4.7	EPA 8270D	2-15-13	2-16-13	
3,3'-Dichlorobenzidine	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
Benzo[a]anthracene	**ND**	0.0093	EPA 8270/SIM	2-15-13	2-15-13	
Chrysene	**ND**	0.0093	EPA 8270/SIM	2-15-13	2-15-13	
bis(2-Ethylhexyl)phthalate	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
Di-n-octylphthalate	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
Benzo[b]fluoranthene	**ND**	0.0093	EPA 8270/SIM	2-15-13	2-15-13	
Benzo(j,k)fluoranthene	**ND**	0.0093	EPA 8270/SIM	2-15-13	2-15-13	
Benzo[a]pyrene	**ND**	0.0093	EPA 8270/SIM	2-15-13	2-15-13	
Indeno[1,2,3-cd]pyrene	**ND**	0.0093	EPA 8270/SIM	2-15-13	2-15-13	
Dibenz[a,h]anthracene	**ND**	0.0093	EPA 8270/SIM	2-15-13	2-15-13	
Benzo[g,h,i]perylene	**ND**	0.0093	EPA 8270/SIM	2-15-13	2-15-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*33*	*17 - 81*				
Phenol-d6	*29*	*10 - 89*				
Nitrobenzene-d5	*45*	*35 - 110*				
2-Fluorobiphenyl	*70*	*45 - 110*				
2,4,6-Tribromophenol	*95*	*39 - 125*				
Terphenyl-d14	*86*	*58 - 111*				

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: February 28, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

SEMIVOLATILES EPA 8270D/SIM
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**DUP**					
Laboratory ID:	02-095-04					
n-Nitrosodimethylamine	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
Pyridine	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
Phenol	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
Aniline	**ND**	4.7	EPA 8270D	2-15-13	2-16-13	
bis(2-Chloroethyl)ether	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
2-Chlorophenol	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
1,3-Dichlorobenzene	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
1,4-Dichlorobenzene	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
Benzyl alcohol	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
1,2-Dichlorobenzene	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
2-Methylphenol (o-Cresol)	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
bis(2-Chloroisopropyl)ether	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
n-Nitroso-di-n-propylamine	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
Hexachloroethane	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
Nitrobenzene	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
Isophorone	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
2-Nitrophenol	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
2,4-Dimethylphenol	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
bis(2-Chloroethoxy)methane	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
2,4-Dichlorophenol	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
1,2,4-Trichlorobenzene	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
Naphthalene	**ND**	0.093	EPA 8270/SIM	2-15-13	2-15-13	
4-Chloroaniline	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
Hexachlorobutadiene	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
4-Chloro-3-methylphenol	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
2-Methylnaphthalene	**ND**	0.093	EPA 8270/SIM	2-15-13	2-15-13	
1-Methylnaphthalene	**ND**	0.093	EPA 8270/SIM	2-15-13	2-15-13	
Hexachlorocyclopentadiene	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
2,4,6-Trichlorophenol	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
2,3-Dichloroaniline	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
2,4,5-Trichlorophenol	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
2-Chloronaphthalene	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
2-Nitroaniline	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
1,4-Dinitrobenzene	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
Dimethylphthalate	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
1,3-Dinitrobenzene	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
2,6-Dinitrotoluene	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
1,2-Dinitrobenzene	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
Acenaphthylene	**ND**	0.093	EPA 8270/SIM	2-15-13	2-15-13	
3-Nitroaniline	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	

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Date of Report: February 28, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

SEMIVOLATILES EPA 8270D/SIM
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**DUP**					
Laboratory ID:	02-095-04					
2,4-Dinitrophenol	**ND**	4.7	EPA 8270D	2-15-13	2-16-13	
Acenaphthene	**ND**	0.093	EPA 8270/SIM	2-15-13	2-15-13	
4-Nitrophenol	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
2,4-Dinitrotoluene	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
Dibenzofuran	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
2,3,5,6-Tetrachlorophenol	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
2,3,4,6-Tetrachlorophenol	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
Diethylphthalate	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
4-Chlorophenyl-phenylether	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
4-Nitroaniline	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
Fluorene	**ND**	0.093	EPA 8270/SIM	2-15-13	2-15-13	
4,6-Dinitro-2-methylphenol	**ND**	4.7	EPA 8270D	2-15-13	2-16-13	
n-Nitrosodiphenylamine	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
1,2-Diphenylhydrazine	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
4-Bromophenyl-phenylether	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
Hexachlorobenzene	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
Pentachlorophenol	**ND**	4.7	EPA 8270D	2-15-13	2-16-13	
Phenanthrene	**ND**	0.093	EPA 8270/SIM	2-15-13	2-15-13	
Anthracene	**ND**	0.093	EPA 8270/SIM	2-15-13	2-15-13	
Carbazole	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
Di-n-butylphthalate	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
Fluoranthene	**ND**	0.093	EPA 8270/SIM	2-15-13	2-15-13	
Benzidine	**ND**	4.7	EPA 8270D	2-15-13	2-16-13	
Pyrene	**ND**	0.093	EPA 8270/SIM	2-15-13	2-15-13	
Butylbenzylphthalate	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
bis-2-Ethylhexyladipate	**ND**	4.7	EPA 8270D	2-15-13	2-16-13	
3,3'-Dichlorobenzidine	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
Benzo[a]anthracene	**ND**	0.0093	EPA 8270/SIM	2-15-13	2-15-13	
Chrysene	**ND**	0.0093	EPA 8270/SIM	2-15-13	2-15-13	
bis(2-Ethylhexyl)phthalate	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
Di-n-octylphthalate	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
Benzo[b]fluoranthene	**ND**	0.0093	EPA 8270/SIM	2-15-13	2-15-13	
Benzo(j,k)fluoranthene	**ND**	0.0093	EPA 8270/SIM	2-15-13	2-15-13	
Benzo[a]pyrene	**ND**	0.0093	EPA 8270/SIM	2-15-13	2-15-13	
Indeno[1,2,3-cd]pyrene	**ND**	0.0093	EPA 8270/SIM	2-15-13	2-15-13	
Dibenz[a,h]anthracene	**ND**	0.0093	EPA 8270/SIM	2-15-13	2-15-13	
Benzo[g,h,i]perylene	**ND**	0.0093	EPA 8270/SIM	2-15-13	2-15-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*40*	*17 - 81*				
Phenol-d6	*34*	*10 - 89*				
Nitrobenzene-d5	*53*	*35 - 110*				
2-Fluorobiphenyl	*69*	*45 - 110*				
2,4,6-Tribromophenol	*83*	*39 - 125*				
Terphenyl-d14	*78*	*58 - 111*				

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Date of Report: February 28, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

SEMIVOLATILES EPA 8270D/SIM
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-6**					
Laboratory ID:	02-095-06					
n-Nitrosodimethylamine	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
Pyridine	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
Phenol	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
Aniline	**ND**	4.6	EPA 8270D	2-15-13	2-16-13	
bis(2-Chloroethyl)ether	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
2-Chlorophenol	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
1,3-Dichlorobenzene	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
1,4-Dichlorobenzene	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
Benzyl alcohol	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
1,2-Dichlorobenzene	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
2-Methylphenol (o-Cresol)	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
bis(2-Chloroisopropyl)ether	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
n-Nitroso-di-n-propylamine	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
Hexachloroethane	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
Nitrobenzene	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
Isophorone	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
2-Nitrophenol	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
2,4-Dimethylphenol	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
bis(2-Chloroethoxy)methane	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
2,4-Dichlorophenol	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
1,2,4-Trichlorobenzene	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
Naphthalene	**ND**	0.093	EPA 8270/SIM	2-15-13	2-15-13	
4-Chloroaniline	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
Hexachlorobutadiene	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
4-Chloro-3-methylphenol	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
2-Methylnaphthalene	**ND**	0.093	EPA 8270/SIM	2-15-13	2-15-13	
1-Methylnaphthalene	**ND**	0.093	EPA 8270/SIM	2-15-13	2-15-13	
Hexachlorocyclopentadiene	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
2,4,6-Trichlorophenol	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
2,3-Dichloroaniline	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
2,4,5-Trichlorophenol	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
2-Chloronaphthalene	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
2-Nitroaniline	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
1,4-Dinitrobenzene	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
Dimethylphthalate	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
1,3-Dinitrobenzene	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
2,6-Dinitrotoluene	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
1,2-Dinitrobenzene	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
Acenaphthylene	**ND**	0.093	EPA 8270/SIM	2-15-13	2-15-13	
3-Nitroaniline	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	

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Date of Report: February 28, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

SEMIVOLATILES EPA 8270D/SIM
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-6**					
Laboratory ID:	02-095-06					
2,4-Dinitrophenol	**ND**	4.6	EPA 8270D	2-15-13	2-16-13	
Acenaphthene	**ND**	0.093	EPA 8270/SIM	2-15-13	2-15-13	
4-Nitrophenol	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
2,4-Dinitrotoluene	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
Dibenzofuran	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
2,3,5,6-Tetrachlorophenol	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
2,3,4,6-Tetrachlorophenol	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
Diethylphthalate	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
4-Chlorophenyl-phenylether	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
4-Nitroaniline	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
Fluorene	**ND**	0.093	EPA 8270/SIM	2-15-13	2-15-13	
4,6-Dinitro-2-methylphenol	**ND**	4.6	EPA 8270D	2-15-13	2-16-13	
n-Nitrosodiphenylamine	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
1,2-Diphenylhydrazine	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
4-Bromophenyl-phenylether	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
Hexachlorobenzene	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
Pentachlorophenol	**ND**	4.6	EPA 8270D	2-15-13	2-16-13	
Phenanthrene	**ND**	0.093	EPA 8270/SIM	2-15-13	2-15-13	
Anthracene	**ND**	0.093	EPA 8270/SIM	2-15-13	2-15-13	
Carbazole	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
Di-n-butylphthalate	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
Fluoranthene	**ND**	0.093	EPA 8270/SIM	2-15-13	2-15-13	
Benzidine	**ND**	4.6	EPA 8270D	2-15-13	2-16-13	
Pyrene	**ND**	0.093	EPA 8270/SIM	2-15-13	2-15-13	
Butylbenzylphthalate	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
bis-2-Ethylhexyladipate	**ND**	4.6	EPA 8270D	2-15-13	2-16-13	
3,3'-Dichlorobenzidine	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
Benzo[a]anthracene	**ND**	0.0093	EPA 8270/SIM	2-15-13	2-15-13	
Chrysene	**ND**	0.0093	EPA 8270/SIM	2-15-13	2-15-13	
bis(2-Ethylhexyl)phthalate	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
Di-n-octylphthalate	**ND**	0.93	EPA 8270D	2-15-13	2-16-13	
Benzo[b]fluoranthene	**ND**	0.0093	EPA 8270/SIM	2-15-13	2-15-13	
Benzo(j,k)fluoranthene	**ND**	0.0093	EPA 8270/SIM	2-15-13	2-15-13	
Benzo[a]pyrene	**ND**	0.0093	EPA 8270/SIM	2-15-13	2-15-13	
Indeno[1,2,3-cd]pyrene	**ND**	0.0093	EPA 8270/SIM	2-15-13	2-15-13	
Dibenz[a,h]anthracene	**ND**	0.0093	EPA 8270/SIM	2-15-13	2-15-13	
Benzo[g,h,i]perylene	**ND**	0.0093	EPA 8270/SIM	2-15-13	2-15-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*36*	*17 - 81*				
Phenol-d6	*37*	*10 - 89*				
Nitrobenzene-d5	*50*	*35 - 110*				
2-Fluorobiphenyl	*74*	*45 - 110*				
2,4,6-Tribromophenol	*93*	*39 - 125*				
Terphenyl-d14	*83*	*58 - 111*				

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: February 28, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

SEMIVOLATILES EPA 8270D/SIM
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-7**					
Laboratory ID:	02-095-07					
n-Nitrosodimethylamine	**ND**	0.95	EPA 8270D	2-15-13	2-16-13	
Pyridine	**ND**	0.95	EPA 8270D	2-15-13	2-16-13	
Phenol	**ND**	0.95	EPA 8270D	2-15-13	2-16-13	
Aniline	**ND**	4.8	EPA 8270D	2-15-13	2-16-13	
bis(2-Chloroethyl)ether	**ND**	0.95	EPA 8270D	2-15-13	2-16-13	
2-Chlorophenol	**ND**	0.95	EPA 8270D	2-15-13	2-16-13	
1,3-Dichlorobenzene	**ND**	0.95	EPA 8270D	2-15-13	2-16-13	
1,4-Dichlorobenzene	**ND**	0.95	EPA 8270D	2-15-13	2-16-13	
Benzyl alcohol	**ND**	0.95	EPA 8270D	2-15-13	2-16-13	
1,2-Dichlorobenzene	**ND**	0.95	EPA 8270D	2-15-13	2-16-13	
2-Methylphenol (o-Cresol)	**ND**	0.95	EPA 8270D	2-15-13	2-16-13	
bis(2-Chloroisopropyl)ether	**ND**	0.95	EPA 8270D	2-15-13	2-16-13	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.95	EPA 8270D	2-15-13	2-16-13	
n-Nitroso-di-n-propylamine	**ND**	0.95	EPA 8270D	2-15-13	2-16-13	
Hexachloroethane	**ND**	0.95	EPA 8270D	2-15-13	2-16-13	
Nitrobenzene	**ND**	0.95	EPA 8270D	2-15-13	2-16-13	
Isophorone	**ND**	0.95	EPA 8270D	2-15-13	2-16-13	
2-Nitrophenol	**ND**	0.95	EPA 8270D	2-15-13	2-16-13	
2,4-Dimethylphenol	**ND**	0.95	EPA 8270D	2-15-13	2-16-13	
bis(2-Chloroethoxy)methane	**ND**	0.95	EPA 8270D	2-15-13	2-16-13	
2,4-Dichlorophenol	**ND**	0.95	EPA 8270D	2-15-13	2-16-13	
1,2,4-Trichlorobenzene	**ND**	0.95	EPA 8270D	2-15-13	2-16-13	
Naphthalene	**ND**	0.095	EPA 8270/SIM	2-15-13	2-15-13	
4-Chloroaniline	**ND**	0.95	EPA 8270D	2-15-13	2-16-13	
Hexachlorobutadiene	**ND**	0.95	EPA 8270D	2-15-13	2-16-13	
4-Chloro-3-methylphenol	**ND**	0.95	EPA 8270D	2-15-13	2-16-13	
2-Methylnaphthalene	**ND**	0.095	EPA 8270/SIM	2-15-13	2-15-13	
1-Methylnaphthalene	**ND**	0.095	EPA 8270/SIM	2-15-13	2-15-13	
Hexachlorocyclopentadiene	**ND**	0.95	EPA 8270D	2-15-13	2-16-13	
2,4,6-Trichlorophenol	**ND**	0.95	EPA 8270D	2-15-13	2-16-13	
2,3-Dichloroaniline	**ND**	0.95	EPA 8270D	2-15-13	2-16-13	
2,4,5-Trichlorophenol	**ND**	0.95	EPA 8270D	2-15-13	2-16-13	
2-Chloronaphthalene	**ND**	0.95	EPA 8270D	2-15-13	2-16-13	
2-Nitroaniline	**ND**	0.95	EPA 8270D	2-15-13	2-16-13	
1,4-Dinitrobenzene	**ND**	0.95	EPA 8270D	2-15-13	2-16-13	
Dimethylphthalate	**ND**	0.95	EPA 8270D	2-15-13	2-16-13	
1,3-Dinitrobenzene	**ND**	0.95	EPA 8270D	2-15-13	2-16-13	
2,6-Dinitrotoluene	**ND**	0.95	EPA 8270D	2-15-13	2-16-13	
1,2-Dinitrobenzene	**ND**	0.95	EPA 8270D	2-15-13	2-16-13	
Acenaphthylene	**ND**	0.095	EPA 8270/SIM	2-15-13	2-15-13	
3-Nitroaniline	**ND**	0.95	EPA 8270D	2-15-13	2-16-13	

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Date of Report: February 28, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

SEMIVOLATILES EPA 8270D/SIM
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-7**					
Laboratory ID:	02-095-07					
2,4-Dinitrophenol	**ND**	4.8	EPA 8270D	2-15-13	2-16-13	
Acenaphthene	**ND**	0.095	EPA 8270/SIM	2-15-13	2-15-13	
4-Nitrophenol	**ND**	0.95	EPA 8270D	2-15-13	2-16-13	
2,4-Dinitrotoluene	**ND**	0.95	EPA 8270D	2-15-13	2-16-13	
Dibenzofuran	**ND**	0.95	EPA 8270D	2-15-13	2-16-13	
2,3,5,6-Tetrachlorophenol	**ND**	0.95	EPA 8270D	2-15-13	2-16-13	
2,3,4,6-Tetrachlorophenol	**ND**	0.95	EPA 8270D	2-15-13	2-16-13	
Diethylphthalate	**ND**	0.95	EPA 8270D	2-15-13	2-16-13	
4-Chlorophenyl-phenylether	**ND**	0.95	EPA 8270D	2-15-13	2-16-13	
4-Nitroaniline	**ND**	0.95	EPA 8270D	2-15-13	2-16-13	
Fluorene	**ND**	0.095	EPA 8270/SIM	2-15-13	2-15-13	
4,6-Dinitro-2-methylphenol	**ND**	4.8	EPA 8270D	2-15-13	2-16-13	
n-Nitrosodiphenylamine	**ND**	0.95	EPA 8270D	2-15-13	2-16-13	
1,2-Diphenylhydrazine	**ND**	0.95	EPA 8270D	2-15-13	2-16-13	
4-Bromophenyl-phenylether	**ND**	0.95	EPA 8270D	2-15-13	2-16-13	
Hexachlorobenzene	**ND**	0.95	EPA 8270D	2-15-13	2-16-13	
Pentachlorophenol	**ND**	4.8	EPA 8270D	2-15-13	2-16-13	
Phenanthrene	**ND**	0.095	EPA 8270/SIM	2-15-13	2-15-13	
Anthracene	**ND**	0.095	EPA 8270/SIM	2-15-13	2-15-13	
Carbazole	**ND**	0.95	EPA 8270D	2-15-13	2-16-13	
Di-n-butylphthalate	**ND**	0.95	EPA 8270D	2-15-13	2-16-13	
Fluoranthene	**ND**	0.095	EPA 8270/SIM	2-15-13	2-15-13	
Benzidine	**ND**	4.8	EPA 8270D	2-15-13	2-16-13	
Pyrene	**ND**	0.095	EPA 8270/SIM	2-15-13	2-15-13	
Butylbenzylphthalate	**ND**	0.95	EPA 8270D	2-15-13	2-16-13	
bis-2-Ethylhexyladipate	**ND**	4.8	EPA 8270D	2-15-13	2-16-13	
3,3'-Dichlorobenzidine	**ND**	0.95	EPA 8270D	2-15-13	2-16-13	
Benzo[a]anthracene	**ND**	0.0095	EPA 8270/SIM	2-15-13	2-15-13	
Chrysene	**ND**	0.0095	EPA 8270/SIM	2-15-13	2-15-13	
bis(2-Ethylhexyl)phthalate	**ND**	0.95	EPA 8270D	2-15-13	2-16-13	
Di-n-octylphthalate	**ND**	0.95	EPA 8270D	2-15-13	2-16-13	
Benzo[b]fluoranthene	**ND**	0.0095	EPA 8270/SIM	2-15-13	2-15-13	
Benzo(j,k)fluoranthene	**ND**	0.0095	EPA 8270/SIM	2-15-13	2-15-13	
Benzo[a]pyrene	**ND**	0.0095	EPA 8270/SIM	2-15-13	2-15-13	
Indeno[1,2,3-cd]pyrene	**ND**	0.0095	EPA 8270/SIM	2-15-13	2-15-13	
Dibenz[a,h]anthracene	**ND**	0.0095	EPA 8270/SIM	2-15-13	2-15-13	
Benzo[g,h,i]perylene	**ND**	0.0095	EPA 8270/SIM	2-15-13	2-15-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*37*	*17 - 81*				
Phenol-d6	*30*	*10 - 89*				
Nitrobenzene-d5	*56*	*35 - 110*				
2-Fluorobiphenyl	*76*	*45 - 110*				
2,4,6-Tribromophenol	*90*	*39 - 125*				
Terphenyl-d14	*84*	*58 - 111*				

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Date of Report: February 28, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

PAHs by EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-1**					
Laboratory ID:	02-095-01					
Naphthalene	**ND**	0.095	EPA 8270D/SIM	2-15-13	2-20-13	
2-Methylnaphthalene	**ND**	0.095	EPA 8270D/SIM	2-15-13	2-20-13	
1-Methylnaphthalene	**ND**	0.095	EPA 8270D/SIM	2-15-13	2-20-13	
Acenaphthylene	**ND**	0.095	EPA 8270D/SIM	2-15-13	2-20-13	
Acenaphthene	**ND**	0.095	EPA 8270D/SIM	2-15-13	2-20-13	
Fluorene	**ND**	0.095	EPA 8270D/SIM	2-15-13	2-20-13	
Phenanthrene	**ND**	0.095	EPA 8270D/SIM	2-15-13	2-20-13	
Anthracene	**ND**	0.095	EPA 8270D/SIM	2-15-13	2-20-13	
Fluoranthene	**ND**	0.095	EPA 8270D/SIM	2-15-13	2-20-13	
Pyrene	**ND**	0.095	EPA 8270D/SIM	2-15-13	2-20-13	
Benzo[a]anthracene	**ND**	0.0095	EPA 8270D/SIM	2-15-13	2-20-13	
Chrysene	**ND**	0.0095	EPA 8270D/SIM	2-15-13	2-20-13	
Benzo[b]fluoranthene	**ND**	0.0095	EPA 8270D/SIM	2-15-13	2-20-13	
Benzo(j,k)fluoranthene	**ND**	0.0095	EPA 8270D/SIM	2-15-13	2-20-13	
Benzo[a]pyrene	**ND**	0.0095	EPA 8270D/SIM	2-15-13	2-20-13	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0095	EPA 8270D/SIM	2-15-13	2-20-13	
Dibenz[a,h]anthracene	**ND**	0.0095	EPA 8270D/SIM	2-15-13	2-20-13	
Benzo[g,h,i]perylene	**ND**	0.0095	EPA 8270D/SIM	2-15-13	2-20-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*71*	*40 - 107*				
Pyrene-d10	*77*	*41 - 106*				
Terphenyl-d14	*95*	*44 - 124*				

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Date of Report: February 28, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

PAHs by EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-2A**					
Laboratory ID:	02-095-02					
Naphthalene	**ND**	0.094	EPA 8270D/SIM	2-15-13	2-20-13	
2-Methylnaphthalene	**ND**	0.094	EPA 8270D/SIM	2-15-13	2-20-13	
1-Methylnaphthalene	**ND**	0.094	EPA 8270D/SIM	2-15-13	2-20-13	
Acenaphthylene	**ND**	0.094	EPA 8270D/SIM	2-15-13	2-20-13	
Acenaphthene	**ND**	0.094	EPA 8270D/SIM	2-15-13	2-20-13	
Fluorene	**ND**	0.094	EPA 8270D/SIM	2-15-13	2-20-13	
Phenanthrene	**ND**	0.094	EPA 8270D/SIM	2-15-13	2-20-13	
Anthracene	**ND**	0.094	EPA 8270D/SIM	2-15-13	2-20-13	
Fluoranthene	**ND**	0.094	EPA 8270D/SIM	2-15-13	2-20-13	
Pyrene	**ND**	0.094	EPA 8270D/SIM	2-15-13	2-20-13	
Benzo[a]anthracene	**ND**	0.0094	EPA 8270D/SIM	2-15-13	2-20-13	
Chrysene	**ND**	0.0094	EPA 8270D/SIM	2-15-13	2-20-13	
Benzo[b]fluoranthene	**ND**	0.0094	EPA 8270D/SIM	2-15-13	2-20-13	
Benzo(j,k)fluoranthene	**ND**	0.0094	EPA 8270D/SIM	2-15-13	2-20-13	
Benzo[a]pyrene	**ND**	0.0094	EPA 8270D/SIM	2-15-13	2-20-13	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0094	EPA 8270D/SIM	2-15-13	2-20-13	
Dibenz[a,h]anthracene	**ND**	0.0094	EPA 8270D/SIM	2-15-13	2-20-13	
Benzo[g,h,i]perylene	**ND**	0.0094	EPA 8270D/SIM	2-15-13	2-20-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*73*	*40 - 107*				
Pyrene-d10	*80*	*41 - 106*				
Terphenyl-d14	*102*	*44 - 124*				

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Date of Report: February 28, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

PAHs by EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-4**					
Laboratory ID:	02-095-05					
Naphthalene	**ND**	0.095	EPA 8270D/SIM	2-15-13	2-20-13	
2-Methylnaphthalene	**ND**	0.095	EPA 8270D/SIM	2-15-13	2-20-13	
1-Methylnaphthalene	**ND**	0.095	EPA 8270D/SIM	2-15-13	2-20-13	
Acenaphthylene	**ND**	0.095	EPA 8270D/SIM	2-15-13	2-20-13	
Acenaphthene	**ND**	0.095	EPA 8270D/SIM	2-15-13	2-20-13	
Fluorene	**ND**	0.095	EPA 8270D/SIM	2-15-13	2-20-13	
Phenanthrene	**ND**	0.095	EPA 8270D/SIM	2-15-13	2-20-13	
Anthracene	**ND**	0.095	EPA 8270D/SIM	2-15-13	2-20-13	
Fluoranthene	**ND**	0.095	EPA 8270D/SIM	2-15-13	2-20-13	
Pyrene	**ND**	0.095	EPA 8270D/SIM	2-15-13	2-20-13	
Benzo[a]anthracene	**0.017**	0.0095	EPA 8270D/SIM	2-15-13	2-20-13	
Chrysene	**ND**	0.0095	EPA 8270D/SIM	2-15-13	2-20-13	
Benzo[b]fluoranthene	**0.013**	0.0095	EPA 8270D/SIM	2-15-13	2-20-13	
Benzo(j,k)fluoranthene	**ND**	0.0095	EPA 8270D/SIM	2-15-13	2-20-13	
Benzo[a]pyrene	**0.011**	0.0095	EPA 8270D/SIM	2-15-13	2-20-13	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0095	EPA 8270D/SIM	2-15-13	2-20-13	
Dibenz[a,h]anthracene	**ND**	0.0095	EPA 8270D/SIM	2-15-13	2-20-13	
Benzo[g,h,i]perylene	**ND**	0.0095	EPA 8270D/SIM	2-15-13	2-20-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*92*	*40 - 107*				
Pyrene-d10	*93*	*41 - 106*				
Terphenyl-d14	*124*	*44 - 124*				

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Date of Report: February 28, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

ORGANOCHLORINE PESTICIDES by EPA 8081B

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-3A**					
Laboratory ID:	02-095-03					
alpha-BHC	**ND**	0.0047	EPA 8081B	2-15-13	2-21-13	
gamma-BHC	**ND**	0.0047	EPA 8081B	2-15-13	2-21-13	
beta-BHC	**ND**	0.0047	EPA 8081B	2-15-13	2-21-13	
delta-BHC	**ND**	0.0047	EPA 8081B	2-15-13	2-21-13	
Heptachlor	**ND**	0.0047	EPA 8081B	2-15-13	2-21-13	
Aldrin	**ND**	0.0047	EPA 8081B	2-15-13	2-21-13	
Heptachlor Epoxide	**ND**	0.0047	EPA 8081B	2-15-13	2-21-13	
gamma-Chlordane	**ND**	0.0047	EPA 8081B	2-15-13	2-21-13	
alpha-Chlordane	**ND**	0.0047	EPA 8081B	2-15-13	2-21-13	
4,4'-DDE	**ND**	0.0047	EPA 8081B	2-15-13	2-21-13	
Endosulfan I	**ND**	0.0047	EPA 8081B	2-15-13	2-21-13	
Dieldrin	**ND**	0.0047	EPA 8081B	2-15-13	2-21-13	
Endrin	**ND**	0.0047	EPA 8081B	2-15-13	2-21-13	
4,4'-DDD	**ND**	0.0047	EPA 8081B	2-15-13	2-21-13	
Endosulfan II	**ND**	0.0047	EPA 8081B	2-15-13	2-21-13	
4,4'-DDT	**ND**	0.0047	EPA 8081B	2-15-13	2-21-13	
Endrin Aldehyde	**ND**	0.0047	EPA 8081B	2-15-13	2-21-13	
Methoxychlor	**ND**	0.0093	EPA 8081B	2-15-13	2-21-13	
Endosulfan Sulfate	**ND**	0.0047	EPA 8081B	2-15-13	2-21-13	
Endrin Ketone	**ND**	0.019	EPA 8081B	2-15-13	2-21-13	
Toxaphene	**ND**	0.047	EPA 8081B	2-15-13	2-21-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*70*	*34-88*				
DCB	*92*	*48-115*				

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Date of Report: February 28, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

ORGANOCHLORINE PESTICIDES by EPA 8081B

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**DUP**					
Laboratory ID:	02-095-04					
alpha-BHC	**ND**	0.0046	EPA 8081B	2-15-13	2-21-13	
gamma-BHC	**ND**	0.0046	EPA 8081B	2-15-13	2-21-13	
beta-BHC	**ND**	0.0046	EPA 8081B	2-15-13	2-21-13	
delta-BHC	**ND**	0.0046	EPA 8081B	2-15-13	2-21-13	
Heptachlor	**ND**	0.0046	EPA 8081B	2-15-13	2-21-13	
Aldrin	**ND**	0.0046	EPA 8081B	2-15-13	2-21-13	
Heptachlor Epoxide	**ND**	0.0046	EPA 8081B	2-15-13	2-21-13	
gamma-Chlordane	**ND**	0.0046	EPA 8081B	2-15-13	2-21-13	
alpha-Chlordane	**ND**	0.0046	EPA 8081B	2-15-13	2-21-13	
4,4'-DDE	**ND**	0.0046	EPA 8081B	2-15-13	2-21-13	
Endosulfan I	**ND**	0.0046	EPA 8081B	2-15-13	2-21-13	
Dieldrin	**ND**	0.0046	EPA 8081B	2-15-13	2-21-13	
Endrin	**ND**	0.0046	EPA 8081B	2-15-13	2-21-13	
4,4'-DDD	**ND**	0.0046	EPA 8081B	2-15-13	2-21-13	
Endosulfan II	**ND**	0.0046	EPA 8081B	2-15-13	2-21-13	
4,4'-DDT	**ND**	0.0046	EPA 8081B	2-15-13	2-21-13	
Endrin Aldehyde	**ND**	0.0046	EPA 8081B	2-15-13	2-21-13	
Methoxychlor	**ND**	0.0093	EPA 8081B	2-15-13	2-21-13	
Endosulfan Sulfate	**ND**	0.0046	EPA 8081B	2-15-13	2-21-13	
Endrin Ketone	**ND**	0.019	EPA 8081B	2-15-13	2-21-13	
Toxaphene	**ND**	0.046	EPA 8081B	2-15-13	2-21-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*70*	*34-88*				
DCB	*86*	*48-115*				

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Date of Report: February 28, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

ORGANOCHLORINE PESTICIDES by EPA 8081B

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-6**					
Laboratory ID:	02-095-06					
alpha-BHC	**ND**	0.0046	EPA 8081B	2-15-13	2-21-13	
gamma-BHC	**ND**	0.0046	EPA 8081B	2-15-13	2-21-13	
beta-BHC	**ND**	0.0046	EPA 8081B	2-15-13	2-21-13	
delta-BHC	**ND**	0.0046	EPA 8081B	2-15-13	2-21-13	
Heptachlor	**ND**	0.0046	EPA 8081B	2-15-13	2-21-13	
Aldrin	**ND**	0.0046	EPA 8081B	2-15-13	2-21-13	
Heptachlor Epoxide	**ND**	0.0046	EPA 8081B	2-15-13	2-21-13	
gamma-Chlordane	**ND**	0.0046	EPA 8081B	2-15-13	2-21-13	
alpha-Chlordane	**ND**	0.0046	EPA 8081B	2-15-13	2-21-13	
4,4'-DDE	**ND**	0.0046	EPA 8081B	2-15-13	2-21-13	
Endosulfan I	**ND**	0.0046	EPA 8081B	2-15-13	2-21-13	
Dieldrin	**ND**	0.0046	EPA 8081B	2-15-13	2-21-13	
Endrin	**ND**	0.0046	EPA 8081B	2-15-13	2-21-13	
4,4'-DDD	**ND**	0.0046	EPA 8081B	2-15-13	2-21-13	
Endosulfan II	**ND**	0.0046	EPA 8081B	2-15-13	2-21-13	
4,4'-DDT	**ND**	0.0046	EPA 8081B	2-15-13	2-21-13	
Endrin Aldehyde	**ND**	0.0046	EPA 8081B	2-15-13	2-21-13	
Methoxychlor	**ND**	0.0093	EPA 8081B	2-15-13	2-21-13	
Endosulfan Sulfate	**ND**	0.0046	EPA 8081B	2-15-13	2-21-13	
Endrin Ketone	**ND**	0.019	EPA 8081B	2-15-13	2-21-13	
Toxaphene	**ND**	0.046	EPA 8081B	2-15-13	2-21-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*63*	*34-88*				
DCB	*85*	*48-115*				

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Date of Report: February 28, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

ORGANOCHLORINE PESTICIDES by EPA 8081B

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-7**					
Laboratory ID:	02-095-07					
alpha-BHC	**ND**	0.0047	EPA 8081B	2-15-13	2-21-13	
gamma-BHC	**ND**	0.0047	EPA 8081B	2-15-13	2-21-13	
beta-BHC	**ND**	0.0047	EPA 8081B	2-15-13	2-21-13	
delta-BHC	**ND**	0.0047	EPA 8081B	2-15-13	2-21-13	
Heptachlor	**ND**	0.0047	EPA 8081B	2-15-13	2-21-13	
Aldrin	**ND**	0.0047	EPA 8081B	2-15-13	2-21-13	
Heptachlor Epoxide	**ND**	0.0047	EPA 8081B	2-15-13	2-21-13	
gamma-Chlordane	**ND**	0.0047	EPA 8081B	2-15-13	2-21-13	
alpha-Chlordane	**ND**	0.0047	EPA 8081B	2-15-13	2-21-13	
4,4'-DDE	**ND**	0.0047	EPA 8081B	2-15-13	2-21-13	
Endosulfan I	**ND**	0.0047	EPA 8081B	2-15-13	2-21-13	
Dieldrin	**ND**	0.0047	EPA 8081B	2-15-13	2-21-13	
Endrin	**ND**	0.0047	EPA 8081B	2-15-13	2-21-13	
4,4'-DDD	**ND**	0.0047	EPA 8081B	2-15-13	2-21-13	
Endosulfan II	**ND**	0.0047	EPA 8081B	2-15-13	2-21-13	
4,4'-DDT	**ND**	0.0047	EPA 8081B	2-15-13	2-21-13	
Endrin Aldehyde	**ND**	0.0047	EPA 8081B	2-15-13	2-21-13	
Methoxychlor	**ND**	0.0095	EPA 8081B	2-15-13	2-21-13	
Endosulfan Sulfate	**ND**	0.0047	EPA 8081B	2-15-13	2-21-13	
Endrin Ketone	**ND**	0.019	EPA 8081B	2-15-13	2-21-13	
Toxaphene	**ND**	0.047	EPA 8081B	2-15-13	2-21-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*53*	*34-88*				
DCB	*76*	*48-115*				

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Date of Report: February 28, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

TOTAL METALS
EPA 200.8/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-095-01					
Client ID:	**MW-1**					
Arsenic	**ND**	18	200.8	2-15-13	2-21-13	U1
Copper	**ND**	15	200.8	2-15-13	2-21-13	
Mercury	**ND**	0.025	7470A	2-26-13	2-26-13	
Nickel	**ND**	8.0	200.8	2-15-13	2-21-13	
Silver	**ND**	10	200.8	2-15-13	2-21-13	
Zinc	**ND**	25	200.8	2-15-13	2-21-13	
Lab ID:	02-095-02					
Client ID:	**MW-2A**					
Arsenic	**ND**	13	200.8	2-15-13	2-21-13	U1
Copper	**ND**	15	200.8	2-15-13	2-21-13	
Mercury	**ND**	0.025	7470A	2-26-13	2-26-13	
Nickel	**ND**	8.0	200.8	2-15-13	2-21-13	
Silver	**ND**	10	200.8	2-15-13	2-21-13	
Zinc	**ND**	25	200.8	2-15-13	2-21-13	

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Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

TOTAL METALS
EPA 200.8/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-095-03					
Client ID:	**MW-3A**					
Arsenic	**ND**	8.0	200.8	2-15-13	2-21-13	
Cadmium	**ND**	8.0	200.8	2-15-13	2-21-13	
Chromium	**ND**	10	200.8	2-15-13	2-21-13	
Copper	**ND**	15	200.8	2-15-13	2-21-13	
Lead	**ND**	5.0	200.8	2-15-13	2-21-13	
Mercury	**ND**	0.025	7470A	2-26-13	2-26-13	
Nickel	**13**	8.0	200.8	2-15-13	2-21-13	
Silver	**ND**	10	200.8	2-15-13	2-21-13	
Zinc	**ND**	25	200.8	2-15-13	2-21-13	
Lab ID:	02-095-04					
Client ID:	**DUP**					
Arsenic	**ND**	8.0	200.8	2-15-13	2-21-13	
Cadmium	**ND**	8.0	200.8	2-15-13	2-21-13	
Chromium	**ND**	10	200.8	2-15-13	2-21-13	
Copper	**ND**	15	200.8	2-15-13	2-21-13	
Lead	**ND**	5.0	200.8	2-15-13	2-21-13	
Mercury	**ND**	0.025	7470A	2-26-13	2-26-13	
Nickel	**16**	8.0	200.8	2-15-13	2-21-13	
Silver	**ND**	10	200.8	2-15-13	2-21-13	
Zinc	**ND**	25	200.8	2-15-13	2-21-13	

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Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

TOTAL METALS
EPA 200.8/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-095-05					
Client ID:	**MW-4**					
Arsenic	**ND**	8.0	200.8	2-15-13	2-21-13	
Copper	**ND**	15	200.8	2-15-13	2-21-13	
Mercury	**ND**	0.025	7470A	2-26-13	2-26-13	
Nickel	**ND**	8.0	200.8	2-15-13	2-21-13	
Silver	**ND**	10	200.8	2-15-13	2-21-13	
Zinc	**ND**	25	200.8	2-15-13	2-21-13	
Lab ID:	02-095-06					
Client ID:	**MW-6**					
Arsenic	**ND**	8.0	200.8	2-15-13	2-21-13	
Cadmium	**ND**	8.0	200.8	2-15-13	2-21-13	
Chromium	**ND**	10	200.8	2-15-13	2-21-13	
Copper	**ND**	15	200.8	2-15-13	2-21-13	
Lead	**ND**	5.0	200.8	2-15-13	2-21-13	
Mercury	**ND**	0.025	7470A	2-26-13	2-26-13	
Nickel	**ND**	8.0	200.8	2-15-13	2-21-13	
Silver	**ND**	10	200.8	2-15-13	2-21-13	
Zinc	**ND**	25	200.8	2-15-13	2-21-13	

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Date of Report: February 28, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

TOTAL METALS
EPA 200.8/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-095-07					
Client ID:	**MW-7**					
Arsenic	**ND**	11	200.8	2-15-13	2-21-13	U1
Cadmium	**ND**	8.0	200.8	2-15-13	2-21-13	
Chromium	**ND**	10	200.8	2-15-13	2-21-13	
Copper	**ND**	15	200.8	2-15-13	2-21-13	
Lead	**ND**	5.0	200.8	2-15-13	2-21-13	
Mercury	**ND**	0.025	7470A	2-26-13	2-26-13	
Nickel	**18**	8.0	200.8	2-15-13	2-21-13	
Silver	**ND**	10	200.8	2-15-13	2-21-13	
Zinc	**ND**	25	200.8	2-15-13	2-21-13	

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Date of Report: February 28, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

DISSOLVED METALS
EPA 200.8/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-095-01					
Client ID:	**MW-1**					
Arsenic	**ND**	18	200.8		2-20-13	U1
Copper	**ND**	15	200.8		2-20-13	
Mercury	**ND**	0.025	7470A		2-19-13	
Nickel	**ND**	8.0	200.8		2-20-13	
Silver	**ND**	10	200.8		2-20-13	
Zinc	**ND**	25	200.8		2-20-13	
Lab ID:	02-095-02					
Client ID:	**MW-2A**					
Arsenic	**ND**	13	200.8		2-20-13	U1
Copper	**ND**	15	200.8		2-20-13	
Mercury	**ND**	0.025	7470A		2-19-13	
Nickel	**ND**	8.0	200.8		2-20-13	
Silver	**ND**	10	200.8		2-20-13	
Zinc	**ND**	25	200.8		2-20-13	

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Date of Report: February 28, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

DISSOLVED METALS
EPA 200.8/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-095-03					
Client ID:	**MW-3A**					
Arsenic	**ND**	8.0	200.8		2-20-13	
Cadmium	**ND**	4.0	200.8		2-20-13	
Chromium	**ND**	10	200.8		2-20-13	
Copper	**ND**	15	200.8		2-20-13	
Lead	**ND**	5.0	200.8		2-20-13	
Mercury	**ND**	0.025	7470A		2-19-13	
Nickel	**18**	8.0	200.8		2-20-13	
Silver	**ND**	10	200.8		2-20-13	
Zinc	**ND**	25	200.8		2-20-13	
Lab ID:	02-095-04					
Client ID:	**DUP**					
Arsenic	**ND**	8.0	200.8		2-20-13	
Cadmium	**ND**	4.0	200.8		2-20-13	
Chromium	**ND**	10	200.8		2-20-13	
Copper	**ND**	15	200.8		2-20-13	
Lead	**ND**	5.0	200.8		2-20-13	
Mercury	**ND**	0.025	7470A		2-19-13	
Nickel	**16**	8.0	200.8		2-20-13	
Silver	**ND**	10	200.8		2-20-13	
Zinc	**ND**	25	200.8		2-20-13	

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Date of Report: February 28, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

DISSOLVED METALS
EPA 200.8/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-095-05					
Client ID:	**MW-4**					
Arsenic	**ND**	8.0	200.8		2-20-13	
Copper	**ND**	15	200.8		2-20-13	
Mercury	**ND**	0.025	7470A		2-19-13	
Nickel	**ND**	8.0	200.8		2-20-13	
Silver	**ND**	10	200.8		2-20-13	
Zinc	**ND**	25	200.8		2-20-13	
Lab ID:	02-095-06					
Client ID:	**MW-6**					
Arsenic	**ND**	8.0	200.8		2-20-13	
Cadmium	**ND**	4.0	200.8		2-20-13	
Chromium	**ND**	10	200.8		2-20-13	
Copper	**ND**	15	200.8		2-20-13	
Lead	**ND**	5.0	200.8		2-20-13	
Mercury	**ND**	0.025	7470A		2-19-13	
Nickel	**ND**	8.0	200.8		2-20-13	
Silver	**ND**	10	200.8		2-20-13	
Zinc	**ND**	25	200.8		2-20-13	

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Date of Report: February 28, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

DISSOLVED METALS
EPA 200.8/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-095-07					
Client ID:	**MW-7**					
Arsenic	**ND**	11	200.8		2-20-13	U1
Cadmium	**ND**	4.0	200.8		2-20-13	
Chromium	**ND**	10	200.8		2-20-13	
Copper	**ND**	15	200.8		2-20-13	
Lead	**ND**	5.0	200.8		2-20-13	
Mercury	**ND**	0.025	7470A		2-19-13	
Nickel	**18**	8.0	200.8		2-20-13	
Silver	**ND**	10	200.8		2-20-13	
Zinc	**ND**	25	200.8		2-20-13	

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Date of Report: February 28, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

EDB by EPA 8011

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-3A**					
Laboratory ID:	02-095-03					
EDB	**ND**	0.0093	EPA 8011	2-25-13	2-25-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*68*	*30-158*				
Client ID:	**DUP**					
Laboratory ID:	02-095-04					
EDB	**ND**	0.0094	EPA 8011	2-25-13	2-25-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*99*	*30-158*				
Client ID:	**MW-6**					
Laboratory ID:	02-095-06					
EDB	**ND**	0.0093	EPA 8011	2-25-13	2-25-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*82*	*30-158*				
Client ID:	**MW-7**					
Laboratory ID:	02-095-07					
EDB	**ND**	0.0096	EPA 8011	2-25-13	2-25-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*154*	*30-158*				
Client ID:	**TRIP BLANK**					
Laboratory ID:	02-095-08					
EDB	**ND**	0.0095	EPA 8011	2-25-13	2-25-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*129*	*30-158*				

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Date of Report: February 28, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

CHLORINATED ACID HERBICIDES by EPA 8151A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-3A**					
Laboratory ID:	02-095-03					
Dalapon	**ND**	0.21	EPA 8151A	2-19-13	2-21-13	
Dicamba	**ND**	0.022	EPA 8151A	2-19-13	2-21-13	
MCPP	**ND**	4.3	EPA 8151A	2-19-13	2-21-13	
MCPA	**ND**	4.3	EPA 8151A	2-19-13	2-21-13	
Dichlorprop	**ND**	0.022	EPA 8151A	2-19-13	2-21-13	
2,4-D	**0.076**	0.022	EPA 8151A	2-19-13	2-21-13	
Pentachlorophenol	**ND**	0.0088	EPA 8151A	2-19-13	2-21-13	
2,4,5-TP (Silvex)	**ND**	0.022	EPA 8151A	2-19-13	2-21-13	
2,4,5-T	**ND**	0.022	EPA 8151A	2-19-13	2-21-13	
2,4-DB	**ND**	0.044	EPA 8151A	2-19-13	2-21-13	
Dinoseb	**ND**	0.022	EPA 8151A	2-19-13	2-21-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCAA	*54*	*30-98*				
Client ID:	**DUP**					
Laboratory ID:	02-095-04					
Dalapon	**ND**	0.21	EPA 8151A	2-19-13	2-21-13	
Dicamba	**ND**	0.022	EPA 8151A	2-19-13	2-21-13	
MCPP	**ND**	4.4	EPA 8151A	2-19-13	2-21-13	
MCPA	**ND**	4.4	EPA 8151A	2-19-13	2-21-13	
Dichlorprop	**ND**	0.022	EPA 8151A	2-19-13	2-21-13	
2,4-D	**0.023**	0.022	EPA 8151A	2-19-13	2-21-13	P
Pentachlorophenol	**ND**	0.0089	EPA 8151A	2-19-13	2-21-13	
2,4,5-TP (Silvex)	**ND**	0.022	EPA 8151A	2-19-13	2-21-13	
2,4,5-T	**ND**	0.022	EPA 8151A	2-19-13	2-21-13	
2,4-DB	**ND**	0.044	EPA 8151A	2-19-13	2-21-13	
Dinoseb	**ND**	0.022	EPA 8151A	2-19-13	2-21-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCAA	*54*	*30-98*				

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Date of Report: February 28, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

CHLORINATED ACID HERBICIDES by EPA 8151A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-6**					
Laboratory ID:	02-095-06					
Dalapon	**ND**	0.21	EPA 8151A	2-19-13	2-21-13	
Dicamba	**ND**	0.022	EPA 8151A	2-19-13	2-21-13	
MCPP	**ND**	4.3	EPA 8151A	2-19-13	2-21-13	
MCPA	**ND**	4.3	EPA 8151A	2-19-13	2-21-13	
Dichlorprop	**ND**	0.022	EPA 8151A	2-19-13	2-21-13	
2,4-D	**0.022**	0.022	EPA 8151A	2-19-13	2-21-13	P
Pentachlorophenol	**ND**	0.0088	EPA 8151A	2-19-13	2-21-13	
2,4,5-TP (Silvex)	**ND**	0.022	EPA 8151A	2-19-13	2-21-13	
2,4,5-T	**ND**	0.022	EPA 8151A	2-19-13	2-21-13	
2,4-DB	**ND**	0.044	EPA 8151A	2-19-13	2-21-13	
Dinoseb	**ND**	0.022	EPA 8151A	2-19-13	2-21-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCAA	*53*	*30-98*				
Client ID:	**MW-7**					
Laboratory ID:	02-095-07					
Dalapon	**ND**	0.22	EPA 8151A	2-19-13	2-21-13	
Dicamba	**ND**	0.022	EPA 8151A	2-19-13	2-21-13	
MCPP	**ND**	4.4	EPA 8151A	2-19-13	2-21-13	
MCPA	**ND**	4.4	EPA 8151A	2-19-13	2-21-13	
Dichlorprop	**ND**	0.022	EPA 8151A	2-19-13	2-21-13	
2,4-D	**ND**	0.022	EPA 8151A	2-19-13	2-21-13	
Pentachlorophenol	**ND**	0.0090	EPA 8151A	2-19-13	2-21-13	
2,4,5-TP (Silvex)	**ND**	0.023	EPA 8151A	2-19-13	2-21-13	
2,4,5-T	**ND**	0.022	EPA 8151A	2-19-13	2-21-13	
2,4-DB	**ND**	0.045	EPA 8151A	2-19-13	2-21-13	
Dinoseb	**ND**	0.022	EPA 8151A	2-19-13	2-21-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCAA	*57*	*30-98*				

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Date of Report: February 28, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

NWTPH-Gx
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0215W1					
Gasoline	**ND**	100	NWTPH-Gx	2-15-13	2-15-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*93*	*71-116*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	02-095-06										
	ORIG	DUP									
Gasoline	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*91*	*90*	*71-116*			

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Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

NWTPH-Gx
CONTINUING CALIBRATION SUMMARY

Lab ID	True Value (ppm)	Calc. Value	Percent Difference	Control Limits
CCVH0215G-1	5.00	5.35	-7	+/- 20%
CCVH0215G-2	5.00	4.99	0	+/- 20%
CCVH0215G-1	5.00	5.60	-12	+/- 20%
CCVH0215G-2	5.00	4.94	1	+/- 20%

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Laboratory Reference: 1302-095
Project: 5147-006-08

NWTPH-Dx
QUALITY CONTROL
(with acid/silica gel clean-up)

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0220W1					
Diesel Range Organics	**ND**	0.25	NWTPH-Dx	2-20-13	2-20-13	
Lube Oil Range Organics	**ND**	0.40	NWTPH-Dx	2-20-13	2-20-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*88*	*50-150*				

Analyte	Result		Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE							
Laboratory ID:	02-095-01						
	ORIG	DUP					
Diesel Range Organics	**ND**	**ND**			NA	NA	
Lube Oil Range Organics	**ND**	**ND**			NA	NA	
Surrogate:							
o-Terphenyl			*71* *70*	*50-150*			

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Date of Report: February 28, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

NWTPH-Dx
CONTINUING CALIBRATION SUMMARY
(with acid/silica gel clean-up)

Lab ID	True Value (ppm)	Calc. Value	Percent Difference	Contol Limits
CCV0220R-T2	100	95.2	4.8	+/-15%
CCV0220R-T3	100	97.9	2.1	+/-15%
CCV0221R-T1	100	103	-3.0	+/-15%
CCV0221R-T2	100	94.2	5.8	+/-15%

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Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

VOLATILES by EPA 8260C
METHOD BLANK QUALITY CONTROL
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0215W1					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Chloromethane	ND	1.0	EPA 8260C	2-15-13	2-15-13	
Vinyl Chloride	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Bromomethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Chloroethane	ND	1.0	EPA 8260C	2-15-13	2-15-13	
Trichlorofluoromethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,1-Dichloroethene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Acetone	ND	5.0	EPA 8260C	2-15-13	2-15-13	
Iodomethane	ND	1.0	EPA 8260C	2-15-13	2-15-13	
Carbon Disulfide	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Methylene Chloride	ND	1.0	EPA 8260C	2-15-13	2-15-13	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,1-Dichloroethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Vinyl Acetate	ND	1.0	EPA 8260C	2-15-13	2-15-13	
2,2-Dichloropropane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
2-Butanone	ND	5.0	EPA 8260C	2-15-13	2-15-13	
Bromochloromethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Chloroform	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Carbon Tetrachloride	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,1-Dichloropropene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Benzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,2-Dichloroethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Trichloroethene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,2-Dichloropropane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Dibromomethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Bromodichloromethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	2-15-13	2-15-13	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	2-15-13	2-15-13	
Toluene	ND	1.0	EPA 8260C	2-15-13	2-15-13	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	2-15-13	2-15-13	

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Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

VOLATILES by EPA 8260C
METHOD BLANK QUALITY CONTROL
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0215W1					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Tetrachloroethene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,3-Dichloropropane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
2-Hexanone	ND	2.0	EPA 8260C	2-15-13	2-15-13	
Dibromochloromethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,2-Dibromoethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Chlorobenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Ethylbenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
m,p-Xylene	ND	0.40	EPA 8260C	2-15-13	2-15-13	
o-Xylene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Styrene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Bromoform	ND	1.0	EPA 8260C	2-15-13	2-15-13	
Isopropylbenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Bromobenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	2-15-13	2-15-13	
n-Propylbenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
2-Chlorotoluene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
4-Chlorotoluene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
tert-Butylbenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
sec-Butylbenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
p-Isopropyltoluene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
n-Butylbenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	2-15-13	2-15-13	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Hexachlorobutadiene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Naphthalene	ND	1.0	EPA 8260C	2-15-13	2-15-13	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	2-15-13	2-15-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*101*	*66-120*				
Toluene-d8	*99*	*70-120*				
4-Bromofluorobenzene	*93*	*63-120*				

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Date of Report: February 28, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

VOLATILES by EPA 8260C
SB/SBD QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0215W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**10.0**	**9.79**	10.0	10.0	100	98	65-141	2	15	
Benzene	**9.60**	**9.60**	10.0	10.0	96	96	77-125	0	15	
Trichloroethene	**9.47**	**9.55**	10.0	10.0	95	96	80-125	1	15	
Toluene	**9.74**	**9.07**	10.0	10.0	97	91	80-125	7	15	
Chlorobenzene	**9.85**	**9.56**	10.0	10.0	99	96	80-140	3	15	
Surrogate:										
Dibromofluoromethane					*100*	*105*	*66-120*			
Toluene-d8					*96*	*99*	*70-120*			
4-Bromofluorobenzene					*97*	*98*	*63-120*			

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Date of Report: February 28, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

SEMIVOLATILES by EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0215W1					
n-Nitrosodimethylamine	**ND**	1.0	EPA 8270D	2-15-13	2-16-13	
Pyridine	**ND**	1.0	EPA 8270D	2-15-13	2-16-13	
Phenol	**ND**	1.0	EPA 8270D	2-15-13	2-16-13	
Aniline	**ND**	5.0	EPA 8270D	2-15-13	2-16-13	
bis(2-Chloroethyl)ether	**ND**	1.0	EPA 8270D	2-15-13	2-16-13	
2-Chlorophenol	**ND**	1.0	EPA 8270D	2-15-13	2-16-13	
1,3-Dichlorobenzene	**ND**	1.0	EPA 8270D	2-15-13	2-16-13	
1,4-Dichlorobenzene	**ND**	1.0	EPA 8270D	2-15-13	2-16-13	
Benzyl alcohol	**ND**	1.0	EPA 8270D	2-15-13	2-16-13	
1,2-Dichlorobenzene	**ND**	1.0	EPA 8270D	2-15-13	2-16-13	
2-Methylphenol (o-Cresol)	**ND**	1.0	EPA 8270D	2-15-13	2-16-13	
bis(2-Chloroisopropyl)ether	**ND**	1.0	EPA 8270D	2-15-13	2-16-13	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	1.0	EPA 8270D	2-15-13	2-16-13	
n-Nitroso-di-n-propylamine	**ND**	1.0	EPA 8270D	2-15-13	2-16-13	
Hexachloroethane	**ND**	1.0	EPA 8270D	2-15-13	2-16-13	
Nitrobenzene	**ND**	1.0	EPA 8270D	2-15-13	2-16-13	
Isophorone	**ND**	1.0	EPA 8270D	2-15-13	2-16-13	
2-Nitrophenol	**ND**	1.0	EPA 8270D	2-15-13	2-16-13	
2,4-Dimethylphenol	**ND**	1.0	EPA 8270D	2-15-13	2-16-13	
bis(2-Chloroethoxy)methane	**ND**	1.0	EPA 8270D	2-15-13	2-16-13	
2,4-Dichlorophenol	**ND**	1.0	EPA 8270D	2-15-13	2-16-13	
1,2,4-Trichlorobenzene	**ND**	1.0	EPA 8270D	2-15-13	2-16-13	
Naphthalene	**ND**	0.10	EPA 8270/SIM	2-15-13	2-15-13	
4-Chloroaniline	**ND**	1.0	EPA 8270D	2-15-13	2-16-13	
Hexachlorobutadiene	**ND**	1.0	EPA 8270D	2-15-13	2-16-13	
4-Chloro-3-methylphenol	**ND**	1.0	EPA 8270D	2-15-13	2-16-13	
2-Methylnaphthalene	**ND**	0.10	EPA 8270/SIM	2-15-13	2-15-13	
1-Methylnaphthalene	**ND**	0.10	EPA 8270/SIM	2-15-13	2-15-13	
Hexachlorocyclopentadiene	**ND**	1.0	EPA 8270D	2-15-13	2-16-13	
2,4,6-Trichlorophenol	**ND**	1.0	EPA 8270D	2-15-13	2-16-13	
2,3-Dichloroaniline	**ND**	1.0	EPA 8270D	2-15-13	2-16-13	
2,4,5-Trichlorophenol	**ND**	1.0	EPA 8270D	2-15-13	2-16-13	
2-Chloronaphthalene	**ND**	1.0	EPA 8270D	2-15-13	2-16-13	
2-Nitroaniline	**ND**	1.0	EPA 8270D	2-15-13	2-16-13	
1,4-Dinitrobenzene	**ND**	1.0	EPA 8270D	2-15-13	2-16-13	
Dimethylphthalate	**ND**	1.0	EPA 8270D	2-15-13	2-16-13	
1,3-Dinitrobenzene	**ND**	1.0	EPA 8270D	2-15-13	2-16-13	
2,6-Dinitrotoluene	**ND**	1.0	EPA 8270D	2-15-13	2-16-13	
1,2-Dinitrobenzene	**ND**	1.0	EPA 8270D	2-15-13	2-16-13	
Acenaphthylene	**ND**	0.10	EPA 8270/SIM	2-15-13	2-15-13	
3-Nitroaniline	**ND**	1.0	EPA 8270D	2-15-13	2-16-13	

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Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

SEMIVOLATILES by EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0215W1					
2,4-Dinitrophenol	**ND**	5.0	EPA 8270D	2-15-13	2-16-13	
Acenaphthene	**ND**	0.10	EPA 8270/SIM	2-15-13	2-15-13	
4-Nitrophenol	**ND**	1.0	EPA 8270D	2-15-13	2-16-13	
2,4-Dinitrotoluene	**ND**	1.0	EPA 8270D	2-15-13	2-16-13	
Dibenzofuran	**ND**	1.0	EPA 8270D	2-15-13	2-16-13	
2,3,5,6-Tetrachlorophenol	**ND**	1.0	EPA 8270D	2-15-13	2-16-13	
2,3,4,6-Tetrachlorophenol	**ND**	1.0	EPA 8270D	2-15-13	2-16-13	
Diethylphthalate	**ND**	1.0	EPA 8270D	2-15-13	2-16-13	
4-Chlorophenyl-phenylether	**ND**	1.0	EPA 8270D	2-15-13	2-16-13	
4-Nitroaniline	**ND**	1.0	EPA 8270D	2-15-13	2-16-13	
Fluorene	**ND**	0.10	EPA 8270/SIM	2-15-13	2-15-13	
4,6-Dinitro-2-methylphenol	**ND**	5.0	EPA 8270D	2-15-13	2-16-13	
n-Nitrosodiphenylamine	**ND**	1.0	EPA 8270D	2-15-13	2-16-13	
1,2-Diphenylhydrazine	**ND**	1.0	EPA 8270D	2-15-13	2-16-13	
4-Bromophenyl-phenylether	**ND**	1.0	EPA 8270D	2-15-13	2-16-13	
Hexachlorobenzene	**ND**	1.0	EPA 8270D	2-15-13	2-16-13	
Pentachlorophenol	**ND**	5.0	EPA 8270D	2-15-13	2-16-13	
Phenanthrene	**ND**	0.10	EPA 8270/SIM	2-15-13	2-15-13	
Anthracene	**ND**	0.10	EPA 8270/SIM	2-15-13	2-15-13	
Carbazole	**ND**	1.0	EPA 8270D	2-15-13	2-16-13	
Di-n-butylphthalate	**ND**	1.0	EPA 8270D	2-15-13	2-16-13	
Fluoranthene	**ND**	0.10	EPA 8270/SIM	2-15-13	2-15-13	
Benzidine	**ND**	5.0	EPA 8270D	2-15-13	2-16-13	
Pyrene	**ND**	0.10	EPA 8270/SIM	2-15-13	2-15-13	
Butylbenzylphthalate	**ND**	1.0	EPA 8270D	2-15-13	2-16-13	
bis-2-Ethylhexyladipate	**ND**	5.0	EPA 8270D	2-15-13	2-16-13	
3,3'-Dichlorobenzidine	**ND**	1.0	EPA 8270D	2-15-13	2-16-13	
Benzo[a]anthracene	**ND**	0.010	EPA 8270/SIM	2-15-13	2-15-13	
Chrysene	**ND**	0.010	EPA 8270/SIM	2-15-13	2-15-13	
bis(2-Ethylhexyl)phthalate	**ND**	1.0	EPA 8270D	2-15-13	2-16-13	
Di-n-octylphthalate	**ND**	1.0	EPA 8270D	2-15-13	2-16-13	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270/SIM	2-15-13	2-15-13	
Benzo(j,k)fluoranthene	**ND**	0.010	EPA 8270/SIM	2-15-13	2-15-13	
Benzo[a]pyrene	**ND**	0.010	EPA 8270/SIM	2-15-13	2-15-13	
Indeno[1,2,3-cd]pyrene	**ND**	0.010	EPA 8270/SIM	2-15-13	2-15-13	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270/SIM	2-15-13	2-15-13	
Benzo[g,h,i]perylene	**ND**	0.010	EPA 8270/SIM	2-15-13	2-15-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*44*	*17 - 81*				
Phenol-d6	*35*	*10 - 89*				
Nitrobenzene-d5	*60*	*35 - 110*				
2-Fluorobiphenyl	*74*	*45 - 110*				
2,4,6-Tribromophenol	*87*	*39 - 125*				
Terphenyl-d14	*79*	*58 - 111*				

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Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

SEMIVOLATILES by EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0215W1									
	SB	SBD	SB	SBD	SB	SBD				
Phenol	**14.9**	**15.9**	40.0	40.0	37	40	28 - 70	6	30	
2-Chlorophenol	**27.0**	**28.1**	40.0	40.0	68	70	41 - 100	4	34	
1,4-Dichlorobenzene	**13.0**	**13.0**	20.0	20.0	65	65	34 - 95	0	33	
n-Nitroso-di-n-propylamine	**14.9**	**15.8**	20.0	20.0	75	79	48 - 98	6	30	
1,2,4-Trichlorobenzene	**13.9**	**14.5**	20.0	20.0	70	73	34 - 97	4	30	
4-Chloro-3-methylphenol	**31.2**	**34.0**	40.0	40.0	78	85	60 - 116	9	27	
Acenaphthene	**18.1**	**19.9**	20.0	20.0	91	100	51 - 100	9	25	
4-Nitrophenol	**20.7**	**22.6**	40.0	40.0	52	57	26 - 74	9	40	
2,4-Dinitrotoluene	**16.8**	**18.3**	20.0	20.0	84	92	59 - 117	9	28	
Pentachlorophenol	**35.1**	**40.0**	40.0	40.0	88	100	29 - 133	13	39	
Pyrene	**16.6**	**18.5**	20.0	20.0	83	93	58 - 121	11	28	
Surrogate:										
2-Fluorophenol					*47*	*49*	*17 - 81*			
Phenol-d6					*37*	*40*	*10 - 89*			
Nitrobenzene-d5					*64*	*68*	*35 - 110*			
2-Fluorobiphenyl					*80*	*88*	*45 - 110*			
2,4,6-Tribromophenol					*90*	*101*	*39 - 125*			
Terphenyl-d14					*83*	*92*	*58 - 111*			

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Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

PAHs by EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0215W2					
Naphthalene	**ND**	0.10	EPA 8270D/SIM	2-15-13	2-20-13	
2-Methylnaphthalene	**ND**	0.10	EPA 8270D/SIM	2-15-13	2-20-13	
1-Methylnaphthalene	**ND**	0.10	EPA 8270D/SIM	2-15-13	2-20-13	
Acenaphthylene	**ND**	0.10	EPA 8270D/SIM	2-15-13	2-20-13	
Acenaphthene	**ND**	0.10	EPA 8270D/SIM	2-15-13	2-20-13	
Fluorene	**ND**	0.10	EPA 8270D/SIM	2-15-13	2-20-13	
Phenanthrene	**ND**	0.10	EPA 8270D/SIM	2-15-13	2-20-13	
Anthracene	**ND**	0.10	EPA 8270D/SIM	2-15-13	2-20-13	
Fluoranthene	**ND**	0.10	EPA 8270D/SIM	2-15-13	2-20-13	
Pyrene	**ND**	0.10	EPA 8270D/SIM	2-15-13	2-20-13	
Benzo[a]anthracene	**ND**	0.010	EPA 8270D/SIM	2-15-13	2-20-13	
Chrysene	**ND**	0.010	EPA 8270D/SIM	2-15-13	2-20-13	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270D/SIM	2-15-13	2-20-13	
Benzo(j,k)fluoranthene	**ND**	0.010	EPA 8270D/SIM	2-15-13	2-20-13	
Benzo[a]pyrene	**ND**	0.010	EPA 8270D/SIM	2-15-13	2-20-13	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270D/SIM	2-15-13	2-20-13	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270D/SIM	2-15-13	2-20-13	
Benzo[g,h,i]perylene	**ND**	0.010	EPA 8270D/SIM	2-15-13	2-20-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*75*	*40 - 107*				
Pyrene-d10	*80*	*41 - 106*				
Terphenyl-d14	*97*	*44 - 124*				

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: February 28, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

PAHs by EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0215W2									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	**0.282**	**0.301**	0.500	0.500	56	60	31 - 110	7	46	
Acenaphthylene	**0.273**	**0.240**	0.500	0.500	55	48	40 - 118	13	43	
Acenaphthene	**0.358**	**0.337**	0.500	0.500	72	67	38 - 112	6	40	
Fluorene	**0.392**	**0.366**	0.500	0.500	78	73	45 - 114	7	41	
Phenanthrene	**0.416**	**0.399**	0.500	0.500	83	80	47 - 112	4	36	
Anthracene	**0.390**	**0.374**	0.500	0.500	78	75	46 - 122	4	37	
Fluoranthene	**0.453**	**0.438**	0.500	0.500	91	88	51 - 127	3	35	
Pyrene	**0.436**	**0.422**	0.500	0.500	87	84	50 - 125	3	37	
Benzo[a]anthracene	**0.542**	**0.516**	0.500	0.500	108	103	46 - 123	5	34	
Chrysene	**0.413**	**0.394**	0.500	0.500	83	79	49 - 120	5	34	
Benzo[b]fluoranthene	**0.435**	**0.415**	0.500	0.500	87	83	46 - 126	5	37	
Benzo(j,k)fluoranthene	**0.481**	**0.455**	0.500	0.500	96	91	43 - 125	6	39	
Benzo[a]pyrene	**0.393**	**0.373**	0.500	0.500	79	75	44 - 129	5	37	
Indeno(1,2,3-c,d)pyrene	**0.462**	**0.436**	0.500	0.500	92	87	40 - 124	6	42	
Dibenz[a,h]anthracene	**0.453**	**0.428**	0.500	0.500	91	86	35 - 122	6	44	
Benzo[g,h,i]perylene	**0.444**	**0.401**	0.500	0.500	89	80	37 - 122	10	45	
Surrogate:										
2-Fluorobiphenyl					*66*	*63*	*40 - 107*			
Pyrene-d10					*83*	*80*	*41 - 106*			
Terphenyl-d14					*96*	*91*	*44 - 124*			

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Date of Report: February 28, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

ORGANOCHLORINE PESTICIDES by EPA 8081B METHOD BLANK QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0215W1					
alpha-BHC	**ND**	0.0050	EPA 8081B	2-15-13	2-21-13	
gamma-BHC	**ND**	0.0050	EPA 8081B	2-15-13	2-21-13	
beta-BHC	**ND**	0.0050	EPA 8081B	2-15-13	2-21-13	
delta-BHC	**ND**	0.0050	EPA 8081B	2-15-13	2-21-13	
Heptachlor	**ND**	0.0050	EPA 8081B	2-15-13	2-21-13	
Aldrin	**ND**	0.0050	EPA 8081B	2-15-13	2-21-13	
Heptachlor Epoxide	**ND**	0.0050	EPA 8081B	2-15-13	2-21-13	
gamma-Chlordane	**ND**	0.0050	EPA 8081B	2-15-13	2-21-13	
alpha-Chlordane	**ND**	0.0050	EPA 8081B	2-15-13	2-21-13	
4,4'-DDE	**ND**	0.0050	EPA 8081B	2-15-13	2-21-13	
Endosulfan I	**ND**	0.0050	EPA 8081B	2-15-13	2-21-13	
Dieldrin	**ND**	0.0050	EPA 8081B	2-15-13	2-21-13	
Endrin	**ND**	0.0050	EPA 8081B	2-15-13	2-21-13	
4,4'-DDD	**ND**	0.0050	EPA 8081B	2-15-13	2-21-13	
Endosulfan II	**ND**	0.0050	EPA 8081B	2-15-13	2-21-13	
4,4'-DDT	**ND**	0.0050	EPA 8081B	2-15-13	2-21-13	
Endrin Aldehyde	**ND**	0.0050	EPA 8081B	2-15-13	2-21-13	
Methoxychlor	**ND**	0.010	EPA 8081B	2-15-13	2-21-13	
Endosulfan Sulfate	**ND**	0.0050	EPA 8081B	2-15-13	2-21-13	
Endrin Ketone	**ND**	0.020	EPA 8081B	2-15-13	2-21-13	
Toxaphene	**ND**	0.050	EPA 8081B	2-15-13	2-21-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*67*	*34-88*				
DCB	*87*	*48-115*				

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Date of Report: February 28, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

ORGANOCHLORINE PESTICIDES by EPA 8081B SB/SBD QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS											
Laboratory ID:	SB0215W1										
	SB	SBD	SB	SBD		SB	SBD				
gamma-BHC	**0.0411**	**0.0434**	0.0500	0.0500	N/A	**82**	**87**	22-113	5	15	
Heptachlor	**0.0370**	**0.0398**	0.0500	0.0500	N/A	**74**	**80**	55-104	7	15	
Aldrin	**0.0393**	**0.0428**	0.0500	0.0500	N/A	**79**	**86**	54-99	9	15	
Dieldrin	**0.101**	**0.105**	0.125	0.125	N/A	**81**	**84**	60-100	4	15	
Endrin	**0.100**	**0.105**	0.125	0.125	N/A	**80**	**84**	62-105	5	15	
4,4'-DDT	**0.0976**	**0.103**	0.125	0.125	N/A	**78**	**82**	43-114	5	15	
Surrogate:											
TCMX						*65*	*73*	*34-88*			
DCB						*87*	*90*	*48-115*			

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Date of Report: February 28, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

TOTAL METALS
EPA 200.8/7470A
METHOD BLANK QUALITY CONTROL

Date Extracted:	2-15&26-13
Date Analyzed:	2-21&26-13
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	MB0215WH1&MB0226W1

Analyte	Method	Result	PQL
Arsenic	200.8	**ND**	8.0
Cadmium	200.8	**ND**	4.0
Chromium	200.8	**ND**	10
Copper	200.8	**ND**	15
Lead	200.8	**ND**	5.0
Mercury	7470A	**ND**	0.025
Nickel	200.8	**ND**	8.0
Silver	200.8	**ND**	10
Zinc	200.8	**ND**	25

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Date of Report: February 28, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

TOTAL NICKEL
EPA 200.8
METHOD BLANK QUALITY CONTROL

Date Extracted:	2-15-13
Date Analyzed:	2-21-13
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	MB0215WH1

Analyte	Method	Result	PQL
Nickel	200.8	**ND**	8.0

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Date of Report: February 28, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

TOTAL METALS
EPA 200.8/7470A
DUPLICATE QUALITY CONTROL

Date Extracted: 2-15&26-13
Date Analyzed: 2-21&26-13

Matrix: Water
Units: ug/L (ppb)

Lab ID: 02-095-03

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**ND**	**ND**	NA	8.0	
Cadmium	**ND**	**ND**	NA	4.0	
Chromium	**ND**	**ND**	NA	10	
Copper	**ND**	**ND**	NA	15	
Lead	**ND**	**ND**	NA	5.0	
Mercury	**ND**	**ND**	NA	0.025	
Nickel	**12.7**	**15.0**	16	8.0	
Silver	**ND**	**ND**	NA	10	
Zinc	**ND**	**ND**	NA	25	

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Date of Report: February 28, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

TOTAL NICKEL
EPA 200.8
DUPLICATE QUALITY CONTROL

Date Extracted: 2-15-13
Date Analyzed: 2-21-13

Matrix: Water
Units: ug/L (ppb)

Lab ID: 02-095-03

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Nickel	**ND**	**ND**	NA	8.0	

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Date of Report: February 28, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

TOTAL METALS
EPA 200.8/7470A
MS/MSD QUALITY CONTROL

Date Extracted: 2-15&26-13
Date Analyzed: 2-21&26-13

Matrix: Water
Units: ug/L (ppb)

Lab ID: 02-095-03

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	**102**	102	**101**	101	1	
Cadmium	100	**92.3**	92	**90.3**	90	2	
Chromium	100	**115**	115	**113**	113	2	
Copper	100	**103**	103	**101**	101	2	
Lead	100	**86.5**	87	**86.1**	86	0	
Mercury	12.5	**10.3**	82	**10.2**	82	1	
Nickel	100	**111**	98	**109**	97	2	
Silver	100	**82.9**	83	**83.5**	83	1	
Zinc	100	**111**	111	**108**	108	3	

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Date of Report: February 28, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

TOTAL NICKEL
EPA 200.8
MS/MSD QUALITY CONTROL

Date Extracted: 2-15-13
Date Analyzed: 2-21-13

Matrix: Water
Units: ug/L (ppb)

Lab ID: 02-095-03

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Nickel	**ND**	**ND**	NA	8.0	

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Date of Report: February 28, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

TOTAL METALS
EPA 200.8/7470A
SPIKE BLANK QUALITY CONTROL

Date Extracted: 2-15&26-13
Date Analyzed: 2-21&26-13

Matrix: Water
Units: ug/L (ppb)

Lab ID: SB0215WH1&SB0226W1

Analyte	Method	Spike Level	SB Result	Percent Recovery
Arsenic	200.8	100	**102**	102
Cadmium	200.8	100	**101**	101
Chromium	200.8	100	**104**	104
Copper	200.8	100	**107**	107
Lead	200.8	100	**103**	103
Mercury	7470A	12.5	**11.8**	94
Nickel	200.8	100	**103**	103
Silver	200.8	100	**96.4**	96
Zinc	200.8	100	**102**	102

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Date of Report: February 28, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

TOTAL NICKEL
EPA 200.8
SPIKE BLANK QUALITY CONTROL

Date Extracted: 2-15-13
Date Analyzed: 2-21-13

Matrix: Water
Units: ug/L (ppb)

Lab ID: SB0215WH1

Analyte	Method	Spike Level	SB Result	Percent Recovery
Nickel	200.8	100	**103**	103

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: February 28, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

TOTAL METALS
EPA 200.8/7470A
CONTINUING CALIBRATION SUMMARY

Analyte	Lab ID	True Value (ppm)	Calc. Value	Percent Difference	Control Limits
Arsenic	ICV022113E	50.0	50.7	-1.4	+/- 10%
Cadmium	ICV022113E	50.0	50.3	-0.60	+/- 10%
Chromium	ICV022113E	50.0	50.8	-1.6	+/- 10%
Copper	ICV022113E	50.0	51.3	-2.6	+/- 10%
Lead	ICV022113E	50.0	51.0	-2.0	+/- 10%
Mercury	ICV022613Y	2.50	2.63	-5.2	+/- 10%
Nickel	ICV022113E	50.0	51.4	-2.8	+/- 10%
Silver	ICV022113E	50.0	50.7	-1.4	+/- 10%
Zinc	ICV022113E	50.0	51.2	-2.4	+/- 10%
Arsenic	CCV1022113E	40.0	39.9	0.25	+/- 10%
Cadmium	CCV1022113E	40.0	40.5	-1.3	+/- 10%
Chromium	CCV1022113E	40.0	39.5	1.3	+/- 10%
Copper	CCV1022113E	40.0	40.3	-0.75	+/- 10%
Lead	CCV1022113E	40.0	40.3	-0.75	+/- 10%
Mercury	CCV1022613Y	2.50	2.69	-7.6	+/- 20%
Nickel	CCV1022113E	40.0	40.0	0	+/- 10%
Silver	CCV1022113E	40.0	39.2	2.0	+/- 10%
Zinc	CCV1022113E	40.0	39.6	1.0	+/- 10%
Arsenic	CCV1022113E	20.0	20.2	-1.0	+/- 10%
Cadmium	CCV1022113E	20.0	20.2	-1.0	+/- 10%
Chromium	CCV1022113E	20.0	19.5	2.5	+/- 10%
Copper	CCV1022113E	20.0	20.2	-1.0	+/- 10%
Lead	CCV1022113E	20.0	20.0	0	+/- 10%
Nickel	CCV1022113E	20.0	20.2	-1.0	+/- 10%
Silver	CCV1022113E	20.0	19.5	2.5	+/- 10%
Zinc	CCV1022113E	20.0	19.7	1.5	+/- 10%
Arsenic	CCV2022113E	40.0	39.8	0.50	+/- 10%
Cadmium	CCV2022113E	40.0	39.7	0.75	+/- 10%
Chromium	CCV2022113E	40.0	40.2	-0.50	+/- 10%
Copper	CCV2022113E	40.0	40.6	-1.5	+/- 10%
Lead	CCV2022113E	40.0	39.7	0.75	+/- 10%
Mercury	CCV2022613Y	2.50	2.54	-1.6	+/- 20%
Nickel	CCV2022113E	40.0	39.9	0.25	+/- 10%
Silver	CCV2022113E	40.0	39.0	2.5	+/- 10%
Zinc	CCV2022113E	40.0	39.9	0.25	+/- 10%

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Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

TOTAL METALS
EPA 200.8/7470A
CONTINUING CALIBRATION SUMMARY

Analyte	Lab ID	True Value (ppm)	Calc. Value	Percent Difference	Control Limits
Arsenic	CCV2022113E	20.0	20.0	0	+/- 10%
Cadmium	CCV2022113E	20.0	20.4	-2.0	+/- 10%
Chromium	CCV2022113E	20.0	20.3	-1.5	+/- 10%
Copper	CCV2022113E	20.0	20.7	-3.5	+/- 10%
Lead	CCV2022113E	20.0	20.1	-0.50	+/- 10%
Nickel	CCV2022113E	20.0	19.6	2.0	+/- 10%
Silver	CCV2022113E	20.0	19.8	1.0	+/- 10%
Zinc	CCV2022113E	20.0	20.0	0	+/- 10%
Arsenic	CCV3022113E	40.0	40.4	-1.0	+/- 10%
Cadmium	CCV3022113E	40.0	40.4	-1.0	+/- 10%
Chromium	CCV3022113E	40.0	41.2	-3.0	+/- 10%
Copper	CCV3022113E	40.0	41.7	-4.3	+/- 10%
Lead	CCV3022113E	40.0	40.1	-0.25	+/- 10%
Mercury	CCV3022613Y	2.50	2.56	-2.4	+/- 20%
Nickel	CCV3022113E	40.0	40.7	-1.8	+/- 10%
Silver	CCV3022113E	40.0	39.5	1.3	+/- 10%
Zinc	CCV3022113E	40.0	39.7	0.75	+/- 10%
Arsenic	CCV3022113E	20.0	20.1	-0.50	+/- 10%
Cadmium	CCV3022113E	20.0	20.1	-0.50	+/- 10%
Chromium	CCV3022113E	20.0	20.5	-2.5	+/- 10%
Copper	CCV3022113E	20.0	20.3	-1.5	+/- 10%
Lead	CCV3022113E	20.0	20.0	0	+/- 10%
Nickel	CCV3022113E	20.0	20.2	-1.0	+/- 10%
Silver	CCV3022113E	20.0	19.7	1.5	+/- 10%
Zinc	CCV3022113E	20.0	20.0	0	+/- 10%
Arsenic	CCV4022113E	40.0	39.8	0.50	+/- 10%
Cadmium	CCV4022113E	40.0	40.7	-1.8	+/- 10%
Chromium	CCV4022113E	40.0	41.1	-2.8	+/- 10%
Copper	CCV4022113E	40.0	40.9	-2.3	+/- 10%
Lead	CCV4022113E	40.0	39.4	1.5	+/- 10%
Nickel	CCV4022113E	40.0	40.2	-0.50	+/- 10%
Silver	CCV4022113E	40.0	39.8	0.50	+/- 10%
Zinc	CCV4022113E	40.0	40.2	-0.50	+/- 10%

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Date of Report: February 28, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

TOTAL METALS
EPA 200.8
CONTINUING CALIBRATION SUMMARY

Analyte	Lab ID	True Value (ppm)	Calc. Value	Percent Difference	Control Limits
Arsenic	CCV4022113E	20.0	20.3	-1.5	+/- 10%
Cadmium	CCV4022113E	20.0	20.3	-1.5	+/- 10%
Chromium	CCV4022113E	20.0	20.3	-1.5	+/- 10%
Copper	CCV4022113E	20.0	20.7	-3.5	+/- 10%
Lead	CCV4022113E	20.0	19.7	1.5	+/- 10%
Nickel	CCV4022113E	20.0	19.9	0.50	+/- 10%
Silver	CCV4022113E	20.0	19.9	0.50	+/- 10%
Zinc	CCV4022113E	20.0	20.2	-1.0	+/- 10%
Arsenic	CCV5022113E	40.0	39.8	0.50	+/- 10%
Cadmium	CCV5022113E	40.0	39.9	0.25	+/- 10%
Chromium	CCV5022113E	40.0	40.7	-1.8	+/- 10%
Copper	CCV5022113E	40.0	40.7	-1.8	+/- 10%
Lead	CCV5022113E	40.0	38.7	3.2	+/- 10%
Nickel	CCV5022113E	40.0	39.5	1.3	+/- 10%
Silver	CCV5022113E	40.0	39.9	0.25	+/- 10%
Zinc	CCV5022113E	40.0	39.8	0.50	+/- 10%
Arsenic	CCV5022113E	20.0	19.8	1.0	+/- 10%
Cadmium	CCV5022113E	20.0	20.2	-1.0	+/- 10%
Chromium	CCV5022113E	20.0	19.9	0.50	+/- 10%
Copper	CCV5022113E	20.0	20.4	-2.0	+/- 10%
Lead	CCV5022113E	20.0	19.9	0.50	+/- 10%
Nickel	CCV5022113E	20.0	19.6	2.0	+/- 10%
Silver	CCV5022113E	20.0	19.6	2.0	+/- 10%
Zinc	CCV5022113E	20.0	20.0	0	+/- 10%

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Date of Report: February 28, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

TOTAL METALS
EPA 200.8
CONTINUING CALIBRATION SUMMARY

Analyte	Lab ID	True Value (ppm)	Calc. Value	Percent Difference	Control Limits
Nickel	ICV022113E	50.0	50.8	-1.6	+/- 10%
Nickel	CCV1022113E	40.0	40.4	-1.0	+/- 10%
Nickel	CCV1022113E	20.0	19.7	1.5	+/- 10%
Nickel	CCV2022113E	40.0	39.6	1.0	+/- 10%
Nickel	CCV2022113E	20.0	19.7	1.5	+/- 10%
Nickel	CCV3022113E	40.0	40.8	-2.0	+/- 10%
Nickel	CCV3022113E	20.0	20.2	-1.0	+/- 10%
Nickel	CCV4022113E	40.0	39.9	0.25	+/- 10%
Nickel	CCV4022113E	20.0	20.1	-0.50	+/- 10%
Nickel	CCV5022113E	40.0	40.3	-0.75	+/- 10%
Nickel	CCV5022113E	20.0	19.7	1.5	+/- 10%

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Date of Report: February 28, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

DISSOLVED METALS
EPA 200.8/7470A
METHOD BLANK QUALITY CONTROL

Date Analyzed: 2-19&20-13

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB0215D1&MB0219D1

Analyte	Method	Result	PQL
Arsenic	200.8	**ND**	8.0
Cadmium	200.8	**ND**	4.0
Chromium	200.8	**ND**	10
Copper	200.8	**ND**	10
Lead	200.8	**ND**	5.0
Mercury	7470A	**ND**	0.025
Nickel	200.8	**ND**	8.0
Silver	200.8	**ND**	10
Zinc	200.8	**ND**	25

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Date of Report: February 28, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

DISSOLVED NICKEL
EPA 200.8
METHOD BLANK QUALITY CONTROL

Date Analyzed: 2-20-13

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB0215D1

Analyte	Method	Result	PQL
Nickel	200.8	**ND**	8.0

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Date of Report: February 28, 2013
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Laboratory Reference: 1302-095
Project: 5147-006-08

DISSOLVED METALS
EPA 200.8/7470A
DUPLICATE QUALITY CONTROL

Date Analyzed: 2-19&20-13

Matrix: Water
Units: ug/L (ppb)

Lab ID: 02-095-03

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**ND**	**ND**	NA	8.0	
Cadmium	**ND**	**ND**	NA	4.0	
Chromium	**ND**	**ND**	NA	10	
Copper	**ND**	**ND**	NA	10	
Lead	**ND**	**ND**	NA	5.0	
Mercury	**ND**	**ND**	NA	0.025	
Nickel	**18.3**	**17.0**	7	8.0	
Silver	**ND**	**ND**	NA	10	
Zinc	**ND**	**ND**	NA	25	

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Date of Report: February 28, 2013
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Laboratory Reference: 1302-095
Project: 5147-006-08

DISSOLVED NICKEL
EPA 200.8
DUPLICATE QUALITY CONTROL

Date Analyzed: 2-20-13

Matrix: Water
Units: ug/L (ppb)

Lab ID: 02-095-03

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Nickel	**ND**	**ND**	NA	8.0	

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Date of Report: February 28, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

DISSOLVED METALS
EPA 200.8/7470A
MS/MSD QUALITY CONTROL

Date Analyzed: 2-19&20-13

Matrix: Water
Units: ug/L (ppb)

Lab ID: 02-095-03

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	**103**	103	**106**	106	3	
Cadmium	100	**90**	90	**92.7**	93	3	
Chromium	100	**107**	107	**105**	105	1	
Copper	100	**98.8**	99	**99.8**	100	1	
Lead	100	**95.1**	95	**88.8**	89	7	
Mercury	6.25	**6.58**	105	**6.49**	104	1	
Nickel	100	**109**	90	**109**	91	1	
Silver	100	**79.9**	80	**85.2**	85	7	
Zinc	100	**111**	111	**113**	113	2	

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Date of Report: February 28, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

DISSOLVED NICKEL
EPA 200.8
MS/MSD QUALITY CONTROL

Date Analyzed: 2-20-13

Matrix: Water
Units: ug/L (ppb)

Lab ID: 02-095-03

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Nickel	100	**94.7**	95	**95.9**	96	1	

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Date of Report: February 28, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

DISSOLVED METALS
EPA 200.8/7470A
SPIKE BLANK QUALITY CONTROL

Date Analyzed: 2-19&20-13

Matrix: Water
Units: ug/L (ppb)

Lab ID: SB0215D1&SB0219D1

Analyte	Method	Spike Level	SB Result	Percent Recovery
Arsenic	200.8	100	**99.5**	99
Cadmium	200.8	100	**97.2**	97
Chromium	200.8	100	**103**	103
Copper	200.8	100	**106**	106
Lead	200.8	100	**107**	107
Mercury	7470A	6.25	**6.54**	105
Nickel	200.8	100	**103**	103
Silver	200.8	100	**92.7**	93
Zinc	200.8	100	**101**	101

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Date of Report: February 28, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

DISSOLVED NICKEL
EPA 200.8
SPIKE BLANK QUALITY CONTROL

Date Analyzed: 2-20-13

Matrix: Water
Units: ug/L (ppb)

Lab ID: SB0215D1

Analyte	Method	Spike Level	SB Result	Percent Recovery
Nickel	200.8	100	**102**	102

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: February 28, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

DISSOLVED METALS
EPA 200.8/7470A
CONTINUING CALIBRATION SUMMARY

Analyte	Lab ID	True Value (ppm)	Calc. Value	Percent Difference	Control Limits
Arsenic	ICV022013E	50.0	51.0	-2.0	+/- 10%
Cadmium	ICV022013E	50.0	49.4	1.2	+/- 10%
Chromium	ICV022013E	50.0	51.5	-3.0	+/- 10%
Copper	ICV022013E	50.0	49.9	0.20	+/- 10%
Lead	ICV022013E	50.0	53.2	-6.4	+/- 10%
Mercury	ICV021913Y	2.50	2.64	-5.6	+/- 10%
Nickel	ICV022013E	50.0	52.2	-4.4	+/- 10%
Silver	ICV022013E	50.0	49.2	1.6	+/- 10%
Zinc	ICV022013E	50.0	51.9	-3.8	+/- 10%
Arsenic	CCV1022013E	40.0	39.6	1.0	+/- 10%
Cadmium	CCV1022013E	40.0	39.3	1.8	+/- 10%
Chromium	CCV1022013E	40.0	40.6	-1.5	+/- 10%
Copper	CCV1022013E	40.0	41.1	-2.8	+/- 10%
Lead	CCV1022013E	40.0	41.5	-3.8	+/- 10%
Mercury	CCV1021913Y	2.50	2.69	-7.6	+/- 20%
Nickel	CCV1022013E	40.0	41.0	-2.5	+/- 10%
Silver	CCV1022013E	40.0	38.3	4.3	+/- 10%
Zinc	CCV1022013E	40.0	40.7	-1.8	+/- 10%
Arsenic	CCV1022013E	20.0	19.9	0.50	+/- 10%
Cadmium	CCV1022013E	20.0	20.0	0	+/- 10%
Chromium	CCV1022013E	20.0	20.3	-1.5	+/- 10%
Copper	CCV1022013E	20.0	20.1	-0.50	+/- 10%
Lead	CCV1022013E	20.0	20.9	-4.5	+/- 10%
Nickel	CCV1022013E	20.0	20.4	-2.0	+/- 10%
Silver	CCV1022013E	20.0	18.8	6.0	+/- 10%
Zinc	CCV1022013E	20.0	19.9	0.50	+/- 10%
Arsenic	CCV2022013E	40.0	39.7	0.75	+/- 10%
Cadmium	CCV2022013E	40.0	39.9	0.25	+/- 10%
Chromium	CCV2022013E	40.0	40.3	-0.75	+/- 10%
Copper	CCV2022013E	40.0	39.7	0.75	+/- 10%
Lead	CCV2022013E	40.0	39.6	1.0	+/- 10%
Mercury	CCV2021913Y	2.50	2.51	-0.40	+/- 20%
Nickel	CCV2022013E	40.0	39.4	1.5	+/- 10%
Silver	CCV2022013E	40.0	38.9	2.8	+/- 10%
Zinc	CCV2022013E	40.0	40.00	0	+/- 10%

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Date of Report: February 28, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

DISSOLVED METALS
EPA 200.8/7470A
CONTINUING CALIBRATION SUMMARY

Analyte	Lab ID	True Value (ppm)	Calc. Value	Percent Difference	Control Limits
Arsenic	CCV2022013E	20.0	20.2	-1.0	+/- 10%
Cadmium	CCV2022013E	20.0	20.2	-1.0	+/- 10%
Chromium	CCV2022013E	20.0	20.7	-3.5	+/- 10%
Copper	CCV2022013E	20.0	20.5	-2.5	+/- 10%
Lead	CCV2022013E	20.0	20.1	-0.50	+/- 10%
Nickel	CCV2022013E	20.0	20.1	-0.50	+/- 10%
Silver	CCV2022013E	20.0	19.3	3.5	+/- 10%
Zinc	CCV2022013E	20.0	20.4	-2.0	+/- 10%
Arsenic	CCV3022013E	40.0	39.7	0.75	+/- 10%
Cadmium	CCV3022013E	40.0	39.9	0.25	+/- 10%
Chromium	CCV3022013E	40.0	39.9	0.25	+/- 10%
Copper	CCV3022013E	40.0	39.3	1.8	+/- 10%
Lead	CCV3022013E	40.0	39.4	1.5	+/- 10%
Mercury	CCV3021913Y	2.50	2.61	-4.4	+/- 20%
Nickel	CCV3022013E	40.0	39.4	1.5	+/- 10%
Silver	CCV3022013E	40.0	38.5	3.8	+/- 10%
Zinc	CCV3022013E	40.0	40.0	0	+/- 10%
Arsenic	CCV3022013E	20.0	19.9	0.50	+/- 10%
Cadmium	CCV3022013E	20.0	20.1	-0.50	+/- 10%
Chromium	CCV3022013E	20.0	20.5	-2.5	+/- 10%
Copper	CCV3022013E	20.0	20.5	-2.5	+/- 10%
Lead	CCV3022013E	20.0	20.4	-2.0	+/- 10%
Nickel	CCV3022013E	20.0	20.5	-2.5	+/- 10%
Silver	CCV3022013E	20.0	19.2	4.0	+/- 10%
Zinc	CCV3022013E	20.0	20.3	-1.5	+/- 10%
Arsenic	CCV4022013E	40.0	40.5	-1.3	+/- 10%
Cadmium	CCV4022013E	40.0	39.8	0.50	+/- 10%
Chromium	CCV4022013E	40.0	41.1	-2.8	+/- 10%
Copper	CCV4022013E	40.0	39.0	2.5	+/- 10%
Lead	CCV4022013E	40.0	40.4	-1.0	+/- 10%
Mercury	CCV4021913Y	2.50	2.65	-6.0	+/- 20%
Nickel	CCV4022013E	40.0	39.4	1.5	+/- 10%
Silver	CCV4022013E	40.0	38.7	3.2	+/- 10%
Zinc	CCV4022013E	40.0	40.2	-0.50	+/- 10%

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Date of Report: February 28, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

DISSOLVED METALS
EPA 200.8/7470A
CONTINUING CALIBRATION SUMMARY

Analyte	Lab ID	True Value (ppm)	Calc. Value	Percent Difference	Control Limits
Arsenic	CCV4022013E	20.0	20.1	-0.50	+/- 10%
Cadmium	CCV4022013E	20.0	19.9	0.50	+/- 10%
Chromium	CCV4022013E	20.0	20.1	-0.50	+/- 10%
Copper	CCV4022013E	20.0	19.9	0.50	+/- 10%
Lead	CCV4022013E	20.0	20.1	-0.50	+/- 10%
Nickel	CCV4022013E	20.0	19.6	2.0	+/- 10%
Silver	CCV4022013E	20.0	19.4	3.0	+/- 10%
Zinc	CCV4022013E	20.0	20.3	-1.5	+/- 10%
Arsenic	CCV5022013E	40.0	39.5	1.3	+/- 10%
Cadmium	CCV5022013E	40.0	38.9	2.8	+/- 10%
Chromium	CCV5022013E	40.0	40.0	0	+/- 10%
Copper	CCV5022013E	40.0	39.7	0.75	+/- 10%
Lead	CCV5022013E	40.0	40.6	-1.5	+/- 10%
Mercury	CCV5021913Y	2.50	2.60	-4.0	+/- 20%
Nickel	CCV5022013E	40.0	38.7	3.2	+/- 10%
Silver	CCV5022013E	40.0	37.7	5.7	+/- 10%
Zinc	CCV5022013E	40.0	39.8	0.50	+/- 10%
Arsenic	CCV5022013E	20.0	20.5	-2.5	+/- 10%
Cadmium	CCV5022013E	20.0	19.8	1.0	+/- 10%
Chromium	CCV5022013E	20.0	20.1	-0.50	+/- 10%
Copper	CCV5022013E	20.0	19.9	0.50	+/- 10%
Lead	CCV5022013E	20.0	20.3	-1.5	+/- 10%
Nickel	CCV5022013E	20.0	19.4	3.0	+/- 10%
Silver	CCV5022013E	20.0	19.1	4.5	+/- 10%
Zinc	CCV5022013E	20.0	20.1	-0.50	+/- 10%

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Project: 5147-006-08

DISSOLVED NICKEL
EPA 200.8
CONTINUING CALIBRATION SUMMARY

Analyte	Lab ID	True Value (ppm)	Calc. Value	Percent Difference	Control Limits
Nickel	ICV022013E	50.0	50.8	-1.6	+/- 10%
Nickel	CCV1022013E	40.0	40.5	-1.3	+/- 10%
Nickel	CCV1022013E	20.0	20.0	0	+/- 10%
Nickel	CCV2022013E	40.0	39.0	2.5	+/- 10%
Nickel	CCV2022013E	20.0	19.6	2.0	+/- 10%
Nickel	CCV3022013E	40.0	39.2	2.0	+/- 10%
Nickel	CCV3022013E	20.0	20.1	-0.50	+/- 10%
Nickel	CCV4022013E	40.0	38.3	4.3	+/- 10%
Nickel	CCV4022013E	20.0	19.3	3.5	+/- 10%
Nickel	CCV5022013E	40.0	38.4	4.0	+/- 10%
Nickel	CCV5022013E	20.0	19.0	5.0	+/- 10%

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Samples Submitted: February 14, 2013
Laboratory Reference: 1302-095
Project: 5147-006-08

EDB by EPA 8011
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0225W1					
EDB	**ND**	0.010	EPA 8011	2-25-13	2-25-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*106*	*30-158*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS											
Laboratory ID:	SB0225W1										
	SB	SBD	SB	SBD		SB	SBD				
EDB	**0.112**	**0.107**	0.100	0.100	N/A	**112**	**107**	72-127	5	15	
Surrogate:											
TCMX						*110*	*112*	*30-158*			

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Project: 5147-006-08

CHLORINATED ACID HERBICIDES by EPA 8151A
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0219W1					
Dalapon	**ND**	0.23	EPA 8151A	2-19-13	2-21-13	
Dicamba	**ND**	0.024	EPA 8151A	2-19-13	2-21-13	
MCPP	**ND**	4.7	EPA 8151A	2-19-13	2-21-13	
MCPA	**ND**	4.7	EPA 8151A	2-19-13	2-21-13	
Dichlorprop	**ND**	0.024	EPA 8151A	2-19-13	2-21-13	
2,4-D	**ND**	0.024	EPA 8151A	2-19-13	2-21-13	
Pentachlorophenol	**ND**	0.0095	EPA 8151A	2-19-13	2-21-13	
2,4,5-TP (Silvex)	**ND**	0.024	EPA 8151A	2-19-13	2-21-13	
2,4,5-T	**ND**	0.024	EPA 8151A	2-19-13	2-21-13	
2,4-DB	**ND**	0.047	EPA 8151A	2-19-13	2-21-13	
Dinoseb	**ND**	0.024	EPA 8151A	2-19-13	2-21-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCAA	*43*	*30-98*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS											
Laboratory ID:	SB0219W1										
	SB	SBD	SB	SBD		SB	SBD				
Dicamba	**0.698**	**0.710**	1.00	1.00	N/A	**70**	**71**	37-88	2	15	
2,4-D	**0.611**	**0.621**	1.00	1.00	N/A	**61**	**62**	30-81	2	17	
Pentachlorophenol	**4.03**	**3.73**	5.00	5.00	N/A	**81**	**75**	49-98	8	16	
2,4,5-T	**0.695**	**0.679**	1.00	1.00	N/A	**69**	**68**	37-83	2	12	
2,4-DB	**0.645**	**0.591**	1.00	1.00	N/A	**65**	**59**	31-84	9	18	
Surrogate:											
DCAA						*62*	*59*	*30-98*			

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OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

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Pace Analytical™

www.pacelabs.com

Pace Analytical Services, Inc.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

Report Prepared for:

David Baumeister
Onsite Environmental, Inc.
14648 NE 95th Street
Redmond WA 98052

REPORT OF LABORATORY ANALYSIS FOR PCDD/PCDF

Report Information:

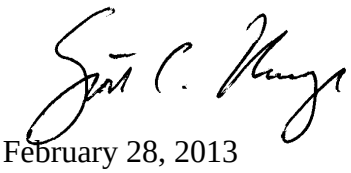
Pace Project #: 10220299
Sample Receipt Date: 02/15/2013
Client Project #: 5147-006-08
Client Sub PO #: N/A
State Cert #: C755

Invoicing & Reporting Options:

The report provided has been invoiced as a Level 2 PCDD/PCDF Report. If an upgrade of this report package is requested, an additional charge may be applied.

Please review the attached invoice for accuracy and forward any questions to Scott Unze, your Pace Project Manager.

This report has been reviewed by:



February 28, 2013

Scott Unze, Project Manager
(612) 607-6383
(612) 607-6444 (fax)
scott.unze@pacelabs.com

ACCREDITED IN ACCORDANCE WITH nelac

Report of Laboratory Analysis

This report should not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc.

The results relate only to the samples included in this report.

Report Prepared Date:
February 28, 2013

Pace Analytical Services, Inc.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

DISCUSSION

This report presents the results from the analyses performed on four samples submitted by a representative of OnSite Environmental, Inc. The samples were analyzed for the presence or absence of polychlorodibenzo-p-dioxins (PCDDs) and polychlorodibenzofurans (PCDFs) using a modified version of USEPA Method 8290. The reporting limits were based on signal-to-noise measurements.

The recoveries of the isotopically-labeled PCDD/PCDF internal standards in the sample extracts ranged from 49-102%. All of the labeled internal standard recoveries obtained for this project were within the 40-135% target range specified in Method 8290. Also, since the quantification of the native 2,3,7,8-substituted congeners was based on isotope dilution, the data were automatically corrected for variation in recovery and accurate values were obtained.

In some cases, interfering substances impacted the determinations of PCDD or PCDF congeners; the affected values were flagged "I" where incorrect isotope ratios were obtained. Concentrations below the calibration range were flagged "J" and should be regarded as estimates.

A laboratory method blank was prepared and analyzed with the sample batch as part of our routine quality control procedures. The results show the blank to be free of PCDDs and PCDFs at the reporting limits.

Laboratory spike samples were also prepared with the sample batch using clean water that had been fortified with native standard materials. The results show that the spiked native compounds were recovered at 95-128% with relative percent differences of 0.0-9.5%. These results indicate high degrees of accuracy and precision for these determinations. Matrix spikes were not prepared with the sample batch.

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Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Minnesota Laboratory Certifications

Authority	Certificate #	Authority	Certificate #
Alabama	40770	Montana	92
Alaska	MN00064	Nebraska	
Arizona	AZ0014	Nevada	MN_00064_200
Arkansas	88-0680	New Jersey (NE	MN002
California	01155CA	New Mexico	MN00064
Colorado	MN00064	New York (NEL	11647
Connecticut	PH-0256	North Carolina	27700
EPA Region 5	WD-15J	North Dakota	R-036
EPA Region 8	8TMS-Q	Ohio	4150
Florida (NELAP	E87605	Ohio VAP	CL101 9507
Georgia (DNR)	959	Oklahoma	D9922
Guam	959	Oregon (ELAP)	MN200001-005
Hawaii	SLD	Oregon (OREL	MN300001-001
Idaho	MN00064	Pennsylvania	68-00563
Illinois	200012	Saipan	MP0003
Indiana	C-MN-01	South Carolina	74003001
Indiana	C-MN-01	Tennesee	2818
Iowa	368	Tennessee	02818
Kansas	E-10167	Texas	T104704192-08
Kentucky	90062	Utah (NELAP)	PAM
Louisiana	03086	Virginia	00251
Maine	2007029	Washington	C755
Maryland	322	West Virginia	9952C
Michigan	9909	Wisconsin	999407970
Minnesota	027-053-137	Wyoming	8TMS-Q
Mississippi	MN00064		

REPORT OF LABORATORY ANALYSIS

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Appendix A

Sample Management

1135

Page 1 of 1

10220299

OnSite Environmental Inc.

14648 NE 95th Street, Redmond, WA 98052 · (425) 883-3881

Laboratory Reference #: 02-095

Subcontract Laboratory: Pace Analytical Service, Inc.

Turnaround Request:

Project Manager: David Baumeister

Contact Person: Scott Unze / Dioxin Manger

1 Day 2 Day 3 Day

email: dbaumeister@onsite-env.com

Address: 1700 Elm St. Ste. 200 Minneapolis, MN 55414

(Standard)

Project Number: 5147-006-08

Phone Number: (612) 607-6383

Other: _____

Project Name: _____

Date/Time: _____

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	Requested Analysis
	MW-3A	2/13/13	1300	W	1	Dioxin/Furan
	DUP	↓	1305	↓	↓	↓
	MW-6		1130			
	MW-7		1015			

Signature	Company	Date	Time	Comments/Special Instructions
Relinquished by:	OSE	2/14/13	1530	TIER 3 EDDs WA Format
Received by: CSI pace	UPS			
Relinquished by:				
Received by: CSI / pace	pace	215.13	9.45	
Relinquished by:				
Received by:				

T=0.4°C

Please return cooler blue packs

Pace Analytical®	Document Name: Sample Condition Upon Receipt Form	Document Revised: 28Jan2013 Page 1 of 1
	Document No.: F-MN-L-213-rev.06	Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: onsite

Project #: WO# : 10220299

10220299

Courier: ☐Fed Ex ☒UPS ☐USPS ☐Client ☐Commercial ☐Pace ☐Other:

Tracking Number: 12 684 EIW 01 9604 4124

Custody Seal on Cooler/Box Present? ☐Yes ☒No **Seals Intact?** ☐Yes ☒No

Optional: Proj. Due Date: Proj. Name:

Packing Material: ☐Bubble Wrap ☒Bubble Bags ☐None ☐Other: **Temp Blank?** ☐Yes ☒No

Thermom. Used: ☐B88A912167504 ☐80512447 ☒72337080 **Type of Ice:** ☐Wet ☒Blue ☐None ☐Samples on ice, cooling process has begun

Cooler Temp Read (°C): 0.4 **Cooler Temp Corrected (°C):** 0.4 **Biological Tissue Frozen?** ☐Yes ☐No

Temp should be above freezing to 6°C **Correction Factor:** true **Date and Initials of Person Examining Contents:** CSI 2.15.13

				Comments:
Chain of Custody Present?	☒Yes	☐No	☐N/A	1.
Chain of Custody Filled Out?	☒Yes	☐No	☐N/A	2.
Chain of Custody Relinquished?	☒Yes	☐No	☐N/A	3.
Sampler Name and/or Signature on COC?	☐Yes	☒No	☐N/A	4.
Samples Arrived within Hold Time?	☒Yes	☐No	☐N/A	5.
Short Hold Time Analysis (<72 hr)?	☐Yes	☒No	☐N/A	6.
Rush Turn Around Time Requested?	☐Yes	☒No	☐N/A	7.
Sufficient Volume?	☒Yes	☐No	☐N/A	8.
Correct Containers Used?	☒Yes	☐No	☐N/A	9.
-Pace Containers Used?	☒Yes	☐No	☐N/A	
Containers Intact?	☒Yes	☐No	☐N/A	10.
Filtered Volume Received for Dissolved Tests?	☐Yes	☐No	☒N/A	11.
Sample Labels Match COC? -Includes Date/Time/ID/Analysis Matrix: WT	☒Yes	☐No	☐N/A	12.
All containers needing acid/base preservation have been checked? Noncompliances are noted in 13.	☐Yes	☐No	☒N/A	13. ☐HNO_3 ☐H_2SO_4 ☐NaOH ☐HCl
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, HCl<2; NaOH>12)	☐Yes	☐No	☒N/A	Sample #
Exceptions: VOA, Coliform, TOC, Oil and Grease, WI-DRO (water)	☐Yes	☒No		Initial when completed: Lot # of added preservative:
Headspace in VOA Vials (>6mm)?	☐Yes	☐No	☒N/A	14.
Trip Blank Present?	☐Yes	☐No	☒N/A	15.
Trip Blank Custody Seals Present?	☐Yes	☐No	☒N/A	
Pace Trip Blank Lot # (if purchased):				

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** ☐Yes ☐No

Person Contacted: Date/Time:

Comments/Resolution:

Project Manager Review: Date: 02/15/13

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Reporting Flags

A = Reporting Limit based on signal to noise

B = Less than 10x higher than method blank level

C = Result obtained from confirmation analysis

D = Result obtained from analysis of diluted sample

E = Exceeds calibration range

I = Interference present

J = Estimated value

Nn = Value obtained from additional analysis

P = PCDE Interference

R = Recovery outside target range

S = Peak saturated

U = Analyte not detected

V = Result verified by confirmation analysis

X = %D Exceeds limits

Y = Calculated using average of daily RFs

* = See Discussion

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Appendix B

Sample Analysis Summary

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - Onsite Environmental, Inc.

Client's Sample ID	MW-3A		
Lab Sample ID	10220299001		
Filename	U130227A_07		
Injected By	SMT		
Total Amount Extracted	1070 mL	Matrix	Water
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	02/13/2013 13:00
ICAL ID	U121116	Received	02/15/2013 09:45
CCal Filename(s)	U130227A_01 & U130227A_16	Extracted	02/25/2013 14:00
Method Blank ID	BLANK-35520	Analyzed	02/27/2013 13:04

Native Isomers	Conc pg/L	EMPC pg/L	RL pg/L		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	0.83		2,3,7,8-TCDF-13C	2.00	59
Total TCDF	ND	-----	0.83		2,3,7,8-TCDD-13C	2.00	81
					1,2,3,7,8-PeCDF-13C	2.00	66
2,3,7,8-TCDD	ND	-----	0.86		2,3,4,7,8-PeCDF-13C	2.00	67
Total TCDD	ND	-----	0.86		1,2,3,7,8-PeCDD-13C	2.00	86
					1,2,3,4,7,8-HxCDF-13C	2.00	76
1,2,3,7,8-PeCDF	ND	-----	0.74		1,2,3,6,7,8-HxCDF-13C	2.00	83
2,3,4,7,8-PeCDF	ND	-----	0.72		2,3,4,6,7,8-HxCDF-13C	2.00	82
Total PeCDF	ND	-----	0.73		1,2,3,7,8,9-HxCDF-13C	2.00	72
					1,2,3,4,7,8-HxCDD-13C	2.00	87
1,2,3,7,8-PeCDD	ND	-----	0.85		1,2,3,6,7,8-HxCDD-13C	2.00	82
Total PeCDD	ND	-----	0.85		1,2,3,4,6,7,8-HpCDF-13C	2.00	76
					1,2,3,4,7,8,9-HpCDF-13C	2.00	73
1,2,3,4,7,8-HxCDF	ND	-----	0.57		1,2,3,4,6,7,8-HpCDD-13C	2.00	102
1,2,3,6,7,8-HxCDF	ND	-----	0.47		OCDD-13C	4.00	67
2,3,4,6,7,8-HxCDF	ND	-----	0.43				
1,2,3,7,8,9-HxCDF	ND	-----	0.58		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	0.51		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.76		2,3,7,8-TCDD-37Cl4	0.20	75
1,2,3,6,7,8-HxCDD	ND	-----	1.00				
1,2,3,7,8,9-HxCDD	ND	-----	0.80				
Total HxCDD	ND	-----	0.86				
1,2,3,4,6,7,8-HpCDF	ND	-----	0.84		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	1.00		Equivalence: 1.3 pg/L		
Total HpCDF	ND	-----	0.92		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	ND	-----	1.10				
Total HpCDD	ND	-----	1.10				
OCDF	ND	-----	1.30				
OCDD	5.5	-----	2.00	J			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit.

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

J = Estimated value

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - Onsite Environmental, Inc.

Client's Sample ID	Dup		
Lab Sample ID	10220299002		
Filename	U130227A_08		
Injected By	SMT		
Total Amount Extracted	1070 mL	Matrix	Water
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	02/13/2013 13:05
ICAL ID	U121116	Received	02/15/2013 09:45
CCal Filename(s)	U130227A_01 & U130227A_16	Extracted	02/25/2013 14:00
Method Blank ID	BLANK-35520	Analyzed	02/27/2013 13:51

Native Isomers	Conc pg/L	EMPC pg/L	RL pg/L		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	0.80		2,3,7,8-TCDF-13C	2.00	59
Total TCDF	ND	-----	0.80		2,3,7,8-TCDD-13C	2.00	81
					1,2,3,7,8-PeCDF-13C	2.00	69
2,3,7,8-TCDD	ND	-----	0.88		2,3,4,7,8-PeCDF-13C	2.00	70
Total TCDD	ND	-----	0.88		1,2,3,7,8-PeCDD-13C	2.00	89
					1,2,3,4,7,8-HxCDF-13C	2.00	77
1,2,3,7,8-PeCDF	ND	-----	0.70		1,2,3,6,7,8-HxCDF-13C	2.00	84
2,3,4,7,8-PeCDF	ND	-----	0.51		2,3,4,6,7,8-HxCDF-13C	2.00	81
Total PeCDF	ND	-----	0.60		1,2,3,7,8,9-HxCDF-13C	2.00	74
					1,2,3,4,7,8-HxCDD-13C	2.00	87
1,2,3,7,8-PeCDD	ND	-----	0.87		1,2,3,6,7,8-HxCDD-13C	2.00	85
Total PeCDD	ND	-----	0.87		1,2,3,4,6,7,8-HpCDF-13C	2.00	76
					1,2,3,4,7,8,9-HpCDF-13C	2.00	72
1,2,3,4,7,8-HxCDF	ND	-----	0.62		1,2,3,4,6,7,8-HpCDD-13C	2.00	100
1,2,3,6,7,8-HxCDF	ND	-----	0.55		OCDD-13C	4.00	67
2,3,4,6,7,8-HxCDF	ND	-----	0.51				
1,2,3,7,8,9-HxCDF	ND	-----	0.72		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	0.60		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.64		2,3,7,8-TCDD-37Cl4	0.20	77
1,2,3,6,7,8-HxCDD	ND	-----	0.75				
1,2,3,7,8,9-HxCDD	ND	-----	0.72				
Total HxCDD	ND	-----	0.70				
1,2,3,4,6,7,8-HpCDF	ND	-----	0.64		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.90		Equivalence: 1.2 pg/L		
Total HpCDF	ND	-----	0.77		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	ND	-----	0.81				
Total HpCDD	ND	-----	0.81				
OCDF	ND	-----	1.10				
OCDD	-----	4.1	2.10	I			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit.

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

I = Interference present

REPORT OF LABORATORY ANALYSIS

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1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - Onsite Environmental, Inc.

Client's Sample ID	MW-6		
Lab Sample ID	10220299003		
Filename	U130227A_09		
Injected By	SMT		
Total Amount Extracted	1070 mL	Matrix	Water
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	02/13/2013 11:30
ICAL ID	U121116	Received	02/15/2013 09:45
CCal Filename(s)	U130227A_01 & U130227A_16	Extracted	02/25/2013 14:00
Method Blank ID	BLANK-35520	Analyzed	02/27/2013 14:38

Native Isomers	Conc pg/L	EMPC pg/L	RL pg/L		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	1.10		2,3,7,8-TCDF-13C	2.00	51
Total TCDF	ND	-----	1.10		2,3,7,8-TCDD-13C	2.00	70
					1,2,3,7,8-PeCDF-13C	2.00	62
2,3,7,8-TCDD	ND	-----	0.99		2,3,4,7,8-PeCDF-13C	2.00	64
Total TCDD	ND	-----	0.99		1,2,3,7,8-PeCDD-13C	2.00	83
					1,2,3,4,7,8-HxCDF-13C	2.00	71
1,2,3,7,8-PeCDF	ND	-----	0.79		1,2,3,6,7,8-HxCDF-13C	2.00	76
2,3,4,7,8-PeCDF	ND	-----	0.64		2,3,4,6,7,8-HxCDF-13C	2.00	75
Total PeCDF	ND	-----	0.71		1,2,3,7,8,9-HxCDF-13C	2.00	68
					1,2,3,4,7,8-HxCDD-13C	2.00	77
1,2,3,7,8-PeCDD	ND	-----	0.89		1,2,3,6,7,8-HxCDD-13C	2.00	79
Total PeCDD	ND	-----	0.89		1,2,3,4,6,7,8-HpCDF-13C	2.00	71
					1,2,3,4,7,8,9-HpCDF-13C	2.00	66
1,2,3,4,7,8-HxCDF	ND	-----	0.74		1,2,3,4,6,7,8-HpCDD-13C	2.00	93
1,2,3,6,7,8-HxCDF	ND	-----	0.76		OCDD-13C	4.00	61
2,3,4,6,7,8-HxCDF	ND	-----	0.53				
1,2,3,7,8,9-HxCDF	ND	-----	0.75		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	0.70		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.86		2,3,7,8-TCDD-37Cl4	0.20	70
1,2,3,6,7,8-HxCDD	ND	-----	1.00				
1,2,3,7,8,9-HxCDD	ND	-----	0.79				
Total HxCDD	ND	-----	0.90				
1,2,3,4,6,7,8-HpCDF	ND	-----	0.80		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	1.10		Equivalence: 1.4 pg/L		
Total HpCDF	ND	-----	0.94		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	2.2	-----	1.20	J			
Total HpCDD	2.2	-----	1.20	J			
OCDF	2.8	-----	1.90	J			
OCDD	16.0	-----	1.30	J			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit.

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

J = Estimated value

REPORT OF LABORATORY ANALYSIS

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Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - Onsite Environmental, Inc.

Client's Sample ID	MW-7		
Lab Sample ID	10220299004		
Filename	U130227A_10		
Injected By	SMT		
Total Amount Extracted	1050 mL	Matrix	Water
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	02/13/2013 10:15
ICAL ID	U121116	Received	02/15/2013 09:45
CCal Filename(s)	U130227A_01 & U130227A_16	Extracted	02/25/2013 14:00
Method Blank ID	BLANK-35520	Analyzed	02/27/2013 15:26

Native Isomers	Conc pg/L	EMPC pg/L	RL pg/L		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	0.97		2,3,7,8-TCDF-13C	2.00	49
Total TCDF	ND	-----	0.97		2,3,7,8-TCDD-13C	2.00	70
					1,2,3,7,8-PeCDF-13C	2.00	62
2,3,7,8-TCDD	ND	-----	1.00		2,3,4,7,8-PeCDF-13C	2.00	64
Total TCDD	ND	-----	1.00		1,2,3,7,8-PeCDD-13C	2.00	83
					1,2,3,4,7,8-HxCDF-13C	2.00	75
1,2,3,7,8-PeCDF	ND	-----	0.77		1,2,3,6,7,8-HxCDF-13C	2.00	80
2,3,4,7,8-PeCDF	ND	-----	0.56		2,3,4,6,7,8-HxCDF-13C	2.00	80
Total PeCDF	ND	-----	0.67		1,2,3,7,8,9-HxCDF-13C	2.00	73
					1,2,3,4,7,8-HxCDD-13C	2.00	81
1,2,3,7,8-PeCDD	ND	-----	1.00		1,2,3,6,7,8-HxCDD-13C	2.00	83
Total PeCDD	ND	-----	1.00		1,2,3,4,6,7,8-HpCDF-13C	2.00	74
					1,2,3,4,7,8,9-HpCDF-13C	2.00	69
1,2,3,4,7,8-HxCDF	ND	-----	0.70		1,2,3,4,6,7,8-HpCDD-13C	2.00	97
1,2,3,6,7,8-HxCDF	ND	-----	0.58		OCDD-13C	4.00	63
2,3,4,6,7,8-HxCDF	ND	-----	0.45				
1,2,3,7,8,9-HxCDF	ND	-----	0.72		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	0.61		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.73		2,3,7,8-TCDD-37Cl4	0.20	67
1,2,3,6,7,8-HxCDD	ND	-----	1.00				
1,2,3,7,8,9-HxCDD	ND	-----	1.00				
Total HxCDD	ND	-----	0.92				
1,2,3,4,6,7,8-HpCDF	ND	-----	0.74		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.94		Equivalence: 1.4 pg/L		
Total HpCDF	ND	-----	0.84		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	ND	-----	1.00				
Total HpCDD	ND	-----	1.00				
OCDF	ND	-----	1.10				
OCDD	-----	3.6	2.80	I			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit.

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

I = Interference present

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Blank Analysis Results

Lab Sample ID	BLANK-35520	Matrix	Water
Filename	F130227A_08	Dilution	NA
Total Amount Extracted	960 mL	Extracted	02/25/2013 14:00
ICAL ID	F121220	Analyzed	02/27/2013 13:08
CCal Filename(s)	F130227A_02 & F130227A_16	Injected By	SMT

Native Isomers	Conc pg/L	EMPC pg/L	RL pg/L		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	1.30		2,3,7,8-TCDF-13C	2.00	69
Total TCDF	ND	-----	1.30		2,3,7,8-TCDD-13C	2.00	74
					1,2,3,7,8-PeCDF-13C	2.00	76
2,3,7,8-TCDD	ND	-----	1.40		2,3,4,7,8-PeCDF-13C	2.00	77
Total TCDD	ND	-----	1.40		1,2,3,7,8-PeCDD-13C	2.00	81
					1,2,3,4,7,8-HxCDF-13C	2.00	80
1,2,3,7,8-PeCDF	ND	-----	1.70		1,2,3,6,7,8-HxCDF-13C	2.00	86
2,3,4,7,8-PeCDF	ND	-----	1.50		2,3,4,6,7,8-HxCDF-13C	2.00	84
Total PeCDF	ND	-----	1.60		1,2,3,7,8,9-HxCDF-13C	2.00	76
					1,2,3,4,7,8-HxCDD-13C	2.00	80
1,2,3,7,8-PeCDD	ND	-----	1.40		1,2,3,6,7,8-HxCDD-13C	2.00	77
Total PeCDD	ND	-----	1.40		1,2,3,4,6,7,8-HpCDF-13C	2.00	60
					1,2,3,4,7,8,9-HpCDF-13C	2.00	56
1,2,3,4,7,8-HxCDF	ND	-----	0.96		1,2,3,4,6,7,8-HpCDD-13C	2.00	55
1,2,3,6,7,8-HxCDF	ND	-----	0.65		OCDD-13C	4.00	45
2,3,4,6,7,8-HxCDF	ND	-----	0.89				
1,2,3,7,8,9-HxCDF	ND	-----	0.94		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	0.86		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	1.60		2,3,7,8-TCDD-37Cl4	0.20	78
1,2,3,6,7,8-HxCDD	ND	-----	1.20				
1,2,3,7,8,9-HxCDD	ND	-----	1.40				
Total HxCDD	ND	-----	1.40				
1,2,3,4,6,7,8-HpCDF	ND	-----	1.60		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	3.00		Equivalence: 2.1 pg/L		
Total HpCDF	ND	-----	2.30		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	ND	-----	2.30				
Total HpCDD	ND	-----	2.30				
OCDF	ND	-----	5.00				
OCDD	-----	12	5.20	I			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

I = Interference present

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Laboratory Control Spike Results

Lab Sample ID	LCS-35521		
Filename	F130227A_04	Matrix	Water
Total Amount Extracted	992 mL	Dilution	NA
ICAL ID	F121220	Extracted	02/25/2013 14:00
CCal Filename(s)	F130227A_02 & F130227A_16	Analyzed	02/27/2013 10:10
Method Blank ID	BLANK-35520	Injected By	JB

Native Isomers	Qs (ng)	Qm (ng)	% Rec.	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.20	0.21	106	2,3,7,8-TCDF-13C	2.0	74
Total TCDF				2,3,7,8-TCDD-13C	2.0	78
				1,2,3,7,8-PeCDF-13C	2.0	77
2,3,7,8-TCDD	0.20	0.19	95	2,3,4,7,8-PeCDF-13C	2.0	78
Total TCDD				1,2,3,7,8-PeCDD-13C	2.0	82
				1,2,3,4,7,8-HxCDF-13C	2.0	81
1,2,3,7,8-PeCDF	1.0	1.1	109	1,2,3,6,7,8-HxCDF-13C	2.0	89
2,3,4,7,8-PeCDF	1.0	1.1	107	2,3,4,6,7,8-HxCDF-13C	2.0	89
Total PeCDF				1,2,3,7,8,9-HxCDF-13C	2.0	84
				1,2,3,4,7,8-HxCDD-13C	2.0	83
1,2,3,7,8-PeCDD	1.0	1.0	101	1,2,3,6,7,8-HxCDD-13C	2.0	83
Total PeCDD				1,2,3,4,6,7,8-HpCDF-13C	2.0	67
				1,2,3,4,7,8,9-HpCDF-13C	2.0	64
1,2,3,4,7,8-HxCDF	1.0	1.1	115	1,2,3,4,6,7,8-HpCDD-13C	2.0	63
1,2,3,6,7,8-HxCDF	1.0	1.1	107	OCDD-13C	4.0	54
2,3,4,6,7,8-HxCDF	1.0	1.0	104			
1,2,3,7,8,9-HxCDF	1.0	1.1	107	1,2,3,4-TCDD-13C	2.0	NA
Total HxCDF				1,2,3,7,8,9-HxCDD-13C	2.0	NA
1,2,3,4,7,8-HxCDD	1.0	1.2	115	2,3,7,8-TCDD-37Cl4	0.20	81
1,2,3,6,7,8-HxCDD	1.0	1.1	110			
1,2,3,7,8,9-HxCDD	1.0	1.1	109			
Total HxCDD						
1,2,3,4,6,7,8-HpCDF	1.0	1.2	117			
1,2,3,4,7,8,9-HpCDF	1.0	1.1	109			
Total HpCDF						
1,2,3,4,6,7,8-HpCDD	1.0	1.0	104			
Total HpCDD						
OCDF	2.0	2.6	128			
OCDD	2.0	2.3	115			

Qs = Quantity Spiked
Qm = Quantity Measured
Rec. = Recovery (Expressed as Percent)
R = Recovery outside of target range
Y = RF averaging used in calculations
Nn = Value obtained from additional analysis
NA = Not Applicable
* = See Discussion

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Laboratory Control Spike Results

Lab Sample ID	LCSD-35522		
Filename	F130227A_05	Matrix	Water
Total Amount Extracted	962 mL	Dilution	NA
ICAL ID	F121220	Extracted	02/25/2013 14:00
CCal Filename(s)	F130227A_02 & F130227A_16	Analyzed	02/27/2013 10:55
Method Blank ID	BLANK-35520	Injected By	JB

Native Isomers	**Qs** (ng)	**Qm** (ng)	% Rec.	**Internal Standards**	**ng's Added**	**Percent Recovery**
2,3,7,8-TCDF	0.20	0.22	112	2,3,7,8-TCDF-13C	2.0	71
Total TCDF				2,3,7,8-TCDD-13C	2.0	76
				1,2,3,7,8-PeCDF-13C	2.0	78
2,3,7,8-TCDD	0.20	0.19	97	2,3,4,7,8-PeCDF-13C	2.0	78
Total TCDD				1,2,3,7,8-PeCDD-13C	2.0	81
				1,2,3,4,7,8-HxCDF-13C	2.0	80
1,2,3,7,8-PeCDF	1.0	1.1	115	1,2,3,6,7,8-HxCDF-13C	2.0	91
2,3,4,7,8-PeCDF	1.0	1.1	111	2,3,4,6,7,8-HxCDF-13C	2.0	87
Total PeCDF				1,2,3,7,8,9-HxCDF-13C	2.0	83
				1,2,3,4,7,8-HxCDD-13C	2.0	83
1,2,3,7,8-PeCDD	1.0	1.1	106	1,2,3,6,7,8-HxCDD-13C	2.0	80
Total PeCDD				1,2,3,4,6,7,8-HpCDF-13C	2.0	68
				1,2,3,4,7,8,9-HpCDF-13C	2.0	63
1,2,3,4,7,8-HxCDF	1.0	1.2	120	1,2,3,4,6,7,8-HpCDD-13C	2.0	65
1,2,3,6,7,8-HxCDF	1.0	1.1	109	OCDD-13C	4.0	56
2,3,4,6,7,8-HxCDF	1.0	1.1	108			
1,2,3,7,8,9-HxCDF	1.0	1.1	113	1,2,3,4-TCDD-13C	2.0	NA
Total HxCDF				1,2,3,7,8,9-HxCDD-13C	2.0	NA
1,2,3,4,7,8-HxCDD	1.0	1.1	115	2,3,7,8-TCDD-37Cl4	0.20	79
1,2,3,6,7,8-HxCDD	1.0	1.2	121			
1,2,3,7,8,9-HxCDD	1.0	1.2	115			
Total HxCDD						
1,2,3,4,6,7,8-HpCDF	1.0	1.2	123			
1,2,3,4,7,8,9-HpCDF	1.0	1.2	115			
Total HpCDF						
1,2,3,4,6,7,8-HpCDD	1.0	1.1	111			
Total HpCDD						
OCDF	2.0	2.6	128			
OCDD	2.0	2.4	122			

Qs = Quantity Spiked
Qm = Quantity Measured
Rec. = Recovery (Expressed as Percent)
R = Recovery outside of target range

Y = RF averaging used in calculations
Nn = Value obtained from additional analysis
NA = Not Applicable
* = See Discussion

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290

Spike Recovery Relative Percent Difference (RPD) Results

Client	Onsite Environmental, Inc.		
Spike 1 ID	LCS-35521	Spike 2 ID	LCSD-35522
Spike 1 Filename	F130227A_04	Spike 2 Filename	F130227A_05

Compound	Spike 1 %REC	Spike 2 %REC	%RPD
2,3,7,8-TCDF	106	112	5.5
2,3,7,8-TCDD	95	97	2.1
1,2,3,7,8-PeCDF	109	115	5.4
2,3,4,7,8-PeCDF	107	111	3.7
1,2,3,7,8-PeCDD	101	106	4.8
1,2,3,4,7,8-HxCDF	115	120	4.3
1,2,3,6,7,8-HxCDF	107	109	1.9
2,3,4,6,7,8-HxCDF	104	108	3.8
1,2,3,7,8,9-HxCDF	107	113	5.5
1,2,3,4,7,8-HxCDD	115	115	0.0
1,2,3,6,7,8-HxCDD	110	121	9.5
1,2,3,7,8,9-HxCDD	109	115	5.4
1,2,3,4,6,7,8-HpCDF	117	123	5.0
1,2,3,4,7,8,9-HpCDF	109	115	5.4
1,2,3,4,6,7,8-HpCDD	104	111	6.5
OCDF	128	128	0.0
OCDD	115	122	5.9

%REC = Percent Recovered
RPD = The difference between the two values divided by the mean value

REPORT OF LABORATORY ANALYSIS

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Chain of Custody

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: GEI
Project Number: 5147-006-08
Project Name: PCI
Project Manager: ROBERT TRAHAN
Sampled by: ABHIJIT

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 02-095

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals/ MTCA Metals (circle one)	TCLP Metals	HEM (oil and grease) 1664A	Dioxin/FURAN	Metal Group A (see comment)	Metal Group B (see comment)	MTBE, EDB & EDC	HERBICIDES		% Moisture
1	MW-1	2/13/13	1600	WATER	8			X	X				X									X					
2	MW-2A		1430		8								X									X					
3	MW-3A		1300		19					X		X			X						X		X	X	X		
4	DUP		1305		19					X		X			X						X		X	X	X		
5	MW-4		1700		8								X									X					
6	MW-6		1130		19					X		X			X						X		X	X	X		
7	MW-7		1015		19				X	X		X			X						X		X	X	X		
8	TRIP BLANK									X														X			

	Signature	Company	Date	Time
Relinquished	[signature]	GEI	2/14/13	1230
Received	[signature]	Spdy	2/14	12:30
Relinquished	[signature]	Spdy	2/14	13:10
Received	[signature]	OSE	2/14/13	1310
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions
Metals Group A: TOTAL & DISSOLVE (As, Cu, Hg, Ni, Ag, Zn)
Metals Group B: TOTAL & DISSOLVE (As, Cd, Cr, Cu, Pb, Hg, Ni, Ag, Zn)
Samples are field filtered for dissolve metals analyses

Chromatograms with final report ☐

Data Package: Level III ☐ Level IV ☐ Electronic Data Deliverables (EDDs) ☐ _____

Sample/Cooler Receipt and Acceptance Checklist

Client: GES

Client Project Name/Number: 5147-006-08

OnSite Project Number: 02-095

Initiated by: MV

Date Initiated: 2/14/13

1.0 Cooler Verification

1.1 Were there custody seals on the outside of the cooler?	Yes	No	N/A	1 2 3 4	
1.2 Were the custody seals intact?	Yes	No	N/A	1 2 3 4	
1.3 Were the custody seals signed and dated by last custodian?	Yes	No	N/A	1 2 3 4	
1.4 Were the samples delivered on ice or blue ice?	Yes	No		1 2 3 4	
1.5 Were samples received between 0-6 degrees Celsius?	Yes	No	Temperature:	2,2,2,2,2,2	
1.6 Have shipping bills (if any) been attached to the back of this form?	Yes	N/A			
1.7 How were the samples delivered?	Client	Courier	UPS/FedEx	OSE Pickup	Other

2.0 Chain of Custody Verification

2.1 Was a Chain of Custody submitted with the samples?	Yes	No	1 2 3 4
2.2 Was the COC legible and written in permanent ink?	Yes	No	1 2 3 4
2.3 Have samples been relinquished and accepted by each custodian?	Yes	No	1 2 3 4
2.4 Did the sample labels (ID, date, time, preservative) agree with COC?	Yes	No	1 2 3 4
2.5 Were all of the samples listed on the COC submitted?	Yes	No	1 2 3 4
2.6 Were any of the samples submitted omitted from the COC?	Yes	No	1 2 3 4

3.0 Sample Verification

3.1 Were any sample containers broken or compromised?	Yes	No		1 2 3 4
3.2 Were any sample labels missing or illegible?	Yes	No		1 2 3 4
3.3 Have the correct containers been used for each analysis requested?	Yes	No		1 2 3 4
3.4 Have the samples been correctly preserved?	Yes	No	N/A	1 2 3 4
3.5 Are volatiles samples free from headspace and air bubbles?	Yes	No	N/A	1 2 3 4
3.6 Is there sufficient sample submitted to perform requested analyses?	Yes	No		1 2 3 4
3.7 Have any holding times already expired or will expire in 24 hours?	Yes	No		1 2 3 4
3.8 Was method 5035A used?	Yes	No	N/A	1 2 3 4
3.9 If 5035A was used, which sampling option was used (#1, 2, or 3).	#		N/A	1 2 3 4

Explain any discrepancies:

1 - Discuss issue in Case Narrative

2 - Process Sample As-is

3 - Client contacted to discuss problem

4 - Sample cannot be analyzed or client does not wish to proceed

Table of Contents: ARI Job AVX9

Client: GeoEngineers Inc. Project: 5147-006-11 Port of Anacortes

	Page From:	Page To:
Inventory Sheet		
Cover Letter	1	1
Chain of Custody Documentation	2	6
Case Narrative, Data Qualifiers, Control Limits	7	16
SIM PAH Analysis		
Report and Summary QC Forms	17	33
Metals Analysis		
Report and Summary QC Forms	34	81
General Chemistry Analysis		
Report and Summary QC Forms	82	92
SIM PAH Raw Data		
Extractions Bench Sheets and Notes	93	96
Initial Calibration	97	163
Run Logs, Continuing Calibrations, and Raw Data	164	227
Metals Raw Data		
Preparation Bench Sheets and Notes	228	230
Run Logs, Calibrations, and Raw Data	231	469
General Chemistry Raw Data		
Analyst Notes and Raw Data	470	473

Signature

February-29-2016
Date

Analytical Resources, Incorporated
Analytical Chemists and Consultants

February 29, 2016

Robert Trahan
GeoEngineers, Inc.
Plaza 600 Building
600 Stewart Street, Suite 1700
Seattle, WA 98101

RE: Project: Port of Anacortes, 5147-006-11
ARI Job No.: AVX9

Dear Mr. Trahan:

Please find enclosed the Chain of Custody record (COC), sample receipt documentation, and the final data package for samples from the project referenced above.

Sample receipt and details of requested analyses are discussed in the Case Narrative.

An electronic copy of this package will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Cheronne Oreiro
Project Manager
(206) 695-6214
cheronneo@arilabs.com
www.arilabs.com

cc: eFile: AVX9

Enclosures

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** fax

Chain of Custody Documentation

ARI Job ID: AVX9

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: ANXG	Turn-around Requested: STANDARD	Page: 1 of 1	
ARI Client Company: GEOENGINEERS INC.	Phone: 206.518.5141	Date: 02.11.16	Ice Present? YES
Client Contact: ROBERT TRAHAN		No. of Coolers: 1	Cooler Temps: 2.4
Client Project Name: PORT OF ANACORTES DAKOTA CREEK			
Client Project #: 5147-006-11	Samplers: NATHAN SOLOMON		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)
www.arilabs.com

Sample ID	Date	Time	Matrix	No Containers	Analysis Requested: RBCA	TOTAL METALS	DISSOLVED METALS	SIM PAHs	MS/MSD	TDS			Notes/Comments
MW-8_021016	02.10.16	1040	WATER	10	3	X	X	X	X	X			
MW-1-021016	02.10.16	1300		3		X	X			X			
MW-7_021016	02.10.16	1430		3		X	X			X			
DUP-021016	02.10.16	1200		5	3	X	X	X		X			
MW-4-021116	02.11.16	1015		5		X	X	X		X			
MW-6-021116	02.11.16	1120		3		X	X			X			
MW-3A-021116	02.11.16	1205		3		X	X			X			

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by (Signature)	Received by (Signature)
SEE ATTCH: TABLE FOR TOTAL & DISSOLVED METALS	Printed Name: Nathan Solomon	Printed Name: Chris Ahel	Printed Name.	Printed Name:
	Company: GEI	Company: ARI	Company	Company
	Date & Time: 2.11.16 1507	Date & Time: 2/11/16 15:07	Date & Time	Date & Time

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Geo Engineers
COC No(s): _____ (NA)
Assigned ARI Job No: AVX9

Project Name: Port of Anacortes
Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____
Tracking No: _____ NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler?	YES	(NO)
Were custody papers included with the cooler?	(YES)	NO
Were custody papers properly filled out (ink, signed, etc.)	(YES)	NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry) 2.4
Time: 1507
If cooler temperature is out of compliance fill out form 00070F
Temp Gun ID#: D00576

Cooler Accepted by: CA Date: 2/12/16 Time: 1507

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	(NO)
What kind of packing material was used? ...	Bubble Wrap (Wet) Ice Gel Packs Baggies Foam Block Paper Other: _____		
Was sufficient ice used (if appropriate)?	NA	(YES)	NO
Were all bottles sealed in individual plastic bags?		YES	(NO)
Did all bottles arrive in good condition (unbroken)?		(YES)	NO
Were all bottle labels complete and legible?		(YES)	NO
Did the number of containers listed on COC match with the number of containers received?		(YES)	NO
Did all bottle labels and tags agree with custody papers?		(YES)	NO
Were all bottles used correct for the requested analyses?		(YES)	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)...	NA	(YES)	NO
Were all VOC vials free of air bubbles?	(NA)	YES	NO
Was sufficient amount of sample sent in each bottle?		(YES)	NO
Date VOC Trip Blank was made at ARI	(NA)		

Was Sample Split by ARI : (NA) YES Date/Time._____ Equipment:_____ Split by:_____

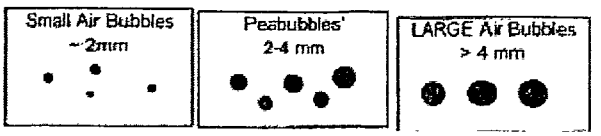
Samples Logged by: AV Date: 2/12/16 Time: 1310

***** Notify Project Manager of discrepancies or concerns *****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: Date:



Small → "sm" (< 2 mm)
Peabubbles → "pb" (2 to < 4 mm)
Large → "lg" (4 to < 6 mm)
Headspace → "hs" (> 6 mm)

AVX9 : 00576

Table 3

Groundwater Monitoring Sampling and Analysis Plan

Dakota Creek Industries

Anacortes, Washington

Monitoring Well[1]	Carcinogenic polycyclic Aromatic Hydrocarbons (EPA 8270SIM)	Total Metals (EPA 6010/6020)		Dissolved Metals (EPA 6010/6020)		Total Dissolved Solids (SM2540C)
		Arsenic	Nickel	Arsenic	Nickel	
MW-1		X		X		X
MW-2A		X	X	X	X	X
MW-3A			X		X	X
MW-4	X	X		X		X
MW-6			X		X	X
MW-7		X	X	X	X	X
MW-8	X	X	X	X	X	X
Duplicate (MW-8)	X	X	X	X	X	X
MS/MSD (MW-8)	X	X	X	X	X	X

Notes:

[1]Monitoring well locations are shown on Figure 2.

[1]A field duplicate sample will be obtained from this location during each monitoring event.

EPA = Environmental Protection Agency

File No. 5147-006-11
Table 3 | October 26, 2015

Page 1 of 1

GeoEngineers

PRESERVATION VERIFICATION 02/12/16
Page 1 of 1

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: **AVX9**

PC: Cheronne
VTSR: 02/11/16

Inquiry Number: NONE
Analysis Requested: 02/12/16
Contact: Trahan, Robert
Client: GeoEngineers Inc.
Logged by: AV
Sample Set Used: Yes-481
Validatable Package: Lv4
Deliverables:

Project #: 5147-006-11
Project: Port of Anacortes
Sample Site: Dakota Creek
SDG No:
Analytical Protocol: In-house

LOGNUM ARI ID	CLIENT ID	CN >12	WAD >12	NH3 <2	COD <2	FOG <2	MET <2	PHEN <2	PHOS <2	TKN <2	NO23 <2	TOC <2	S2 >9	TPHD <2	Fe2+ <2	DMET FLT	DOC FLT	PARAMETER	ADJUSTED TO	LOT NUMBER	AMOUNT ADDED	DATE/BY
16-2330 **AVX9A**	MW-8_021016						TOT															
16-2331 **AVX9B**	MW-1_021016						TOT															
16-2332 **AVX9C**	MW-7_021016						TOT															
16-2333 **AVX9D**	DUP_021016						TOT															
16-2334 **AVX9E**	MW-4_021116						TOT															
16-2335 **AVX9F**	MW-6_021116						TOT															
16-2336 **AVX9G**	MW-3A_021116						TOT															
16-2337 **AVX9H**	MW-8_021016						DIS									Y						
16-2338 **AVX9I**	MW-1_021016						DIS									Y						
16-2339 **AVX9J**	MW-7_021016						DIS									Y						
16-2340 **AVX9K**	DUP_021016						DIS									Y						
16-2341 **AVX9L**	MW-4_021116						DIS									Y						
16-2342 **AVX9M**	MW-6_021116						DIS									Y						
16-2343 **AVX9N**	MW-3A_021116						DIS									Y						

P= Pass

Checked By AV Date 2/12/16

Case Narrative, Data Qualifiers, Control Limits

ARI Job ID: AVX9

AVX9: 80807

ANALYTICAL
RESOURCES
INCORPORATED

Case Narrative

Client: GeoEngineers, Inc.
Project: Port of Anacortes Dakota Creek, 5147-006-11
ARI Job No.: AVX9

Sample Receipt

Seven water samples were received on February 11, 2016 under ARI job AVX9. The cooler temperature measured by IR thermometer following ARI SOP was 2.4°C. For further details regarding sample receipt, please refer to the Cooler Receipt Form.

PAHs by SW8270-SIM

The samples and associated laboratory QC were extracted and analyzed within method recommended holding times.

Initial calibrations and initial calibration verifications were within method requirements. Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The method blank was clean at the reporting limits. The LCS percent recoveries were within control limits.

The matrix spike and matrix spike duplicate percent recoveries were within control limits.

Total and Dissolved Metals by SW6020

The samples and associated laboratory QC were prepared and analyzed within method recommended holding times.

The method blanks were clean at the reporting limits. The LCS percent recoveries were within control limits.

The matrix spike percent recoveries and duplicate RPDs were within control limits.

General Chemistry Parameters (TDS)

The samples and associated laboratory QC were prepared and analyzed within method recommended holding times.

The method blanks were clean at the reporting limits. The LCS percent recoveries were within control limits.

The replicate RPD was within control limits.

AVX9 : 00001

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: AVX9
Client: GeoEngineers Inc.
Project Event: 5147-006-11
Project Name: Port of Anacortes

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	MW-8_021016	AVX9A	16-2330	Water	02/10/16 10:40	02/11/16 15:07
2.	MW-1_021016	AVX9B	16-2331	Water	02/10/16 13:00	02/11/16 15:07
3.	MW-7_021016	AVX9C	16-2332	Water	02/10/16 14:30	02/11/16 15:07
4.	DUP_021016	AVX9D	16-2333	Water	02/10/16 12:00	02/11/16 15:07
5.	MW-4_021116	AVX9E	16-2334	Water	02/11/16 10:15	02/11/16 15:07
6.	MW-6_021116	AVX9F	16-2335	Water	02/11/16 11:20	02/11/16 15:07
7.	MW-3A_021116	AVX9G	16-2336	Water	02/11/16 12:05	02/11/16 15:07
8.	MW-8_021016	AVX9H	16-2337	Water	02/10/16 10:40	02/11/16 15:07
9.	MW-1_021016	AVX9I	16-2338	Water	02/10/16 13:00	02/11/16 15:07
10.	MW-7_021016	AVX9J	16-2339	Water	02/10/16 14:30	02/11/16 15:07
11.	DUP_021016	AVX9K	16-2340	Water	02/10/16 12:00	02/11/16 15:07
12.	MW-4_021116	AVX9L	16-2341	Water	02/11/16 10:15	02/11/16 15:07
13.	MW-6_021116	AVX9M	16-2342	Water	02/11/16 11:20	02/11/16 15:07
14.	MW-3A_021116	AVX9N	16-2343	Water	02/11/16 12:05	02/11/16 15:07

AVX9:000003

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Data Reporting Qualifiers

Effective 12/31/13

Inorganic Data

U — Indicates that the target analyte was not detected at the reported concentration

* — Duplicate RPD is not within established control limits

B — Reported value is less than the CRDL but ≥ the Reporting Limit

N — Matrix Spike recovery not within established control limits

NA — Not Applicable, analyte not spiked

H — The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible

L — Analyte concentration is ≤5 times the Reporting Limit and the replicate control limit defaults to ±1 RL instead of the normal 20% RPD

Organic Data

U — Indicates that the target analyte was not detected at the reported concentration

* — Flagged value is not within established control limits

B — Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.

J — Estimated concentration when the value is less than ARI's established reporting limits

D — The spiked compound was not detected due to sample extract dilution

E — Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

AVX3 : 00010

Q Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20%Drift or minimum RRF).

S Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte

NA The flagged analyte was not analyzed for

NR Spiked compound recovery is not reported due to chromatographic interference

NS The flagged analyte was not spiked into the sample

M Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses

N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"

Y The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.

EMPC Estimated Maximum Possible Concentration (EMPC) defined in EPA Statement of Work DLM02.2 as a value "calculated for 2,3,7,8-substituted isomers for which the quantitation and /or confirmation ion(s) has signal to noise in excess of 2.5, but does not meet identification criteria" **(Dioxin/Furan analysis only)**

C The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column

P The analyte was detected on both chromatographic columns but the quantified values differ by ≥40% RPD with no obvious chromatographic interference

X Analyte signal includes interference from polychlorinated diphenyl ethers. **(Dioxin/Furan analysis only)**

Z Analyte signal includes interference from the sample matrix or perfluorokerosene ions. **(Dioxin/Furan analysis only)**

AVXS : 00011

Geotechnical Data

A	The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.
F	Samples were frozen prior to particle size determination
SM	Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations
SS	Sample did not contain the proportion of "fines" required to perform the pipette portion of the grain size analysis
W	Weight of sample in some pipette aliquots was below the level required for accurate weighting

AVX9:00012

Analytical Method Information

Printed: 02/29/2016 8:30 am

8270D-SIM PAH (0.01 ug/L) in Water (EPA 8270D-SIM)

Preservation: Cool <6°C

Container: Glass NM, Amber, 500 mL **Amount Required:** 1000 **Hold Time:** 7 days

Analyte	MDL	Reporting Limit	Surrogate %Rec	Duplicate RPD	----Matrix Spike---- %Rec	RPD	--Blank Spike / LCS-- %Rec	RPD
Naphthalene	0.00740	0.0100 ug/L		30	37-120	30	37-120	30
2-Methylnaphthalene	0.00384	0.0100 ug/L		30	37-120	30	37-120	30
1-Methylnaphthalene	0.00313	0.0100 ug/L		30	29-120	30	29-120	30
Biphenyl				30	30-160	30	30-160	40
2,6-Dimethylnaphthalene				30	30-160	30	30-160	40
Acenaphthylene	0.00317	0.0100 ug/L		30	41-120	30	41-120	30
Acenaphthene	0.00311	0.0100 ug/L		30	41-120	30	41-120	30
Dibenzofuran	0.00354	0.0100 ug/L		30	38-120	30	38-120	30
2,3,5-Trimethylnaphthalene								
Fluorene	0.00317	0.0100 ug/L		30	43-120	30	43-120	30
Dibenzothiophene								
Phenanthrene	0.00299	0.0100 ug/L		30	41-120	30	41-120	30
Anthracene	0.00248	0.0100 ug/L		30	40-120	30	40-120	30
Carbazole				30	30-160	30	30-160	40
1-Methylphenanthrene				30	30-160	30	30-160	40
Fluoranthene	0.00337	0.0100 ug/L		30	45-120	30	45-120	30
Pyrene	0.00417	0.0100 ug/L		30	41-120	30	41-120	30
Benzo(a)anthracene	0.00347	0.0100 ug/L		30	42-120	30	42-120	30
Chrysene	0.00313	0.0100 ug/L		30	44-120	30	44-120	30
Benzo(b)fluoranthene	0.00356	0.0100 ug/L		30	44-120	30	44-120	30
Benzo(k)fluoranthene	0.00345	0.0100 ug/L		30	50-120	30	50-120	30
Benzo(j)fluoranthene	0.00286	0.0100 ug/L		30	39-160	30	39-160	30
Benzo(e)pyrene				30	30-160	30	30-160	40
Benzo(a)pyrene	0.00237	0.0100 ug/L		30	35-120	30	35-120	30
Perylene	0.00400	0.0100 ug/L		30	30-160	30	30-160	30
Indeno(1,2,3-cd)pyrene	0.00334	0.0100 ug/L		30	37-120	30	37-120	30
Dibenzo(a,h)anthracene	0.00303	0.0100 ug/L		30	34-120	30	34-120	30
Benzo(g,h,i)perylene	0.00312	0.0100 ug/L		30	38-120	30	38-120	30
Benzofluoranthenes, Total	0.00356	0.0100 ug/L		30	46-120	30	46-120	30
Surr: 2-Methylnaphthalene-d10			42-120	30		30		30
Surr: Dibenzo[a,h]anthracene-d14			29-120	30		30		30
Surr: Fluoranthene-d10			57-120	30		30		30
Naphthalene-d8				30		30		30
Acenaphthene-d10				30		30		30
Phenanthrene-d10				30		30		30
Chrysene-d12				30		30		30
Perylene-d12				30		30		30

AVXO : 20013

Analytical Method Information

Printed: 02/03/2016 10:17 am

Met 200.8/6020A Master List in Water (EPA 6020A)

Preservation: pH<2; HNO3, Cool <6°C

Container: HDPE NM, 500 mL, 1:1 HNO3 **Amount Required:** 500 mL **Hold Time:** 180 days

Analyte	MDL	Reporting Limit	Surrogate %Rec	Duplicate RPD	----Matrix Spike---- %Rec	RPD	--Blank Spike / LCS-- %Rec	RPD
Aluminum-27	0.550	20.0 ug/L		20	75-125	20	80-120	20
Antimony-121	0.0199	0.200 ug/L		20	75-125	20	80-120	20
Antimony-123	0.0183	0.200 ug/L		20	75-125	20	80-120	20
Arsenic-75a	0.0298	0.200 ug/L		20	75-125	20	80-120	20
Arsenic-75b	0.120	0.500 ug/L		20	75-125	20	80-120	20
Barium-135	0.0314	0.500 ug/L		20	75-125	20	80-120	20
Barium-137	0.0336	0.500 ug/L		20	75-125	20	80-120	20
Beryllium-9	0.00954	0.200 ug/L		20	75-125	20	80-120	20
Cadmium-111	0.00716	0.100 ug/L		20	75-125	20	80-120	20
Cadmium-114	0.00500	0.100 ug/L		20	75-125	20	80-120	20
Calcium-43	3.81	50.0 ug/L		20	75-125	20	80-120	20
Chromium-52	0.0685	0.500 ug/L		20	75-125	20	80-120	20
Chromium-53	0.0373	0.500 ug/L		20	75-125	20	80-120	20
Cobalt-59	0.00572	0.200 ug/L		20	75-125	20	80-120	20
Copper-63	0.0372	0.500 ug/L		20	75-125	20	80-120	20
Copper-65	0.0259	0.500 ug/L		20	75-125	20	80-120	20
Iron-54	4.01	20.0 ug/L		20	75-125	20	80-120	20
Iron-57	1.31	20.0 ug/L		20	75-125	20	80-120	20
Lead-208	0.00800	0.100 ug/L		20	75-125	20	80-120	20
Magnesium-24	0.614	20.0 ug/L		20	75-125	20	80-120	20
Manganese-55	0.0133	0.500 ug/L		20	75-125	20	80-120	20
Molybdenum-98	0.0100	0.200 ug/L		20	75-125	20	80-120	20
Nickel-60	0.0168	0.500 ug/L		20	75-125	20	80-120	20
Nickel-62	0.268	0.500 ug/L		20	75-125	20	80-120	20
Potassium-39	2.81	20.0 ug/L		20	75-125	20	80-120	20
Selenium-82	0.0322	0.500 ug/L		20	75-125	20	80-120	20
Selenium-78	0.391	2.00 ug/L		20	75-125	20	80-120	20
Silver-107	0.00310	0.200 ug/L		20	75-125	20	80-120	20
Sodium-23	14.4	100 ug/L		20	75-125	20	80-120	20
Thallium-205	0.00620	0.200 ug/L		20	75-125	20	80-120	20
Vanadium-51a	0.0203	0.200 ug/L		20	75-125	20	80-120	20
Vanadium-51b	0.0203	0.200 ug/L		20	75-125	20	80-120	20
Zinc-66	0.285	4.00 ug/L		20	75-125	20	80-120	20
Zinc-67	0.226	4.00 ug/L		20	75-125	20	80-120	20
Zinc-68	0.326	4.00 ug/L		20	75-125	20	80-120	20
Lithium								
Scandium								
Germanium								
Indium								
Terbium								

AVX3 : 00814

Analytical Method Information

Printed: 02/29/2016 8:31 am

Solids, Total Dissolved EPA 160.1 in Water (EPA 160.1)

Preservation: Cool <6°C

Container: HDPE NM, 1000 mL **Amount Required:** 1000 mL **Hold Time:** 7 days

Analyte	MDL	Reporting Limit	Surrogate %Rec	Duplicate RPD	----Matrix Spike---- %Rec	RPD	--Blank Spike / LCS-- %Rec	RPD
Dissolved Solids		1.00 mg/L		20				

AVXS:00015

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Printed: 11/6/2014

Analytical Method Information

Met Diss 200.8 (EPA 200.8) in Water

Preservation: pH<2; HNO3, Cool <6°C

Container: HDPE NM, 500 mL, 1:1 HNO3 (FF) **Minimum Sample Volume:** 500 mL **Hold Time:** 180 days

Analyte	DL	LOQ	Surrogate %R	Duplicate RPD	Matrix Spike %R	Matrix Spike RPD	Blank Spike / LCS %R	Blank Spike / LCS RPD
Aluminum-27	0 00160	0 0200 mg/L		20	75 - 125	20	80 - 120	20
Antimony-121	0 0000100	0 000200 mg/L		20	75 - 125	20	80 - 120	20
Antimony-123	0 0000110	0 000200 mg/L		20	75 - 125	20	80 - 120	20
Arsenic-75a	0 0000480	0 000200 mg/L		20	75 - 125	20	80 - 120	20
Arsenic-75b	0 0000480	0 000200 mg/L		20	75 - 125	20	80 - 120	20
Barium-135	0 0000200	0 000500 mg/L		20	75 - 125	20	80 - 120	20
Barium-137	0 0000190	0 000500 mg/L		20	75 - 125	20	80 - 120	20
Beryllium-9	0 0000210	0 000200 mg/L		20	75 - 125	20	80 - 120	20
Cadmium-111	0 000100	0 000100 mg/L		20	75 - 125	20	80 - 120	20
Cadmium-114	0 00000500	0 000100 mg/L		20	75 - 125	20	80 - 120	20
Calcium-43	0 00398	0 0500 mg/L		20	75 - 125	20	80 - 120	20
Chromium-52	0 0000450	0 000500 mg/L		20	75 - 125	20	80 - 120	20
Chromium-53	0 000118	0 000500 mg/L		20	75 - 125	20	80 - 120	20
Cobalt-59	0 0000110	0 000200 mg/L		20	75 - 125	20	80 - 120	20
Copper-63	0 000158	0 000500 mg/L		20	75 - 125	20	80 - 120	20
Copper-65	0 000236	0 000500 mg/L		20	75 - 125	20	80 - 120	20
Iron-54	0 00575	0 0200 mg/L		20	75 - 125	20	80 - 120	20
Iron-57	0 00388	0 0200 mg/L		20	75 - 125	20	80 - 120	20
Lead-208	0 0000460	0 000100 mg/L		20	75 - 125	20	80 - 120	20
Magnesium-24	0 000297	0 0200 mg/L		20	75 - 125	20	80 - 120	20
Manganese-55	0 0000220	0 000500 mg/L		20	75 - 125	20	80 - 120	20
Molybdenum-98	0 0000130	0 000200 mg/L		20	75 - 125	20	80 - 120	20
Nickel-60	0 0000790	0 000500 mg/L		20	75 - 125	20	80 - 120	20
Nickel-62	0 0000890	0 000500 mg/L		20	75 - 125	20	80 - 120	20
Potassium-39	0 00294	0 0200 mg/L		20	75 - 125	20	80 - 120	20
Selenium-82	0 000127	0 000500 mg/L		20	75 - 125	20	80 - 120	20
Selenium-78	0 000324	0 00200 mg/L		20	75 - 125	20	80 - 120	20
Silver-107	0 00000800	0 000200 mg/L		20	75 - 125	20	80 - 120	20
Sodium-23	0 00283	0 100 mg/L		20	75 - 125	20	80 - 120	20
Thallium-205	0 00000400	0 000200 mg/L		20	75 - 125	20	80 - 120	20
Vanadium-51a	0 0000430	0 000200 mg/L		20	75 - 125	20	80 - 120	20
Vanadium-51b	0 0000430	0 000200 mg/L		20	75 - 125	20	80 - 120	20
Zinc-66	0 000497	0 00400 mg/L		20	75 - 125	20	80 - 120	20
Zinc-67	0 000531	0 00400 mg/L		20	75 - 125	20	80 - 120	20
Zinc-68	0 000524	0 00400 mg/L		20	75 - 125	20	80 - 120	20
Lithium								
Scandium								
Germanium								
Indium								
Terbium								

AVXS 00016

SIM PAH Analysis
Report and Summary QC Forms

ARI Job ID: AVX9

AVX9 : 0802.7

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: MW-8_021016**
Extraction Method: SW3510C **SAMPLE**

Lab Sample ID: AVX9A
LIMS ID: 16-2330
Matrix: Water
Data Release Authorized:
Reported: 02/19/16

QC Report No: AVX9-GeoEngineers Inc.
Project: Port of Anacortes
5147-006-11
Date Sampled: 02/10/16
Date Received: 02/11/16

Date Extracted: 02/17/16
Date Analyzed: 02/19/16 09:31
Instrument/Analyst: NT11/JLW

Sample Amount: 500 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00

CAS Number	Analyte	DL	LOQ	Result
56-55-3	Benzo(a)anthracene	0.0035	0.010	< 0.010 U
218-01-9	Chrysene	0.0031	0.010	< 0.010 U
205-99-2	Benzo(b)fluoranthene	0.0036	0.010	< 0.010 U
207-08-9	Benzo(k)fluoranthene	0.0034	0.010	< 0.010 U
50-32-8	Benzo(a)pyrene	0.0024	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.0033	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.0030	0.010	< 0.010 U
TOTBFA	Total Benzofluoranthenes	0.0025	0.020	< 0.020 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	68.0%
d14-Dibenzo(a,h)anthracene	56.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: DUP_021016**
Extraction Method: SW3510C **SAMPLE**

Lab Sample ID: AVX9D
LIMS ID: 16-2333
Matrix: Water
Data Release Authorized:
Reported: 02/19/16

QC Report No: AVX9-GeoEngineers Inc.
Project: Port of Anacortes
5147-006-11
Date Sampled: 02/10/16
Date Received: 02/11/16

Date Extracted: 02/17/16
Date Analyzed: 02/19/16 11:02
Instrument/Analyst: NT11/JLW

Sample Amount: 500 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00

CAS Number	Analyte	DL	LOQ	Result
56-55-3	Benzo(a)anthracene	0.0035	0.010	< 0.010 U
218-01-9	Chrysene	0.0031	0.010	< 0.010 U
205-99-2	Benzo(b)fluoranthene	0.0036	0.010	< 0.010 U
207-08-9	Benzo(k)fluoranthene	0.0034	0.010	< 0.010 U
50-32-8	Benzo(a)pyrene	0.0024	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.0033	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.0030	0.010	< 0.010 U
TOTBFA	Total Benzofluoranthenes	0.0025	0.020	< 0.020 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	66.0%
d14-Dibenzo(a,h)anthracene	56.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: MW-4_021116**
Extraction Method: SW3510C **SAMPLE**

Lab Sample ID: AVX9E
LIMS ID: 16-2334
Matrix: Water
Data Release Authorized:
Reported: 02/19/16

QC Report No: AVX9-GeoEngineers Inc.
Project: Port of Anacortes
5147-006-11
Date Sampled: 02/11/16
Date Received: 02/11/16

Date Extracted: 02/17/16
Date Analyzed: 02/19/16 11:33
Instrument/Analyst: NT11/JLW

Sample Amount: 500 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00

CAS Number	Analyte	DL	LOQ	Result
56-55-3	Benzo(a)anthracene	0.0035	0.010	< 0.010 U
218-01-9	Chrysene	0.0031	0.010	< 0.010 U
205-99-2	Benzo(b)fluoranthene	0.0036	0.010	< 0.010 U
207-08-9	Benzo(k)fluoranthene	0.0034	0.010	< 0.010 U
50-32-8	Benzo(a)pyrene	0.0024	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.0033	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.0030	0.010	< 0.010 U
TOTBFA	Total Benzofluoranthenes	0.0025	0.020	< 0.020 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	70.0%
d14-Dibenzo(a,h)anthracene	75.7%

ANALYTICAL RESOURCES INCORPORATED

SIM SW8270 SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: AVX9-GeoEngineers Inc.
Project: Port of Anacortes
5147-006-11

Client ID	MNP	DBA	TOT OUT
MB-021716	74.3%	63.7%	0
LCS-021716	79.7%	79.7%	0
MW-8_021016	68.0%	56.3%	0
MW-8_021016 MS	70.3%	58.3%	0
MW-8_021016 MSD	69.0%	60.3%	0
DUP_021016	66.0%	56.0%	0
MW-4_021116	70.0%	75.7%	0

	QC LIMITS
(MNP) = d10-2-Methylnaphthalene	(42-120)
(DBA) = d14-Dibenzo(a,h)anthracene	(29-120)

Prep Method: SW3510C
Log Number Range: 16-2330 to 16-2334

AVX9 · 000021

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: MW-8_021016**
Page 1 of 1 **MATRIX SPIKE**

Lab Sample ID: AVX9A
LIMS ID: 16-2330
Matrix: Water
Data Release Authorized:
Reported: 02/19/16

QC Report No: AVX9-GeoEngineers Inc.
Project: Port of Anacortes
Event: 5147-006-11
Date Sampled: 02/10/16
Date Received: 02/11/16

Date Extracted MS/MSD: 02/17/16

Date Analyzed MS: 02/19/16 10:01
MSD: 02/19/16 10:32
Instrument/Analyst MS: NT11/JLW
MSD: NT11/JLW

Sample Amount MS: 500 mL
MSD: 500 mL
Final Extract Volume MS: 0.50 mL
MSD: 0.50 mL
Dilution Factor MS: 1.00
MSD: 1.00

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Benzo(a)anthracene	< 0.0100 U	0.212	0.300	70.7%	0.213	0.300	71.0%	0.5%
Chrysene	< 0.0100 U	0.220	0.300	73.3%	0.220	0.300	73.3%	0.0%
Benzo(b)fluoranthene	< 0.0100 U	0.198	0.300	66.0%	0.195	0.300	65.0%	1.5%
Benzo(k)fluoranthene	< 0.0100 U	0.211	0.300	70.3%	0.210	0.300	70.0%	0.5%
Benzo(a)pyrene	< 0.0100 U	0.193	0.300	64.3%	0.197	0.300	65.7%	2.1%
Indeno(1,2,3-cd)pyrene	< 0.0100 U	0.189	0.300	63.0%	0.188	0.300	62.7%	0.5%
Dibenz(a,h)anthracene	< 0.0100 U	0.190	0.300	63.3%	0.189	0.300	63.0%	0.5%
Total Benzofluoranthenes	< 0.0200 U	0.635	0.900	70.6%	0.627	0.900	69.7%	1.3%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: MW-8_021016**
Extraction Method: SW3510C **MATRIX SPIKE**

Lab Sample ID: AVX9A
LIMS ID: 16-2330
Matrix: Water
Data Release Authorized:
Reported: 02/19/16

QC Report No: AVX9-GeoEngineers Inc.
Project: Port of Anacortes
5147-006-11
Date Sampled: 02/10/16
Date Received: 02/11/16

Date Extracted: 02/17/16
Date Analyzed: 02/19/16 10:01
Instrument/Analyst: NT11/JLW

Sample Amount: 500 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00

CAS Number	Analyte	DL	LOQ	Result
56-55-3	Benzo(a)anthracene	0.0035	0.010	---
218-01-9	Chrysene	0.0031	0.010	---
205-99-2	Benzo(b)fluoranthene	0.0036	0.010	---
207-08-9	Benzo(k)fluoranthene	0.0034	0.010	---
50-32-8	Benzo(a)pyrene	0.0024	0.010	---
193-39-5	Indeno(1,2,3-cd)pyrene	0.0033	0.010	---
53-70-3	Dibenz(a,h)anthracene	0.0030	0.010	---
TOTBFA	Total Benzofluoranthenes	0.0025	0.020	---

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	70.3%
d14-Dibenzo(a,h)anthracene	58.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: MW-8_021016**
Extraction Method: SW3510C **MATRIX SPIKE DUP**

Lab Sample ID: AVX9A
LIMS ID: 16-2330
Matrix: Water
Data Release Authorized: 3
Reported: 02/19/16

QC Report No: AVX9-GeoEngineers Inc.
Project: Port of Anacortes
5147-006-11
Date Sampled: 02/10/16
Date Received: 02/11/16

Date Extracted: 02/17/16
Date Analyzed: 02/19/16 10:32
Instrument/Analyst: NT11/JLW

Sample Amount: 500 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00

CAS Number	Analyte	DL	LOQ	Result
56-55-3	Benzo(a)anthracene	0.0035	0.010	---
218-01-9	Chrysene	0.0031	0.010	---
205-99-2	Benzo(b)fluoranthene	0.0036	0.010	---
207-08-9	Benzo(k)fluoranthene	0.0034	0.010	---
50-32-8	Benzo(a)pyrene	0.0024	0.010	---
193-39-5	Indeno(1,2,3-cd)pyrene	0.0033	0.010	---
53-70-3	Dibenz(a,h)anthracene	0.0030	0.010	---
TOTBFA	Total Benzofluoranthenes	0.0025	0.020	---

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	69.0%
d14-Dibenzo(a,h)anthracene	60.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: LCS-021716**
Page 1 of 1 **LAB CONTROL SAMPLE**

Lab Sample ID: LCS-021716
LIMS ID: 16-2330
Matrix: Water
Data Release Authorized:
Reported: 02/19/16

QC Report No: AVX9-GeoEngineers Inc.
Project: Port of Anacortes
Event: 5147-006-11
Date Sampled: NA
Date Received: NA

Date Extracted LCS/LCSD: 02/17/16
Date Analyzed LCS: 02/19/16 09:01
Instrument/Analyst LCS: NT11/JLW

Sample Amount LCS: 500 mL
Final Extract Volume LCS: 0.50 mL
Dilution Factor LCS: 1.00

Analyte	LCS	Spike Added	Recovery
Benzo(a)anthracene	0.258	0.300	86.0%
Chrysene	0.268	0.300	89.3%
Benzo(b)fluoranthene	0.265	0.300	88.3%
Benzo(k)fluoranthene	0.291	0.300	97.0%
Benzo(a)pyrene	0.238	0.300	79.3%
Indeno(1,2,3-cd)pyrene	0.269	0.300	89.7%
Dibenz(a,h)anthracene	0.254	0.300	84.7%
Total Benzofluoranthenes	0.869	0.900	96.6%

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	79.7%
d14-Dibenzo(a,h)anthracene	79.7%

4B

SEMIVOLATILE METHOD BLANK SUMMARY

BLANK NO.

AVX9MBW1

Lab Name: ANALYTICAL RESOURCES INC. Client: GEOENGINEERS INC.

ARI Job No: AVX9 Project: PORT OF ANACORTES

Lab File ID: 16021903 Date Extracted: 02/17/16

Instrument ID: NT11 Date Analyzed: 02/19/16

Matrix: LIQUID Time Analyzed: 0830

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	AVX9LCSW1	AVX9LCSW1	16021904	02/19/16
02	MW-8_021016	AVX9A	16021905	02/19/16
03	MW-8_021016 MS	AVX9AMS	16021906	02/19/16
04	MW-8_021016 MSD	AVX9AMSD	16021907	02/19/16
05	DUP_021016	AVX9D	16021908	02/19/16
06	MW-4_021116	AVX9E	16021909	02/19/16
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FORM IV SV

AVX9 : 00025

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: MB-021716**
Extraction Method: SW3510C **METHOD BLANK**

Lab Sample ID: MB-021716
LIMS ID: 16-2330
Matrix: Water
Data Release Authorized:
Reported: 02/19/16

QC Report No: AVX9-GeoEngineers Inc.
Project: Port of Anacortes
5147-006-11
Date Sampled: NA
Date Received: NA

Date Extracted: 02/17/16
Date Analyzed: 02/19/16 08:30
Instrument/Analyst: NT11/JLW

Sample Amount: 500 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00

CAS Number	Analyte	DL	LOQ	Result
56-55-3	Benzo(a)anthracene	0.0035	0.010	< 0.010 U
218-01-9	Chrysene	0.0031	0.010	< 0.010 U
205-99-2	Benzo(b)fluoranthene	0.0036	0.010	< 0.010 U
207-08-9	Benzo(k)fluoranthene	0.0034	0.010	< 0.010 U
50-32-8	Benzo(a)pyrene	0.0024	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.0033	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.0030	0.010	< 0.010 U
TOTBFA	Total Benzofluoranthenes	0.0025	0.020	< 0.020 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	74.3%
d14-Dibenzo(a,h)anthracene	63.7%

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC. Client: GEOENGINEERS INC.

Instrument ID: NT11 Project: PORT OF ANACORTES

DFTPP Injection Date: 01/25/16 DFTPP Injection Time: 0857

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	37.4
68	Less than 2.0% of mass 69	0.4 (0.8)1
69	Mass 69 relative abundance	45.6
70	Less than 2.0% of mass 69	0.3 (0.6)1
127	10.0 - 80.0% of mass 198	50.8
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	8.7
275	10.0 - 60.0% of mass 198	28.5
365	Greater than 1.0% of mass 198	2.89
441	0.0 - 24.0% of mass 442	12.4 (16.4)2
442	50.0 - 200.0% of mass 198	75.5
443	15.0 - 24.0% of mass 442	16.4 (21.7)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		LLPAH ICV	16012505	01/25/16	0914
02		LLPAH 50	16012507	01/25/16	0959
03		LLPAH 10	16012506	01/25/16	1029
04		LLPAH 500	16012509	01/25/16	1059
05		LLPAH 100	16012508	01/25/16	1129
06		LLPAH 1000	16012510	01/25/16	1200
07		LLPAH SCV	16012511	01/25/16	1230
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20					

FORM V SV

AVX9 : 00028

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC. Client: GEOENGINEERS INC.

Instrument ID: NT11 Project: PORT OF ANACORTES

DFTPP Injection Date: 02/19/16 DFTPP Injection Time: 0729

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	34.8
68	Less than 2.0% of mass 69	0.4 (0.8)1
69	Mass 69 relative abundance	44.9
70	Less than 2.0% of mass 69	0.2 (0.6)1
127	10.0 - 80.0% of mass 198	49.9
197	Less than 2.0% of mass 198	0.5
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	8.1
275	10.0 - 60.0% of mass 198	28.8
365	Greater than 1.0% of mass 198	3.54
441	0.0 - 24.0% of mass 442	12.9 (16.5)2
442	50.0 - 200.0% of mass 198	78.6
443	15.0 - 24.0% of mass 442	17.3 (22.0)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		LL SIM ICV	16021902	02/19/16	0746
02	AVX9MBW1	AVX9MBW1	16021903	02/19/16	0830
03	AVX9LCSW1	AVX9LCSW1	16021904	02/19/16	0901
04	MW-8_021016	AVX9A	16021905	02/19/16	0931
05	MW-8_021016 MS	AVX9AMS	16021906	02/19/16	1001
06	MW-8_021016 MSD	AVX9AMSD	16021907	02/19/16	1032
07	DUP_021016	AVX9D	16021908	02/19/16	1102
08	MW-4_021116	AVX9E	16021909	02/19/16	1133
09		LL SIM CCV	16021910	02/19/16	1203
10					
11					
12					
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14					
15					
16					
17					
18					
19					
20					

FORM V SV

AVX9:00023

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC. Client: GEOENGINEERS INC.

ARI Job No: AVX9 Project: PORT OF ANACORTES

Instrument ID: NT11 Calibration Date: 01/25/16

LAB FILE ID: RRF10 =16012506 RRF50 =16012507 RRF100=16012508
RRF250=16012505 RRF500=16012509 RRF1000=16012510

COMPOUND	RRF 10	RRF 50	RRF 100	RRF 250	RRF 500	RRF 1000	___ RRF	%RSD /R^2
Naphthalene	1.231	1.209	1.193	0.976	1.069	0.962	1.107	10.9
2-Methylnaphthalene	0.826	0.851	0.843	0.718	0.804	0.732	0.796	7.2
Acenaphthylene	1.824	1.792	1.710	1.472	1.577	1.436	1.635	10.1
Acenaphthene	1.112	1.111	1.086	0.920	1.020	0.942	1.032	8.3
Dibenzofuran	1.764	1.733	1.704	1.401	1.512	1.367	1.580	11.1
Fluorene	1.390	1.356	1.310	1.103	1.213	1.112	1.247	9.9
Phenanthrene	1.287	1.240	1.240	0.971	1.081	0.974	1.132	12.6
Anthracene	1.177	1.187	1.150	0.968	1.083	0.967	1.089	9.3
Fluoranthene	1.262	1.238	1.257	1.031	1.149	1.028	1.161	9.5
Pyrene	1.756	1.708	1.635	1.337	1.485	1.311	1.539	12.3
Benzo(a)anthracene	1.447	1.408	1.385	1.142	1.303	1.176	1.310	9.7
Chrysene	1.494	1.452	1.454	1.153	1.320	1.171	1.341	11.2
Benzo(b)fluoranthene	1.436	1.437	1.408	1.088	1.315	1.216	1.317	10.7
Benzo(k)fluoranthene	1.474	1.385	1.480	1.191	1.421	1.299	1.375	8.2
Benzo(j)fluoranthene	1.355	1.341	1.348	1.049	1.257	1.162	1.252	9.9
Benzo(a)pyrene	1.266	1.248	1.280	1.030	1.247	1.172	1.207	7.8
Indeno(1,2,3-cd)pyrene	1.175	1.225	1.268	1.070	1.352	1.324	1.236	8.4
Dibenzo(a,h)anthracene	0.870	0.960	1.011	0.852	1.086	1.078	0.976	10.3
Benzo(g,h,i)perylene	1.117	1.112	1.132	0.933	1.154	1.115	1.094	7.3
1-Methylnaphthalene	0.766	0.769	0.769	0.641	0.721	0.658	0.721	8.1
Perylene	1.299	1.311	1.312	1.050	1.264	1.177	1.236	8.4
2-Methylnaphthalene-d10	0.803	0.806	0.784	0.662	0.743	0.686	0.747	8.2
Dibenzo(a,h)anthracene-d14	0.661	0.750	0.765	0.657	0.824	0.819	0.746	9.8
Fluoranthene-d10	1.196	1.164	1.155	0.941	1.066	0.973	1.082	9.9

<- Outside QC limits: %RSD <20% or R^2 > 0.990

7B

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC. Client: GEOENGINEERS INC.

ARI Job No: AVX9 Project: PORT OF ANACORTES

Instrument ID: NT11 Cont. Calib. Date: 02/19/16

Init. Calib. Date: 01/25/16 Cont. Calib. Time: 0746

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
Naphthalene	1.107	1.109	0.700	AVRG	0.2
2-Methylnaphthalene	0.796	0.802	0.400	AVRG	0.8
Acenaphthylene	1.635	1.529	0.900	AVRG	-6.5
Acenaphthene	1.032	1.050	0.900	AVRG	1.7
Dibenzofuran	1.580	1.615	0.800	AVRG	2.2
Fluorene	1.247	1.221	0.900	AVRG	-2.1
Phenanthrene	1.132	1.169	0.700	AVRG	3.3
Anthracene	1.089	1.066	0.700	AVRG	-2.1
Fluoranthene	1.161	1.292	0.600	AVRG	11.3
Pyrene	1.539	1.424	0.600	AVRG	-7.5
Benzo(a)anthracene	1.310	1.278	0.800	AVRG	-2.4
Chrysene	1.341	1.371	0.700	AVRG	2.2
Benzo(b)fluoranthene	1.317	1.279	0.700	AVRG	-2.9
Benzo(k)fluoranthene	1.375	1.481	0.700	AVRG	7.7
Benzo(j)fluoranthene	1.252	1.450	0.010	AVRG	15.8
Benzo(a)pyrene	1.207	1.250	0.700	AVRG	3.6
Indeno(1,2,3-cd)pyrene	1.236	1.204	0.500	AVRG	-2.6
Dibenzo(a,h)anthracene	0.976	0.926	0.400	AVRG	-5.1
Benzo(g,h,i)perylene	1.094	1.115	0.500	AVRG	1.9
1-Methylnaphthalene	0.721	0.721	0.010	AVRG	0.0
Perylene	1.236	1.275	0.010	AVRG	3.2
2-Methylnaphthalene-d10	0.747	0.743	0.010	AVRG	-0.5
Dibenzo(a,h)anthracene-d14	0.746	0.687	0.010	AVRG	-7.9
Fluoranthene-d10	1.082	1.158	0.010	AVRG	7.0

<- Exceeds QC limit of 20% D

* RF less than minimum RF

FORM VII SV-1

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC. Client: GEOENGINEERS INC.

ARI Job No: AVX9 Project: PORT OF ANACORTES

Ical Midpoint ID: 16012505 Ical Date: 01/25/16

Instrument ID: NT11 Cont. Cal Date: 02/19/16

		IS1(NPT) AREA #	RT #	IS2(ANT) AREA #	RT #	IS3(PHN) AREA #	RT #
	ICAL MIDPT	356051	6.71	264524	9.71	444949	12.38
	UPPER LIMIT	712102		529048		889898	
	LOWER LIMIT	178026		132262		222475	
	CCAL	303782	6.70	232982	9.71	393656	12.38
	UPPER LIMIT		7.20		10.21		12.88
	LOWER LIMIT		6.20		9.21		11.88
01	AVX9MBW1	286270	6.71	207228	9.71	352850	12.38
02	AVX9LCSW1	280773	6.70	213705	9.71	358548	12.38
03	MW-8_021016	292834	6.70	209484	9.71	355795	12.38
04	MW-8_021016	298549	6.70	219250	9.71	359810	12.38
05	MW-8_021016	298992	6.70	219742	9.71	363091	12.38
06	DUP_021016	293559	6.70	209127	9.71	360933	12.37
07	MW-4_021116	299042	6.70	216895	9.71	371506	12.38
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

IS1 = Naphthalene-d8
IS2 = Acenaphthene-d10
IS3 = Phenanthrene-d10

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC. Client: GEOENGINEERS INC.

ARI Job No: AVX9 Project: PORT OF ANACORTES

Ical Midpoint ID: 16012505 Ical Date: 01/25/16

Instrument ID: NT11 Cont. Cal Date: 02/19/16

		IS4(CRY) AREA #	RT #	IS5(PRY) AREA #	RT #	AREA #	RT #
	ICAL MIDPT	343139	17.12	319277	20.01		
	UPPER LIMIT	686278		638554			
	LOWER LIMIT	171570		159639			
	CCAL	352177	17.12	311873	20.01		
	UPPER LIMIT		17.62		20.51		
	LOWER LIMIT		16.62		19.51		
01	AVX9MBW1	300906	17.13	271777	20.01		
02	AVX9LCSW1	323812	17.12	291513	20.01		
03	MW-8_021016	302591	17.12	278001	20.00		
04	MW-8_021016	319382	17.12	299542	20.00		
05	MW-8_021016	320253	17.12	302903	20.01		
06	DUP_021016	304532	17.12	280612	20.01		
07	MW-4_021116	309960	17.12	287983	20.00		
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

IS4 = Chrysene-d12
IS5 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

AVX9 : 02033

Metals Analysis
Report and Summary QC Forms

ARI Job ID: AVX9

AVX9 : 0000H

Cover Page

INORGANIC ANALYSIS DATA PACKAGE

ANALYTICAL RESOURCES INCORPORATED

CLIENT: GeoEngineers Inc.

PROJECT: Port of Anacortes

SDG: AVX9

CLIENT ID	ARI ID	ARI LIMS ID	REPREP
MW-8_021016	AVX9A	16-2330	
MW-8_021016D	AVX9ADUP	16-2330	
MW-8_021016S	AVX9ASPK	16-2330	
MW-1_021016	AVX9B	16-2331	
MW-7_021016	AVX9C	16-2332	
PBW	AVX9MB1	16-2332	
LCSW	AVX9MB1SPK	16-2332	
DUP_021016	AVX9D	16-2333	
MW-4_021116	AVX9E	16-2334	
MW-6_021116	AVX9F	16-2335	
MW-3A_021116	AVX9G	16-2336	
MW-8_021016	AVX9H	16-2337	
MW-8_021016D	AVX9HDUP	16-2337	
MW-8_021016S	AVX9HSPK	16-2337	
MW-1_021016	AVX9I	16-2338	
MW-7_021016	AVX9J	16-2339	
PBW	AVX9MB2	16-2339	
LCSW	AVX9MB2SPK	16-2339	
DUP_021016	AVX9K	16-2340	
MW-4_021116	AVX9L	16-2341	
MW-6_021116	AVX9M	16-2342	

Were ICP interelement corrections applied ?	Yes/No	YES
Were ICP background corrections applied ?	Yes/No	YES
If yes - were raw data generated before application of background corrections ?	Yes/No	NO

Comments: _____

THIS DATA PACKAGE HAS BEEN REVIEWED AND AUTHORIZED FOR RELEASE BY:

Signature: Eric Larson Name: Eric Larson

Date: 2-26-16 Title: Inorganics Director

Cover Page

INORGANIC ANALYSIS DATA PACKAGE

ANALYTICAL RESOURCES INCORPORATED

CLIENT: GeoEngineers Inc.

PROJECT: Port of Anacortes

SDG: AVX9

CLIENT ID	ARI ID	ARI LIMS ID	REPREP
MW-3A_021116	AVX9N	16-2343	

Were ICP interelement corrections applied ?	Yes/No	YES
Were ICP background corrections applied ?	Yes/No	YES
If yes - were raw data generated before application of background corrections ?	Yes/No	NO

Comments: _____

THIS DATA PACKAGE HAS BEEN REVIEWED AND AUTHORIZED FOR RELEASE BY:

Signature: Eric Larson Name: Eric Larson

Date: 2-26-16 Title: Inorganics Director

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: MW-8_021016
SAMPLE

Lab Sample ID: AVX9A
LIMS ID: 16-2330
Matrix: Water
Data Release Authorized:
Reported: 02/26/16

QC Report No: AVX9-GeoEngineers Inc.
Project: Port of Anacortes
5147-006-11
Date Sampled: 02/10/16
Date Received: 02/11/16

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	DL	LOQ	Result	Q
200.8	02/22/16	6020A	02/23/16	**7440-38-2**	**Arsenic**	0.03	0.2	**16.6**	
200.8	02/22/16	6020A	02/23/16	**7440-02-0**	**Nickel**	0.017	0.5	**9.1**	

Reported in ug/L (ppb).
U-Analyte undetected at given LOQ
LOQ-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: MW-1_021016
SAMPLE

Lab Sample ID: AVX9B
LIMS ID: 16-2331
Matrix: Water
Data Release Authorized:
Reported: 02/26/16

QC Report No: AVX9-GeoEngineers Inc.
Project: Port of Anacortes
5147-006-11
Date Sampled: 02/10/16
Date Received: 02/11/16

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	DL	LOQ	Result	Q
200.8	02/22/16	6020A	02/23/16	**7440-38-2**	**Arsenic**	0.03	0.2	**1.3**	

Reported in ug/L (ppb).
U-Analyte undetected at given LOQ
LOQ-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: MW-7_021016
SAMPLE

Lab Sample ID: AVX9C
LIMS ID: 16-2332
Matrix: Water
Data Release Authorized:
Reported: 02/26/16

QC Report No: AVX9-GeoEngineers Inc.
Project: Port of Anacortes
5147-006-11
Date Sampled: 02/10/16
Date Received: 02/11/16

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	DL	LOQ	Result	Q
200.8	02/22/16	6020A	02/23/16	**7440-38-2**	**Arsenic**	0.03	0.2	**12.9**	
200.8	02/22/16	6020A	02/23/16	**7440-02-0**	**Nickel**	0.017	0.5	**9.9**	

Reported in ug/L (ppb).
U-Analyte undetected at given LOQ
LOQ-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: DUP_021016
SAMPLE

Lab Sample ID: AVX9D
LIMS ID: 16-2333
Matrix: Water
Data Release Authorized:
Reported: 02/26/16

QC Report No: AVX9-GeoEngineers Inc.
Project: Port of Anacortes
5147-006-11
Date Sampled: 02/10/16
Date Received: 02/11/16

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	DL	LOQ	Result	Q
200.8	02/22/16	6020A	02/23/16	**7440-38-2**	**Arsenic**	0.03	0.2	**16.1**	
200.8	02/22/16	6020A	02/23/16	**7440-02-0**	**Nickel**	0.017	0.5	**8.4**	

Reported in ug/L (ppb).
U-Analyte undetected at given LOQ
LOQ-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: MW-4_021116
SAMPLE

Lab Sample ID: AVX9E
LIMS ID: 16-2334
Matrix: Water
Data Release Authorized:
Reported: 02/26/16

QC Report No: AVX9-GeoEngineers Inc.
Project: Port of Anacortes
5147-006-11
Date Sampled: 02/11/16
Date Received: 02/11/16

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	DL	LOQ	Result	Q
200.8	02/22/16	6020A	02/23/16	**7440-38-2**	**Arsenic**	0.03	0.2	**3.5**	

Reported in ug/L (ppb).
U-Analyte undetected at given LOQ
LOQ-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: MW-6_021116**
Page 1 of 1 **SAMPLE**

Lab Sample ID: AVX9F
LIMS ID: 16-2335
Matrix: Water
Data Release Authorized:
Reported: 02/26/16

QC Report No: AVX9-GeoEngineers Inc.
Project: Port of Anacortes
5147-006-11
Date Sampled: 02/11/16
Date Received: 02/11/16

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	DL	LOQ	Result	Q
200.8	02/22/16	6020A	02/24/16	7440-02-0	Nickel	0.4	10	10	U

Reported in ug/L (ppb).
U-Analyte undetected at given LOQ
LOQ-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: MW-3A_021116
SAMPLE

Lab Sample ID: AVX9G
LIMS ID: 16-2336
Matrix: Water
Data Release Authorized:
Reported: 02/29/16

QC Report No: AVX9-GeoEngineers Inc.
Project: Port of Anacortes
5147-006-11
Date Sampled: 02/11/16
Date Received: 02/11/16

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	DL	LOQ	µg/L	Q
200.8	02/22/16	6020A	02/24/16	**7440-02-0**	**Nickel**	0.4	12.5	**0.5**	**J**

U-Analyte undetected at given DL
J-Analyte detected between DL and LOQ
DL-Method Detection Limit

Results reported below the LOQ are for statistical purposes only and have not been evaluated by either an analyst or data reviewer.

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: MW-8_021016
MATRIX SPIKE

Lab Sample ID: AVX9A
LIMS ID: 16-2330
Matrix: Water
Data Release Authorized:
Reported: 02/26/16

QC Report No: AVX9-GeoEngineers Inc.
Project: Port of Anacortes
5147-006-11
Date Sampled: 02/10/16
Date Received: 02/11/16

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Arsenic	6020A	16.6	41.8	25.0	101%	
Nickel	6020A	9.1	35.9	25.0	107%	

Reported in µg/L

N-Control Limit Not Met
H-% Recovery Not Applicable, Sample Concentration Too High
NA-Not Applicable, Analyte Not Spiked
NR-Not Recovered

Percent Recovery Limits: 75-125%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: MW-8_021016
DUPLICATE

Lab Sample ID: AVX9A
LIMS ID: 16-2330
Matrix: Water
Data Release Authorized:
Reported: 02/26/16

QC Report No: AVX9-GeoEngineers Inc.
Project: Port of Anacortes
5147-006-11
Date Sampled: 02/10/16
Date Received: 02/11/16

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Arsenic	6020A	16.6	16.8	1.2%	+/- 20%	
Nickel	6020A	9.1	9.0	1.1%	+/- 20%	

Reported in µg/L

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: LAB CONTROL**

Lab Sample ID: AVX9LCS
LIMS ID: 16-2332
Matrix: Water
Data Release Authorized:
Reported: 02/26/16

QC Report No: AVX9-GeoEngineers Inc.
Project: Port of Anacortes
5147-006-11
Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Arsenic	6020A	26.1	25.0	104%	
Nickel	6020A	29.8	25.0	119%	

Reported in µg/L

N-Control limit not met
Control Limits: 80-120%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: METHOD BLANK**

Lab Sample ID: AVX9MB
LIMS ID: 16-2332
Matrix: Water
Data Release Authorized:
Reported: 02/29/16

QC Report No: AVX9-GeoEngineers Inc.
Project: Port of Anacortes
5147-006-11
Date Sampled: NA
Date Received: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	DL	LOQ	µg/L	Q
200.8	02/22/16	6020A	02/23/16	7440-38-2	Arsenic	0.03	0.2	0.2	U
200.8	02/22/16	6020A	02/23/16	**7440-02-0**	**Nickel**	0.017	0.500	**0.030**	**J**

U-Analyte undetected at given DL
J-Analyte detected between DL and LOQ
DL-Method Detection Limit

Results reported below the LOQ are for statistical purposes only and have not been evaluated by either an analyst or data reviewer.

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: MW-8_021016
SAMPLE

Lab Sample ID: AVX9H
LIMS ID: 16-2337
Matrix: Water
Data Release Authorized:
Reported: 02/26/16

QC Report No: AVX9-GeoEngineers Inc.
Project: Port of Anacortes
5147-006-11
Date Sampled: 02/10/16
Date Received: 02/11/16

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	DL	LOQ	Result	Q
200.8	02/22/16	6020A	02/23/16	**7440-38-2**	**Arsenic**	0.03	0.2	**16.1**	
200.8	02/22/16	6020A	02/23/16	**7440-02-0**	**Nickel**	0.017	0.5	**7.4**	

Reported In µg/L (ppb)
U-Analyte undetected at given LOQ
LOQ-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: MW-1_021016
SAMPLE

Lab Sample ID: AVX9I
LIMS ID: 16-2338
Matrix: Water
Data Release Authorized:
Reported: 02/29/16

QC Report No: AVX9-GeoEngineers Inc.
Project: Port of Anacortes
5147-006-11
Date Sampled: 02/10/16
Date Received: 02/11/16

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	DL	LOQ	µg/L	Q
200.8	02/22/16	6020A	02/24/16	**7440-38-2**	**Arsenic**	0.7	5.0	**1.2**	**J**

U-Analyte undetected at given DL
J-Analyte detected between DL and LOQ
DL-Detection Limit

Results reported below the LOQ are for statistical purposes only and have not been evaluated by either an analyst or data reviewer.

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: MW-7_021016
SAMPLE

Lab Sample ID: AVX9J
LIMS ID: 16-2339
Matrix: Water
Data Release Authorized:
Reported: 02/29/16

QC Report No: AVX9-GeoEngineers Inc.
Project: Port of Anacortes
5147-006-11
Date Sampled: 02/10/16
Date Received: 02/11/16

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	DL	LOQ	µg/L	Q
200.8	02/22/16	6020A	02/24/16	**7440-38-2**	**Arsenic**	0.7	5	**13**	
200.8	02/22/16	6020A	02/24/16	**7440-02-0**	**Nickel**	0.4	12.5	**5.2**	J

U-Analyte undetected at given DL
J-Analyte detected between DL and LOQ
DL-Detection Limit

Results reported below the LOQ are for statistical purposes only and have not been evaluated by either an analyst or data reviewer.

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: DUP_021016
SAMPLE

Lab Sample ID: AVX9K
LIMS ID: 16-2340
Matrix: Water
Data Release Authorized:
Reported: 02/26/16

QC Report No: AVX9-GeoEngineers Inc.
Project: Port of Anacortes
5147-006-11
Date Sampled: 02/10/16
Date Received: 02/11/16

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	DL	LOQ	Result	Q
200.8	02/22/16	6020A	02/23/16	**7440-38-2**	**Arsenic**	0.03	0.2	**16.3**	
200.8	02/22/16	6020A	02/23/16	**7440-02-0**	**Nickel**	0.017	0.5	**7.8**	

Reported In µg/L (ppb)
U-Analyte undetected at given LOQ
LOQ-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: MW-4_021116
SAMPLE

Lab Sample ID: AVX9L
LIMS ID: 16-2341
Matrix: Water
Data Release Authorized:
Reported: 02/26/16

QC Report No: AVX9-GeoEngineers Inc.
Project: Port of Anacortes
5147-006-11
Date Sampled: 02/11/16
Date Received: 02/11/16

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	DL	LOQ	Result	Q
200.8	02/22/16	6020A	02/23/16	**7440-38-2**	**Arsenic**	0.03	0.2	**3.5**	

Reported In µg/L (ppb)
U-Analyte undetected at given LOQ
LOQ-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: MW-6_021116
SAMPLE

Lab Sample ID: AVX9M
LIMS ID: 16-2342
Matrix: Water
Data Release Authorized:
Reported: 02/26/16

QC Report No: AVX9-GeoEngineers Inc.
Project: Port of Anacortes
5147-006-11
Date Sampled: 02/11/16
Date Received: 02/11/16

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	DL	LOQ	Result	Q
200.8	02/22/16	6020A	02/24/16	7440-02-0	Nickel	0.4	10	10	U

Reported In µg/L (ppb)
U-Analyte undetected at given LOQ
LOQ-Reporting Limit

AVX9 · 20653

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: MW-3A_021116
SAMPLE

Lab Sample ID: AVX9N
LIMS ID: 16-2343
Matrix: Water
Data Release Authorized:
Reported: 02/26/16

QC Report No: AVX9-GeoEngineers Inc.
Project: Port of Anacortes
5147-006-11
Date Sampled: 02/11/16
Date Received: 02/11/16

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	µg/L	Q
200.8	02/22/16	6020A	02/24/16	7440-02-0	Nickel	10	10	U

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: MW-8_021016
MATRIX SPIKE

Lab Sample ID: AVX9H
LIMS ID: 16-2337
Matrix: Water
Data Release Authorized:
Reported: 02/26/16

QC Report No: AVX9-GeoEngineers Inc.
Project: Port of Anacortes
5147-006-11
Date Sampled: 02/10/16
Date Received: 02/11/16

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Arsenic	6020A	16.1	41.2	25.0	100%	
Nickel	6020A	7.4	36.0	25.0	114%	

Reported in µg/L

N-Control Limit Not Met
H-% Recovery Not Applicable, Sample Concentration Too High
NA-Not Applicable, Analyte Not Spiked
NR-Not Recovered

Percent Recovery Limits: 75-125%

AVX9:00855

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: MW-8_021016
DUPLICATE

Lab Sample ID: AVX9H
LIMS ID: 16-2337
Matrix: Water
Data Release Authorized:
Reported: 02/26/16

QC Report No: AVX9-GeoEngineers Inc.
Project: Port of Anacortes
5147-006-11
Date Sampled: 02/10/16
Date Received: 02/11/16

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Arsenic	6020A	16.1	16.4	1.8%	+/- 20%	
Nickel	6020A	7.4	7.8	5.3%	+/- 20%	

Reported in µg/L

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS **Sample ID: LAB CONTROL**

Lab Sample ID: AVX9LCS
LIMS ID: 16-2339
Matrix: Water
Data Release Authorized:
Reported: 02/26/16

QC Report No: AVX9-GeoEngineers Inc.
Project: Port of Anacortes
5147-006-11
Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Arsenic	6020A	26.5	25.0	106%	
Nickel	6020A	28.8	25.0	115%	

Reported in µg/L

N-Control limit not met
Control Limits: 80-120%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS **Sample ID: METHOD BLANK**

Lab Sample ID: AVX9MB
LIMS ID: 16-2339
Matrix: Water
Data Release Authorized:
Reported: 02/26/16

QC Report No: AVX9-GeoEngineers Inc.
Project: Port of Anacortes
5147-006-11
Date Sampled: NA
Date Received: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	DL	LOQ	Result	Q
200.8	02/22/16	6020A	02/23/16	7440-38-2	Arsenic	0.03	0.2	0.2	U
200.8	02/22/16	6020A	02/23/16	7440-02-0	Nickel	0.017	0.5	0.5	U

Reported In µg/L (ppb)
U-Analyte undetected at given LOQ
LOQ-Reporting Limit

AVX9:00058

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: GeoEngineers Inc.

PROJECT: Port of Anacortes

UNITS:ug/L

SDG: AVX9

ANALYTE	EL	M	RUN	ICVTV	ICV	%R	CCVTV	CCV1	%R	CCV2	%R	CCV3	%R	CCV4	%R	CCV5	%R
Arsenic	AS	PMS	MS022311	50.0	50.76	**101.5**	50.0	49.82	**99.6**	49.89	**99.8**	48.82	**97.6**	49.01	**98.0**	48.02	**96.0**
Nickel	NI	PMS	MS022311	50.0	52.14	**104.3**	50.0	51.07	**102.1**	50.66	**101.3**	49.64	**99.3**	51.42	**102.8**	48.71	**97.4**

Control Limits: Mercury 80-120; Other Metals 90-110

AVX9 : 00053

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: GeoEngineers Inc.

PROJECT: Port of Anacortes

UNITS:ug/L

SDG: AVX9

ANALYTE	EL	M	RUN	CCVTV	CCV6	%R	CCV7	%R	CCV8	%R	CCV9	%R	CCV10	%R	CCV11	%R
Arsenic	AS	PMS	MS022311	50.0	47.21	**94.4**	48.79	**97.6**	48.92	**97.8**	47.24	**94.5**				
Nickel	NI	PMS	MS022311	50.0	48.59	**97.2**	51.95	**103.9**	50.93	**101.9**	52.72	**105.4**				

Control Limits: Mercury 80-120; Other Metals 90-110

AVX9 : 00050

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: GeoEngineers Inc.

PROJECT: Port of Anacortes

UNITS:ug/L

SDG: AVX9

ANALYTE	EL	M	RUN	ICVTV	ICV	%R	CCVTV	CCV1	%R	CCV2	%R	CCV3	%R	CCV4	%R	CCV5	%R
Arsenic	AS	PMS	MS022411	50.0	50.94	**101.9**	50.0	49.23	**98.5**	50.02	**100.0**	48.86	**97.7**	47.90	**95.8**	50.01	**100.0**
Nickel	NI	PMS	MS022411	50.0	50.50	**101.0**	50.0	48.07	**96.1**	47.45	**94.9**	45.68	**91.4**	46.31	**92.6**	47.46	**94.9**

Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (1)

AVX9 . 00061

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: GeoEngineers Inc.

PROJECT: Port of Anacortes

UNITS:ug/L

SDG: AVX9

ANALYTE	EL	M	RUN	CCVTV	CCV6	%R	CCV7	%R	CCV8	%R	CCV9	%R	CCV10	%R	CCV11	%R
Arsenic	AS	PMS	MS022411	50.0	50.72	**101.4**	49.83	**99.7**								
Nickel	NI	PMS	MS022411	50.0	46.60	**93.2**	46.02	**92.0**								

Control Limits: Mercury 80-120; Other Metals 90-110

AVX9 09922

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: GeoEngineers Inc.

PROJECT: Port of Anacortes

UNITS:ug/L

SDG: AVX9

ANALYTE	EL	M	RUN	ICVTV	ICV	%R	CCVTV	CCV1	%R	CCV2	%R	CCV3	%R	CCV4	%R	CCV5	%R
Nickel	NI	PMS	MS022511	50.0	52.74	**105.5**	50.0	50.54	**101.1**	49.84	**99.7**	50.57	**101.1**				

Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (1)

AVX9 · 00063

CRDL Standard

ANALYTICAL RESOURCES INCORPORATED

CLIENT: GeoEngineers Inc.

PROJECT: Port of Anacortes

UNITS:ug/L

SDG: AVX9

ANALYTE	EL	M	RUN	CRA/I TV	CR-1	%R	CR-2	%R	CR-3	%R	CR-4	%R	CR-5	%R	CR-6	%R
Arsenic	AS	PMS	MS022311	0.2	0.19	**95.0**										
Nickel	NI	PMS	MS022311	0.5	0.53	**106.0**										
Arsenic	AS	PMS	MS022411	0.2	0.18	**90.0**										
Nickel	NI	PMS	MS022411	0.5	0.51	**102.0**										
Nickel	NI	PMS	MS022511	0.5	0.53	**106.0**										

Control Limits: no control limits have been established by the EPA at this time.

FORM II (2)

AVX9 : 00064

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: GeoEngineers Inc.

PROJECT: Port of Anacortes

UNITS:ug/L

SDG: AVX9

ANALYTE	EL	METH	RUN	CRDL	IDL	ICB	C	CCB1	C	CCB2	C	CCB3	C	CCB4	C	CCB5	C
Arsenic	AS	PMS	MS022311	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Nickel	NI	PMS	MS022311	40.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U

AVX9 : 00055

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: GeoEngineers Inc.

PROJECT: Port of Anacortes

UNITS:ug/L

SDG: AVX9

ANALYTE	EL	METH	RUN	CRDL	IDL	CCB6	C	CCB7	C	CCB8	C	CCB9	C	CCB10	C	CCB11	C
Arsenic	AS	PMS	MS022311	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U				
Nickel	NI	PMS	MS022311	40.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U				

AVX9 : 00066

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: GeoEngineers Inc.

PROJECT: Port of Anacortes

UNITS:ug/L

SDG: AVX9

ANALYTE	EL	METH	RUN	CRDL	IDL	ICB	C	CCB1	C	CCB2	C	CCB3	C	CCB4	C	CCB5	C
Arsenic	AS	PMS	MS022411	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Nickel	NI	PMS	MS022411	40.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U

AVX9 : 00067

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: GeoEngineers Inc.

PROJECT: Port of Anacortes

UNITS:ug/L

SDG: AVX9

ANALYTE	EL	METH	RUN	CRDL	IDL	CCB6	C	CCB7	C	CCB8	C	CCB9	C	CCB10	C	CCB11	C
Arsenic	AS	PMS	MS022411	10.0	0.2	0.2	U	0.2	U								
Nickel	NI	PMS	MS022411	40.0	0.5	0.5	U	0.5	U								

AVX9 : 00068

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: GeoEngineers Inc.

PROJECT: Port of Anacortes

UNITS:ug/L

SDG: AVX9

ANALYTE	EL	METH	RUN	CRDL	IDL	ICB	C	CCB1	C	CCB2	C	CCB3	C	CCB4	C	CCB5	C
Nickel	NI	PMS	MS022511	40.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U				

AVX9 : 00069

ICP Interference Check Sample

ANALYTICAL RESOURCES INCORPORATED

CLIENT: GeoEngineers Inc.

PROJECT: Port of Anacortes

SDG: AVX9

ICS SOURCE: I.V.

RUNID: MS022311

INSTRUMENT ID: NEXION 300D

UNITS: ug/L

ANALYTE	ICSA TV	ICSAB TV	ICSA1	ICSAB1	%R	ICSA2	ICSAB2	%R	ICSA3	ICSAB3	%R
Arsenic		20	0.0	19.7	**98.5**						
Cadmium		20	0.1	20.0	**100.0**						
Chromium		20	0.6	20.7	**103.5**						
Cobalt		20	0.0	20.8	**104.0**						
Copper		20	0.1	20.3	**101.5**						
Lead			0.1	0.1							
Manganese		20	0.1	19.1	**95.5**						
Molybdenum	400	400	407.4	416.2	**104.1**						
Nickel		20	0.0	20.8	**104.0**						
Selenium			0.1	0.1							
Silver		20	0.1	21.6	**108.0**						
Zinc		20	0.3	19.6	**98.0**						

AVX9 : 00070

ICP Interference Check Sample

ANALYTICAL RESOURCES INCORPORATED

CLIENT: GeoEngineers Inc.

PROJECT: Port of Anacortes

SDG: AVX9

ICS SOURCE: I.V.

RUNID: MS022411

INSTRUMENT ID: NEXION 300D

UNITS: ug/L

ANALYTE	ICSA TV	ICSAB TV	ICSA1	ICSAB1	%R	ICSA2	ICSAB2	%R	ICSA3	ICSAB3	%R
Aluminum	20000	20000	23209.0	23630.4	**118.2**						
Arsenic		20	0.0	20.1	**100.5**						
Cadmium		20	0.0	18.7	**93.5**						
Chromium		20	0.6	21.0	**105.0**						
Cobalt		20	0.0	20.8	**104.0**						
Copper		20	0.1	19.8	**99.0**						
Iron	20000	20000	19892.4	19816.8	**99.1**						
Lead			0.1	0.1							
Manganese		20	0.1	21.1	**105.5**						
Molybdenum	400	400	403.3	394.9	**98.7**						
Nickel		20	0.0	19.6	**98.0**						
Selenium			0.0	0.1							
Silver		20	0.0	19.2	**96.0**						
Vanadium			0.4	0.2							
Zinc		20	0.2	19.5	**97.5**						

AVX9 : 00071

ICP Interference Check Sample

ANALYTICAL RESOURCES INCORPORATED

CLIENT: GeoEngineers Inc.

PROJECT: Port of Anacortes

SDG: AVX9

ICS SOURCE: I.V.

RUNID: MS022511

INSTRUMENT ID: NEXION 300D

UNITS: ug/L

ANALYTE	ICSA TV	ICSAB TV	ICSA1	ICSAB1	%R	ICSA2	ICSAB2	%R	ICSA3	ICSAB3	%R
Aluminum	20000	20000	21629.1	21768.1	**108.8**						
Arsenic		20	0.0	20.1	**100.5**						
Cadmium		20	0.1	19.4	**97.0**						
Chromium		20	0.5	21.3	**106.5**						
Cobalt		20	0.0	20.7	**103.5**						
Copper		20	0.1	20.5	**102.5**						
Iron	20000	20000	20202.1	20142.8	**100.7**						
Lead			0.1	0.1							
Manganese		20	0.1	20.2	**101.0**						
Molybdenum	400	400	405.7	402.6	**100.7**						
Nickel		20	0.0	21.1	**105.5**						
Selenium			0.2	0.2							
Silver		20	0.1	21.9	**109.5**						
Vanadium			0.6	0.5							
Zinc		20	0.4	19.7	**98.5**						

AVX9:00072

IDLs and ICP Linear Ranges

ANALYTICAL RESOURCES INCORPORATED

CLIENT: GeoEngineers Inc.

PROJECT: Port of Anacortes

SDG: AVX9 UNITS: ug/L

ANALYTE	EL	METH	INSTRUMENT	WAVELENTH (nm)	GFA BACK-GROUND	CLP CRDL	RL	RL DATE	ICP LINEAR RANGE (ug/L)	ICP LR DATE
Arsenic	AS	PMS	NEXION 300D MS	0.00		10	0.2	4/1/2012		
Nickel	NI	PMS	NEXION 300D MS	0.00		40	0.5	4/1/2012		

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: GeoEngineers Inc.

PROJECT: Port of Anacortes

SDG: AVX9

ANALYSIS METHOD: PMS

ARI PREP CODE: REN

PREPDATE: 2/22/2016

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
MW-8_021016	AVX9A	0.000	50.0	25.0
MW-8_021016D	AVX9ADUP	0.000	50.0	25.0
MW-8_021016S	AVX9ASPK	0.000	50.0	25.0
MW-1_021016	AVX9B	0.000	50.0	25.0
MW-7_021016	AVX9C	0.000	50.0	25.0
DUP_021016	AVX9D	0.000	50.0	25.0
MW-4_021116	AVX9E	0.000	50.0	25.0
MW-6_021116	AVX9F	0.000	50.0	25.0
MW-3A_021116	AVX9G	0.000	50.0	25.0
MW-8_021016	AVX9H	0.000	50.0	25.0
MW-8_021016D	AVX9HDUP	0.000	50.0	25.0
MW-8_021016S	AVX9HSPK	0.000	50.0	25.0
MW-1_021016	AVX9I	0.000	50.0	25.0
MW-7_021016	AVX9J	0.000	50.0	25.0
DUP_021016	AVX9K	0.000	50.0	25.0
MW-4_021116	AVX9L	0.000	50.0	25.0
MW-6_021116	AVX9M	0.000	50.0	25.0
PBW	AVX9MB1	0.000	50.0	25.0
LCSW	AVX9MB1SPK	0.000	50.0	25.0
PBW	AVX9MB2	0.000	50.0	25.0
LCSW	AVX9MB2SPK	0.000	50.0	25.0
MW-3A_021116	AVX9N	0.000	50.0	25.0

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: GeoEngineers Inc.

PROJECT: Port of Anacortes INSTRUMENT ID: NEXION 300D MS START DATE: 2/23/2016

SDG: AVX9 RUNID: MS022311 METHOD: PMS END DATE: 2/23/2016

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	11080				X																X										
S1	S1	1.00	11130				X																X										
S2	S2	1.00	11180				X																X										
S3	S3	1.00	11230				X																X										
S4	S4	1.00	11290				X																X										
S5	S5	1.00	11350																														
ZZZZZZ	Rinse sampl	1.00	11430																														
ICV	MICV	1.00	11510				X																X										
ICB	ICB	1.00	11580				X																X										
CCV	MCCV1	1.00	12030				X																X										
CCB	CCB1	1.00	12100				X																X										
CRI	MCRI	1.00	12150				X																X										
ICSA	ICSAI	1.00	12200				X																X										
ICSAB	ICSABI	1.00	12250				X																X										
ZZZZZZ	LR200	1.00	12330																														
ZZZZZZ	LR300	1.00	12370																														
ZZZZZZ	B1	1.00	12450																														
ZZZZZZ	B2	1.00	12520																														
CCV	MCCV2	1.00	12590				X																X										
CCB	CCB2	1.00	13060				X																X										
ZZZZZZ	AWG4MB	2.00	13110																														
ZZZZZZ	AWG5MB	2.00	13160																														
ZZZZZZ	AWA5MB	2.00	13210																														
ZZZZZZ	AVP0C	20.00	13260																														
ZZZZZZ	AWH1A	2.00	13320																														
ZZZZZZ	AWG5A	2.00	13360																														
ZZZZZZ	AWG4A	5.00	13420																														
ZZZZZZ	AWG4MBSPK	2.00	13500																														
ZZZZZZ	AWG5MBSPK	2.00	13550																														
ZZZZZZ	AWA5MBSPK	2.00	14000																														
CCV	MCCV3	1.00	14060				X																X										
CCB	CCB3	1.00	14150				X																X										
ZZZZZZ	AWH3MB	2.00	14200																														
ZZZZZZ	AWE8MB	2.00	14250																														
ZZZZZZ	AWE8A	2.00	14300																														

FORM XIV

AVX9 : 00075

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: GeoEngineers Inc.

PROJECT: Port of Anacortes | INSTRUMENT ID: NEXION 300D MS | START DATE: 2/23/2016

SDG: AVX9 | RUNID: MS022311 | METHOD: PMS | END DATE: 2/23/2016

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
ZZZZZZ	AWE8B	2.00	14350																														
ZZZZZZ	AWH3A	2.00	14410																														
ZZZZZZ	AWH3B	2.00	14450																														
ZZZZZZ	AWH3C	2.00	14500																														
ZZZZZZ	AWH3D	2.00	14550																														
ZZZZZZ	AWH3MBSPK	2.00	15000																														
ZZZZZZ	AWE8MBSPK	2.00	15050																														
CCV	MCCV4	1.00	15110				X																X										
CCB	CCB4	1.00	15180				X																X										
ZZZZZZ	AVP2MB	20.00	15230																														
ZZZZZZ	AVX6MB	20.00	15280																														
ZZZZZZ	AVX6A	20.00	15330																														
ZZZZZZ	AVX6B	20.00	15380																														
ZZZZZZ	AVP2A	20.00	15440																														
ZZZZZZ	AVP2B	20.00	15490																														
ZZZZZZ	AWA5A	10.00	15530																														
ZZZZZZ	AVP2MBSPK	20.00	15580																														
ZZZZZZ	AVX6MBSPK	20.00	16030																														
ZZZZZZ	AWG4MBSPK	2.00	16090																														
CCV	MCCV5	1.00	16150				X																X										
CCB	CCB5	1.00	16230				X																X										
ZZZZZZ	AVW0MB1	2.00	16320																														
ZZZZZZ	AVW0B	20.00	16370																														
ZZZZZZ	AVW0C	20.00	16410																														
ZZZZZZ	AVW0D	20.00	16460																														
ZZZZZZ	AVW0E	20.00	16510																														
ZZZZZZ	AVW0ADUP	20.00	16560																														
ZZZZZZ	AVW0A	20.00	17010																														
ZZZZZZ	AVW0ASPK	20.00	17060																														
ZZZZZZ	ZZZZZZ	20.00	17110																														
ZZZZZZ	AVW0MB1SPK	2.00	17180																														
CCV	MCCV6	1.00	17240				X																X										
CCB	CCB6	1.00	17320				X																X										
PBW	AVX9MB1	2.00	17370				X																X										
PBW	AVX9MB2	2.00	17420				X																X										

FORM XIV

AVX9 - 022311

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: GeoEngineers Inc.

PROJECT: Port of Anacortes | INSTRUMENT ID: NEXION 300D MS | START DATE: 2/23/2016

SDG: AVX9 | RUNID: MS022311 | METHOD: PMS | END DATE: 2/23/2016

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
MW-1_021016	AVX9B	2.00	17460				X																										
MW-7_021016	AVX9C	2.00	17510				X																X										
MW-8_021016D	AVX9ADUP	2.00	17560				X																X										
MW-8_021016	AVX9A	2.00	18010				X																X										
MW-8_021016S	AVX9ASPK	2.00	18060				X																X										
ZZZZZZ	ZZZZZZ	2.00	18110																														
LCSW	AVX9MB1SPK	2.00	18180				X																X										
LCSW	AVX9MB2SPK	2.00	18230				X																										
CCV	MCCV7	1.00	18290				X																X										
CCB	CCB7	1.00	18370				X																X										
DUP_021016	AVX9D	2.00	18420				X																X										
MW-4_021116	AVX9E	2.00	18460				X																										
MW-6_021116	AVX9F	2.00	18510																														
MW-3A_021116	AVX9G	2.00	18560																														
MW-1_021016	AVX9I	2.00	19010																														
MW-7_021016	AVX9J	2.00	19060																														
MW-8_021016D	AVX9HDUP	2.00	19110				X																X										
MW-8_021016	AVX9H	2.00	19160				X																X										
MW-8_021016S	AVX9HSPK	2.00	19200				X																X										
ZZZZZZ	ZZZZZZ	2.00	19250																														
CCV	MCCV8	1.00	19330				X																X										
CCB	CCB8	1.00	19400				X																X										
ZZZZZZ	AVY5MB	2.00	19450																														
DUP_021016	AVX9K	2.00	19500				X																X										
MW-4_021116	AVX9L	2.00	19550				X																										
MW-6_021116	AVX9M	2.00	20000																														
MW-3A_021116	AVX9N	2.00	20050																														
ZZZZZZ	AVY5ADUP	2.00	20120																														
ZZZZZZ	AVY5A	2.00	20170																														
ZZZZZZ	AVY5ASPK	2.00	20220																														
ZZZZZZ	AVY5MBSPK	2.00	20300																														
ZZZZZZ	AWG5MBSPK	2.00	20350																														
CCV	MCCV9	1.00	20400				X																X										
CCB	CCB9	1.00	20480				X																X										

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: GeoEngineers Inc.

PROJECT: Port of Anacortes INSTRUMENT ID: NEXION 300D MS START DATE: 2/24/2016

SDG: AVX9 RUNID: MS022411 METHOD: PMS END DATE: 2/24/2016

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	12310				X																X										
S1	S1	1.00	12360				X																X										
S2	S2	1.00	12410				X																X										
S3	S3	1.00	12460				X																X										
S4	S4	1.00	12520				X																X										
S5	S5	1.00	12590																														
ZZZZZZ	Rinse sampl	1.00	13060																														
ICV	MICV	1.00	13140				X																X										
ICB	ICB	1.00	13220				X																X										
S0	S0	1.00	13270				X																X										
CCV	MCCV1	1.00	13320				X																X										
CCB	CCB1	1.00	13400				X																X										
CRI	MCRI	1.00	13450				X																X										
ICSA	ICSAI	1.00	13500				X																X										
ICSAB	ICSABI	1.00	13550				X																X										
ZZZZZZ	LR200	1.00	14030																														
ZZZZZZ	LR300	1.00	14080																														
ZZZZZZ	B1	1.00	14160																														
ZZZZZZ	B2	1.00	14230																														
ZZZZZZ	ZZZZZZ	1.00	14300																														
ZZZZZZ	ZZZZZZ	1.00	14380																														
CCV	MCCV2	1.00	14440				X																X										
CCB	CCB2	1.00	14520				X																X										
S0	S0	1.00	14580				X																X										
CCV	MCCV3	1.00	15030				X																X										
CCB	CCB3	1.00	15110				X																X										
ZZZZZZ	AWH3MB	2.00	15170																														
ZZZZZZ	AWK1MB	2.00	15220																														
ZZZZZZ	AWJ0MB	2.00	15270																														
ZZZZZZ	AWJ0A	2.00	15320																														
ZZZZZZ	AWK0A	5.00	15370																														
ZZZZZZ	AWK1A	100.00	15450																														
ZZZZZZ	AWK1MBSPK	2.00	15500																														
ZZZZZZ	AWJ0MBSPK	2.00	15550																														
ZZZZZZ	AWH3MBSPK	2.00	16000																														

FORM XIV

AVX9 · 66978

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: GeoEngineers Inc.

PROJECT: Port of Anacortes | INSTRUMENT ID: NEXION 300D MS | START DATE: 2/24/2016

SDG: AVX9 | RUNID: MS022411 METHOD: PMS | END DATE: 2/24/2016

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
ZZZZZZ	AWE8MBSPK	2.00	16050																														
CCV	MCCV4	1.00	16110				X																X										
CCB	CCB4	1.00	16190				X																X										
ZZZZZZ	AWI9MB	20.00	16240																														
ZZZZZZ	AVX6A	100.00	16290																														
ZZZZZZ	AWI9A	20.00	16350																														
ZZZZZZ	AWI9B	20.00	16400																														
ZZZZZZ	AWI9C	20.00	16450																														
ZZZZZZ	AWI9D	20.00	16500																														
ZZZZZZ	AWI9MBSPK	20.00	16550																														
ZZZZZZ	AWG4MBSPK	2.00	17000																														
ZZZZZZ	AWG5MBSPK	2.00	17050																														
ZZZZZZ	AWA5MBSPK	2.00	17100																														
CCV	MCCV5	1.00	17160				X																X										
CCB	CCB5	1.00	17240				X																X										
ZZZZZZ	AVZ0MB	2.00	17290																														
ZZZZZZ	AVY2MB	2.00	17340																														
ZZZZZZ	AWJ7MB	2.00	17390																														
ZZZZZZ	AWJ7A	2.00	17440																														
ZZZZZZ	AWJ7B	2.00	17490																														
ZZZZZZ	AVY2B	2.00	17560																														
ZZZZZZ	AVZ0A	2.00	18010																														
ZZZZZZ	AVZ0MBSPK	2.00	18060																														
ZZZZZZ	AVY2MBSPK	2.00	18110																														
ZZZZZZ	AWJ7MBSPK	2.00	18160																														
CCV	MCCV6	1.00	18220				X																X										
CCB	CCB6	1.00	18300				X																X										
ZZZZZZ	AVW0RMB1	2.00	18350																														
ZZZZZZ	AWA5A	100.00	18400																														
ZZZZZZ	AWJ7C	2.00	18450																														
MW-6_021116	AVX9F	50.00	18500																				X										
MW-3A_021116	AVX9G	50.00	18550																				X										
MW-1_021016	AVX9I	50.00	19000				X																										
MW-7_021016	AVX9J	50.00	19050				X																X										
MW-6_021116	AVX9M	50.00	19110																				X										

FORM XIV

SDG: AVX9

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: GeoEngineers Inc.

PROJECT: Port of Anacortes

INSTRUMENT ID: NEXION 300D MS

START DATE: 2/24/2016

SDG: AVX9

RUNID: MS022411 METHOD: PMS

END DATE: 2/24/2016

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
MW-3A_021116	AVX9N	50.00	19160																				X										
ZZZZZZ	AVW0RMB1SPK	2.00	19210																														
CCV	MCCV7	1.00	19270				X																X										
CCB	CCB7	1.00	19350				X																X										

AVX9 : 00080

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: GeoEngineers Inc.

PROJECT: Port of Anacortes | INSTRUMENT ID: NEXION 300D MS | START DATE: 2/25/2016

SDG: AVX9 | RUNID: MS022511 | METHOD: PMS | END DATE: 2/25/2016

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	12140																				X										
S1	S1	1.00	12190																				X										
S2	S2	1.00	12250																				X										
S3	S3	1.00	12300																				X										
S4	S4	1.00	12350																				X										
S5	S5	1.00	12430																														
ZZZZZZ	Rinse sampl	1.00	12500																														
ICV	MICV	1.00	12580																				X										
ICB	ICB	1.00	13060																				X										
CCV	MCCV1	1.00	13110																				X										
CCB	CCB1	1.00	13190																				X										
CRI	MCRI	1.00	13240																				X										
ICSA	ICSAI	1.00	13290																				X										
ICSAB	ICSABI	1.00	13340																				X										
ZZZZZZ	LR200	1.00	13420																														
ZZZZZZ	LR300	1.00	13470																														
ZZZZZZ	B1	1.00	13540																														
ZZZZZZ	B2	1.00	14010																														
CCV	MCCV2	1.00	14080																				X										
CCB	CCB2	1.00	14160																				X										
ZZZZZZ	AWI9MB	20.00	14220																														
ZZZZZZ	AWJ9MB	2.00	14270																														
ZZZZZZ	AWJ0MB	2.00	14320																														
ZZZZZZ	AWJ0A	2.00	14370																														
ZZZZZZ	AWK1A	10.00	14430																														
ZZZZZZ	AWJ9A	2.00	14490																														
ZZZZZZ	AWJ9MBSPK	2.00	14540																														
ZZZZZZ	AWJ0MBSPK	2.00	14590																														
LCSW	AVX9MB2SPK	2.00	15040																				X										
ZZZZZZ	AWI9MBSPK	20.00	15100																														
CCV	MCCV3	1.00	15160																				X										
CCB	CCB3	1.00	15240																				X										

General Chemistry Analysis
Report and Summary QC Forms

ARI Job ID: AVX9

AVX9 : 86862

SAMPLE RESULTS-CONVENTIONALS
AVX9-GeoEngineers Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized: JL
Reported: 02/29/16

Project: Port of Anacortes
Event: 5147-006-11
Date Sampled: 02/10/16
Date Received: 02/11/16

Client ID: MW-8_021016
ARI ID: 16-2330 AVX9A

Analyte	Date Batch	Method	Units	RL	Sample
Total Dissolved Solids	02/12/16 021216#1	SM2540C	mg/L	10.0	459

RL Analytical reporting limit
U Undetected at reported detection limit

AVX9 : 000003

SAMPLE RESULTS-CONVENTIONALS
AVX9-GeoEngineers Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 02/29/16

Project: Port of Anacortes
Event: 5147-006-11
Date Sampled: 02/10/16
Date Received: 02/11/16

Client ID: MW-1_021016
ARI ID: 16-2331 AVX9B

Analyte	Date Batch	Method	Units	RL	Sample
Total Dissolved Solids	02/12/16 021216#1	SM2540C	mg/L	100	9,540

RL Analytical reporting limit
U Undetected at reported detection limit

AVX9 : 0606H

SAMPLE RESULTS-CONVENTIONALS
AVX9-GeoEngineers Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized: QU
Reported: 02/29/16

Project: Port of Anacortes
Event: 5147-006-11
Date Sampled: 02/10/16
Date Received: 02/11/16

Client ID: MW-7_021016
ARI ID: 16-2332 AVX9C

Analyte	Date Batch	Method	Units	RL	Sample
Total Dissolved Solids	02/12/16 021216#1	SM2540C	mg/L	100	3,390

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
AVX9-GeoEngineers Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 02/29/16

Project: Port of Anacortes
Event: 5147-006-11
Date Sampled: 02/10/16
Date Received: 02/11/16

Client ID: DUP_021016
ARI ID: 16-2333 AVX9D

Analyte	Date Batch	Method	Units	RL	Sample
Total Dissolved Solids	02/12/16 021216#1	SM2540C	mg/L	10.0	445

RL Analytical reporting limit
U Undetected at reported detection limit

AVX9 · 00006

SAMPLE RESULTS-CONVENTIONALS
AVX9-GeoEngineers Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 02/29/16

Project: Port of Anacortes
Event: 5147-006-11
Date Sampled: 02/11/16
Date Received: 02/11/16

Client ID: MW-4_021116
ARI ID: 16-2334 AVX9E

Analyte	Date Batch	Method	Units	RL	Sample
Total Dissolved Solids	02/12/16 021216#1	SM2540C	mg/L	5.0	266

RL Analytical reporting limit
U Undetected at reported detection limit

AVX9 - 00007

SAMPLE RESULTS-CONVENTIONALS
AVX9-GeoEngineers Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 02/29/16

Project: Port of Anacortes
Event: 5147-006-11
Date Sampled: 02/11/16
Date Received: 02/11/16

Client ID: MW-6_021116
ARI ID: 16-2335 AVX9F

Analyte	Date Batch	Method	Units	RL	Sample
Total Dissolved Solids	02/16/16 021616#1	SM2540C	mg/L	100	29,100

RL Analytical reporting limit
U Undetected at reported detection limit

AVX9 00036

SAMPLE RESULTS-CONVENTIONALS
AVX9-GeoEngineers Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized: W
Reported: 02/29/16

Project: Port of Anacortes
Event: 5147-006-11
Date Sampled: 02/11/16
Date Received: 02/11/16

Client ID: MW-3A_021116
ARI ID: 16-2336 AVX9G

Analyte	Date Batch	Method	Units	RL	Sample
Total Dissolved Solids	02/16/16 021616#1	SM2540C	mg/L	100	28,000

RL Analytical reporting limit
U Undetected at reported detection limit

AVX9 00085

REPLICATE RESULTS-CONVENTIONALS
AVX9-GeoEngineers Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 02/29/16

Project: Port of Anacortes
Event: 5147-006-11
Date Sampled: 02/10/16
Date Received: 02/11/16

Analyte	Method	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: AVX9A Client ID: MW-8_021016						
Total Dissolved Solids	SM2540C	02/12/16	mg/L	459	446	2.9%

AVX9 : 66656

LAB CONTROL RESULTS-CONVENTIONALS
AVX9-GeoEngineers Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 02/29/16

Project: Port of Anacortes
Event: 5147-006-11
Date Sampled: NA
Date Received: NA

Analyte/Method	QC ID	Date	Units	LCS	Spike Added	Recovery
Total Dissolved Solids	ICVL	02/12/16	mg/L	472	500	94.4%
SM2540C	ICVL	02/16/16		489	500	97.8%

AVX9:00091

METHOD BLANK RESULTS-CONVENTIONALS
AVX9-GeoEngineers Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 02/29/16

Project: Port of Anacortes
Event: 5147-006-11
Date Sampled: NA
Date Received: NA

Analyte	Method	Date	Units	Blank	ID
Total Dissolved Solids	SM2540C	02/12/16	mg/L	< 5.0 U	
		02/16/16		< 5.0 U	

AVX9-000032

SIM PAH Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: AVX9

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Benchsheet

(8270D) SIM PNA-Water
Separatory Funnel (3510C) (SOP # 3311S)

Preparation Test Low Level SIM PNA # 6 Low Level (0.01ppb)

Lab Number(s) AVX9 Page 1 of 1 Batch set up by: ~~JH~~

Batch ID

Bottle ID	Extraction Requirements	Volume Extracted	Final Effective Volume	Volume to Lab	Comments	Verify Client ID
	AVX9 BLK	500mL	0.5mL	0.5mL		
	↓ BS	500mL	0.5mL	0.5mL		PD 2/17/16 Analyst/Date
	~~BSDup~~	~~500mL~~	~~0.5mL~~	~~0.5mL~~		
	~~MRL CHeck~~	~~500mL~~	~~0.5mL~~	~~0.5mL~~		KD 80°C (1) 2 3 4 5 6 Low Level DCM RMH 2/17/16 Analyst/Date
1	AVX9 A	500mL	0.5mL	0.5mL		
2	↓ AMS	500mL	0.5mL	0.5mL		
3	AMSD	500mL	0.5mL	0.5mL		
1	↓ D	500mL	0.5mL	0.5mL		TurboVap 1 2 3 4 5 Pre-Silica Gel Shakeout Analyst/Date
1	E	500mL	0.5mL	0.5mL		
		~~500mL~~	~~0.5mL~~	~~0.5mL~~		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		(REQ) Silica Gel Clean Shakeout (1:1) 2/18/16 Analyst/Date
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		TurboVap (1) (2) 3 4 5 Post Silica Gel Shakeout 2/18/16 Analyst/Date
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		~~500mL~~	~~0.5mL~~	~~0.5mL~~		
Analyst/Date PD 2/17/16			2/18/16	2/18/16	Reviewed by/Date 2/18/16	

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	**1 (D#45238)**	1.5/7.5µg/mL	**100µL**	11/11/16	AR	PD
Spike	**18 (D#4411)**	1.5/7.5µg/mL	**100µL**	11/11/16	AR	PD
~~**MRL Spike**~~	**2 ( )**	~~0.1µg/mL~~	~~**50µL**~~			
Extraction Time: 08:29						

SPECIAL INSTRUCTIONS: Note: LOW LEVEL SIM PNA'S MUST BE COMPLETED WITHIN 48HRS!
1. USE ONLY NON-SCRATCHED GLASSWARE. 2. Rinse all glassware with Low Level DCM.
3. Add 500mL sample to 1.0L Sep. Funnel. 4. Add surr/spk. 5. Add 30mL Low Level DCM to 500mL sample bottle and add rinsate to corresponding Sep. Funnel. 6. Shake 2 minutes. 7. Drain DCM into 250mL E-Flask. 8. Extract 2 more times with 30mL Low Level DCM. 9. Add Sodium Sulfate to flask until free flowing. 10. KD to 5mL at 80°C. (Thoroughly rinse Snyder Columns with Low Level DCM)! 11. TurboVap below 10mL. 12. Silica Gel Clean-up Shakeout=REQUIRED. (Scintillation vial shakeout): Add 1g of Silica Gel. Vortex for 1min. 13. Pass thru turbo drying column with glass wool and sodium sulfate plug and Low Level DCM. 14. TurboVap. 15. Vial in Low Level DCM. (Pre-clean vialing syringes thoroughly)! 16. Post screen extracts with any color.

A. Archive Y / N

AVX9 : 66654

Organic Extractions
Reagent and Solutions Identification

(8270D)Low Level SIM PNA-Water
Separatory Funnel (3510C) (SOP # 3311S)

Lab Number(s) AVX9

(8270D) Low Level SIM PNA Aqueous:	Analyst/Date
Separatory Funnel Station: Low Level DCM: (E000078) Anhydrous Sodium Sulfate: (E000302)	Sep. Funnel PD 2/17/16
KD Station: Low Level DCM: (E000079)	KD RMH 2/17/16
Vialing Station: Low Level DCM: (E000079) 0% Silica Gel: (D000343) Neutral Glass wool: (D000378) Anhydrous Sodium Sulfate: (E000302)	Vialing ww 2/18/16

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: AVX9 Client ID: GeoEngineers Inc.

Batch ID:

Parameter: SIM PNA Low Lvl Client Project: Port of Anacortes

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☐ No Anomalies (standard soil/wet sediment/sand/gravel)=	
☐ Standing Water Decanted (Not shared)=	
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Received in 32oz jar(s)=Homogenized in Pyrex dish=	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☑ Turbid/Color= A & D are amber & turbid, E is tan & turbid	PD2/17/16
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☑ Emulsions (%)= A & D = 15% used Centrifuge to break up	PD2/17/16
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
☐ Received in 1.0L Bottle(s)=No Bottle Rinse=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	
☐ Share Samples Y / N	
☐ Multiple Jars Y / N	
☐ Sample Pre-Screens indicate analyte activity=	
☐ Sample weights/volumes reduced based on Pre-Screen=	2/19/16

SIM PAH Raw Data
Initial Calibration

ARI Job ID: AVX9

AVX9 00037

Checklist for SEQUENCE SEA0042

1/25/2016

Analysis	Matrix	Method
8270D-SIM PAH (0.5 ug/kg)	Solid	EPA 8270D-SIM

Checklist: Initial Calibration Checklist-SVOA

#	Checklist Item	Response	Analyst Initials	Date
1	Element Calibration Code Comments: *ZA00015*	YES	JLW	01/25/2016
2	DFTPP Tune met criteria	YES	JLW	01/25/2016
3	DDT breakdown <20%	YES	JLW	01/25/2016
4	Peak Tailing factor <= 2%	YES	JLW	01/25/2016
5	ICal meets 20% RSD, LR COD, and QR COD limits	YES	JLW	01/25/2016
6	NO ICAL Q Flag applied	YES	JLW	01/25/2016
7	Manual integrations include before/after pictures	NA	JLW	01/25/2016
8	Spectral Library matches updated	NA	JLW	01/25/2016
9	Internal Standard areas within 50-200% from reference	YES	JLW	01/25/2016
10	Minimum response factors met	YES	JLW	01/25/2016
11	All SCV within +/- 20% (DOD)	YES	JLW	01/25/2016
12	All SCV within +/- 30%	YES	JLW	01/25/2016
13	NO Linear or Quadratic fits used	YES	JLW	01/25/2016
14	NO Calibration points dropped	YES	JLW	01/25/2016
15	Additional notes	NA	JLW	01/25/2016
16	Reviewer approval (Reviewer)	YES	BB	01/25/2016

* = Indicates Automated Response from Element DataSyst

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 25-JAN-2016 09:14
End Cal Date : 25-JAN-2016 12:00
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt11.i\20160125.b\lowsim.m
Last Edit : 25-Jan-2016 12:22 jonathonw
Curve Type : Average

Calibration File Names:
Level 1: \\target\share\chem3\nt11.i\20160125.b\16012506.D
Level 2: \\target\share\chem3\nt11.i\20160125.b\16012507.D
Level 3: \\target\share\chem3\nt11.i\20160125.b\16012508.D
Level 4: \\target\share\chem3\nt11.i\20160125.b\16012505.D
Level 5: \\target\share\chem3\nt11.i\20160125.b\16012509.D
Level 6: \\target\share\chem3\nt11.i\20160125.b\16012510.D

Compound	10.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
5 Naphthalene	1.23125	1.20925	1.19281	0.97552	1.06864	0.96201	1.10658	10.922
7 2-Methylnaphthalene	0.82651	0.85115	0.84278	0.71799	0.80383	0.73153	0.79563	7.212
8 1-Methylnaphthalene	0.76563	0.76861	0.76881	0.64068	0.72138	0.65849	0.72060	8.068
10 Acenaphthylene	1.82400	1.79230	1.71027	1.47247	1.57680	1.43637	1.63537	10.062
12 Acenaphthene	1.11170	1.11141	1.08590	0.91981	1.01993	0.94225	1.03183	8.264
14 Dibenzofuran	1.76444	1.73288	1.70352	1.40113	1.51173	1.36747	1.58020	11.123
15 Fluorene	1.38984	1.35567	1.31049	1.10342	1.21297	1.11159	1.24733	9.907
17 Pentachlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
19 Phenanthrene	1.28714	1.24014	1.24049	0.97076	1.08094	0.97391	1.13223	12.561
20 Anthracene	1.17726	1.18749	1.14964	0.96820	1.08296	0.96684	1.08873	9.251
22 Carbazole	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
24 Fluoranthene	1.26250	1.23777	1.25745	1.03072	1.14897	1.02812	1.16092	9.457
25 Pyrene	1.75596	1.70807	1.63510	1.33717	1.48523	1.31137	1.53882	12.342
28 Benzo(a)anthracene	1.44714	1.40816	1.38469	1.14241	1.30313	1.17561	1.31019	9.668
30 Chrysene	1.49434	1.45258	1.45360	1.15300	1.32060	1.17070	1.34080	11.232
44 Benzo(b)fluoranthene	1.43552	1.43694	1.40803	1.08771	1.31473	1.21659	1.31659	10.708
45 Benzo(k)fluoranthene	1.47456	1.38493	1.48058	1.19066	1.42099	1.29867	1.37507	8.168
46 Benzo(j)fluoranthene	1.35528	1.34123	1.34854	1.04890	1.25673	1.16150	1.25203	9.938
34 Benzo(a)pyrene	1.26626	1.24843	1.27972	1.02993	1.24737	1.17258	1.20738	7.830
37 Indeno(1,2,3-cd)pyrene	1.17517	1.22550	1.26750	1.07059	1.35258	1.32373	1.23585	8.366
38 Dibenzo(a,h)anthracene	0.87048	0.95973	1.01063	0.85214	1.08636	1.07821	0.97626	10.301
39 Benzo(g,h,i)perylene	1.11731	1.11248	1.13248	0.93347	1.15405	1.11510	1.09415	7.333
47 Perylene	1.29950	1.31091	1.31240	1.05008	1.26399	1.17666	1.23559	8.438
48 Benzo(e)pyrene	1.37153	1.32075	1.33256	1.04774	1.25868	1.16199	1.24888	9.827
$ 6 2-Methylnaphthalene-d10	0.80348	0.80607	0.78360	0.66232	0.74338	0.68630	0.74752	8.222
$ 16 2,4,6-Tribromophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 23 Fluoranthene-d10	1.19648	1.16354	1.15494	0.94147	1.06650	0.97310	1.08267	9.855

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 25-JAN-2016 09:14
End Cal Date : 25-JAN-2016 12:00
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt11.i\20160125.b\lowsim.m
Last Edit : 25-Jan-2016 12:22 jonathonw
Curve Type : Average

Compound	10.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	___ RRF	% RSD
$ 36 Dibenzo(a,h)anthracene-d14	0.66127	0.75054	0.76490	0.65699	0.82414	0.81914	0.74617	9.836

Analytical Resources, Incorporated
Analytical Chemists and Consultants

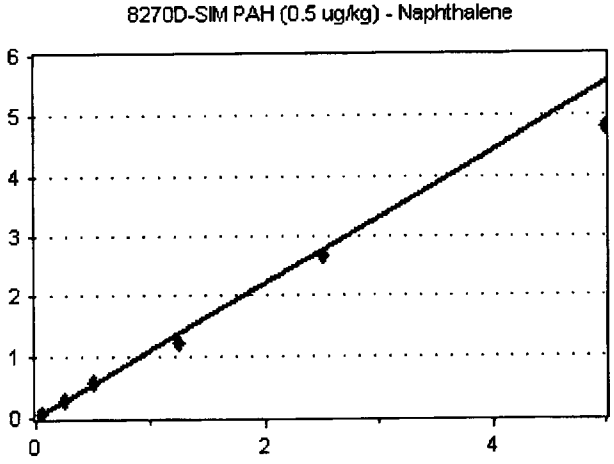
Calibration Report

Instrument: NT11
Calibration ID: ZA00015

Calibration Date: 25-Jan-2016 08:57 By JLW
Last Edit Date: 25-Jan-2016 13:53 By JLW

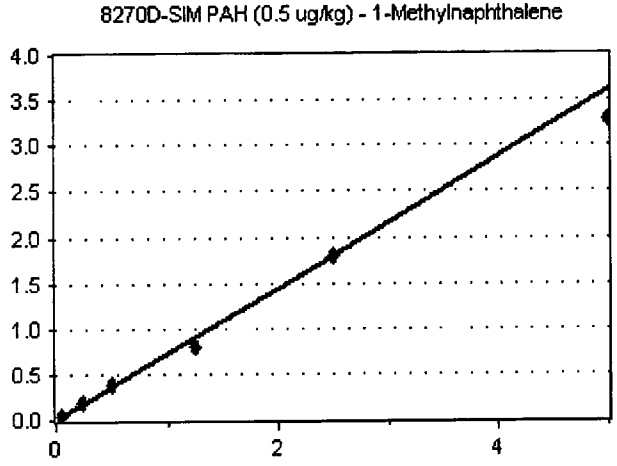
8270D-SIM PAH (0.5 ug/k

Naphthalene



Average RF
RF RSD: 10.92202
[Conc] = 1.106578 * [Response]

1-Methylnaphthalene



Average RF
RF RSD: 8.068453
[Conc] = 0.7206017 * [Response]

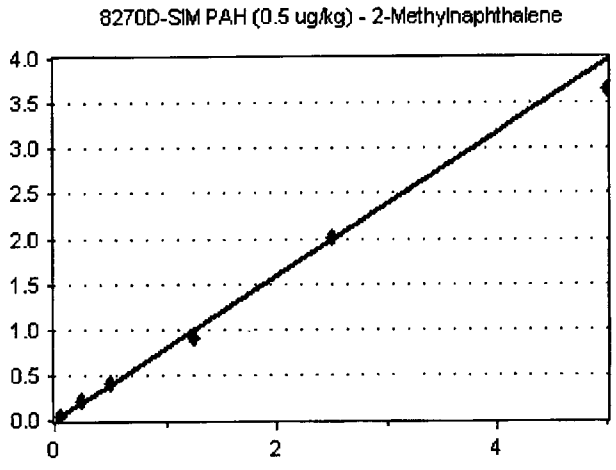
Printed: 1/25/2016 2:02:03PM

Calibration Report

Instrument: NT11
Calibration ID: ZA00015
Calibration Date: 25-Jan-2016 08:57 By JLW
Last Edit Date: 25-Jan-2016 13:53 By JLW

8270D-SIM PAH (0.5 ug/k

2-Methylnaphthalene

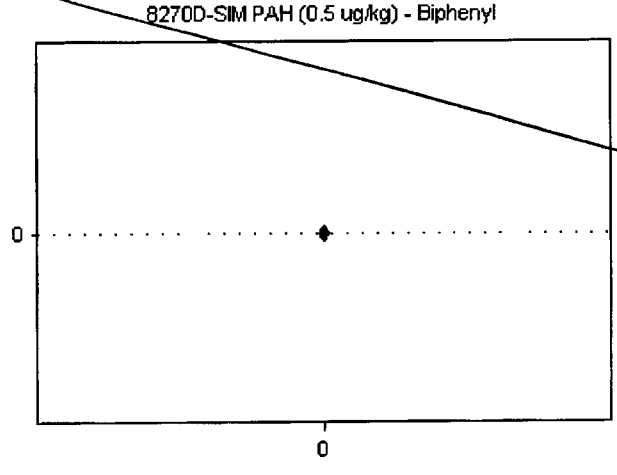


Average RF

RF RSD: 7.211931

[Conc] = 0.7956312 * [Response]

Biphenyl



Average RF

RF RSD:

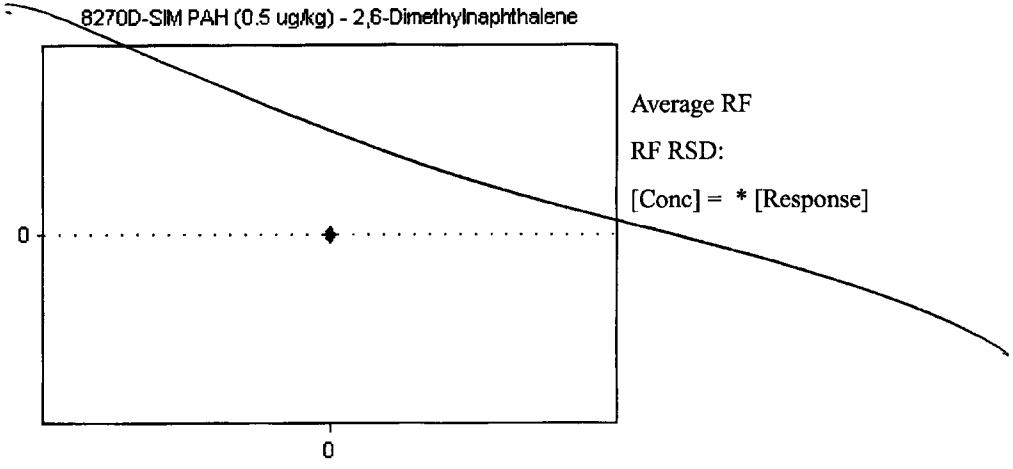
[Conc] = * [Response]

Calibration Report

Instrument: NT11
Calibration ID: ZA00015
Calibration Date: 25-Jan-2016 08:57 By JLW
Last Edit Date: 25-Jan-2016 13:53 By JLW

8270D-SIM PAH (0.5 ug/k

2,6-Dimethylnaphthalene

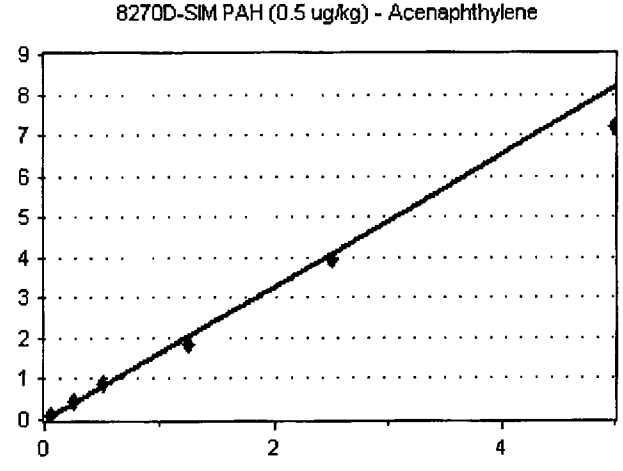


Average RF

RF RSD:

[Conc] = * [Response]

Acenaphthylene



Average RF

RF RSD: 10.06206

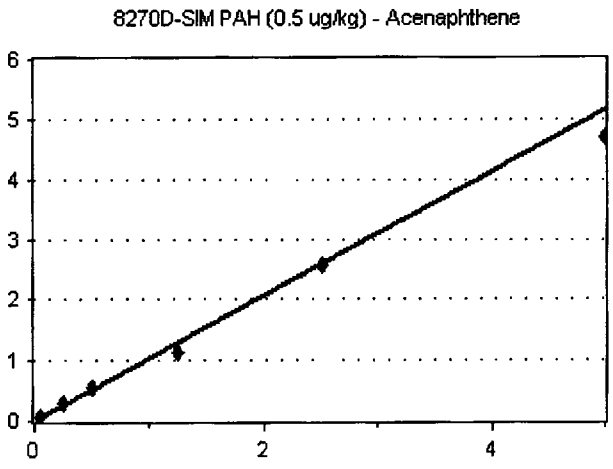
[Conc] = 1.635367 * [Response]

Calibration Report

Instrument: NT11
Calibration ID: ZA00015
Calibration Date: 25-Jan-2016 08:57 By JLW
Last Edit Date: 25-Jan-2016 13:53 By JLW

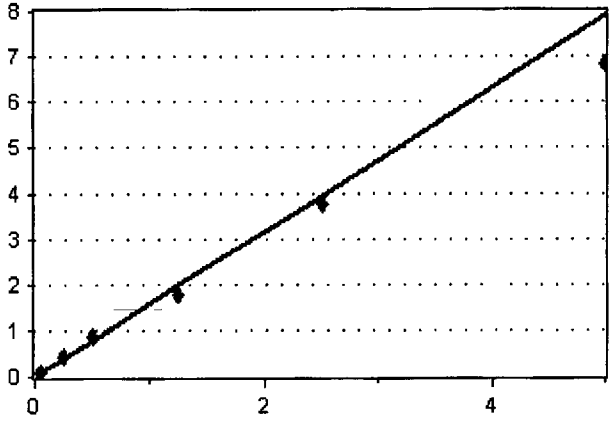
8270D-SIM PAH (0.5 ug/k

Acenaphthene



Average RF
RF RSD: 8.263575
[Conc] = 1.031833 * [Response]

Dibenzofuran



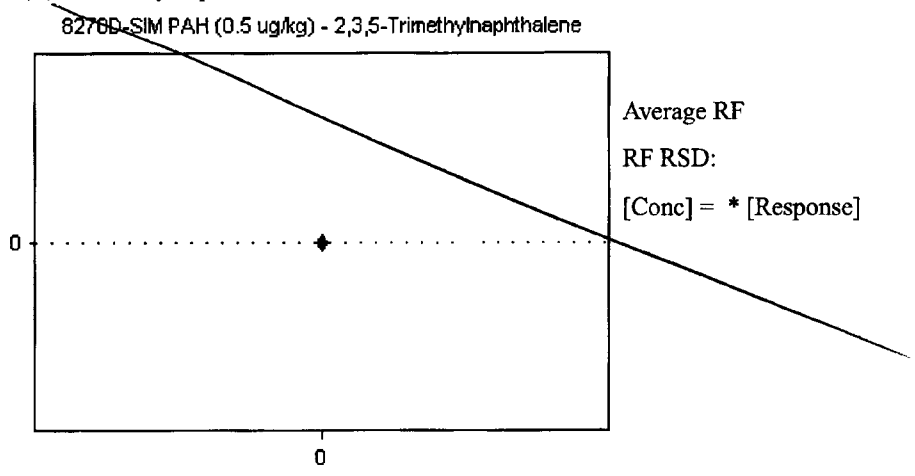
Average RF
RF RSD: 11.12303
[Conc] = 1.580196 * [Response]

Calibration Report

Instrument:	**NT11**	**Calibration Date:**	**25-Jan-2016 08:57 By JLW**
Calibration ID:	**ZA00015**	**Last Edit Date:**	**25-Jan-2016 13:53 By JLW**

8270D-SIM PAH (0.5 ug/k

2,3,5-Trimethylnaphthalene

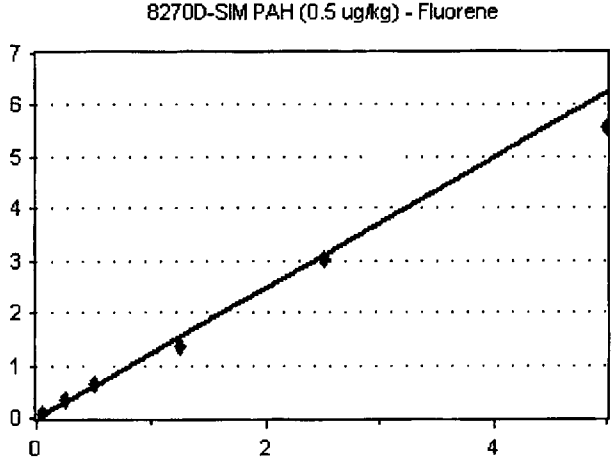


Average RF

RF RSD:

[Conc] = * [Response]

Fluorene



Average RF

RF RSD: 9.907105

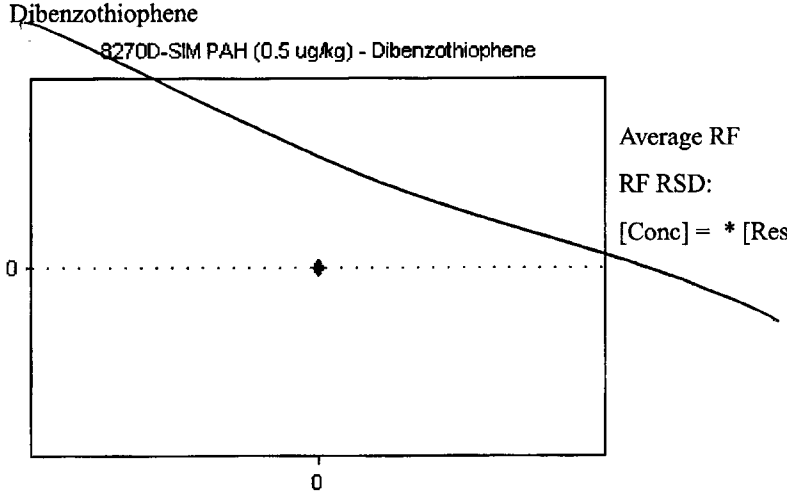
[Conc] = 1.24733 * [Response]

Calibration Report

Instrument: NT11
Calibration ID: ZA00015
Calibration Date: 25-Jan-2016 08:57 By JLW
Last Edit Date: 25-Jan-2016 13:53 By JLW

8270D-SIM PAH (0.5 ug/k

Dibenzothiophene

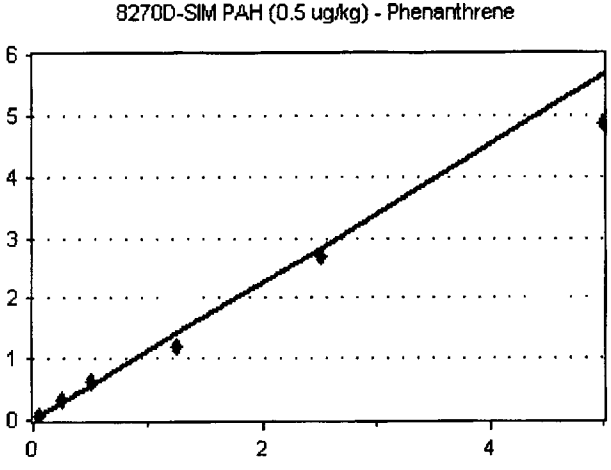


Average RF

RF RSD:

[Conc] = * [Response]

Phenanthrene



Average RF

RF RSD: 12.56097

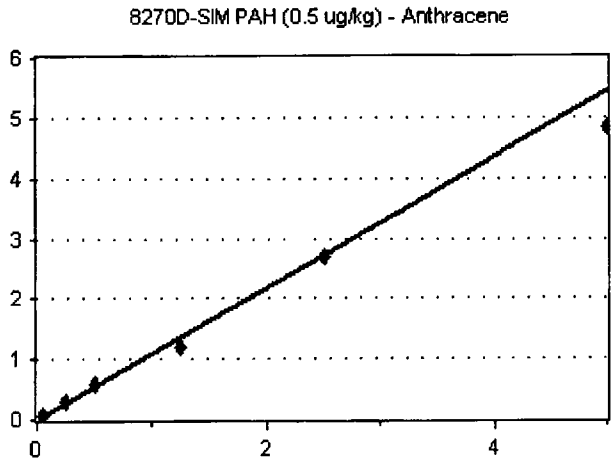
[Conc] = 1.132227 * [Response]

Calibration Report

Instrument: NT11
Calibration ID: ZA00015
Calibration Date: 25-Jan-2016 08:57 By JLW
Last Edit Date: 25-Jan-2016 13:53 By JLW

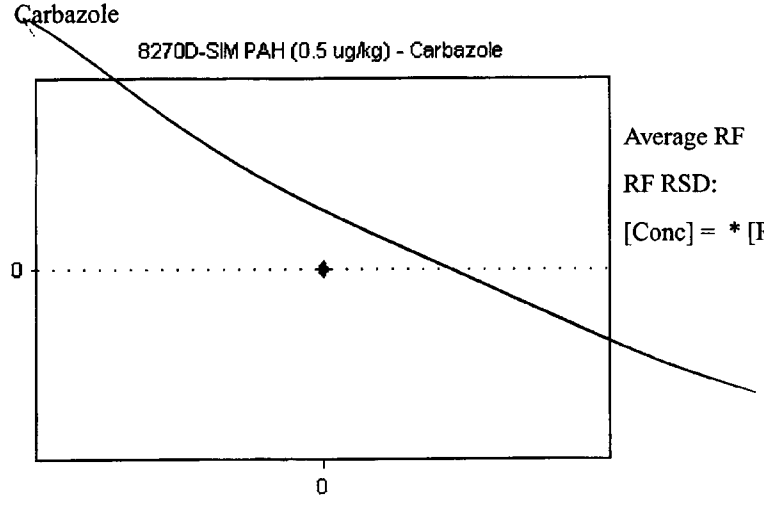
8270D-SIM PAH (0.5 ug/k

Anthracene



Average RF
RF RSD: 9.250857
[Conc] = 1.088733 * [Response]

Carbazole



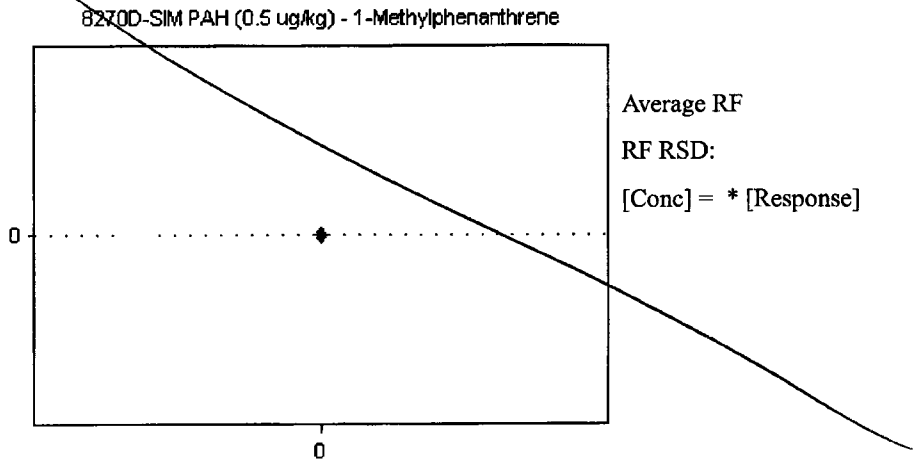
Average RF
RF RSD:
[Conc] = * [Response]

Calibration Report

Instrument: NT11
Calibration ID: ZA00015
Calibration Date: 25-Jan-2016 08:57 By JLW
Last Edit Date: 25-Jan-2016 13:53 By JLW

8270D-SIM PAH (0.5 ug/k

1-Methylphenanthrene

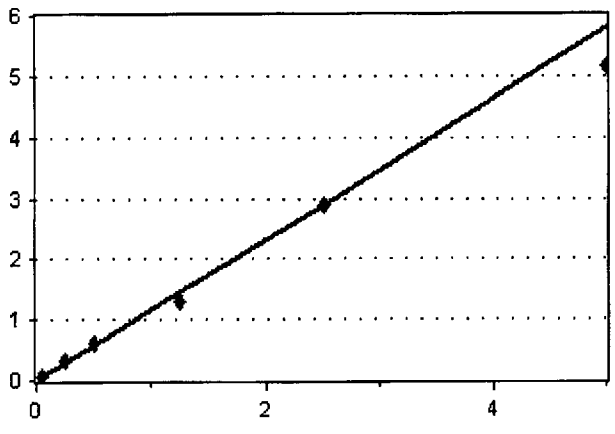


Average RF

RF RSD:

[Conc] = * [Response]

Fluoranthene



Average RF

RF RSD: 9.457339

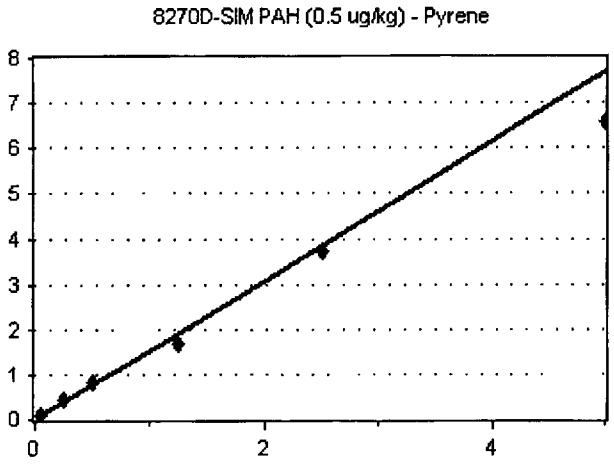
[Conc] = 1.160923 * [Response]

Calibration Report

Instrument: NT11
Calibration ID: ZA00015
Calibration Date: 25-Jan-2016 08:57 By JLW
Last Edit Date: 25-Jan-2016 13:53 By JLW

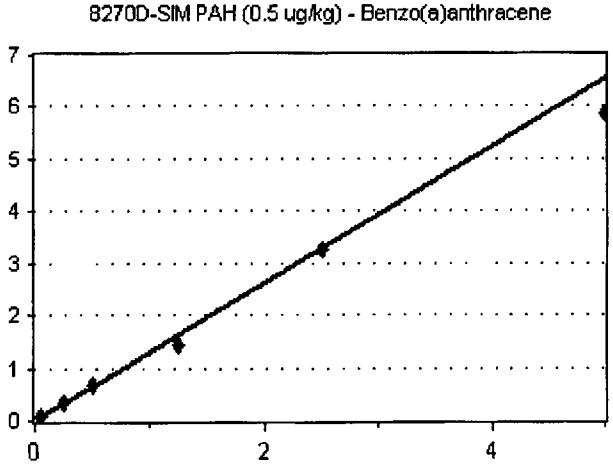
8270D-SIM PAH (0.5 ug/k

Pyrene



Average RF
RF RSD: 12.34151
[Conc] = 1.538816 * [Response]

Benzo(a)anthracene



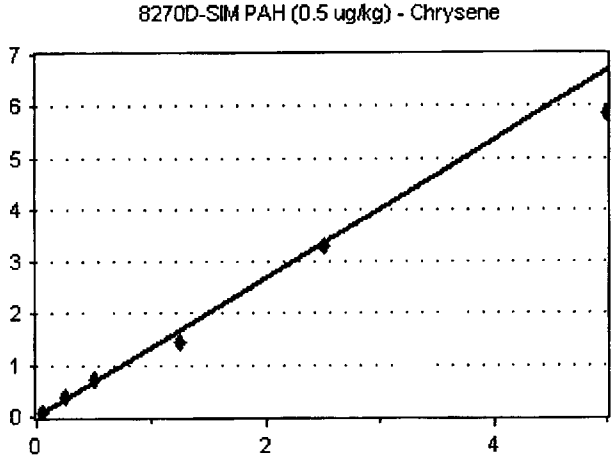
Average RF
RF RSD: 9.667504
[Conc] = 1.310189 * [Response]

Calibration Report

Instrument: NT11
Calibration ID: ZA00015
Calibration Date: 25-Jan-2016 08:57 By JLW
Last Edit Date: 25-Jan-2016 13:53 By JLW

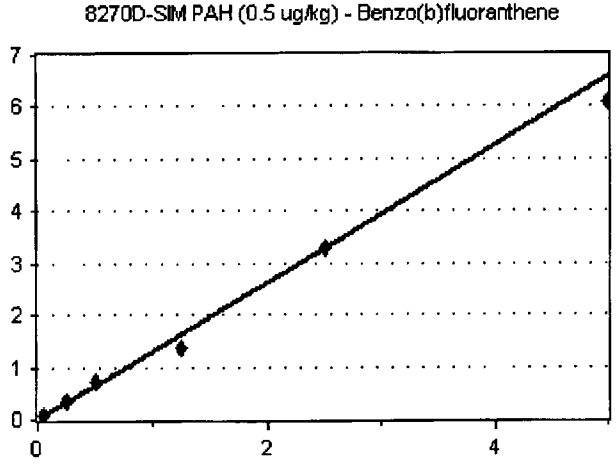
8270D-SIM PAH (0.5 ug/k

Chrysene



Average RF
RF RSD: 11.2321
[Conc] = 1.340803 * [Response]

Benzo(b)fluoranthene



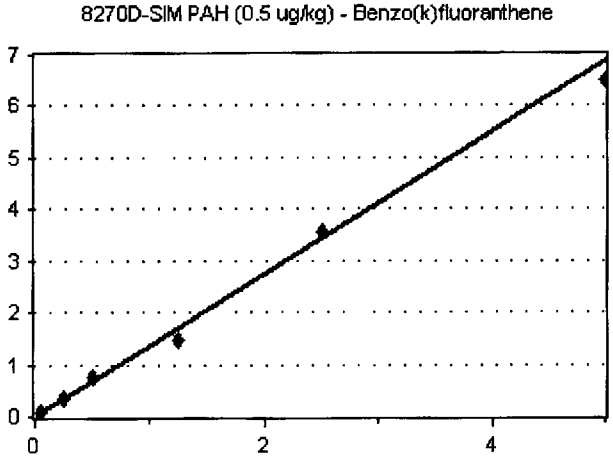
Average RF
RF RSD: 10.70822
[Conc] = 1.316586 * [Response]

Calibration Report

Instrument: NT11
Calibration ID: ZA00015
Calibration Date: 25-Jan-2016 08:57 By JLW
Last Edit Date: 25-Jan-2016 13:53 By JLW

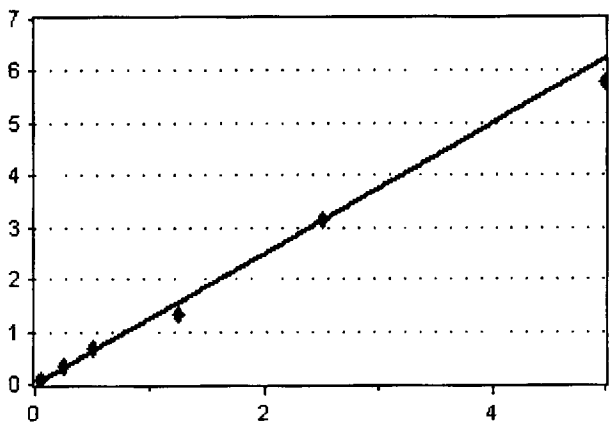
8270D-SIM PAH (0.5 ug/k

Benzo(k)fluoranthene



Average RF
RF RSD: 8.168264
[Conc] = 1.375066 * [Response]

Benzo(j)fluoranthene



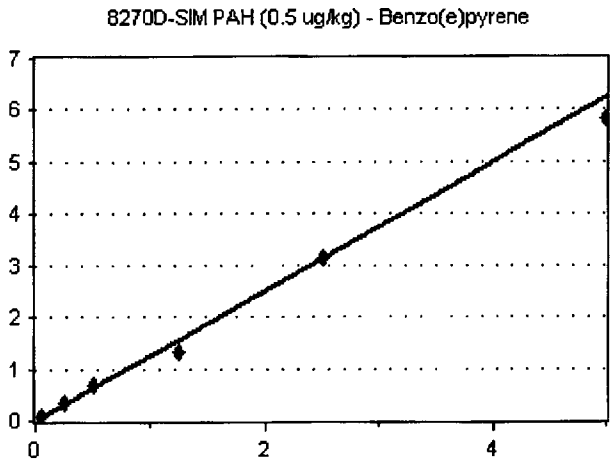
Average RF
RF RSD: 9.937959
[Conc] = 1.252029 * [Response]

Calibration Report

Instrument: NT11
Calibration ID: ZA00015
Calibration Date: 25-Jan-2016 08:57 By JLW
Last Edit Date: 25-Jan-2016 13:53 By JLW

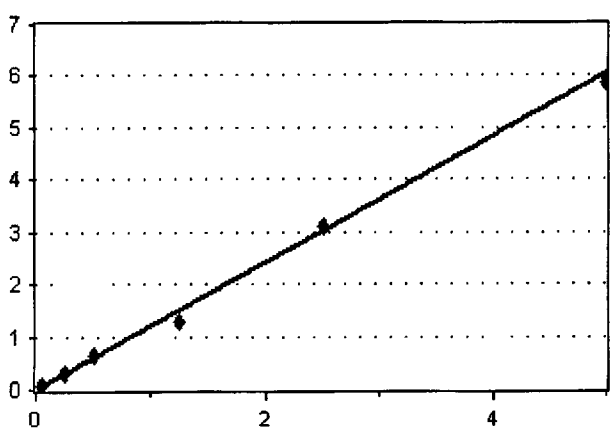
8270D-SIM PAH (0.5 ug/k

Benzo(e)pyrene



Average RF
RF RSD: 9.827213
[Conc] = 1.248877 * [Response]

Benzo(a)pyrene



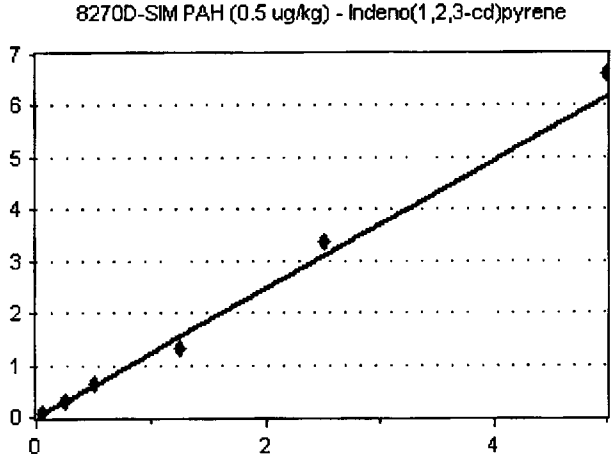
Average RF
RF RSD: 7.829669
[Conc] = 1.207383 * [Response]

Calibration Report

Instrument: NT11
Calibration ID: ZA00015
Calibration Date: 25-Jan-2016 08:57 By JLW
Last Edit Date: 25-Jan-2016 13:53 By JLW

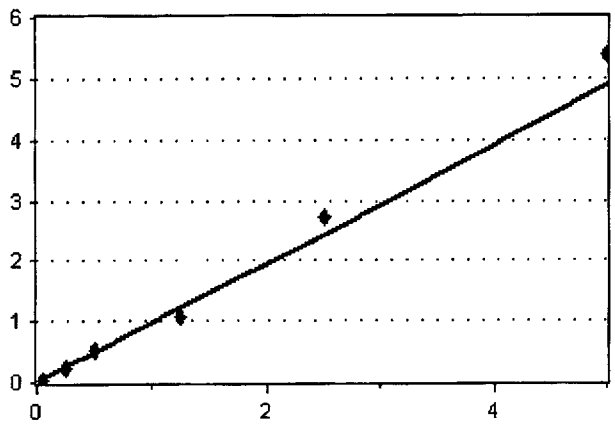
8270D-SIM PAH (0.5 ug/k

Indeno(1,2,3-cd)pyrene



Average RF
RF RSD: 8.366101
[Conc] = 1.235846 * [Response]

Dibenzo(a,h)anthracene



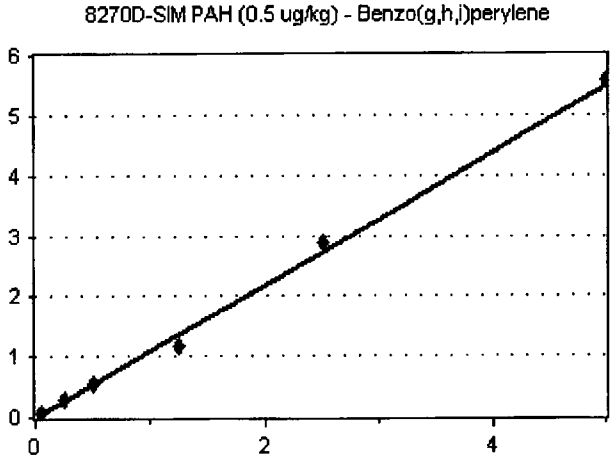
Average RF
RF RSD: 10.30108
[Conc] = 0.9762581 * [Response]

Calibration Report

Instrument: NT11
Calibration ID: ZA00015
Calibration Date: 25-Jan-2016 08:57 By JLW
Last Edit Date: 25-Jan-2016 13:53 By JLW

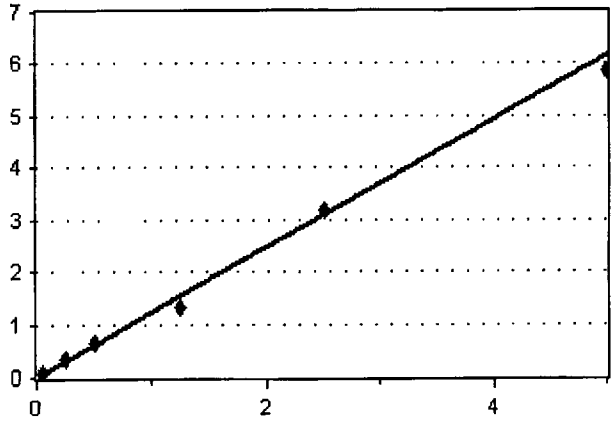
8270D-SIM PAH (0.5 ug/k

Benzo(g,h,i)perylene



Average RF
RF RSD: 7.332754
[Conc] = 1.094149 * [Response]

Perylene



Average RF
RF RSD: 8.438263
[Conc] = 1.235591 * [Response]

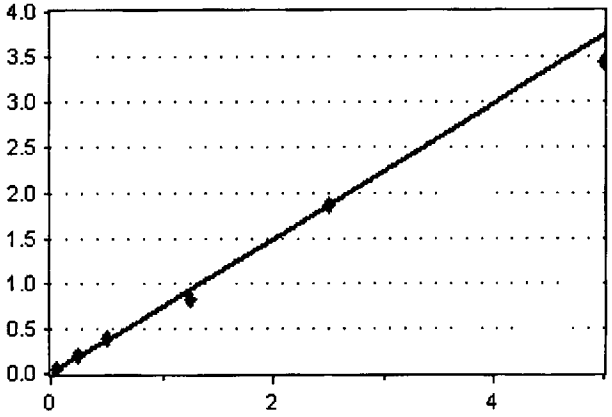
Calibration Report

Instrument: NT11
Calibration ID: ZA00015
Calibration Date: 25-Jan-2016 08:57 By JLW
Last Edit Date: 25-Jan-2016 13:53 By JLW

8270D-SIM PAH (0.5 ug/k

2-Methylnaphthalene-d10

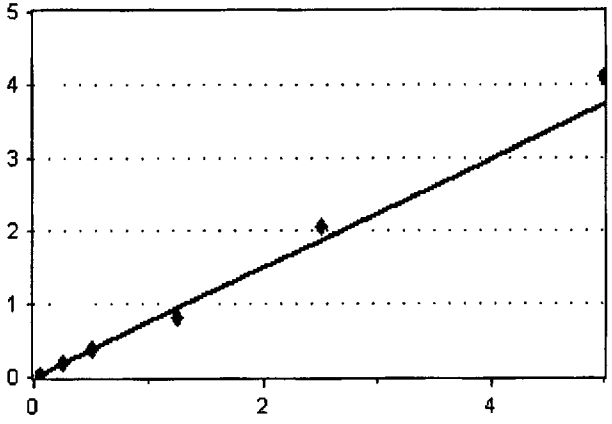
8270D-SIM PAH (0.5 ug/kg) - 2-Methylnaphthalene-d10



Average RF
RF RSD: 8.221795
[Conc] = 0.7475239 * [Response]

Dibenzo[a,h]anthracene-d14

8270D-SIM PAH (0.5 ug/kg) - Dibenzo[a,h]anthracene-d14



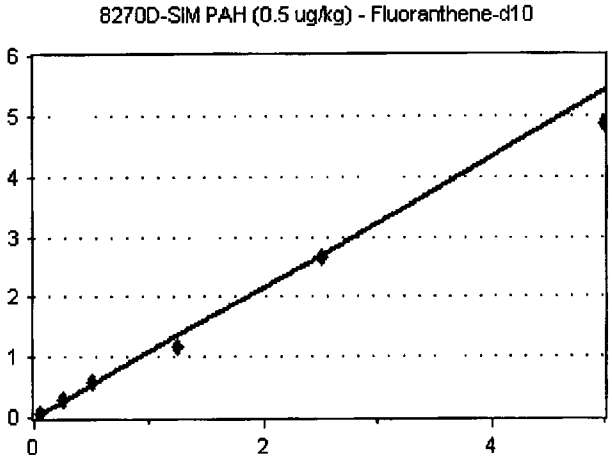
Average RF
RF RSD: 9.836392
[Conc] = 0.7461651 * [Response]

Calibration Report

Instrument: NT11
Calibration ID: ZA00015
Calibration Date: 25-Jan-2016 08:57 By JLW
Last Edit Date: 25-Jan-2016 13:53 By JLW

8270D-SIM PAH (0.5 ug/k

Fluoranthene-d10



Average RF

RF RSD: 9.854978

[Conc] = 1.082671 * [Response]

Naphthalene-d8

Average RF

RF RSD:

[Conc] = * [Response]

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC. Client: ANCHOR QEA, LLC

ARI Job No: 20150730 Project: PORT GAMBLE CLEAN-UP

Instrument ID: NT11 Calibration Date: 01/25/16

LAB FILE ID: RRF10 =16012506 RRF50 =16012507 RRF100=16012508
RRF250=16012505 RRF500=16012509 RRF1000=16012510

COMPOUND	RRF 10	RRF 50	RRF 100	RRF 250	RRF 500	RRF 1000	___ RRF	%RSD /R^2
Naphthalene	1.231	1.209	1.193	0.976	1.069	0.962	1.107	10.9
2-Methylnaphthalene	0.826	0.851	0.843	0.718	0.804	0.732	0.796	7.2
Acenaphthylene	1.824	1.792	1.710	1.472	1.577	1.436	1.635	10.1
Acenaphthene	1.112	1.111	1.086	0.920	1.020	0.942	1.032	8.3
Dibenzofuran	1.764	1.733	1.704	1.401	1.512	1.367	1.580	11.1
Fluorene	1.390	1.356	1.310	1.103	1.213	1.112	1.247	9.9
Phenanthrene	1.287	1.240	1.240	0.971	1.081	0.974	1.132	12.6
Anthracene	1.177	1.187	1.150	0.968	1.083	0.967	1.089	9.3
Fluoranthene	1.262	1.238	1.257	1.031	1.149	1.028	1.161	9.5
Pyrene	1.756	1.708	1.635	1.337	1.485	1.311	1.539	12.3
Benzo(a)anthracene	1.447	1.408	1.385	1.142	1.303	1.176	1.310	9.7
Chrysene	1.494	1.452	1.454	1.153	1.320	1.171	1.341	11.2
Benzo(a)pyrene	1.266	1.248	1.280	1.030	1.247	1.172	1.207	7.8
Indeno(1,2,3-cd)pyrene	1.175	1.225	1.268	1.070	1.352	1.324	1.236	8.4
Dibenzo(a,h)anthracene	0.870	0.960	1.011	0.852	1.086	1.078	0.976	10.3
Benzo(g,h,i)perylene	1.117	1.112	1.132	0.933	1.154	1.115	1.094	7.3
Pentachlorophenol								
1-Methylnaphthalene	0.766	0.769	0.769	0.641	0.721	0.658	0.721	8.1
Carbazole								
Benzo(b)fluoranthene	1.436	1.437	1.408	1.088	1.315	1.216	1.317	10.7
Benzo(k)fluoranthene	1.474	1.385	1.480	1.191	1.421	1.299	1.375	8.2
Benzo(j)fluoranthene	1.355	1.341	1.348	1.049	1.257	1.162	1.252	9.9
Perylene	1.299	1.311	1.312	1.050	1.264	1.177	1.236	8.4
Benzo(e)pyrene	1.372	1.321	1.332	1.048	1.259	1.162	1.249	9.8
2-Methylnaphthalene-d10	0.803	0.806	0.784	0.662	0.743	0.686	0.747	8.2
Fluoranthene-d10	1.196	1.164	1.155	0.941	1.066	0.973	1.082	9.9
Dibenzo(a,h)anthracene-d14	0.661	0.750	0.765	0.657	0.824	0.819	0.746	9.8
2,4,6-Tribromophenol								

<- Outside QC limits: %RSD <20% or R^2 > 0.990

AVG-00117

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC. Client: ANCHOR QEA, LLC

ARI Job No: 20150730 Project: PORT GAMBLE CLEAN-UP

Ical Midpoint ID: 16012505 Ical Date: 01/25/16

Instrument ID: NT11 Cont. Cal Date: 01/25/16

	IS1(NPT) AREA #	RT #	IS2(ANT) AREA #	RT #	IS3(PHN) AREA #	RT #
ICAL MIDPT	356051	6.71	264524	9.71	444949	12.38
UPPER LIMIT	712102		529048		889898	
LOWER LIMIT	178026		132262		222475	
CCAL	309113	6.71	227974	9.71	372441	12.38
UPPER LIMIT		7.21		10.21		12.88
LOWER LIMIT		6.21		9.21		11.88
01	297375	6.71	218000	9.71	349233	12.38
02						
03						
04						
05						
06						
07						
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

IS1 = Naphthalene-d8
IS2 = Acenaphthene-d10
IS3 = Phenanthrene-d10

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC. Client: ANCHOR QEA, LLC

ARI Job No: 20150730 Project: PORT GAMBLE CLEAN-UP

Ical Midpoint ID: 16012505 Ical Date: 01/25/16

Instrument ID: NT11 Cont. Cal Date: 01/25/16

	IS4 (CRY) AREA #	RT #	IS5 (PRY) AREA #	RT #	AREA #	RT #
ICAL MIDPT	343139	17.12	319277	20.01		
UPPER LIMIT	686278		638554			
LOWER LIMIT	171570		159639			
CCAL	295350	17.12	273271	20.00		
UPPER LIMIT		17.62		20.50		
LOWER LIMIT		16.62		19.50		
01	282390	17.12	252294	20.00		
02						
03						
04						
05						
06						
07						
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

IS4 = Chrysene-d12
IS5 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

AXYS 00119

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt11.i\20160125.b

ARI Job No.: TUNE Method: DFTPP.m Instrument: nt11.i Date: 25-JAN-2016

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0857	16012504.D	TUNE	10	1	NO MANUAL INTEGRATION
0914	16012505.D	LLPAH	ICV	1	NO MANUAL INTEGRATION
1029	16012506.D	LLPAH	10	1	NO MANUAL INTEGRATION
0959	16012507.D	LLPAH	50	1	NO MANUAL INTEGRATION
1129	16012508.D	LLPAH	100	1	NO MANUAL INTEGRATION
1059	16012509.D	LLPAH	500	1	NO MANUAL INTEGRATION
1200	16012510.D	LLPAH	1000	1	NO MANUAL INTEGRATION
1230	16012511.D	LLPAH	SCV	1	NO MANUAL INTEGRATION

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt11.i\20160125.b\lowsim.m
Batch File: \\target\share\chem3\nt11.i\20160125.b
Inst ID: nt11.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	16012505	16012507	16012506	16012509	16012508	16012510
INJ.DATE:	25-JAN-2016	25-JAN-2016	25-JAN-2016	25-JAN-2016	25-JAN-2016	25-JAN-2016
INJ.TIME:	09:14	09:59	10:29	10:59	11:29	12:00

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
*	4 Naphthalene-d8	6.708	6.708	6.708	6.708	6.708	6.708	6.708	6.458-6.958	6.708	0.000
	5 Naphthalene	6.739	6.739	6.739	6.739	6.739	6.739	6.739	6.489-6.989	6.739	0.000
$	6 2-Methylnaphthalene-d1	7.685	7.685	7.685	7.685	7.674	7.674	7.674	7.424-7.924	7.681	0.005
	7 2-Methylnaphthalene	7.737	7.737	7.737	7.737	7.737	7.737	7.737	7.487-7.987	7.737	0.000
	8 1-Methylnaphthalene	7.989	7.989	7.989	7.989	7.989	7.989	7.989	7.739-8.239	7.989	0.000
	10 Acenaphthylene	9.551	9.562	9.551	9.551	9.551	9.551	9.551	9.301-9.801	9.552	0.005
*	11 Acenaphthene-d10	9.706	9.717	9.706	9.706	9.706	9.706	9.706	9.456-9.956	9.707	0.005
	12 Acenaphthene	9.772	9.772	9.772	9.772	9.772	9.772	9.772	9.522-10.022	9.772	0.000
	14 Dibenzofuran	9.971	9.982	9.971	9.971	9.971	9.971	9.971	9.721-10.221	9.973	0.005
	15 Fluorene	10.591	10.602	10.591	10.591	10.591	10.591	10.591	10.341-10.841	10.593	0.005
$	16 2,4,6-Tribromophenol	+++++	+++++	+++++	+++++	+++++	+++++	12.499	12.249-12.749	+++++	+++++
	17 Pentachlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	4.785	4.535-5.035	+++++	+++++
*	18 Phenanthrene-d10	12.385	12.385	12.385	12.385	12.385	12.385	12.385	12.135-12.635	12.385	0.000
	19 Phenanthrene	12.429	12.429	12.429	12.429	12.418	12.429	12.429	12.179-12.679	12.427	0.004
	20 Anthracene	12.484	12.485	12.474	12.473	12.474	12.473	12.473	12.223-12.723	12.477	0.006
	22 Carbazole	+++++	+++++	+++++	+++++	+++++	+++++	14.533	14.283-14.783	+++++	+++++
$	23 Fluoranthene-d10	14.486	14.486	14.486	14.486	14.476	14.476	14.476	14.226-14.726	14.482	0.005

Reviewer 1 JU Date: 1/25/16
Reviewer 2 Date: 1/25/16

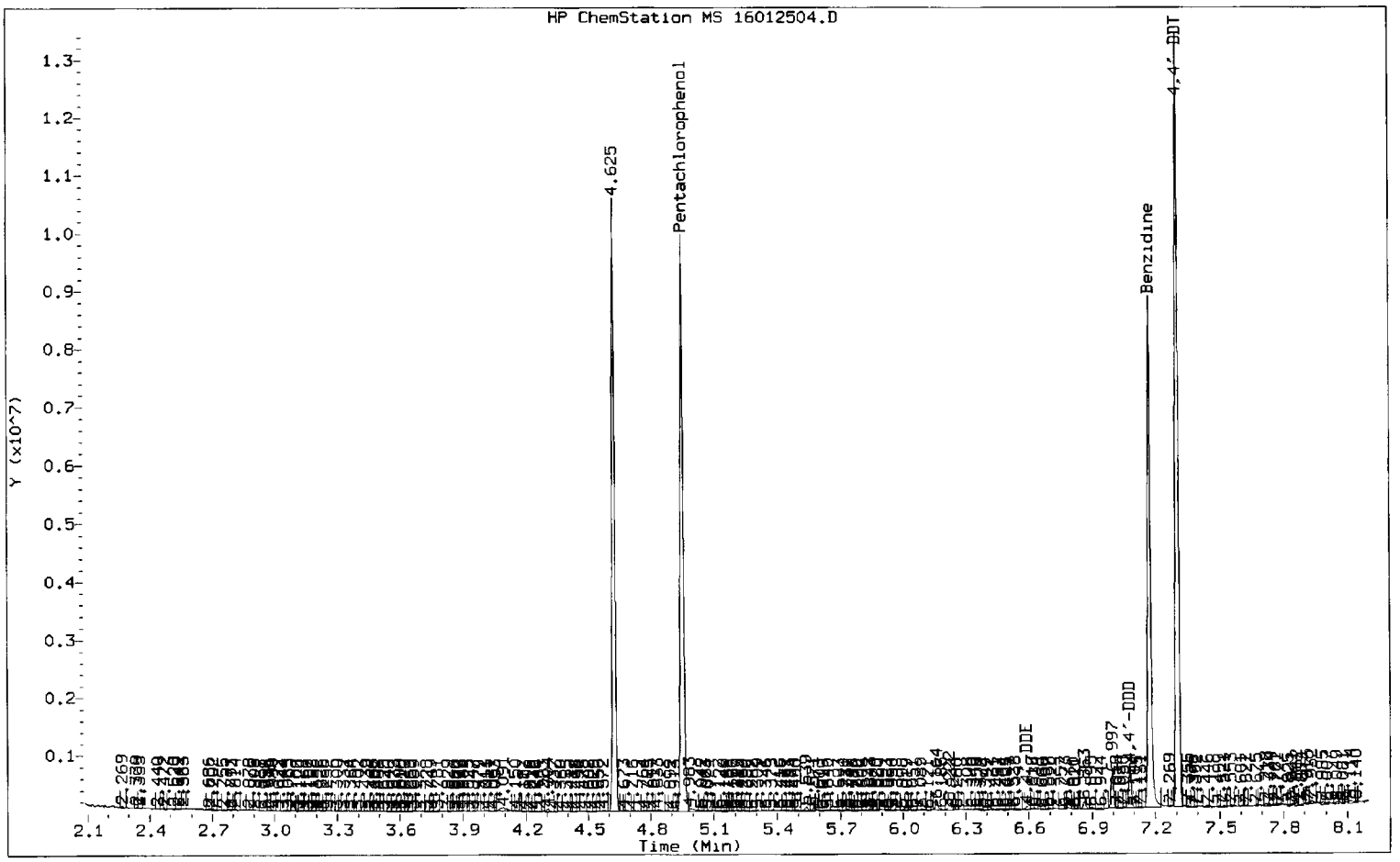
ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

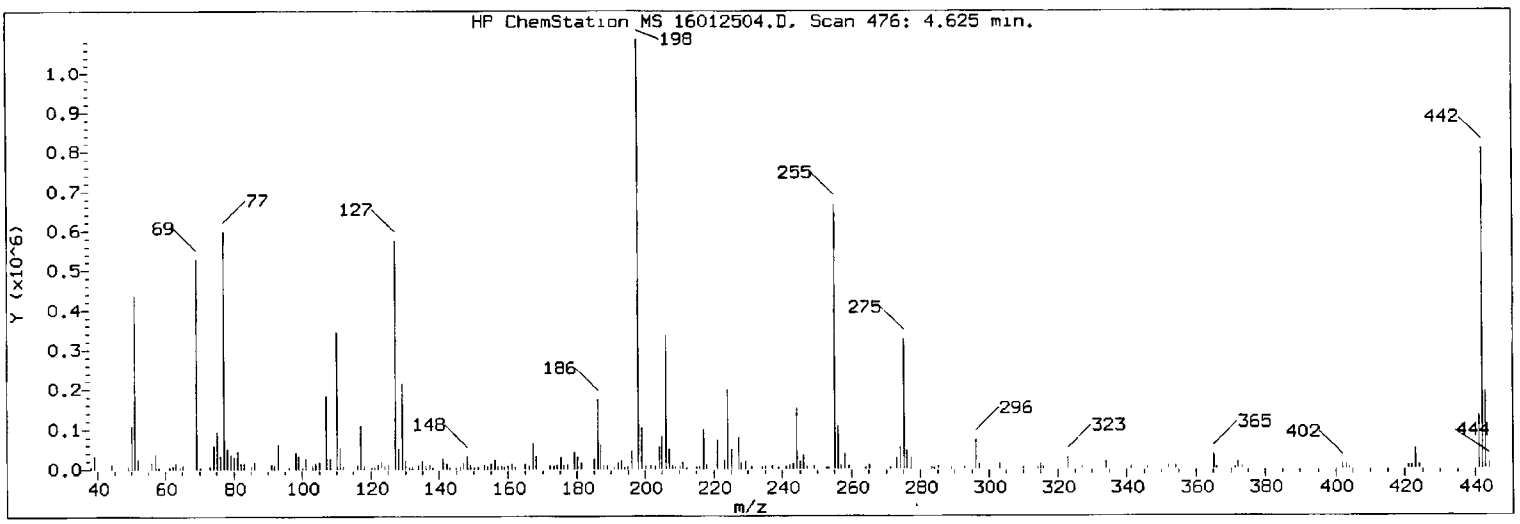
Method File: \\target\share\chem3\nt11.i\20160125.b\lowsim.m
Batch File: \\target\share\chem3\nt11.i\20160125.b
Inst ID: nt11.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
24 Fluoranthene	14.514	14.524	14.515	14.514	14.515	14.514	14.514	14.264-14.764	14.516	0.004
25 Pyrene	15.014	15.014	15.014	15.014	15.014	15.014	15.014	14.764-15.264	15.014	0.000
28 Benzo(a)anthracene	17.030	17.038	17.030	17.030	17.030	17.030	17.030	16.780-17.280	17.031	0.003
* 29 Chrysene-d12	17.121	17.130	17.121	17.121	17.121	17.121	17.121	16.871-17.371	17.123	0.003
30 Chrysene	17.171	17.179	17.171	17.171	17.171	17.171	17.171	16.921-17.421	17.172	0.003
44 Benzo(b)fluoranthene	18.921	18.921	18.922	18.922	18.912	18.921	18.921	18.671-19.171	18.920	0.004
45 Benzo(k)fluoranthene	18.969	18.970	18.960	18.960	18.960	18.960	18.960	18.710-19.210	18.963	0.005
46 Benzo(j)fluoranthene	19.027	19.037	19.027	19.027	19.027	19.027	19.027	18.777-19.277	19.029	0.004
34 Benzo(a)pyrene	19.796	19.796	19.796	19.796	19.786	19.796	19.796	19.546-20.046	19.794	0.004
* 35 Perylene-d12	20.007	20.007	20.007	20.007	19.998	19.998	19.998	19.748-20.248	20.004	0.005
$ 36 Dibenzo(a,h)anthracene	22.443	22.443	22.432	22.443	22.432	22.443	22.443	22.193-22.693	22.439	0.006
37 Indeno(1,2,3-cd)pyrene	22.575	22.575	22.564	22.564	22.565	22.575	22.575	22.325-22.825	22.570	0.006
38 Dibenzo(a,h)anthracene	22.553	22.564	22.553	22.553	22.553	22.553	22.553	22.303-22.803	22.555	0.005
39 Benzo(g,h,i)perylene	23.716	23.716	23.705	23.705	23.705	23.705	23.705	23.455-23.955	23.709	0.006
47 Perylene	20.074	20.075	20.065	20.065	20.065	20.065	20.065	19.815-20.315	20.068	0.005
48 Benzo(e)pyrene	19.681	19.681	19.681	19.681	19.681	19.681	19.681	19.431-19.931	19.681	0.000

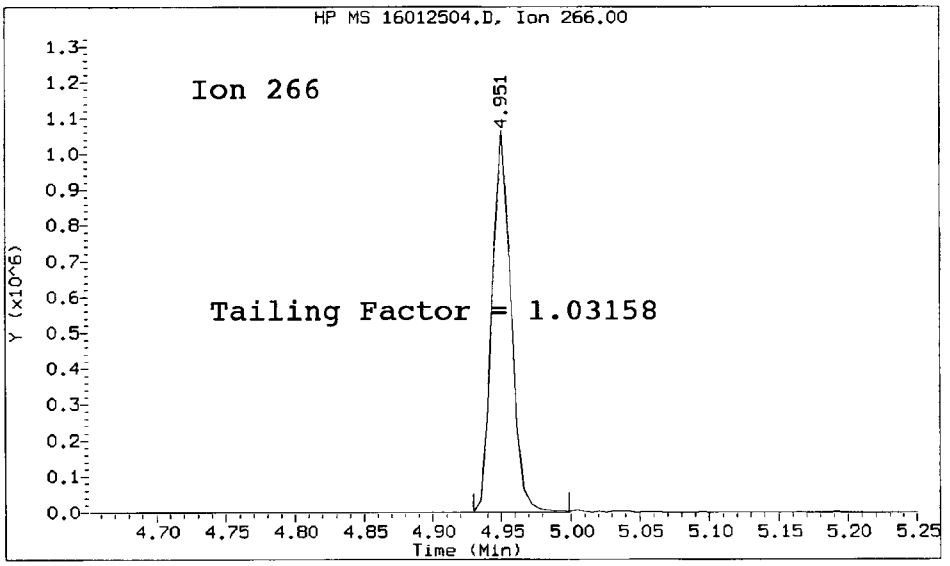
DFTPP TAILING FACTOR AND BREAKDOWN GRAPHIC REPORT

Datafile Analyzed: /20160125.b/16012504.D/16012504.D
Method Used: \20160125.b\DFTPP.m Inst: nt11
Injection Date: 25-JAN-2016 08:57 Operator: JW
Sample Info: TUNE 10 TUNE 10
Report Date: 01/25/2016 09:09



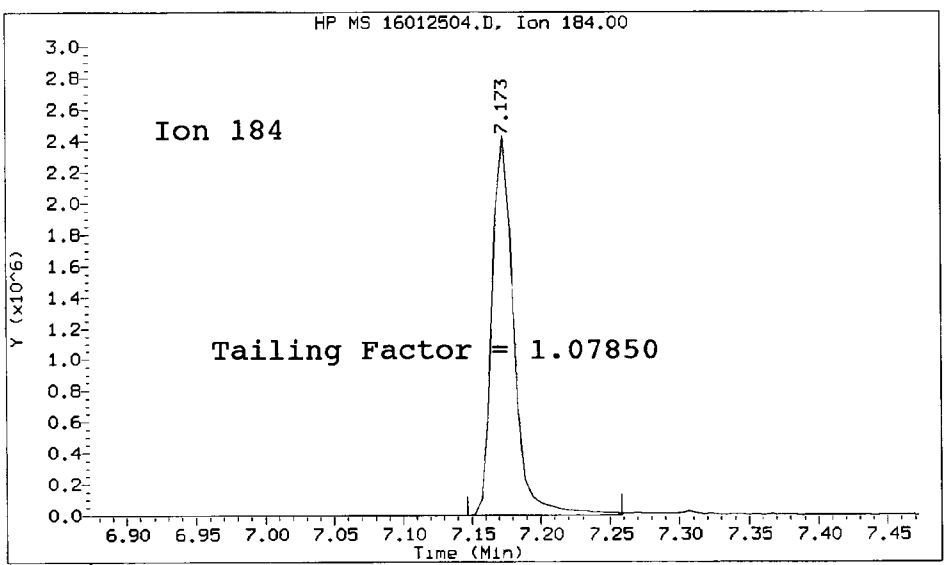


Datafile Analyzed: /20160125.b/16012504.D/16012504.D
Method Used: \20160125.b\DFTPP.m\sw846ddt.m Inst: nt11
Injection Date: 25-JAN-2016 08:57 Operator: JR
Sample Info: TUNE 10
Report Date: 01/25/2016 09:09



Pentachlorophenol
==========
Exp. RT = 4.993
Found RT = 4.951

Tail Factor = 1.032 Maximum Allowed = 2.0



Benzidine
==========
Exp. RT = 7.221
Found RT = 7.173

Tail Factor = 1.078 Maximum Allowed = 2.0

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	37.45
68	Less than 2.00% of mass 69	0.37 (0.81)
69	Mass 69 relative abundance	45.57
70	Less than 2.00% of mass 69	0.29 (0.63)
127	10.00 - 80.00% of mass 198	50.81
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	8.74
275	10.00 - 60.00% of mass 198	28.48
365	Greater than 1.00% of mass 198	2.89
441	0.01 - 24.00% of mass 442	12.40 (16.41)
442	50.00 - 200.00% of mass 198	75.54
443	15.00 - 24.00% of mass 442	16.39 (21.69)

8270 TAILING FACTOR/BREAKDOWN SUMMARY RESULTS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test
Pentachlorophenol	1.0315789	2.000	PASS
Benzidine	1.0784983	2.000	PASS

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	1860276			N/A
4,4-DDE	8198	0.4	20.0	PASS
4,4-DDD	124298	6.3	20.0	PASS
4,4-DDD + DDE	132496	6.6	20.0	PASS

Tuning Sample, nt11.i/20160125.b/16012504.D, *** PASSED ***

Data File: 16012504.D
Spectrum: Avg. Scans 475-477 (4.63), Background Scan 470
Location of Maximum: 198.00
Number of points: 244

m/z	Y	m/z	Y	m/z	Y	m/z	Y
38.00	3649	120.00	2093	189.00	6588	273.00	16744
39.00	23416	121.00	1355	191.00	5306	274.00	42336
40.00	2821	122.00	8348	192.00	12210	275.00	253312
41.00	751	123.00	13455	193.00	14186	276.00	34312
43.00	740	124.00	5977	194.00	1910	277.00	19064
44.00	1103	125.00	7429	195.00	1308	278.00	2909
49.00	1335	127.00	451840	196.00	35320	283.00	3255
50.00	86040	128.00	35152	198.00	889344	284.00	832
51.00	333056	129.00	168000	199.00	77688	285.00	4669
52.00	16370	130.00	16424	200.00	5755	289.00	707
55.00	3839	131.00	1646	201.00	6194	293.00	5387
56.00	11002	132.00	2558	202.00	2546	296.00	58592
57.00	27120	134.00	6150	203.00	5344	297.00	8132
58.00	1084	135.00	14263	204.00	40192	303.00	8680
61.00	4453	136.00	4923	205.00	61784	304.00	1882
62.00	5898	137.00	7270	206.00	269376	310.00	864
63.00	14254	138.00	2256	207.00	38520	314.00	1111
64.00	1684	139.00	710	208.00	7629	315.00	6898
65.00	8896	141.00	18856	209.00	2955	316.00	5846
68.00	3292	142.00	9147	210.00	4025	322.00	2037
69.00	405312	143.00	4171	211.00	10899	323.00	23200
70.00	2541	145.00	1964	212.00	4262	324.00	3512
73.00	4101	146.00	4148	215.00	1774	327.00	3549
74.00	42416	147.00	13499	216.00	3495	328.00	807
75.00	72696	148.00	25376	217.00	68544	332.00	3036
76.00	26600	149.00	7146	218.00	9377	333.00	1285
77.00	460672	150.00	979	221.00	58512	334.00	13573
78.00	31040	151.00	4284	222.00	2379	335.00	4378
79.00	27688	152.00	1473	223.00	18400	336.00	770
80.00	23600	153.00	6911	224.00	152832	341.00	3102
81.00	32800	154.00	5303	225.00	36752	342.00	766
82.00	9299	155.00	13420	226.00	2432	346.00	3637
83.00	9216	156.00	18976	227.00	61136	351.00	685
84.00	557	157.00	3983	228.00	8686	352.00	7540
85.00	5522	158.00	5101	229.00	12504	353.00	3491
86.00	8497	159.00	3868	231.00	6526	354.00	6396
87.00	4346	160.00	6848	233.00	803	355.00	1196
88.00	2973	161.00	10662	234.00	4102	365.00	25664
91.00	8185	162.00	3791	235.00	4443	366.00	3165
92.00	7611	165.00	9192	236.00	2359	371.00	821
93.00	49776	166.00	6324	237.00	5889	372.00	13465
94.00	3390	167.00	45400	239.00	2902	373.00	3113
96.00	936	168.00	21944	240.00	896	377.00	679
97.00	1770	169.00	3837	241.00	3783	383.00	882
98.00	30680	170.00	736	242.00	6940	384.00	883
99.00	29104	171.00	718	243.00	8594	390.00	770
100.00	3048	172.00	3954	244.00	110872	402.00	6242
101.00	17480	173.00	4499	245.00	15704	403.00	6551
103.00	6162	174.00	8976	246.00	23296	404.00	2057

104.00	11942	175.00	23464	247.00	4598	421.00	5587
105.00	12846	176.00	5626	249.00	4985	422.00	6188
106.00	1995	177.00	8652	252.00	911	423.00	43232
107.00	141248	178.00	2929	253.00	4212	424.00	5324
108.00	25624	179.00	33368	255.00	528192	441.00	110248
109.00	3384	180.00	23904	256.00	83696	442.00	671808
110.00	255808	181.00	13103	257.00	8213	443.00	145728
111.00	38624	182.00	2291	258.00	28904	444.00	12291
112.00	4258	184.00	1696	259.00	6298	445.00	705
116.00	6833	185.00	19448	264.00	794		
117.00	87088	186.00	143040	265.00	9743		
118.00	7590	187.00	43488	266.00	2006		
119.00	673	188.00	7046	271.00	1026		

ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160125.b\16012505.D
Lab Smp Id: LLPAH ICV
Inj Date : 25-JAN-2016 09:14 MS Autotune Date: 23-APR-2014 12:54
Operator : JW Inst ID: nt11.i
Smp Info : LLPAH ICV
Misc Info :
Comment :
Method : \\target\share\chem3\nt11.i\20160125.b\lowsim.m
Meth Date : 25-Jan-2016 12:22 jonathonw Quant Type: ISTD
Cal Date : 25-JAN-2016 12:00 Cal File: 16012510.D
Als bottle: 2 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PEMD.sub
Target Version: 4.14
Processing Host: AUTOSPECDATA2

Concentration Formula: Amt * DF * Vt/(Ws * (100-M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	500.000	Volume of final extract (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
* 4	Naphthalene-d8	136	6.707	6.707	(1.000)	356051	200.000	
5	Naphthalene	128	6.739	6.739	(1.005)	434168	250.000	220
$ 6	2-Methylnaphthalene-d10	152	7.684	7.674	(1.146)	294773	250.000	222
7	2-Methylnaphthalene	142	7.737	7.737	(1.153)	319553	250.000	226
8	1-Methylnaphthalene	142	7.989	7.989	(1.191)	285143	250.000	222
10	Acenaphthylene	152	9.550	9.550	(0.984)	486879	250.000	225
* 11	Acenaphthene-d10	164	9.705	9.705	(1.000)	264524	200.000	
12	Acenaphthene	153	9.771	9.772	(1.007)	304139	250.000	223
14	Dibenzofuran	168	9.971	9.971	(1.027)	463292	250.000	222
15	Fluorene	166	10.591	10.591	(1.091)	364851	250.000	221
* 18	Phenanthrene-d10	188	12.384	12.384	(1.000)	444949	200.000	
19	Phenanthrene	178	12.429	12.429	(1.004)	539922	250.000	214
20	Anthracene	178	12.484	12.473	(1.008)	538499	250.000	222
$ 23	Fluoranthene-d10	212	14.485	14.476	(1.170)	523633	250.000	217
24	Fluoranthene	202	14.514	14.514	(1.172)	573274	250.000	222
25	Pyrene	202	15.014	15.014	(0.877)	573543	250.000	217
28	Benzo(a)anthracene	228	17.029	17.029	(0.995)	490006	250.000	218
* 29	Chrysene-d12	240	17.121	17.121	(1.000)	343139	200.000	
30	Chrysene	228	17.171	17.171	(1.003)	494549	250.000	215
44	Benzo(b)fluoranthene	252	18.921	18.921	(0.946)	434099	250.000	207
45	Benzo(k)fluoranthene	252	18.969	18.959	(0.948)	475189	250.000	216

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
	46 Benzo(j)fluoranthene	252	19.027	19.027	(0.951)	418612	250.000	209
	34 Benzo(a)pyrene	252	19.795	19.795	(0.989)	411042	250.000	213
*	35 Perylene-d12	264	20.007	19.997	(1.000)	319277	200.000	
$	36 Dibenzo(a,h)anthracene-d14	292	22.442	22.442	(1.122)	262204	250.000	220
	37 Indeno(1,2,3-cd)pyrene	276	22.575	22.575	(1.128)	427270	250.000	217
	38 Dibenzo(a,h)anthracene	278	22.553	22.553	(1.127)	340086	250.000	218
	39 Benzo(g,h,i)perylene	276	23.716	23.705	(1.185)	372546	250.000	213
	47 Perylene	252	20.074	20.064	(1.003)	419081	250.000	212
	48 Benzo(e)pyrene	252	19.680	19.680	(0.984)	418150	250.000	210

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 16012505.D
Lab Smp Id: LLPAH ICV
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20160125.b\lowsim.m
Misc Info:

Calibration Date: 25-JAN-2016
Calibration Time: 09:14

Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	356051	178026	712102	356051	0.00
11 Acenaphthene-d10	264524	132262	529048	264524	0.00
18 Phenanthrene-d10	444949	222475	889898	444949	0.00
29 Chrysene-d12	343139	171570	686278	343139	0.00
35 Perylene-d12	319277	159639	638554	319277	0.00

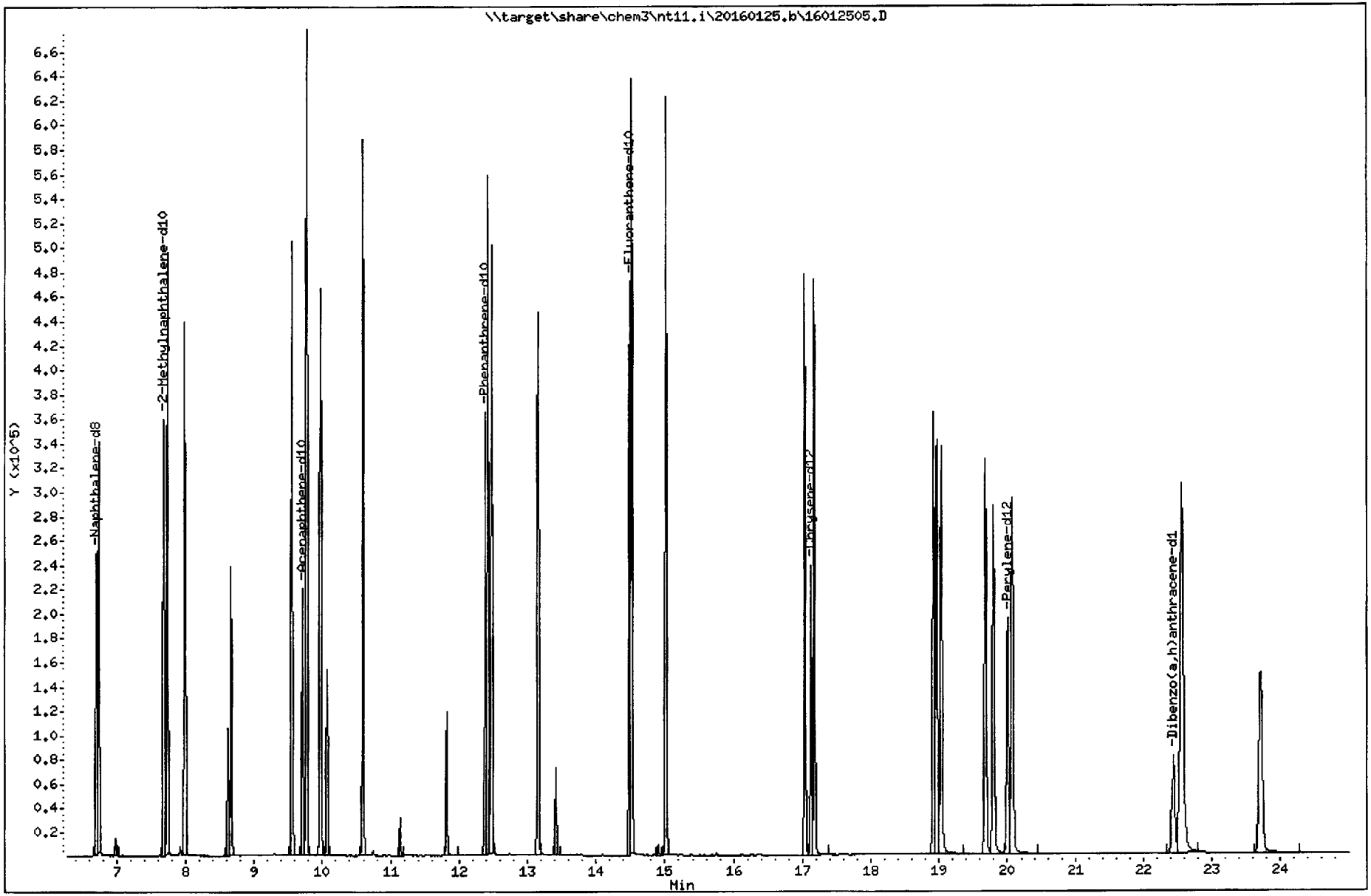
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.71	6.21	7.21	6.71	0.00
11 Acenaphthene-d10	9.71	9.21	10.21	9.71	0.00
18 Phenanthrene-d10	12.38	11.88	12.88	12.38	0.00
29 Chrysene-d12	17.12	16.62	17.62	17.12	0.00
35 Perylene-d12	20.01	19.51	20.51	20.01	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: \\target\share\chem3\nt11.i\20160125.b\16012505.D
Date : 25-JAN-2016 09:14
Client ID:
Sample Info: LLPAH ICV
Volume Injected (uL): 2.0
Column phase: Rxi-17Sil MS

Instrument: nt11.i

Operator: JW
Column diameter: 0.25



REVIEW SUMMARY FOR FILE - 16012505.D

Lab ID: LLPAH ICV
nt11.i, 20160125.b\lowsim.m, 25-JAN-2016 09:14

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

On Column LOD for nt11.i,20160125.b\lowsim.m,Sublist: PEMD.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: Benzo(e)pyrene 2.0000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000

ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160125.b\16012507.D
Lab Smp Id: LLPAH 50
Inj Date : 25-JAN-2016 09:59 MS Autotune Date: 23-APR-2014 12:54
Operator : JW Inst ID: nt11.i
Smp Info : LLPAH 50
Misc Info :
Comment :
Method : \\target\share\chem3\nt11.i\20160125.b\lowsim.m
Meth Date : 25-Jan-2016 12:22 jonathonw Quant Type: ISTD
Cal Date : 25-JAN-2016 12:00 Cal File: 16012510.D
Als bottle: 4 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PEMD.sub
Target Version: 4.14
Processing Host: AUTOSPECDATA2

Concentration Formula: Amt * DF * Vt/(Ws * (100-M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	500.000	Volume of final extract (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Cpnd Variable		Local Compound Variable

1/25/16

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
*	4 Naphthalene-d8	136	6.707	6.707	(1.000)	294064	200.000	
	5 Naphthalene	128	6.739	6.739	(1.005)	88899	50.0000	54.6
$	6 2-Methylnaphthalene-d10	152	7.684	7.674	(1.146)	59259	50.0000	53.9
	7 2-Methylnaphthalene	142	7.737	7.737	(1.153)	62573	50.0000	53.5
	8 1-Methylnaphthalene	142	7.989	7.989	(1.191)	56505	50.0000	53.3
	10 Acenaphthylene	152	9.561	9.550	(0.984)	96982	50.0000	54.8
*	11 Acenaphthene-d10	164	9.716	9.705	(1.000)	216442	200.000	
	12 Acenaphthene	153	9.772	9.772	(1.006)	60139	50.0000	53.9
	14 Dibenzofuran	168	9.982	9.971	(1.027)	93767	50.0000	54.8
	15 Fluorene	166	10.602	10.591	(1.091)	73356	50.0000	54.3
*	18 Phenanthrene-d10	188	12.384	12.384	(1.000)	363731	200.000	
	19 Phenanthrene	178	12.429	12.429	(1.004)	112769	50.0000	54.8
	20 Anthracene	178	12.484	12.473	(1.008)	107982	50.0000	54.5
$	23 Fluoranthene-d10	212	14.485	14.476	(1.170)	105804	50.0000	53.7
	24 Fluoranthene	202	14.524	14.514	(1.173)	112554	50.0000	53.3
	25 Pyrene	202	15.014	15.014	(0.876)	115927	50.0000	55.5
	28 Benzo(a)anthracene	228	17.038	17.029	(0.995)	95572	50.0000	53.7
*	29 Chrysene-d12	240	17.129	17.121	(1.000)	271481	200.000	
	30 Chrysene	228	17.179	17.171	(1.003)	98587	50.0000	54.2
	44 Benzo(b)fluoranthene	252	18.921	18.921	(0.946)	90541	50.0000	54.6
	45 Benzo(k)fluoranthene	252	18.969	18.959	(0.948)	87264	50.0000	50.4

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
	46 Benzo(j)fluoranthene	252	19.036	19.027	(0.951)	84510	50.0000	53.6
	34 Benzo(a)pyrene	252	19.795	19.795	(0.989)	78663	50.0000	51.7
*	35 Perylene-d12	264	20.007	19.997	(1.000)	252038	200.000	
$	36 Dibenzo(a,h)anthracene-d14	292	22.442	22.442	(1.122)	47291	50.0000	50.3
	37 Indeno(1,2,3-cd)pyrene	276	22.575	22.575	(1.128)	77218	50.0000	49.6
	38 Dibenzo(a,h)anthracene	278	22.564	22.553	(1.128)	60472	50.0000	49.2
	39 Benzo(g,h,i)perylene	276	23.716	23.705	(1.185)	70097	50.0000	50.8
	47 Perylene	252	20.074	20.064	(1.003)	82600	50.0000	53.0
	48 Benzo(e)pyrene	252	19.680	19.680	(0.984)	83220	50.0000	52.9

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 16012507.D
Lab Smp Id: LLPAH 50
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20160125.b\lowsim.m
Misc Info:

Calibration Date: 25-JAN-2016
Calibration Time: 09:14

Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 4.

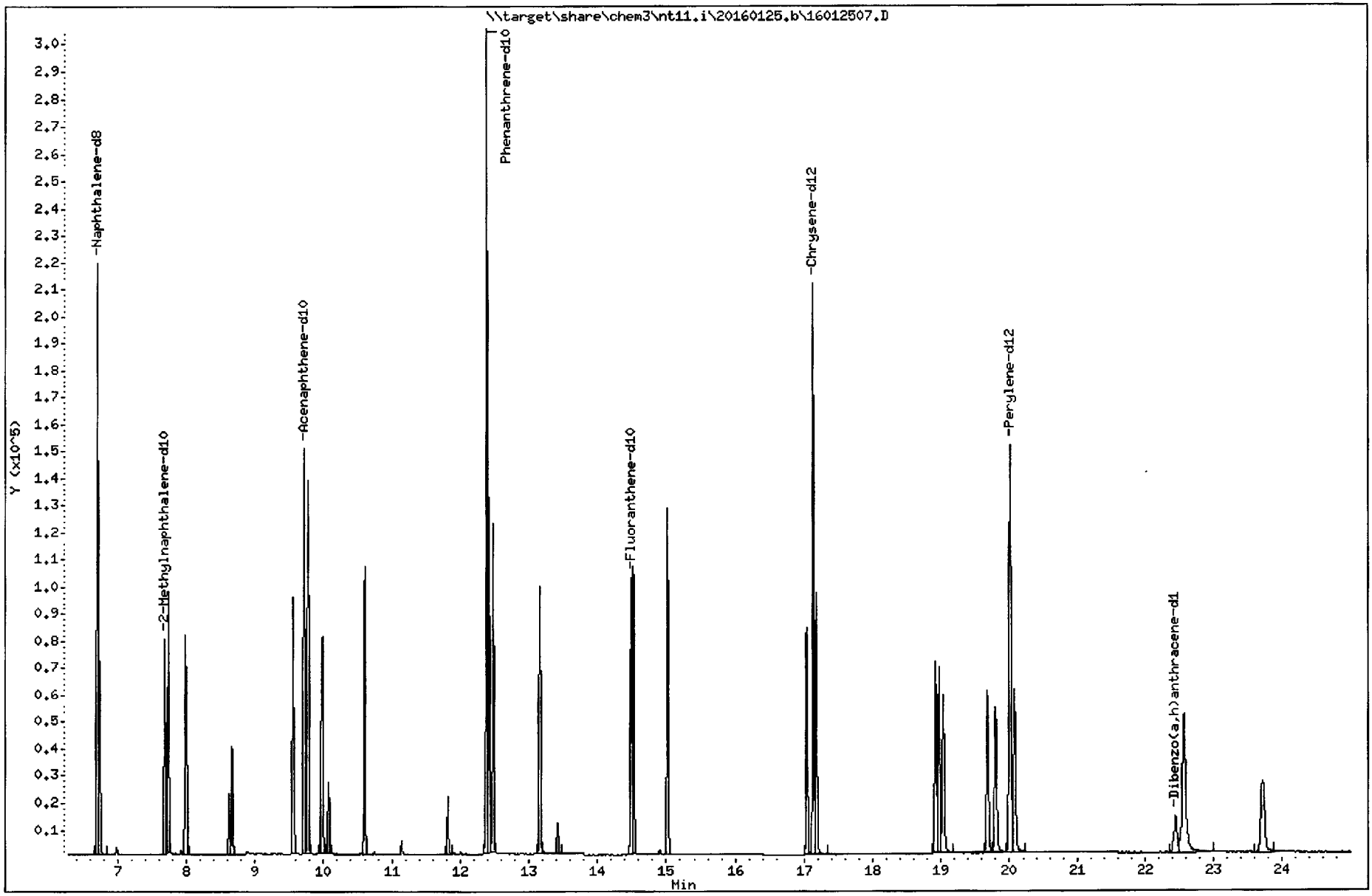
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	356051	178026	712102	294064	-17.41
11 Acenaphthene-d10	264524	132262	529048	216442	-18.18
18 Phenanthrene-d10	444949	222475	889898	363731	-18.25
29 Chrysene-d12	343139	171570	686278	271481	-20.88
35 Perylene-d12	319277	159639	638554	252038	-21.06

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.71	6.21	7.21	6.71	0.00
11 Acenaphthene-d10	9.71	9.21	10.21	9.72	0.11
18 Phenanthrene-d10	12.38	11.88	12.88	12.38	0.00
29 Chrysene-d12	17.12	16.62	17.62	17.13	0.05
35 Perylene-d12	20.01	19.51	20.51	20.01	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: \\target\share\chem3\nt11.i\20160125.b\16012507.D
Date : 25-JAN-2016 09:59
Client ID:
Sample Info: LLPAH 50
Volume Injected (uL): 2.0
Column phase: Rxi-17Sil MS

Instrument: nt11.i
Operator: JW
Column diameter: 0.25



REVIEW SUMMARY FOR FILE - 16012507.D

Lab ID: LLPAH 50
nt11.i, 20160125.b\lowsim.m, 25-JAN-2016 09:59

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

On Column LOD for nt11.i,20160125.b\lowsim.m,Sublist: PEMD.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: Benzo(e)pyrene 2.0000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000

ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160125.b\16012506.D
Lab Smp Id: LLPAH 10
Inj Date : 25-JAN-2016 10:29 MS Autotune Date: 23-APR-2014 12:54
Operator : JW Inst ID: nt11.i
Smp Info : LLPAH 10
Misc Info :
Comment :
Method : \\target\share\chem3\nt11.i\20160125.b\lowsim.m
Meth Date : 25-Jan-2016 12:22 jonathonw Quant Type: ISTD
Cal Date : 25-JAN-2016 12:00 Cal File: 16012510.D
Als bottle: 3 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PEMD.sub
Target Version: 4.14
Processing Host: AUTOSPECDATA2

Concentration Formula: Amt * DF * Vt/(Ws * (100-M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	500.000	Volume of final extract (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Cpnd Variable		Local Compound Variable

JW 1/25/16

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
* 4 Naphthalene-d8	136	6.707	6.707	(1.000)	299647	200.000	
5 Naphthalene	128	6.739	6.739	(1.005)	18447	10.0000	11.1
$ 6 2-Methylnaphthalene-d10	152	7.684	7.674	(1.146)	12038	10.0000	10.7
7 2-Methylnaphthalene	142	7.737	7.737	(1.153)	12383	10.0000	10.4
8 1-Methylnaphthalene	142	7.989	7.989	(1.191)	11471	10.0000	10.6
10 Acenaphthylene	152	9.550	9.550	(0.984)	19628	10.0000	11.2
* 11 Acenaphthene-d10	164	9.705	9.705	(1.000)	215219	200.000	
12 Acenaphthene	153	9.772	9.772	(1.007)	11963	10.0000	10.8
14 Dibenzofuran	168	9.971	9.971	(1.027)	18987	10.0000	11.2
15 Fluorene	166	10.591	10.591	(1.091)	14956	10.0000	11.1
* 18 Phenanthrene-d10	188	12.384	12.384	(1.000)	354756	200.000	
19 Phenanthrene	178	12.429	12.429	(1.004)	22831	10.0000	11.4
20 Anthracene	178	12.473	12.473	(1.007)	20882	10.0000	10.8
$ 23 Fluoranthene-d10	212	14.485	14.476	(1.170)	21223	10.0000	11.1
24 Fluoranthene	202	14.514	14.514	(1.172)	22394	10.0000	10.9
25 Pyrene	202	15.014	15.014	(0.877)	23290	10.0000	11.4
28 Benzo(a)anthracene	228	17.029	17.029	(0.995)	19194	10.0000	11.0
* 29 Chrysene-d12	240	17.121	17.121	(1.000)	265268	200.000	
30 Chrysene	228	17.171	17.171	(1.003)	19820	10.0000	11.1
44 Benzo(b)fluoranthene	252	18.921	18.921	(0.946)	17319	10.0000	10.9
45 Benzo(k)fluoranthene	252	18.959	18.959	(0.948)	17790	10.0000	10.7

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
	46 Benzo(j)fluoranthene	252	19.027	19.027	(0.951)	16351	10.0000	10.8
	34 Benzo(a)pyrene	252	19.795	19.795	(0.989)	15277	10.0000	10.5
*	35 Perylene-d12	264	20.007	19.997	(1.000)	241293	200.000	
$	36 Dibenzo(a,h)anthracene-d14	292	22.431	22.442	(1.121)	7978	10.0000	8.86
	37 Indeno(1,2,3-cd)pyrene	276	22.564	22.575	(1.128)	14178	10.0000	9.51
	38 Dibenzo(a,h)anthracene	278	22.553	22.553	(1.127)	10502	10.0000	8.92
	39 Benzo(g,h,i)perylene	276	23.705	23.705	(1.185)	13480	10.0000	10.2
	47 Perylene	252	20.064	20.064	(1.003)	15678	10.0000	10.5
	48 Benzo(e)pyrene	252	19.680	19.680	(0.984)	16547	10.0000	11.0

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 16012506.D
Lab Smp Id: LLPAH 10
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20160125.b\lowsim.m
Misc Info:

Calibration Date: 25-JAN-2016
Calibration Time: 09:14
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	356051	178026	712102	299647	-15.84
11 Acenaphthene-d10	264524	132262	529048	215219	-18.64
18 Phenanthrene-d10	444949	222475	889898	354756	-20.27
29 Chrysene-d12	343139	171570	686278	265268	-22.69
35 Perylene-d12	319277	159639	638554	241293	-24.43

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.71	6.21	7.21	6.71	0.00
11 Acenaphthene-d10	9.71	9.21	10.21	9.71	0.00
18 Phenanthrene-d10	12.38	11.88	12.88	12.38	0.00
29 Chrysene-d12	17.12	16.62	17.62	17.12	0.00
35 Perylene-d12	20.01	19.51	20.51	20.01	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: \\target\share\chem3\nt11.i\20160125.b\16012506.D

Date : 25-JAN-2016 10:29

Client ID:

Instrument: nt11.i

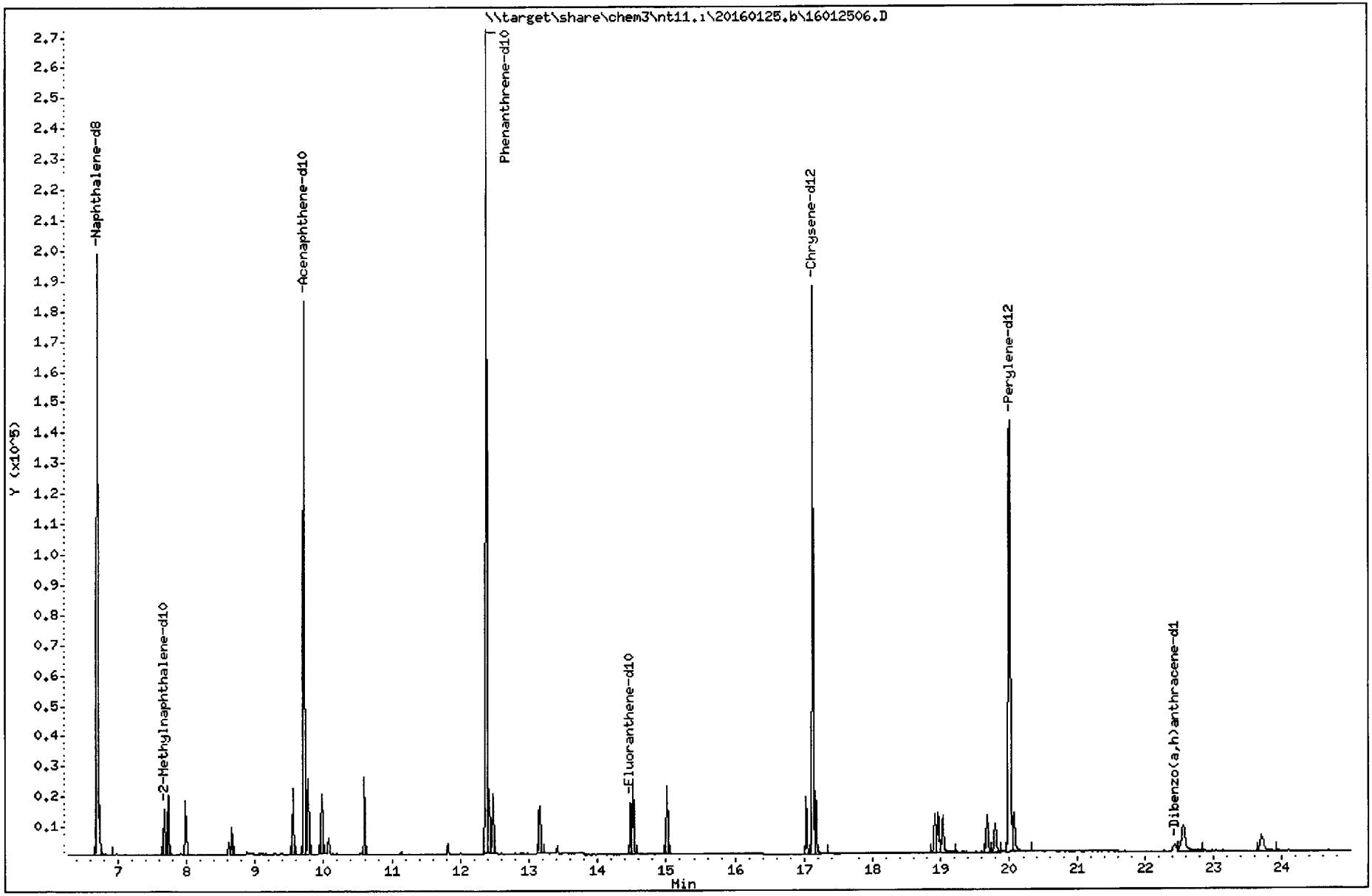
Sample Info: LLPAH 10

Volume Injected (uL): 2.0

Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25



REVIEW SUMMARY FOR FILE - 16012506.D

Lab ID: LLPAH 10
nt11.i, 20160125.b\lowsim.m, 25-JAN-2016 10:29

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
NONE			

On Column LOD for nt11.i,20160125.b\lowsim.m,Sublist: PEMD.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: Benzo(e)pyrene 2.0000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000

ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160125.b\16012509.D
Lab Smp Id: LLPAH 500
Inj Date : 25-JAN-2016 10:59 MS Autotune Date: 23-APR-2014 12:54
Operator : JW Inst ID: nt11.i
Smp Info : LLPAH 500
Misc Info :
Comment :
Method : \\target\share\chem3\nt11.i\20160125.b\lowsim.m
Meth Date : 25-Jan-2016 12:22 jonathonw Quant Type: ISTD
Cal Date : 25-JAN-2016 12:00 Cal File: 16012510.D
Als bottle: 6 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PEMD.sub
Target Version: 4.14
Processing Host: AUTOSPECDATA2

Concentration Formula: Amt * DF * Vt/(Ws * (100-M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	500.000	Volume of final extract (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Cpnd Variable		Local Compound Variable

JC 1/25/16

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
*	4 Naphthalene-d8	136	6.707	6.707	(1.000)	303314	200.000	
	5 Naphthalene	128	6.739	6.739	(1.005)	810334	500.000	483
$	6 2-Methylnaphthalene-d10	152	7.684	7.674	(1.146)	563695	500.000	497
	7 2-Methylnaphthalene	142	7.737	7.737	(1.153)	609536	500.000	505
	8 1-Methylnaphthalene	142	7.989	7.989	(1.191)	547015	500.000	501
	10 Acenaphthylene	152	9.550	9.550	(0.984)	900307	500.000	482
*	11 Acenaphthene-d10	164	9.705	9.705	(1.000)	228389	200.000	
	12 Acenaphthene	153	9.772	9.772	(1.007)	582352	500.000	494
	14 Dibenzofuran	168	9.971	9.971	(1.027)	863159	500.000	478
	15 Fluorene	166	10.591	10.591	(1.091)	692573	500.000	486
*	18 Phenanthrene-d10	188	12.384	12.384	(1.000)	374517	200.000	
	19 Phenanthrene	178	12.429	12.429	(1.004)	1012075	500.000	477
	20 Anthracene	178	12.473	12.473	(1.007)	1013964	500.000	497
$	23 Fluoranthene-d10	212	14.485	14.476	(1.170)	998553	500.000	493
	24 Fluoranthene	202	14.514	14.514	(1.172)	1075774	500.000	495
	25 Pyrene	202	15.014	15.014	(0.877)	1077457	500.000	483
	28 Benzo(a)anthracene	228	17.029	17.029	(0.995)	945351	500.000	497
*	29 Chrysene-d12	240	17.121	17.121	(1.000)	290179	200.000	
	30 Chrysene	228	17.171	17.171	(1.003)	958023	500.000	492
	44 Benzo(b)fluoranthene	252	18.921	18.921	(0.946)	877554	500.000	499
	45 Benzo(k)fluoranthene	252	18.959	18.959	(0.948)	948480	500.000	517

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
	46 Benzo(j)fluoranthene	252	19.027	19.027	(0.951)	838838	500.000	502
	34 Benzo(a)pyrene	252	19.795	19.795	(0.989)	832593	500.000	517
*	35 Perylene-d12	264	20.007	19.997	(1.000)	266991	200.000	
$	36 Dibenzo(a,h)anthracene-d14	292	22.442	22.442	(1.122)	550098	500.000	552
	37 Indeno(1,2,3-cd)pyrene	276	22.564	22.575	(1.128)	902818	500.000	547
	38 Dibenzo(a,h)anthracene	278	22.553	22.553	(1.127)	725124	500.000	556
	39 Benzo(g,h,i)perylene	276	23.705	23.705	(1.185)	770302	500.000	527
	47 Perylene	252	20.064	20.064	(1.003)	843684	500.000	511
	48 Benzo(e)pyrene	252	19.680	19.680	(0.984)	840139	500.000	504

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 16012509.D
Lab Smp Id: LLPAH 500
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20160125.b\lowsim.m
Misc Info:

Calibration Date: 25-JAN-2016
Calibration Time: 09:14

Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 4.

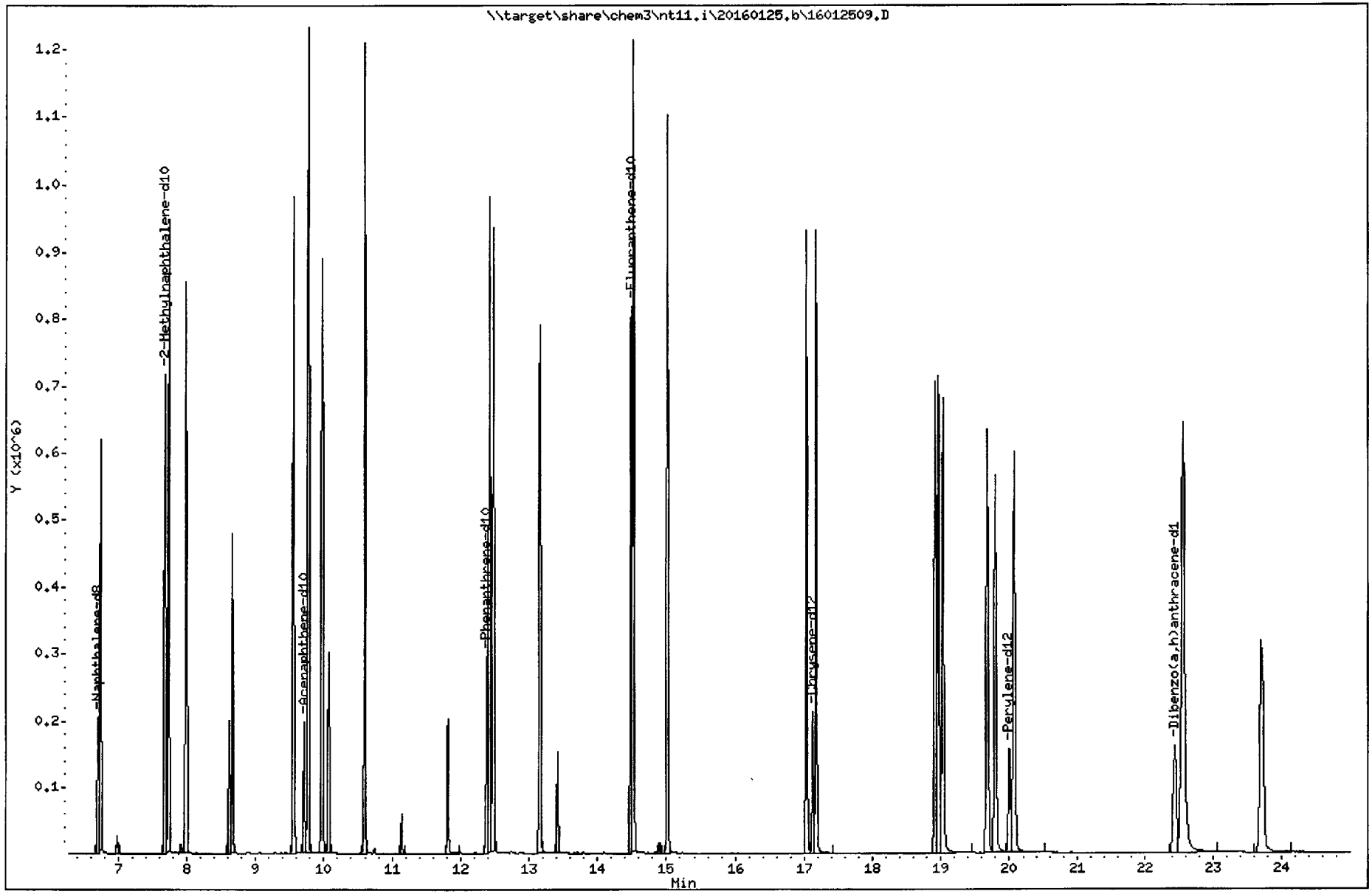
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	356051	178026	712102	303314	-14.81
11 Acenaphthene-d10	264524	132262	529048	228389	-13.66
18 Phenanthrene-d10	444949	222475	889898	374517	-15.83
29 Chrysene-d12	343139	171570	686278	290179	-15.43
35 Perylene-d12	319277	159639	638554	266991	-16.38

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.71	6.21	7.21	6.71	0.00
11 Acenaphthene-d10	9.71	9.21	10.21	9.71	0.00
18 Phenanthrene-d10	12.38	11.88	12.88	12.38	0.00
29 Chrysene-d12	17.12	16.62	17.62	17.12	0.00
35 Perylene-d12	20.01	19.51	20.51	20.01	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: \\target\share\chem3\nt11.i\20160125.b\16012509.D
Date : 25-JAN-2016 10:59
Client ID:
Sample Info: LLPAH 500
Volume Injected (uL): 2.0
Column phase: Rxi-17Sil MS

Instrument: nt11.i
Operator: JW
Column diameter: 0.25



REVIEW SUMMARY FOR FILE - 16012509.D

Lab ID: LLPAH 500
nt11.i, 20160125.b\lowsim.m, 25-JAN-2016 10:59

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

On Column LOD for nt11.i,20160125.b\lowsim.m,Sublist: PEMD.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: Benzo(e)pyrene 2.0000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000

ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160125.b\16012508.D
Lab Smp Id: LLPAH 100
Inj Date : 25-JAN-2016 11:29 MS Autotune Date: 23-APR-2014 12:54
Operator : JW Inst ID: nt11.i
Smp Info : LLPAH 100
Misc Info :
Comment :
Method : \\target\share\chem3\nt11.i\20160125.b\lowsim.m
Meth Date : 25-Jan-2016 12:22 jonathonw Quant Type: ISTD
Cal Date : 25-JAN-2016 12:00 Cal File: 16012510.D
Als bottle: 5 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PEMD.sub
Target Version: 4.14
Processing Host: AUTOSPECDATA2

Concentration Formula: Amt * DF * Vt/(Ws * (100-M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	500.000	Volume of final extract (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Cpnd Variable		Local Compound Variable

JC 1/25/16

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
*	4 Naphthalene-d8	136	6.707	6.707	(1.000)	299208	200.000	
	5 Naphthalene	128	6.739	6.739	(1.005)	178449	100.000	108
$	6 2-Methylnaphthalene-d10	152	7.674	7.674	(1.144)	117230	100.000	105
	7 2-Methylnaphthalene	142	7.737	7.737	(1.153)	126083	100.000	106
	8 1-Methylnaphthalene	142	7.989	7.989	(1.191)	115017	100.000	107
	10 Acenaphthylene	152	9.550	9.550	(0.984)	188606	100.000	105
*	11 Acenaphthene-d10	164	9.705	9.705	(1.000)	220557	200.000	
	12 Acenaphthene	153	9.772	9.772	(1.007)	119751	100.000	105
	14 Dibenzofuran	168	9.971	9.971	(1.027)	187862	100.000	108
	15 Fluorene	166	10.591	10.591	(1.091)	144519	100.000	105
*	18 Phenanthrene-d10	188	12.384	12.384	(1.000)	361305	200.000	
	19 Phenanthrene	178	12.418	12.429	(1.003)	224097	100.000	110
	20 Anthracene	178	12.473	12.473	(1.007)	207686	100.000	106
$	23 Fluoranthene-d10	212	14.476	14.476	(1.169)	208642	100.000	107
	24 Fluoranthene	202	14.514	14.514	(1.172)	227161	100.000	108
	25 Pyrene	202	15.014	15.014	(0.877)	229911	100.000	106
	28 Benzo(a)anthracene	228	17.030	17.029	(0.995)	194701	100.000	106
*	29 Chrysene-d12	240	17.121	17.121	(1.000)	281219	200.000	
	30 Chrysene	228	17.171	17.171	(1.003)	204390	100.000	108
	44 Benzo(b)fluoranthene	252	18.911	18.921	(0.946)	178870	100.000	107
	45 Benzo(k)fluoranthene	252	18.960	18.959	(0.948)	188086	100.000	108

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
	46 Benzo(j)fluoranthene	252	19.027	19.027	(0.951)	171312	100.000	108
	34 Benzo(a)pyrene	252	19.786	19.795	(0.989)	162570	100.000	106
*	35 Perylene-d12	264	19.997	19.997	(1.000)	254071	200.000	
$	36 Dibenzo(a,h)anthracene-d14	292	22.431	22.442	(1.122)	97170	100.000	103
	37 Indeno(1,2,3-cd)pyrene	276	22.564	22.575	(1.128)	161018	100.000	103
	38 Dibenzo(a,h)anthracene	278	22.553	22.553	(1.128)	128386	100.000	104
	39 Benzo(g,h,i)perylene	276	23.705	23.705	(1.185)	143865	100.000	104
	47 Perylene	252	20.064	20.064	(1.003)	166722	100.000	106
	48 Benzo(e)pyrene	252	19.680	19.680	(0.984)	169283	100.000	107

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 16012508.D
Lab Smp Id: LLPAH 100
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20160125.b\lowsim.m
Misc Info:

Calibration Date: 25-JAN-2016
Calibration Time: 09:14

Level: LOW
Sample Type: SOIL

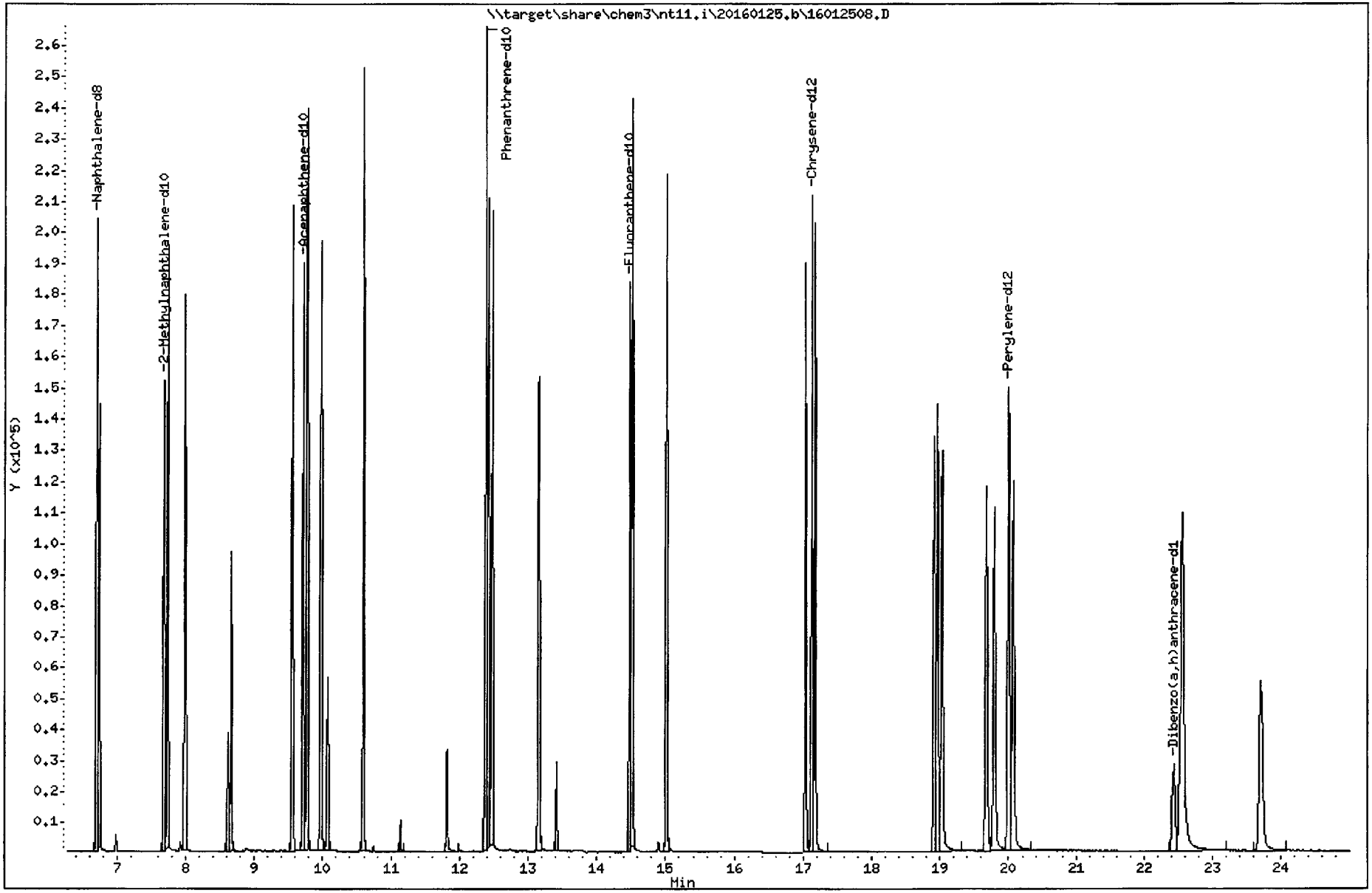
Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	356051	178026	712102	299208	-15.96
11 Acenaphthene-d10	264524	132262	529048	220557	-16.62
18 Phenanthrene-d10	444949	222475	889898	361305	-18.80
29 Chrysene-d12	343139	171570	686278	281219	-18.05
35 Perylene-d12	319277	159639	638554	254071	-20.42

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.71	6.21	7.21	6.71	0.00
11 Acenaphthene-d10	9.71	9.21	10.21	9.71	0.00
18 Phenanthrene-d10	12.38	11.88	12.88	12.38	0.00
29 Chrysene-d12	17.12	16.62	17.62	17.12	0.00
35 Perylene-d12	20.01	19.51	20.51	20.00	-0.05

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: \\target\share\chem3\nt11.i\20160125.b\16012508.D
Date : 25-JAN-2016 11:29
Client ID:
Instrument: nt11.i
Sample Info: LLPAH 100
Volume Injected (uL): 2.0
Operator: JW
Column phase: Rxi-17Sil MS
Column diameter: 0.25



REVIEW SUMMARY FOR FILE - 16012508.D

Lab ID: LLPAH 100
nt11.i, 20160125.b\lowsim.m, 25-JAN-2016 11:29

RT CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

On Column LOD for nt11.i,20160125.b\lowsim.m,Sublist: PEMD.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: Benzo(e)pyrene 2.0000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000

ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160125.b\16012510.D
Lab Smp Id: LLPAH 1000
Inj Date : 25-JAN-2016 12:00 MS Autotune Date: 23-APR-2014 12:54
Operator : JW Inst ID: nt11.i
Smp Info : LLPAH 1000
Misc Info :
Comment :
Method : \\target\share\chem3\nt11.i\20160125.b\lowsim.m
Meth Date : 25-Jan-2016 12:22 jonathonw Quant Type: ISTD
Cal Date : 25-JAN-2016 12:00 Cal File: 16012510.D
Als bottle: 7 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PEMD.sub
Target Version: 4.14
Processing Host: AUTOSPECDATA2

Concentration Formula: Amt * DF * Vt/(Ws * (100-M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	500.000	Volume of final extract (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Cpnd Variable		Local Compound Variable

1/25/16

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
* 4 Naphthalene-d8	136	6.707	6.707	(1.000)	309113	200.000	
5 Naphthalene	128	6.739	6.739	(1.005)	1486842	1000.00	869
$ 6 2-Methylnaphthalene-d10	152	7.674	7.674	(1.144)	1060714	1000.00	918
7 2-Methylnaphthalene	142	7.737	7.737	(1.153)	1130621	1000.00	919
8 1-Methylnaphthalene	142	7.989	7.989	(1.191)	1017746	1000.00	914
10 Acenaphthylene	152	9.550	9.550	(0.984)	1637276	1000.00	878
* 11 Acenaphthene-d10	164	9.705	9.705	(1.000)	227974	200.000	
12 Acenaphthene	153	9.772	9.772	(1.007)	1074041	1000.00	913
14 Dibenzofuran	168	9.971	9.971	(1.027)	1558739	1000.00	865
15 Fluorene	166	10.591	10.591	(1.091)	1267065	1000.00	891
* 18 Phenanthrene-d10	188	12.384	12.384	(1.000)	372441	200.000	
19 Phenanthrene	178	12.429	12.429	(1.004)	1813611	1000.00	860
20 Anthracene	178	12.473	12.473	(1.007)	1800460	1000.00	888
$ 23 Fluoranthene-d10	212	14.476	14.476	(1.169)	1812106	1000.00	899
24 Fluoranthene	202	14.514	14.514	(1.172)	1914574	1000.00	886
25 Pyrene	202	15.014	15.014	(0.877)	1936563	1000.00	852
28 Benzo(a)anthracene	228	17.029	17.029	(0.995)	1736076	1000.00	897
* 29 Chrysene-d12	240	17.121	17.121	(1.000)	295350	200.000	
30 Chrysene	228	17.171	17.171	(1.003)	1728837	1000.00	873
44 Benzo(b)fluoranthene	252	18.921	18.921	(0.946)	1662296	1000.00	924
45 Benzo(k)fluoranthene	252	18.959	18.959	(0.948)	1774449	1000.00	944

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
	46 Benzo(j)fluoranthene	252	19.027	19.027	(0.951)	1587026	1000.00	928
	34 Benzo(a)pyrene	252	19.795	19.795	(0.990)	1602164	1000.00	971
*	35 Perylene-d12	264	19.997	19.997	(1.000)	273271	200.000	
$	36 Dibenzo(a,h)anthracene-d14	292	22.442	22.442	(1.122)	1119235	1000.00	1100
	37 Indeno(1,2,3-cd)pyrene	276	22.575	22.575	(1.129)	1808681	1000.00	1070
	38 Dibenzo(a,h)anthracene	278	22.553	22.553	(1.128)	1473214	1000.00	1100
	39 Benzo(g,h,i)perylene	276	23.705	23.705	(1.185)	1523618	1000.00	1020
	47 Perylene	252	20.064	20.064	(1.003)	1607740	1000.00	952
	48 Benzo(e)pyrene	252	19.680	19.680	(0.984)	1587696	1000.00	930

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 16012510.D
Lab Smp Id: LLPAH 1000
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20160125.b\lowsim.m
Misc Info:

Calibration Date: 25-JAN-2016
Calibration Time: 09:14
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	356051	178026	712102	309113	-13.18
11 Acenaphthene-d10	264524	132262	529048	227974	-13.82
18 Phenanthrene-d10	444949	222475	889898	372441	-16.30
29 Chrysene-d12	343139	171570	686278	295350	-13.93
35 Perylene-d12	319277	159639	638554	273271	-14.41

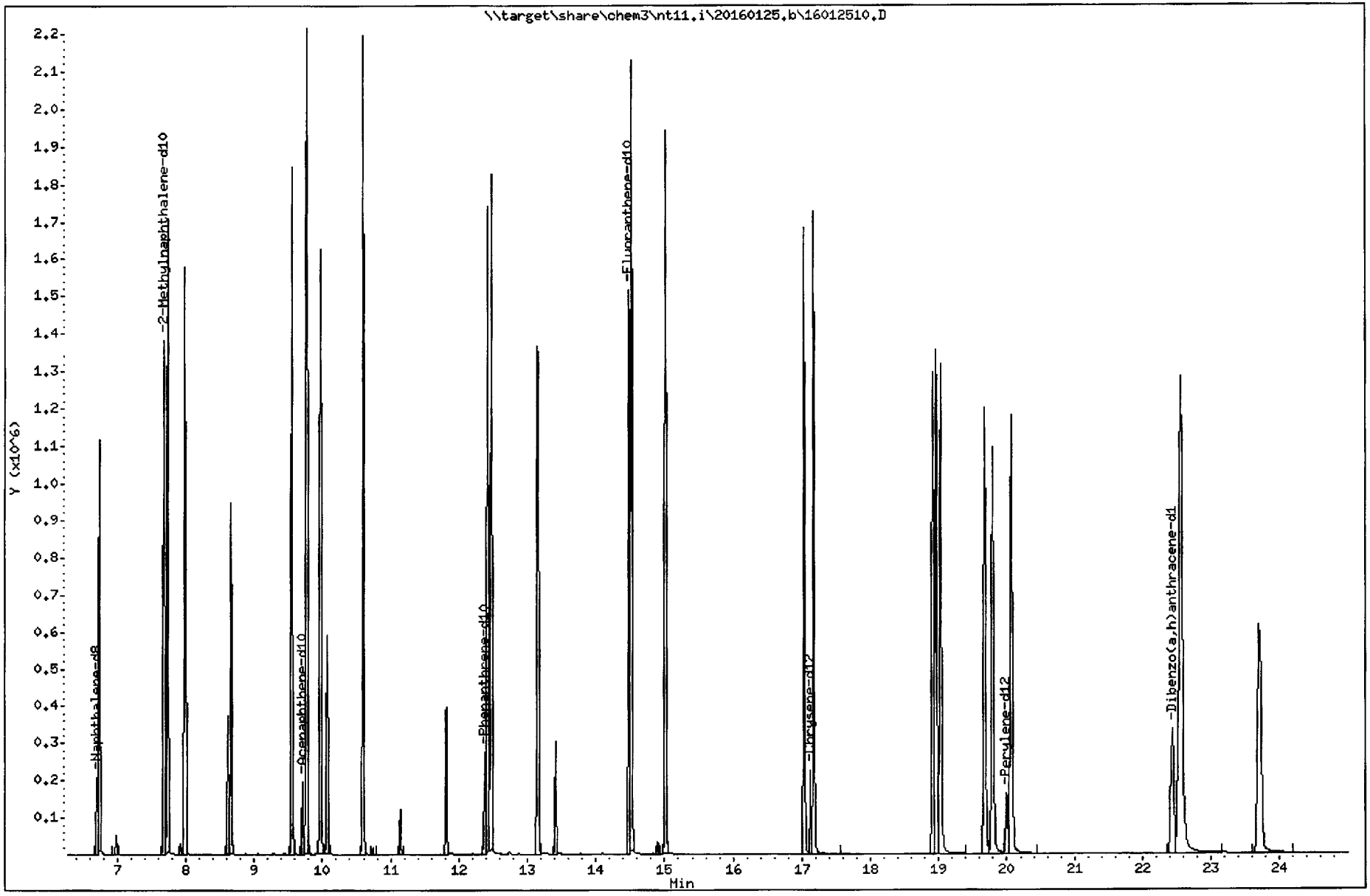
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.71	6.21	7.21	6.71	0.00
11 Acenaphthene-d10	9.71	9.21	10.21	9.71	0.00
18 Phenanthrene-d10	12.38	11.88	12.88	12.38	0.00
29 Chrysene-d12	17.12	16.62	17.62	17.12	0.00
35 Perylene-d12	20.01	19.51	20.51	20.00	-0.05

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: \\target\share\chem3\nt11.i\20160125.b\16012510.D
Date : 25-JAN-2016 12:00
Client ID:
Sample Info: LLPAH 1000
Volume Injected (uL): 2.0
Column phase: Rxi-17Sil MS

Instrument: nt11.i

Operator: JW
Column diameter: 0.25



REVIEW SUMMARY FOR FILE - 16012510.D

Lab ID: LLPAH 1000
nt11.i, 20160125.b\lowsim.m, 25-JAN-2016 12:00

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

On Column LOD for nt11.i,20160125.b\lowsim.m,Sublist: PEMD.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: Benzo(e)pyrene 2.0000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000

ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160125.b\16012511.D
Lab Smp Id: LLPAH SCV
Inj Date : 25-JAN-2016 12:30 MS Autotune Date: 23-APR-2014 12:54
Operator : JW Inst ID: nt11.i
Smp Info : LLPAH SCV
Misc Info :
Comment :
Method : \\target\share\chem3\nt11.i\20160125.b\lowsim.m
Meth Date : 25-Jan-2016 12:22 jonathonw Quant Type: ISTD
Cal Date : 25-JAN-2016 12:00 Cal File: 16012510.D
Als bottle: 8 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PEMD.sub
Target Version: 4.14
Processing Host: AUTOSPECDATA2

Concentration Formula: Amt * DF * Vt/(Ws * (100-M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	500.000	Volume of final extract (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Cpnd Variable		Local Compound Variable

1/25/16

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ng/Kg)
* 4 Naphthalene-d8	136	6.707	6.707	(1.000)	297375	200.000	
5 Naphthalene	128	6.739	6.739	(1.005)	393033	238.876	11900
$ 6 2-Methylnaphthalene-d10	152	Compound Not Detected.					
7 2-Methylnaphthalene	142	7.737	7.737	(1.153)	268187	226.700	11300
8 1-Methylnaphthalene	142	7.989	7.989	(1.191)	261967	244.499	12200
10 Acenaphthylene	152	9.550	9.550	(0.984)	425342	238.614	11900
* 11 Acenaphthene-d10	164	9.705	9.705	(1.000)	218000	200.000	
12 Acenaphthene	153	9.772	9.772	(1.007)	280994	249.840	12500
14 Dibenzofuran	168	Compound Not Detected.					
15 Fluorene	166	10.591	10.591	(1.091)	325324	239.281	12000
* 18 Phenanthrene-d10	188	12.384	12.384	(1.000)	349233	200.000	
19 Phenanthrene	178	12.418	12.429	(1.003)	494432	250.085	12500
20 Anthracene	178	12.473	12.473	(1.007)	478375	251.630	12600
$ 23 Fluoranthene-d10	212	Compound Not Detected.					
24 Fluoranthene	202	14.514	14.514	(1.172)	487263	240.367	12000
25 Pyrene	202	15.014	15.014	(0.877)	550874	253.540	12700
28 Benzo(a)anthracene	228	17.029	17.029	(0.995)	441556	238.689	11900
* 29 Chrysene-d12	240	17.121	17.121	(1.000)	282390	200.000	
30 Chrysene	228	17.171	17.171	(1.003)	460355	243.169	12200
44 Benzo(b)fluoranthene	252	18.921	18.921	(0.946)	392027	236.042	11800
45 Benzo(k)fluoranthene	252	18.959	18.959	(0.948)	427665	246.549	12300
46 Benzo(j)fluoranthene	252	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ng/Kg)
34	Benzo(a)pyrene	252	19.786	19.795	(0.989)	379557	249.204	12500
* 35	Perylene-d12	264	19.997	19.997	(1.000)	252294	200.000	
$ 36	Dibenzo(a,h)anthracene-d14	292	Compound Not Detected.					
37	Indeno(1,2,3-cd)pyrene	276	22.564	22.575	(1.128)	387296	248.429	12400
38	Dibenzo(a,h)anthracene	278	22.553	22.553	(1.128)	305417	248.000	12400
39	Benzo(g,h,i)perylene	276	23.705	23.705	(1.185)	340826	246.933	12300
47	Perylene	252	Compound Not Detected.					
48	Benzo(e)pyrene	252	Compound Not Detected.					

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 16012511.D
Lab Smp Id: LLPAH SCV
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20160125.b\lowsim.m
Misc Info:

Calibration Date: 25-JAN-2016
Calibration Time: 09:14

Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 4.

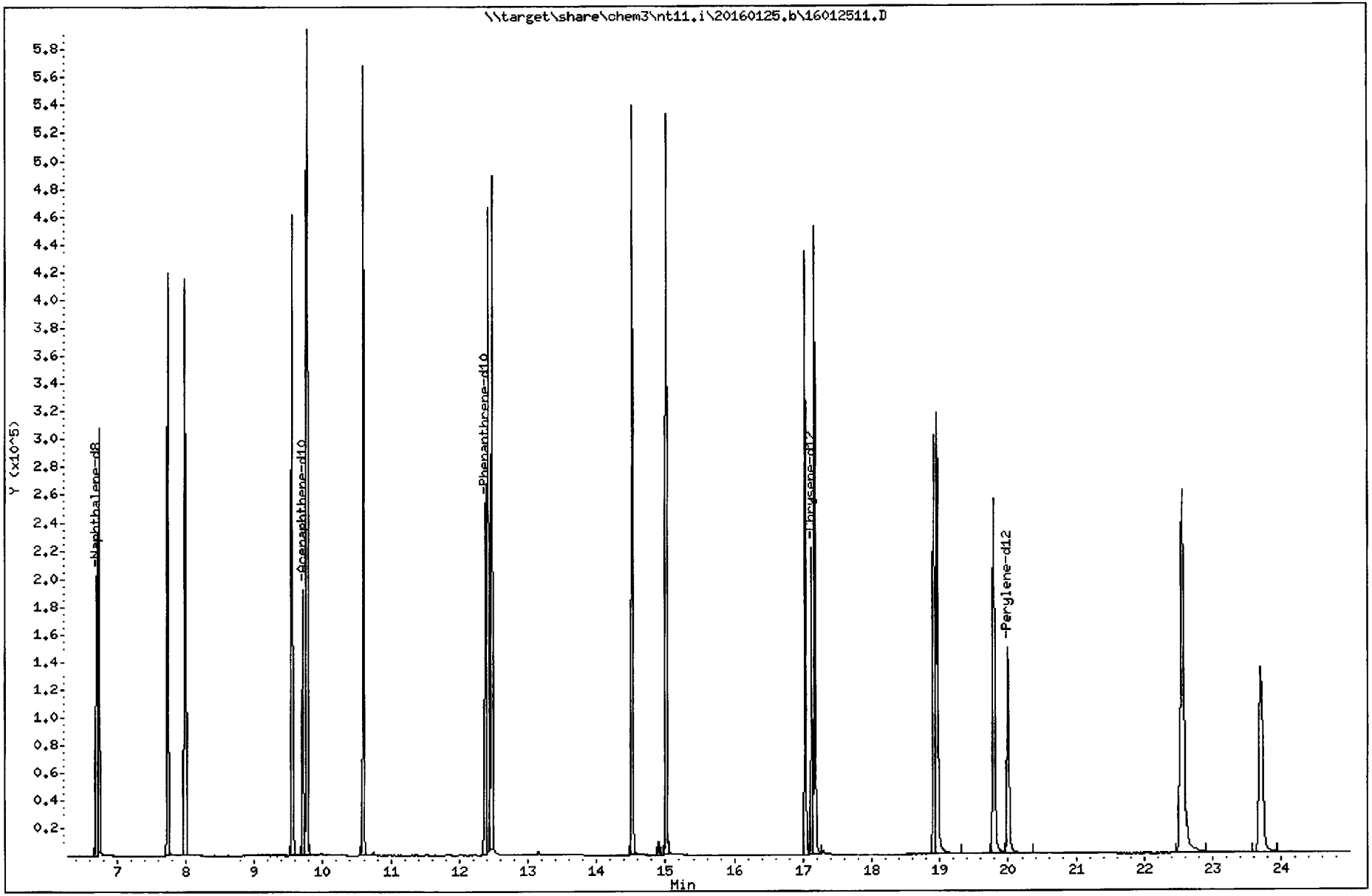
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	356051	178026	712102	297375	-16.48
11 Acenaphthene-d10	264524	132262	529048	218000	-17.59
18 Phenanthrene-d10	444949	222475	889898	349233	-21.51
29 Chrysene-d12	343139	171570	686278	282390	-17.70
35 Perylene-d12	319277	159639	638554	252294	-20.98

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.71	6.21	7.21	6.71	0.00
11 Acenaphthene-d10	9.71	9.21	10.21	9.71	0.00
18 Phenanthrene-d10	12.38	11.88	12.88	12.38	0.00
29 Chrysene-d12	17.12	16.62	17.62	17.12	0.00
35 Perylene-d12	20.01	19.51	20.51	20.00	-0.05

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: \\target\share\chem3\nt11.i\20160125.b\16012511.D
Date : 25-JAN-2016 12:30
Client ID:
Sample Info: LLPAH SCV
Volume Injected (uL): 2.0
Column phase: Rxi-17Sil MS

Instrument: nt11.i
Operator: JW
Column diameter: 0.25



REVIEW SUMMARY FOR FILE - 16012511.D

Lab ID: LLPAH SCV
nt11.i, 20160125.b\lowsim.m, 25-JAN-2016 12:30

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

** FIRST SURROGATE NOT FOUND. ICAL Check not performed **

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
NONE			

On Column LOD for nt11.i,20160125.b\lowsim.m,Sublist: PEMD.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: Benzo(e)pyrene 2.0000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000

SIM PAH Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: AVX9

AVX9 : 88151

Analytical Resources, Incorporated
Analytical Chemists and
Consultants

GC/MS SVOA Analyst Notes / Data Review Checklist

ELEMENT/NWA #.: AUX9 Client: GeoEngineers Inc

METHOD: **8270D** (SIM-SVOA) **KRONE** (Butyl Tins) **8270D** (SVOA) **8270D** (OP-Pest)

Instrument: NT-6 NT-8 NT-10 ~~NT-11~~ NT-12 NT-14

Calibration Code: 2A0015 Analysis Start Date: 2/19/16

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
DFTPP Tune met Criteria?	Y / N /	Internal Standard within 50-200%?	Y / N /
DDT Breakdown <20%?	Y / N /	Retention Times within Windows?	Y / N /
Peak Tailing Factor ≤2?	Y / N /	Method Blank in Control?	Y / N /
ICV/CCV Meets %D?	Y / N /	BS/BSD Recovery in Control?	Y / N /
ICAL Q Flag applied?	Y / N /	MS / MSD Recovery in Control?	Y / N /
ICV/CCV Q flag applied?	Y / N /	Samples Diluted?	Y / N /
Surrogate Recovery met?	Y / N /	Special Analysis Request?	Y / N /
Manual Integrations?	Y / N /	VDP Completed?	NA / Y / N /
Integration Summary?	Y / N /	Technical Review?	/

Detail problems, corrective actions and/or other pertinent information below.

Total benzofluoranthenes includes benzo(j), enough peak res. between all three.

Requested compound all below MDL

(Review 1) Analyst: JW **Date:** 2/19/16

(Review 2) Peer: **Date:**

(Final Review) Reviewer: **Date:** 2/15/16

Analytical Resources Inc.: Organics Instrument Log

NT-11 Serial No.:GC=US10140004, MS=US10481502

Date: 2/19/16 Analysis: low Sim PAH Analyst: JW

GC Program: low sim Column No: D001726 Column Type: Rxi - 17 Sitms

Instrument Tune (.U or .CT.): 150115.U EM Voltage: 1929

Calibration File: Cali Code: 7A00015 Injection Vol.: 2ul

IS/SS	Ical/Ccal	LCS/ICV
D002835	D004412	
	D005203	

Document All Maintenance Tasks In Element

	Time	Filename	LabID	ClientId	DF									
1	0729	16021901.D	TUNE 10		1	|NO ISTDS FOUND||								
2	0746	16021902 D	LL SIM ICV		1	| 6.71	306091||	9.71	222823||12.38	370591||17.12	334087||20.01	302085|		
3	0830	16021903.D	AVX9MBW1	AVX9MBW1	1	| 6 71	286270||	9.71	207228||12.38	352850||17 13	300906||20.01	271777|		
4	0901	16021904.D	AVX9LCSW1	AVX9LCSW1	1	| 6 70	280773||	9.71	213705||12.38	358548||17.12	323812||20.01	291513|		
5	0931	16021905.D	AVX9A	MW-8_021016	1	| 6.70	292834||	9.71	209484||12 38	355795||17 12	302591||20.00	278001|		
6	1001	16021906.D	AVX9AMS	MW-8_021016	1	| 6 70	298549||	9.71	219250||12.38	359810||17.12	319382||20.00	299542|		
7	1032	16021907.D	AVX9AMSD	MW-8_021016	1	| 6 70	298992||	9.71	219742||12.38	363091||17 12	320253||20 01	302903|		
8	1102	16021908 D	AVX9D	DUP_021016	1	| 6.70	293559||	9.71	209127||12 37	360933||17.12	304532||20.01	280612|		
9	1133	16021909.D	AVX9E	MW-4_021116	1	| 6.70	299042||	9.71	216895||12.38	371506||17 12	309960||20.00	287983|		
10	1203	16021910.D	LL SIM CCV		1	| 6 70	303782||	9 71	232982||12.38	393656||17.12	352177||20.01	311873|		
11	1234	16021911.D	E000403		1	| 6 70	323339||	9 71	241618||12 38	424165||17.12	371643||20.01	306336|		

JW 2/19/16

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In Element

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt11.i\20160219.b

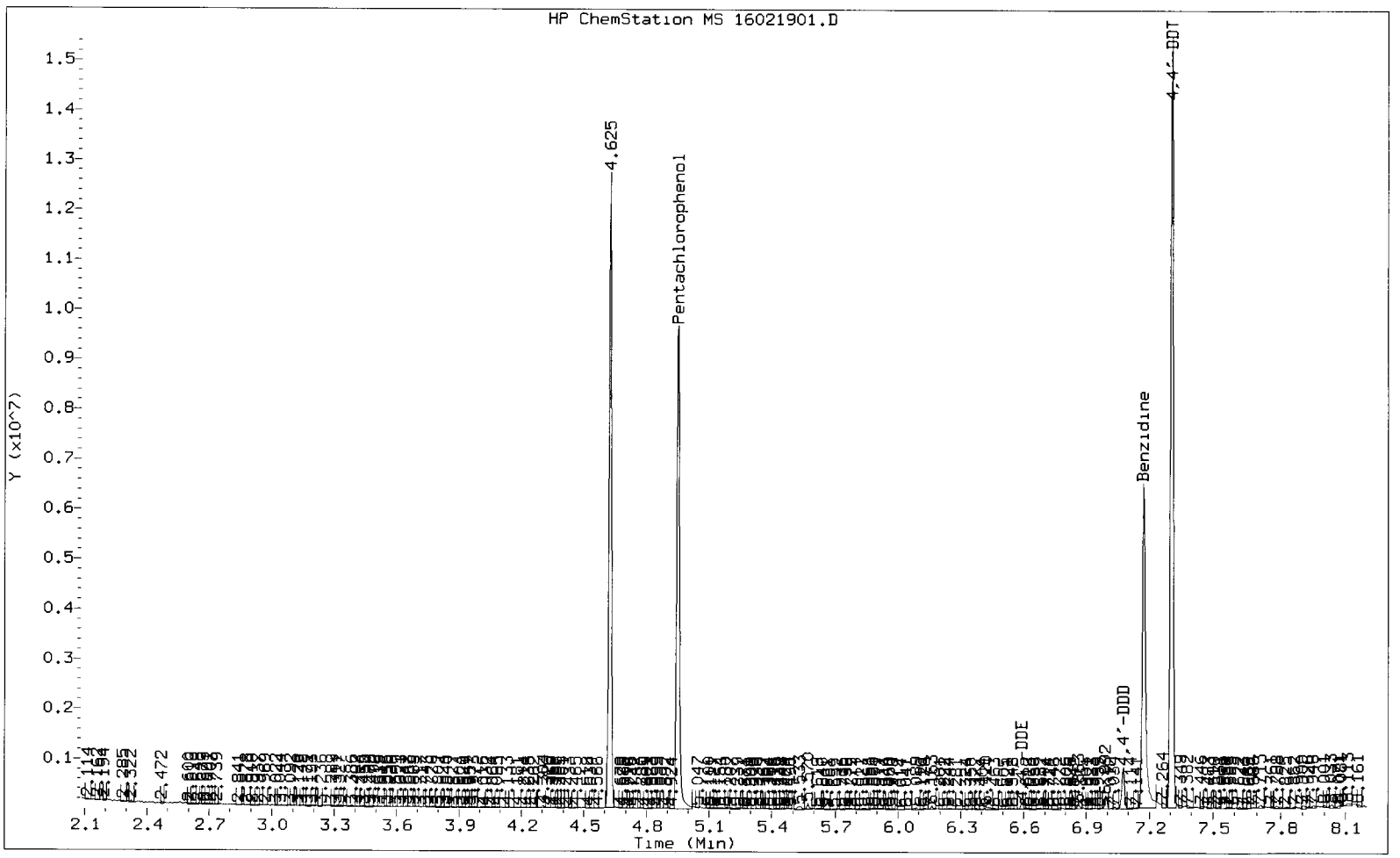
ARI Job No.: TUNE Method: DFTPP.m Instrument: nt11.i Date: 19-FEB-2016

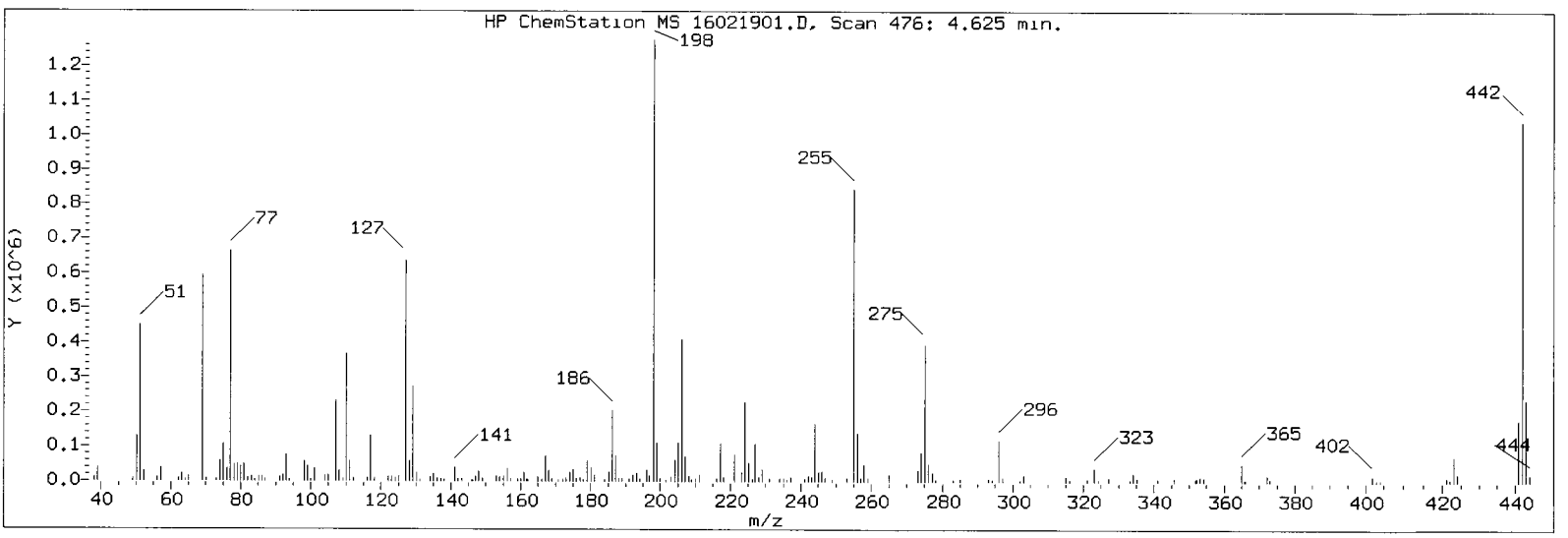
Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0729	16021901.D	TUNE 10		1	NO MANUAL INTEGRATION
0746	16021902.D	LL SIM ICV		1	NO MANUAL INTEGRATION
0830	16021903.D	AVX9MBW1	AVX9MBW1	1	NO MANUAL INTEGRATION
0901	16021904.D	AVX9LCSW1	AVX9LCSW1	1	NO MANUAL INTEGRATION
0931	16021905.D	AVX9A	MW-8_02101	1	NO MANUAL INTEGRATION
1001	16021906.D	AVX9AMS	MW-8_02101	1	NO MANUAL INTEGRATION
1032	16021907.D	AVX9AMSD	MW-8_02101	1	NO MANUAL INTEGRATION
1102	16021908.D	AVX9D	DUP_021016	1	NO MANUAL INTEGRATION
1133	16021909.D	AVX9E	MW-4_02111	1	NO MANUAL INTEGRATION
1203	16021910.D	LL SIM CCV		1	NO MANUAL INTEGRATION

AVX9:00167

DFTPP TAILING FACTOR AND BREAKDOWN GRAPHIC REPORT

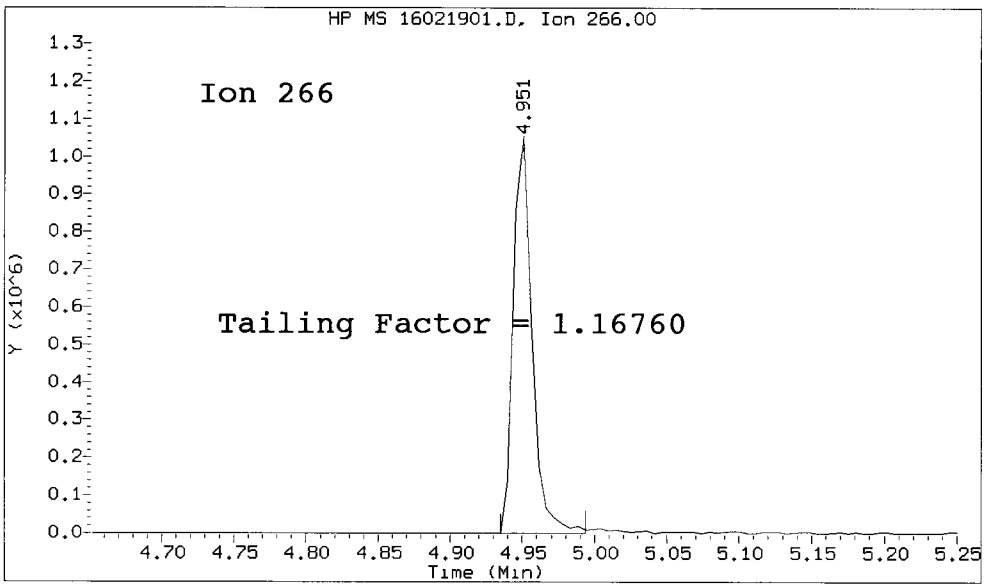
Datafile Analyzed: /20160219.b/16021901.D/16021901.D
Method Used: \20160219.b\DFTPP.m Inst: nt11
Injection Date: 19-FEB-2016 07:29 Operator: JW
Sample Info: TUNE 10 TUNE 10
Report Date: 02/19/2016 07:40





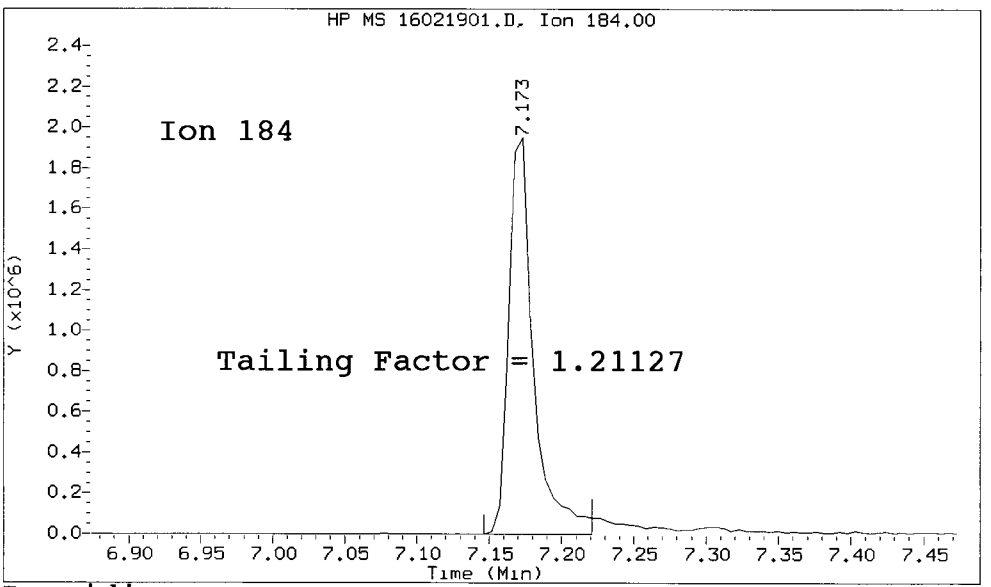
AVX9:00168

Datafile Analyzed: /20160219.b/16021901.D/16021901.D
Method Used: \20160219.b\DFTPP.m\sw846ddt.m Inst: nt11
Injection Date: 19-FEB-2016 07:29 Operator: JR
Sample Info: TUNE 10
Report Date: 02/19/2016 07:40



Pentachlorophenol
==========
Exp. RT = 4.914
Found RT = 4.951

Tail Factor = 1.168 Maximum Allowed = 2.0



Benzidine
==========
Exp. RT = 7.141
Found RT = 7.173

Tail Factor = 1.211 Maximum Allowed = 2.0

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	34.81
68	Less than 2.00% of mass 69	0.36 (0.80)
69	Mass 69 relative abundance	44.89
70	Less than 2.00% of mass 69	0.25 (0.55)
127	10.00 - 80.00% of mass 198	49.90
197	Less than 2.00% of mass 198	0.53
199	5.00 - 9.00% of mass 198	8.13
275	10.00 - 60.00% of mass 198	28.85
365	Greater than 1.00% of mass 198	3.54
441	0.01 - 24.00% of mass 442	12.94 (16.47)
442	50.00 - 200.00% of mass 198	78.61
443	15.00 - 24.00% of mass 442	17.27 (21.97)

AVX3:00170

8270 TAILING FACTOR/BREAKDOWN SUMMARY RESULTS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test
Pentachlorophenol	1.1675978	2.000	PASS
Benzidine	1.2112676	2.000	PASS

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	2024331			N/A
4,4-DDE	17166	0.8	20.0	PASS
4,4-DDD	136844	6.3	20.0	PASS
4,4-DDD + DDE	154010	7.1	20.0	PASS

Tuning Sample, nt11.i/20160219.b/16021901.D, *** PASSED ***

ANXG 00171

Data File: 16021901.D
Spectrum: Avg. Scans 475-477 (4.62), Background Scan 470
Location of Maximum: 198.00
Number of points: 254

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	1643	122.00	9463	192.00	17152	276.00	35832
38.00	6065	123.00	13453	193.00	18832	277.00	21192
39.00	27480	124.00	6191	194.00	3722	278.00	5684
40.00	2552	125.00	8777	196.00	36528	283.00	3094
47.00	1417	127.00	506048	197.00	5365	284.00	1987
49.00	3978	128.00	44608	198.00	1014080	285.00	4752
50.00	98944	129.00	214976	199.00	82416	290.00	688
51.00	353024	130.00	19264	200.00	5481	293.00	3891
52.00	19712	131.00	3664	201.00	6621	294.00	3741
55.00	2509	132.00	911	203.00	11160	295.00	706
56.00	13303	134.00	8249	204.00	46768	296.00	80376
57.00	31600	135.00	16768	205.00	80688	297.00	10577
58.00	824	136.00	7229	206.00	315072	301.00	1866
61.00	4858	137.00	6184	207.00	47520	302.00	2614
62.00	6808	138.00	1773	208.00	11873	303.00	12421
63.00	17648	139.00	779	209.00	2432	304.00	3883
64.00	3089	140.00	1722	210.00	2257	309.00	670
65.00	11864	141.00	26904	211.00	17104	311.00	1453
67.00	722	142.00	8144	215.00	3495	313.00	974
68.00	3654	143.00	5290	216.00	3577	314.00	3457
69.00	455232	144.00	1823	217.00	87552	315.00	10295
70.00	2518	146.00	6002	218.00	10309	316.00	5123
73.00	3524	147.00	12767	219.00	1711	317.00	1037
74.00	49112	148.00	27616	221.00	62880	321.00	2868
75.00	85416	149.00	6532	222.00	5057	322.00	2582
76.00	26176	150.00	1090	223.00	23152	323.00	29120
77.00	532736	151.00	4095	224.00	170816	324.00	3825
78.00	40544	153.00	10253	225.00	41352	327.00	6212
79.00	36328	154.00	8649	226.00	4564	328.00	2163
80.00	29240	155.00	11384	227.00	76232	329.00	848
81.00	44008	156.00	26344	228.00	10499	332.00	666
82.00	9799	157.00	5662	229.00	22264	333.00	2913
83.00	9481	158.00	2941	230.00	1849	334.00	19296
84.00	692	159.00	4595	231.00	5978	335.00	6216
85.00	7753	160.00	6964	234.00	4389	341.00	3882
86.00	9779	161.00	14355	235.00	6631	346.00	6936
87.00	4533	162.00	4943	236.00	5282	352.00	7857
88.00	2286	164.00	1805	237.00	8765	353.00	6832
89.00	743	165.00	8230	239.00	2208	354.00	9197
91.00	8708	166.00	6919	240.00	3596	355.00	1366
92.00	10554	167.00	50960	241.00	4666	365.00	35880
93.00	63416	168.00	28760	242.00	10236	366.00	7010
94.00	3188	169.00	4794	243.00	12152	371.00	1828
96.00	5184	170.00	807	244.00	131840	372.00	13404
98.00	43256	171.00	2339	245.00	20560	373.00	3860
99.00	37688	172.00	4086	246.00	25536	374.00	997
100.00	3929	173.00	6572	247.00	5500	383.00	3531
101.00	23680	174.00	15786	249.00	5103	390.00	1653
102.00	2547	175.00	24384	251.00	723	392.00	686

AJX9:00172

103.00	6204	176.00	6765	252.00	758	401.00	1049
104.00	13367	177.00	11125	253.00	5075	402.00	10085
105.00	14966	178.00	1661	255.00	629696	403.00	6854
106.00	4564	179.00	42552	256.00	100824	404.00	3805
107.00	167104	180.00	31696	257.00	7892	421.00	7054
108.00	24144	181.00	14731	258.00	40776	422.00	6132
109.00	4456	182.00	2133	259.00	7758	423.00	52968
110.00	283584	184.00	5197	260.00	666	424.00	13600
111.00	47984	185.00	19032	265.00	16142	441.00	131264
112.00	7196	186.00	165696	266.00	2404	442.00	797184
113.00	884	187.00	53664	271.00	2513	443.00	175168
116.00	8548	188.00	5675	272.00	2255	444.00	16012
117.00	102976	189.00	7434	273.00	22600	445.00	675
118.00	9035	190.00	763	274.00	55720		
120.00	2549	191.00	4703	275.00	292544		

ARI Labs, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt11.i Injection Date: 19-FEB-2016 07:46
Lab File ID: 16021902.D Init. Cal. Date(s): 25-JAN-2016 25-JAN-2016
Analysis Type: SOIL Init. Cal. Times: 09:14 12:00
Lab Sample ID: LL SIM ICV Quant Type: ISTD
Method: \\target\share\chem3\nt11.i\20160219.b\lowsim.m

COMPOUND	RRF / AMOUNT	RF250	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
5 Naphthalene	1.10658	1.10883	0.010	0.20311	20.00000	Averaged
$ 6 2-Methylnaphthalene-d10	0.74752	0.74295	0.010	-0.61148	20.00000	Averaged
7 2-Methylnaphthalene	0.79563	0.80237	0.010	0.84639	20.00000	Averaged
8 1-Methylnaphthalene	0.72060	0.72113	0.010	0.07286	20.00000	Averaged
10 Acenaphthylene	1.63537	1.52920	0.010	-6.49198	20.00000	Averaged
12 Acenaphthene	1.03183	1.05056	0.010	1.81452	20.00000	Averaged
14 Dibenzofuran	1.58020	1.61462	0.010	2.17842	20.00000	Averaged
15 Fluorene	1.24733	1.22139	0.010	-2.07998	20.00000	Averaged
19 Phenanthrene	1.13223	1.16882	0.010	3.23238	20.00000	Averaged
20 Anthracene	1.08873	1.06553	0.010	-2.13130	20.00000	Averaged
$ 23 Fluoranthene-d10	1.08267	1.15799	0.200	6.95682	20.00000	Averaged
24 Fluoranthene	1.16092	1.29237	0.010	11.32265	20.00000	Averaged
25 Pyrene	1.53882	1.42379	0.010	-7.47517	20.00000	Averaged
28 Benzo(a)anthracene	1.31019	1.27818	0.010	-2.44310	20.00000	Averaged
30 Chrysene	1.34080	1.37112	0.010	2.26134	20.00000	Averaged
44 Benzo(b)fluoranthene	1.31659	1.27907	0.200	-2.84949	20.00000	Averaged
45 Benzo(k)fluoranthene	1.37507	1.48102	0.200	7.70530	20.00000	Averaged
46 Benzo(j)fluoranthene	1.25203	1.44975	0.200	15.79166	20.00000	Averaged
34 Benzo(a)pyrene	1.20738	1.25031	0.010	3.55559	20.00000	Averaged
$ 36 Dibenzo(a,h)anthracene-d14	0.74617	0.68741	0.010	-7.87475	20.00000	Averaged
37 Indeno(1,2,3-cd)pyrene	1.23585	1.20415	0.010	-2.56438	20.00000	Averaged
38 Dibenzo(a,h)anthracene	0.97626	0.92576	0.010	-5.17255	20.00000	Averaged
39 Benzo(g,h,i)perylene	1.09415	1.11506	0.010	1.91099	20.00000	Averaged
47 Perylene	1.23559	1.27462	0.200	3.15908	20.00000	Averaged

AVX9 : 36174

ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160219.b\16021902.D
Lab Smp Id: LL SIM ICV
Inj Date : 19-FEB-2016 07:46 MS Autotune Date: 12-FEB-2016 08:31
Operator : JW Inst ID: nt11.i
Smp Info : LL SIM ICV
Misc Info :
Comment :
Method : \\target\share\chem3\nt11.i\20160219.b\lowsim.m
Meth Date : 19-Feb-2016 13:31 nt11.i Quant Type: ISTD
Cal Date : 25-JAN-2016 12:00 Cal File: 16012510.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: newpna.sub
Target Version: 4.14
Processing Host: AUTOSPECDATA2

Concentration Formula: Amt * DF * Vt/(Ws * (100-M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	500.000	Volume of final extract (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
*	4 Naphthalene-d8	136	6.707	6.707	(1.000)	306091	200.000	
	5 Naphthalene	128	6.739	6.739	(1.005)	424252	250.000	251
$	6 2-Methylnaphthalene-d10	152	7.674	7.674	(1.144)	284264	250.000	248
	7 2-Methylnaphthalene	142	7.737	7.737	(1.153)	306996	250.000	252
	8 1-Methylnaphthalene	142	7.989	7.989	(1.191)	275913	250.000	250
	10 Acenaphthylene	152	9.550	9.550	(0.984)	425926	250.000	234
*	11 Acenaphthene-d10	164	9.705	9.705	(1.000)	222823	200.000	
	12 Acenaphthene	153	9.772	9.772	(1.007)	292610	250.000	255
	14 Dibenzofuran	168	9.971	9.971	(1.027)	449718	250.000	255
	15 Fluorene	166	10.591	10.591	(1.091)	340191	250.000	245
*	18 Phenanthrene-d10	188	12.384	12.384	(1.000)	370591	200.000	
	19 Phenanthrene	178	12.418	12.418	(1.003)	541445	250.000	258
	20 Anthracene	178	12.473	12.473	(1.007)	493594	250.000	245
$	23 Fluoranthene-d10	212	14.485	14.485	(1.170)	536426	250.000	267
	24 Fluoranthene	202	14.514	14.514	(1.172)	598676	250.000	278
	25 Pyrene	202	15.014	15.014	(0.877)	594586	250.000	231
	28 Benzo(a)anthracene	228	17.029	17.029	(0.995)	533779	250.000	244
*	29 Chrysene-d12	240	17.121	17.121	(1.000)	334087	200.000	
	30 Chrysene	228	17.171	17.171	(1.003)	572593	250.000	256
	44 Benzo(b)fluoranthene	252	18.921	18.921	(0.946)	482985	250.000	243
	45 Benzo(k)fluoranthene	252	18.959	18.959	(0.948)	559242	250.000	269

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
46	Benzo(j)fluoranthene	252	19.027	19.027	(0.951)	547433	250.000	289
34	Benzo(a)pyrene	252	19.795	19.795	(0.989)	472126	250.000	259
* 35	Perylene-d12	264	20.007	20.007	(1.000)	302085	200.000	
$ 36	Dibenzo(a,h)anthracene-d14	292	22.442	22.442	(1.122)	259569	250.000	230
37	Indeno(1,2,3-cd)pyrene	276	22.575	22.575	(1.128)	454696	250.000	244
38	Dibenzo(a,h)anthracene	278	22.553	22.553	(1.127)	349573	250.000	237
39	Benzo(g,h,i)perylene	276	23.705	23.705	(1.185)	421053	250.000	255
47	Perylene	252	20.064	20.064	(1.003)	481306	250.000	258

AXYS-00176

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 16021902.D
Lab Smp Id: LL SIM ICV
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20160219.b\lowsim.m
Misc Info:

Calibration Date: 19-FEB-2016
Calibration Time: 12:03

Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	356051	178026	712102	306091	-14.03
11 Acenaphthene-d10	264524	132262	529048	222823	-15.76
18 Phenanthrene-d10	444949	222475	889898	370591	-16.71
29 Chrysene-d12	343139	171570	686278	334087	-2.64
35 Perylene-d12	319277	159639	638554	302085	-5.38

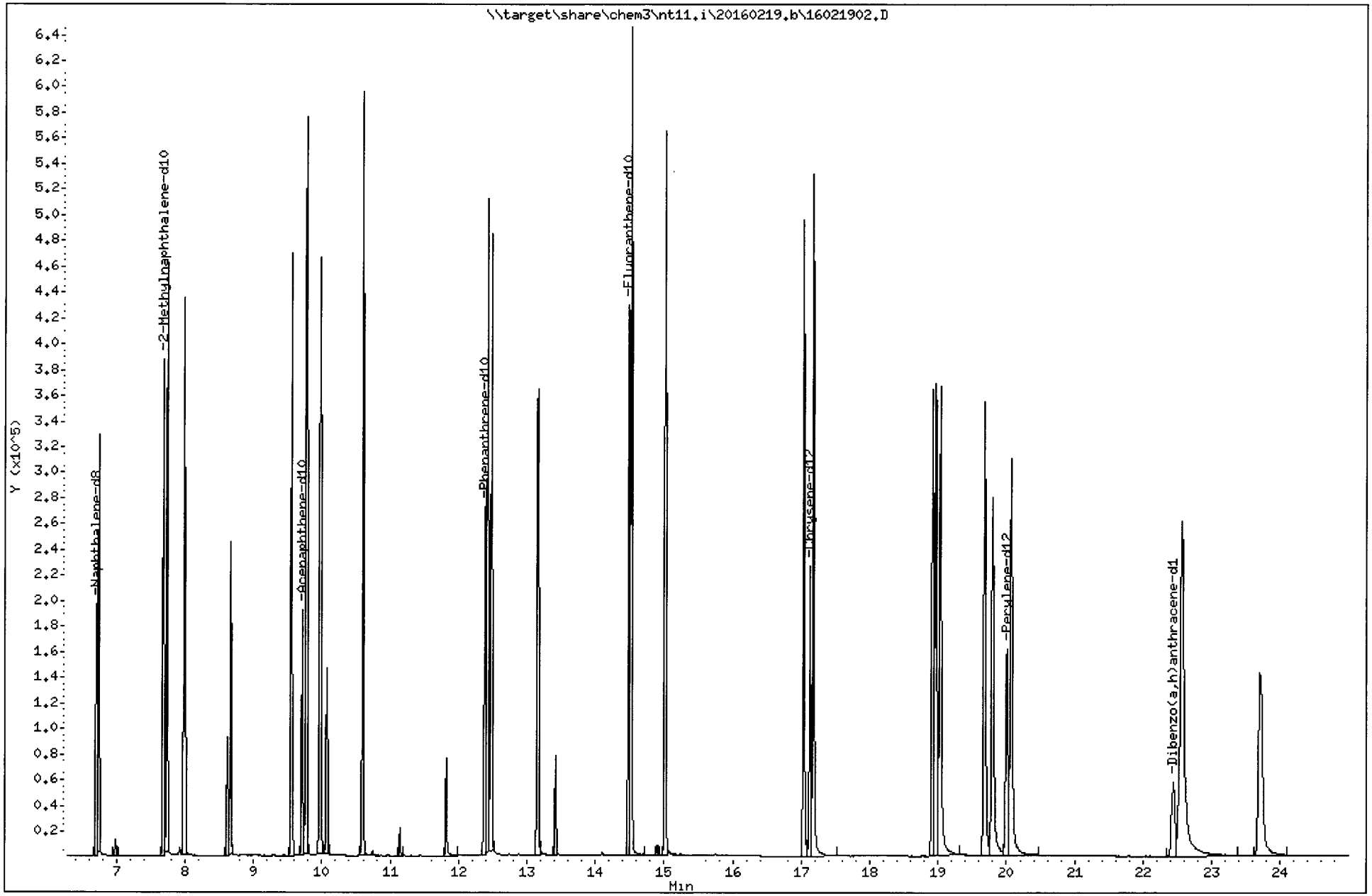
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.71	6.21	7.21	6.71	0.00
11 Acenaphthene-d10	9.71	9.21	10.21	9.71	0.00
18 Phenanthrene-d10	12.38	11.88	12.88	12.38	0.00
29 Chrysene-d12	17.12	16.62	17.62	17.12	0.00
35 Perylene-d12	20.01	19.51	20.51	20.01	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: \\target\share\chem3\nt11.i\20160219.b\16021902.D
Date : 19-FEB-2016 07:46
Client ID:
Sample Info: LL SIM ICV
Volume Injected (uL): 2.0
Column phase: Rxi-17Sil MS

Instrument: nt11.i

Operator: JW
Column diameter: 0.25



REVIEW SUMMARY FOR FILE - 16021902.D

Lab ID: LL SIM ICV
nt11.i, 20160219.b\lowsim.m, 19-FEB-2016 07:46

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

On Column LOD for nt11.i,20160219.b\lowsim.m,Sublist: newpna.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000

AVX9 00179

ARI Labs, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt11.i Injection Date: 19-FEB-2016 12:03
Lab File ID: 16021910.D Init. Cal. Date(s): 25-JAN-2016 25-JAN-2016
Analysis Type: SOIL Init. Cal. Times: 09:14 12:00
Lab Sample ID: LL SIM CCV Quant Type: ISTD
Method: \\target\share\chem3\nt11.i\20160219.b\lowsim.m

COMPOUND	RRF / AMOUNT	RF250	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
5 Naphthalene	1.10658	1.12134	0.010	1.33361	20.00000	Averaged
$ 6 2-Methylnaphthalene-d10	0.74752	0.76518	0.010	2.36163	20.00000	Averaged
7 2-Methylnaphthalene	0.79563	0.83038	0.010	4.36808	20.00000	Averaged
8 1-Methylnaphthalene	0.72060	0.74332	0.010	3.15304	20.00000	Averaged
10 Acenaphthylene	1.63537	1.59235	0.010	-2.63045	20.00000	Averaged
12 Acenaphthene	1.03183	1.04908	0.010	1.67184	20.00000	Averaged
14 Dibenzofuran	1.58020	1.61249	0.010	2.04355	20.00000	Averaged
15 Fluorene	1.24733	1.25294	0.010	0.45017	20.00000	Averaged
19 Phenanthrene	1.13223	1.17136	0.010	3.45608	20.00000	Averaged
20 Anthracene	1.08873	1.07859	0.010	-0.93136	20.00000	Averaged
$ 23 Fluoranthene-d10	1.08267	1.16333	0.200	7.44967	20.00000	Averaged
24 Fluoranthene	1.16092	1.27347	0.010	9.69420	20.00000	Averaged
25 Pyrene	1.53882	1.43323	0.010	-6.86128	20.00000	Averaged
28 Benzo(a)anthracene	1.31019	1.27524	0.010	-2.66759	20.00000	Averaged
30 Chrysene	1.34080	1.36981	0.010	2.16366	20.00000	Averaged
44 Benzo(b)fluoranthene	1.31659	1.34067	0.200	1.82935	20.00000	Averaged
45 Benzo(k)fluoranthene	1.37507	1.49078	0.200	8.41506	20.00000	Averaged
46 Benzo(j)fluoranthene	1.25203	1.41646	0.200	13.13302	20.00000	Averaged
34 Benzo(a)pyrene	1.20738	1.28578	0.010	6.49287	20.00000	Averaged
$ 36 Dibenzo(a,h)anthracene-d14	0.74617	0.75847	0.010	1.64911	20.00000	Averaged
37 Indeno(1,2,3-cd)pyrene	1.23585	1.29777	0.010	5.01064	20.00000	Averaged
38 Dibenzo(a,h)anthracene	0.97626	1.02650	0.010	5.14610	20.00000	Averaged
39 Benzo(g,h,i)perylene	1.09415	1.15727	0.010	5.76856	20.00000	Averaged
47 Perylene	1.23559	1.32698	0.200	7.39671	20.00000	Averaged

ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160219.b\16021910.D
Lab Smp Id: LL SIM CCV
Inj Date : 19-FEB-2016 12:03 MS Autotune Date: 12-FEB-2016 08:31
Operator : JW Inst ID: nt11.i
Smp Info : LL SIM CCV
Misc Info :
Comment :
Method : \\target\share\chem3\nt11.i\20160219.b\lowsim.m
Meth Date : 19-Feb-2016 13:35 nt11.i Quant Type: ISTD
Cal Date : 25-JAN-2016 12:00 Cal File: 16012510.D
Als bottle: 8 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: newpna.sub
Target Version: 4.14
Processing Host: AUTOSPECDATA2

Concentration Formula: Amt * DF * Vt/(Ws * (100-M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	500.000	Volume of final extract (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Cpnd Variable		Local Compound Variable

JW 9/14/16

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
*	4 Naphthalene-d8	136	6.697	6.697	(1.000)	303782	200.000	
	5 Naphthalene	128	6.739	6.739	(1.006)	425802	250.000	253
$	6 2-Methylnaphthalene-d10	152	7.674	7.674	(1.146)	290559	250.000	256
	7 2-Methylnaphthalene	142	7.737	7.737	(1.155)	315320	250.000	261
	8 1-Methylnaphthalene	142	7.989	7.989	(1.193)	282260	250.000	258
	10 Acenaphthylene	152	9.550	9.550	(0.984)	463736	250.000	243
*	11 Acenaphthene-d10	164	9.705	9.705	(1.000)	232982	200.000	
	12 Acenaphthene	153	9.772	9.772	(1.007)	305522	250.000	254
	14 Dibenzofuran	168	9.971	9.971	(1.027)	469601	250.000	255
	15 Fluorene	166	10.591	10.591	(1.091)	364892	250.000	251
*	18 Phenanthrene-d10	188	12.384	12.384	(1.000)	393656	200.000	
	19 Phenanthrene	178	12.418	12.418	(1.003)	576390	250.000	259
	20 Anthracene	178	12.473	12.473	(1.007)	530743	250.000	248
$	23 Fluoranthene-d10	212	14.476	14.476	(1.169)	572438	250.000	269
	24 Fluoranthene	202	14.514	14.514	(1.172)	626634	250.000	274
	25 Pyrene	202	15.014	15.014	(0.877)	630940	250.000	233
	28 Benzo(a)anthracene	228	17.030	17.030	(0.995)	561387	250.000	243
*	29 Chrysene-d12	240	17.121	17.121	(1.000)	352177	200.000	
	30 Chrysene	228	17.171	17.171	(1.003)	603021	250.000	255
	44 Benzo(b)fluoranthene	252	18.921	18.921	(0.946)	522649	250.000	255
	45 Benzo(k)fluoranthene	252	18.960	18.960	(0.948)	581167	250.000	271

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
	46 Benzo(j)fluoranthene	252	19.027	19.027	(0.951)	552194	250.000	283
	34 Benzo(a)pyrene	252	19.795	19.795	(0.989)	501249	250.000	266
*	35 Perylene-d12	264	20.007	20.007	(1.000)	311873	200.000	
$	36 Dibenzo(a,h)anthracene-d14	292	22.431	22.431	(1.121)	295683	250.000	254
	37 Indeno(1,2,3-cd)pyrene	276	22.564	22.564	(1.128)	505924	250.000	263
	38 Dibenzo(a,h)anthracene	278	22.553	22.553	(1.127)	400171	250.000	263
	39 Benzo(g,h,i)perylene	276	23.705	23.705	(1.185)	451150	250.000	264
	47 Perylene	252	20.065	20.065	(1.003)	517313	250.000	268

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 16021910.D
Lab Smp Id: LL SIM CCV
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20160219.b\lowsim.m
Misc Info:

Calibration Date: 19-FEB-2016
Calibration Time: 07:46

Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 4.

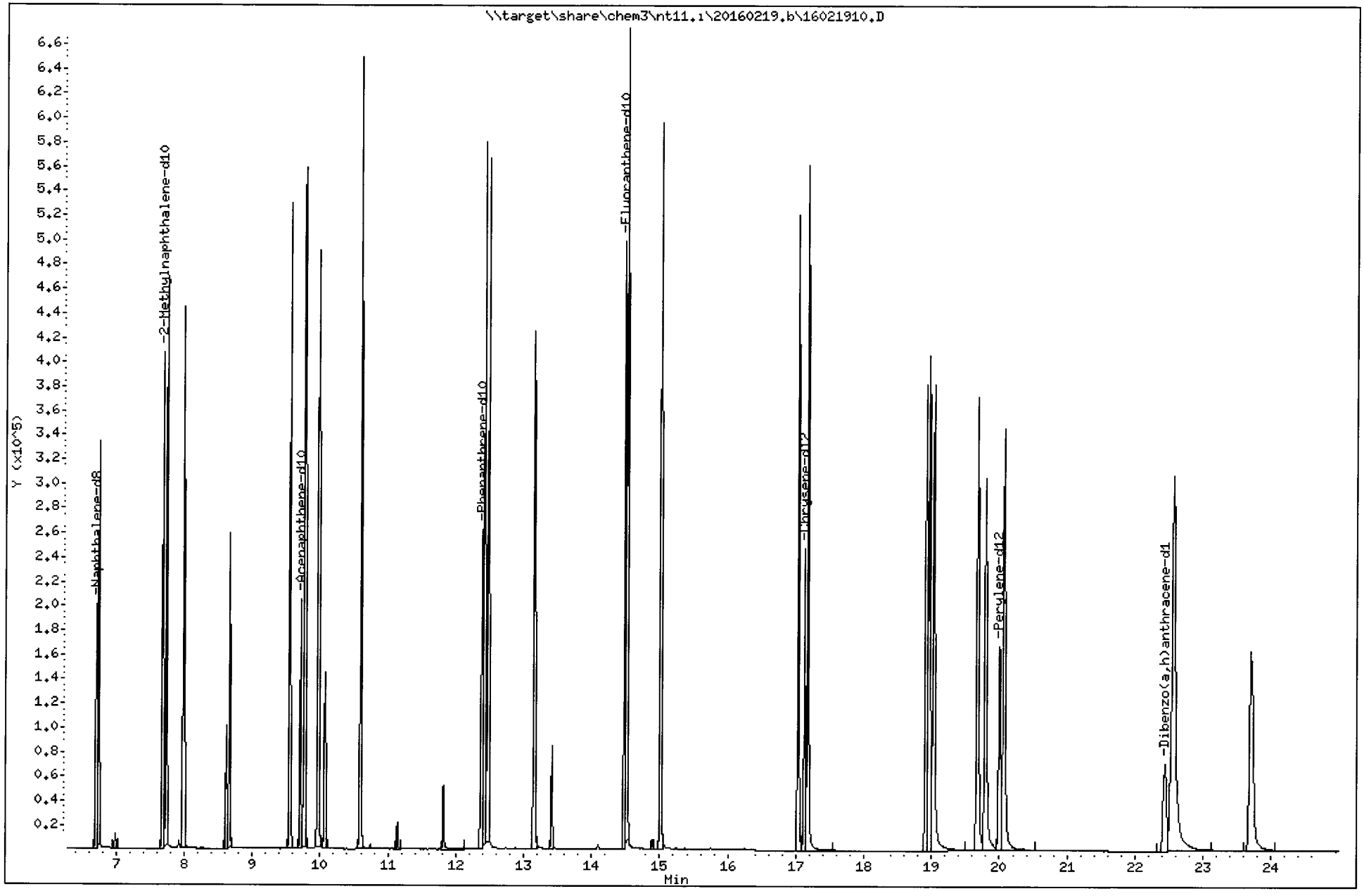
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	356051	178026	712102	303782	-14.68
11 Acenaphthene-d10	264524	132262	529048	232982	-11.92
18 Phenanthrene-d10	444949	222475	889898	393656	-11.53
29 Chrysene-d12	343139	171570	686278	352177	2.63
35 Perylene-d12	319277	159639	638554	311873	-2.32

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.70	6.20	7.20	6.70	0.00
11 Acenaphthene-d10	9.71	9.21	10.21	9.71	0.00
18 Phenanthrene-d10	12.38	11.88	12.88	12.38	0.00
29 Chrysene-d12	17.12	16.62	17.62	17.12	0.00
35 Perylene-d12	20.01	19.51	20.51	20.01	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: \\target\share\chem3\nt11.i\20160219.b\16021910.D
Date : 19-FEB-2016 12:03
Client ID:
Sample Info: LL SIM CCV
Volume Injected (uL): 2.0
Column phase: Rxi-17Sil MS

Instrument: nt11.i
Operator: JW
Column diameter: 0.25



REVIEW SUMMARY FOR FILE - 16021910.D

Lab ID: LL SIM CCV
nt11.i, 20160219.b\lowsim.m, 19-FEB-2016 12:03

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

On Column LOD for nt11.i,20160219.b\lowsim.m,Sublist: newpna.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000

ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160219.b\16021903.D
Lab Smp Id: AVX9MBW1 Client Smp ID: AVX9MBW1
Inj Date : 19-FEB-2016 08:30 MS Autotune Date: 12-FEB-2016 08:31
Operator : JW Inst ID: nt11.i
Smp Info : AVX9MBW1
Misc Info : 16-2330
Comment :
Method : \\target\share\chem3\nt11.i\20160219.b\lowsim.m
Meth Date : 19-Feb-2016 13:31 nt11.i Quant Type: ISTD
Cal Date : 25-JAN-2016 12:00 Cal File: 16012510.D
Als bottle: 1 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: newpna.sub
Target Version: 4.14
Processing Host: AUTOSPECDATA2

Concentration Formula: Amt * DF * Vt / Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	500.000	Final Extract Volume (uL)
Vo	500.000	Sample Volume extracted (mL)
Cpnd Variable		Local Compound Variable

2/19/16

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/L)
*	4 Naphthalene-d8	136	6.707	6.707	(1.000)	286270	200.000	
	5 Naphthalene	128	Compound Not Detected.					
$	6 2-Methylnaphthalene-d10	152	7.684	7.674	(1.146)	238665	223.058	223
	7 2-Methylnaphthalene	142	Compound Not Detected.					
	8 1-Methylnaphthalene	142	Compound Not Detected.					
	10 Acenaphthylene	152	Compound Not Detected.					
*	11 Acenaphthene-d10	164	9.705	9.705	(1.000)	207228	200.000	
	12 Acenaphthene	153	Compound Not Detected.					
	14 Dibenzofuran	168	Compound Not Detected.					
	15 Fluorene	166	Compound Not Detected.					
*	18 Phenanthrene-d10	188	12.384	12.384	(1.000)	352850	200.000	
	19 Phenanthrene	178	Compound Not Detected.					
	20 Anthracene	178	Compound Not Detected.					
$	23 Fluoranthene-d10	212	14.485	14.485	(1.170)	531606	278.313	278
	24 Fluoranthene	202	Compound Not Detected.					
	25 Pyrene	202	Compound Not Detected.					
	28 Benzo(a)anthracene	228	Compound Not Detected.					
*	29 Chrysene-d12	240	17.129	17.121	(1.000)	300906	200.000	
	30 Chrysene	228	Compound Not Detected.					
	44 Benzo(b)fluoranthene	252	Compound Not Detected.					
	45 Benzo(k)fluoranthene	252	Compound Not Detected.					
	46 Benzo(j)fluoranthene	252	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/L)
	34 Benzo(a)pyrene	252	Compound Not Detected.					
*	35 Perylene-d12	264	20.007	20.007	(1.000)	271777	200.000	
$	36 Dibenzo(a,h)anthracene-d14	292	22.453	22.442	(1.122)	193203	190.544	191
	37 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
	38 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	39 Benzo(g,h,i)perylene	276	Compound Not Detected.					
	47 Perylene	252	Compound Not Detected.					

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 16021903.D
Lab Smp Id: AVX9MBW1
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20160219.b\lowsim.m
Misc Info: 16-2330

Calibration Date: 19-FEB-2016
Calibration Time: 07:46
Client Smp ID: AVX9MBW1
Level: LOW
Sample Type: Liquid

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	356051	178026	712102	286270	-19.60
11 Acenaphthene-d10	264524	132262	529048	207228	-21.66
18 Phenanthrene-d10	444949	222475	889898	352850	-20.70
29 Chrysene-d12	343139	171570	686278	300906	-12.31
35 Perylene-d12	319277	159639	638554	271777	-14.88

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.71	6.21	7.21	6.71	-0.00
11 Acenaphthene-d10	9.71	9.21	10.21	9.71	-0.00
18 Phenanthrene-d10	12.38	11.88	12.88	12.38	-0.00
29 Chrysene-d12	17.12	16.62	17.62	17.13	0.05
35 Perylene-d12	20.01	19.51	20.51	20.01	-0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

ARI Labs, Inc.

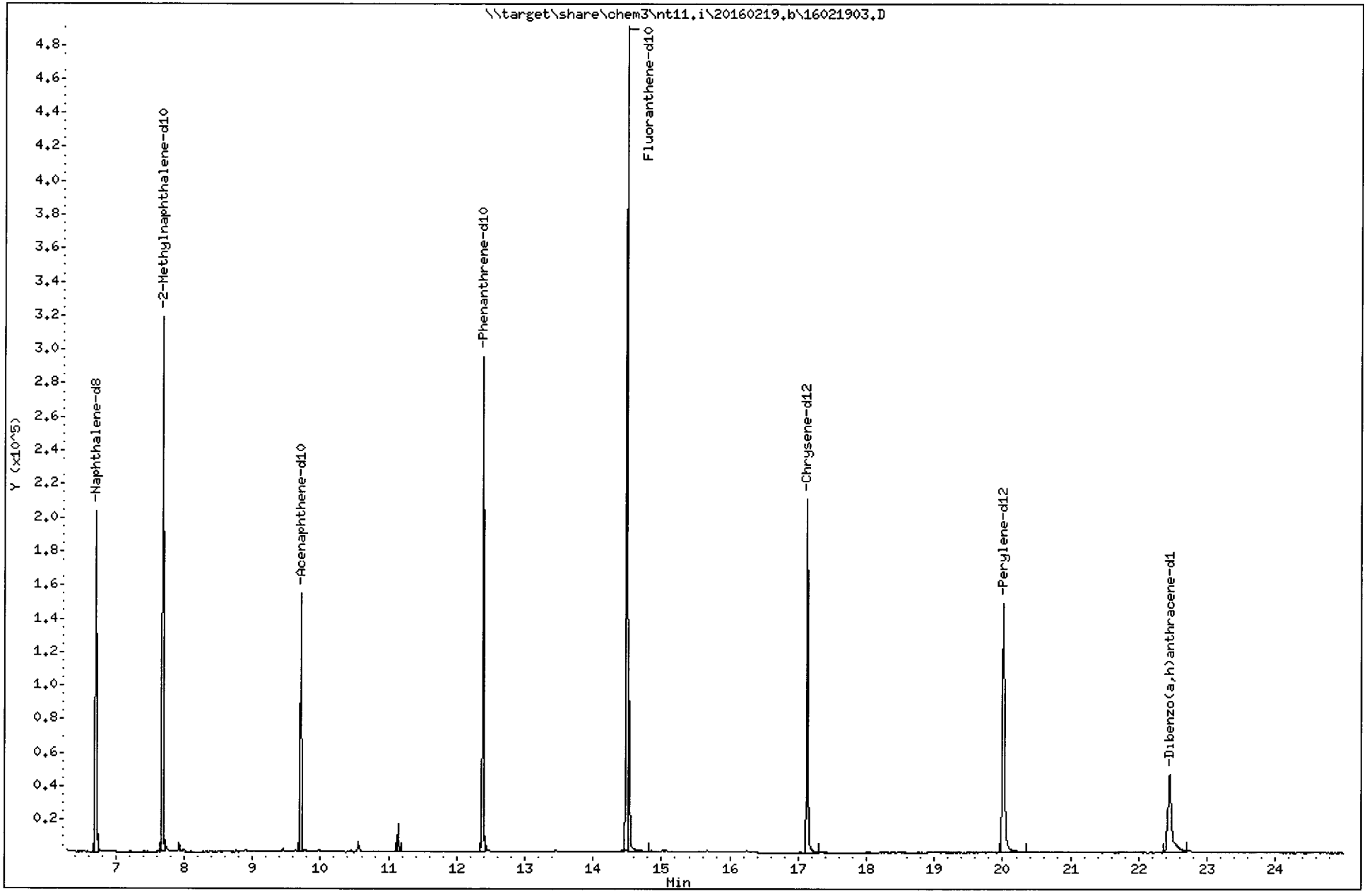
RECOVERY REPORT

Client Name: GeoEngineers Inc. Client SDG: AVX9
Sample Matrix: LIQUID Fraction: SV
Lab Smp Id: AVX9MBW1 Client Smp ID: AVX9MBW1
Level: LOW Operator: JW
Data Type: MS DATA SampleType: BLANK
SpikeList File: waterlcs.spk Quant Type: ISTD
Sublist File: newpna.sub
Method File: \\target\share\chem3\nt11.i\20160219.b\lowsim.m
Misc Info: 16-2330

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	300	223	74.35	42-120
$ 23 Fluoranthene-d10	300	278	92.77	57-120
$ 36 Dibenzo(a,h)anthra	300	191	63.51	29-120

Data File: \\target\share\chem3\nt11.i\20160219.b\16021903.D
Date : 19-FEB-2016 08:30
Client ID: AVX9MBW1
Sample Info: AVX9MBW1
Volume Injected (uL): 2.0
Column phase: Rxi-17Sil MS

Instrument: nt11.i
Operator: JW
Column diameter: 0.25



AVX9-SB1.SB

REVIEW SUMMARY FOR FILE - 16021903.D

Lab ID: AVX9MBW1
nt11.i, 20160219.b\lowsim.m, 19-FEB-2016 08:30

RT CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

On Column LOD for nt11.i,20160219.b\lowsim.m,Sublist: newpna.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000

ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160219.b\16021904.D
Lab Smp Id: AVX9LCSW1 Client Smp ID: AVX9LCSW1
Inj Date : 19-FEB-2016 09:01 MS Autotune Date: 12-FEB-2016 08:31
Operator : JW Inst ID: nt11.i
Smp Info : AVX9LCSW1
Misc Info : 16-2330
Comment :
Method : \\target\share\chem3\nt11.i\20160219.b\lowsim.m
Meth Date : 19-Feb-2016 13:31 nt11.i Quant Type: ISTD
Cal Date : 25-JAN-2016 12:00 Cal File: 16012510.D
Als bottle: 2 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: newpna.sub
Target Version: 4.14
Processing Host: AUTOSPECDATA2

Concentration Formula: Amt * DF * Vt / Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	500.000	Final Extract Volume (uL)
Vo	500.000	Sample Volume extracted (mL)
Cpnd Variable		Local Compound Variable

JJ 2/19/16

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/L)
* 4 Naphthalene-d8	136	6.697	6.707	(1.000)	280773	200.000	
5 Naphthalene	128	6.739	6.739	(1.006)	379628	244.372	244
$ 6 2-Methylnaphthalene-d10	152	7.674	7.674	(1.146)	250715	238.908	239
7 2-Methylnaphthalene	142	7.737	7.737	(1.155)	278983	249.770	250
8 1-Methylnaphthalene	142	7.989	7.989	(1.193)	253230	250.319	250
10 Acenaphthylene	152	9.550	9.550	(0.984)	402775	230.496	230
* 11 Acenaphthene-d10	164	9.705	9.705	(1.000)	213705	200.000	
12 Acenaphthene	153	9.772	9.772	(1.007)	273676	248.223	248
14 Dibenzofuran	168	9.971	9.971	(1.027)	428611	253.844	254
15 Fluorene	166	10.591	10.591	(1.091)	334010	250.607	251
* 18 Phenanthrene-d10	188	12.384	12.384	(1.000)	358548	200.000	
19 Phenanthrene	178	12.418	12.418	(1.003)	539232	265.659	266
20 Anthracene	178	12.473	12.473	(1.007)	445948	228.479	228
$ 23 Fluoranthene-d10	212	14.476	14.485	(1.169)	529542	272.827	273
24 Fluoranthene	202	14.514	14.514	(1.172)	619622	297.719	298
25 Pyrene	202	15.014	15.014	(0.877)	606874	243.584	244
28 Benzo(a)anthracene	228	17.030	17.029	(0.995)	546287	257.528	258
* 29 Chrysene-d12	240	17.121	17.121	(1.000)	323812	200.000	
30 Chrysene	228	17.171	17.171	(1.003)	581881	268.044	268
44 Benzo(b)fluoranthene	252	18.921	18.921	(0.946)	507827	264.630	265
45 Benzo(k)fluoranthene	252	18.960	18.959	(0.948)	582872	290.818	291
46 Benzo(j)fluoranthene	252	19.027	19.027	(0.951)	572615	313.776	314

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/L)
	34 Benzo(a)pyrene	252	19.795	19.795	(0.989)	418513	237.813	238
*	35 Perylene-d12	264	20.007	20.007	(1.000)	291513	200.000	
$	36 Dibenzo(a,h)anthracene-d14	292	22.442	22.442	(1.122)	259648	238.738	239
	37 Indeno(1,2,3-cd)pyrene	276	22.564	22.575	(1.128)	483888	268.629	269
	38 Dibenzo(a,h)anthracene	278	22.553	22.553	(1.127)	362153	254.507	255
	39 Benzo(g,h,i)perylene	276	23.705	23.705	(1.185)	450421	282.432	282
	47 Perylene	252	20.065	20.064	(1.003)	311272	172.837	173

AVXQ:00193

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 16021904.D
Lab Smp Id: AVX9LCSW1
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20160219.b\lowsim.m
Misc Info: 16-2330

Calibration Date: 19-FEB-2016
Calibration Time: 07:46
Client Smp ID: AVX9LCSW1
Level: LOW
Sample Type: Liquid

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	356051	178026	712102	280773	-21.14
11 Acenaphthene-d10	264524	132262	529048	213705	-19.21
18 Phenanthrene-d10	444949	222475	889898	358548	-19.42
29 Chrysene-d12	343139	171570	686278	323812	-5.63
35 Perylene-d12	319277	159639	638554	291513	-8.70

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.71	6.21	7.21	6.70	-0.16
11 Acenaphthene-d10	9.71	9.21	10.21	9.71	0.00
18 Phenanthrene-d10	12.38	11.88	12.88	12.38	0.00
29 Chrysene-d12	17.12	16.62	17.62	17.12	0.00
35 Perylene-d12	20.01	19.51	20.51	20.01	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

ARI Labs, Inc.

RECOVERY REPORT

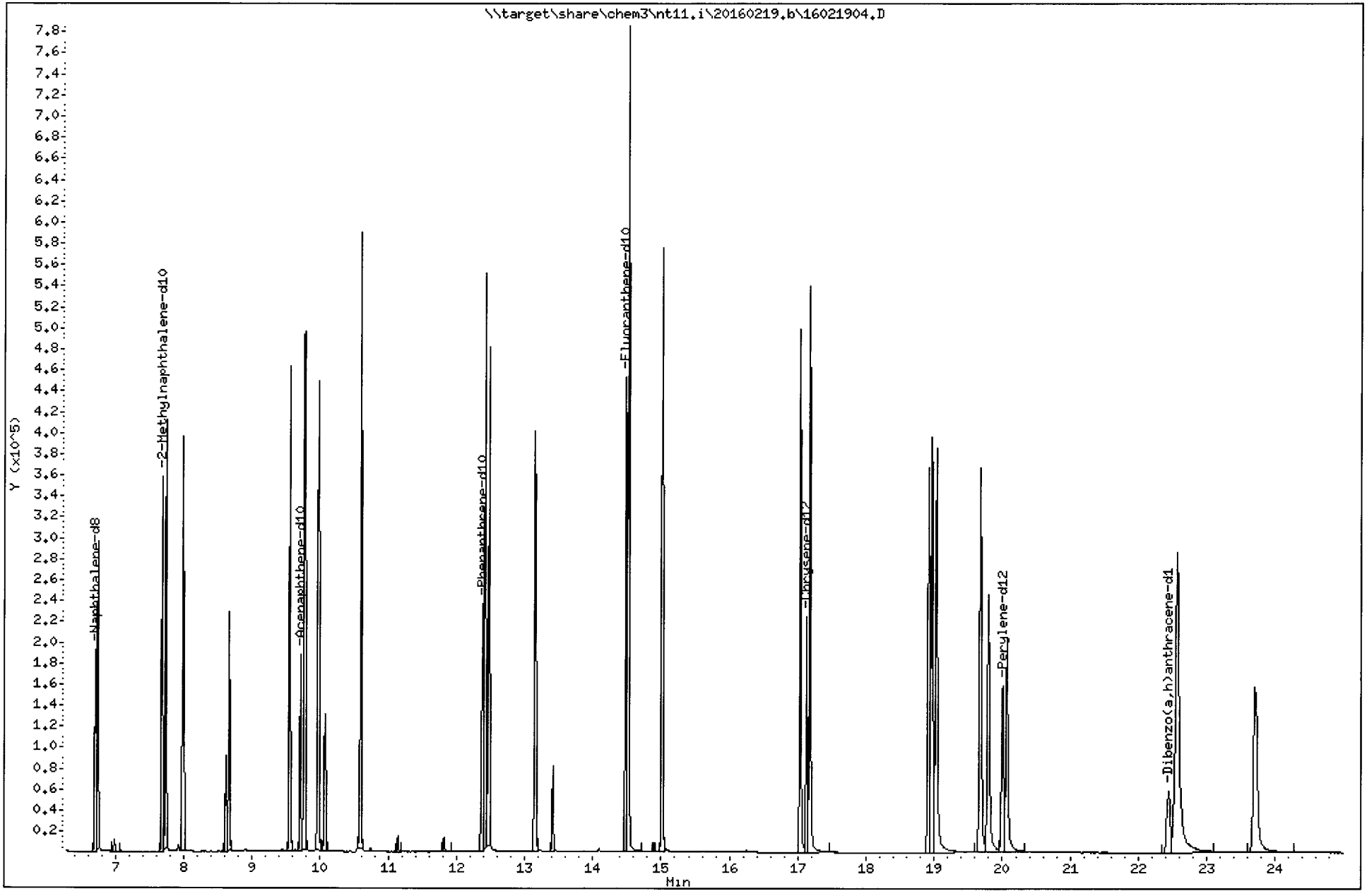
Client Name: GeoEngineers Inc. Client SDG: AVX9
Sample Matrix: LIQUID Fraction: SV
Lab Smp Id: AVX9LCSW1 Client Smp ID: AVX9LCSW1
Level: LOW Operator: JW
Data Type: MS DATA SampleType: LCS
SpikeList File: waterlcs.spk Quant Type: ISTD
Sublist File: newpna.sub
Method File: \\target\share\chem3\nt11.i\20160219.b\lowsim.m
Misc Info: 16-2330

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
5 Naphthalene	300	244	81.46	37-120
7 2-Methylnaphthalen	300	250	83.26	37-120
8 1-Methylnaphthalen	300	250	83.44	29-120
10 Acenaphthylene	300	230	76.83	41-120
12 Acenaphthene	300	248	82.74	41-120
14 Dibenzofuran	300	254	84.61	38-120
15 Fluorene	300	251	83.54	43-120
19 Phenanthrene	300	266	88.55	41-120
20 Anthracene	300	228	76.16	40-120
24 Fluoranthene	300	298	99.24	45-120
25 Pyrene	300	244	81.19	41-120
28 Benzo(a)anthracene	300	258	85.84	42-120
30 Chrysene	300	268	89.35	44-120
44 Benzo(b)fluoranthe	300	265	88.21	44-120
45 Benzo(k)fluoranthe	300	291	96.94	50-120
46 Benzo(j)fluoranthe	300	314	104.59	39-160
34 Benzo(a)pyrene	300	238	79.27	35-120
37 Indeno(1,2,3-cd)py	300	269	89.54	37-120
38 Dibenzo(a,h)anthra	300	255	84.84	34-120
39 Benzo(g,h,i)peryle	300	282	94.14	38-120
47 Perylene	300	173	57.61	30-160

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	300	239	79.64	42-120
$ 23 Fluoranthene-d10	300	273	90.94	57-120
$ 36 Dibenzo(a,h)anthra	300	239	79.58	29-120

Data File: \\target\share\chem3\nt11.i\20160219.b\16021904.D
Date : 19-FEB-2016 09:01
Client ID: AVX9LCSW1
Sample Info: AVX9LCSW1
Volume Injected (uL): 2.0
Column phase: Rxi-17Sil MS

Instrument: nt11.i
Operator: JW
Column diameter: 0.25



AVX9 05139

REVIEW SUMMARY FOR FILE - 16021904.D

Lab ID: AVX9LCSW1
nt11.i, 20160219.b\lowsim.m, 19-FEB-2016 09:01

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

On Column LOD for nt11.i,20160219.b\lowsim.m,Sublist: newpna.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000

ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160219.b\16021905.D
Lab Smp Id: AVX9A Client Smp ID: MW-8_021016
Inj Date : 19-FEB-2016 09:31 MS Autotune Date: 12-FEB-2016 08:31
Operator : JW Inst ID: nt11.i
Smp Info : AVX9A
Misc Info : 16-2330
Comment :
Method : \\target\share\chem3\nt11.i\20160219.b\lowsim.m
Meth Date : 19-Feb-2016 13:31 nt11.i Quant Type: ISTD
Cal Date : 25-JAN-2016 12:00 Cal File: 16012510.D
Als bottle: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: newpna.sub
Target Version: 4.14
Processing Host: AUTOSPECDATA2

Concentration Formula: Amt * DF * Vt / Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	500.000	Final Extract Volume (uL)
Vo	500.000	Sample Volume extracted (mL)
Cpnd Variable		Local Compound Variable

2/19/16

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/L)
*	4 Naphthalene-d8	136	6.697	6.707	(1.000)	292834	200.000	
	5 Naphthalene	128	Compound Not Detected.					
$	6 2-Methylnaphthalene-d10	152	7.674	7.674	(1.146)	223486	204.190	204
	7 2-Methylnaphthalene	142	Compound Not Detected.					
	8 1-Methylnaphthalene	142	Compound Not Detected.					
	10 Acenaphthylene	152	Compound Not Detected.					
*	11 Acenaphthene-d10	164	9.705	9.705	(1.000)	209484	200.000	
	12 Acenaphthene	153	Compound Not Detected.					
	14 Dibenzofuran	168	Compound Not Detected.					
	15 Fluorene	166	Compound Not Detected.					
*	18 Phenanthrene-d10	188	12.384	12.384	(1.000)	355795	200.000	
	19 Phenanthrene	178	Compound Not Detected.					
	20 Anthracene	178	Compound Not Detected.					
$	23 Fluoranthene-d10	212	14.476	14.485	(1.169)	457601	237.586	238
	24 Fluoranthene	202	Compound Not Detected.					
	25 Pyrene	202	Compound Not Detected.					
	28 Benzo(a)anthracene	228	Compound Not Detected.					
*	29 Chrysene-d12	240	17.121	17.121	(1.000)	302591	200.000	
	30 Chrysene	228	Compound Not Detected.					
	44 Benzo(b)fluoranthene	252	Compound Not Detected.					
	45 Benzo(k)fluoranthene	252	Compound Not Detected.					
	46 Benzo(j)fluoranthene	252	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/L)
	34 Benzo(a)pyrene	252	Compound Not Detected.					
*	35 Perylene-d12	264	19.997	20.007	(1.000)	278001	200.000	
$	36 Dibenzo(a,h)anthracene-d14	292	22.431	22.442	(1.122)	175512	169.221	169
	37 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
	38 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	39 Benzo(g,h,i)perylene	276	Compound Not Detected.					
	47 Perylene	252	Compound Not Detected.					

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 16021905.D
Lab Smp Id: AVX9A
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Calibration Date: 19-FEB-2016
Calibration Time: 07:46
Client Smp ID: MW-8_021016
Level: LOW
Sample Type: Water
Method File: \\target\share\chem3\nt11.i\20160219.b\lowsim.m
Misc Info: 16-2330

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	356051	178026	712102	292834	-17.76
11 Acenaphthene-d10	264524	132262	529048	209484	-20.81
18 Phenanthrene-d10	444949	222475	889898	355795	-20.04
29 Chrysene-d12	343139	171570	686278	302591	-11.82
35 Perylene-d12	319277	159639	638554	278001	-12.93

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.71	6.21	7.21	6.70	-0.16
11 Acenaphthene-d10	9.71	9.21	10.21	9.71	-0.00
18 Phenanthrene-d10	12.38	11.88	12.88	12.38	-0.00
29 Chrysene-d12	17.12	16.62	17.62	17.12	-0.00
35 Perylene-d12	20.01	19.51	20.51	20.00	-0.05

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

ARI Labs, Inc.

RECOVERY REPORT

Client Name: GeoEngineers Inc. Client SDG: AVX9
Sample Matrix: LIQUID Fraction: SV
Lab Smp Id: AVX9A Client Smp ID: MW-8_021016
Level: LOW Operator: JW
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: waterlcs.spk Quant Type: ISTD
Sublist File: newpna.sub
Method File: \\target\share\chem3\nt11.i\20160219.b\lowsim.m
Misc Info: 16-2330

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	300	204	68.06	42-120
$ 23 Fluoranthene-d10	300	238	79.20	57-120
$ 36 Dibenzo(a,h)anthra	300	169	56.41	29-120

Data File: \\target\share\chem3\nt11.i\20160219.b\16021905.D

Date : 19-FEB-2016 09:31

Client ID: MW-8_021016

Instrument: nt11.i

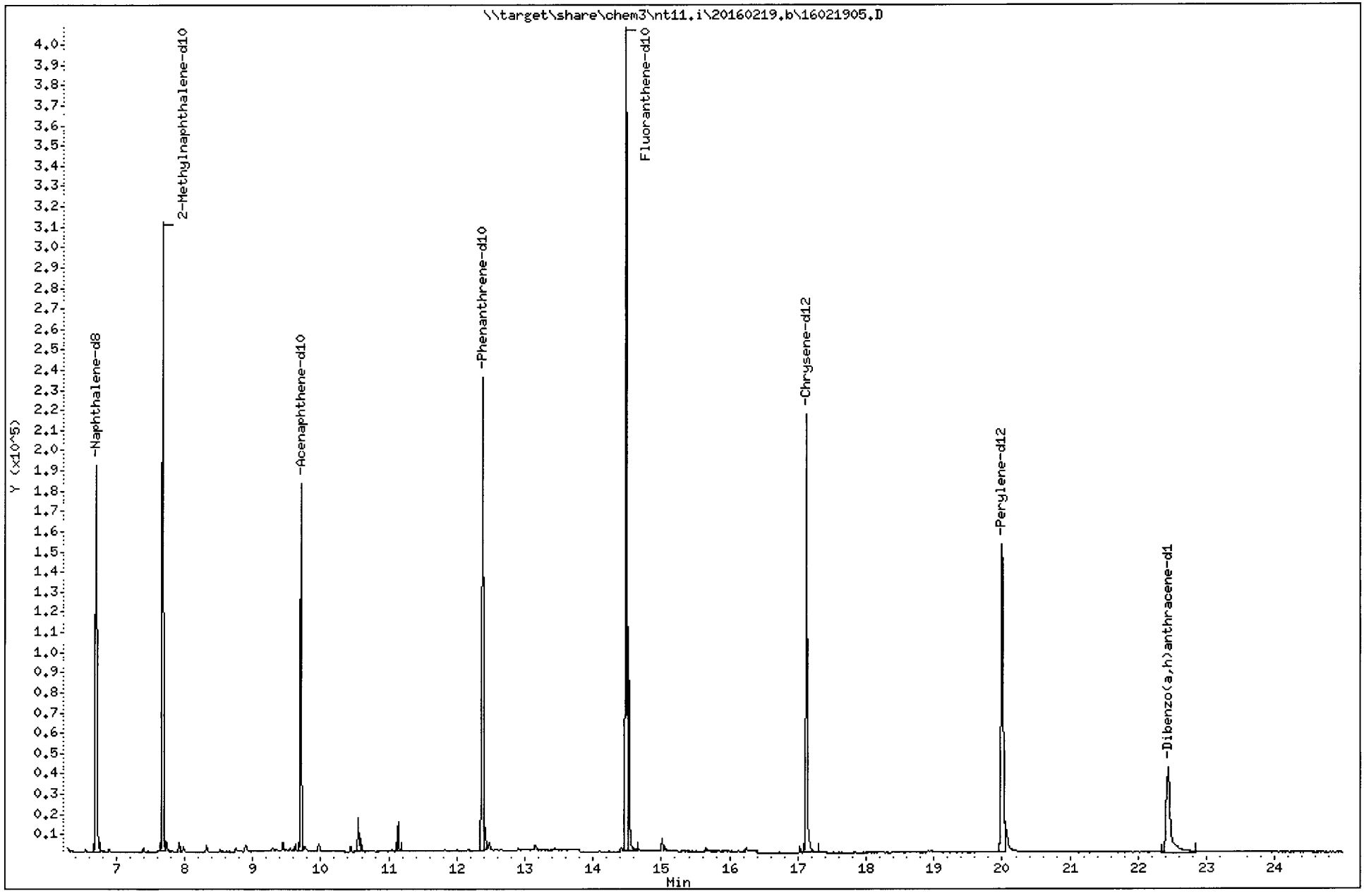
Sample Info: AVX9A

Volume Injected (uL): 2.0

Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25



AVX9 : 00202

REVIEW SUMMARY FOR FILE - 16021905.D

Lab ID: AVX9A
nt11.i, 20160219.b\lowsim.m, 19-FEB-2016 09:31

RT CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

On Column LOD for nt11.i,20160219.b\lowsim.m,Sublist: newpna.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000

ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160219.b\16021906.D
Lab Smp Id: AVX9AMS
Client Smp ID: MW-8_021016 MS
Inj Date : 19-FEB-2016 10:01
MS Autotune Date: 12-FEB-2016 08:31
Operator : JW
Inst ID: nt11.i
Smp Info : AVX9AMS
Misc Info : 16-2330
Comment :
Method : \\target\share\chem3\nt11.i\20160219.b\lowsim.m
Meth Date : 19-Feb-2016 13:31 nt11.i
Quant Type: ISTD
Cal Date : 25-JAN-2016 12:00
Cal File: 16012510.D
Als bottle: 4
QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE
Compound Sublist: newpna.sub
Target Version: 4.14
Processing Host: AUTOSPECDATA2

Concentration Formula: Amt * DF * Vt / Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	500.000	Final Extract Volume (uL)
Vo	500.000	Sample Volume extracted (mL)
Cpnd Variable		Local Compound Variable

JCD 2/19/16

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ug/L)
* 4 Naphthalene-d8	136	6.697	6.707	(1.000)	298549	200.000	
5 Naphthalene	128	6.739	6.739	(1.006)	368673	223.189	223
$ 6 2-Methylnaphthalene-d10	152	7.674	7.674	(1.146)	235499	211.047	211
7 2-Methylnaphthalene	142	7.737	7.737	(1.155)	259253	218.286	218
8 1-Methylnaphthalene	142	7.989	7.989	(1.193)	236231	219.612	220
10 Acenaphthylene	152	9.550	9.550	(0.984)	383790	214.076	214
* 11 Acenaphthene-d10	164	9.705	9.705	(1.000)	219250	200.000	
12 Acenaphthene	153	9.772	9.772	(1.007)	249296	220.392	220
14 Dibenzofuran	168	9.971	9.971	(1.027)	383785	221.548	222
15 Fluorene	166	10.591	10.591	(1.091)	304037	222.349	222
* 18 Phenanthrene-d10	188	12.384	12.384	(1.000)	359810	200.000	
19 Phenanthrene	178	12.418	12.418	(1.003)	472008	231.725	232
20 Anthracene	178	12.473	12.473	(1.007)	425046	217.006	217
$ 23 Fluoranthene-d10	212	14.476	14.485	(1.169)	462805	237.607	238
24 Fluoranthene	202	14.514	14.514	(1.172)	518718	248.362	248
25 Pyrene	202	15.014	15.014	(0.877)	522406	212.589	213
28 Benzo(a)anthracene	228	17.029	17.029	(0.995)	442838	211.656	212
* 29 Chrysene-d12	240	17.121	17.121	(1.000)	319382	200.000	
30 Chrysene	228	17.171	17.171	(1.003)	470064	219.539	220
44 Benzo(b)fluoranthene	252	18.921	18.921	(0.946)	390427	197.999	198
45 Benzo(k)fluoranthene	252	18.959	18.959	(0.948)	435351	211.392	211
46 Benzo(j)fluoranthene	252	19.027	19.027	(0.951)	422251	225.179	225

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/L)
	34 Benzo(a)pyrene	252	19.795	19.795	(0.990)	348358	192.643	193
*	35 Perylene-d12	264	19.997	20.007	(1.000)	299542	200.000	
$	36 Dibenzo(a,h)anthracene-d14	292	22.431	22.442	(1.122)	195920	175.314	175
	37 Indeno(1,2,3-cd)pyrene	276	22.564	22.575	(1.128)	349674	188.917	189
	38 Dibenzo(a,h)anthracene	278	22.553	22.553	(1.128)	277885	190.052	190
	39 Benzo(g,h,i)perylene	276	23.705	23.705	(1.185)	318780	194.530	195
	47 Perylene	252	20.064	20.064	(1.003)	390122	210.813	211

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 16021906.D
Lab Smp Id: AVX9AMS
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20160219.b\lowsim.m
Misc Info: 16-2330

Calibration Date: 19-FEB-2016
Calibration Time: 07:46
Client Smp ID: MW-8_021016 MS
Level: LOW
Sample Type: Water

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	356051	178026	712102	298549	-16.15
11 Acenaphthene-d10	264524	132262	529048	219250	-17.12
18 Phenanthrene-d10	444949	222475	889898	359810	-19.13
29 Chrysene-d12	343139	171570	686278	319382	-6.92
35 Perylene-d12	319277	159639	638554	299542	-6.18

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.71	6.21	7.21	6.70	-0.16
11 Acenaphthene-d10	9.71	9.21	10.21	9.71	0.00
18 Phenanthrene-d10	12.38	11.88	12.88	12.38	0.00
29 Chrysene-d12	17.12	16.62	17.62	17.12	0.00
35 Perylene-d12	20.01	19.51	20.51	20.00	-0.05

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

ARI Labs, Inc.

RECOVERY REPORT

Client Name: Geo
Sample Matrix: LIQUID
Lab Smp Id: AVX9AMS
Level: LOW
Data Type: MS DATA
SpikeList File: waterlcs.spk
Sublist File: newpna.sub
Method File: \\target\share\chem3\nt11.i\20160219.b\lowsim.m
Misc Info: 16-2330

Client SDG: AVX9
Fraction: SV
Client Smp ID: MW-8_021016 MS
Operator: JW
SampleType: MS
Quant Type: ISTD

	SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
5	Naphthalene	300	223	74.40	37-120
7	2-Methylnaphthalen	300	218	72.76	37-120
8	1-Methylnaphthalen	300	220	73.20	29-120
10	Acenaphthylene	300	214	71.36	41-120
12	Acenaphthene	300	220	73.46	41-120
14	Dibenzofuran	300	222	73.85	38-120
15	Fluorene	300	222	74.12	43-120
19	Phenanthrene	300	232	77.24	41-120
20	Anthracene	300	217	72.34	40-120
24	Fluoranthene	300	248	82.79	45-120
25	Pyrene	300	213	70.86	41-120
28	Benzo(a)anthracene	300	212	70.55	42-120
30	Chrysene	300	220	73.18	44-120
44	Benzo(b)fluoranthe	300	198	66.00	44-120
45	Benzo(k)fluoranthe	300	211	70.46	50-120
46	Benzo(j)fluoranthe	300	225	75.06	39-160
34	Benzo(a)pyrene	300	193	64.21	35-120
37	Indeno(1,2,3-cd)py	300	189	62.97	37-120
38	Dibenzo(a,h)anthra	300	190	63.35	34-120
39	Benzo(g,h,i)peryle	300	195	64.84	38-120
47	Perylene	300	211	70.27	30-160

	SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 6	2-Methylnaphthalen	300	211	70.35	42-120
$ 23	Fluoranthene-d10	300	238	79.20	57-120
$ 36	Dibenzo(a,h)anthra	300	175	58.44	29-120

Data File: \\target\share\chem3\nt11.i\20160219.b\16021906.D

Date : 19-FEB-2016 10:01

Client ID: MW-8_021016 MS

Sample Info: AVX9AMS

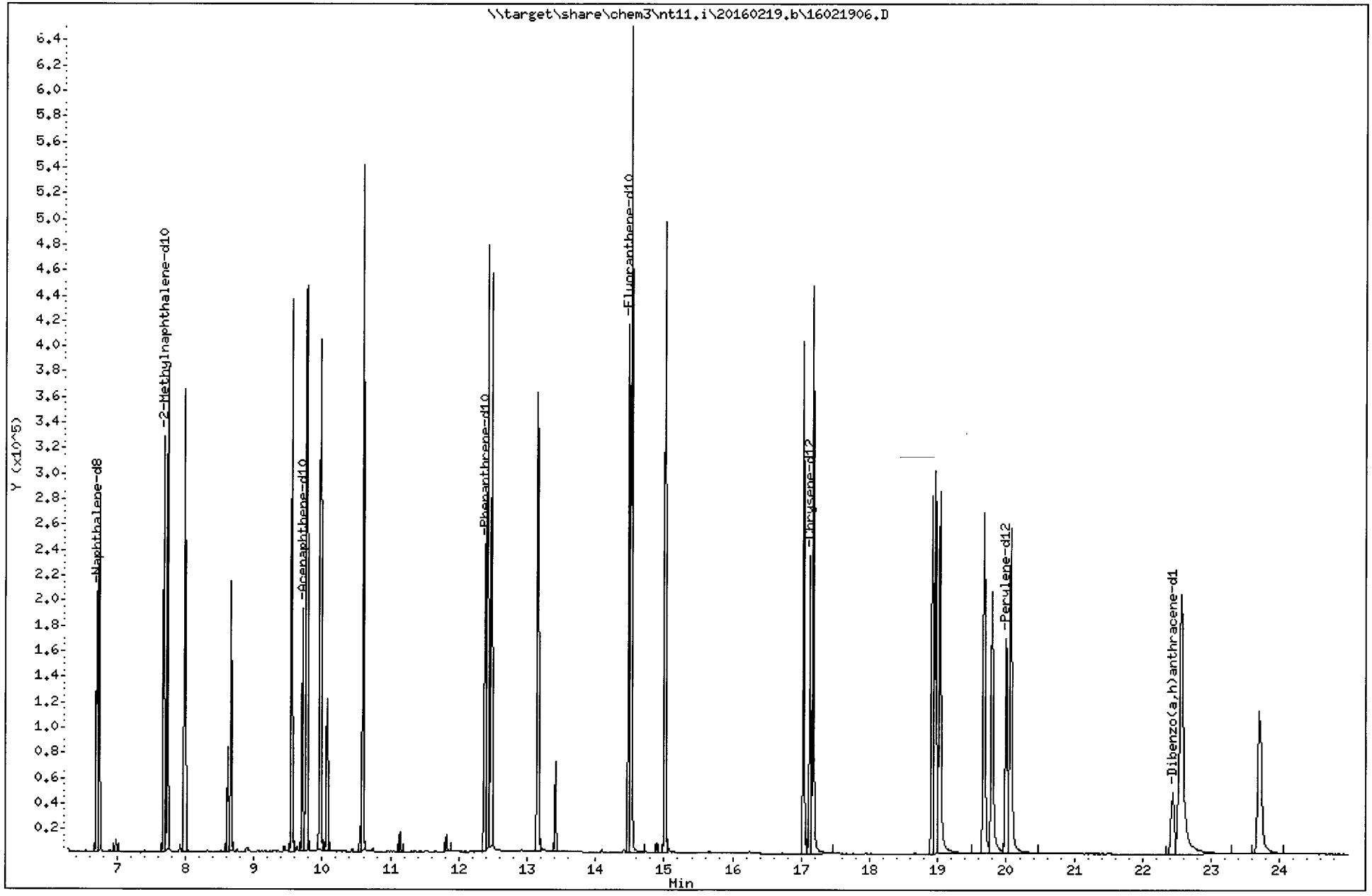
Volume Injected (uL): 2.0

Column phase: Rxi-17Sil MS

Instrument: nt11.i

Operator: JW

Column diameter: 0.25



AVX9 : 00209

REVIEW SUMMARY FOR FILE - 16021906.D

Lab ID: AVX9AMS
nt11.i, 20160219.b\lowsim.m, 19-FEB-2016 10:01

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

On Column LOD for nt11.i,20160219.b\lowsim.m,Sublist: newpna.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000

ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160219.b\16021907.D
Lab Smp Id: AVX9AMSD Client Smp ID: MW-8_021016 MSD
Inj Date : 19-FEB-2016 10:32 MS Autotune Date: 12-FEB-2016 08:31
Operator : JW Inst ID: nt11.i
Smp Info : AVX9AMSD
Misc Info : 16-2330
Comment :
Method : \\target\share\chem3\nt11.i\20160219.b\lowsim.m
Meth Date : 19-Feb-2016 13:31 nt11.i Quant Type: ISTD
Cal Date : 25-JAN-2016 12:00 Cal File: 16012510.D
Als bottle: 5 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: newpna.sub
Target Version: 4.14
Processing Host: AUTOSPECDATA2

Concentration Formula: Amt * DF * Vt / Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	500.000	Final Extract Volume (uL)
Vo	500.000	Sample Volume extracted (mL)
Cpnd Variable		Local Compound Variable

JW 2/19/16

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/L)
*	4 Naphthalene-d8	136	6.697	6.707	(1.000)	298992	200.000	
	5 Naphthalene	128	6.739	6.739	(1.006)	362764	219.287	219
$	6 2-Methylnaphthalene-d10	152	7.674	7.674	(1.146)	231280	206.959	207
	7 2-Methylnaphthalene	142	7.737	7.737	(1.155)	257461	216.456	216
	8 1-Methylnaphthalene	142	7.989	7.989	(1.193)	233053	216.337	216
	10 Acenaphthylene	152	9.550	9.550	(0.984)	381280	212.200	212
*	11 Acenaphthene-d10	164	9.705	9.705	(1.000)	219742	200.000	
	12 Acenaphthene	153	9.761	9.772	(1.006)	246624	217.542	218
	14 Dibenzofuran	168	9.971	9.971	(1.027)	383548	220.915	221
	15 Fluorene	166	10.591	10.591	(1.091)	302502	220.731	221
*	18 Phenanthrene-d10	188	12.384	12.384	(1.000)	363091	200.000	
	19 Phenanthrene	178	12.418	12.418	(1.003)	471177	229.227	229
	20 Anthracene	178	12.473	12.473	(1.007)	431079	218.097	218
$	23 Fluoranthene-d10	212	14.476	14.485	(1.169)	465038	236.596	237
	24 Fluoranthene	202	14.514	14.514	(1.172)	519859	246.659	247
	25 Pyrene	202	15.014	15.014	(0.877)	523348	212.393	212
	28 Benzo(a)anthracene	228	17.029	17.029	(0.995)	446845	212.990	213
*	29 Chrysene-d12	240	17.121	17.121	(1.000)	320253	200.000	
	30 Chrysene	228	17.171	17.171	(1.003)	471474	219.599	220
	44 Benzo(b)fluoranthene	252	18.921	18.921	(0.946)	389021	195.097	195
	45 Benzo(k)fluoranthene	252	18.959	18.959	(0.948)	436741	209.714	210
	46 Benzo(j)fluoranthene	252	19.027	19.027	(0.951)	420692	221.859	222

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ug/L)
34 Benzo(a)pyrene	252	19.795	19.795	(0.989)	359568	196.636	197
* 35 Perylene-d12	264	20.007	20.007	(1.000)	302903	200.000	
$ 36 Dibenzo(a,h)anthracene-d14	292	22.431	22.442	(1.121)	204090	180.598	181
37 Indeno(1,2,3-cd)pyrene	276	22.564	22.575	(1.128)	351129	187.598	188
38 Dibenzo(a,h)anthracene	278	22.553	22.553	(1.127)	279110	188.772	189
39 Benzo(g,h,i)perylene	276	23.705	23.705	(1.185)	320587	193.462	193
47 Perylene	252	20.064	20.064	(1.003)	391961	209.457	209

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 16021907.D
Lab Smp Id: AVX9AMSD
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20160219.b\lowsim.m
Misc Info: 16-2330

Calibration Date: 19-FEB-2016
Calibration Time: 07:46
Client Smp ID: MW-8_021016 MSD
Level: LOW
Sample Type: Water

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	356051	178026	712102	298992	-16.03
11 Acenaphthene-d10	264524	132262	529048	219742	-16.93
18 Phenanthrene-d10	444949	222475	889898	363091	-18.40
29 Chrysene-d12	343139	171570	686278	320253	-6.67
35 Perylene-d12	319277	159639	638554	302903	-5.13

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.71	6.21	7.21	6.70	-0.16
11 Acenaphthene-d10	9.71	9.21	10.21	9.71	0.00
18 Phenanthrene-d10	12.38	11.88	12.88	12.38	0.00
29 Chrysene-d12	17.12	16.62	17.62	17.12	0.00
35 Perylene-d12	20.01	19.51	20.51	20.01	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

ARI Labs, Inc.

RECOVERY REPORT

Client Name: Geo
Sample Matrix: LIQUID
Lab Smp Id: AVX9AMSD
Level: LOW
Data Type: MS DATA
SpikeList File: waterlcs.spk
Sublist File: newpna.sub
Method File: \\target\share\chem3\nt11.i\20160219.b\lowsim.m
Misc Info: 16-2330

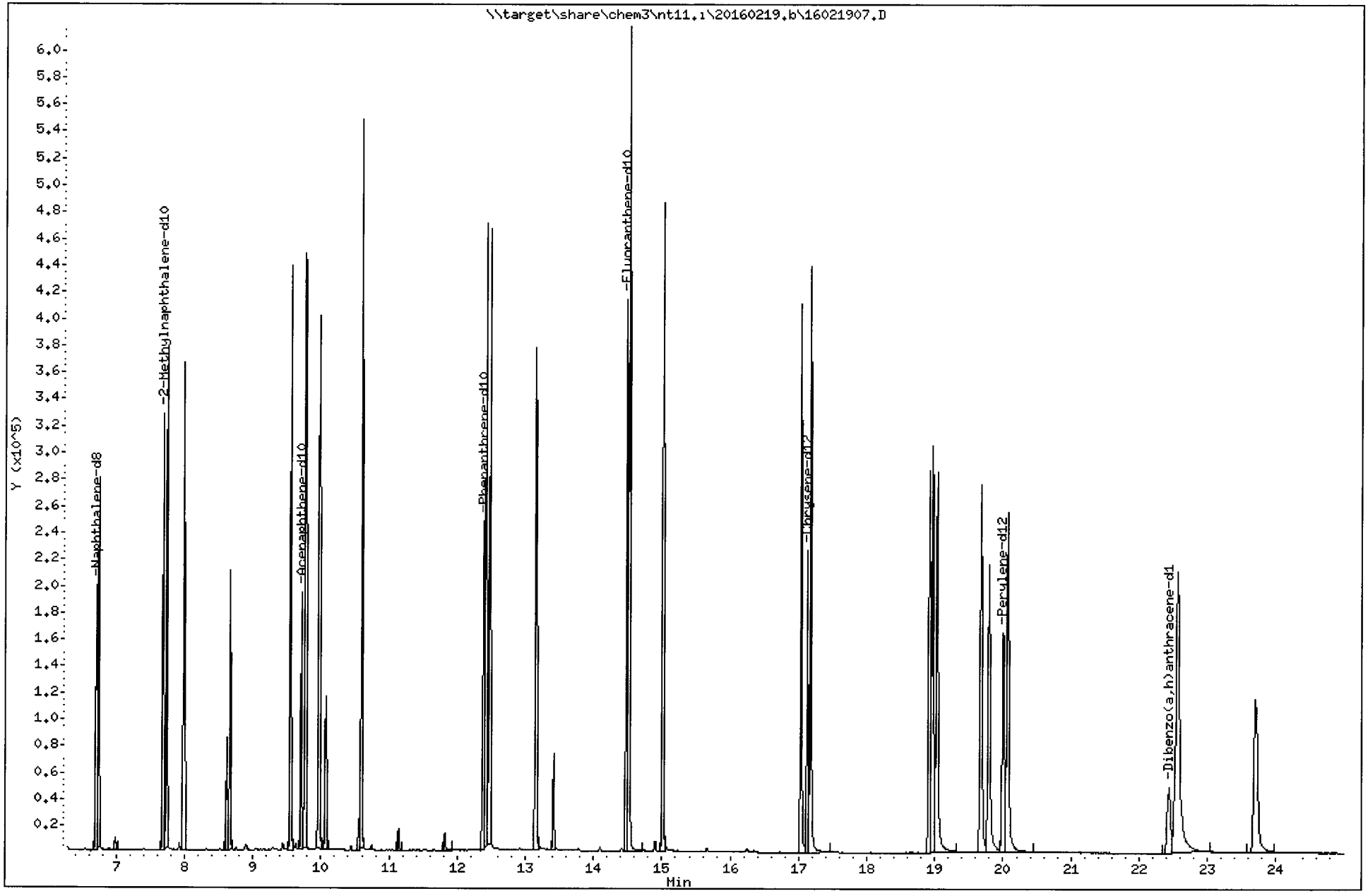
Client SDG: AVX9
Fraction: SV
Client Smp ID: MW-8_021016 MSD
Operator: JW
SampleType: MS
Quant Type: ISTD

	SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
5	Naphthalene	300	219	73.10	37-120
7	2-Methylnaphthalen	300	216	72.15	37-120
8	1-Methylnaphthalen	300	216	72.11	29-120
10	Acenaphthylene	300	212	70.73	41-120
12	Acenaphthene	300	218	72.51	41-120
14	Dibenzofuran	300	221	73.64	38-120
15	Fluorene	300	221	73.58	43-120
19	Phenanthrene	300	229	76.41	41-120
20	Anthracene	300	218	72.70	40-120
24	Fluoranthene	300	247	82.22	45-120
25	Pyrene	300	212	70.80	41-120
28	Benzo(a)anthracene	300	213	71.00	42-120
30	Chrysene	300	220	73.20	44-120
44	Benzo(b)fluoranthe	300	195	65.03	44-120
45	Benzo(k)fluoranthe	300	210	69.90	50-120
46	Benzo(j)fluoranthe	300	222	73.95	39-160
34	Benzo(a)pyrene	300	197	65.55	35-120
37	Indeno(1,2,3-cd)py	300	188	62.53	37-120
38	Dibenzo(a,h)anthra	300	189	62.92	34-120
39	Benzo(g,h,i)peryle	300	193	64.49	38-120
47	Perylene	300	209	69.82	30-160

	SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 6	2-Methylnaphthalen	300	207	68.99	42-120
$ 23	Fluoranthene-d10	300	237	78.87	57-120
$ 36	Dibenzo(a,h)anthra	300	181	60.20	29-120

Data File: \\target\share\chem3\nt11.i\20160219.b\16021907.D
Date : 19-FEB-2016 10:32
Client ID: MW-8_021016 MSD
Sample Info: AVX9AMSD
Volume Injected (uL): 2.0
Column phase: Rx1-17Sil MS

Instrument: nt11.i
Operator: JW
Column diameter: 0.25



AVX9AMSD

REVIEW SUMMARY FOR FILE - 16021907.D

Lab ID: AVX9AMSD
nt11.i, 20160219.b\lowsim.m, 19-FEB-2016 10:32

RT CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

On Column LOD for nt11.i,20160219.b\lowsim.m,Sublist: newpna.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000

ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160219.b\16021908.D
Lab Smp Id: AVX9D Client Smp ID: DUP 021016
Inj Date : 19-FEB-2016 11:02 MS Autotune Date: 12-FEB-2016 08:31
Operator : JW Inst ID: nt11.i
Smp Info : AVX9D
Misc Info : 16-2333
Comment :
Method : \\target\share\chem3\nt11.i\20160219.b\lowsim.m
Meth Date : 19-Feb-2016 13:31 nt11.i Quant Type: ISTD
Cal Date : 25-JAN-2016 12:00 Cal File: 16012510.D
Als bottle: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: newpna.sub
Target Version: 4.14
Processing Host: AUTOSPECDATA2

Concentration Formula: Amt * DF * Vt / Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	500.000	Final Extract Volume (uL)
Vo	500.000	Sample Volume extracted (mL)
Cpnd Variable		Local Compound Variable

2/19/16

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ug/L)
*	4 Naphthalene-d8	136	6.697	6.707	(1.000)	293559	200.000	
	5 Naphthalene	128	Compound Not Detected.					
$	6 2-Methylnaphthalene-d10	152	7.674	7.674	(1.146)	216760	197.555	198
	7 2-Methylnaphthalene	142	Compound Not Detected.					
	8 1-Methylnaphthalene	142	Compound Not Detected.					
	10 Acenaphthylene	152	Compound Not Detected.					
*	11 Acenaphthene-d10	164	9.705	9.705	(1.000)	209127	200.000	
	12 Acenaphthene	153	Compound Not Detected.					
	14 Dibenzofuran	168	Compound Not Detected.					
	15 Fluorene	166	Compound Not Detected.					
*	18 Phenanthrene-d10	188	12.373	12.384	(1.000)	360933	200.000	
	19 Phenanthrene	178	Compound Not Detected.					
	20 Anthracene	178	Compound Not Detected.					
$	23 Fluoranthene-d10	212	14.476	14.485	(1.170)	444707	227.605	228
	24 Fluoranthene	202	Compound Not Detected.					
	25 Pyrene	202	Compound Not Detected.					
	28 Benzo(a)anthracene	228	Compound Not Detected.					
*	29 Chrysene-d12	240	17.121	17.121	(1.000)	304532	200.000	
	30 Chrysene	228	Compound Not Detected.					
	44 Benzo(b)fluoranthene	252	Compound Not Detected.					
	45 Benzo(k)fluoranthene	252	Compound Not Detected.					
	46 Benzo(j)fluoranthene	252	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ug/L)
	34 Benzo(a)pyrene	252	Compound Not Detected.					
*	35 Perylene-d12	264	20.007	20.007	(1.000)	280612	200.000	
$	36 Dibenzo(a,h)anthracene-d14	292	22.431	22.442	(1.121)	175556	167.689	168
	37 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
	38 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	39 Benzo(g,h,i)perylene	276	Compound Not Detected.					
	47 Perylene	252	Compound Not Detected.					

AXYS : QC1.7

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 16021908.D
Lab Smp Id: AVX9D
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20160219.b\lowsim.m
Misc Info: 16-2333

Calibration Date: 19-FEB-2016
Calibration Time: 07:46
Client Smp ID: DUP_021016
Level: LOW
Sample Type: Water

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	356051	178026	712102	293559	-17.55
11 Acenaphthene-d10	264524	132262	529048	209127	-20.94
18 Phenanthrene-d10	444949	222475	889898	360933	-18.88
29 Chrysene-d12	343139	171570	686278	304532	-11.25
35 Perylene-d12	319277	159639	638554	280612	-12.11

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.71	6.21	7.21	6.70	-0.16
11 Acenaphthene-d10	9.71	9.21	10.21	9.71	0.00
18 Phenanthrene-d10	12.38	11.88	12.88	12.37	-0.09
29 Chrysene-d12	17.12	16.62	17.62	17.12	0.00
35 Perylene-d12	20.01	19.51	20.51	20.01	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

ARI Labs, Inc.

RECOVERY REPORT

Client Name: GeoEngineers Inc. Client SDG: AVX9
Sample Matrix: LIQUID Fraction: SV
Lab Smp Id: AVX9D Client Smp ID: DUP_021016
Level: LOW Operator: JW
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: waterlcs.spk Quant Type: ISTD
Sublist File: newpna.sub
Method File: \\target\share\chem3\nt11.i\20160219.b\lowsim.m
Misc Info: 16-2333

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	300	198	65.85	42-120
$ 23 Fluoranthene-d10	300	228	75.87	57-120
$ 36 Dibenzo(a,h)anthra	300	168	55.90	29-120

Data File: \\target\share\chem3\nt11.i\20160219.b\16021908.D

Date : 19-FEB-2016 11:02

Client ID: DUP_021016

Sample Info: AVX9D

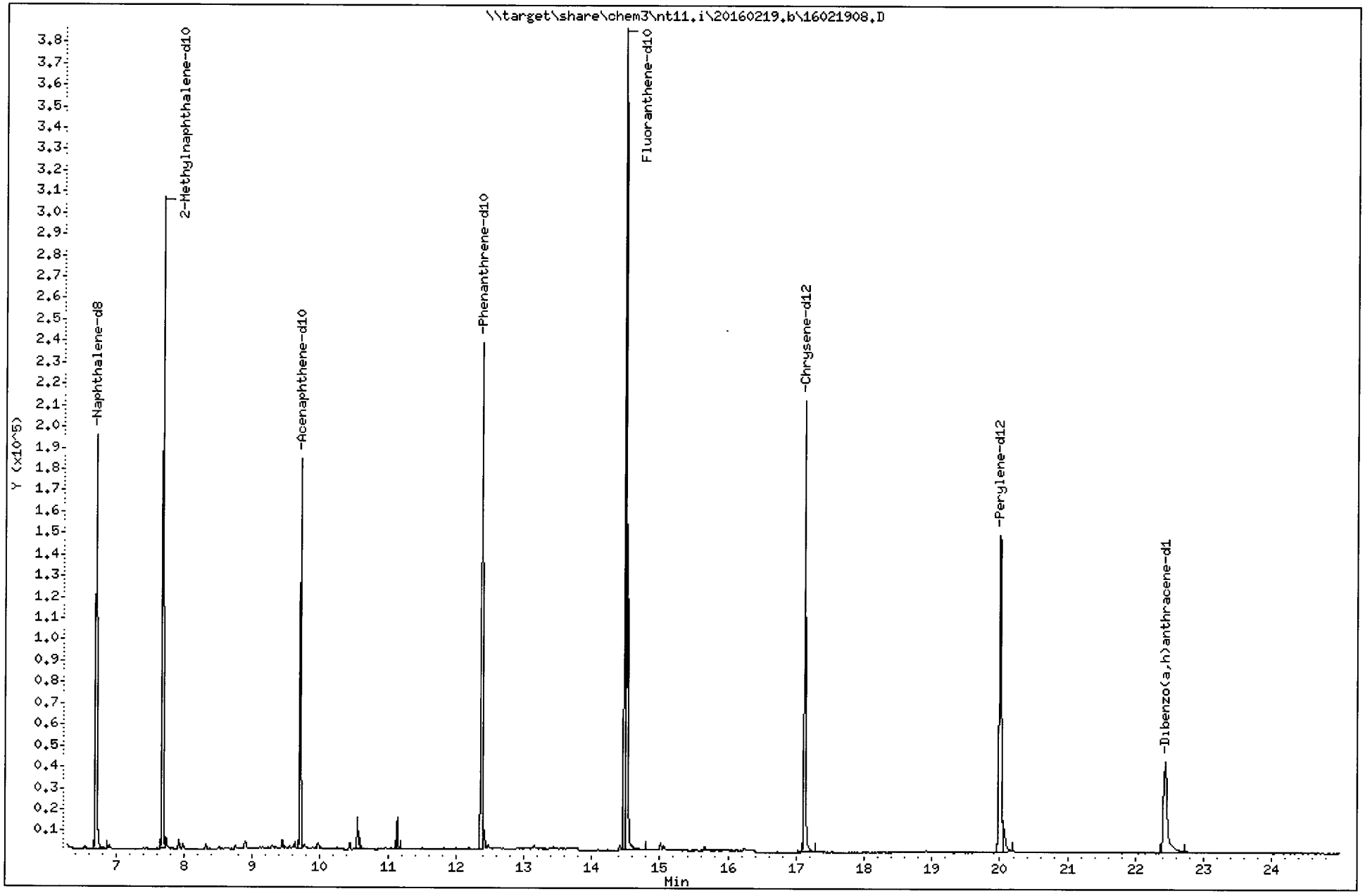
Volume Injected (uL): 2.0

Column phase: Rxi-17Sil MS

Instrument: nt11.i

Operator: JW

Column diameter: 0.25



AVX9:00220

REVIEW SUMMARY FOR FILE - 16021908.D

Lab ID: AVX9D
nt11.i, 20160219.b\lowsim.m, 19-FEB-2016 11:02

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

On Column LOD for nt11.i,20160219.b\lowsim.m,Sublist: newpna.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000

ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160219.b\16021909.D
Lab Smp Id: AVX9E Client Smp ID: MW-4_021116
Inj Date : 19-FEB-2016 11:33 MS Autotune Date: 12-FEB-2016 08:31
Operator : JW Inst ID: nt11.i
Smp Info : AVX9E
Misc Info : 16-2334
Comment :
Method : \\target\share\chem3\nt11.i\20160219.b\lowsim.m
Meth Date : 19-Feb-2016 13:31 nt11.i Quant Type: ISTD
Cal Date : 25-JAN-2016 12:00 Cal File: 16012510.D
Als bottle: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: newpna.sub
Target Version: 4.14
Processing Host: AUTOSPECDATA2

Concentration Formula: Amt * DF * Vt / Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	500.000	Final Extract Volume (uL)
Vo	500.000	Sample Volume extracted (mL)
Cpnd Variable		Local Compound Variable

2/16/16

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/L)
*	4 Naphthalene-d8	136	6.697	6.707	(1.000)	299042	200.000	
	5 Naphthalene	128	Compound Not Detected.					
$	6 2-Methylnaphthalene-d10	152	7.674	7.674	(1.146)	234287	209.614	210
	7 2-Methylnaphthalene	142	Compound Not Detected.					
	8 1-Methylnaphthalene	142	Compound Not Detected.					
	10 Acenaphthylene	152	Compound Not Detected.					
*	11 Acenaphthene-d10	164	9.705	9.705	(1.000)	216895	200.000	
	12 Acenaphthene	153	Compound Not Detected.					
	14 Dibenzofuran	168	Compound Not Detected.					
	15 Fluorene	166	Compound Not Detected.					
*	18 Phenanthrene-d10	188	12.384	12.384	(1.000)	371506	200.000	
	19 Phenanthrene	178	Compound Not Detected.					
	20 Anthracene	178	Compound Not Detected.					
$	23 Fluoranthene-d10	212	14.475	14.485	(1.169)	509984	253.585	254
	24 Fluoranthene	202	Compound Not Detected.					
	25 Pyrene	202	Compound Not Detected.					
	28 Benzo(a)anthracene	228	Compound Not Detected.					
*	29 Chrysene-d12	240	17.121	17.121	(1.000)	309960	200.000	
	30 Chrysene	228	Compound Not Detected.					
	44 Benzo(b)fluoranthene	252	Compound Not Detected.					
	45 Benzo(k)fluoranthene	252	Compound Not Detected.					
	46 Benzo(j)fluoranthene	252	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/L)
	34 Benzo(a)pyrene	252	Compound Not Detected.					
*	35 Perylene-d12	264	19.997	20.007	(1.000)	287983	200.000	
$	36 Dibenzo(a,h)anthracene-d14	292	22.431	22.442	(1.122)	244042	227.140	227
	37 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
	38 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	39 Benzo(g,h,i)perylene	276	Compound Not Detected.					
	47 Perylene	252	Compound Not Detected.					

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 16021909.D
Lab Smp Id: AVX9E
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20160219.b\lowsim.m
Misc Info: 16-2334

Calibration Date: 19-FEB-2016
Calibration Time: 07:46
Client Smp ID: MW-4_021116
Level: LOW
Sample Type: Water

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	356051	178026	712102	299042	-16.01
11 Acenaphthene-d10	264524	132262	529048	216895	-18.01
18 Phenanthrene-d10	444949	222475	889898	371506	-16.51
29 Chrysene-d12	343139	171570	686278	309960	-9.67
35 Perylene-d12	319277	159639	638554	287983	-9.80

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.71	6.21	7.21	6.70	-0.16
11 Acenaphthene-d10	9.71	9.21	10.21	9.71	-0.00
18 Phenanthrene-d10	12.38	11.88	12.88	12.38	-0.00
29 Chrysene-d12	17.12	16.62	17.62	17.12	-0.00
35 Perylene-d12	20.01	19.51	20.51	20.00	-0.05

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

AVX9 : 00224

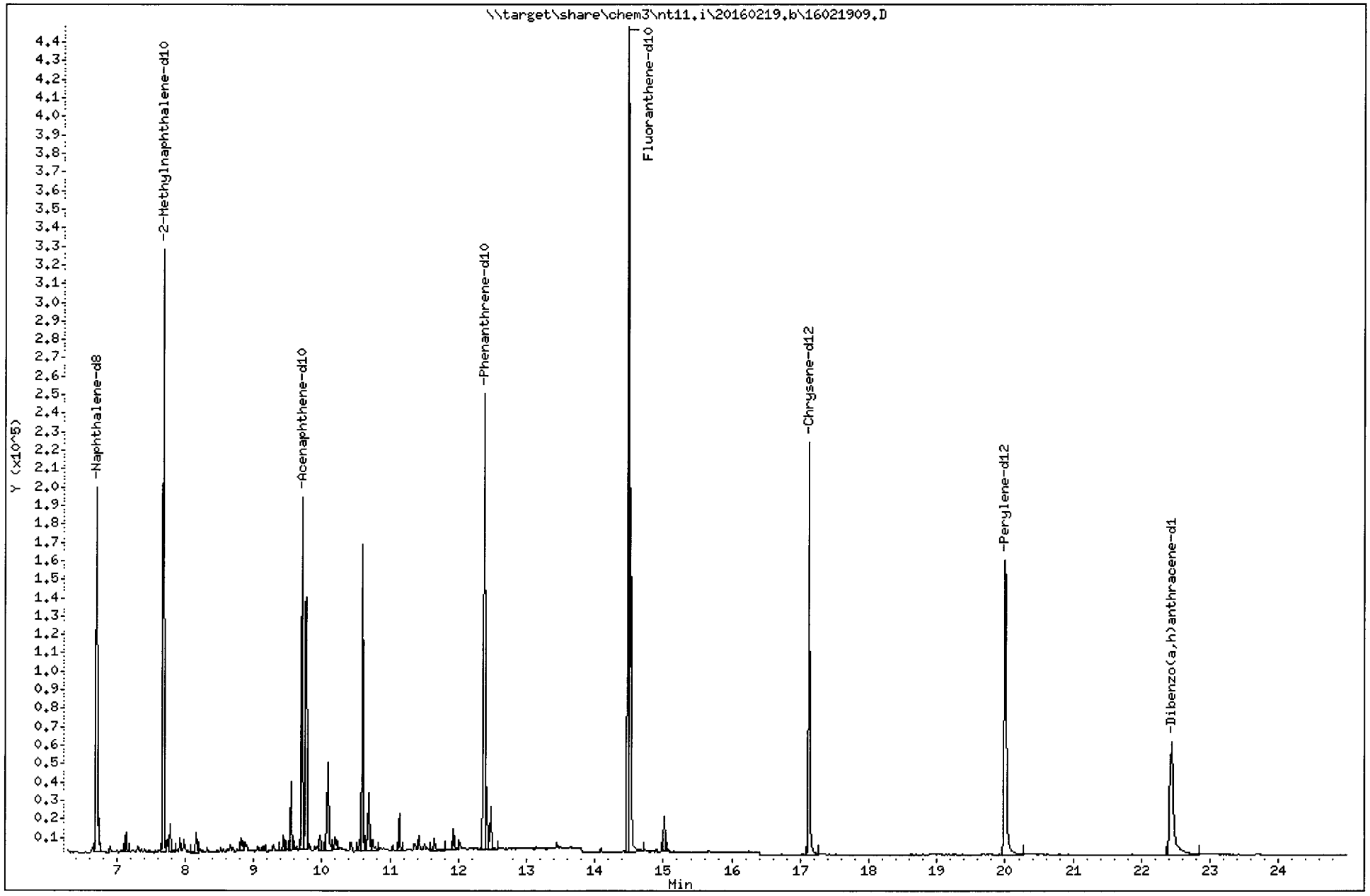
ARI Labs, Inc.

RECOVERY REPORT

Client Name: GeoEngineers Inc. Client SDG: AVX9
Sample Matrix: LIQUID Fraction: SV
Lab Smp Id: AVX9E Client Smp ID: MW-4_021116
Level: LOW Operator: JW
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: waterlcs.spk Quant Type: ISTD
Sublist File: newpna.sub
Method File: \\target\share\chem3\nt11.i\20160219.b\lowsim.m
Misc Info: 16-2334

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	300	210	69.87	42-120
$ 23 Fluoranthene-d10	300	254	84.53	57-120
$ 36 Dibenzo(a,h)anthra	300	227	75.71	29-120

Data File: \\target\share\chem3\nt11.i\20160219.b\16021909.D
Date : 19-FEB-2016 11:33
Client ID: MW-4_021116
Instrument: nt11.i
Sample Info: AVX9E
Volume Injected (uL): 2.0
Operator: JW
Column phase: Rxi-17Sil MS
Column diameter: 0.25



REVIEW SUMMARY FOR FILE - 16021909.D

Lab ID: AVX9E
nt11.i, 20160219.b\lowsim.m, 19-FEB-2016 11:33

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

On Column LOD for nt11.i,20160219.b\lowsim.m,Sublist: newpna.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000

Metals Raw Data
Preparation Bench Sheets and Notes

ARI Job ID: AVX9

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SPIKING LOG

Analyst: MK

Date: 2/22/16

Final Volume 25.0

Final Volume (Hg): _____

Sample ID AUX9

ASPK
HSPK
MBSPK
MB2SPK

Prepcode:				
Spike Solution:		ICP Routine	ICP No GFA	GFA
Standard No.:				
Vol Added (mL):				
STOCK CONCENTRATION	Ag	50		2.0
	Al	200	200	
	As	200		10
	Ba	200	200	
	Be	50	50	
	Ca	1000	1000	
	Cd	50		2.0
	Co	50	50	
	Cr	50	50	
	Cu	50	50	
	Fe	200	200	
	K	1000	1000	
	Mg	1000	1000	
	Mn	50	50	
	Na	1000	1000	
	Ni	50	50	
	Pb	200		10
	Se	200		10
	Sr	50	50	
	Tl	200		10
	V	50	50	
	Zn	50	50	

	REN		
	ICP-MS #1	ICP-MS #2	ICP-MS Minerals
	03383		
	Q05		
Ag	25		
Al			500
As	25 ✓		
Ba	25		
Be	25		
Ca			500
Cd	25		
Co	25		
Cr	25		
Cu	25		
Fe			500
K			500
Mg			500
Mn	25		
Mo		25	
Na			500
Ni	25 ✓		
Pb	25		
Sb		25	
Se	80		
Tl	25		
U	25		
V	25		
Zn	80		

Element	Prepcode	Analysis	Stock Conc.	Stock Added	Std No.
Hg		CVA	1.0		
Hg MBSPK		CVA	1.0		
Sb		ICP	2000		
Sb		GFA	100		
B		ICP	500		
Mo		ICP	500		
Si		ICP	10000		
Sn		ICP	500		
Ti		ICP	2000		

Additional Elements:

Element	Prepcode	Analysis	Stock Conc.	Stock Added	Std. No.

5033F

27950

Revision 14, 11/21/05

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Digestion Log

Analyst: MH **Date:** 2/22/16 **Time:** 0930

Matrix: water **Block ID:** #12 **Block Temp:** 96°C **Thermometer:** mp26

ARI Sample ID	Btl #	pH<2	Prep Code: REN Initial ~~Wt (g)~~ Vol (mL)	Final Vol (mL)	Prep Code: Initial Wt (g) Vol (mL)	Final Vol (mL)	Comments
AVX9 A	8	✓	50.0	25.0			
" ADUP	8	✓					
" ASPK	8	✓					
" B	2	✓					
" C	2	✓					
" D	2	✓					
" E	2	✓					
" F	2	✓					
" G	2	✓					
" MB1	–	–					
" MB1SPK	–	–					
" H	1	✓					
" HDUP	1	✓					
" HSPK	1	✓					
" I	1	✓					
" J	1	✓					
" K	1	✓					
" L	1	✓					
" M	1	✓					
" N	1	✓					
" MB2	–	–					
" MB2SPK	–	–	50.0	25.0			
					MH 2/22/16		

Chemical/Reagent ID:

HNO_3: E0264 **HCl:** – **H_2O_2:** D2934 **Tube Lot #:** N04103

Metals Raw Data
Run Logs, Calibrations, and Raw Data

ARI Job ID: AVX9

AVX9 : 00201

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: ICP/ICP-MS GFA CVA

Analysis Date: 2/24/16

MD	Analyst ar 2/25/16	Peer [illegible] 2-25-16	Comment
Logbook:			
Analyst, Date, Method info	✓	✓	
Sample ID's	✓	✓	See log
Standard/QC solution ID's recorded	✓	✓	
Prep codes	✓	✓	
Dilution factors	✓	✓	
Crossouts/Corrections/Deletions	✓	✓	See log
Calibration:			
Blank & Standard intensities	✓	✓	
Standard deviations	✓	✓	
Curve fit	✓	✓	
Calibration Verification:			
ICV/CCV	✓	✓	See log
ICB/CCB	✓	✓	
Samples:			
RSD's & SD's	✓	✓	
Internal Standards	✓	✓	See log
Carry-over	✓	✓	
Method QC:			
CRI/CRA	✓	✓	
ICSA/ICSAB	✓	✓	See log
Post Spikes/Serial Dilutions	—	—	
Analytic Spikes	—	—	
Matrix QC:			
SRM/LCS	✓	✓	
Matrix Spikes	✓	✓	
Matrix Duplicates	✓	✓	
Method Blanks	✓	✓	
Data Distribution:			
Requested elements/isotope identified	✓	✓	
Correct samples identified for distribution	✓	✓	
Raw data match distributed data	✓	✓	
Data filename correct	✓	✓	
Necessary Analysts Notes and CAF's	—	—	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 2/24/16 **Analyst:** ee

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		Std Ø	E474		
		1	E522		
		2	E455		
		3	E456		
		4	E517		
		5	E523		
		Rinse			
		ICV	E156		
		ICB	E474		
		Std Ø	E474		
		CCV1	E517		
		CCB1	E474		
		Low Check	E522		
		ICSA	E524		V-, Cr^{53} ↑
		ICSAB	E525		V-, ↑
		LR200	E361		Al↑, Ag↓
		LR300	E533		Al↑, $Cu^{63,65}$ $Zn^{66,67,68}$ Ag Tl Pb U ↓
		B1-B2			
ZZZ ↓	✓ ↓	~~CCV2~~ ZZZZZZ ~~CCB2~~ ↓			Al↑, Ni^{60} Ag Th↓
		CCV2			Al↑, Be Ag Th U↓
		CCB2			
		Std Ø			
		CCV3			Al↑, Ag Th↓

AVXS : 06233

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 2/24/16 **Analyst:** ee

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		CCB3			
	✓	AWH3 MB	REN	2	Cu↑
		AWK1 MB		↓	
		AWJØ MB		↓	RR Ag
		↓ A		↓	↓
		AWKØ A		5	
		AWK1 A		100	
		↓ MBSPK		2	
		AWJØ MBSPK		↓	RR Ag
		AWH3 MBSPK		↓	Cu Pb only: override
		AWE8 MBSPK	↓	↓	Pb only Override
		CCV4			Be, Ag, Th, U ↓
		CCB4			
		AWI9 MB	SWN	20	RR Al Ag
		AVX6 A	↓	100	Zn Only
		AWI9 A		20	Sc↑, RR Al Ag Cr Fe
		↓ B		↓	RR Al Ag, +RR Fe
		C			
		D			+RR Fe
		↓ MBSPK	↓	↓	↓, +RR Ba(↑)
		AWG4 MBSPK	REN	2	Pb only: override
		AWG5 ↓	↓	↓	↓
		AWA5 ↓	↓	↓	↓
		CCV5			Be Al Fe^{57} Th ↓

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS SAMPLE RUN LOG

PE Nexlon ICP-MS Serial No. 81DN1050201

Analysis Date: 2/24/16 **Analyst:** ee

All corrections made by analyst unless otherwise noted. ee 2/24/16

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		CCB5			
		AVZØ MB	REN	2	
		AVY2 MB	↓	↓	
		AWJ7 MB			
		↓ A			
		↓ B			
		AVY2 B			
		AVZØ A			
		↓ MBSPK			
		AVY2 MBSPK			
		AWJ7 MBSPK	↓	↓	
		CCV6			Be Ag Th↓
		CCB6			
Label		AVWØR MB1	REN	2	Cu only
		AWA5 A	↓	100	Zn only
		AWJ7 C		2	
		AVX9 F		50	
		↓ G		↓	
		I			
		J			
		M			
		↓ N		↓	
Label		AVWØR MBSPK	↓	2	Cu only
		CCV7			Be Ag Th U ↓

AVXS 002205

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 2/24/14 **Analyst:** ee
ee 2/24/14

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		CCB7			
		AWJ9 MB	REN	2	RRCd
		AVW0K A		20	Cu only
		B			
		C			ee 2/25/14
		D			
		EDUP			
		E			
		ESPK			
		AWJ9 A		2	RRCd
		MBSPK		2	
		CCV8			Be MoCd^{111,114} Th U
		CCB8			
		Rinse/DI			
					ee 2/24/14

AVXS : 00226

Performance Check Report

Sample ID: STD Performance Check
Sample Date/Time: Wednesday, February 24, 2016 11:58:36
Sample Description:
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\STD Performance Check.mth
Dataset File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\DataSet\Default\STD Performance Check.8689
MassCal File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Conditions File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Dual Detector Mode: Pulse
Acq. Dead Time (ns): 35
Current Dead Time (ns): 35
Torch Z position (mm): 0.00

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD	Mode
	Be	9.0	2612.4	2612.372	99.022	3.8	Standard
	In	114.9	61681.1	61681.101	1850.903	3.0	Standard
	U	238.1	67590.0	67589.977	2138.209	3.2	Standard
⌈	CeO	155.9	816.1	0.016	0.000	3.1	Standard
|>	Ce	139.9	51702.7	51702.727	259.003	0.5	Standard
⌊	Ce++	70.0	1482.3	0.029	0.002	6.8	Standard
	Bkgd	220.0	0.0	0.033	0.075	223.6	Standard

Current Conditions File Data

Current Value	Description
1.07	Nebulizer Gas Flow STD/KED [NEB]
1.20	Auxiliary Gas Flow
18.00	Plasma Gas Flow
-12.00	Deflector Voltage
1600.00	ICP RF Power
-1637.00	Analog Stage Voltage
1050.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-15.00	Cell Rod Offset STD [CRO]
7.00	Discriminator Threshold
-2.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.25	RPq
1.07	DRC Mode NEB
-8.00	DRC Mode QRO
-2.50	DRC Mode CRO
-4.00	DRC Mode Cell Entrance/Exit Voltage
0.60	Cell Gas A
0.00	Cell Gas B
250.00	Axial Field Voltage
-15.00	KED Mode CRO
-12.00	KED Mode QRO
-2.00	KED Mode Cell Entrance Voltage
-24.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
4.00	KED Cell Gas B
0.00	KED RPa
0.25	KED RPq
475.00	KED Mode Axial Field Voltage

AVX9 : 00237

SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Wizard\SmartTune\ARIdaily_UCT.swz

Start Time: 2/24/2016 11:14:27 AM
End Time: 2/24/2016 11:26:05 AM

STD Performance Check - [Failed]
Obtained Intensity (Be 9): 1282.19 - <Target not achieved>
Obtained Intensity (In 115): 26574.58 - <Target not achieved>
Obtained Intensity (U 238): 34407.06
Obtained Intensity (Bkgd 220): 0.00
Obtained Formula (Ce++ 70 / Ce 140): 0.015 (=381.27 / 26040.13)
Obtained Formula (CeO 156 / Ce 140): 0.010 (=265.14 / 26040.13)

Torch Alignment - [Passed]

Vertical	Horizontal	Intensity
1.40 mm	0.62 mm	37888.18

Nebulizer Gas Flow STD/KED [NEB] - [Passed] Optimum value(s): 1.07
Obtained Intensity (In 115): 42700.72
Obtained Formula (CeO 156 / Ce 140): 0.0125 (=470.01 / 37664.59)

Mass Calibration and Resolution - [Passed] Optimum value(s): N/A
Target/Obtained mass (7.016/6.975), Target/Obtained resolution (0.7/0.681)
Target/Obtained mass (23.985/24.025), Target/Obtained resolution (0.7/0.683)
Target/Obtained mass (114.904/114.875), Target/Obtained resolution (0.7/0.712)
Target/Obtained mass (238.05/238.075), Target/Obtained resolution (0.7/0.695)

QID STD/DRC - Optimum value(s): Correlation Coefficient = 0.998; Intercept = -12.63

KED Mode QID - Optimum value(s): Correlation Coefficient = 0.999; Intercept = -13.19

STD Performance Check - [Passed] Optimum value(s): N/A
Obtained Intensity (Be 9): 2583.57
Obtained Intensity (In 115): 62938.55
Obtained Intensity (U 238): 68236.59
Obtained Intensity (Bkgd 220): 0.10
Obtained Formula (Ce++ 70 / Ce 140): 0.028 (=1520.68 / 53908.12)
Obtained Formula (CeO 156 / Ce 140): 0.015 (=827.82 / 53908.12)

AVX3 · 80238

SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Wizard\SmartTune\ARISmartTuneDual.s

Start Time: 2/24/2016 11:29:07 AM
End Time: 2/24/2016 11:46:00 AM

Detector Voltages - [Passed]
- Pulse Stage Voltage - [Passed] Optimum value(s): 1100
- Analog Stage Voltage - [Passed] Optimum value(s): -1637
- Pulse Stage Voltage (Fine-tune) - [Passed] Optimum value(s): 1050

Dual Detector Calibration
- Points Collected: 401
- Calibration unsuccessful for some masses due to insufficient pulse/analog crossover points

RQ ran to improve. ea 2/24/16

AVXS 66239

SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Wizard\SmartTune\ARISmartTuneDual.

Start Time: 2/24/2016 11:46:22 AM
End Time: 2/24/2016 11:53:52 AM

Target Analytes passed. ee 2/24/16

Dual Detector Calibration
Points Collected: 401
Calibration unsuccessful for some masses due to insufficient pulse/analog crossover points

AVX3 00246

SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Wizard\SmartTune\ARISmartTuneDual.s

Start Time: 2/24/2016 11:58:35 AM
End Time: 2/24/2016 12:00:40 PM

STD Performance Check - [Passed] Optimum value(s): N/A
Obtained Intensity (Be 9): 2612.37
Obtained Intensity (In 115): 61681.10
Obtained Intensity (U 238): 67589.98
Obtained Intensity (Bkgd 220): 0.03
Obtained Formula (Ce++ 70 / Ce 140): 0.029 (=1482.34 / 51702.73)
Obtained Formula (CeO 156 / Ce 140): 0.016 (=816.09 / 51702.73)

AVX3 : 00241

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Blank
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, February 24, 2016 12:31:06
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
⌈>	**Li**	**6**		ug/L				684500	3	Standard
⌊	**Be**	**9**		ug/L				17	29	Standard
	C	**13**		ug/L				54830	5	Standard
	Cl	**37**		mg/L				2505205	2	Standard
⌈>	**Sc**	**45**		ug/L				922938	2	Standard
⌈	**Al**	**27**		ug/L				438	2	Standard
⌈	**V**	**51**		mg/L				3335	0	Standard
⌈	**V-1**	**51**		mg/L				172	20	Standard
⌈	**Cr**	**52**		ug/L				9712	1	Standard
⌈	**Cr**	**53**		ug/L				85	4	Standard
⌈	**Fe**	**54**		mg/L				39435	1	Standard
⌈	**Fe**	**57**		mg/L				8353	2	Standard
⌊	**Mn**	**55**		ug/L				271	6	Standard
⌈>	**Ge-1**	**72**		ug/L				23012	2	KED
⌈	**Co**	**59**		ug/L				4	89	KED
⌈	**Ni**	**60**		ug/L				2	86	KED
⌈	**Ni**	**62**		ug/L				0	173	KED
⌈	**Cu**	**63**		ug/L				21	35	KED
⌈	**Cu**	**65**		ug/L				7	90	KED
⌈	**Zn**	**66**		ug/L				7	50	KED
⌈	**Zn**	**67**		ug/L				0		KED
⌈	**Zn**	**68**		ug/L				6	75	KED
⌈	**As**	**75**		ug/L				1	137	KED
⌊	**Se-1**	**78**		ug/L				4	26	KED
	Y	**89**		ug/L				623216	3	Standard
	Kr	**83**		ug/L				52	14	Standard
⌈>	**In-1**	**115**		ug/L				8263	3	KED
⌈	**Mo**	**98**		ug/L				11	32	KED
⌈	**Cd**	**111**		ug/L				0	100	KED
⌊	**Cd**	**114**		ug/L				1	103	KED
⌈>	**In**	**115**		ug/L				746709	0	Standard
⌈	**Ag**	**107**		ug/L				31	34	Standard
⌈	**Sb**	**121**		ug/L				407	10	Standard
⌈	**Sb**	**123**		ug/L				335	3	Standard
⌈	**Ba**	**135**		ug/L				5	57	Standard
⌊	**Ba**	**137**		ug/L				7	66	Standard
⌈>	**Tb**	**159**		ug/L				929216	1	Standard
⌈	**Tl**	**205**		ug/L				67	19	Standard
⌈	**Pb**	**208**		ug/L				158	11	Standard
⌈	**Bi**	**209**		ug/L				2280075	3	Standard
⌈	**Th**	**232**		ug/L				186	7	Standard
⌊	**U**	**238**		ug/L				30	16	Standard

AVX9 : 00242

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 1
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, February 24, 2016 12:36:10
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
>	Li	6		ug/L			684500	683905	0	Standard
	Be	9	0.200	ug/L	0.008	4	17	396	3	Standard
	C	13		ug/L			54830	56033	2	Standard
	Cl	37		mg/L			2505205	2445718	2	Standard
>	Sc	45		ug/L			922938	928317	1	Standard
	Al	27	20.000	ug/L	0.400	2	438	249026	0	Standard
	V	51	0.200	mg/L	0.013	6	3335	7052	1	Standard
	V-1	51	0.200	mg/L	0.009	4	172	3907	3	Standard
	Cr	52	0.500	ug/L	0.054	10	9712	13873	2	Standard
	Cr	53	0.500	ug/L	0.007	1	85	561	2	Standard
	Fe	54	20.000	mg/L	1.339	6	39435	64402	2	Standard
	Fe	57	20.000	mg/L	0.376	1	8353	18284	1	Standard
	Mn	55	0.500	ug/L	0.010	1	271	11696	1	Standard
>	Ge-1	72		ug/L			23012	22811	1	KED
	Co	59	0.200	ug/L	0.019	9	4	404	10	KED
	Ni	60	0.500	ug/L	0.031	6	2	297	7	KED
	Ni	62	0.500	ug/L	0.089	17	0	48	19	KED
	Cu	63	0.500	ug/L	0.032	6	21	846	4	KED
	Cu	65	0.500	ug/L	0.027	5	7	407	3	KED
	Zn	66	4.000	ug/L	0.284	7	7	728	8	KED
	Zn	67	4.000	ug/L	0.651	16	0	116	14	KED
	Zn	68	4.000	ug/L	0.482	12	6	504	13	KED
	As	75	0.200	ug/L	0.013	6	1	22	7	KED
	Se-1	78	0.500	ug/L	0.429	85	4	8	43	KED
	Y	89		ug/L			623216	592169	3	Standard
	Kr	83		ug/L			52	57	28	Standard
>	In-1	115		ug/L			8263	8116	1	KED
	Mo	98	0.200	ug/L	0.013	6	11	108	5	KED
	Cd	111	0.100	ug/L	0.024	23	0	15	22	KED
	Cd	114	0.100	ug/L	0.024	23	1	41	23	KED
>	In	115		ug/L			746709	737488	0	Standard
	Ag	107	0.200	ug/L	0.010	4	31	3461	5	Standard
	Sb	121	0.200	ug/L	0.005	2	407	2508	2	Standard
	Sb	123	0.200	ug/L	0.002	0	335	1976	0	Standard
	Ba	135	0.500	ug/L	0.007	1	5	1418	1	Standard
	Ba	137	0.500	ug/L	0.007	1	7	2517	1	Standard
>	Tb	159		ug/L			929216	924691	1	Standard
	Tl	205	0.200	ug/L	0.009	4	67	6578	2	Standard
	Pb	208	0.100	ug/L	0.007	7	158	4520	5	Standard
	Bi	209		ug/L			2280075	2274192	1	Standard
	Th	232	0.200	ug/L	0.011	5	186	5719	3	Standard
	U	238	0.200	ug/L	0.008	3	30	9262	3	Standard

AVX9 : 80243

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 2
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, February 24, 2016 12:41:15
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File:

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
Li	6		ug/L			684500	703502	4	Standard
Be	9	10.000	ug/L	0.625	6	17	18640	1	Standard
C	13		ug/L			54830	57426	3	Standard
Cl	37		mg/L			2505205	2514050	3	Standard
Sc	45		ug/L			922938	941209	3	Standard
Al	27	999.991	ug/L	48.239	4	438	12312762	2	Standard
V	51	10.000	mg/L	0.100	1	3335	191434	2	Standard
V-1	51	10.000	mg/L	0.014	0	172	190332	3	Standard
Cr	52	9.999	ug/L	0.728	7	9712	90280	3	Standard
Cr	53	10.000	ug/L	0.409	4	85	9849	3	Standard
Fe	54	999.981	mg/L	37.911	3	39435	1237430	0	Standard
Fe	57	999.973	mg/L	30.502	3	8353	478105	1	Standard
Mn	55	10.000	ug/L	0.330	3	271	234611	1	Standard
Ge-1	72		ug/L			23012	24120	0	KED
Co	59	10.000	ug/L	0.216	2	4	19696	1	KED
Ni	60	9.999	ug/L	0.646	6	2	6070	5	KED
Ni	62	9.999	ug/L	0.398	3	0	961	3	KED
Cu	63	10.000	ug/L	0.401	4	21	17195	3	KED
Cu	65	9.999	ug/L	0.283	2	7	7998	3	KED
Zn	66	9.855	ug/L	0.144	1	7	1729	1	KED
Zn	67	9.824	ug/L	0.194	1	0	272	1	KED
Zn	68	10.026	ug/L	0.631	6	6	1348	5	KED
As	75	10.000	ug/L	0.406	4	1	1021	4	KED
Se-1	78	10.001	ug/L	0.848	8	4	100	8	KED
Y	89		ug/L			623216	630442	1	Standard
Kr	83		ug/L			52	59	8	Standard
In-1	115		ug/L			8263	8375	1	KED
Mo	98	10.000	ug/L	0.135	1	11	4610	2	KED
Cd	111	10.000	ug/L	0.151	1	0	1388	0	KED
Cd	114	10.000	ug/L	0.214	2	1	3708	2	KED
In	115		ug/L			746709	770280	2	Standard
Ag	107	10.000	ug/L	0.258	2	31	175137	2	Standard
Sb	121	10.000	ug/L	0.289	2	407	111530	1	Standard
Sb	123	10.000	ug/L	0.302	3	335	85213	0	Standard
Ba	135	10.000	ug/L	0.316	3	5	29605	0	Standard
Ba	137	10.000	ug/L	0.248	2	7	51706	0	Standard
Tb	159		ug/L			929216	961731	2	Standard
Tl	205	10.000	ug/L	0.652	6	67	326507	4	Standard
Pb	208	10.000	ug/L	0.540	5	158	426110	2	Standard
Bi	209		ug/L			2280075	2366112	0	Standard
Th	232	10.001	ug/L	0.772	7	186	362957	5	Standard
U	238	10.000	ug/L	0.504	5	30	471526	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 3
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, February 24, 2016 12:46:33
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
>	Li	6		ug/L			684500	685471	1	Standard
	Be	9	19.919	ug/L	0.157	0	17	35657	1	Standard
	C	13		ug/L			54830	55517	2	Standard
	Cl	37		mg/L			2505205	2431975	0	Standard
>	Sc	45		ug/L			922938	935348	2	Standard
	Al	27	1998.470	ug/L	60.355	3	438	24388680	1	Standard
	V	51	20.024	mg/L	0.601	3	3335	379289	2	Standard
	V-1	51	20.019	mg/L	0.604	3	172	379765	2	Standard
	Cr	52	19.829	ug/L	0.939	4	9712	163148	2	Standard
	Cr	53	19.808	ug/L	0.915	4	85	18587	2	Standard
	Fe	54	1992.960	mg/L	73.047	3	39435	2378772	1	Standard
	Fe	57	1998.680	mg/L	95.248	4	8353	938617	2	Standard
	Mn	55	19.954	ug/L	0.846	4	271	460747	2	Standard
>	Ge-1	72		ug/L			23012	24335	2	KED
	Co	59	19.934	ug/L	0.316	1	4	39080	1	KED
	Ni	60	19.821	ug/L	0.518	2	2	11719	1	KED
	Ni	62	19.841	ug/L	0.930	4	0	1863	2	KED
	Cu	63	19.859	ug/L	0.159	0	21	33491	2	KED
	Cu	65	19.930	ug/L	0.232	1	7	15850	2	KED
	Zn	66	20.007	ug/L	0.457	2	7	3538	1	KED
	Zn	67	20.261	ug/L	1.299	6	0	593	4	KED
	Zn	68	19.839	ug/L	0.761	3	6	2614	6	KED
	As	75	19.865	ug/L	1.062	5	1	1991	3	KED
	Se-1	78	20.381	ug/L	0.307	1	4	216	2	KED
	Y	89		ug/L			623216	641601	2	Standard
	Kr	83		ug/L			52	50	34	Standard
>	In-1	115		ug/L			8263	8576	0	KED
	Mo	98	19.886	ug/L	0.149	0	11	9167	0	KED
	Cd	111	19.974	ug/L	0.537	2	0	2825	3	KED
	Cd	114	19.851	ug/L	0.866	4	1	7317	4	KED
>	In	115		ug/L			746709	788449	3	Standard
	Ag	107	19.802	ug/L	0.724	3	31	341203	0	Standard
	Sb	121	19.988	ug/L	0.669	3	407	227109	0	Standard
	Sb	123	19.985	ug/L	0.775	3	335	173349	0	Standard
	Ba	135	20.018	ug/L	0.539	2	5	60873	2	Standard
	Ba	137	19.932	ug/L	0.880	4	7	103998	0	Standard
>	Tb	159		ug/L			929216	985572	1	Standard
	Tl	205	19.900	ug/L	0.114	0	67	653364	1	Standard
	Pb	208	19.901	ug/L	0.162	0	158	852966	2	Standard
	Bi	209		ug/L			2280075	2328521	3	Standard
	Th	232	20.074	ug/L	0.172	0	186	758358	1	Standard
	U	238	19.879	ug/L	0.146	0	30	938758	1	Standard

AVX9 : 66245

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 4
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, February 24, 2016 12:52:01
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
[>	**Li**	**6**		ug/L			684500	637723	3	Standard
[	**Be**	**9**	**49.903**	ug/L	3.104	6	17	82197	3	Standard
	C	**13**		ug/L			54830	51945	2	Standard
	Cl	**37**		mg/L			2505205	2405030	1	Standard
[>	**Sc**	**45**		ug/L			922938	889393	2	Standard
[	**Al**	**27**	**5042.682**	ug/L	226.194	4	438	61106844	2	Standard
[	**V**	**51**	**49.739**	mg/L	2.017	4	3335	868390	3	Standard
[	**V-1**	**51**	**49.724**	mg/L	2.151	4	172	872527	3	Standard
[	**Cr**	**52**	**50.080**	ug/L	3.136	6	9712	380451	4	Standard
[	**Cr**	**53**	**49.966**	ug/L	1.655	3	85	44314	1	Standard
[	**Fe**	**54**	**4988.771**	mg/L	28.330	0	39435	5545683	2	Standard
[	**Fe**	**57**	**5007.032**	mg/L	143.438	2	8353	2240122	1	Standard
[	**Mn**	**55**	**49.967**	ug/L	1.956	3	271	1092988	1	Standard
[>	**Ge-1**	**72**		ug/L			23012	23803	2	KED
[	**Co**	**59**	**49.901**	ug/L	1.270	2	4	94739	0	KED
[	**Ni**	**60**	**50.084**	ug/L	1.433	2	2	29206	1	KED
[	**Ni**	**62**	**49.884**	ug/L	1.599	3	0	4531	2	KED
[	**Cu**	**63**	**49.684**	ug/L	2.528	5	21	79362	3	KED
[	**Cu**	**65**	**50.022**	ug/L	2.892	5	7	38955	3	KED
[	**Zn**	**66**	**50.208**	ug/L	1.716	3	7	8849	1	KED
[	**Zn**	**67**	**49.773**	ug/L	2.746	5	0	1394	3	KED
[	**Zn**	**68**	**49.921**	ug/L	2.232	4	6	6369	3	KED
[	**As**	**75**	**50.056**	ug/L	1.403	2	1	4934	0	KED
[	**Se-1**	**78**	**50.150**	ug/L	2.729	5	4	522	3	KED
	Y	**89**		ug/L			623216	607533	3	Standard
	Kr	**83**		ug/L			52	55	15	Standard
[>	**In-1**	**115**		ug/L			8263	8662	1	KED
[	**Mo**	**98**	**49.958**	ug/L	1.374	2	11	23136	0	KED
[	**Cd**	**111**	**49.861**	ug/L	0.945	1	0	7023	1	KED
[	**Cd**	**114**	**49.782**	ug/L	2.763	5	1	18122	3	KED
[>	**In**	**115**		ug/L			746709	789220	2	Standard
[	**Ag**	**107**	**49.644**	ug/L	2.610	5	31	827026	3	Standard
[	**Sb**	**121**	**50.064**	ug/L	1.533	3	407	572645	1	Standard
[	**Sb**	**123**	**50.095**	ug/L	1.195	2	335	438883	0	Standard
[	**Ba**	**135**	**50.288**	ug/L	1.633	3	5	157600	1	Standard
[	**Ba**	**137**	**50.405**	ug/L	1.789	3	7	274513	1	Standard
[>	**Tb**	**159**		ug/L			929216	1035225	0	Standard
[	**Tl**	**205**	**49.295**	ug/L	2.118	4	67	1587694	3	Standard
[	**Pb**	**208**	**49.401**	ug/L	1.750	3	158	2097579	2	Standard
[	**Bi**	**209**		ug/L			2280075	2298120	1	Standard
[	**Th**	**232**	**49.807**	ug/L	2.741	5	186	1938603	5	Standard
[	**U**	**238**	**49.503**	ug/L	2.122	4	30	2338951	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 5
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, February 24, 2016 12:59:09
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File:

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
Li	6		ug/L			684500	602826	1	Standard
Be	9	99.122	ug/L	4.020	4	17	150035	2	Standard
C	13		ug/L			54830	50089	2	Standard
Cl	37		mg/L			2505205	2366745	1	Standard
Sc	45		ug/L			922938	837888	2	Standard
Al	27	10077.627	ug/L	221.350	2	438	118147547	0	Standard
V	51	99.288	mg/L	4.037	4	3335	1593038	4	Standard
V-1	51	99.496	mg/L	4.160	4	172	1618004	4	Standard
Cr	52	98.966	ug/L	4.013	4	9712	676900	2	Standard
Cr	53	100.280	ug/L	5.403	5	85	84473	3	Standard
Fe	54	9989.168	mg/L	405.957	4	39435	10382294	1	Standard
Fe	57	9994.391	mg/L	260.213	2	8353	4197110	0	Standard
Mn	55	99.376	ug/L	2.963	2	271	2006369	1	Standard
Ge-1	72		ug/L			23012	23367	2	KED
Co	59	99.133	ug/L	1.577	1	4	179594	1	KED
Ni	60	99.099	ug/L	2.234	2	2	55072	0	KED
Ni	62	99.533	ug/L	5.194	5	0	8736	3	KED
Cu	63	98.919	ug/L	3.447	3	21	149718	0	KED
Cu	65	99.041	ug/L	1.977	1	7	73411	1	KED
Zn	66	98.428	ug/L	3.182	3	7	16181	2	KED
Zn	67	98.945	ug/L	0.955	0	0	2631	3	KED
Zn	68	99.411	ug/L	3.294	3	6	12205	1	KED
As	75	100.407	ug/L	2.913	2	1	9849	0	KED
Se-1	78	99.445	ug/L	3.969	3	4	994	1	KED
Y	89		ug/L			623216	587063	0	Standard
Kr	83		ug/L			52	66	14	Standard
In-1	115		ug/L			8263	8525	0	KED
Mo	98	100.287	ug/L	2.812	2	11	46153	2	KED
Cd	111	100.051	ug/L	1.573	1	0	13895	0	KED
Cd	114	100.030	ug/L	1.217	1	1	35900	1	KED
In	115		ug/L			746709	820310	3	Standard
Ag	107	97.937	ug/L	5.353	5	31	1585650	2	Standard
Sb	121	99.379	ug/L	4.652	4	407	1156419	1	Standard
Sb	123	99.745	ug/L	3.079	3	335	899996	1	Standard
Ba	135	100.181	ug/L	2.649	2	5	328274	1	Standard
Ba	137	100.121	ug/L	4.593	4	7	568849	2	Standard
Tb	159		ug/L			929216	1083635	1	Standard
Tl	205	98.317	ug/L	1.986	2	67	3139427	3	Standard
Pb	208	97.926	ug/L	2.393	2	158	4071166	2	Standard
Bi	209		ug/L			2280075	2244087	3	Standard
Th	232	99.439	ug/L	2.111	2	186	3977095	2	Standard
U	238	97.575	ug/L	2.981	3	30	4465510	3	Standard

AVX9 : 00247

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Rinse sample
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, February 24, 2016 13:06:58
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File:

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
Li	6		ug/L			684500	663198	3	Standard
Be	9	-0.004	ug/L	0.003	59	17	9	40	Standard
C	13		ug/L			54830	48912	4	Standard
Cl	37		mg/L			2505205	2334137	1	Standard
Sc	45		ug/L			922938	864095	4	Standard
Al	27	0.049	ug/L	0.018	36	438	994	17	Standard
V	51	0.020	mg/L	0.015	72	3335	3450	3	Standard
V-1	51	0.009	mg/L	0.001	14	172	307	4	Standard
Cr	52	0.102	ug/L	0.085	83	9712	9789	2	Standard
Cr	53	0.024	ug/L	0.005	19	85	100	7	Standard
Fe	54	2.924	mg/L	2.409	82	39435	39975	2	Standard
Fe	57	3.480	mg/L	1.139	32	8353	9312	1	Standard
Mn	55	0.002	ug/L	0.002	76	271	297	7	Standard
Ge-1	72		ug/L			23012	24343	3	KED
Co	59	-0.000	ug/L	0.002	1621	4	4	65	KED
Ni	60	-0.001	ug/L	0.003	237	2	1	100	KED
Ni	62	-0.007	ug/L	0.000	0	0	0		KED
Cu	63	-0.001	ug/L	0.008	1172	21	21	56	KED
Cu	65	0.005	ug/L	0.004	82	7	12	24	KED
Zn	66	-0.021	ug/L	0.017	78	7	4	65	KED
Zn	67	0.000	ug/L	0.000		0	0		KED
Zn	68	0.026	ug/L	0.029	110	6	10	39	KED
As	75	0.015	ug/L	0.013	83	1	2	44	KED
Se-1	78	-0.144	ug/L	0.190	131	4	3	60	KED
Y	89		ug/L			623216	591330	0	Standard
Kr	83		ug/L			52	64	33	Standard
In-1	115		ug/L			8263	9154	0	KED
Mo	98	0.053	ug/L	0.005	8	11	39	5	KED
Cd	111	-0.001	ug/L	0.006	954	0	0	100	KED
Cd	114	-0.000	ug/L	0.005	1127	1	1	101	KED
In	115		ug/L			746709	835325	1	Standard
Ag	107	0.001	ug/L	0.001	77	31	45	18	Standard
Sb	121	0.085	ug/L	0.007	8	407	1464	5	Standard
Sb	123	0.081	ug/L	0.004	4	335	1118	2	Standard
Ba	135	-0.000	ug/L	0.002	773	5	5	88	Standard
Ba	137	0.003	ug/L	0.001	45	7	24	29	Standard
Tb	159		ug/L			929216	1079886	1	Standard
Tl	205	0.006	ug/L	0.001	16	67	259	10	Standard
Pb	208	0.002	ug/L	0.001	26	158	273	8	Standard
Bi	209		ug/L			2280075	2437552	5	Standard
Th	232	0.140	ug/L	0.006	4	186	5811	4	Standard
U	238	0.002	ug/L	0.000	7	30	107	4	Standard

AVX9 : 88248

Sample Information

Sample Date/Time: Wednesday, February 24, 2016 12:59:09
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_
Mass Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tu
Conditions File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416.cal

Calibration

Analyte	Mass	r Corr Coef	Slope	Std 1 Conc	Std 2 Conc	Std 3 Conc	Std 4 Conc	Std 5 Conc
Li	6							
Be	9	**0.9999**	0.003	0.20	10	20	50	100
C	13							
Cl	37							
Sc	45							
Al	27	**0.9999**	0.014	20.00	1000	2000	5000	10000
V	51	**0.9999**	0.019	0.20	10	20	50	100
V-1	51	**0.9999**	0.019	0.20	10	20	50	100
Cr	52	**0.9998**	0.008	0.50	10	20	50	100
Cr	53	**1.0000**	0.001	0.50	10	20	50	100
Fe	54	**1.0000**	0.001	20.00	1000	2000	5000	10000
Fe	57	**1.0000**	0.001	20.00	1000	2000	5000	10000
Mn	55	**0.9999**	0.024	0.50	10	20	50	100
Ge-1	72							
Co	59	**0.9999**	0.078	0.20	10	20	50	100
Ni	60	**0.9999**	0.024	0.50	10	20	50	100
Ni	62	**1.0000**	0.004	0.50	10	20	50	100
Cu	63	**0.9998**	0.065	0.50	10	20	50	100
Cu	65	**0.9998**	0.032	0.50	10	20	50	100
Zn	66	**0.9996**	0.007	4.00	10	20	50	100
Zn	67	**0.9998**	0.001	4.00	10	20	50	100
Zn	68	**0.9999**	0.005	4.00	10	20	50	100
As	75	**1.0000**	0.004	0.20	10	20	50	100
Se-1	78	**0.9999**	0.000	0.50	10	20	50	100
Y	89							
Kr	83							
In-1	115							
Mo	98	**1.0000**	0.054	0.20	10	20	50	100
Cd	111	**1.0000**	0.016	0.10	10	20	50	100
Cd	114	**1.0000**	0.042	0.10	10	20	50	100
In	115							
Ag	107	**0.9992**	0.020	0.20	10	20	50	100
Sb	121	**0.9999**	0.014	0.20	10	20	50	100
Sb	123	**1.0000**	0.011	0.20	10	20	50	100
Ba	135	**1.0000**	0.004	0.50	10	20	50	100
Ba	137	**1.0000**	0.007	0.50	10	20	50	100
Tb	159							
Tl	205	**0.9994**	0.029	0.20	10	20	50	100
Pb	208	**0.9992**	0.038	0.10	10	20	50	100
Bi	209							
Th	232	**0.9999**	0.037	0.20	10	20	50	100
U	238	**0.9990**	0.042	0.20	10	20	50	100

AVX9 : 60249

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICV
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, February 24, 2016 13:14:47
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
⌈>	**Li**	**6**		ug/L			684500	653636	3	Standard
⌊	**Be**	**9**	**49.301**	ug/L	2.219	4	17	80888	2	Standard
	C	**13**		ug/L			54830	50278	2	Standard
	Cl	**37**		mg/L			2505205	2414522	2	Standard
⌈>	**Sc**	**45**		ug/L			922938	859710	2	Standard
|	**Al**	**27**	**5104.733**	ug/L	166.359	3	438	61401106	1	Standard
|	**V**	**51**	**53.421**	mg/L	1.902	3	3335	880404	1	Standard
|	**V-1**	**51**	**53.229**	mg/L	1.915	3	172	887782	1	Standard
|	**Cr**	**52**	**51.616**	ug/L	1.242	2	9712	366685	2	Standard
|	**Cr**	**53**	**50.596**	ug/L	1.438	2	85	43794	2	Standard
|	**Fe**	**54**	**5077.731**	mg/L	67.928	1	39435	5435849	1	Standard
|	**Fe**	**57**	**4996.475**	mg/L	155.702	3	8353	2156695	1	Standard
⌊	**Mn**	**55**	**53.533**	ug/L	2.041	3	271	1108877	1	Standard
⌈>	**Ge-1**	**72**		ug/L			23012	24352	5	KED
|	**Co**	**59**	**52.043**	ug/L	3.688	7	4	98033	2	KED
|	**Ni**	**60**	**50.502**	ug/L	2.911	5	2	29198	0	KED
|	**Ni**	**62**	**50.977**	ug/L	2.248	4	0	4659	1	KED
|	**Cu**	**63**	**51.345**	ug/L	2.574	5	21	80898	1	KED
|	**Cu**	**65**	**50.986**	ug/L	3.374	6	7	39307	1	KED
|	**Zn**	**66**	**49.669**	ug/L	3.156	6	7	8499	3	KED
|	**Zn**	**67**	**51.821**	ug/L	4.816	9	0	1431	4	KED
|	**Zn**	**68**	**49.429**	ug/L	3.761	7	6	6313	2	KED
|	**As**	**75**	**50.941**	ug/L	2.597	5	1	5201	0	KED
⌊	**Se-1**	**78**	**78.217**	ug/L	4.593	5	4	814	0	KED
	Y	**89**		ug/L			623216	614516	4	Standard
	Kr	**83**		ug/L			52	66	21	Standard
⌈>	**In-1**	**115**		ug/L			8263	9019	2	KED
|	**Mo**	**98**	**48.677**	ug/L	1.474	3	11	23697	1	KED
|	**Cd**	**111**	**47.655**	ug/L	1.134	2	0	7000	0	KED
⌊	**Cd**	**114**	**48.138**	ug/L	1.570	3	1	18268	1	KED
⌈>	**In**	**115**		ug/L			746709	829540	2	Standard
|	**Ag**	**107**	**51.587**	ug/L	2.333	4	31	845158	2	Standard
|	**Sb**	**121**	**51.924**	ug/L	1.874	3	407	611565	1	Standard
|	**Sb**	**123**	**51.790**	ug/L	0.827	1	335	472928	0	Standard
|	**Ba**	**135**	**51.129**	ug/L	1.838	3	5	169442	1	Standard
⌊	**Ba**	**137**	**51.680**	ug/L	1.689	3	7	297046	1	Standard
⌈>	**Tb**	**159**		ug/L			929216	1114824	1	Standard
|	**Tl**	**205**	**50.212**	ug/L	1.699	3	67	1648971	2	Standard
|	**Pb**	**208**	**52.043**	ug/L	1.599	3	158	2225621	1	Standard
|	**Bi**	**209**		ug/L			2280075	2338870	2	Standard
|	**Th**	**232**	**48.371**	ug/L	3.094	6	186	1989679	5	Standard
⌊	**U**	**238**	**48.993**	ug/L	1.650	3	30	2306247	2	Standard

AVX9 : 88250

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICB
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, February 24, 2016 13:22:35
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
Li	6		ug/L			684500	671331	5	Standard
Be	9	-0.005	ug/L	0.002	46	17	8	48	Standard
C	13		ug/L			54830	49085	6	Standard
Cl	37		mg/L			2505205	2337504	1	Standard
Sc	45		ug/L			922938	854543	0	Standard
Al	27	0.116	ug/L	0.164	141	438	1799	110	Standard
V	51	0.015	mg/L	0.017	108	3335	3340	8	Standard
V-1	51	0.000	mg/L	0.002	736	172	163	17	Standard
Cr	52	0.100	ug/L	0.096	96	9712	9683	7	Standard
Cr	53	-0.001	ug/L	0.006	422	85	78	6	Standard
Fe	54	4.401	mg/L	1.769	40	39435	41158	4	Standard
Fe	57	2.853	mg/L	0.665	23	8353	8955	3	Standard
Mn	55	0.002	ug/L	0.002	94	271	284	11	Standard
Ge-1	72		ug/L			23012	24864	3	KED
Co	59	0.001	ug/L	0.001	71	4	6	17	KED
Ni	60	-0.002	ug/L	0.004	161	2	1	173	KED
Ni	62	-0.001	ug/L	0.011	1420	0	0	173	KED
Cu	63	0.000	ug/L	0.001	914	21	23	4	KED
Cu	65	-0.002	ug/L	0.003	202	7	6	41	KED
Zn	66	0.004	ug/L	0.018	431	7	8	32	KED
Zn	67	0.046	ug/L	0.040	86	0	1	86	KED
Zn	68	-0.023	ug/L	0.015	64	6	3	50	KED
As	75	0.013	ug/L	0.011	83	1	2	47	KED
Se-1	78	-0.227	ug/L	0.097	42	4	2	40	KED
Y	89		ug/L			623216	584901	3	Standard
Kr	83		ug/L			52	55	15	Standard
In-1	115		ug/L			8263	9190	3	KED
Mo	98	0.030	ug/L	0.010	32	11	28	20	KED
Cd	111	0.004	ug/L	0.013	379	0	1	124	KED
Cd	114	-0.004	ug/L	0.003	81	1	0	180	KED
In	115		ug/L			746709	848592	0	Standard
Ag	107	0.001	ug/L	0.002	247	31	51	77	Standard
Sb	121	0.009	ug/L	0.002	22	407	568	4	Standard
Sb	123	0.004	ug/L	0.003	73	335	419	7	Standard
Ba	135	0.003	ug/L	0.002	71	5	15	42	Standard
Ba	137	0.002	ug/L	0.001	28	7	22	17	Standard
Tb	159		ug/L			929216	1094572	2	Standard
Tl	205	0.003	ug/L	0.001	42	67	185	25	Standard
Pb	208	0.001	ug/L	0.001	261	158	208	29	Standard
Bi	209		ug/L			2280075	2469914	4	Standard
Th	232	0.085	ug/L	0.004	4	186	3639	3	Standard
U	238	0.001	ug/L	0.001	87	30	89	53	Standard

AVX9 : 80251

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Blank
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, February 24, 2016 13:27:40
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
⌈>	Li	6		ug/L				679131	0	Standard
⌊	Be	9		ug/L				8	35	Standard
	C	13		ug/L				50836	5	Standard
	Cl	37		mg/L				2334177	1	Standard
⌈>	Sc	45		ug/L				850597	1	Standard
|	Al	27		ug/L				654	24	Standard
|	V	51		mg/L				3290	1	Standard
|	V-1	51		mg/L				158	13	Standard
|	Cr	52		ug/L				9493	1	Standard
|	Cr	53		ug/L				71	18	Standard
|	Fe	54		mg/L				41029	3	Standard
|	Fe	57		mg/L				9169	1	Standard
⌊	Mn	55		ug/L				281	12	Standard
⌈>	Ge-1	72		ug/L				24342	2	KED
|	Co	59		ug/L				3	91	KED
|	Ni	60		ug/L				1	100	KED
|	Ni	62		ug/L				0	173	KED
|	Cu	63		ug/L				10	53	KED
|	Cu	65		ug/L				6	91	KED
|	Zn	66		ug/L				12	71	KED
|	Zn	67		ug/L				4	65	KED
|	Zn	68		ug/L				6	41	KED
|	As	75		ug/L				1	69	KED
⌊	Se-1	78		ug/L				3	18	KED
	Y	89		ug/L				594216	2	Standard
	Kr	83		ug/L				50	7	Standard
⌈>	In-1	115		ug/L				9059	2	KED
|	Mo	98		ug/L				19	13	KED
|	Cd	111		ug/L				0	173	KED
⌊	Cd	114		ug/L				2	45	KED
⌈>	In	115		ug/L				811458	0	Standard
|	Ag	107		ug/L				33	14	Standard
|	Sb	121		ug/L				324	5	Standard
|	Sb	123		ug/L				220	3	Standard
|	Ba	135		ug/L				5	33	Standard
⌊	Ba	137		ug/L				19	26	Standard
⌈>	Tb	159		ug/L				1085308	1	Standard
|	Tl	205		ug/L				93	13	Standard
|	Pb	208		ug/L				159	6	Standard
|	Bi	209		ug/L				2456055	2	Standard
|	Th	232		ug/L				1238	8	Standard
⌊	U	238		ug/L				46	20	Standard

AUX3 : 00252

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV1
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, February 24, 2016 13:32:45
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
Li	6		ug/L			679131	670631	6	Standard
Be	9	48.386	ug/L	3.309	6	8	81262	0	Standard
C	13		ug/L			50836	47411	2	Standard
Cl	37		mg/L			2334177	2463950	1	Standard
Sc	45		ug/L			850597	877643	3	Standard
Al	27	5094.714	ug/L	138.167	2	654	62548330	0	Standard
V	51	49.633	mg/L	1.637	3	3290	835346	0	Standard
V-1	51	49.531	mg/L	1.573	3	158	843294	1	Standard
Cr	52	49.556	ug/L	3.058	6	9493	360051	4	Standard
Cr	53	48.932	ug/L	1.398	2	71	43227	2	Standard
Fe	54	4893.903	mg/L	256.396	5	41029	5349239	1	Standard
Fe	57	4970.556	mg/L	75.869	1	9169	2192167	2	Standard
Mn	55	49.215	ug/L	1.600	3	281	1040863	2	Standard
Ge-1	72		ug/L			24342	24632	2	KED
Co	59	49.568	ug/L	1.338	2	3	94643	0	KED
Ni	60	48.069	ug/L	1.791	3	1	28152	1	KED
Ni	62	49.039	ug/L	2.665	5	0	4536	2	KED
Cu	63	50.286	ug/L	0.891	1	10	80279	3	KED
Cu	65	48.882	ug/L	1.517	3	6	38195	2	KED
Zn	66	51.498	ug/L	3.337	6	12	8925	3	KED
Zn	67	50.337	ug/L	0.671	1	4	1415	1	KED
Zn	68	51.230	ug/L	0.757	1	6	6639	3	KED
As	75	49.234	ug/L	1.463	2	1	5092	0	KED
Se-1	78	51.257	ug/L	2.806	5	3	541	2	KED
Y	89		ug/L			594216	596467	2	Standard
Kr	83		ug/L			50	52	14	Standard
In-1	115		ug/L			9059	9406	5	KED
Mo	98	45.088	ug/L	4.461	9	19	22833	5	KED
Cd	111	45.572	ug/L	3.123	6	0	6968	2	KED
Cd	114	46.827	ug/L	3.927	8	2	18493	3	KED
In	115		ug/L			811458	841386	0	Standard
Ag	107	49.618	ug/L	1.548	3	33	825041	3	Standard
Sb	121	50.775	ug/L	0.563	1	324	606733	0	Standard
Sb	123	50.191	ug/L	0.939	1	220	464820	1	Standard
Ba	135	50.457	ug/L	1.390	2	5	169680	2	Standard
Ba	137	50.906	ug/L	0.890	1	19	296912	1	Standard
Tb	159		ug/L			1085308	1130268	1	Standard
Tl	205	49.095	ug/L	0.802	1	93	1635172	2	Standard
Pb	208	50.030	ug/L	1.384	2	159	2169533	2	Standard
Bi	209		ug/L			2456055	2418597	3	Standard
Th	232	46.354	ug/L	1.261	2	1238	1935327	3	Standard
U	238	49.167	ug/L	1.292	2	46	2346964	2	Standard

AVX9 : 88253

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB1
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, February 24, 2016 13:40:14
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD	Mode
⌈>	**Li**	**6**		ug/L			679131	665929	1	Standard
⌊	**Be**	**9**	**0.002**	ug/L	0.006	243	8	12	79	Standard
	C	**13**		ug/L			50836	49581	4	Standard
	Cl	**37**		mg/L			2334177	2371564	5	Standard
⌈>	**Sc**	**45**		ug/L			850597	869169	3	Standard
|	**Al**	**27**	**-0.003**	ug/L	0.003	92	654	625	2	Standard
|	**V**	**51**	**0.007**	mg/L	0.009	133	3290	3474	1	Standard
|	**V-1**	**51**	**0.002**	mg/L	0.001	44	158	191	4	Standard
|	**Cr**	**52**	**0.037**	ug/L	0.064	172	9493	9950	2	Standard
|	**Cr**	**53**	**0.002**	ug/L	0.003	142	71	74	1	Standard
|	**Fe**	**54**	**-1.792**	mg/L	1.617	90	41029	39977	4	Standard
|	**Fe**	**57**	**-0.630**	mg/L	1.679	266	9169	9076	4	Standard
⌊	**Mn**	**55**	**0.000**	ug/L	0.001	877	281	289	2	Standard
⌈>	**Ge-1**	**72**		ug/L			24342	24655	1	KED
|	**Co**	**59**	**-0.001**	ug/L	0.001	141	3	1	100	KED
|	**Ni**	**60**	**0.001**	ug/L	0.005	487	1	2	114	KED
|	**Ni**	**62**	**-0.007**	ug/L	0.000	0	0	0		KED
|	**Cu**	**63**	**0.006**	ug/L	0.003	54	10	20	27	KED
|	**Cu**	**65**	**-0.002**	ug/L	0.006	339	6	5	86	KED
|	**Zn**	**66**	**-0.030**	ug/L	0.006	19	12	6	15	KED
|	**Zn**	**67**	**-0.003**	ug/L	0.101	3270	4	4	65	KED
|	**Zn**	**68**	**0.048**	ug/L	0.039	80	6	13	37	KED
|	**As**	**75**	**-0.005**	ug/L	0.015	314	1	1	137	KED
⌊	**Se-1**	**78**	**0.058**	ug/L	0.210	364	3	4	46	KED
	Y	**89**		ug/L			594216	605261	1	Standard
	Kr	**83**		ug/L			50	46	24	Standard
⌈>	**In-1**	**115**		ug/L			9059	9213	3	KED
|	**Mo**	**98**	**-0.001**	ug/L	0.007	1222	19	19	19	KED
|	**Cd**	**111**	**0.002**	ug/L	0.009	489	0	1	114	KED
⌊	**Cd**	**114**	**-0.007**	ug/L	0.000	1	2	0	86	KED
⌈>	**In**	**115**		ug/L			811458	861881	2	Standard
|	**Ag**	**107**	**0.000**	ug/L	0.000	30	33	42	6	Standard
|	**Sb**	**121**	**0.047**	ug/L	0.001	1	324	923	1	Standard
|	**Sb**	**123**	**0.048**	ug/L	0.004	7	220	691	6	Standard
|	**Ba**	**135**	**0.001**	ug/L	0.002	264	5	8	70	Standard
⌊	**Ba**	**137**	**0.000**	ug/L	0.000	4843	19	20	14	Standard
⌈>	**Tb**	**159**		ug/L			1085308	1110264	1	Standard
|	**Tl**	**205**	**0.004**	ug/L	0.001	19	93	233	10	Standard
|	**Pb**	**208**	**0.000**	ug/L	0.000	13174	159	163	10	Standard
|	**Bi**	**209**		ug/L			2456055	2494075	0	Standard
|	**Th**	**232**	**0.085**	ug/L	0.005	5	1238	4743	2	Standard
⌊	**U**	**238**	**0.000**	ug/L	0.000	44	46	68	14	Standard

AVXO · 00254

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LOW CHECK
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, February 24, 2016 13:45:19
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
Li	6		ug/L			679131	681500	6	Standard
Be	9	0.209	ug/L	0.013	6	8	366	5	Standard
C	13		ug/L			50836	50409	2	Standard
Cl	37		mg/L			2334177	2421440	2	Standard
Sc	45		ug/L			850597	865806	2	Standard
Al	27	22.793	ug/L	1.382	6	654	276874	6	Standard
V	51	0.218	mg/L	0.005	2	3290	6950	1	Standard
V-1	51	0.217	mg/L	0.003	1	158	3801	1	Standard
Cr	52	0.540	ug/L	0.046	8	9493	13425	1	Standard
Cr	53	0.503	ug/L	0.024	4	71	510	2	Standard
Fe	54	20.194	mg/L	1.743	8	41029	63379	3	Standard
Fe	57	22.661	mg/L	0.657	2	9169	19147	1	Standard
Mn	55	0.537	ug/L	0.020	3	281	11489	1	Standard
Ge-1	72		ug/L			24342	25352	2	KED
Co	59	0.217	ug/L	0.007	3	3	430	2	KED
Ni	60	0.507	ug/L	0.063	12	1	307	12	KED
Ni	62	0.573	ug/L	0.058	10	0	55	10	KED
Cu	63	0.503	ug/L	0.021	4	10	837	3	KED
Cu	65	0.528	ug/L	0.017	3	6	431	4	KED
Zn	66	4.015	ug/L	0.184	4	12	728	5	KED
Zn	67	3.871	ug/L	0.315	8	4	116	5	KED
Zn	68	4.150	ug/L	0.417	10	6	559	7	KED
As	75	0.184	ug/L	0.035	18	1	21	18	KED
Se-1	78	0.442	ug/L	0.213	48	3	8	24	KED
Y	89		ug/L			594216	613414	3	Standard
Kr	83		ug/L			50	57	11	Standard
In-1	115		ug/L			9059	9295	4	KED
Mo	98	0.188	ug/L	0.032	16	19	114	14	KED
Cd	111	0.099	ug/L	0.041	41	0	15	38	KED
Cd	114	0.106	ug/L	0.029	27	2	43	22	KED
In	115		ug/L			811458	854615	1	Standard
Ag	107	0.213	ug/L	0.012	5	33	3625	3	Standard
Sb	121	0.212	ug/L	0.007	3	324	2908	1	Standard
Sb	123	0.215	ug/L	0.012	5	220	2250	5	Standard
Ba	135	0.498	ug/L	0.012	2	5	1706	0	Standard
Ba	137	0.487	ug/L	0.021	4	19	2903	3	Standard
Tb	159		ug/L			1085308	1099811	1	Standard
Tl	205	0.226	ug/L	0.023	10	93	7396	8	Standard
Pb	208	0.118	ug/L	0.016	13	159	5140	11	Standard
Bi	209		ug/L			2456055	2535767	1	Standard
Th	232	0.163	ug/L	0.009	5	1238	7880	3	Standard
U	238	0.219	ug/L	0.017	7	46	10203	6	Standard

AVX9 : 00255

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICSA
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, February 24, 2016 13:50:24
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
⌈>	Li	6		ug/L			679131	624791	1	Standard
⌊	Be	9	0.002	ug/L	0.001	44	8	10	10	Standard
	C	13		ug/L			50836	84215	2	Standard
	Cl	37		mg/L			2334177	6808348	3	Standard
⌈>	Sc	45		ug/L			850597	846359	2	Standard
⌈	Al	27	23208.953	ug/L	202.433	0	654	274956035	2	Standard
⌈	V	51	0.399	mg/L	0.009	2	3290	9729	3	Standard
⌈	V-1	51	0.757	mg/L	0.013	1	158	12596	2	Standard
⌈	Cr	52	0.598	ug/L	0.057	9	9493	13526	3	Standard
⌈	Cr	53	2.792	ug/L	0.079	2	71	2445	0	Standard
⌈	Fe	54	19892.376	mg/L	225.639	1	41029	20864779	2	Standard
⌈	Fe	57	20087.711	mg/L	571.329	2	9169	8514627	1	Standard
⌊	Mn	55	0.115	ug/L	0.004	3	281	2624	1	Standard
⌈>	Ge-1	72		ug/L			24342	23787	2	KED
⌈	Co	59	0.003	ug/L	0.003	95	3	8	58	KED
⌈	Ni	60	0.045	ug/L	0.014	31	1	27	31	KED
⌈	Ni	62	0.093	ug/L	0.015	15	0	8	12	KED
⌈	Cu	63	0.101	ug/L	0.011	11	10	165	10	KED
⌈	Cu	65	0.110	ug/L	0.020	18	6	88	15	KED
⌈	Zn	66	0.221	ug/L	0.028	12	12	48	11	KED
⌈	Zn	67	0.242	ug/L	0.224	92	4	10	53	KED
⌈	Zn	68	0.240	ug/L	0.083	34	6	36	28	KED
⌈	As	75	0.019	ug/L	0.014	73	1	3	43	KED
⌊	Se-1	78	-0.035	ug/L	0.172	487	3	3	47	KED
	Y	89		ug/L			594216	601937	4	Standard
	Kr	83		ug/L			50	85	26	Standard
⌈>	In-1	115		ug/L			9059	8735	1	KED
⌈	Mo	98	403.319	ug/L	5.922	1	19	190157	1	KED
⌈	Cd	111	0.047	ug/L	0.014	28	0	7	25	KED
⌊	Cd	114	0.047	ug/L	0.013	28	2	19	22	KED
⌈>	In	115		ug/L			811458	845163	3	Standard
⌈	Ag	107	0.049	ug/L	0.003	6	33	852	2	Standard
⌈	Sb	121	0.009	ug/L	0.002	16	324	446	7	Standard
⌈	Sb	123	0.013	ug/L	0.004	28	220	346	6	Standard
⌈	Ba	135	0.036	ug/L	0.005	14	5	128	10	Standard
⌊	Ba	137	0.027	ug/L	0.002	5	19	179	1	Standard
⌈>	Tb	159		ug/L			1085308	1129204	1	Standard
⌈	Tl	205	0.004	ug/L	0.000	6	93	238	3	Standard
⌈	Pb	208	0.053	ug/L	0.001	1	159	2450	2	Standard
⌈	Bi	209		ug/L			2456055	2225147	2	Standard
⌈	Th	232	0.035	ug/L	0.002	6	1238	2759	2	Standard
⌊	U	238	0.000	ug/L	0.000	105	46	55	13	Standard

AVX9 : 00256

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICSAB
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, February 24, 2016 13:55:29
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
[>	**Li**	**6**		ug/L			679131	617501	2	Standard
[	**Be**	**9**	**0.000**	ug/L	0.003	2359	8	7	50	Standard
	C	**13**		ug/L			50836	81327	3	Standard
	Cl	**37**		mg/L			2334177	6930028	2	Standard
[>	**Sc**	**45**		ug/L			850597	840018	0	Standard
[	**Al**	**27**	**23630.356**	ug/L	980.787	4	654	277845460	4	Standard
[	**V**	**51**	**0.171**	mg/L	0.106	62	3290	5991	28	Standard
[	**V-1**	**51**	**0.879**	mg/L	0.018	2	158	14491	1	Standard
[	**Cr**	**52**	**21.045**	ug/L	0.728	3	9493	151860	2	Standard
[	**Cr**	**53**	**23.460**	ug/L	0.536	2	71	19878	1	Standard
[	**Fe**	**54**	**19816.842**	mg/L	495.010	2	41029	20631855	2	Standard
[	**Fe**	**57**	**20015.403**	mg/L	828.664	4	9169	8424125	4	Standard
[	**Mn**	**55**	**21.133**	ug/L	0.341	1	281	428135	1	Standard
[>	**Ge-1**	**72**		ug/L			24342	24246	1	KED
[	**Co**	**59**	**20.780**	ug/L	0.825	3	3	39078	4	KED
[	**Ni**	**60**	**19.641**	ug/L	0.527	2	1	11328	1	KED
[	**Ni**	**62**	**20.377**	ug/L	1.376	6	0	1858	7	KED
[	**Cu**	**63**	**19.758**	ug/L	0.853	4	10	31043	3	KED
[	**Cu**	**65**	**19.811**	ug/L	0.479	2	6	15245	2	KED
[	**Zn**	**66**	**19.457**	ug/L	1.130	5	12	3329	4	KED
[	**Zn**	**67**	**18.322**	ug/L	0.699	3	4	509	2	KED
[	**Zn**	**68**	**17.823**	ug/L	0.116	0	6	2277	0	KED
[	**As**	**75**	**20.067**	ug/L	0.165	0	1	2045	2	KED
[	**Se-1**	**78**	**0.141**	ug/L	0.169	119	3	5	30	KED
	Y	**89**		ug/L			594216	610601	2	Standard
	Kr	**83**		ug/L			50	90	13	Standard
[>	**In-1**	**115**		ug/L			9059	9209	1	KED
[	**Mo**	**98**	**394.858**	ug/L	15.961	4	19	196247	3	KED
[	**Cd**	**111**	**18.662**	ug/L	0.256	1	0	2800	2	KED
[	**Cd**	**114**	**19.150**	ug/L	0.373	1	2	7425	0	KED
[>	**In**	**115**		ug/L			811458	871391	1	Standard
[	**Ag**	**107**	**19.211**	ug/L	0.502	2	33	330797	2	Standard
[	**Sb**	**121**	**0.000**	ug/L	0.003	7289	324	348	7	Standard
[	**Sb**	**123**	**0.005**	ug/L	0.001	16	220	288	2	Standard
[	**Ba**	**135**	**0.040**	ug/L	0.004	10	5	146	10	Standard
[	**Ba**	**137**	**0.037**	ug/L	0.001	4	19	241	2	Standard
[>	**Tb**	**159**		ug/L			1085308	1149037	2	Standard
[	**Tl**	**205**	**0.001**	ug/L	0.000	33	93	130	6	Standard
[	**Pb**	**208**	**0.054**	ug/L	0.000	0	159	2570	2	Standard
[	**Bi**	**209**		ug/L			2456055	2261003	2	Standard
[	**Th**	**232**	**-0.001**	ug/L	0.002	129	1238	1258	5	Standard
[	**U**	**238**	**0.000**	ug/L	0.000	26	46	59	6	Standard

AVXS 60257

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LR200
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, February 24, 2016 14:03:17
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
[>	Li	6		ug/L			679131	572794	1	Standard
[	Be	9	187.237	ug/L	1.827	0	8	269413	2	Standard
	C	13		ug/L			50836	45744	1	Standard
	Cl	37		mg/L			2334177	2498947	2	Standard
[>	Sc	45		ug/L			850597	822731	3	Standard
[	Al	27	23191.064	ug/L	1124.009	4	654	266737901	1	Standard
[	V	51	201.299	mg/L	4.845	2	3290	3168231	4	Standard
[	V-1	51	203.318	mg/L	5.202	2	158	3245776	3	Standard
[	Cr	52	181.280	ug/L	2.414	1	9493	1211302	3	Standard
[	Cr	53	195.625	ug/L	8.977	4	71	161675	0	Standard
[	Fe	54	19603.068	mg/L	1014.850	5	41029	19966231	2	Standard
[	Fe	57	19918.956	mg/L	980.649	4	9169	8200958	1	Standard
[	Mn	55	202.175	ug/L	5.764	2	281	4006472	0	Standard
[>	Ge-1	72		ug/L			24342	24203	2	KED
[	Co	59	198.450	ug/L	8.918	4	3	372266	2	KED
[	Ni	60	186.632	ug/L	3.852	2	1	107439	0	KED
[	Ni	62	188.508	ug/L	5.330	2	0	17143	0	KED
[	Cu	63	192.521	ug/L	13.245	6	10	301696	4	KED
[	Cu	65	183.707	ug/L	2.977	1	6	141054	1	KED
[	Zn	66	185.243	ug/L	3.214	1	12	31558	3	KED
[	Zn	67	191.529	ug/L	8.062	4	4	5277	2	KED
[	Zn	68	187.958	ug/L	10.919	5	6	23894	4	KED
[	As	75	198.571	ug/L	6.305	3	1	20178	1	KED
[	Se-1	78	200.358	ug/L	7.340	3	3	2070	1	KED
	Y	89		ug/L			594216	594778	1	Standard
	Kr	83		ug/L			50	82	21	Standard
[>	In-1	115		ug/L			9059	9365	5	KED
[	Mo	98	188.112	ug/L	13.896	7	19	94852	1	KED
[	Cd	111	182.457	ug/L	10.040	5	0	27783	1	KED
[	Cd	114	183.649	ug/L	10.353	5	2	72258	0	KED
[>	In	115		ug/L			811458	878330	2	Standard
[	Ag	107	168.104	ug/L	5.840	3	33	2916583	2	Standard
[	Sb	121	200.855	ug/L	6.537	3	324	2503350	1	Standard
[	Sb	123	199.433	ug/L	3.389	1	220	1927127	1	Standard
[	Ba	135	208.546	ug/L	6.152	2	5	731825	1	Standard
[	Ba	137	206.213	ug/L	6.589	3	19	1254959	1	Standard
[>	Tb	159		ug/L			1085308	1193156	1	Standard
[	Tl	205	184.937	ug/L	8.800	4	93	6498378	3	Standard
[	Pb	208	180.693	ug/L	8.925	4	159	8267537	3	Standard
[	Bi	209		ug/L			2456055	2220268	2	Standard
[	Th	232	194.704	ug/L	11.069	5	1238	8570917	4	Standard
[	U	238	180.238	ug/L	9.809	5	46	9077853	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LR300
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, February 24, 2016 14:08:22
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
Li	6		ug/L			679131	567626	5	Standard
Be	9	270.404	ug/L	17.548	6	8	384783	3	Standard
C	13		ug/L			50836	41826	4	Standard
Cl	37		mg/L			2334177	2513258	2	Standard
Sc	45		ug/L			850597	800216	1	Standard
Al	27	35453.004	ug/L	1772.306	4	654	396923876	3	Standard
V	51	304.983	mg/L	5.123	1	3290	4666944	1	Standard
V-1	51	304.338	mg/L	7.029	2	158	4725590	1	Standard
Cr	52	287.620	ug/L	16.411	5	9493	1865202	7	Standard
Cr	53	285.267	ug/L	2.331	0	71	229522	0	Standard
Fe	54	29534.881	mg/L	1023.454	3	41029	29263943	2	Standard
Fe	57	29312.337	mg/L	1124.664	3	9169	11743940	2	Standard
Mn	55	301.809	ug/L	9.485	3	281	5819737	2	Standard
Ge-1	72		ug/L			24342	24207	1	KED
Co	59	291.890	ug/L	6.694	2	3	547867	1	KED
Ni	60	276.084	ug/L	8.137	2	1	158952	1	KED
Ni	62	273.864	ug/L	10.182	3	0	24909	2	KED
Cu	63	266.837	ug/L	9.462	3	10	418465	2	KED
Cu	65	265.259	ug/L	1.840	0	6	203749	2	KED
Zn	66	267.733	ug/L	11.226	4	12	45586	2	KED
Zn	67	266.412	ug/L	2.897	1	4	7344	2	KED
Zn	68	265.037	ug/L	8.315	3	6	33714	2	KED
As	75	294.973	ug/L	3.246	1	1	29986	0	KED
Se-1	78	294.297	ug/L	5.797	1	3	3040	1	KED
Y	89		ug/L			594216	557219	0	Standard
Kr	83		ug/L			50	104	4	Standard
In-1	115		ug/L			9059	9016	0	KED
Mo	98	301.313	ug/L	3.235	1	19	146649	1	KED
Cd	111	275.842	ug/L	4.814	1	0	40517	1	KED
Cd	114	281.969	ug/L	5.408	1	2	107024	2	KED
In	115		ug/L			811458	844989	1	Standard
Ag	107	241.702	ug/L	7.458	3	33	4035464	2	Standard
Sb	121	301.119	ug/L	5.505	1	324	3611599	0	Standard
Sb	123	301.209	ug/L	8.547	2	220	2799836	1	Standard
Ba	135	316.240	ug/L	7.738	2	5	1067873	1	Standard
Ba	137	315.742	ug/L	2.980	0	19	1849296	0	Standard
Tb	159		ug/L			1085308	1177880	2	Standard
Tl	205	267.701	ug/L	7.613	2	93	9290630	3	Standard
Pb	208	261.307	ug/L	4.182	1	159	11808165	2	Standard
Bi	209		ug/L			2456055	2042213	4	Standard
Th	232	289.134	ug/L	7.721	2	1238	12569419	2	Standard
U	238	260.631	ug/L	2.603	0	46	12963803	1	Standard

AVX9 : 00259

ICP-MS Quantitative Analysis - Summary Report

Sample ID: B1
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, February 24, 2016 14:16:11
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
>	**Li**	**6**		ug/L			679131	660896	8	Standard
	Be	**9**	**-0.001**	ug/L	0.001	204	8	6	41	Standard
	C	**13**		ug/L			50836	43926	5	Standard
	Cl	**37**		mg/L			2334177	2519067	1	Standard
>	**Sc**	**45**		ug/L			850597	812180	3	Standard
	Al	**27**	**0.475**	ug/L	0.051	10	654	6011	7	Standard
	V	**51**	**0.035**	mg/L	0.021	60	3290	3675	5	Standard
	V-1	**51**	**0.008**	mg/L	0.003	30	158	283	10	Standard
	Cr	**52**	**0.269**	ug/L	0.118	43	9493	10809	3	Standard
	Cr	**53**	**0.084**	ug/L	0.006	7	71	136	7	Standard
	Fe	**54**	**2.321**	mg/L	2.740	118	41029	41439	2	Standard
	Fe	**57**	**1.965**	mg/L	0.950	48	9169	9546	2	Standard
	Mn	**55**	**0.017**	ug/L	0.002	10	281	600	2	Standard
>	**Ge-1**	**72**		ug/L			24342	26764	2	KED
	Co	**59**	**0.001**	ug/L	0.003	300	3	5	120	KED
	Ni	**60**	**0.027**	ug/L	0.008	30	1	19	26	KED
	Ni	**62**	**0.012**	ug/L	0.019	155	0	1	100	KED
	Cu	**63**	**0.032**	ug/L	0.004	11	10	67	10	KED
	Cu	**65**	**0.016**	ug/L	0.006	36	6	20	27	KED
	Zn	**66**	**0.596**	ug/L	0.068	11	12	125	12	KED
	Zn	**67**	**0.529**	ug/L	0.124	23	4	20	15	KED
	Zn	**68**	**0.621**	ug/L	0.163	26	6	94	21	KED
	As	**75**	**0.026**	ug/L	0.020	77	1	4	46	KED
	Se-1	**78**	**0.048**	ug/L	0.082	170	3	4	20	KED
	Y	**89**		ug/L			594216	591374	6	Standard
	Kr	**83**		ug/L			50	62	24	Standard
>	**In-1**	**115**		ug/L			9059	9818	0	KED
	Mo	**98**	**0.102**	ug/L	0.013	12	19	75	9	KED
	Cd	**111**	**-0.002**	ug/L	0.003	139	0	0	86	KED
	Cd	**114**	**-0.001**	ug/L	0.003	378	2	2	44	KED
>	**In**	**115**		ug/L			811458	894842	10	Standard
	Ag	**107**	**0.002**	ug/L	0.001	88	33	64	29	Standard
	Sb	**121**	**0.316**	ug/L	0.034	10	324	4345	1	Standard
	Sb	**123**	**0.316**	ug/L	0.037	11	220	3328	2	Standard
	Ba	**135**	**0.015**	ug/L	0.003	22	5	59	9	Standard
	Ba	**137**	**0.010**	ug/L	0.002	19	19	85	12	Standard
>	**Tb**	**159**		ug/L			1085308	1199612	10	Standard
	Tl	**205**	**0.068**	ug/L	0.010	14	93	2480	4	Standard
	Pb	**208**	**0.021**	ug/L	0.003	11	159	1151	1	Standard
	Bi	**209**		ug/L			2456055	2501062	7	Standard
	Th	**232**	**0.140**	ug/L	0.017	12	1238	7524	1	Standard
	U	**238**	**0.002**	ug/L	0.001	33	46	165	11	Standard

AVX9 : 80260

ICP-MS Quantitative Analysis - Summary Report

Sample ID: B2
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, February 24, 2016 14:23:10
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
⌈>	**Li**	**6**		ug/L			679131	673891	4	Standard
⌊	**Be**	**9**	**0.000**	ug/L	0.002	588	8	8	44	Standard
	C	**13**		ug/L			50836	46736	2	Standard
	Cl	**37**		mg/L			2334177	2534011	2	Standard
⌈>	**Sc**	**45**		ug/L			850597	831859	1	Standard
|	**Al**	**27**	**0.418**	ug/L	0.034	8	654	5506	8	Standard
|	**V**	**51**	**0.019**	mg/L	0.004	20	3290	3519	2	Standard
|	**V-1**	**51**	**0.006**	mg/L	0.001	20	158	248	8	Standard
|	**Cr**	**52**	**0.156**	ug/L	0.002	1	9493	10333	1	Standard
|	**Cr**	**53**	**0.063**	ug/L	0.016	24	71	121	10	Standard
|	**Fe**	**54**	**0.959**	mg/L	1.135	118	41029	41104	1	Standard
|	**Fe**	**57**	**2.078**	mg/L	1.470	70	9169	9829	5	Standard
⌊	**Mn**	**55**	**0.015**	ug/L	0.000	2	281	570	2	Standard
⌈>	**Ge-1**	**72**		ug/L			24342	27368	1	KED
|	**Co**	**59**	**0.000**	ug/L	0.000	120	3	4	24	KED
|	**Ni**	**60**	**0.032**	ug/L	0.008	26	1	22	25	KED
|	**Ni**	**62**	**0.030**	ug/L	0.018	60	0	3	50	KED
|	**Cu**	**63**	**0.015**	ug/L	0.002	9	10	39	7	KED
|	**Cu**	**65**	**0.014**	ug/L	0.002	14	6	19	10	KED
|	**Zn**	**66**	**0.626**	ug/L	0.037	5	12	133	4	KED
|	**Zn**	**67**	**0.472**	ug/L	0.256	54	4	19	40	KED
|	**Zn**	**68**	**0.532**	ug/L	0.141	26	6	84	24	KED
|	**As**	**75**	**0.001**	ug/L	0.007	684	1	1	43	KED
⌊	**Se-1**	**78**	**-0.002**	ug/L	0.162	8038	3	4	43	KED
	Y	**89**		ug/L			594216	598356	0	Standard
	Kr	**83**		ug/L			50	58	9	Standard
⌈>	**In-1**	**115**		ug/L			9059	9770	0	KED
|	**Mo**	**98**	**0.021**	ug/L	0.016	76	19	32	26	KED
|	**Cd**	**111**	**0.005**	ug/L	0.006	107	0	1	50	KED
⌊	**Cd**	**114**	**-0.005**	ug/L	0.003	50	2	0	254	KED
⌈>	**In**	**115**		ug/L			811458	938466	1	Standard
|	**Ag**	**107**	**0.001**	ug/L	0.000	95	33	48	17	Standard
|	**Sb**	**121**	**0.084**	ug/L	0.005	5	324	1495	4	Standard
|	**Sb**	**123**	**0.087**	ug/L	0.005	6	220	1153	3	Standard
|	**Ba**	**135**	**0.011**	ug/L	0.003	29	5	46	24	Standard
⌊	**Ba**	**137**	**0.012**	ug/L	0.003	28	19	101	21	Standard
⌈>	**Tb**	**159**		ug/L			1085308	1250577	0	Standard
|	**Tl**	**205**	**0.024**	ug/L	0.003	12	93	991	10	Standard
|	**Pb**	**208**	**0.014**	ug/L	0.001	6	159	831	4	Standard
|	**Bi**	**209**		ug/L			2456055	2646922	4	Standard
|	**Th**	**232**	**0.016**	ug/L	0.002	10	1238	2162	2	Standard
⌊	**U**	**238**	**0.000**	ug/L	0.000	96	46	70	23	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ~~CCV2~~ ZZZZZZ 2/24/16
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, February 24, 2016 14:30:10
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
Li	6		ug/L			679131	627721	0	Standard
Be	9	47.997	ug/L	1.609	3	8	75678	2	Standard
C	13		ug/L			50836	43295	5	Standard
Cl	37		mg/L			2334177	2610832	3	Standard
Sc	45		ug/L			850597	851301	1	Standard
Al	27	5866.930	ug/L	176.685	3	654	69888763	2	Standard
V	51	51.754	mg/L	0.920	1	3290	845271	1	Standard
V-1	51	51.239	mg/L	0.920	1	158	846647	2	Standard
Cr	52	52.471	ug/L	0.935	1	9493	369489	0	Standard
Cr	53	49.224	ug/L	0.333	0	71	42192	1	Standard
Fe	54	5083.430	mg/L	126.693	2	41029	5393239	2	Standard
Fe	57	5093.117	mg/L	53.633	1	9169	2178995	1	Standard
Mn	55	51.810	ug/L	0.848	1	281	1063141	0	Standard
Ge-1	72		ug/L			24342	26990	2	KED
Co	59	46.627	ug/L	2.924	6	3	97481	3	KED
Ni	60	44.590	ug/L	0.668	1	1	28632	3	KED
Ni	62	45.443	ug/L	0.973	2	0	4608	1	KED
Cu	63	46.024	ug/L	2.422	5	10	80434	2	KED
Cu	65	44.849	ug/L	2.092	4	6	38398	4	KED
Zn	66	48.775	ug/L	1.638	3	12	9270	2	KED
Zn	67	49.702	ug/L	2.314	4	4	1531	5	KED
Zn	68	47.578	ug/L	0.854	1	6	6753	2	KED
As	75	47.331	ug/L	2.090	4	1	5362	2	KED
Se-1	78	50.397	ug/L	1.549	3	3	583	1	KED
Y	89		ug/L			594216	595682	0	Standard
Kr	83		ug/L			50	57	30	Standard
In-1	115		ug/L			9059	9502	2	KED
Mo	98	47.992	ug/L	1.611	3	19	24621	1	KED
Cd	111	47.379	ug/L	0.781	1	0	7332	1	KED
Cd	114	50.400	ug/L	1.326	2	2	20153	0	KED
In	115		ug/L			811458	919206	1	Standard
Ag	107	41.814	ug/L	1.428	3	33	759499	3	Standard
Sb	121	51.511	ug/L	0.124	0	324	672461	1	Standard
Sb	123	50.810	ug/L	1.051	2	220	514021	1	Standard
Ba	135	53.223	ug/L	1.289	2	5	195503	1	Standard
Ba	137	52.824	ug/L	1.298	2	19	336546	1	Standard
Tb	159		ug/L			1085308	1242976	2	Standard
Tl	205	46.983	ug/L	0.394	0	93	1720930	2	Standard
Pb	208	48.093	ug/L	0.268	0	159	2293774	2	Standard
Bi	209		ug/L			2456055	2471665	1	Standard
Th	232	44.569	ug/L	0.976	2	1238	2046759	4	Standard
U	238	46.036	ug/L	0.718	1	46	2417307	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB2 ZZZZZZ 2/24/16
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, February 24, 2016 14:38:00
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
[>	Li	6		ug/L			679131	654845	3	Standard
[	Be	9	-0.001	ug/L	0.001	133	8	6	15	Standard
	C	13		ug/L			50836	45045	6	Standard
	Cl	37		mg/L			2334177	2478709	0	Standard
[>	Sc	45		ug/L			850597	844793	0	Standard
[	Al	27	0.011	ug/L	0.003	25	654	780	3	Standard
[	V	51	0.006	mg/L	0.008	138	3290	3365	3	Standard
[	V-1	51	0.004	mg/L	0.001	17	158	224	5	Standard
[	Cr	52	0.032	ug/L	0.048	146	9493	9648	2	Standard
[	Cr	53	0.018	ug/L	0.008	44	71	85	8	Standard
[	Fe	54	-0.945	mg/L	1.477	156	41029	39762	3	Standard
[	Fe	57	-0.347	mg/L	0.041	11	9169	8960	1	Standard
[	Mn	55	0.001	ug/L	0.001	100	281	300	7	Standard
[>	Ge-1	72		ug/L			24342	26685	1	KED
[	Co	59	0.001	ug/L	0.003	370	3	5	114	KED
[	Ni	60	0.001	ug/L	0.005	673	1	2	114	KED
[	Ni	62	-0.007	ug/L	0.000	0	0	0		KED
[	Cu	63	0.005	ug/L	0.003	57	10	20	24	KED
[	Cu	65	0.005	ug/L	0.004	82	6	11	33	KED
[	Zn	66	-0.003	ug/L	0.035	1173	12	12	52	KED
[	Zn	67	-0.076	ug/L	0.096	125	4	2	114	KED
[	Zn	68	0.063	ug/L	0.035	55	6	16	29	KED
[	As	75	0.010	ug/L	0.009	86	1	2	33	KED
[	Se-1	78	-0.063	ug/L	0.153	243	3	3	49	KED
	Y	89		ug/L			594216	587622	1	Standard
	Kr	83		ug/L			50	41	28	Standard
[>	In-1	115		ug/L			9059	10056	6	KED
[	Mo	98	0.025	ug/L	0.012	49	19	34	13	KED
[	Cd	111	-0.002	ug/L	0.003	143	0	0	86	KED
[	Cd	114	-0.005	ug/L	0.002	45	2	0	180	KED
[>	In	115		ug/L			811458	898577	2	Standard
[	Ag	107	0.001	ug/L	0.001	91	33	50	23	Standard
[	Sb	121	0.069	ug/L	0.008	11	324	1239	10	Standard
[	Sb	123	0.072	ug/L	0.006	7	220	957	4	Standard
[	Ba	135	0.004	ug/L	0.002	69	5	19	45	Standard
[	Ba	137	0.000	ug/L	0.001	1456	19	21	30	Standard
[>	Tb	159		ug/L			1085308	1219050	3	Standard
[	Tl	205	0.009	ug/L	0.001	8	93	419	7	Standard
[	Pb	208	0.002	ug/L	0.000	14	159	254	1	Standard
[	Bi	209		ug/L			2456055	2580267	4	Standard
[	Th	232	0.073	ug/L	0.004	5	1238	4666	2	Standard
[	U	238	0.000	ug/L	0.000	54	46	69	13	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV2
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, February 24, 2016 14:44:40
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
>	Li	6		ug/L			679131	676006	2	Standard
	Be	9	41.910	ug/L	2.293	5	8	71111	3	Standard
	C	13		ug/L			50836	44921	5	Standard
	Cl	37		mg/L			2334177	2670384	1	Standard
>	Sc	45		ug/L			850597	831789	0	Standard
	Al	27	5828.803	ug/L	165.521	2	654	67861968	3	Standard
	V	51	52.704	mg/L	0.697	1	3290	841059	1	Standard
	V-1	51	52.470	mg/L	0.630	1	158	847168	1	Standard
	Cr	52	52.053	ug/L	1.484	2	9493	358238	2	Standard
	Cr	53	50.669	ug/L	1.025	2	71	42434	1	Standard
	Fe	54	5123.069	mg/L	156.073	3	41029	5310193	2	Standard
	Fe	57	4994.690	mg/L	304.326	6	9169	2087502	5	Standard
	Mn	55	51.796	ug/L	0.642	1	281	1038730	2	Standard
>	Ge-1	72		ug/L			24342	25427	1	KED
	Co	59	48.329	ug/L	1.276	2	3	95277	1	KED
	Ni	60	47.452	ug/L	1.144	2	1	28700	1	KED
	Ni	62	47.918	ug/L	0.684	1	0	4579	0	KED
	Cu	63	50.087	ug/L	0.820	1	10	82531	1	KED
	Cu	65	47.572	ug/L	1.833	3	6	38370	2	KED
	Zn	66	49.107	ug/L	1.425	2	12	8796	2	KED
	Zn	67	51.936	ug/L	1.595	3	4	1507	3	KED
	Zn	68	50.054	ug/L	2.001	3	6	6692	2	KED
	As	75	50.020	ug/L	0.963	1	1	5342	0	KED
	Se-1	78	52.061	ug/L	1.280	2	3	568	2	KED
	Y	89		ug/L			594216	593557	1	Standard
	Kr	83		ug/L			50	50	5	Standard
>	In-1	115		ug/L			9059	9897	1	KED
	Mo	98	45.073	ug/L	1.320	2	19	24090	1	KED
	Cd	111	45.635	ug/L	1.650	3	0	7355	1	KED
	Cd	114	45.782	ug/L	2.317	5	2	19066	3	KED
>	In	115		ug/L			811458	921874	1	Standard
	Ag	107	42.367	ug/L	1.182	2	33	771685	1	Standard
	Sb	121	50.428	ug/L	0.888	1	324	660154	0	Standard
	Sb	123	48.927	ug/L	0.694	1	220	496421	0	Standard
	Ba	135	51.130	ug/L	0.259	0	5	188394	1	Standard
	Ba	137	51.155	ug/L	0.494	0	19	326888	0	Standard
>	Tb	159		ug/L			1085308	1259555	0	Standard
	Tl	205	46.329	ug/L	1.419	3	93	1719454	3	Standard
	Pb	208	46.436	ug/L	1.675	3	159	2244154	3	Standard
	Bi	209		ug/L			2456055	2506851	1	Standard
	Th	232	42.714	ug/L	1.499	3	1238	1987383	4	Standard
	U	238	44.552	ug/L	2.118	4	46	2370276	5	Standard

AVX9 : 88264

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB2
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, February 24, 2016 14:52:30
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
Li	6		ug/L			679131	658433	3	Standard
Be	9	0.001	ug/L	0.002	127	8	10	28	Standard
C	13		ug/L			50836	45821	3	Standard
Cl	37		mg/L			2334177	2625895	2	Standard
Sc	45		ug/L			850597	827294	5	Standard
Al	27	0.002	ug/L	0.009	482	654	659	18	Standard
V	51	0.003	mg/L	0.011	378	3290	3242	2	Standard
V-1	51	0.002	mg/L	0.000	12	158	189	5	Standard
Cr	52	0.034	ug/L	0.067	195	9493	9446	0	Standard
Cr	53	0.026	ug/L	0.016	60	71	91	16	Standard
Fe	54	-0.634	mg/L	2.081	328	41029	39235	6	Standard
Fe	57	1.142	mg/L	1.116	97	9169	9382	4	Standard
Mn	55	0.001	ug/L	0.000	20	281	293	4	Standard
Ge-1	72		ug/L			24342	25841	3	KED
Co	59	0.001	ug/L	0.002	171	3	5	57	KED
Ni	60	0.126	ug/L	0.032	25	1	79	21	KED
Ni	62	0.117	ug/L	0.039	33	0	12	32	KED
Cu	63	0.022	ug/L	0.006	28	10	47	18	KED
Cu	65	0.027	ug/L	0.007	27	6	28	17	KED
Zn	66	-0.018	ug/L	0.018	102	12	9	34	KED
Zn	67	-0.098	ug/L	0.108	110	4	1	173	KED
Zn	68	-0.004	ug/L	0.041	1061	6	6	83	KED
As	75	0.017	ug/L	0.008	46	1	3	20	KED
Se-1	78	0.149	ug/L	0.165	110	3	5	32	KED
Y	89		ug/L			594216	601383	1	Standard
Kr	83		ug/L			50	49	45	Standard
In-1	115		ug/L			9059	9512	5	KED
Mo	98	0.018	ug/L	0.004	20	19	29	9	KED
Cd	111	-0.002	ug/L	0.004	155	0	0	86	KED
Cd	114	-0.002	ug/L	0.009	579	2	1	175	KED
In	115		ug/L			811458	911676	4	Standard
Ag	107	0.001	ug/L	0.001	102	33	52	31	Standard
Sb	121	0.054	ug/L	0.004	6	324	1056	1	Standard
Sb	123	0.061	ug/L	0.007	11	220	860	4	Standard
Ba	135	0.001	ug/L	0.001	102	5	9	34	Standard
Ba	137	-0.001	ug/L	0.000	35	19	14	19	Standard
Tb	159		ug/L			1085308	1213747	2	Standard
Tl	205	0.005	ug/L	0.001	15	93	292	10	Standard
Pb	208	0.001	ug/L	0.001	47	159	233	9	Standard
Bi	209		ug/L			2456055	2592134	0	Standard
Th	232	0.076	ug/L	0.008	11	1238	4777	6	Standard
U	238	0.000	ug/L	0.000	114	46	66	27	Standard

NWX9 : 86265

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Blank
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, February 24, 2016 14:58:38
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
[>	Li	6		ug/L				657253	2	Standard
[	Be	9		ug/L				11	16	Standard
	C	13		ug/L				44880	4	Standard
	Cl	37		mg/L				2442655	3	Standard
[>	Sc	45		ug/L				850943	0	Standard
[	Al	27		ug/L				675	3	Standard
[	V	51		mg/L				3344	3	Standard
[	V-1	51		mg/L				187	16	Standard
[	Cr	52		ug/L				9656	3	Standard
[	Cr	53		ug/L				81	10	Standard
[	Fe	54		mg/L				39663	1	Standard
[	Fe	57		mg/L				9512	1	Standard
[	Mn	55		ug/L				286	9	Standard
[>	Ge-1	72		ug/L				25772	2	KED
[	Co	59		ug/L				2	114	KED
[	Ni	60		ug/L				80	13	KED
[	Ni	62		ug/L				10	10	KED
[	Cu	63		ug/L				49	30	KED
[	Cu	65		ug/L				15	21	KED
[	Zn	66		ug/L				13	24	KED
[	Zn	67		ug/L				3	124	KED
[	Zn	68		ug/L				8	12	KED
[	As	75		ug/L				2	75	KED
[	Se-1	78		ug/L				4	12	KED
	Y	89		ug/L				577578	0	Standard
	Kr	83		ug/L				59	11	Standard
[>	In-1	115		ug/L				9746	0	KED
[	Mo	98		ug/L				15	13	KED
[	Cd	111		ug/L				0		KED
[	Cd	114		ug/L				0	180	KED
[>	In	115		ug/L				905245	2	Standard
[	Ag	107		ug/L				28	35	Standard
[	Sb	121		ug/L				495	8	Standard
[	Sb	123		ug/L				369	1	Standard
[	Ba	135		ug/L				9	40	Standard
[	Ba	137		ug/L				15	6	Standard
[>	Tb	159		ug/L				1209873	0	Standard
[	Tl	205		ug/L				178	12	Standard
[	Pb	208		ug/L				214	5	Standard
[	Bi	209		ug/L				2532779	1	Standard
[	Th	232		ug/L				1448	6	Standard
[	U	238		ug/L				42	15	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV3
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, February 24, 2016 15:03:43
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
[>	**Li**	**6**		ug/L			657253	638772	3	Standard
[	**Be**	**9**	**45.764**	ug/L	1.423	3	11	73383	0	Standard
	C	**13**		ug/L			44880	42534	2	Standard
	Cl	**37**		mg/L			2442655	2508928	3	Standard
[>	**Sc**	**45**		ug/L			850943	866404	1	Standard
[	**Al**	**27**	**5715.505**	ug/L	86.410	1	675	69300118	0	Standard
[	**V**	**51**	**49.502**	mg/L	1.623	3	3344	822847	1	Standard
[	**V-1**	**51**	**48.864**	mg/L	1.519	3	187	821557	1	Standard
[	**Cr**	**52**	**50.104**	ug/L	1.109	2	9656	359746	2	Standard
[	**Cr**	**53**	**46.107**	ug/L	2.335	5	81	40238	5	Standard
[	**Fe**	**54**	**4879.896**	mg/L	126.085	2	39663	5269444	2	Standard
[	**Fe**	**57**	**4997.435**	mg/L	155.907	3	9512	2176158	2	Standard
[	**Mn**	**55**	**50.108**	ug/L	1.492	2	286	1046495	2	Standard
[>	**Ge-1**	**72**		ug/L			25772	25933	3	KED
[	**Co**	**59**	**48.409**	ug/L	0.744	1	2	97325	1	KED
[	**Ni**	**60**	**45.679**	ug/L	1.267	2	80	28249	1	KED
[	**Ni**	**62**	**45.773**	ug/L	1.684	3	10	4469	2	KED
[	**Cu**	**63**	**48.028**	ug/L	2.026	4	49	80702	2	KED
[	**Cu**	**65**	**46.580**	ug/L	1.974	4	15	38313	2	KED
[	**Zn**	**66**	**46.855**	ug/L	1.139	2	13	8558	1	KED
[	**Zn**	**67**	**47.966**	ug/L	2.794	5	3	1417	3	KED
[	**Zn**	**68**	**47.912**	ug/L	0.907	1	8	6535	1	KED
[	**As**	**75**	**48.855**	ug/L	1.456	2	2	5319	0	KED
[	**Se-1**	**78**	**50.575**	ug/L	2.276	4	4	563	2	KED
	Y	**89**		ug/L			577578	604207	1	Standard
	Kr	**83**		ug/L			59	63	4	Standard
[>	**In-1**	**115**		ug/L			9746	9737	2	KED
[	**Mo**	**98**	**45.621**	ug/L	0.711	1	15	23986	1	KED
[	**Cd**	**111**	**45.214**	ug/L	2.142	4	0	7166	2	KED
[	**Cd**	**114**	**45.696**	ug/L	0.644	1	0	18726	1	KED
[>	**In**	**115**		ug/L			905245	896412	1	Standard
[	**Ag**	**107**	**43.602**	ug/L	2.040	4	28	771949	2	Standard
[	**Sb**	**121**	**51.426**	ug/L	1.233	2	495	654645	0	Standard
[	**Sb**	**123**	**51.461**	ug/L	1.668	3	369	507754	2	Standard
[	**Ba**	**135**	**52.291**	ug/L	1.397	2	9	187295	1	Standard
[	**Ba**	**137**	**53.760**	ug/L	1.572	2	15	333944	1	Standard
[>	**Tb**	**159**		ug/L			1209873	1228471	0	Standard
[	**Tl**	**205**	**47.018**	ug/L	1.834	3	178	1701780	3	Standard
[	**Pb**	**208**	**47.666**	ug/L	1.459	3	214	2246616	2	Standard
[	**Bi**	**209**		ug/L			2532779	2477182	1	Standard
[	**Th**	**232**	**43.820**	ug/L	2.387	5	1448	1988045	5	Standard
[	**U**	**238**	**46.491**	ug/L	1.517	3	42	2411950	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB3
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, February 24, 2016 15:11:33
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
>	Li	6		ug/L			657253	681023	0	Standard
	Be	9	-0.001	ug/L	0.002	160	11	9	40	Standard
	C	13		ug/L			44880	47227	2	Standard
	Cl	37		mg/L			2442655	2544651	2	Standard
>	Sc	45		ug/L			850943	834927	3	Standard
	Al	27	0.004	ug/L	0.005	125	675	709	4	Standard
	V	51	0.001	mg/L	0.026	1900	3344	3292	8	Standard
	V-1	51	0.000	mg/L	0.001	2430	187	184	6	Standard
	Cr	52	0.009	ug/L	0.180	2060	9656	9502	8	Standard
	Cr	53	-0.000	ug/L	0.010	5541	81	80	6	Standard
	Fe	54	-0.325	mg/L	1.098	337	39663	38552	1	Standard
	Fe	57	0.139	mg/L	1.267	908	9512	9378	2	Standard
	Mn	55	0.000	ug/L	0.001	1540	286	282	7	Standard
>	Ge-1	72		ug/L			25772	26013	3	KED
	Co	59	-0.000	ug/L	0.001	170445	2	2	43	KED
	Ni	60	-0.009	ug/L	0.024	265	80	75	17	KED
	Ni	62	0.011	ug/L	0.046	402	10	12	39	KED
	Cu	63	0.000	ug/L	0.007	2766	49	50	18	KED
	Cu	65	0.014	ug/L	0.011	80	15	26	31	KED
	Zn	66	-0.032	ug/L	0.010	29	13	7	25	KED
	Zn	67	-0.088	ug/L	0.036	41	3	0	173	KED
	Zn	68	0.005	ug/L	0.040	812	8	9	52	KED
	As	75	0.006	ug/L	0.008	134	2	2	28	KED
	Se-1	78	-0.002	ug/L	0.061	2478	4	4	12	KED
	Y	89		ug/L			577578	582094	0	Standard
	Kr	83		ug/L			59	57	10	Standard
>	In-1	115		ug/L			9746	9355	1	KED
	Mo	98	0.013	ug/L	0.009	66	15	21	19	KED
	Cd	111	0.004	ug/L	0.004	86	0	0	86	KED
	Cd	114	0.000	ug/L	0.003	4929	0	0	180	KED
>	In	115		ug/L			905245	902633	0	Standard
	Ag	107	0.000	ug/L	0.000	850	28	29	20	Standard
	Sb	121	0.037	ug/L	0.002	5	495	968	2	Standard
	Sb	123	0.037	ug/L	0.002	4	369	738	2	Standard
	Ba	135	-0.000	ug/L	0.000	166	9	8	12	Standard
	Ba	137	0.000	ug/L	0.001	286	15	17	22	Standard
>	Tb	159		ug/L			1209873	1208033	1	Standard
	Tl	205	0.002	ug/L	0.001	27	178	256	9	Standard
	Pb	208	-0.000	ug/L	0.000	384	214	210	8	Standard
	Bi	209		ug/L			2532779	2610233	4	Standard
	Th	232	0.070	ug/L	0.006	8	1448	4572	5	Standard
	U	238	0.000	ug/L	0.000	102	42	60	30	Standard

AVX9 . 66268

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AWH3 MB REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Wednesday, February 24, 2016 15:17:19
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
[>	Li	6		ug/L			657253	708644	1	Standard
[	Be	9	0.000	ug/L	0.003	1097	11	12	34	Standard
	C	13		ug/L			44880	50474	0	Standard
	Cl	37		mg/L			2442655	2531899	1	Standard
[>	Sc	45		ug/L			850943	883203	2	Standard
[	Al	27	1.169	ug/L	0.040	3	675	15143	1	Standard
[	V	51	-0.005	mg/L	0.016	316	3344	3386	7	Standard
[	V-1	51	0.002	mg/L	0.001	72	187	223	8	Standard
[	Cr	52	-0.023	ug/L	0.096	413	9656	9854	6	Standard
[	Cr	53	0.019	ug/L	0.003	14	81	101	4	Standard
[	Fe	54	8.306	mg/L	0.830	9	39663	50225	0	Standard
[	Fe	57	0.765	mg/L	1.973	257	9512	10201	7	Standard
[	Mn	55	0.035	ug/L	0.003	8	286	1046	5	Standard
[>	Ge-1	72		ug/L			25772	25920	2	KED
[	Co	59	0.002	ug/L	0.002	122	2	5	66	KED
[	Ni	60	-0.082	ug/L	0.011	13	80	30	22	KED
[	Ni	62	-0.066	ug/L	0.012	18	10	4	24	KED
[	Cu	63	0.867	ug/L	0.055	6	49	1506	5	KED
[	Cu	65	0.899	ug/L	0.052	5	15	754	3	KED
[	Zn	66	0.506	ug/L	0.063	12	13	105	8	KED
[	Zn	67	0.405	ug/L	0.245	60	3	15	50	KED
[	Zn	68	0.540	ug/L	0.060	11	8	82	10	KED
[	As	75	-0.006	ug/L	0.002	35	2	1	17	KED
[	Se-1	78	-0.002	ug/L	0.030	1485	4	4	6	KED
	Y	89		ug/L			577578	605350	3	Standard
	Kr	83		ug/L			59	64	4	Standard
[>	In-1	115		ug/L			9746	9471	3	KED
[	Mo	98	0.039	ug/L	0.012	29	15	35	18	KED
[	Cd	111	0.010	ug/L	0.017	173	0	1	173	KED
[	Cd	114	0.003	ug/L	0.000	8	0	1	2	KED
[>	In	115		ug/L			905245	941210	2	Standard
[	Ag	107	0.001	ug/L	0.001	112	28	42	35	Standard
[	Sb	121	-0.005	ug/L	0.001	19	495	454	5	Standard
[	Sb	123	-0.002	ug/L	0.001	28	369	363	1	Standard
[	Ba	135	0.007	ug/L	0.003	39	9	36	26	Standard
[	Ba	137	0.004	ug/L	0.002	41	15	43	24	Standard
[>	Tb	159		ug/L			1209873	1213992	1	Standard
[	Tl	205	0.008	ug/L	0.000	4	178	469	3	Standard
[	Pb	208	0.009	ug/L	0.001	7	214	616	3	Standard
[	Bi	209		ug/L			2532779	2587862	1	Standard
[	Th	232	0.026	ug/L	0.004	15	1448	2613	5	Standard
[	U	238	0.000	ug/L	0.000	14	42	56	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AWK1 MB REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Wednesday, February 24, 2016 15:22:23
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
⌈>	**Li**	**6**		ug/L			657253	697097	2	Standard
⌊	**Be**	**9**	**0.000**	ug/L	0.004	17677	11	12	50	Standard
	C	**13**		ug/L			44880	49227	4	Standard
	Cl	**37**		mg/L			2442655	2568560	1	Standard
⌈>	**Sc**	**45**		ug/L			850943	866460	1	Standard
|	**Al**	**27**	**1.646**	ug/L	0.349	21	675	20614	19	Standard
|	**V**	**51**	**0.006**	mg/L	0.014	235	3344	3503	6	Standard
|	**V-1**	**51**	**0.003**	mg/L	0.004	135	187	246	29	Standard
|	**Cr**	**52**	**0.050**	ug/L	0.061	122	9656	10179	3	Standard
|	**Cr**	**53**	**0.029**	ug/L	0.019	64	81	108	14	Standard
|	**Fe**	**54**	**11.974**	mg/L	3.000	25	39663	53192	4	Standard
|	**Fe**	**57**	**0.632**	mg/L	1.444	228	9512	9955	5	Standard
⌊	**Mn**	**55**	**0.025**	ug/L	0.009	35	286	819	21	Standard
⌈>	**Ge-1**	**72**		ug/L			25772	26089	0	KED
|	**Co**	**59**	**0.001**	ug/L	0.001	156	2	4	65	KED
|	**Ni**	**60**	**-0.111**	ug/L	0.010	8	80	12	48	KED
|	**Ni**	**62**	**-0.099**	ug/L	0.022	22	10	1	173	KED
|	**Cu**	**63**	**-0.010**	ug/L	0.004	42	49	33	21	KED
|	**Cu**	**65**	**0.002**	ug/L	0.004	196	15	17	19	KED
|	**Zn**	**66**	**0.418**	ug/L	0.072	17	13	90	14	KED
|	**Zn**	**67**	**0.320**	ug/L	0.038	11	3	12	8	KED
|	**Zn**	**68**	**0.472**	ug/L	0.019	4	8	73	2	KED
|	**As**	**75**	**-0.010**	ug/L	0.007	63	2	1	65	KED
⌊	**Se-1**	**78**	**-0.048**	ug/L	0.067	141	4	3	18	KED
	Y	**89**		ug/L			577578	584625	3	Standard
	Kr	**83**		ug/L			59	66	22	Standard
⌈>	**In-1**	**115**		ug/L			9746	9681	2	KED
|	**Mo**	**98**	**0.019**	ug/L	0.011	54	15	25	23	KED
|	**Cd**	**111**	**0.002**	ug/L	0.003	173	0	0	173	KED
⌊	**Cd**	**114**	**0.001**	ug/L	0.003	195	0	1	94	KED
⌈>	**In**	**115**		ug/L			905245	919755	2	Standard
|	**Ag**	**107**	**0.005**	ug/L	0.008	149	28	129	117	Standard
|	**Sb**	**121**	**-0.010**	ug/L	0.007	70	495	377	25	Standard
|	**Sb**	**123**	**-0.011**	ug/L	0.005	46	369	262	22	Standard
|	**Ba**	**135**	**0.010**	ug/L	0.008	76	9	47	62	Standard
⌊	**Ba**	**137**	**0.010**	ug/L	0.007	67	15	79	55	Standard
⌈>	**Tb**	**159**		ug/L			1209873	1208025	1	Standard
|	**Tl**	**205**	**0.003**	ug/L	0.005	150	178	295	59	Standard
|	**Pb**	**208**	**0.005**	ug/L	0.005	100	214	429	49	Standard
|	**Bi**	**209**		ug/L			2532779	2600327	1	Standard
|	**Th**	**232**	**-0.001**	ug/L	0.005	381	1448	1386	15	Standard
⌊	**U**	**238**	**0.002**	ug/L	0.003	172	42	138	119	Standard

AVX9 · 00278

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AWJ0 MB REN
Sample Dil Factor: 2 RR Ag
Comments:
Sample Date/Time: Wednesday, February 24, 2016 15:27:28
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
⌈>	**Li**	**6**		ug/L			657253	681166	3	Standard
⌊	**Be**	**9**	**-0.002**	ug/L	0.003	129	11	7	66	Standard
	C	**13**		ug/L			44880	48595	4	Standard
	Cl	**37**		mg/L			2442655	2459078	2	Standard
⌈>	**Sc**	**45**		ug/L			850943	859760	0	Standard
|	**Al**	**27**	**1.072**	ug/L	0.037	3	675	13578	3	Standard
|	**V**	**51**	**0.009**	mg/L	0.005	58	3344	3530	3	Standard
|	**V-1**	**51**	**0.002**	mg/L	0.001	63	187	221	8	Standard
|	**Cr**	**52**	**0.066**	ug/L	0.041	62	9656	10213	3	Standard
|	**Cr**	**53**	**0.015**	ug/L	0.009	56	81	95	8	Standard
|	**Fe**	**54**	**12.018**	mg/L	0.808	6	39663	52852	1	Standard
|	**Fe**	**57**	**0.268**	mg/L	0.307	114	9512	9726	1	Standard
⌊	**Mn**	**55**	**0.032**	ug/L	0.001	3	286	953	1	Standard
⌈>	**Ge-1**	**72**		ug/L			25772	25996	2	KED
|	**Co**	**59**	**0.002**	ug/L	0.003	144	2	6	86	KED
|	**Ni**	**60**	**-0.120**	ug/L	0.011	9	80	6	103	KED
|	**Ni**	**62**	**-0.105**	ug/L	0.011	10	10	0	173	KED
|	**Cu**	**63**	**-0.011**	ug/L	0.001	11	49	31	9	KED
|	**Cu**	**65**	**-0.002**	ug/L	0.007	276	15	13	37	KED
|	**Zn**	**66**	**0.428**	ug/L	0.099	23	13	91	17	KED
|	**Zn**	**67**	**0.131**	ug/L	0.194	148	3	6	78	KED
|	**Zn**	**68**	**0.335**	ug/L	0.077	23	8	54	17	KED
|	**As**	**75**	**-0.009**	ug/L	0.002	25	2	1	21	KED
⌊	**Se-1**	**78**	**-0.032**	ug/L	0.162	507	4	4	43	KED
	Y	**89**		ug/L			577578	604909	2	Standard
	Kr	**83**		ug/L			59	47	6	Standard
⌈>	**In-1**	**115**		ug/L			9746	9849	3	KED
|	**Mo**	**98**	**0.003**	ug/L	0.007	216	15	17	22	KED
|	**Cd**	**111**	**0.010**	ug/L	0.006	66	0	1	69	KED
⌊	**Cd**	**114**	**0.004**	ug/L	0.003	62	0	2	44	KED
⌈>	**In**	**115**		ug/L			905245	915791	3	Standard
|	**Ag**	**107**	**0.000**	ug/L	0.001	266	28	33	37	Standard
|	**Sb**	**121**	**-0.016**	ug/L	0.001	4	495	294	4	Standard
|	**Sb**	**123**	**-0.015**	ug/L	0.003	17	369	217	10	Standard
|	**Ba**	**135**	**0.006**	ug/L	0.003	47	9	29	31	Standard
⌊	**Ba**	**137**	**0.006**	ug/L	0.002	33	15	52	20	Standard
⌈>	**Tb**	**159**		ug/L			1209873	1232591	0	Standard
|	**Tl**	**205**	**-0.001**	ug/L	0.000	10	178	133	3	Standard
|	**Pb**	**208**	**0.003**	ug/L	0.001	20	214	352	7	Standard
|	**Bi**	**209**		ug/L			2532779	2593519	1	Standard
|	**Th**	**232**	**-0.014**	ug/L	0.001	5	1448	817	4	Standard
⌊	**U**	**238**	**-0.000**	ug/L	0.000	158	42	36	28	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AWJ0 A REN
Sample Dil Factor: 2 RR Ag
Comments:
Sample Date/Time: Wednesday, February 24, 2016 15:32:33
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
⌈>	**Li**	**6**		ug/L			657253	500133	2	Standard
⌊	**Be**	**9**	**0.001**	ug/L	0.001	209	11	9	20	Standard
	C	**13**		ug/L			44880	56272	3	Standard
	Cl	**37**		mg/L			2442655	2537034	2	Standard
⌈>	**Sc**	**45**		ug/L			850943	715108	0	Standard
|	**Al**	**27**	**104.150**	ug/L	2.279	2	675	1042916	1	Standard
|	**V**	**51**	**32.579**	mg/L	1.641	5	3344	447991	4	Standard
|	**V-1**	**51**	**32.226**	mg/L	1.579	4	187	447317	4	Standard
|	**Cr**	**52**	**17.297**	ug/L	0.438	2	9656	107805	1	Standard
|	**Cr**	**53**	**16.550**	ug/L	0.078	0	81	11966	1	Standard
|	**Fe**	**54**	**13141.686**	mg/L	246.089	1	39663	11656961	1	Standard
|	**Fe**	**57**	**13342.380**	mg/L	361.543	2	9512	4783657	3	Standard
⌊	**Mn**	**55**	**21.621**	ug/L	0.265	1	286	372871	0	Standard
⌈>	**Ge-1**	**72**		ug/L			25772	17832	2	KED
|	**Co**	**59**	**7.087**	ug/L	0.211	2	2	9798	0	KED
|	**Ni**	**60**	**13.792**	ug/L	0.287	2	80	5905	2	KED
|	**Ni**	**62**	**14.856**	ug/L	0.291	1	10	1003	2	KED
|	**Cu**	**63**	**5.207**	ug/L	0.182	3	49	6048	1	KED
|	**Cu**	**65**	**5.002**	ug/L	0.208	4	15	2839	2	KED
|	**Zn**	**66**	**143.392**	ug/L	0.875	0	13	17996	1	KED
|	**Zn**	**67**	**130.617**	ug/L	2.241	1	3	2652	0	KED
|	**Zn**	**68**	**137.979**	ug/L	9.515	6	8	12922	4	KED
|	**As**	**75**	**0.204**	ug/L	0.037	18	2	16	17	KED
⌊	**Se-1**	**78**	**0.555**	ug/L	0.114	20	4	7	13	KED
	Y	**89**		ug/L			577578	484787	0	Standard
	Kr	**83**		ug/L			59	214	16	Standard
⌈>	**In-1**	**115**		ug/L			9746	7239	0	KED
|	**Mo**	**98**	**2.077**	ug/L	0.031	1	15	823	1	KED
|	**Cd**	**111**	**3.714**	ug/L	0.187	5	0	438	5	KED
⌊	**Cd**	**114**	**3.691**	ug/L	0.032	0	0	1125	0	KED
⌈>	**In**	**115**		ug/L			905245	652160	2	Standard
|	**Ag**	**107**	**0.004**	ug/L	0.001	14	28	70	9	Standard
|	**Sb**	**121**	**0.256**	ug/L	0.008	3	495	2730	4	Standard
|	**Sb**	**123**	**0.244**	ug/L	0.003	1	369	2017	1	Standard
|	**Ba**	**135**	**4.269**	ug/L	0.170	3	9	11127	1	Standard
⌊	**Ba**	**137**	**4.308**	ug/L	0.110	2	15	19478	1	Standard
⌈>	**Tb**	**159**		ug/L			1209873	914715	1	Standard
|	**Tl**	**205**	**0.006**	ug/L	0.001	17	178	285	10	Standard
|	**Pb**	**208**	**0.581**	ug/L	0.008	1	214	20558	2	Standard
|	**Bi**	**209**		ug/L			2532779	1366723	3	Standard
|	**Th**	**232**	**0.091**	ug/L	0.005	5	1448	4179	5	Standard
⌊	**U**	**238**	**0.097**	ug/L	0.005	5	42	3761	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AWK0 A REN
Sample Dil Factor: 5
Comments:
Sample Date/Time: Wednesday, February 24, 2016 15:37:38
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
[>	Li	6		ug/L			657253	703064	4	Standard
[	Be	9	0.002	ug/L	0.003	114	11	16	29	Standard
	C	13		ug/L			44880	47141	6	Standard
	Cl	37		mg/L			2442655	3030922	4	Standard
[>	Sc	45		ug/L			850943	926849	0	Standard
[	Al	27	181.388	ug/L	2.726	1	675	2354021	2	Standard
[	V	51	-1.148	mg/L	1.269	110	3344	-16697	134	Standard
[	V-1	51	0.799	mg/L	0.030	3	187	14575	4	Standard
[	Cr	52	171.768	ug/L	3.981	2	9656	1293743	2	Standard
[	Cr	53	167.555	ug/L	4.518	2	81	156194	2	Standard
[	Fe	54	92.811	mg/L	4.605	4	39663	149631	4	Standard
[	Fe	57	43.365	mg/L	6.065	13	9512	30491	10	Standard
[	Mn	55	5.679	ug/L	0.095	1	286	127173	0	Standard
[>	Ge-1	72		ug/L			25772	27344	1	KED
[	Co	59	0.461	ug/L	0.024	5	2	980	5	KED
[	Ni	60	16.536	ug/L	0.483	2	80	10840	2	KED
[	Ni	62	16.727	ug/L	0.427	2	10	1730	1	KED
[	Cu	63	20.820	ug/L	0.228	1	49	36941	0	KED
[	Cu	65	20.451	ug/L	0.166	0	15	17757	0	KED
[	Zn	66	56.444	ug/L	3.253	5	13	10866	4	KED
[	Zn	67	50.865	ug/L	2.508	4	3	1586	6	KED
[	Zn	68	54.617	ug/L	0.992	1	8	7857	2	KED
[	As	75	0.241	ug/L	0.047	19	2	30	16	KED
[	Se-1	78	-0.037	ug/L	0.005	13	4	4	0	KED
	Y	89		ug/L			577578	621324	2	Standard
	Kr	83		ug/L			59	158	5	Standard
[>	In-1	115		ug/L			9746	9841	1	KED
[	Mo	98	1.137	ug/L	0.067	5	15	619	4	KED
[	Cd	111	0.818	ug/L	0.033	4	0	131	4	KED
[	Cd	114	0.865	ug/L	0.059	6	0	358	6	KED
[>	In	115		ug/L			905245	911487	0	Standard
[	Ag	107	0.048	ug/L	0.002	4	28	895	3	Standard
[	Sb	121	0.840	ug/L	0.018	2	495	11371	1	Standard
[	Sb	123	0.822	ug/L	0.004	0	369	8620	1	Standard
[	Ba	135	1.494	ug/L	0.063	4	9	5451	3	Standard
[	Ba	137	1.430	ug/L	0.025	1	15	9049	1	Standard
[>	Tb	159		ug/L			1209873	1239630	1	Standard
[	Tl	205	0.004	ug/L	0.001	25	178	325	9	Standard
[	Pb	208	3.163	ug/L	0.091	2	214	150615	2	Standard
[	Bi	209		ug/L			2532779	2440462	3	Standard
[	Th	232	-0.009	ug/L	0.001	12	1448	1070	4	Standard
[	U	238	0.008	ug/L	0.001	13	42	473	10	Standard

AVX9 : 66273

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AWK1 A REN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Wednesday, February 24, 2016 15:45:27
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
[>	**Li**	**6**		ug/L			657253	680884	4	Standard
[	**Be**	**9**	**-0.006**	ug/L	0.000	0	11	1		Standard
	C	**13**		ug/L			44880	45373	2	Standard
	Cl	**37**		mg/L			2442655	2519449	3	Standard
[>	**Sc**	**45**		ug/L			850943	934646	3	Standard
[	**Al**	**27**	**4.564**	ug/L	0.217	4	675	60385	1	Standard
[	**V**	**51**	**-0.066**	mg/L	0.088	134	3344	2462	60	Standard
[	**V-1**	**51**	**0.058**	mg/L	0.007	11	187	1252	7	Standard
[	**Cr**	**52**	**13.007**	ug/L	0.791	6	9656	108460	2	Standard
[	**Cr**	**53**	**12.542**	ug/L	0.223	1	81	11869	2	Standard
[	**Fe**	**54**	**370.940**	mg/L	18.113	4	39663	471884	0	Standard
[	**Fe**	**57**	**360.525**	mg/L	16.599	4	9512	178902	0	Standard
[	**Mn**	**55**	**2.895**	ug/L	0.112	3	286	65479	1	Standard
[>	**Ge-1**	**72**		ug/L			25772	26844	0	KED
[	**Co**	**59**	**0.036**	ug/L	0.003	7	2	76	7	KED
[	**Ni**	**60**	**0.328**	ug/L	0.006	1	80	293	1	KED
[	**Ni**	**62**	**0.348**	ug/L	0.090	25	10	46	18	KED
[	**Cu**	**63**	**0.472**	ug/L	0.014	3	49	871	1	KED
[	**Cu**	**65**	**0.504**	ug/L	0.042	8	15	445	8	KED
[	**Zn**	**66**	**14.320**	ug/L	0.200	1	13	2718	2	KED
[	**Zn**	**67**	**13.130**	ug/L	0.332	2	3	404	3	KED
[	**Zn**	**68**	**14.046**	ug/L	0.493	3	8	1990	3	KED
[	**As**	**75**	**0.003**	ug/L	0.010	286	2	2	40	KED
[	**Se-1**	**78**	**0.080**	ug/L	0.130	162	4	5	27	KED
	Y	**89**		ug/L			577578	612727	2	Standard
	Kr	**83**		ug/L			59	129	2	Standard
[>	**In-1**	**115**		ug/L			9746	9892	1	KED
[	**Mo**	**98**	**0.072**	ug/L	0.006	8	15	54	7	KED
[	**Cd**	**111**	**0.090**	ug/L	0.022	23	0	14	24	KED
[	**Cd**	**114**	**0.079**	ug/L	0.023	28	0	33	28	KED
[>	**In**	**115**		ug/L			905245	902341	0	Standard
[	**Ag**	**107**	**0.008**	ug/L	0.001	16	28	174	13	Standard
[	**Sb**	**121**	**-0.003**	ug/L	0.005	143	495	449	13	Standard
[	**Sb**	**123**	**-0.000**	ug/L	0.003	695	369	364	6	Standard
[	**Ba**	**135**	**0.556**	ug/L	0.021	3	9	2012	3	Standard
[	**Ba**	**137**	**0.539**	ug/L	0.026	4	15	3388	3	Standard
[>	**Tb**	**159**		ug/L			1209873	1208936	2	Standard
[	**Tl**	**205**	**-0.004**	ug/L	0.000	3	178	51	7	Standard
[	**Pb**	**208**	**0.021**	ug/L	0.000	1	214	1173	2	Standard
[	**Bi**	**209**		ug/L			2532779	2538451	1	Standard
[	**Th**	**232**	**-0.028**	ug/L	0.001	2	1448	208	12	Standard
[	**U**	**238**	**0.004**	ug/L	0.000	8	42	257	4	Standard

AVX9 : 60274

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AWK1 MBSPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Wednesday, February 24, 2016 15:50:31
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
⌈>	Li	6		ug/L			657253	731841	5	Standard
⌊	Be	9	21.083	ug/L	1.523	7	11	38667	2	Standard
	C	13		ug/L			44880	45147	1	Standard
	Cl	37		mg/L			2442655	2554289	0	Standard
⌈>	Sc	45		ug/L			850943	927455	0	Standard
|	Al	27	1.701	ug/L	0.008	0	675	22814	0	Standard
|	V	51	27.646	mg/L	0.658	2	3344	493632	1	Standard
|	V-1	51	27.421	mg/L	0.610	2	187	493709	1	Standard
|	Cr	52	28.313	ug/L	1.131	3	9656	222163	3	Standard
|	Cr	53	26.861	ug/L	0.767	2	81	25129	2	Standard
|	Fe	54	15.749	mg/L	1.631	10	39663	61290	2	Standard
|	Fe	57	-2.148	mg/L	0.627	29	9512	9370	3	Standard
⌊	Mn	55	27.831	ug/L	0.423	1	286	622485	2	Standard
⌈>	Ge-1	72		ug/L			25772	26589	4	KED
|	Co	59	27.656	ug/L	1.540	5	2	56935	1	KED
|	Ni	60	27.040	ug/L	0.786	2	80	17176	2	KED
|	Ni	62	28.656	ug/L	3.714	12	10	2864	8	KED
|	Cu	63	27.953	ug/L	1.182	4	49	48164	2	KED
|	Cu	65	27.885	ug/L	1.192	4	15	23511	1	KED
|	Zn	66	87.431	ug/L	2.372	2	13	16355	1	KED
|	Zn	67	82.887	ug/L	4.979	6	3	2507	3	KED
|	Zn	68	85.668	ug/L	4.076	4	8	11963	2	KED
|	As	75	26.094	ug/L	0.555	2	2	2914	2	KED
⌊	Se-1	78	88.510	ug/L	4.114	4	4	1006	0	KED
	Y	89		ug/L			577578	610034	2	Standard
	Kr	83		ug/L			59	113	9	Standard
⌈>	In-1	115		ug/L			9746	9569	5	KED
|	Mo	98	-0.002	ug/L	0.003	153	15	14	6	KED
|	Cd	111	26.644	ug/L	0.967	3	0	4148	1	KED
⌊	Cd	114	26.199	ug/L	1.486	5	0	10532	0	KED
⌈>	In	115		ug/L			905245	902698	2	Standard
|	Ag	107	23.561	ug/L	0.509	2	28	420187	0	Standard
|	Sb	121	-0.027	ug/L	0.001	1	495	144	3	Standard
|	Sb	123	-0.023	ug/L	0.002	10	369	137	17	Standard
|	Ba	135	29.963	ug/L	0.823	2	9	108067	1	Standard
⌊	Ba	137	29.606	ug/L	0.546	1	15	185224	1	Standard
⌈>	Tb	159		ug/L			1209873	1213146	1	Standard
|	Tl	205	26.728	ug/L	0.105	0	178	955557	1	Standard
|	Pb	208	26.972	ug/L	0.224	0	214	1255637	1	Standard
|	Bi	209		ug/L			2532779	2501910	5	Standard
|	Th	232	24.036	ug/L	0.524	2	1448	1077837	3	Standard
⌊	U	238	25.294	ug/L	0.272	1	42	1296121	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AWJ0 MBSPK REN
Sample Dil Factor: 2
RR Ag
Comments:
Sample Date/Time: Wednesday, February 24, 2016 15:55:36
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416b.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
Li	6		ug/L			657253	733124	1	Standard
Be	9	20.261	ug/L	0.619	3	11	37320	3	Standard
C	13		ug/L			44880	43851	2	Standard
Cl	37		mg/L			2442655	2510921	1	Standard
Sc	45		ug/L			850943	924936	1	Standard
Al	27	1.041	ug/L	0.044	4	675	14200	2	Standard
V	51	28.262	mg/L	1.439	5	3344	502993	3	Standard
V-1	51	27.969	mg/L	1.472	5	187	501993	3	Standard
Cr	52	28.547	ug/L	0.435	1	9656	223322	1	Standard
Cr	53	26.709	ug/L	0.693	2	81	24915	0	Standard
Fe	54	16.416	mg/L	1.381	8	39663	61894	3	Standard
Fe	57	-2.847	mg/L	0.280	9	9512	9020	1	Standard
Mn	55	28.138	ug/L	0.508	1	286	627465	0	Standard
Ge-1	72		ug/L			25772	25696	1	KED
Co	59	28.303	ug/L	0.397	1	2	56398	1	KED
Ni	60	28.914	ug/L	0.985	3	80	17751	2	KED
Ni	62	28.324	ug/L	0.915	3	10	2745	1	KED
Cu	63	29.545	ug/L	1.159	3	49	49243	3	KED
Cu	65	28.818	ug/L	0.433	1	15	23507	1	KED
Zn	66	86.928	ug/L	3.644	4	13	15722	3	KED
Zn	67	84.807	ug/L	4.235	4	3	2482	3	KED
Zn	68	85.136	ug/L	3.082	3	8	11504	3	KED
As	75	26.903	ug/L	0.140	0	2	2905	0	KED
Se-1	78	90.121	ug/L	4.644	5	4	991	4	KED
Y	89		ug/L			577578	602869	2	Standard
Kr	83		ug/L			59	90	12	Standard
In-1	115		ug/L			9746	10070	5	KED
Mo	98	-0.005	ug/L	0.011	210	15	13	38	KED
Cd	111	24.586	ug/L	1.909	7	0	4022	2	KED
Cd	114	25.465	ug/L	1.313	5	0	10775	0	KED
In	115		ug/L			905245	898074	2	Standard
Ag	107	23.361	ug/L	0.745	3	28	414426	1	Standard
Sb	121	-0.028	ug/L	0.001	2	495	137	7	Standard
Sb	123	-0.025	ug/L	0.001	5	369	121	9	Standard
Ba	135	30.070	ug/L	0.542	1	9	107927	1	Standard
Ba	137	29.834	ug/L	1.029	3	15	185652	1	Standard
Tb	159		ug/L			1209873	1231633	2	Standard
Tl	205	26.735	ug/L	1.144	4	178	969720	2	Standard
Pb	208	26.867	ug/L	0.754	2	214	1269345	2	Standard
Bi	209		ug/L			2532779	2506338	2	Standard
Th	232	24.244	ug/L	1.068	4	1448	1103078	3	Standard
U	238	24.954	ug/L	0.589	2	42	1297583	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AWH3 MBSPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Wednesday, February 24, 2016 16:00:41
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416b.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
Li	6		ug/L			657253	704548	1	Standard
Be	9	20.652	ug/L	0.719	3	11	36568	4	Standard
C	13		ug/L			44880	43752	4	Standard
Cl	37		mg/L			2442655	2509152	1	Standard
Sc	45		ug/L			850943	901403	1	Standard
Al	27	1.087	ug/L	0.048	4	675	14425	3	Standard
V	51	28.772	mg/L	0.496	1	3344	499151	0	Standard
V-1	51	28.381	mg/L	0.649	2	187	496590	1	Standard
Cr	52	28.324	ug/L	0.531	1	9656	216062	2	Standard
Cr	53	25.951	ug/L	0.892	3	81	23596	2	Standard
Fe	54	15.972	mg/L	0.906	5	39663	59821	1	Standard
Fe	57	-3.095	mg/L	0.751	24	9512	8679	3	Standard
Mn	55	27.984	ug/L	0.647	2	286	608270	2	Standard
Ge-1	72		ug/L			25772	25373	0	KED
Co	59	28.192	ug/L	0.478	1	2	55469	1	KED
Ni	60	27.345	ug/L	0.396	1	80	16586	1	KED
Ni	62	26.677	ug/L	0.801	3	10	2554	2	KED
Cu	63	28.580	ug/L	0.918	3	49	47033	2	KED
Cu	65	27.646	ug/L	0.601	2	15	22269	1	KED
Zn	66	84.532	ug/L	2.224	2	13	15101	2	KED
Zn	67	83.109	ug/L	2.547	3	3	2402	2	KED
Zn	68	83.239	ug/L	0.251	0	8	11106	0	KED
As	75	26.910	ug/L	0.452	1	2	2869	0	KED
Se-1	78	87.754	ug/L	2.232	2	4	953	1	KED
Y	89		ug/L			577578	608666	2	Standard
Kr	83		ug/L			59	99	7	Standard
In-1	115		ug/L			9746	9693	0	KED
Mo	98	-0.007	ug/L	0.006	78	15	11	25	KED
Cd	111	24.750	ug/L	0.035	0	0	3908	0	KED
Cd	114	25.178	ug/L	1.020	4	0	10274	4	KED
In	115		ug/L			905245	878331	0	Standard
Ag	107	22.778	ug/L	0.094	0	28	395382	0	Standard
Sb	121	-0.027	ug/L	0.001	3	495	142	8	Standard
Sb	123	-0.027	ug/L	0.001	3	369	99	8	Standard
Ba	135	29.972	ug/L	0.099	0	9	105227	1	Standard
Ba	137	29.589	ug/L	0.399	1	15	180180	2	Standard
Tb	159		ug/L			1209873	1192068	1	Standard
Tl	205	26.460	ug/L	0.619	2	178	929491	2	Standard
Pb	208	26.811	ug/L	0.679	2	214	1226397	2	Standard
Bi	209		ug/L			2532779	2447286	3	Standard
Th	232	24.225	ug/L	0.688	2	1448	1067234	2	Standard
U	238	24.812	ug/L	0.794	3	42	1249009	2	Standard

AVX9 : 80277

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AWE8 MBSPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Wednesday, February 24, 2016 16:05:46
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416b.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
Li	6		ug/L			657253	741886	3	Standard
Be	9	20.019	ug/L	0.206	1	11	37316	3	Standard
C	13		ug/L			44880	42563	3	Standard
Cl	37		mg/L			2442655	2568362	1	Standard
Sc	45		ug/L			850943	927324	1	Standard
Al	27	1.235	ug/L	0.082	6	675	16753	4	Standard
V	51	27.525	mg/L	1.439	5	3344	491205	3	Standard
V-1	51	27.295	mg/L	1.333	4	187	491179	3	Standard
Cr	52	27.025	ug/L	0.963	3	9656	212465	1	Standard
Cr	53	25.654	ug/L	0.342	1	81	24000	0	Standard
Fe	54	14.221	mg/L	1.329	9	39663	59520	1	Standard
Fe	57	-3.173	mg/L	0.507	15	9512	8892	1	Standard
Mn	55	27.255	ug/L	0.432	1	286	609381	0	Standard
Ge-1	72		ug/L			25772	25472	2	KED
Co	59	27.331	ug/L	0.326	1	2	53981	1	KED
Ni	60	26.768	ug/L	0.474	1	80	16298	1	KED
Ni	62	26.921	ug/L	0.852	3	10	2589	5	KED
Cu	63	28.548	ug/L	0.138	0	49	47173	2	KED
Cu	65	27.241	ug/L	0.525	1	15	22030	3	KED
Zn	66	86.245	ug/L	1.057	1	13	15466	2	KED
Zn	67	78.674	ug/L	3.353	4	3	2285	6	KED
Zn	68	82.380	ug/L	3.038	3	8	11029	1	KED
As	75	26.346	ug/L	0.594	2	2	2819	1	KED
Se-1	78	87.634	ug/L	4.394	5	4	955	2	KED
Y	89		ug/L			577578	601872	2	Standard
Kr	83		ug/L			59	111	7	Standard
In-1	115		ug/L			9746	10116	3	KED
Mo	98	-0.006	ug/L	0.012	197	15	13	51	KED
Cd	111	23.278	ug/L	1.239	5	0	3830	1	KED
Cd	114	23.404	ug/L	1.287	5	0	9961	5	KED
In	115		ug/L			905245	887440	2	Standard
Ag	107	23.056	ug/L	0.594	2	28	404256	1	Standard
Sb	121	-0.028	ug/L	0.001	4	495	136	10	Standard
Sb	123	-0.024	ug/L	0.001	5	369	123	11	Standard
Ba	135	29.163	ug/L	0.226	0	9	103436	1	Standard
Ba	137	29.364	ug/L	1.059	3	15	180579	2	Standard
Tb	159		ug/L			1209873	1195557	2	Standard
Tl	205	26.253	ug/L	1.203	4	178	924431	2	Standard
Pb	208	26.539	ug/L	0.716	2	214	1217129	1	Standard
Bi	209		ug/L			2532779	2451846	0	Standard
Th	232	23.930	ug/L	0.884	3	1448	1056994	2	Standard
U	238	24.276	ug/L	0.927	3	42	1225293	2	Standard

AVX9 : 06278

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV4
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, February 24, 2016 16:11:56
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
>	Li	6		ug/L			657253	690477	0	Standard
	Be	9	37.168	ug/L	1.068	2	11	64483	3	Standard
	C	13		ug/L			44880	39662	3	Standard
	Cl	37		mg/L			2442655	2479554	0	Standard
>	Sc	45		ug/L			850943	907155	0	Standard
	Al	27	4489.802	ug/L	73.095	1	675	57011491	2	Standard
	V	51	48.600	mg/L	0.364	0	3344	846149	0	Standard
	V-1	51	48.250	mg/L	0.703	1	187	849672	1	Standard
	Cr	52	47.599	ug/L	2.120	4	9656	358324	4	Standard
	Cr	53	45.538	ug/L	1.459	3	81	41617	3	Standard
	Fe	54	4727.968	mg/L	137.766	2	39663	5347009	2	Standard
	Fe	57	4721.075	mg/L	7.919	0	9512	2153606	0	Standard
	Mn	55	47.157	ug/L	0.918	1	286	1031357	2	Standard
>	Ge-1	72		ug/L			25772	25540	4	KED
	Co	59	47.502	ug/L	2.363	4	2	93980	3	KED
	Ni	60	46.310	ug/L	2.399	5	80	28172	0	KED
	Ni	62	46.183	ug/L	2.388	5	10	4436	0	KED
	Cu	63	46.656	ug/L	2.562	5	49	77140	1	KED
	Cu	65	45.704	ug/L	1.649	3	15	37007	1	KED
	Zn	66	48.068	ug/L	2.494	5	13	8635	0	KED
	Zn	67	48.591	ug/L	5.689	11	3	1410	7	KED
	Zn	68	48.370	ug/L	3.182	6	8	6486	1	KED
	As	75	47.901	ug/L	3.078	6	2	5129	1	KED
	Se-1	78	50.894	ug/L	3.142	6	4	557	1	KED
	Y	89		ug/L			577578	601919	4	Standard
	Kr	83		ug/L			59	90	16	Standard
>	In-1	115		ug/L			9746	9350	3	KED
	Mo	98	45.889	ug/L	1.782	3	15	23155	0	KED
	Cd	111	46.343	ug/L	0.943	2	0	7056	1	KED
	Cd	114	47.738	ug/L	1.700	3	0	18779	2	KED
>	In	115		ug/L			905245	854422	1	Standard
	Ag	107	43.856	ug/L	1.568	3	28	740269	2	Standard
	Sb	121	50.385	ug/L	1.147	2	495	611417	1	Standard
	Sb	123	50.342	ug/L	1.360	2	369	473451	1	Standard
	Ba	135	53.108	ug/L	0.813	1	9	181348	1	Standard
	Ba	137	52.388	ug/L	1.013	1	15	310241	0	Standard
>	Tb	159		ug/L			1209873	1196804	0	Standard
	Tl	205	44.828	ug/L	1.441	3	178	1580597	2	Standard
	Pb	208	44.754	ug/L	1.526	3	214	2054838	2	Standard
	Bi	209		ug/L			2532779	2343080	2	Standard
	Th	232	41.640	ug/L	1.336	3	1448	1840554	2	Standard
	U	238	43.370	ug/L	2.083	4	42	2191659	3	Standard

AVX3 : 68279

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB4
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, February 24, 2016 16:19:45
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
[>	**Li**	**6**		ug/L			657253	722548	2	Standard
[	**Be**	**9**	**-0.003**	ug/L	0.002	72	11	6	69	Standard
	C	**13**		ug/L			44880	38510	6	Standard
	Cl	**37**		mg/L			2442655	2436662	1	Standard
[>	**Sc**	**45**		ug/L			850943	886758	2	Standard
[	**Al**	**27**	**-0.002**	ug/L	0.003	162	675	676	4	Standard
[	**V**	**51**	**-0.009**	mg/L	0.008	90	3344	3325	5	Standard
[	**V-1**	**51**	**0.001**	mg/L	0.001	84	187	215	10	Standard
[	**Cr**	**52**	**-0.079**	ug/L	0.060	75	9656	9498	5	Standard
[	**Cr**	**53**	**-0.007**	ug/L	0.001	15	81	78	4	Standard
[	**Fe**	**54**	**-0.316**	mg/L	1.446	457	39663	40958	1	Standard
[	**Fe**	**57**	**-1.956**	mg/L	0.603	30	9512	9039	0	Standard
[	**Mn**	**55**	**-0.001**	ug/L	0.000	20	286	280	4	Standard
[>	**Ge-1**	**72**		ug/L			25772	25070	1	KED
[	**Co**	**59**	**0.009**	ug/L	0.017	178	2	20	156	KED
[	**Ni**	**60**	**-0.019**	ug/L	0.026	140	80	67	21	KED
[	**Ni**	**62**	**0.010**	ug/L	0.036	356	10	11	28	KED
[	**Cu**	**63**	**-0.000**	ug/L	0.016	7617	49	47	53	KED
[	**Cu**	**65**	**0.020**	ug/L	0.021	106	15	30	54	KED
[	**Zn**	**66**	**0.024**	ug/L	0.087	360	13	17	88	KED
[	**Zn**	**67**	**-0.064**	ug/L	0.038	59	3	1	86	KED
[	**Zn**	**68**	**0.050**	ug/L	0.039	77	8	15	33	KED
[	**As**	**75**	**0.025**	ug/L	0.030	121	2	4	65	KED
[	**Se-1**	**78**	**-0.018**	ug/L	0.070	384	4	4	17	KED
	Y	**89**		ug/L			577578	578434	1	Standard
	Kr	**83**		ug/L			59	84	20	Standard
[>	**In-1**	**115**		ug/L			9746	9570	2	KED
[	**Mo**	**98**	**0.004**	ug/L	0.010	231	15	17	27	KED
[	**Cd**	**111**	**0.012**	ug/L	0.006	51	0	1	50	KED
[	**Cd**	**114**	**0.001**	ug/L	0.003	188	0	1	94	KED
[>	**In**	**115**		ug/L			905245	835586	2	Standard
[	**Ag**	**107**	**0.000**	ug/L	0.000	66	28	33	14	Standard
[	**Sb**	**121**	**0.026**	ug/L	0.002	7	495	766	1	Standard
[	**Sb**	**123**	**0.028**	ug/L	0.004	12	369	601	4	Standard
[	**Ba**	**135**	**-0.000**	ug/L	0.001	751	9	8	58	Standard
[	**Ba**	**137**	**0.002**	ug/L	0.001	58	15	26	23	Standard
[>	**Tb**	**159**		ug/L			1209873	1162608	0	Standard
[	**Tl**	**205**	**0.001**	ug/L	0.001	78	178	205	12	Standard
[	**Pb**	**208**	**0.001**	ug/L	0.001	124	214	237	17	Standard
[	**Bi**	**209**		ug/L			2532779	2458802	3	Standard
[	**Th**	**232**	**0.092**	ug/L	0.008	8	1448	5348	6	Standard
[	**U**	**238**	**0.000**	ug/L	0.000	23	42	65	9	Standard

AVX3 · 00280

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AWI9 MB SWN
Sample Dil Factor: 20 KA Al Ag
Comments:
Sample Date/Time: Wednesday, February 24, 2016 16:24:50
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
⌈>	Li	6		ug/L			657253	738615	3	Standard
⌊	Be	9	-0.005	ug/L	0.001	14	11	4	24	Standard
	C	13		ug/L			44880	41469	4	Standard
	Cl	37		mg/L			2442655	2481376	0	Standard
⌈>	Sc	45		ug/L			850943	917447	3	Standard
|	Al	27	0.339	ug/L	0.001	0	675	5085	3	Standard
|	V	51	-0.014	mg/L	0.017	123	3344	3355	6	Standard
|	V-1	51	0.002	mg/L	0.000	10	187	246	3	Standard
|	Cr	52	-0.076	ug/L	0.104	137	9656	9835	4	Standard
|	Cr	53	0.031	ug/L	0.010	31	81	117	10	Standard
|	Fe	54	3.757	mg/L	1.035	27	39663	47003	0	Standard
|	Fe	57	-2.156	mg/L	1.326	61	9512	9254	3	Standard
⌊	Mn	55	0.009	ug/L	0.000	5	286	497	5	Standard
⌈>	Ge-1	72		ug/L			25772	25059	0	KED
|	Co	59	0.001	ug/L	0.002	242	2	4	107	KED
|	Ni	60	-0.110	ug/L	0.007	6	80	12	31	KED
|	Ni	62	-0.105	ug/L	0.012	11	10	0	173	KED
|	Cu	63	-0.012	ug/L	0.002	20	49	29	13	KED
|	Cu	65	0.007	ug/L	0.009	131	15	20	35	KED
|	Zn	66	0.283	ug/L	0.022	7	13	62	6	KED
|	Zn	67	0.270	ug/L	0.234	86	3	10	61	KED
|	Zn	68	0.219	ug/L	0.109	49	8	37	38	KED
|	As	75	0.007	ug/L	0.005	68	2	2	16	KED
⌊	Se-1	78	-0.004	ug/L	0.160	4516	4	4	40	KED
	Y	89		ug/L			577578	575167	6	Standard
	Kr	83		ug/L			59	68	15	Standard
⌈>	In-1	115		ug/L			9746	9485	3	KED
|	Mo	98	-0.004	ug/L	0.007	165	15	13	28	KED
|	Cd	111	0.008	ug/L	0.003	41	0	1	43	KED
⌊	Cd	114	0.001	ug/L	0.003	183	0	1	90	KED
⌈>	In	115		ug/L			905245	854979	1	Standard
|	Ag	107	0.001	ug/L	0.000	21	28	39	5	Standard
|	Sb	121	-0.013	ug/L	0.001	10	495	305	4	Standard
|	Sb	123	-0.011	ug/L	0.002	21	369	248	7	Standard
|	Ba	135	0.008	ug/L	0.000	5	9	36	5	Standard
⌊	Ba	137	0.008	ug/L	0.002	25	15	59	17	Standard
⌈>	Tb	159		ug/L			1209873	1168478	2	Standard
|	Tl	205	-0.002	ug/L	0.000	16	178	106	8	Standard
|	Pb	208	0.004	ug/L	0.000	11	214	398	3	Standard
|	Bi	209		ug/L			2532779	2425475	1	Standard
|	Th	232	0.031	ug/L	0.002	7	1448	2725	3	Standard
⌊	U	238	0.000	ug/L	0.000	3805	42	41	21	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AVX6 A SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Wednesday, February 24, 2016 16:29:55
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
[>	Li	6		ug/L			657253	683941	1	Standard
[	Be	9	0.023	ug/L	0.003	11	11	52	7	Standard
	C	13		ug/L			44880	41278	0	Standard
	Cl	37		mg/L			2442655	2470762	2	Standard
[>	Sc	45		ug/L			850943	921916	0	Standard
[	Al	27	1923.542	ug/L	50.191	2	675	24817858	1	Standard
[	V	51	8.137	mg/L	0.367	4	3344	146954	3	Standard
[	V-1	51	8.057	mg/L	0.353	4	187	144322	3	Standard
[	Cr	52	8.784	ug/L	0.120	1	9656	75738	1	Standard
[	Cr	53	8.231	ug/L	0.159	1	81	7716	1	Standard
[	Fe	54	3818.187	mg/L	91.545	2	39663	4396433	1	Standard
[	Fe	57	3657.303	mg/L	12.170	0	9512	1697842	1	Standard
[	Mn	55	80.714	ug/L	1.342	1	286	1793662	1	Standard
[>	Ge-1	72		ug/L			25772	24878	1	KED
[	Co	59	1.387	ug/L	0.060	4	2	2677	4	KED
[	Ni	60	5.788	ug/L	0.298	5	80	3503	5	KED
[	Ni	62	5.812	ug/L	0.345	5	10	553	4	KED
[	Cu	63	24.778	ug/L	0.443	1	49	39997	2	KED
[	Cu	65	24.038	ug/L	0.341	1	15	18989	2	KED
[	Zn	66	65.624	ug/L	1.174	1	13	11496	0	KED
[	Zn	67	63.753	ug/L	1.751	2	3	1807	2	KED
[	Zn	68	63.930	ug/L	1.357	2	8	8366	3	KED
[	As	75	0.858	ug/L	0.037	4	2	91	4	KED
[	Se-1	78	0.300	ug/L	0.144	47	4	7	19	KED
	Y	89		ug/L			577578	627631	2	Standard
	Kr	83		ug/L			59	99	5	Standard
[>	In-1	115		ug/L			9746	9194	2	KED
[	Mo	98	0.517	ug/L	0.022	4	15	271	5	KED
[	Cd	111	0.081	ug/L	0.007	8	0	12	9	KED
[	Cd	114	0.105	ug/L	0.017	16	0	41	17	KED
[>	In	115		ug/L			905245	845126	2	Standard
[	Ag	107	0.027	ug/L	0.000	0	28	480	2	Standard
[	Sb	121	-0.003	ug/L	0.002	66	495	421	4	Standard
[	Sb	123	-0.001	ug/L	0.003	274	369	334	6	Standard
[	Ba	135	32.031	ug/L	0.968	3	9	108153	1	Standard
[	Ba	137	32.765	ug/L	1.140	3	15	191862	1	Standard
[>	Tb	159		ug/L			1209873	1174087	2	Standard
[	Tl	205	0.007	ug/L	0.001	19	178	428	13	Standard
[	Pb	208	14.022	ug/L	0.136	0	214	631805	2	Standard
[	Bi	209		ug/L			2532779	2398124	3	Standard
[	Th	232	0.151	ug/L	0.007	4	1448	7964	2	Standard
[	U	238	0.050	ug/L	0.000	0	42	2528	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AWI9 A SWN
Sample Dil Factor: 20
RR Al Ag Cr Fe
Comments:
Sample Date/Time: Wednesday, February 24, 2016 16:35:00
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
[>	**Li**	**6**		ug/L			657253	717991	3	Standard
[	**Be**	**9**	**0.254**	ug/L	0.024	9	11	470	11	Standard
	C	**13**		ug/L			44880	41326	4	Standard
	Cl	**37**		mg/L			2442655	2433005	0	Standard
[>	**Sc**	**45**		ug/L			850943	1072967	2	Standard
[	**Al**	**27**	**14746.287**	ug/L	486.288	3	675	221360173	1	Standard
[	**V**	**51**	**46.251**	mg/L	1.355	2	3344	952317	1	Standard
[	**V-1**	**51**	**45.914**	mg/L	1.350	2	187	955978	1	Standard
[	**Cr**	**52**	**30.325**	ug/L	0.856	2	9656	274357	0	Standard
[	**Cr**	**53**	**29.744**	ug/L	0.753	2	81	32173	0	Standard
[	**Fe**	**54**	**16979.246**	mg/L	602.155	3	39663	22574664	1	Standard
[	**Fe**	**57**	**16614.224**	mg/L	381.620	2	9512	8932941	2	Standard
[	**Mn**	**55**	**209.862**	ug/L	1.876	0	286	5426878	1	Standard
[>	**Ge-1**	**72**		ug/L			25772	25115	0	KED
[	**Co**	**59**	**12.041**	ug/L	0.089	0	2	23452	0	KED
[	**Ni**	**60**	**36.356**	ug/L	1.868	5	80	21796	4	KED
[	**Ni**	**62**	**36.181**	ug/L	0.784	2	10	3426	2	KED
[	**Cu**	**63**	**34.795**	ug/L	0.818	2	49	56679	2	KED
[	**Cu**	**65**	**34.114**	ug/L	1.601	4	15	27191	3	KED
[	**Zn**	**66**	**50.348**	ug/L	1.321	2	13	8910	3	KED
[	**Zn**	**67**	**54.333**	ug/L	2.292	4	3	1556	4	KED
[	**Zn**	**68**	**54.178**	ug/L	1.825	3	8	7159	4	KED
[	**As**	**75**	**5.366**	ug/L	0.044	0	2	568	0	KED
[	**Se-1**	**78**	**2.205**	ug/L	0.208	9	4	27	8	KED
	Y	**89**		ug/L			577578	898118	3	Standard
	Kr	**83**		ug/L			59	156	8	Standard
[>	**In-1**	**115**		ug/L			9746	9519	1	KED
[	**Mo**	**98**	**0.502**	ug/L	0.048	9	15	273	10	KED
[	**Cd**	**111**	**0.158**	ug/L	0.014	9	0	24	8	KED
[	**Cd**	**114**	**0.135**	ug/L	0.009	6	0	54	7	KED
[>	**In**	**115**		ug/L			905245	838224	0	Standard
[	**Ag**	**107**	**0.088**	ug/L	0.002	2	28	1476	1	Standard
[	**Sb**	**121**	**-0.015**	ug/L	0.002	14	495	282	9	Standard
[	**Sb**	**123**	**-0.014**	ug/L	0.003	19	369	213	12	Standard
[	**Ba**	**135**	**93.054**	ug/L	2.715	2	9	311713	2	Standard
[	**Ba**	**137**	**93.286**	ug/L	0.798	0	15	542030	0	Standard
[>	**Tb**	**159**		ug/L			1209873	1202710	0	Standard
[	**Tl**	**205**	**0.098**	ug/L	0.001	1	178	3652	1	Standard
[	**Pb**	**208**	**4.495**	ug/L	0.119	2	214	207659	3	Standard
[	**Bi**	**209**		ug/L			2532779	2286284	1	Standard
[	**Th**	**232**	**1.497**	ug/L	0.049	3	1448	67902	3	Standard
[	**U**	**238**	**0.453**	ug/L	0.011	2	42	23035	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AWI9 B SWN Pr Al Ag Fe
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, February 24, 2016 16:40:05
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
[>	**Li**	**6**		ug/L			657253	736499	1	Standard
[	**Be**	**9**	**0.219**	ug/L	0.021	9	11	417	7	Standard
	C	**13**		ug/L			44880	42114	3	Standard
	Cl	**37**		mg/L			2442655	2478841	1	Standard
[>	**Sc**	**45**		ug/L			850943	1050033	2	Standard
[	**Al**	**27**	**13610.510**	ug/L	592.577	4	675	199916604	2	Standard
[	**V**	**51**	**41.993**	mg/L	2.218	5	3344	846305	3	Standard
[	**V-1**	**51**	**41.665**	mg/L	2.262	5	187	848723	3	Standard
[	**Cr**	**52**	**24.960**	ug/L	0.232	0	9656	223163	1	Standard
[	**Cr**	**53**	**24.534**	ug/L	0.748	3	81	25990	2	Standard
[	**Fe**	**54**	**15003.779**	mg/L	325.015	2	39663	19530840	0	Standard
[	**Fe**	**57**	**14675.860**	mg/L	245.985	1	9512	7723652	2	Standard
[	**Mn**	**55**	**158.075**	ug/L	2.075	1	286	4000236	0	Standard
[>	**Ge-1**	**72**		ug/L			25772	25033	1	KED
[	**Co**	**59**	**7.290**	ug/L	0.059	0	2	14154	0	KED
[	**Ni**	**60**	**23.262**	ug/L	0.174	0	80	13933	1	KED
[	**Ni**	**62**	**22.898**	ug/L	0.886	3	10	2164	3	KED
[	**Cu**	**63**	**22.275**	ug/L	0.184	0	49	36185	2	KED
[	**Cu**	**65**	**21.633**	ug/L	0.338	1	15	17196	1	KED
[	**Zn**	**66**	**32.577**	ug/L	0.688	2	13	5749	0	KED
[	**Zn**	**67**	**38.093**	ug/L	0.108	0	3	1088	1	KED
[	**Zn**	**68**	**37.506**	ug/L	1.284	3	8	4941	2	KED
[	**As**	**75**	**2.727**	ug/L	0.107	3	2	288	2	KED
[	**Se-1**	**78**	**2.093**	ug/L	0.374	17	4	26	15	KED
	Y	**89**		ug/L			577578	854834	2	Standard
	Kr	**83**		ug/L			59	161	10	Standard
[>	**In-1**	**115**		ug/L			9746	9539	2	KED
[	**Mo**	**98**	**0.151**	ug/L	0.026	16	15	93	12	KED
[	**Cd**	**111**	**0.051**	ug/L	0.004	8	0	7	6	KED
[	**Cd**	**114**	**0.035**	ug/L	0.015	41	0	14	40	KED
[>	**In**	**115**		ug/L			905245	843646	3	Standard
[	**Ag**	**107**	**0.061**	ug/L	0.013	21	28	1036	18	Standard
[	**Sb**	**121**	**-0.023**	ug/L	0.003	11	495	181	14	Standard
[	**Sb**	**123**	**-0.022**	ug/L	0.001	5	369	135	10	Standard
[	**Ba**	**135**	**88.107**	ug/L	2.053	2	9	296942	1	Standard
[	**Ba**	**137**	**88.423**	ug/L	3.789	4	15	516655	1	Standard
[>	**Tb**	**159**		ug/L			1209873	1213841	1	Standard
[	**Tl**	**205**	**0.053**	ug/L	0.001	1	178	2061	0	Standard
[	**Pb**	**208**	**3.311**	ug/L	0.168	5	214	154342	3	Standard
[	**Bi**	**209**		ug/L			2532779	2300882	2	Standard
[	**Th**	**232**	**1.425**	ug/L	0.073	5	1448	65246	3	Standard
[	**U**	**238**	**0.455**	ug/L	0.022	4	42	23370	3	Standard

AVX3 : 00284

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AWI9 C SWN
Sample Dil Factor: 20 RR Al Ag
Comments:
Sample Date/Time: Wednesday, February 24, 2016 16:45:10
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
[>	Li	6		ug/L			657253	740200	3	Standard
[	Be	9	0.214	ug/L	0.020	9	11	410	5	Standard
	C	13		ug/L			44880	43069	5	Standard
	Cl	37		mg/L			2442655	2470102	1	Standard
[>	Sc	45		ug/L			850943	1028668	1	Standard
|	Al	27	12113.263	ug/L	49.445	0	675	174410907	2	Standard
|	V	51	41.901	mg/L	0.901	2	3344	827648	1	Standard
|	V-1	51	41.628	mg/L	0.899	2	187	831086	1	Standard
|	Cr	52	26.818	ug/L	0.406	1	9656	234001	0	Standard
|	Cr	53	26.546	ug/L	0.642	2	81	27541	1	Standard
|	Fe	54	15063.058	mg/L	215.111	1	39663	19211073	0	Standard
|	Fe	57	15080.489	mg/L	638.912	4	9512	7775214	4	Standard
[	Mn	55	200.276	ug/L	1.955	0	286	4965249	0	Standard
[>	Ge-1	72		ug/L			25772	24726	3	KED
|	Co	59	7.786	ug/L	0.244	3	2	14925	2	KED
|	Ni	60	29.360	ug/L	0.656	2	80	17340	1	KED
|	Ni	62	29.481	ug/L	0.505	1	10	2751	5	KED
|	Cu	63	22.030	ug/L	0.813	3	49	35326	2	KED
|	Cu	65	21.769	ug/L	0.712	3	15	17080	0	KED
|	Zn	66	40.981	ug/L	1.410	3	13	7137	2	KED
|	Zn	67	43.992	ug/L	1.422	3	3	1240	0	KED
|	Zn	68	44.242	ug/L	1.944	4	8	5750	0	KED
|	As	75	3.800	ug/L	0.208	5	2	396	3	KED
[	Se-1	78	2.204	ug/L	0.167	7	4	27	4	KED
	Y	89		ug/L			577578	844954	1	Standard
	Kr	83		ug/L			59	132	20	Standard
[>	In-1	115		ug/L			9746	9066	1	KED
|	Mo	98	0.210	ug/L	0.019	9	15	117	6	KED
|	Cd	111	0.131	ug/L	0.048	36	0	19	35	KED
[	Cd	114	0.076	ug/L	0.009	11	0	29	9	KED
[>	In	115		ug/L			905245	833150	1	Standard
|	Ag	107	0.064	ug/L	0.006	9	28	1087	8	Standard
|	Sb	121	-0.024	ug/L	0.001	4	495	175	8	Standard
|	Sb	123	-0.022	ug/L	0.004	17	369	134	27	Standard
|	Ba	135	78.524	ug/L	1.783	2	9	261413	0	Standard
[	Ba	137	77.536	ug/L	2.678	3	15	447616	1	Standard
[>	Tb	159		ug/L			1209873	1191699	0	Standard
|	Tl	205	0.056	ug/L	0.002	3	178	2158	3	Standard
|	Pb	208	3.323	ug/L	0.101	3	214	152129	2	Standard
|	Bi	209		ug/L			2532779	2278978	0	Standard
|	Th	232	1.309	ug/L	0.043	3	1448	58978	2	Standard
[	U	238	0.368	ug/L	0.018	4	42	18570	4	Standard

AVX9 · 66235

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AWI9 D SWN
Sample Dil Factor: 20
RR Al Ag Fe
Comments:
Sample Date/Time: Wednesday, February 24, 2016 16:50:14
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416b.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
Li	6		ug/L			657253	730386	1	Standard
Be	9	0.114	ug/L	0.016	14	11	222	14	Standard
C	13		ug/L			44880	45330	5	Standard
Cl	37		mg/L			2442655	2384911	1	Standard
Sc	45		ug/L			850943	993046	0	Standard
Al	27	6761.933	ug/L	69.749	1	675	93986359	1	Standard
V	51	23.325	mg/L	0.378	1	3344	446548	0	Standard
V-1	51	22.966	mg/L	0.376	1	187	442783	0	Standard
Cr	52	14.043	ug/L	0.362	2	9656	123664	1	Standard
Cr	53	12.699	ug/L	0.350	2	81	12769	1	Standard
Fe	54	7728.212	mg/L	152.029	1	39663	9538221	1	Standard
Fe	57	7569.554	mg/L	65.080	0	9512	3773322	1	Standard
Mn	55	94.387	ug/L	2.412	2	286	2259135	1	Standard
Ge-1	72		ug/L			25772	25081	2	KED
Co	59	3.690	ug/L	0.121	3	2	7178	3	KED
Ni	60	11.472	ug/L	0.495	4	80	6919	2	KED
Ni	62	11.935	ug/L	0.867	7	10	1134	5	KED
Cu	63	9.564	ug/L	0.152	1	49	15593	2	KED
Cu	65	9.432	ug/L	0.189	1	15	7518	0	KED
Zn	66	13.087	ug/L	0.028	0	13	2322	1	KED
Zn	67	15.955	ug/L	0.993	6	3	458	6	KED
Zn	68	15.070	ug/L	0.294	1	8	1995	3	KED
As	75	2.233	ug/L	0.101	4	2	237	3	KED
Se-1	78	1.093	ug/L	0.245	22	4	16	17	KED
Y	89		ug/L			577578	743959	2	Standard
Kr	83		ug/L			59	92	4	Standard
In-1	115		ug/L			9746	9141	3	KED
Mo	98	0.207	ug/L	0.033	16	15	117	16	KED
Cd	111	0.015	ug/L	0.003	21	0	2	24	KED
Cd	114	0.032	ug/L	0.004	12	0	12	15	KED
In	115		ug/L			905245	841163	1	Standard
Ag	107	0.037	ug/L	0.002	4	28	641	4	Standard
Sb	121	-0.025	ug/L	0.001	4	495	162	9	Standard
Sb	123	-0.025	ug/L	0.002	8	369	113	16	Standard
Ba	135	42.372	ug/L	1.420	3	9	142421	2	Standard
Ba	137	42.129	ug/L	0.207	0	15	245653	1	Standard
Tb	159		ug/L			1209873	1215592	1	Standard
Tl	205	0.025	ug/L	0.000	1	178	1065	0	Standard
Pb	208	1.670	ug/L	0.048	2	214	78068	2	Standard
Bi	209		ug/L			2532779	2370096	4	Standard
Th	232	0.645	ug/L	0.022	3	1448	30407	2	Standard
U	238	0.209	ug/L	0.005	2	42	10774	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AWI9 MBSPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, February 24, 2016 16:55:19

RF Al Ag Ba

Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
⌈>	**Li**	**6**		ug/L			657253	737822	3	Standard
⌊	**Be**	**9**	**19.673**	ug/L	1.083	5	11	36425	2	Standard
	C	**13**		ug/L			44880	39265	5	Standard
	Cl	**37**		mg/L			2442655	2401347	1	Standard
⌈>	**Sc**	**45**		ug/L			850943	913399	2	Standard
|	**Al**	**27**	**432.782**	ug/L	12.180	2	675	5531613	1	Standard
|	**V**	**51**	**27.524**	mg/L	0.798	2	3344	483900	0	Standard
|	**V-1**	**51**	**27.372**	mg/L	0.720	2	187	485250	0	Standard
|	**Cr**	**52**	**27.489**	ug/L	0.962	3	9656	212666	1	Standard
|	**Cr**	**53**	**26.553**	ug/L	0.516	1	81	24463	1	Standard
|	**Fe**	**54**	**489.400**	mg/L	21.066	4	39663	595221	2	Standard
|	**Fe**	**57**	**461.725**	mg/L	16.035	3	9512	221189	1	Standard
⌊	**Mn**	**55**	**26.406**	ug/L	0.639	2	286	581456	0	Standard
⌈>	**Ge-1**	**72**		ug/L			25772	25213	3	KED
|	**Co**	**59**	**27.605**	ug/L	1.117	4	2	53918	0	KED
|	**Ni**	**60**	**27.281**	ug/L	0.673	2	80	16432	1	KED
|	**Ni**	**62**	**27.306**	ug/L	1.126	4	10	2595	1	KED
|	**Cu**	**63**	**27.846**	ug/L	2.113	7	49	45455	3	KED
|	**Cu**	**65**	**27.942**	ug/L	0.661	2	15	22356	2	KED
|	**Zn**	**66**	**88.828**	ug/L	2.183	2	13	15763	3	KED
|	**Zn**	**67**	**84.479**	ug/L	5.653	6	3	2423	4	KED
|	**Zn**	**68**	**84.873**	ug/L	5.044	5	8	11235	2	KED
|	**As**	**75**	**27.241**	ug/L	0.826	3	2	2884	1	KED
⌊	**Se-1**	**78**	**93.090**	ug/L	5.609	6	4	1003	2	KED
	Y	**89**		ug/L			577578	576420	2	Standard
	Kr	**83**		ug/L			59	53	11	Standard
⌈>	**In-1**	**115**		ug/L			9746	9290	1	KED
|	**Mo**	**98**	**23.665**	ug/L	0.275	1	15	11881	2	KED
|	**Cd**	**111**	**26.167**	ug/L	0.785	2	0	3958	1	KED
⌊	**Cd**	**114**	**26.362**	ug/L	0.425	1	0	10310	2	KED
⌈>	**In**	**115**		ug/L			905245	831269	2	Standard
|	**Ag**	**107**	**24.506**	ug/L	1.207	4	28	402452	4	Standard
|	**Sb**	**121**	**26.683**	ug/L	1.208	4	495	315083	2	Standard
|	**Sb**	**123**	**26.701**	ug/L	0.829	3	369	244413	0	Standard
|	**Ba**	**135**	**30.570**	ug/L	0.710	2	9	101540	0	Standard
⌊	**Ba**	**137**	**30.581**	ug/L	1.315	4	15	176111	2	Standard
⌈>	**Tb**	**159**		ug/L			1209873	1157988	1	Standard
|	**Tl**	**205**	**27.096**	ug/L	1.218	4	178	924235	3	Standard
|	**Pb**	**208**	**27.115**	ug/L	0.912	3	214	1204377	1	Standard
|	**Bi**	**209**		ug/L			2532779	2395634	2	Standard
|	**Th**	**232**	**23.973**	ug/L	1.419	5	1448	1025260	4	Standard
⌊	**U**	**238**	**24.922**	ug/L	1.155	4	42	1218195	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AWG4 MBSPK REN
Sample Dil Factor: 2 p6
Comments:
Sample Date/Time: Wednesday, February 24, 2016 17:00:24
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
⌈>	**Li**	**6**		ug/L			657253	733095	5	Standard
⌊	**Be**	**9**	**19.839**	ug/L	1.294	6	11	36468	4	Standard
	C	**13**		ug/L			44880	39893	7	Standard
	Cl	**37**		mg/L			2442655	2391274	1	Standard
⌈>	**Sc**	**45**		ug/L			850943	892163	0	Standard
|	**Al**	**27**	**1.016**	ug/L	0.052	5	675	13389	4	Standard
|	**V**	**51**	**27.739**	mg/L	0.201	0	3344	476499	0	Standard
|	**V-1**	**51**	**27.638**	mg/L	0.127	0	187	478737	0	Standard
|	**Cr**	**52**	**27.522**	ug/L	0.741	2	9656	208048	2	Standard
|	**Cr**	**53**	**26.916**	ug/L	0.141	0	81	24224	0	Standard
|	**Fe**	**54**	**16.011**	mg/L	1.415	8	39663	59252	2	Standard
|	**Fe**	**57**	**-0.519**	mg/L	0.465	89	9512	9741	2	Standard
⌊	**Mn**	**55**	**27.502**	ug/L	0.428	1	286	591672	1	Standard
⌈>	**Ge-1**	**72**		ug/L			25772	25142	2	KED
|	**Co**	**59**	**27.561**	ug/L	0.814	2	2	53709	0	KED
|	**Ni**	**60**	**26.425**	ug/L	0.979	3	80	15876	2	KED
|	**Ni**	**62**	**26.615**	ug/L	1.321	4	10	2525	5	KED
|	**Cu**	**63**	**27.787**	ug/L	1.243	4	49	45290	2	KED
|	**Cu**	**65**	**27.249**	ug/L	0.747	2	15	21755	4	KED
|	**Zn**	**66**	**84.302**	ug/L	1.789	2	13	14923	3	KED
|	**Zn**	**67**	**78.650**	ug/L	2.190	2	3	2252	0	KED
|	**Zn**	**68**	**80.089**	ug/L	0.905	1	8	10588	2	KED
|	**As**	**75**	**26.748**	ug/L	0.906	3	2	2825	2	KED
⌊	**Se-1**	**78**	**87.133**	ug/L	2.424	2	4	937	2	KED
	Y	**89**		ug/L			577578	575651	0	Standard
	Kr	**83**		ug/L			59	47	36	Standard
⌈>	**In-1**	**115**		ug/L			9746	9158	4	KED
|	**Mo**	**98**	**0.016**	ug/L	0.016	97	15	22	32	KED
|	**Cd**	**111**	**25.397**	ug/L	1.158	4	0	3784	1	KED
⌊	**Cd**	**114**	**25.485**	ug/L	1.334	5	0	9812	2	KED
⌈>	**In**	**115**		ug/L			905245	839119	2	Standard
|	**Ag**	**107**	**23.612**	ug/L	0.427	1	28	391471	1	Standard
|	**Sb**	**121**	**-0.019**	ug/L	0.002	12	495	234	11	Standard
|	**Sb**	**123**	**-0.017**	ug/L	0.003	19	369	188	15	Standard
|	**Ba**	**135**	**29.707**	ug/L	0.802	2	9	99601	0	Standard
⌊	**Ba**	**137**	**30.017**	ug/L	0.598	1	15	174562	0	Standard
⌈>	**Tb**	**159**		ug/L			1209873	1143184	2	Standard
|	**Tl**	**205**	**27.043**	ug/L	1.292	4	178	910421	3	Standard
|	**Pb**	**208**	**27.112**	ug/L	1.063	3	214	1188515	1	Standard
|	**Bi**	**209**		ug/L			2532779	2395517	1	Standard
|	**Th**	**232**	**24.453**	ug/L	1.352	5	1448	1032189	3	Standard
⌊	**U**	**238**	**24.721**	ug/L	1.165	4	42	1192712	2	Standard

AVX9 · 802260

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AWG5 MBSPK REN
Sample Dil Factor: 2 Pb
Comments:
Sample Date/Time: Wednesday, February 24, 2016 17:05:29
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
[>	**Li**	**6**		ug/L			657253	714710	2	Standard
[	**Be**	**9**	**19.631**	ug/L	0.357	1	11	35247	1	Standard
	C	**13**		ug/L			44880	39551	1	Standard
	Cl	**37**		mg/L			2442655	2330216	2	Standard
[>	**Sc**	**45**		ug/L			850943	908463	1	Standard
[	**Al**	**27**	**0.902**	ug/L	0.043	4	675	12190	3	Standard
[	**V**	**51**	**26.748**	mg/L	0.861	3	3344	467849	2	Standard
[	**V-1**	**51**	**26.443**	mg/L	0.622	2	187	466308	1	Standard
[	**Cr**	**52**	**27.262**	ug/L	1.469	5	9656	209836	3	Standard
[	**Cr**	**53**	**25.330**	ug/L	0.240	0	81	23218	1	Standard
[	**Fe**	**54**	**13.686**	mg/L	1.078	7	39663	57710	1	Standard
[	**Fe**	**57**	**-1.540**	mg/L	0.396	25	9512	9453	1	Standard
[	**Mn**	**55**	**26.477**	ug/L	0.852	3	286	579947	2	Standard
[>	**Ge-1**	**72**		ug/L			25772	24463	2	KED
[	**Co**	**59**	**27.675**	ug/L	1.464	5	2	52482	4	KED
[	**Ni**	**60**	**26.980**	ug/L	0.328	1	80	15778	2	KED
[	**Ni**	**62**	**27.572**	ug/L	0.918	3	10	2544	2	KED
[	**Cu**	**63**	**28.654**	ug/L	0.478	1	49	45465	2	KED
[	**Cu**	**65**	**27.393**	ug/L	0.754	2	15	21265	0	KED
[	**Zn**	**66**	**84.672**	ug/L	3.470	4	13	14573	1	KED
[	**Zn**	**67**	**79.174**	ug/L	5.078	6	3	2205	4	KED
[	**Zn**	**68**	**82.041**	ug/L	2.872	3	8	10554	4	KED
[	**As**	**75**	**26.647**	ug/L	1.260	4	2	2737	2	KED
[	**Se-1**	**78**	**88.388**	ug/L	3.224	3	4	925	1	KED
	Y	**89**		ug/L			577578	585098	3	Standard
	Kr	**83**		ug/L			59	61	34	Standard
[>	**In-1**	**115**		ug/L			9746	9252	2	KED
[	**Mo**	**98**	**-0.010**	ug/L	0.015	153	15	10	70	KED
[	**Cd**	**111**	**25.171**	ug/L	0.539	2	0	3793	2	KED
[	**Cd**	**114**	**25.222**	ug/L	0.468	1	0	9822	1	KED
[>	**In**	**115**		ug/L			905245	826863	3	Standard
[	**Ag**	**107**	**24.201**	ug/L	1.995	8	28	394741	5	Standard
[	**Sb**	**121**	**-0.027**	ug/L	0.001	3	495	138	6	Standard
[	**Sb**	**123**	**-0.025**	ug/L	0.001	2	369	107	5	Standard
[	**Ba**	**135**	**29.695**	ug/L	1.077	3	9	98063	1	Standard
[	**Ba**	**137**	**29.947**	ug/L	1.082	3	15	171506	0	Standard
[>	**Tb**	**159**		ug/L			1209873	1133361	1	Standard
[	**Tl**	**205**	**26.969**	ug/L	0.550	2	178	900603	1	Standard
[	**Pb**	**208**	**27.276**	ug/L	0.130	0	214	1186312	2	Standard
[	**Bi**	**209**		ug/L			2532779	2380282	5	Standard
[	**Th**	**232**	**24.326**	ug/L	0.144	0	1448	1018900	1	Standard
[	**U**	**238**	**24.982**	ug/L	0.280	1	42	1195901	2	Standard

AVX9 : 06289

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AWA5 MBSPK REN
Sample Dil Factor: 2 Pb
Comments:
Sample Date/Time: Wednesday, February 24, 2016 17:10:34
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
⌈>	**Li**	**6**		ug/L			657253	729851	1	Standard
⌊	**Be**	**9**	**18.653**	ug/L	0.526	2	11	34196	0	Standard
	C	**13**		ug/L			44880	40395	1	Standard
	Cl	**37**		mg/L			2442655	2339946	1	Standard
⌈>	**Sc**	**45**		ug/L			850943	900112	2	Standard
|	**Al**	**27**	**0.855**	ug/L	0.034	3	675	11475	1	Standard
|	**V**	**51**	**26.615**	mg/L	0.540	2	3344	461402	3	Standard
|	**V-1**	**51**	**26.352**	mg/L	0.370	1	187	460530	2	Standard
|	**Cr**	**52**	**27.201**	ug/L	0.548	2	9656	207507	0	Standard
|	**Cr**	**53**	**25.524**	ug/L	1.198	4	81	23169	3	Standard
|	**Fe**	**54**	**13.596**	mg/L	0.621	4	39663	57080	1	Standard
|	**Fe**	**57**	**-2.478**	mg/L	1.071	43	9512	8937	2	Standard
⌊	**Mn**	**55**	**26.388**	ug/L	0.764	2	286	572504	0	Standard
⌈>	**Ge-1**	**72**		ug/L			25772	24136	4	KED
|	**Co**	**59**	**27.609**	ug/L	1.712	6	2	51592	2	KED
|	**Ni**	**60**	**27.418**	ug/L	1.732	6	80	15791	2	KED
|	**Ni**	**62**	**26.847**	ug/L	0.894	3	10	2447	6	KED
|	**Cu**	**63**	**27.900**	ug/L	1.904	6	49	43600	2	KED
|	**Cu**	**65**	**26.698**	ug/L	1.266	4	15	20436	2	KED
|	**Zn**	**66**	**86.523**	ug/L	4.889	5	13	14681	1	KED
|	**Zn**	**67**	**81.113**	ug/L	6.244	7	3	2226	3	KED
|	**Zn**	**68**	**80.774**	ug/L	4.749	5	8	10236	2	KED
|	**As**	**75**	**26.799**	ug/L	1.228	4	2	2715	0	KED
⌊	**Se-1**	**78**	**86.763**	ug/L	5.390	6	4	895	4	KED
	Y	**89**		ug/L			577578	592788	3	Standard
	Kr	**83**		ug/L			59	64	12	Standard
⌈>	**In-1**	**115**		ug/L			9746	9058	3	KED
|	**Mo**	**98**	**-0.011**	ug/L	0.011	99	15	9	51	KED
|	**Cd**	**111**	**25.000**	ug/L	0.801	3	0	3686	0	KED
⌊	**Cd**	**114**	**25.597**	ug/L	0.512	2	0	9756	1	KED
⌈>	**In**	**115**		ug/L			905245	829514	0	Standard
|	**Ag**	**107**	**23.401**	ug/L	0.312	1	28	383612	1	Standard
|	**Sb**	**121**	**-0.030**	ug/L	0.000	0	495	99	0	Standard
|	**Sb**	**123**	**-0.027**	ug/L	0.000	0	369	93	1	Standard
|	**Ba**	**135**	**29.389**	ug/L	0.233	0	9	97439	0	Standard
⌊	**Ba**	**137**	**29.671**	ug/L	0.404	1	15	170631	2	Standard
⌈>	**Tb**	**159**		ug/L			1209873	1148133	1	Standard
|	**Tl**	**205**	**26.592**	ug/L	0.208	0	178	899674	0	Standard
|	**Pb**	**208**	**26.684**	ug/L	0.170	0	214	1175582	0	Standard
|	**Bi**	**209**		ug/L			2532779	2369582	5	Standard
|	**Th**	**232**	**24.065**	ug/L	0.439	1	1448	1021049	1	Standard
⌊	**U**	**238**	**24.720**	ug/L	0.505	2	42	1198526	0	Standard

AVX9 082918

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV5
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, February 24, 2016 17:16:43
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
[>	**Li**	**6**		ug/L			657253	685685	3	Standard
[	**Be**	**9**	**34.571**	ug/L	1.095	3	11	59509	0	Standard
	C	**13**		ug/L			44880	37238	2	Standard
	Cl	**37**		mg/L			2442655	2379802	0	Standard
[>	**Sc**	**45**		ug/L			850943	868690	2	Standard
|	**Al**	**27**	**4247.681**	ug/L	38.726	0	675	51650290	3	Standard
|	**V**	**51**	**47.961**	mg/L	0.725	1	3344	799483	1	Standard
|	**V-1**	**51**	**47.408**	mg/L	0.880	1	187	799188	0	Standard
|	**Cr**	**52**	**49.012**	ug/L	1.695	3	9656	353005	3	Standard
|	**Cr**	**53**	**45.501**	ug/L	1.528	3	81	39795	1	Standard
|	**Fe**	**54**	**4648.560**	mg/L	107.963	2	39663	5033511	0	Standard
|	**Fe**	**57**	**4447.560**	mg/L	151.792	3	9512	1942367	1	Standard
[	**Mn**	**55**	**46.548**	ug/L	0.925	1	286	974552	0	Standard
[>	**Ge-1**	**72**		ug/L			25772	23505	3	KED
|	**Co**	**59**	**50.018**	ug/L	1.170	2	2	91125	1	KED
|	**Ni**	**60**	**47.462**	ug/L	2.028	4	80	26594	2	KED
|	**Ni**	**62**	**46.372**	ug/L	1.621	3	10	4103	0	KED
|	**Cu**	**63**	**47.761**	ug/L	0.654	1	49	72773	2	KED
|	**Cu**	**65**	**47.471**	ug/L	1.416	2	15	35394	2	KED
|	**Zn**	**66**	**47.411**	ug/L	3.186	6	13	7839	3	KED
|	**Zn**	**67**	**47.218**	ug/L	1.790	3	3	1264	0	KED
|	**Zn**	**68**	**50.286**	ug/L	2.711	5	8	6213	3	KED
|	**As**	**75**	**50.007**	ug/L	2.329	4	2	4933	1	KED
[	**Se-1**	**78**	**52.448**	ug/L	2.753	5	4	529	4	KED
	Y	**89**		ug/L			577578	565249	2	Standard
	Kr	**83**		ug/L			59	62	9	Standard
[>	**In-1**	**115**		ug/L			9746	8695	2	KED
|	**Mo**	**98**	**45.511**	ug/L	0.824	1	15	21365	0	KED
|	**Cd**	**111**	**44.869**	ug/L 89.7%	0.365	0	0	6354	1	KED
[	**Cd**	**114**	**47.305**	ug/L	1.138	2	0	17308	0	KED
[>	**In**	**115**		ug/L			905245	795013	1	Standard
|	**Ag**	**107**	**45.115**	ug/L	0.314	0	28	708866	2	Standard
|	**Sb**	**121**	**51.494**	ug/L	1.623	3	495	581306	1	Standard
|	**Sb**	**123**	**50.992**	ug/L	0.907	1	369	446236	0	Standard
|	**Ba**	**135**	**53.606**	ug/L	1.395	2	9	170302	1	Standard
[	**Ba**	**137**	**53.921**	ug/L	0.960	1	15	297130	1	Standard
[>	**Tb**	**159**		ug/L			1209873	1120125	1	Standard
|	**Tl**	**205**	**46.467**	ug/L	1.491	3	178	1533170	2	Standard
|	**Pb**	**208**	**46.752**	ug/L	0.961	2	214	2009159	2	Standard
|	**Bi**	**209**		ug/L			2532779	2246195	2	Standard
|	**Th**	**232**	**43.230**	ug/L	0.532	1	1448	1788374	1	Standard
[	**U**	**238**	**45.496**	ug/L	1.431	3	42	2151823	2	Standard

AUX9, G8291

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB5
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, February 24, 2016 17:24:33
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416b.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
Li	6		ug/L			657253	668282	5	Standard
Be	9	-0.002	ug/L	0.002	100	11	8	35	Standard
C	13		ug/L			44880	36309	3	Standard
Cl	37		mg/L			2442655	2292182	0	Standard
Sc	45		ug/L			850943	846741	1	Standard
Al	27	0.007	ug/L	0.017	238	675	757	27	Standard
V	51	-0.013	mg/L	0.011	87	3344	3122	5	Standard
V-1	51	-0.001	mg/L	0.001	53	187	168	4	Standard
Cr	52	-0.069	ug/L	0.071	102	9656	9135	4	Standard
Cr	53	0.007	ug/L	0.009	124	81	87	7	Standard
Fe	54	-1.775	mg/L	0.825	46	39663	37600	0	Standard
Fe	57	-2.294	mg/L	1.034	45	9512	8491	4	Standard
Mn	55	-0.000	ug/L	0.001	667	286	282	7	Standard
Ge-1	72		ug/L			25772	23520	4	KED
Co	59	0.001	ug/L	0.001	120	2	3	50	KED
Ni	60	-0.053	ug/L	0.009	17	80	43	8	KED
Ni	62	0.019	ug/L	0.047	246	10	11	33	KED
Cu	63	-0.006	ug/L	0.007	116	49	35	30	KED
Cu	65	0.005	ug/L	0.007	125	15	17	26	KED
Zn	66	0.003	ug/L	0.015	428	13	12	17	KED
Zn	67	-0.036	ug/L	0.074	202	3	1	100	KED
Zn	68	0.027	ug/L	0.062	235	8	11	66	KED
As	75	-0.006	ug/L	0.012	186	2	1	88	KED
Se-1	78	-0.008	ug/L	0.075	894	4	3	18	KED
Y	89		ug/L			577578	554883	2	Standard
Kr	83		ug/L			59	59	16	Standard
In-1	115		ug/L			9746	8737	4	KED
Mo	98	0.012	ug/L	0.013	115	15	19	29	KED
Cd	111	0.011	ug/L	0.020	173	0	1	173	KED
Cd	114	0.009	ug/L	0.014	154	0	3	133	KED
In	115		ug/L			905245	785677	1	Standard
Ag	107	0.001	ug/L	0.001	84	28	34	24	Standard
Sb	121	0.025	ug/L	0.003	11	495	703	3	Standard
Sb	123	0.025	ug/L	0.005	19	369	539	7	Standard
Ba	135	0.001	ug/L	0.001	173	9	10	40	Standard
Ba	137	0.001	ug/L	0.001	80	15	18	21	Standard
Tb	159		ug/L			1209873	1092506	2	Standard
Tl	205	-0.001	ug/L	0.001	88	178	139	15	Standard
Pb	208	0.001	ug/L	0.001	82	214	236	15	Standard
Bi	209		ug/L			2532779	2287825	1	Standard
Th	232	0.092	ug/L	0.003	3	1448	4997	2	Standard
U	238	0.000	ug/L	0.000	99	42	55	32	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AVZ0 MB REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Wednesday, February 24, 2016 17:29:38
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
⌈>	**Li**	**6**		ug/L			657253	695919	4	Standard
⌊	**Be**	**9**	**-0.002**	ug/L	0.001	62	11	8	26	Standard
	C	**13**		ug/L			44880	38840	6	Standard
	Cl	**37**		mg/L			2442655	2277608	3	Standard
⌈>	**Sc**	**45**		ug/L			850943	883343	1	Standard
|	**Al**	**27**	**0.958**	ug/L	0.042	4	675	12545	2	Standard
|	**V**	**51**	**0.001**	mg/L	0.005	304	3344	3496	1	Standard
|	**V-1**	**51**	**0.006**	mg/L	0.001	16	187	295	5	Standard
|	**Cr**	**52**	**0.002**	ug/L	0.046	2509	9656	10036	3	Standard
|	**Cr**	**53**	**0.029**	ug/L	0.010	33	81	110	7	Standard
|	**Fe**	**54**	**7.943**	mg/L	1.115	14	39663	49842	1	Standard
|	**Fe**	**57**	**-1.718**	mg/L	0.187	10	9512	9116	2	Standard
⌊	**Mn**	**55**	**0.048**	ug/L	0.002	5	286	1312	2	Standard
⌈>	**Ge-1**	**72**		ug/L			25772	23671	3	KED
|	**Co**	**59**	**0.001**	ug/L	0.001	56	2	4	24	KED
|	**Ni**	**60**	**-0.111**	ug/L	0.012	11	80	11	57	KED
|	**Ni**	**62**	**-0.083**	ug/L	0.013	15	10	2	43	KED
|	**Cu**	**63**	**0.078**	ug/L	0.021	26	49	163	16	KED
|	**Cu**	**65**	**0.081**	ug/L	0.012	14	15	74	8	KED
|	**Zn**	**66**	**0.585**	ug/L	0.113	19	13	109	13	KED
|	**Zn**	**67**	**0.622**	ug/L	0.074	11	3	19	11	KED
|	**Zn**	**68**	**0.538**	ug/L	0.065	12	8	74	7	KED
|	**As**	**75**	**0.000**	ug/L	0.009	12593	2	2	48	KED
⌊	**Se-1**	**78**	**-0.037**	ug/L	0.251	681	4	3	66	KED
	Y	**89**		ug/L			577578	561342	1	Standard
	Kr	**83**		ug/L			59	60	9	Standard
⌈>	**In-1**	**115**		ug/L			9746	8867	2	KED
|	**Mo**	**98**	**0.015**	ug/L	0.012	79	15	21	28	KED
|	**Cd**	**111**	**0.004**	ug/L	0.004	86	0	0	86	KED
⌊	**Cd**	**114**	**-0.002**	ug/L	0.000	0	0	0	0	KED
⌈>	**In**	**115**		ug/L			905245	796220	4	Standard
|	**Ag**	**107**	**0.001**	ug/L	0.000	23	28	43	13	Standard
|	**Sb**	**121**	**-0.016**	ug/L	0.004	27	495	257	14	Standard
|	**Sb**	**123**	**-0.015**	ug/L	0.001	7	369	194	4	Standard
|	**Ba**	**135**	**0.151**	ug/L	0.023	15	9	485	11	Standard
⌊	**Ba**	**137**	**0.147**	ug/L	0.008	5	15	826	3	Standard
⌈>	**Tb**	**159**		ug/L			1209873	1115357	0	Standard
|	**Tl**	**205**	**0.001**	ug/L	0.001	81	178	198	13	Standard
|	**Pb**	**208**	**0.004**	ug/L	0.001	28	214	368	12	Standard
|	**Bi**	**209**		ug/L			2532779	2345593	2	Standard
|	**Th**	**232**	**0.039**	ug/L	0.003	7	1448	2926	3	Standard
⌊	**U**	**238**	**0.000**	ug/L	0.000	86	42	57	27	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AVY2 MB REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Wednesday, February 24, 2016 17:34:43
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
⌈>	**Li**	**6**		ug/L			657253	701529	0	Standard
⌊	**Be**	**9**	**-0.004**	ug/L	0.000	0	11	5	0	Standard
	C	**13**		ug/L			44880	38580	3	Standard
	Cl	**37**		mg/L			2442655	2264472	1	Standard
⌈>	**Sc**	**45**		ug/L			850943	868766	4	Standard
|	**Al**	**27**	**0.741**	ug/L	0.039	5	675	9693	2	Standard
|	**V**	**51**	**-0.009**	mg/L	0.003	34	3344	3257	2	Standard
|	**V-1**	**51**	**0.002**	mg/L	0.001	40	187	220	9	Standard
|	**Cr**	**52**	**-0.061**	ug/L	0.030	48	9656	9428	2	Standard
|	**Cr**	**53**	**0.012**	ug/L	0.003	26	81	94	1	Standard
|	**Fe**	**54**	**7.526**	mg/L	2.127	28	39663	48526	2	Standard
|	**Fe**	**57**	**-1.200**	mg/L	1.308	108	9512	9173	1	Standard
⌊	**Mn**	**55**	**0.125**	ug/L	0.004	3	286	2911	1	Standard
⌈>	**Ge-1**	**72**		ug/L			25772	23332	0	KED
|	**Co**	**59**	**-0.000**	ug/L	0.001	495	2	1	100	KED
|	**Ni**	**60**	**-0.120**	ug/L	0.007	5	80	6	62	KED
|	**Ni**	**62**	**-0.090**	ug/L	0.038	42	10	1	173	KED
|	**Cu**	**63**	**-0.009**	ug/L	0.008	88	49	31	36	KED
|	**Cu**	**65**	**0.011**	ug/L	0.006	48	15	22	17	KED
|	**Zn**	**66**	**0.465**	ug/L	0.179	38	13	88	32	KED
|	**Zn**	**67**	**0.441**	ug/L	0.144	32	3	14	27	KED
|	**Zn**	**68**	**0.447**	ug/L	0.066	14	8	62	12	KED
|	**As**	**75**	**-0.014**	ug/L	0.006	39	2	0	86	KED
⌊	**Se-1**	**78**	**0.121**	ug/L	0.140	115	4	5	27	KED
	Y	**89**		ug/L			577578	547597	3	Standard
	Kr	**83**		ug/L			59	59	27	Standard
⌈>	**In-1**	**115**		ug/L			9746	8862	1	KED
|	**Mo**	**98**	**-0.004**	ug/L	0.009	223	15	12	31	KED
|	**Cd**	**111**	**0.002**	ug/L	0.004	173	0	0	173	KED
⌊	**Cd**	**114**	**0.002**	ug/L	0.003	199	0	1	102	KED
⌈>	**In**	**115**		ug/L			905245	781723	2	Standard
|	**Ag**	**107**	**0.000**	ug/L	0.000	98	28	27	8	Standard
|	**Sb**	**121**	**-0.024**	ug/L	0.003	10	495	165	16	Standard
|	**Sb**	**123**	**-0.022**	ug/L	0.003	13	369	131	17	Standard
|	**Ba**	**135**	**0.009**	ug/L	0.003	33	9	34	27	Standard
⌊	**Ba**	**137**	**0.007**	ug/L	0.003	34	15	53	26	Standard
⌈>	**Tb**	**159**		ug/L			1209873	1110253	0	Standard
|	**Tl**	**205**	**-0.003**	ug/L	0.000	7	178	67	11	Standard
|	**Pb**	**208**	**0.003**	ug/L	0.001	40	214	317	14	Standard
|	**Bi**	**209**		ug/L			2532779	2316966	3	Standard
|	**Th**	**232**	**0.005**	ug/L	0.002	39	1448	1541	5	Standard
⌊	**U**	**238**	**0.000**	ug/L	0.000	3693	42	39	27	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AWJ7 MB REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Wednesday, February 24, 2016 17:39:48
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
⌈>	**Li**	**6**		ug/L			657253	691248	1	Standard
⌊	**Be**	**9**	**-0.001**	ug/L	0.004	267	11	9	69	Standard
	C	**13**		ug/L			44880	38190	0	Standard
	Cl	**37**		mg/L			2442655	2226306	1	Standard
⌈>	**Sc**	**45**		ug/L			850943	857342	0	Standard
|	**Al**	**27**	**0.738**	ug/L	0.027	3	675	9537	2	Standard
|	**V**	**51**	**-0.004**	mg/L	0.004	110	3344	3311	2	Standard
|	**V-1**	**51**	**0.002**	mg/L	0.001	24	187	228	4	Standard
|	**Cr**	**52**	**-0.008**	ug/L	0.013	169	9656	9674	1	Standard
|	**Cr**	**53**	**0.029**	ug/L	0.010	33	81	107	8	Standard
|	**Fe**	**54**	**8.202**	mg/L	1.315	16	39663	48654	2	Standard
|	**Fe**	**57**	**-0.966**	mg/L	0.625	64	9512	9168	2	Standard
⌊	**Mn**	**55**	**0.020**	ug/L	0.001	4	286	698	2	Standard
⌈>	**Ge-1**	**72**		ug/L			25772	22932	0	KED
|	**Co**	**59**	**0.001**	ug/L	0.002	430	2	3	124	KED
|	**Ni**	**60**	**-0.112**	ug/L	0.002	1	80	10	10	KED
|	**Ni**	**62**	**-0.075**	ug/L	0.013	17	10	3	34	KED
|	**Cu**	**63**	**0.203**	ug/L	0.023	11	49	345	9	KED
|	**Cu**	**65**	**0.205**	ug/L	0.034	16	15	162	15	KED
|	**Zn**	**66**	**0.552**	ug/L	0.051	9	13	100	8	KED
|	**Zn**	**67**	**0.573**	ug/L	0.185	32	3	17	26	KED
|	**Zn**	**68**	**0.424**	ug/L	0.029	6	8	59	6	KED
|	**As**	**75**	**-0.011**	ug/L	0.000	0	2	0		KED
⌊	**Se-1**	**78**	**0.083**	ug/L	0.086	103	4	4	17	KED
	Y	**89**		ug/L			577578	544202	0	Standard
	Kr	**83**		ug/L			59	48	31	Standard
⌈>	**In-1**	**115**		ug/L			9746	8812	2	KED
|	**Mo**	**98**	**-0.014**	ug/L	0.000	0	15	7	1	KED
|	**Cd**	**111**	**0.009**	ug/L	0.010	116	0	1	114	KED
⌊	**Cd**	**114**	**0.000**	ug/L	0.003	2116	0	0	180	KED
⌈>	**In**	**115**		ug/L			905245	789943	1	Standard
|	**Ag**	**107**	**0.000**	ug/L	0.000	848	28	25	15	Standard
|	**Sb**	**121**	**-0.027**	ug/L	0.001	4	495	125	12	Standard
|	**Sb**	**123**	**-0.026**	ug/L	0.002	7	369	98	16	Standard
|	**Ba**	**135**	**0.008**	ug/L	0.002	27	9	34	20	Standard
⌊	**Ba**	**137**	**0.009**	ug/L	0.000	3	15	61	1	Standard
⌈>	**Tb**	**159**		ug/L			1209873	1091779	1	Standard
|	**Tl**	**205**	**-0.004**	ug/L	0.000	6	178	47	14	Standard
|	**Pb**	**208**	**0.001**	ug/L	0.000	26	214	255	5	Standard
|	**Bi**	**209**		ug/L			2532779	2304648	1	Standard
|	**Th**	**232**	**-0.010**	ug/L	0.001	10	1448	893	6	Standard
⌊	**U**	**238**	**-0.000**	ug/L	0.000	89	42	27	31	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AWJ7 A REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Wednesday, February 24, 2016 17:44:53
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
⌈>	**Li**	**6**		ug/L			657253	770126	2	Standard
⌊	**Be**	**9**	**-0.004**	ug/L	0.001	12	11	5	21	Standard
	C	**13**		ug/L			44880	52190	1	Standard
	Cl	**37**		mg/L			2442655	2634080	1	Standard
⌈>	**Sc**	**45**		ug/L			850943	855231	2	Standard
|	**Al**	**27**	**883.469**	ug/L	39.021	4	675	10568131	2	Standard
|	**V**	**51**	**0.684**	mg/L	0.184	26	3344	14547	21	Standard
|	**V-1**	**51**	**0.940**	mg/L	0.059	6	187	15778	3	Standard
|	**Cr**	**52**	**38.806**	ug/L	1.314	3	9656	277084	1	Standard
|	**Cr**	**53**	**36.813**	ug/L	1.717	4	81	31704	2	Standard
|	**Fe**	**54**	**200.051**	mg/L	7.819	3	39663	251335	0	Standard
|	**Fe**	**57**	**192.543**	mg/L	4.556	2	9512	91939	0	Standard
⌊	**Mn**	**55**	**8.193**	ug/L	0.446	5	286	168999	2	Standard
⌈>	**Ge-1**	**72**		ug/L			25772	21984	1	KED
|	**Co**	**59**	**0.929**	ug/L	0.021	2	2	1586	3	KED
|	**Ni**	**60**	**0.524**	ug/L	0.056	10	80	342	8	KED
|	**Ni**	**62**	**0.811**	ug/L	0.115	14	10	76	11	KED
|	**Cu**	**63**	**12.340**	ug/L	0.343	2	49	17617	1	KED
|	**Cu**	**65**	**11.481**	ug/L	0.098	0	15	8020	0	KED
|	**Zn**	**66**	**9.710**	ug/L	0.130	1	13	1513	1	KED
|	**Zn**	**67**	**8.600**	ug/L	0.485	5	3	217	4	KED
|	**Zn**	**68**	**9.256**	ug/L	0.572	6	8	1076	4	KED
|	**As**	**75**	**0.055**	ug/L	0.017	31	2	6	23	KED
⌊	**Se-1**	**78**	**0.187**	ug/L	0.119	63	4	5	21	KED
	Y	**89**		ug/L			577578	556317	1	Standard
	Kr	**83**		ug/L			59	87	28	Standard
⌈>	**In-1**	**115**		ug/L			9746	8395	0	KED
|	**Mo**	**98**	**14.061**	ug/L	0.604	4	15	6382	3	KED
|	**Cd**	**111**	**0.325**	ug/L	0.023	6	0	44	6	KED
⌊	**Cd**	**114**	**0.329**	ug/L	0.039	11	0	116	12	KED
⌈>	**In**	**115**		ug/L			905245	779975	3	Standard
|	**Ag**	**107**	**0.002**	ug/L	0.001	28	28	53	15	Standard
|	**Sb**	**121**	**0.238**	ug/L	0.004	1	495	3065	1	Standard
|	**Sb**	**123**	**0.229**	ug/L	0.022	9	369	2279	5	Standard
|	**Ba**	**135**	**0.639**	ug/L	0.023	3	9	2000	2	Standard
⌊	**Ba**	**137**	**0.647**	ug/L	0.033	5	15	3509	2	Standard
⌈>	**Tb**	**159**		ug/L			1209873	1142125	2	Standard
|	**Tl**	**205**	**0.005**	ug/L	0.000	10	178	321	6	Standard
|	**Pb**	**208**	**0.027**	ug/L	0.002	6	214	1375	7	Standard
|	**Bi**	**209**		ug/L			2532779	1854481	4	Standard
|	**Th**	**232**	**0.073**	ug/L	0.006	7	1448	4446	6	Standard
⌊	**U**	**238**	**0.004**	ug/L	0.001	17	42	211	12	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AWJ7 B REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Wednesday, February 24, 2016 17:49:58
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
⌈>	**Li**	**6**		ug/L			657253	773502	2	Standard
⌊	**Be**	**9**	**-0.006**	ug/L	0.001	19	11	2	86	Standard
	C	**13**		ug/L			44880	51739	2	Standard
	Cl	**37**		mg/L			2442655	2690609	0	Standard
⌈>	**Sc**	**45**		ug/L			850943	815369	0	Standard
|	**Al**	**27**	**784.469**	ug/L	7.691	0	675	8953306	0	Standard
|	**V**	**51**	**0.777**	mg/L	0.059	7	3344	15312	6	Standard
|	**V-1**	**51**	**0.868**	mg/L	0.024	2	187	13912	2	Standard
|	**Cr**	**52**	**11.751**	ug/L	0.754	6	9656	86494	5	Standard
|	**Cr**	**53**	**11.282**	ug/L	0.370	3	81	9325	3	Standard
|	**Fe**	**54**	**182.621**	mg/L	8.638	4	39663	222176	3	Standard
|	**Fe**	**57**	**188.612**	mg/L	4.115	2	9512	86081	1	Standard
⌊	**Mn**	**55**	**5.940**	ug/L	0.045	0	286	117012	0	Standard
⌈>	**Ge-1**	**72**		ug/L			25772	21941	2	KED
|	**Co**	**59**	**0.874**	ug/L	0.020	2	2	1488	1	KED
|	**Ni**	**60**	**0.456**	ug/L	0.105	22	80	306	15	KED
|	**Ni**	**62**	**0.999**	ug/L	0.154	15	10	91	12	KED
|	**Cu**	**63**	**11.653**	ug/L	0.267	2	49	16609	2	KED
|	**Cu**	**65**	**11.001**	ug/L	0.567	5	15	7666	3	KED
|	**Zn**	**66**	**10.517**	ug/L	0.672	6	13	1633	3	KED
|	**Zn**	**67**	**9.068**	ug/L	0.444	4	3	229	6	KED
|	**Zn**	**68**	**9.388**	ug/L	0.245	2	8	1090	4	KED
|	**As**	**75**	**0.081**	ug/L	0.010	12	2	9	11	KED
⌊	**Se-1**	**78**	**0.258**	ug/L	0.015	5	4	6	0	KED
	Y	**89**		ug/L			577578	558185	2	Standard
	Kr	**83**		ug/L			59	95	5	Standard
⌈>	**In-1**	**115**		ug/L			9746	8366	1	KED
|	**Mo**	**98**	**14.582**	ug/L	0.228	1	15	6597	1	KED
|	**Cd**	**111**	**0.319**	ug/L	0.070	21	0	43	23	KED
⌊	**Cd**	**114**	**0.308**	ug/L	0.031	10	0	108	8	KED
⌈>	**In**	**115**		ug/L			905245	787877	1	Standard
|	**Ag**	**107**	**0.001**	ug/L	0.000	29	28	41	11	Standard
|	**Sb**	**121**	**0.280**	ug/L	0.010	3	495	3564	1	Standard
|	**Sb**	**123**	**0.277**	ug/L	0.014	5	369	2723	3	Standard
|	**Ba**	**135**	**0.658**	ug/L	0.017	2	9	2080	3	Standard
⌊	**Ba**	**137**	**0.644**	ug/L	0.023	3	15	3528	2	Standard
⌈>	**Tb**	**159**		ug/L			1209873	1119526	1	Standard
|	**Tl**	**205**	**0.003**	ug/L	0.001	20	178	273	7	Standard
|	**Pb**	**208**	**0.034**	ug/L	0.001	1	214	1657	0	Standard
|	**Bi**	**209**		ug/L			2532779	1828458	2	Standard
|	**Th**	**232**	**0.010**	ug/L	0.004	36	1448	1753	9	Standard
⌊	**U**	**238**	**0.002**	ug/L	0.000	11	42	144	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AVY2 B REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Wednesday, February 24, 2016 17:56:06
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416b.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
Li	6		ug/L			657253	733520	1	Standard
Be	9	-0.004	ug/L	0.003	72	11	5	108	Standard
C	13		ug/L			44880	45989	0	Standard
Cl	37		mg/L			2442655	2554474	0	Standard
Sc	45		ug/L			850943	903350	0	Standard
Al	27	27.274	ug/L	0.179	0	675	345562	0	Standard
V	51	0.228	mg/L	0.007	3	3344	7493	2	Standard
V-1	51	0.214	mg/L	0.008	3	187	3944	3	Standard
Cr	52	0.508	ug/L	0.094	18	9656	13950	5	Standard
Cr	53	0.390	ug/L	0.025	6	81	441	5	Standard
Fe	54	47.251	mg/L	0.733	1	39663	94900	0	Standard
Fe	57	33.089	mg/L	1.923	5	9512	25062	4	Standard
Mn	55	2.177	ug/L	0.022	0	286	47713	1	Standard
Ge-1	72		ug/L			25772	26224	1	KED
Co	59	0.036	ug/L	0.015	42	2	75	41	KED
Ni	60	0.064	ug/L	0.033	52	80	121	18	KED
Ni	62	0.081	ug/L	0.064	78	10	19	34	KED
Cu	63	2.296	ug/L	0.035	1	49	3952	1	KED
Cu	65	2.226	ug/L	0.046	2	15	1867	2	KED
Zn	66	16.551	ug/L	0.642	3	13	3065	2	KED
Zn	67	15.271	ug/L	0.256	1	3	459	3	KED
Zn	68	16.484	ug/L	0.905	5	8	2279	4	KED
As	75	0.044	ug/L	0.019	41	2	7	29	KED
Se-1	78	-0.036	ug/L	0.168	464	4	4	46	KED
Y	89		ug/L			577578	604806	3	Standard
Kr	83		ug/L			59	74	21	Standard
In-1	115		ug/L			9746	10087	1	KED
Mo	98	0.169	ug/L	0.025	14	15	108	13	KED
Cd	111	0.625	ug/L	0.109	17	0	102	18	KED
Cd	114	0.690	ug/L	0.079	11	0	293	10	KED
In	115		ug/L			905245	879346	1	Standard
Ag	107	0.002	ug/L	0.000	13	28	61	6	Standard
Sb	121	0.153	ug/L	0.014	9	495	2383	6	Standard
Sb	123	0.161	ug/L	0.008	5	369	1912	4	Standard
Ba	135	1.904	ug/L	0.067	3	9	6699	2	Standard
Ba	137	1.898	ug/L	0.063	3	15	11581	1	Standard
Tb	159		ug/L			1209873	1196243	1	Standard
Tl	205	-0.002	ug/L	0.001	26	178	109	17	Standard
Pb	208	0.517	ug/L	0.008	1	214	23925	2	Standard
Bi	209		ug/L			2532779	2526188	3	Standard
Th	232	-0.028	ug/L	0.000	1	1448	174	11	Standard
U	238	0.002	ug/L	0.000	3	42	118	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AVZ0 A REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Wednesday, February 24, 2016 18:01:11
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
[>	Li	6		ug/L			657253	713530	4	Standard
[	Be	9	-0.001	ug/L	0.002	242	11	10	40	Standard
	C	13		ug/L			44880	43389	4	Standard
	Cl	37		mg/L			2442655	2585207	3	Standard
[>	Sc	45		ug/L			850943	890836	0	Standard
[	Al	27	25.002	ug/L	0.502	2	675	312415	1	Standard
[	V	51	0.578	mg/L	0.012	2	3344	13340	2	Standard
[	V-1	51	0.592	mg/L	0.009	1	187	10427	1	Standard
[	Cr	52	0.877	ug/L	0.029	3	9656	16408	0	Standard
[	Cr	53	0.935	ug/L	0.074	7	81	922	6	Standard
[	Fe	54	131.345	mg/L	1.751	1	39663	186243	0	Standard
[	Fe	57	118.263	mg/L	0.979	0	9512	62683	0	Standard
[	Mn	55	1.493	ug/L	0.038	2	286	32358	1	Standard
[>	Ge-1	72		ug/L			25772	25382	0	KED
[	Co	59	0.022	ug/L	0.003	11	2	45	11	KED
[	Ni	60	1.508	ug/L	0.086	5	80	989	5	KED
[	Ni	62	1.386	ug/L	0.196	14	10	142	12	KED
[	Cu	63	57.427	ug/L	0.308	0	49	94506	0	KED
[	Cu	65	58.149	ug/L	1.432	2	15	46845	2	KED
[	Zn	66	7.579	ug/L	0.182	2	13	1366	2	KED
[	Zn	67	7.279	ug/L	0.600	8	3	213	7	KED
[	Zn	68	8.804	ug/L	0.470	5	8	1182	5	KED
[	As	75	0.312	ug/L	0.021	6	2	35	6	KED
[	Se-1	78	0.696	ug/L	0.086	12	4	11	8	KED
	Y	89		ug/L			577578	589261	1	Standard
	Kr	83		ug/L			59	80	6	Standard
[>	In-1	115		ug/L			9746	9485	3	KED
[	Mo	98	0.183	ug/L	0.015	8	15	109	10	KED
[	Cd	111	0.023	ug/L	0.004	16	0	3	15	KED
[	Cd	114	0.024	ug/L	0.015	62	0	10	59	KED
[>	In	115		ug/L			905245	859767	0	Standard
[	Ag	107	0.157	ug/L	0.005	3	28	2698	2	Standard
[	Sb	121	0.144	ug/L	0.006	4	495	2224	3	Standard
[	Sb	123	0.136	ug/L	0.005	3	369	1637	2	Standard
[	Ba	135	1.764	ug/L	0.024	1	9	6071	1	Standard
[	Ba	137	1.783	ug/L	0.018	1	15	10640	1	Standard
[>	Tb	159		ug/L			1209873	1188962	2	Standard
[	Tl	205	-0.002	ug/L	0.001	28	178	91	25	Standard
[	Pb	208	0.780	ug/L	0.018	2	214	35773	1	Standard
[	Bi	209		ug/L			2532779	2422884	2	Standard
[	Th	232	-0.028	ug/L	0.000	1	1448	194	7	Standard
[	U	238	0.031	ug/L	0.002	6	42	1601	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AVZ0 MBSPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Wednesday, February 24, 2016 18:06:16
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
⌈>	**Li**	**6**		ug/L			657253	733434	1	Standard
⌊	**Be**	**9**	**19.795**	ug/L	0.856	4	11	36467	3	Standard
	C	**13**		ug/L			44880	42643	4	Standard
	Cl	**37**		mg/L			2442655	2549906	2	Standard
⌈>	**Sc**	**45**		ug/L			850943	871551	1	Standard
|	**Al**	**27**	**1.175**	ug/L	0.028	2	675	15023	3	Standard
|	**V**	**51**	**28.543**	mg/L	0.622	2	3344	478763	0	Standard
|	**V-1**	**51**	**28.212**	mg/L	0.501	1	187	477294	0	Standard
|	**Cr**	**52**	**28.851**	ug/L	0.870	3	9656	212603	3	Standard
|	**Cr**	**53**	**26.781**	ug/L	0.797	2	81	23554	4	Standard
|	**Fe**	**54**	**15.863**	mg/L	1.105	6	39663	57712	0	Standard
|	**Fe**	**57**	**-0.409**	mg/L	1.127	275	9512	9565	5	Standard
⌊	**Mn**	**55**	**27.939**	ug/L	0.446	1	286	587211	2	Standard
⌈>	**Ge-1**	**72**		ug/L			25772	25304	2	KED
|	**Co**	**59**	**28.717**	ug/L	0.430	1	2	56342	1	KED
|	**Ni**	**60**	**27.640**	ug/L	0.965	3	80	16709	1	KED
|	**Ni**	**62**	**26.716**	ug/L	1.901	7	10	2548	4	KED
|	**Cu**	**63**	**28.091**	ug/L	0.901	3	49	46093	2	KED
|	**Cu**	**65**	**27.561**	ug/L	1.340	4	15	22125	2	KED
|	**Zn**	**66**	**85.769**	ug/L	3.143	3	13	15277	3	KED
|	**Zn**	**67**	**79.894**	ug/L	2.076	2	3	2303	1	KED
|	**Zn**	**68**	**82.284**	ug/L	2.223	2	8	10946	2	KED
|	**As**	**75**	**26.836**	ug/L	0.902	3	2	2852	1	KED
⌊	**Se-1**	**78**	**87.386**	ug/L	3.052	3	4	947	4	KED
	Y	**89**		ug/L			577578	592542	1	Standard
	Kr	**83**		ug/L			59	85	3	Standard
⌈>	**In-1**	**115**		ug/L			9746	9572	6	KED
|	**Mo**	**98**	**-0.017**	ug/L	0.005	30	15	6	32	KED
|	**Cd**	**111**	**24.946**	ug/L	1.616	6	0	3880	2	KED
⌊	**Cd**	**114**	**25.255**	ug/L	1.913	7	0	10143	1	KED
⌈>	**In**	**115**		ug/L			905245	859640	3	Standard
|	**Ag**	**107**	**23.795**	ug/L	0.331	1	28	404150	1	Standard
|	**Sb**	**121**	**-0.031**	ug/L	0.001	4	495	93	15	Standard
|	**Sb**	**123**	**-0.030**	ug/L	0.002	5	369	70	18	Standard
|	**Ba**	**135**	**30.158**	ug/L	1.127	3	9	103544	0	Standard
⌊	**Ba**	**137**	**30.303**	ug/L	1.259	4	15	180441	1	Standard
⌈>	**Tb**	**159**		ug/L			1209873	1166642	2	Standard
|	**Tl**	**205**	**27.220**	ug/L	0.178	0	178	935790	1	Standard
|	**Pb**	**208**	**27.404**	ug/L	0.195	0	214	1226710	1	Standard
|	**Bi**	**209**		ug/L			2532779	2462452	3	Standard
|	**Th**	**232**	**24.608**	ug/L	0.418	1	1448	1060842	1	Standard
⌊	**U**	**238**	**25.738**	ug/L	0.439	1	42	1267946	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AVY2 MBSPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Wednesday, February 24, 2016 18:11:21
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
⌈>	**Li**	**6**		ug/L			657253	715925	4	Standard
⌊	**Be**	**9**	**19.515**	ug/L	1.170	5	11	35041	1	Standard
	C	**13**		ug/L			44880	43590	3	Standard
	Cl	**37**		mg/L			2442655	2436701	2	Standard
⌈>	**Sc**	**45**		ug/L			850943	871992	2	Standard
|	**Al**	**27**	**0.906**	ug/L	0.046	5	675	11743	2	Standard
|	**V**	**51**	**27.606**	mg/L	1.009	3	3344	463221	1	Standard
|	**V-1**	**51**	**27.467**	mg/L	0.901	3	187	464763	1	Standard
|	**Cr**	**52**	**27.707**	ug/L	1.124	4	9656	204522	1	Standard
|	**Cr**	**53**	**26.839**	ug/L	0.389	1	81	23604	1	Standard
|	**Fe**	**54**	**15.863**	mg/L	1.688	10	39663	57725	0	Standard
|	**Fe**	**57**	**-0.580**	mg/L	1.478	254	9512	9486	5	Standard
⌊	**Mn**	**55**	**27.743**	ug/L	1.071	3	286	582986	1	Standard
⌈>	**Ge-1**	**72**		ug/L			25772	24576	1	KED
|	**Co**	**59**	**27.767**	ug/L	0.372	1	2	52924	2	KED
|	**Ni**	**60**	**25.825**	ug/L	0.275	1	80	15177	2	KED
|	**Ni**	**62**	**26.664**	ug/L	0.788	2	10	2473	3	KED
|	**Cu**	**63**	**27.575**	ug/L	0.263	0	49	43960	0	KED
|	**Cu**	**65**	**27.097**	ug/L	0.318	1	15	21143	1	KED
|	**Zn**	**66**	**83.392**	ug/L	0.455	0	13	14430	0	KED
|	**Zn**	**67**	**79.799**	ug/L	1.121	1	3	2235	2	KED
|	**Zn**	**68**	**80.955**	ug/L	1.105	1	8	10462	1	KED
|	**As**	**75**	**26.112**	ug/L	0.154	0	2	2697	1	KED
⌊	**Se-1**	**78**	**86.691**	ug/L	2.568	2	4	912	4	KED
	Y	**89**		ug/L			577578	569888	0	Standard
	Kr	**83**		ug/L			59	72	24	Standard
⌈>	**In-1**	**115**		ug/L			9746	9108	1	KED
|	**Mo**	**98**	**-0.021**	ug/L	0.005	21	15	4	53	KED
|	**Cd**	**111**	**25.624**	ug/L	0.882	3	0	3801	2	KED
⌊	**Cd**	**114**	**25.459**	ug/L	0.573	2	0	9760	1	KED
⌈>	**In**	**115**		ug/L			905245	831480	1	Standard
|	**Ag**	**107**	**23.195**	ug/L	0.780	3	28	381035	2	Standard
|	**Sb**	**121**	**-0.032**	ug/L	0.001	3	495	71	18	Standard
|	**Sb**	**123**	**-0.030**	ug/L	0.001	3	369	68	15	Standard
|	**Ba**	**135**	**30.067**	ug/L	0.376	1	9	99931	2	Standard
⌊	**Ba**	**137**	**30.434**	ug/L	1.005	3	15	175380	2	Standard
⌈>	**Tb**	**159**		ug/L			1209873	1172288	2	Standard
|	**Tl**	**205**	**25.977**	ug/L	0.789	3	178	896987	1	Standard
|	**Pb**	**208**	**26.367**	ug/L	0.804	3	214	1185696	2	Standard
|	**Bi**	**209**		ug/L			2532779	2487507	2	Standard
|	**Th**	**232**	**23.922**	ug/L	0.838	3	1448	1035943	1	Standard
⌊	**U**	**238**	**24.312**	ug/L	0.746	3	42	1203326	2	Standard

AVX9 : 86381

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AWJ7 MBSPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Wednesday, February 24, 2016 18:16:26
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
⌈>	**Li**	**6**		ug/L			657253	698845	5	Standard
⌊	**Be**	**9**	**20.138**	ug/L	0.762	3	11	35313	2	Standard
	C	**13**		ug/L			44880	41293	7	Standard
	Cl	**37**		mg/L			2442655	2447698	1	Standard
⌈>	**Sc**	**45**		ug/L			850943	864105	0	Standard
|	**Al**	**27**	**0.904**	ug/L	0.007	0	675	11621	1	Standard
|	**V**	**51**	**27.806**	mg/L	0.502	1	3344	462580	1	Standard
|	**V-1**	**51**	**27.368**	mg/L	0.430	1	187	459117	1	Standard
|	**Cr**	**52**	**28.401**	ug/L	0.833	2	9656	207598	1	Standard
|	**Cr**	**53**	**25.639**	ug/L	0.726	2	81	22351	2	Standard
|	**Fe**	**54**	**16.538**	mg/L	0.476	2	39663	57951	0	Standard
|	**Fe**	**57**	**-1.935**	mg/L	0.546	28	9512	8822	2	Standard
⌊	**Mn**	**55**	**27.155**	ug/L	0.169	0	286	565829	0	Standard
⌈>	**Ge-1**	**72**		ug/L			25772	24587	1	KED
|	**Co**	**59**	**27.293**	ug/L	0.051	0	2	52041	1	KED
|	**Ni**	**60**	**27.121**	ug/L	1.232	4	80	15936	3	KED
|	**Ni**	**62**	**26.371**	ug/L	1.201	4	10	2447	4	KED
|	**Cu**	**63**	**27.801**	ug/L	0.133	0	49	44341	0	KED
|	**Cu**	**65**	**27.553**	ug/L	0.788	2	15	21504	1	KED
|	**Zn**	**66**	**83.841**	ug/L	1.679	2	13	14512	0	KED
|	**Zn**	**67**	**79.654**	ug/L	3.003	3	3	2231	2	KED
|	**Zn**	**68**	**81.756**	ug/L	0.821	1	8	10570	0	KED
|	**As**	**75**	**26.321**	ug/L	0.814	3	2	2719	2	KED
⌊	**Se-1**	**78**	**89.062**	ug/L	2.541	2	4	937	2	KED
	Y	**89**		ug/L			577578	571431	4	Standard
	Kr	**83**		ug/L			59	59	16	Standard
⌈>	**In-1**	**115**		ug/L			9746	8922	1	KED
|	**Mo**	**98**	**-0.017**	ug/L	0.013	72	15	6	98	KED
|	**Cd**	**111**	**26.149**	ug/L	0.100	0	0	3800	1	KED
⌊	**Cd**	**114**	**26.496**	ug/L	0.051	0	0	9952	1	KED
⌈>	**In**	**115**		ug/L			905245	828141	2	Standard
|	**Ag**	**107**	**23.324**	ug/L	1.216	5	28	381443	3	Standard
|	**Sb**	**121**	**-0.031**	ug/L	0.000	1	495	85	4	Standard
|	**Sb**	**123**	**-0.031**	ug/L	0.001	2	369	55	12	Standard
|	**Ba**	**135**	**29.955**	ug/L	0.904	3	9	99121	1	Standard
⌊	**Ba**	**137**	**30.010**	ug/L	0.601	2	15	172239	0	Standard
⌈>	**Tb**	**159**		ug/L			1209873	1147363	1	Standard
|	**Tl**	**205**	**26.372**	ug/L	1.314	4	178	891304	3	Standard
|	**Pb**	**208**	**26.972**	ug/L	1.188	4	214	1186937	2	Standard
|	**Bi**	**209**		ug/L			2532779	2416394	1	Standard
|	**Th**	**232**	**24.671**	ug/L	1.237	5	1448	1045573	3	Standard
⌊	**U**	**238**	**24.875**	ug/L	1.153	4	42	1204922	3	Standard

AVX9 - 00282

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV6
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, February 24, 2016 18:22:35
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
[>	Li	6		ug/L			657253	672982	3	Standard
[	Be	9	36.776	ug/L	0.944	2	11	62140	1	Standard
	C	13		ug/L			44880	35582	1	Standard
	Cl	37		mg/L			2442655	2471844	1	Standard
[>	Sc	45		ug/L			850943	867764	0	Standard
|	Al	27	4524.274	ug/L	52.526	1	675	54952281	1	Standard
|	V	51	47.669	mg/L	1.582	3	3344	794030	3	Standard
|	V-1	51	47.454	mg/L	1.554	3	187	799394	3	Standard
|	Cr	52	48.437	ug/L	1.365	2	9656	348659	2	Standard
|	Cr	53	47.035	ug/L	0.897	1	81	41113	2	Standard
|	Fe	54	4639.273	mg/L	101.568	2	39663	5019975	1	Standard
|	Fe	57	4512.315	mg/L	72.258	1	9512	1969463	1	Standard
[	Mn	55	46.665	ug/L	0.805	1	286	976300	1	Standard
[>	Ge-1	72		ug/L			25772	23295	1	KED
|	Co	59	49.797	ug/L	0.210	0	2	89958	0	KED
|	Ni	60	46.597	ug/L	0.179	0	80	25897	0	KED
|	Ni	62	49.398	ug/L	1.066	2	10	4334	1	KED
|	Cu	63	48.919	ug/L	0.420	0	49	73890	0	KED
|	Cu	65	47.022	ug/L	0.764	1	15	34764	0	KED
|	Zn	66	49.018	ug/L	0.083	0	13	8045	1	KED
|	Zn	67	51.386	ug/L	1.987	3	3	1365	3	KED
|	Zn	68	51.946	ug/L	0.314	0	8	6366	0	KED
|	As	75	50.724	ug/L	0.386	0	2	4964	0	KED
[	Se-1	78	53.739	ug/L	2.166	4	4	537	3	KED
	Y	89		ug/L			577578	572409	2	Standard
	Kr	83		ug/L			59	62	19	Standard
[>	In-1	115		ug/L			9746	8853	3	KED
|	Mo	98	45.709	ug/L	1.591	3	15	21839	0	KED
|	Cd	111	45.520	ug/L	1.619	3	0	6560	0	KED
[	Cd	114	46.752	ug/L	1.090	2	0	17421	3	KED
[>	In	115		ug/L			905245	804929	1	Standard
|	Ag	107	44.478	ug/L	2.155	4	28	707231	3	Standard
|	Sb	121	51.950	ug/L	0.523	1	495	593953	0	Standard
|	Sb	123	52.068	ug/L	0.827	1	369	461368	0	Standard
|	Ba	135	54.317	ug/L	0.503	0	9	174755	1	Standard
[	Ba	137	54.890	ug/L	0.572	1	15	306254	0	Standard
[>	Tb	159		ug/L			1209873	1154851	2	Standard
|	Tl	205	45.306	ug/L	0.667	1	178	1541439	0	Standard
|	Pb	208	46.116	ug/L	0.609	1	214	2043386	2	Standard
|	Bi	209		ug/L			2532779	2301590	3	Standard
|	Th	232	41.721	ug/L	1.205	2	1448	1779656	3	Standard
[	U	238	45.476	ug/L	0.089	0	42	2218133	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB6
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, February 24, 2016 18:30:25
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416b.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
Li	6		ug/L			657253	673146	3	Standard
Be	9	-0.005	ug/L	0.000	1	11	3	0	Standard
C	13		ug/L			44880	35657	3	Standard
Cl	37		mg/L			2442655	2409572	1	Standard
Sc	45		ug/L			850943	846089	1	Standard
Al	27	0.003	ug/L	0.004	131	675	707	6	Standard
V	51	-0.004	mg/L	0.014	328	3344	3256	6	Standard
V-1	51	-0.002	mg/L	0.001	55	187	161	8	Standard
Cr	52	-0.038	ug/L	0.091	237	9656	9337	6	Standard
Cr	53	-0.019	ug/L	0.008	42	81	65	9	Standard
Fe	54	-1.457	mg/L	0.334	22	39663	37911	1	Standard
Fe	57	-2.595	mg/L	0.112	4	9512	8359	1	Standard
Mn	55	-0.001	ug/L	0.001	72	286	259	5	Standard
Ge-1	72		ug/L			25772	23419	1	KED
Co	59	0.033	ug/L	0.051	155	2	61	149	KED
Ni	60	-0.013	ug/L	0.055	433	80	66	46	KED
Ni	62	0.005	ug/L	0.091	1976	10	10	78	KED
Cu	63	0.024	ug/L	0.059	242	49	81	108	KED
Cu	65	0.032	ug/L	0.041	129	15	37	81	KED
Zn	66	0.065	ug/L	0.062	95	13	22	44	KED
Zn	67	0.011	ug/L	0.150	1343	3	3	124	KED
Zn	68	0.064	ug/L	0.091	142	8	15	69	KED
As	75	0.023	ug/L	0.051	218	2	4	115	KED
Se-1	78	0.042	ug/L	0.239	575	4	4	52	KED
Y	89		ug/L			577578	539302	3	Standard
Kr	83		ug/L			59	67	8	Standard
In-1	115		ug/L			9746	8971	3	KED
Mo	98	0.014	ug/L	0.032	227	15	21	71	KED
Cd	111	0.007	ug/L	0.000	3	0	0		KED
Cd	114	0.002	ug/L	0.003	179	0	1	94	KED
In	115		ug/L			905245	790812	3	Standard
Ag	107	0.001	ug/L	0.000	26	28	41	7	Standard
Sb	121	0.022	ug/L	0.004	17	495	678	3	Standard
Sb	123	0.018	ug/L	0.005	30	369	478	10	Standard
Ba	135	0.001	ug/L	0.001	122	9	12	39	Standard
Ba	137	0.002	ug/L	0.002	71	15	26	35	Standard
Tb	159		ug/L			1209873	1095539	1	Standard
Tl	205	-0.001	ug/L	0.001	50	178	129	12	Standard
Pb	208	0.000	ug/L	0.001	140	214	212	13	Standard
Bi	209		ug/L			2532779	2379185	0	Standard
Th	232	0.098	ug/L	0.002	2	1448	5263	3	Standard
U	238	0.000	ug/L	0.000	31	42	60	10	Standard

AVX9 : 66361

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AVW0R MB REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Wednesday, February 24, 2016 18:35:30
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
⌈>	**Li**	**6**		ug/L			657253	717635	3	Standard
⌊	**Be**	**9**	**-0.001**	ug/L	0.002	195	11	10	26	Standard
	C	**13**		ug/L			44880	40466	2	Standard
	Cl	**37**		mg/L			2442655	2422311	1	Standard
⌈>	**Sc**	**45**		ug/L			850943	889922	1	Standard
|	**Al**	**27**	**10.879**	ug/L	0.116	1	675	136214	2	Standard
|	**V**	**51**	**0.004**	mg/L	0.013	337	3344	3561	5	Standard
|	**V-1**	**51**	**0.015**	mg/L	0.002	13	187	460	7	Standard
|	**Cr**	**52**	**-0.048**	ug/L	0.080	168	9656	9753	4	Standard
|	**Cr**	**53**	**0.028**	ug/L	0.012	42	81	110	10	Standard
|	**Fe**	**54**	**20.023**	mg/L	1.909	9	39663	63502	2	Standard
|	**Fe**	**57**	**-0.886**	mg/L	0.720	81	9512	9550	1	Standard
⌊	**Mn**	**55**	**0.051**	ug/L	0.003	6	286	1390	3	Standard
⌈>	**Ge-1**	**72**		ug/L			25772	24161	1	KED
|	**Co**	**59**	**0.008**	ug/L	0.001	19	2	16	17	KED
|	**Ni**	**60**	**-0.103**	ug/L	0.004	4	80	16	13	KED
|	**Ni**	**62**	**-0.063**	ug/L	0.012	18	10	4	24	KED
|	**Cu**	**63**	**0.002**	ug/L	0.005	298	49	48	15	KED
|	**Cu**	**65**	**0.024**	ug/L	0.009	37	15	32	21	KED
|	**Zn**	**66**	**0.458**	ug/L	0.134	29	13	90	24	KED
|	**Zn**	**67**	**0.238**	ug/L	0.138	57	3	9	40	KED
|	**Zn**	**68**	**0.440**	ug/L	0.058	13	8	64	10	KED
|	**As**	**75**	**-0.017**	ug/L	0.005	31	2	0	173	KED
⌊	**Se-1**	**78**	**0.150**	ug/L	0.047	31	4	5	8	KED
	Y	**89**		ug/L			577578	566723	2	Standard
	Kr	**83**		ug/L			59	57	15	Standard
⌈>	**In-1**	**115**		ug/L			9746	8986	2	KED
|	**Mo**	**98**	**0.004**	ug/L	0.004	110	15	16	13	KED
|	**Cd**	**111**	**0.013**	ug/L	0.011	85	0	1	86	KED
⌊	**Cd**	**114**	**0.006**	ug/L	0.006	99	0	2	78	KED
⌈>	**In**	**115**		ug/L			905245	821236	2	Standard
|	**Ag**	**107**	**0.006**	ug/L	0.001	18	28	118	12	Standard
|	**Sb**	**121**	**-0.010**	ug/L	0.003	27	495	333	11	Standard
|	**Sb**	**123**	**-0.010**	ug/L	0.003	26	369	240	8	Standard
|	**Ba**	**135**	**0.047**	ug/L	0.012	25	9	162	23	Standard
⌊	**Ba**	**137**	**0.050**	ug/L	0.003	6	15	299	8	Standard
⌈>	**Tb**	**159**		ug/L			1209873	1153086	0	Standard
|	**Tl**	**205**	**0.008**	ug/L	0.001	9	178	427	5	Standard
|	**Pb**	**208**	**0.014**	ug/L	0.001	10	214	836	7	Standard
|	**Bi**	**209**		ug/L			2532779	2423958	0	Standard
|	**Th**	**232**	**0.107**	ug/L	0.005	4	1448	5953	3	Standard
⌊	**U**	**238**	**0.007**	ug/L	0.001	15	42	380	14	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AWA5 A REN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Wednesday, February 24, 2016 18:40:35
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
⌈>	**Li**	**6**		ug/L			657253	671407	1	Standard
⌊	**Be**	**9**	**-0.005**	ug/L	0.001	13	11	3	34	Standard
	C	**13**		ug/L			44880	50621	5	Standard
	Cl	**37**		mg/L			2442655	2306005	1	Standard
⌈>	**Sc**	**45**		ug/L			850943	830705	0	Standard
|	**Al**	**27**	**14.185**	ug/L	0.527	3	675	165568	3	Standard
|	**V**	**51**	**0.079**	mg/L	0.010	13	3344	4521	4	Standard
|	**V-1**	**51**	**0.084**	mg/L	0.005	6	187	1544	4	Standard
|	**Cr**	**52**	**3.280**	ug/L	0.108	3	9656	31393	2	Standard
|	**Cr**	**53**	**3.012**	ug/L	0.057	1	81	2595	1	Standard
|	**Fe**	**54**	**164.492**	mg/L	2.661	1	39663	207729	1	Standard
|	**Fe**	**57**	**158.257**	mg/L	10.109	6	9512	75077	5	Standard
⌊	**Mn**	**55**	**1.514**	ug/L	0.053	3	286	30584	2	Standard
⌈>	**Ge-1**	**72**		ug/L			25772	22910	0	KED
|	**Co**	**59**	**0.029**	ug/L	0.001	4	2	54	4	KED
|	**Ni**	**60**	**0.124**	ug/L	0.031	25	80	139	11	KED
|	**Ni**	**62**	**0.066**	ug/L	0.080	122	10	15	45	KED
|	**Cu**	**63**	**1.176**	ug/L	0.037	3	49	1789	3	KED
|	**Cu**	**65**	**1.134**	ug/L	0.057	5	15	837	4	KED
|	**Zn**	**66**	**135.699**	ug/L	1.885	1	13	21882	0	KED
|	**Zn**	**67**	**127.899**	ug/L	2.061	1	3	3337	1	KED
|	**Zn**	**68**	**131.108**	ug/L	0.796	0	8	15790	0	KED
|	**As**	**75**	**0.009**	ug/L	0.009	93	2	2	28	KED
⌊	**Se-1**	**78**	**-0.015**	ug/L	0.083	563	4	3	21	KED
	Y	**89**		ug/L			577578	556057	1	Standard
	Kr	**83**		ug/L			59	68	2	Standard
⌈>	**In-1**	**115**		ug/L			9746	8413	3	KED
|	**Mo**	**98**	**0.050**	ug/L	0.010	19	15	36	9	KED
|	**Cd**	**111**	**0.322**	ug/L	0.064	19	0	44	20	KED
⌊	**Cd**	**114**	**0.311**	ug/L	0.029	9	0	110	9	KED
⌈>	**In**	**115**		ug/L			905245	784657	0	Standard
|	**Ag**	**107**	**0.001**	ug/L	0.000	38	28	45	17	Standard
|	**Sb**	**121**	**0.015**	ug/L	0.002	13	495	591	3	Standard
|	**Sb**	**123**	**0.015**	ug/L	0.002	14	369	446	3	Standard
|	**Ba**	**135**	**2.655**	ug/L	0.070	2	9	8334	2	Standard
⌊	**Ba**	**137**	**2.680**	ug/L	0.087	3	15	14588	2	Standard
⌈>	**Tb**	**159**		ug/L			1209873	1111790	1	Standard
|	**Tl**	**205**	**-0.003**	ug/L	0.000	3	178	55	8	Standard
|	**Pb**	**208**	**0.059**	ug/L	0.002	4	214	2694	3	Standard
|	**Bi**	**209**		ug/L			2532779	2407711	3	Standard
|	**Th**	**232**	**-0.007**	ug/L	0.001	9	1448	1043	3	Standard
⌊	**U**	**238**	**0.001**	ug/L	0.000	16	42	107	10	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AWJ7 C REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Wednesday, February 24, 2016 18:45:40
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
[>	**Li**	**6**		ug/L			657253	726869	4	Standard
[	**Be**	**9**	**-0.004**	ug/L	0.000	4	11	5	0	Standard
	C	**13**		ug/L			44880	51121	4	Standard
	Cl	**37**		mg/L			2442655	2689540	2	Standard
[>	**Sc**	**45**		ug/L			850943	829473	2	Standard
[	**Al**	**27**	**562.293**	ug/L	27.944	4	675	6522748	2	Standard
[	**V**	**51**	**0.790**	mg/L	0.136	17	3344	15747	11	Standard
[	**V-1**	**51**	**0.815**	mg/L	0.031	3	187	13286	1	Standard
[	**Cr**	**52**	**10.871**	ug/L	0.617	5	9656	82021	2	Standard
[	**Cr**	**53**	**10.076**	ug/L	0.296	2	81	8481	4	Standard
[	**Fe**	**54**	**183.098**	mg/L	12.743	6	39663	226272	2	Standard
[	**Fe**	**57**	**179.405**	mg/L	8.251	4	9512	83687	1	Standard
[	**Mn**	**55**	**6.173**	ug/L	0.220	3	286	123611	1	Standard
[>	**Ge-1**	**72**		ug/L			25772	21771	1	KED
[	**Co**	**59**	**1.119**	ug/L	0.063	5	2	1891	5	KED
[	**Ni**	**60**	**0.465**	ug/L	0.006	1	80	309	2	KED
[	**Ni**	**62**	**0.455**	ug/L	0.051	11	10	46	10	KED
[	**Cu**	**63**	**11.322**	ug/L	0.317	2	49	16009	1	KED
[	**Cu**	**65**	**10.835**	ug/L	0.126	1	15	7495	0	KED
[	**Zn**	**66**	**10.534**	ug/L	0.085	0	13	1624	2	KED
[	**Zn**	**67**	**9.951**	ug/L	1.685	16	3	248	15	KED
[	**Zn**	**68**	**10.524**	ug/L	0.497	4	8	1210	2	KED
[	**As**	**75**	**0.062**	ug/L	0.033	52	2	7	40	KED
[	**Se-1**	**78**	**0.420**	ug/L	0.283	67	4	7	33	KED
	Y	**89**		ug/L			577578	543274	4	Standard
	Kr	**83**		ug/L			59	84	7	Standard
[>	**In-1**	**115**		ug/L			9746	8111	2	KED
[	**Mo**	**98**	**11.591**	ug/L	0.733	6	15	5082	3	KED
[	**Cd**	**111**	**0.463**	ug/L	0.121	26	0	60	24	KED
[	**Cd**	**114**	**0.338**	ug/L	0.060	17	0	115	16	KED
[>	**In**	**115**		ug/L			905245	768760	2	Standard
[	**Ag**	**107**	**0.002**	ug/L	0.000	12	28	48	8	Standard
[	**Sb**	**121**	**0.234**	ug/L	0.012	5	495	2967	2	Standard
[	**Sb**	**123**	**0.238**	ug/L	0.008	3	369	2322	2	Standard
[	**Ba**	**135**	**0.697**	ug/L	0.015	2	9	2148	2	Standard
[	**Ba**	**137**	**0.732**	ug/L	0.020	2	15	3914	3	Standard
[>	**Tb**	**159**		ug/L			1209873	1119226	3	Standard
[	**Tl**	**205**	**0.003**	ug/L	0.000	5	178	279	5	Standard
[	**Pb**	**208**	**0.010**	ug/L	0.001	12	214	645	6	Standard
[	**Bi**	**209**		ug/L			2532779	1822503	3	Standard
[	**Th**	**232**	**0.109**	ug/L	0.004	3	1448	5846	3	Standard
[	**U**	**238**	**0.002**	ug/L	0.000	16	42	132	8	Standard

AUX3 · 98387

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AVX9 F REN
Sample Dil Factor: 50
Comments:
Sample Date/Time: Wednesday, February 24, 2016 18:50:44
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
⌈>	**Li**	**6**		ug/L			657253	698055	4	Standard
⌊	**Be**	**9**	**-0.003**	ug/L	0.003	109	11	6	78	Standard
	C	**13**		ug/L			44880	39456	1	Standard
	Cl	**37**		mg/L			2442655	18190580	4	Standard
⌈>	**Sc**	**45**		ug/L			850943	801055	2	Standard
⌈	**Al**	**27**	**3.507**	ug/L	0.157	4	675	39928	1	Standard
⌈	**V**	**51**	**2.443**	mg/L	0.312	12	3344	40497	10	Standard
⌈	**V-1**	**51**	**4.695**	mg/L	0.261	5	187	73113	3	Standard
⌈	**Cr**	**52**	**0.437**	ug/L	0.094	21	9656	11902	2	Standard
⌈	**Cr**	**53**	**14.530**	ug/L	0.532	3	81	11775	3	Standard
⌈	**Fe**	**54**	**12.455**	mg/L	1.581	12	39663	49654	0	Standard
⌈	**Fe**	**57**	**44.544**	mg/L	2.764	6	9512	26798	2	Standard
⌊	**Mn**	**55**	**0.433**	ug/L	0.015	3	286	8615	1	Standard
⌈>	**Ge-1**	**72**		ug/L			25772	21477	3	KED
⌈	**Co**	**59**	**0.009**	ug/L	0.002	23	2	16	24	KED
⌈	**Ni**	**60**	**0.013**	ug/L	0.032	242	80	73	19	KED
⌈	**Ni**	**62**	**0.272**	ug/L	0.109	39	10	31	31	KED
⌈	**Cu**	**63**	**0.196**	ug/L	0.017	8	49	314	9	KED
⌈	**Cu**	**65**	**0.194**	ug/L	0.020	10	15	144	10	KED
⌈	**Zn**	**66**	**0.745**	ug/L	0.183	24	13	123	22	KED
⌈	**Zn**	**67**	**0.725**	ug/L	0.237	32	3	20	27	KED
⌈	**Zn**	**68**	**0.763**	ug/L	0.167	21	8	93	18	KED
⌈	**As**	**75**	**0.120**	ug/L	0.016	12	2	12	13	KED
⌊	**Se-1**	**78**	**0.062**	ug/L	0.174	282	4	4	38	KED
	Y	**89**		ug/L			577578	515352	1	Standard
	Kr	**83**		ug/L			59	430	7	Standard
⌈>	**In-1**	**115**		ug/L			9746	7955	1	KED
⌈	**Mo**	**98**	**0.378**	ug/L	0.055	14	15	175	11	KED
⌈	**Cd**	**111**	**0.010**	ug/L	0.011	114	0	1	114	KED
⌊	**Cd**	**114**	**0.010**	ug/L	0.000	2	0	3	1	KED
⌈>	**In**	**115**		ug/L			905245	749616	1	Standard
⌈	**Ag**	**107**	**0.002**	ug/L	0.000	16	28	50	7	Standard
⌈	**Sb**	**121**	**-0.011**	ug/L	0.002	22	495	295	8	Standard
⌈	**Sb**	**123**	**-0.008**	ug/L	0.002	19	369	237	5	Standard
⌈	**Ba**	**135**	**1.331**	ug/L	0.020	1	9	3994	0	Standard
⌊	**Ba**	**137**	**1.339**	ug/L	0.032	2	15	6973	3	Standard
⌈>	**Tb**	**159**		ug/L			1209873	1097616	0	Standard
⌈	**Tl**	**205**	**-0.000**	ug/L	0.001	149	178	149	12	Standard
⌈	**Pb**	**208**	**0.023**	ug/L	0.001	4	214	1155	4	Standard
⌈	**Bi**	**209**		ug/L			2532779	1690484	3	Standard
⌈	**Th**	**232**	**-0.029**	ug/L	0.000	1	1448	137	9	Standard
⌊	**U**	**238**	**0.094**	ug/L	0.002	1	42	4407	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AVX9 G REN
Sample Dil Factor: 50
Comments:
Sample Date/Time: Wednesday, February 24, 2016 18:55:49
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
⌈>	Li	6		ug/L			657253	700660	1	Standard
⌊	Be	9	-0.006	ug/L	0.001	9	11	1	86	Standard
	C	13		ug/L			44880	40906	2	Standard
	Cl	37		mg/L			2442655	17603422	1	Standard
⌈>	Sc	45		ug/L			850943	781131	3	Standard
|	Al	27	16.931	ug/L	1.256	7	675	185458	4	Standard
|	V	51	2.496	mg/L	0.178	7	3344	40269	3	Standard
|	V-1	51	4.868	mg/L	0.264	5	187	73888	2	Standard
|	Cr	52	0.401	ug/L	0.112	27	9656	11373	2	Standard
|	Cr	53	15.245	ug/L	0.658	4	81	12036	2	Standard
|	Fe	54	22.656	mg/L	3.004	13	39663	58230	1	Standard
|	Fe	57	57.391	mg/L	3.485	6	9512	31136	0	Standard
⌊	Mn	55	0.444	ug/L	0.021	4	286	8611	1	Standard
⌈>	Ge-1	72		ug/L			25772	22347	1	KED
|	Co	59	0.017	ug/L	0.001	7	2	32	5	KED
|	Ni	60	0.022	ug/L	0.023	104	80	81	16	KED
|	Ni	62	0.457	ug/L	0.223	48	10	47	38	KED
|	Cu	63	0.192	ug/L	0.030	15	49	320	13	KED
|	Cu	65	0.185	ug/L	0.014	7	15	144	7	KED
|	Zn	66	0.694	ug/L	0.037	5	13	120	5	KED
|	Zn	67	0.992	ug/L	0.202	20	3	27	17	KED
|	Zn	68	0.707	ug/L	0.101	14	8	90	13	KED
|	As	75	0.081	ug/L	0.019	23	2	9	18	KED
⌊	Se-1	78	0.211	ug/L	0.194	92	4	5	32	KED
	Y	89		ug/L			577578	525843	1	Standard
	Kr	83		ug/L			59	401	9	Standard
⌈>	In-1	115		ug/L			9746	8222	1	KED
|	Mo	98	0.347	ug/L	0.048	13	15	166	11	KED
|	Cd	111	0.012	ug/L	0.008	70	0	1	69	KED
⌊	Cd	114	0.009	ug/L	0.006	60	0	3	52	KED
⌈>	In	115		ug/L			905245	752118	0	Standard
|	Ag	107	0.001	ug/L	0.000	30	28	38	12	Standard
|	Sb	121	-0.008	ug/L	0.004	53	495	330	13	Standard
|	Sb	123	-0.005	ug/L	0.002	46	369	266	7	Standard
|	Ba	135	2.151	ug/L	0.010	0	9	6475	1	Standard
⌊	Ba	137	2.154	ug/L	0.041	1	15	11241	2	Standard
⌈>	Tb	159		ug/L			1209873	1088472	0	Standard
|	Tl	205	-0.001	ug/L	0.001	46	178	123	13	Standard
|	Pb	208	0.033	ug/L	0.000	0	214	1574	1	Standard
|	Bi	209		ug/L			2532779	1683057	3	Standard
|	Th	232	-0.029	ug/L	0.000	0	1448	149	6	Standard
⌊	U	238	0.089	ug/L	0.001	0	42	4118	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AVX9 I REN
Sample Dil Factor: 50
Comments:
Sample Date/Time: Wednesday, February 24, 2016 19:00:54
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416b.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
Li	6		ug/L			657253	661699	3	Standard
Be	9	-0.002	ug/L	0.004	189	11	8	70	Standard
C	13		ug/L			44880	38918	1	Standard
Cl	37		mg/L			2442655	7609677	3	Standard
Sc	45		ug/L			850943	798633	2	Standard
Al	27	0.821	ug/L	0.012	1	675	9804	0	Standard
V	51	1.109	mg/L	0.056	5	3344	20055	2	Standard
V-1	51	2.059	mg/L	0.107	5	187	32064	3	Standard
Cr	52	0.305	ug/L	0.014	4	9656	11026	3	Standard
Cr	53	6.244	ug/L	0.324	5	81	5086	3	Standard
Fe	54	223.052	mg/L	6.489	2	39663	257476	0	Standard
Fe	57	239.482	mg/L	3.147	1	9512	104664	3	Standard
Mn	55	50.194	ug/L	1.318	2	286	966069	0	Standard
Ge-1	72		ug/L			25772	23693	1	KED
Co	59	0.006	ug/L	0.003	45	2	13	37	KED
Ni	60	-0.104	ug/L	0.000	0	80	15	0	KED
Ni	62	-0.012	ug/L	0.060	500	10	8	61	KED
Cu	63	-0.001	ug/L	0.010	1451	49	44	32	KED
Cu	65	0.002	ug/L	0.011	652	15	15	54	KED
Zn	66	0.148	ug/L	0.015	10	13	36	5	KED
Zn	67	2.716	ug/L	0.213	7	3	76	8	KED
Zn	68	1.983	ug/L	0.322	16	8	255	16	KED
As	75	0.054	ug/L	0.018	34	2	7	25	KED
Se-1	78	-0.137	ug/L	0.074	54	4	2	26	KED
Y	89		ug/L			577578	546858	0	Standard
Kr	83		ug/L			59	129	1	Standard
In-1	115		ug/L			9746	8979	1	KED
Mo	98	0.005	ug/L	0.001	12	15	16	1	KED
Cd	111	0.004	ug/L	0.004	86	0	0	86	KED
Cd	114	0.001	ug/L	0.003	190	0	1	95	KED
In	115		ug/L			905245	801342	0	Standard
Ag	107	0.001	ug/L	0.001	109	28	33	26	Standard
Sb	121	-0.029	ug/L	0.001	2	495	104	8	Standard
Sb	123	-0.027	ug/L	0.001	4	369	89	11	Standard
Ba	135	27.406	ug/L	0.295	1	9	87784	1	Standard
Ba	137	27.629	ug/L	0.347	1	15	153478	1	Standard
Tb	159		ug/L			1209873	1150248	3	Standard
Tl	205	-0.002	ug/L	0.001	41	178	96	32	Standard
Pb	208	0.006	ug/L	0.001	11	214	484	4	Standard
Bi	209		ug/L			2532779	1909962	3	Standard
Th	232	-0.029	ug/L	0.000	1	1448	137	11	Standard
U	238	0.003	ug/L	0.001	17	42	186	11	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AVX9 J REN
Sample Dil Factor: 50
Comments:
Sample Date/Time: Wednesday, February 24, 2016 19:05:59
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
⌈>	**Li**	**6**		ug/L			657253	667880	1	Standard
⌊	**Be**	**9**	**-0.004**	ug/L	0.002	40	11	4	65	Standard
	C	**13**		ug/L			44880	39263	4	Standard
	Cl	**37**		mg/L			2442655	4194823	3	Standard
⌈>	**Sc**	**45**		ug/L			850943	837579	2	Standard
|	**Al**	**27**	**8.767**	ug/L	0.310	3	675	103394	1	Standard
|	**V**	**51**	**0.410**	mg/L	0.017	4	3344	9844	1	Standard
|	**V-1**	**51**	**0.733**	mg/L	0.032	4	187	12096	3	Standard
|	**Cr**	**52**	**0.182**	ug/L	0.097	53	9656	10724	3	Standard
|	**Cr**	**53**	**2.201**	ug/L	0.146	6	81	1932	4	Standard
|	**Fe**	**54**	**703.292**	mg/L	34.950	4	39663	767106	2	Standard
|	**Fe**	**57**	**698.497**	mg/L	39.700	5	9512	301946	3	Standard
⌊	**Mn**	**55**	**99.807**	ug/L	3.996	4	286	2014867	4	Standard
⌈>	**Ge-1**	**72**		ug/L			25772	24725	4	KED
|	**Co**	**59**	**0.087**	ug/L	0.006	7	2	169	4	KED
|	**Ni**	**60**	**0.211**	ug/L	0.044	20	80	201	13	KED
|	**Ni**	**62**	**0.261**	ug/L	0.127	48	10	34	30	KED
|	**Cu**	**63**	**0.073**	ug/L	0.017	23	49	163	14	KED
|	**Cu**	**65**	**0.075**	ug/L	0.031	40	15	73	29	KED
|	**Zn**	**66**	**0.207**	ug/L	0.079	37	13	48	29	KED
|	**Zn**	**67**	**1.030**	ug/L	0.454	44	3	32	44	KED
|	**Zn**	**68**	**1.075**	ug/L	0.129	12	8	148	15	KED
|	**As**	**75**	**0.520**	ug/L	0.018	3	2	56	6	KED
⌊	**Se-1**	**78**	**0.108**	ug/L	0.141	130	4	5	26	KED
	Y	**89**		ug/L			577578	571047	3	Standard
	Kr	**83**		ug/L			59	73	16	Standard
⌈>	**In-1**	**115**		ug/L			9746	9164	1	KED
|	**Mo**	**98**	**0.062**	ug/L	0.032	51	15	45	35	KED
|	**Cd**	**111**	**0.011**	ug/L	0.014	125	0	1	124	KED
⌊	**Cd**	**114**	**0.005**	ug/L	0.003	54	0	2	43	KED
⌈>	**In**	**115**		ug/L			905245	835291	1	Standard
|	**Ag**	**107**	**0.000**	ug/L	0.000	506	28	27	28	Standard
|	**Sb**	**121**	**-0.028**	ug/L	0.001	2	495	119	8	Standard
|	**Sb**	**123**	**-0.027**	ug/L	0.002	7	369	90	19	Standard
|	**Ba**	**135**	**10.628**	ug/L	0.276	2	9	35485	2	Standard
⌊	**Ba**	**137**	**10.597**	ug/L	0.234	2	15	61360	0	Standard
⌈>	**Tb**	**159**		ug/L			1209873	1171332	1	Standard
|	**Tl**	**205**	**-0.000**	ug/L	0.001	127	178	158	10	Standard
|	**Pb**	**208**	**0.013**	ug/L	0.001	8	214	791	6	Standard
|	**Bi**	**209**		ug/L			2532779	2294104	4	Standard
|	**Th**	**232**	**-0.029**	ug/L	0.000	0	1448	132	4	Standard
⌊	**U**	**238**	**0.001**	ug/L	0.000	6	42	77	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AVX9 M REN
Sample Dil Factor: 50
Comments:
Sample Date/Time: Wednesday, February 24, 2016 19:11:03
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
[>	**Li**	**6**		ug/L			657253	629767	4	Standard
[	**Be**	**9**	**-0.006**	ug/L	0.001	11	11	1	86	Standard
	C	**13**		ug/L			44880	39010	1	Standard
	Cl	**37**		mg/L			2442655	16777854	5	Standard
[>	**Sc**	**45**		ug/L			850943	756899	2	Standard
[	**Al**	**27**	**0.539**	ug/L	0.022	4	675	6310	1	Standard
[	**V**	**51**	**2.487**	mg/L	0.154	6	3344	38918	3	Standard
[	**V-1**	**51**	**4.933**	mg/L	0.210	4	187	72575	1	Standard
[	**Cr**	**52**	**0.452**	ug/L	0.069	15	9656	11340	2	Standard
[	**Cr**	**53**	**15.742**	ug/L	0.488	3	81	12044	1	Standard
[	**Fe**	**54**	**3.383**	mg/L	2.887	85	39663	38414	5	Standard
[	**Fe**	**57**	**38.802**	mg/L	0.385	0	9512	23162	3	Standard
[	**Mn**	**55**	**0.066**	ug/L	0.003	5	286	1450	1	Standard
[>	**Ge-1**	**72**		ug/L			25772	21765	3	KED
[	**Co**	**59**	**0.002**	ug/L	0.002	65	2	6	45	KED
[	**Ni**	**60**	**-0.020**	ug/L	0.016	76	80	57	16	KED
[	**Ni**	**62**	**0.441**	ug/L	0.096	21	10	45	14	KED
[	**Cu**	**63**	**0.096**	ug/L	0.003	3	49	176	1	KED
[	**Cu**	**65**	**0.100**	ug/L	0.027	26	15	81	18	KED
[	**Zn**	**66**	**0.513**	ug/L	0.081	15	13	89	11	KED
[	**Zn**	**67**	**0.533**	ug/L	0.162	30	3	15	24	KED
[	**Zn**	**68**	**0.471**	ug/L	0.076	16	8	61	17	KED
[	**As**	**75**	**0.087**	ug/L	0.024	27	2	9	21	KED
[	**Se-1**	**78**	**0.182**	ug/L	0.236	129	4	5	36	KED
	Y	**89**		ug/L			577578	497872	2	Standard
	Kr	**83**		ug/L			59	398	3	Standard
[>	**In-1**	**115**		ug/L			9746	8221	2	KED
[	**Mo**	**98**	**0.297**	ug/L	0.024	8	15	144	4	KED
[	**Cd**	**111**	**0.014**	ug/L	0.007	47	0	1	50	KED
[	**Cd**	**114**	**0.017**	ug/L	0.009	54	0	6	47	KED
[>	**In**	**115**		ug/L			905245	736332	1	Standard
[	**Ag**	**107**	**0.000**	ug/L	0.001	317	28	26	33	Standard
[	**Sb**	**121**	**-0.014**	ug/L	0.000	3	495	258	3	Standard
[	**Sb**	**123**	**-0.015**	ug/L	0.003	21	369	180	12	Standard
[	**Ba**	**135**	**1.322**	ug/L	0.027	2	9	3897	2	Standard
[	**Ba**	**137**	**1.301**	ug/L	0.033	2	15	6651	1	Standard
[>	**Tb**	**159**		ug/L			1209873	1071121	3	Standard
[	**Tl**	**205**	**-0.003**	ug/L	0.000	7	178	78	3	Standard
[	**Pb**	**208**	**0.006**	ug/L	0.001	23	214	429	9	Standard
[	**Bi**	**209**		ug/L			2532779	1608298	6	Standard
[	**Th**	**232**	**-0.030**	ug/L	0.000	1	1448	102	21	Standard
[	**U**	**238**	**0.095**	ug/L	0.006	5	42	4339	4	Standard

AVX9 - 0912

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AVX9 N REN
Sample Dil Factor: 50
Comments:
Sample Date/Time: Wednesday, February 24, 2016 19:16:08
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
⌈>	**Li**	**6**		ug/L			657253	653851	2	Standard
⌊	**Be**	**9**	**-0.005**	ug/L	0.002	41	11	3	86	Standard
	C	**13**		ug/L			44880	38217	1	Standard
	Cl	**37**		mg/L			2442655	16198208	4	Standard
⌈>	**Sc**	**45**		ug/L			850943	738538	2	Standard
|	**Al**	**27**	**0.791**	ug/L	0.024	3	675	8755	2	Standard
|	**V**	**51**	**2.404**	mg/L	0.194	8	3344	36793	5	Standard
|	**V-1**	**51**	**4.799**	mg/L	0.271	5	187	68890	3	Standard
|	**Cr**	**52**	**0.448**	ug/L	0.020	4	9656	11049	2	Standard
|	**Cr**	**53**	**15.419**	ug/L	0.493	3	81	11512	1	Standard
|	**Fe**	**54**	**2.858**	mg/L	1.439	50	39663	37017	1	Standard
|	**Fe**	**57**	**37.368**	mg/L	2.252	6	9512	22056	1	Standard
⌊	**Mn**	**55**	**0.040**	ug/L	0.003	6	286	954	3	Standard
⌈>	**Ge-1**	**72**		ug/L			25772	22331	3	KED
|	**Co**	**59**	**0.002**	ug/L	0.001	23	2	6	17	KED
|	**Ni**	**60**	**-0.046**	ug/L	0.026	57	80	45	27	KED
|	**Ni**	**62**	**0.252**	ug/L	0.036	14	10	30	10	KED
|	**Cu**	**63**	**0.104**	ug/L	0.021	20	49	193	14	KED
|	**Cu**	**65**	**0.096**	ug/L	0.015	15	15	81	13	KED
|	**Zn**	**66**	**0.587**	ug/L	0.195	33	13	104	31	KED
|	**Zn**	**67**	**0.566**	ug/L	0.365	64	3	17	55	KED
|	**Zn**	**68**	**0.578**	ug/L	0.080	13	8	75	13	KED
|	**As**	**75**	**0.105**	ug/L	0.033	31	2	11	26	KED
⌊	**Se-1**	**78**	**0.196**	ug/L	0.176	89	4	5	30	KED
	Y	**89**		ug/L			577578	496781	2	Standard
	Kr	**83**		ug/L			59	323	7	Standard
⌈>	**In-1**	**115**		ug/L			9746	8345	2	KED
|	**Mo**	**98**	**0.347**	ug/L	0.011	3	15	169	1	KED
|	**Cd**	**111**	**0.021**	ug/L	0.011	54	0	2	57	KED
⌊	**Cd**	**114**	**0.002**	ug/L	0.003	166	0	1	94	KED
⌈>	**In**	**115**		ug/L			905245	732950	1	Standard
|	**Ag**	**107**	**0.001**	ug/L	0.001	43	28	40	18	Standard
|	**Sb**	**121**	**-0.014**	ug/L	0.002	15	495	255	8	Standard
|	**Sb**	**123**	**-0.011**	ug/L	0.002	18	369	209	6	Standard
|	**Ba**	**135**	**2.010**	ug/L	0.078	3	9	5893	2	Standard
⌊	**Ba**	**137**	**1.976**	ug/L	0.041	2	15	10049	1	Standard
⌈>	**Tb**	**159**		ug/L			1209873	1078189	2	Standard
|	**Tl**	**205**	**-0.002**	ug/L	0.000	11	178	88	10	Standard
|	**Pb**	**208**	**0.007**	ug/L	0.000	1	214	486	3	Standard
|	**Bi**	**209**		ug/L			2532779	1622909	5	Standard
|	**Th**	**232**	**-0.030**	ug/L	0.000	1	1448	86	12	Standard
⌊	**U**	**238**	**0.084**	ug/L	0.002	2	42	3865	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AVW0R MBSPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Wednesday, February 24, 2016 19:21:13
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD	Mode
⌈>	**Li**	**6**		ug/L			657253	679106	2	Standard
⌊	**Be**	**9**	**20.088**	ug/L	0.294	1	11	34280	3	Standard
	C	**13**		ug/L			44880	39678	2	Standard
	Cl	**37**		mg/L			2442655	2732419	1	Standard
⌈>	**Sc**	**45**		ug/L			850943	841748	2	Standard
|	**Al**	**27**	**13.229**	ug/L	0.184	1	675	156503	1	Standard
|	**V**	**51**	**28.083**	mg/L	1.423	5	3344	454819	3	Standard
|	**V-1**	**51**	**27.734**	mg/L	1.527	5	187	452955	3	Standard
|	**Cr**	**52**	**29.097**	ug/L	0.225	0	9656	206970	1	Standard
|	**Cr**	**53**	**26.849**	ug/L	0.758	2	81	22791	1	Standard
|	**Fe**	**54**	**30.503**	mg/L	0.847	2	39663	70995	2	Standard
|	**Fe**	**57**	**5.426**	mg/L	1.775	32	9512	11695	6	Standard
⌊	**Mn**	**55**	**28.242**	ug/L	0.620	2	286	573112	1	Standard
⌈>	**Ge-1**	**72**		ug/L			25772	26584	0	KED
|	**Co**	**59**	**26.497**	ug/L	0.277	1	2	54629	1	KED
|	**Ni**	**60**	**25.811**	ug/L	0.349	1	80	16407	1	KED
|	**Ni**	**62**	**24.784**	ug/L	0.965	3	10	2487	3	KED
|	**Cu**	**63**	**27.126**	ug/L	0.625	2	49	46779	2	KED
|	**Cu**	**65**	**26.162**	ug/L	1.088	4	15	22078	3	KED
|	**Zn**	**66**	**76.538**	ug/L	1.287	1	13	14327	1	KED
|	**Zn**	**67**	**74.413**	ug/L	2.500	3	3	2254	3	KED
|	**Zn**	**68**	**76.201**	ug/L	1.656	2	8	10653	2	KED
|	**As**	**75**	**25.069**	ug/L	0.531	2	2	2801	1	KED
⌊	**Se-1**	**78**	**78.078**	ug/L	1.738	2	4	889	2	KED
	Y	**89**		ug/L			577578	573249	0	Standard
	Kr	**83**		ug/L			59	59	22	Standard
⌈>	**In-1**	**115**		ug/L			9746	10204	7	KED
|	**Mo**	**98**	**21.698**	ug/L	1.847	8	15	11919	2	KED
|	**Cd**	**111**	**23.035**	ug/L	2.242	9	0	3811	3	KED
⌊	**Cd**	**114**	**23.574**	ug/L	2.312	9	0	10085	4	KED
⌈>	**In**	**115**		ug/L			905245	879933	2	Standard
|	**Ag**	**107**	**21.510**	ug/L	0.697	3	28	373921	2	Standard
|	**Sb**	**121**	**24.788**	ug/L	1.332	5	495	309854	3	Standard
|	**Sb**	**123**	**24.533**	ug/L	0.658	2	369	237781	1	Standard
|	**Ba**	**135**	**30.293**	ug/L	0.426	1	9	106529	1	Standard
⌊	**Ba**	**137**	**30.452**	ug/L	1.389	4	15	185634	2	Standard
⌈>	**Tb**	**159**		ug/L			1209873	1200540	0	Standard
|	**Tl**	**205**	**25.964**	ug/L	0.941	3	178	918597	3	Standard
|	**Pb**	**208**	**26.172**	ug/L	0.538	2	214	1205670	2	Standard
|	**Bi**	**209**		ug/L			2532779	2468786	3	Standard
|	**Th**	**232**	**23.554**	ug/L	0.640	2	1448	1045155	2	Standard
⌊	**U**	**238**	**23.732**	ug/L	0.559	2	42	1203271	2	Standard

AVW9 : 0831W

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV7
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, February 24, 2016 19:27:23
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416b.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
Li	6		ug/L			657253	648588	5	Standard
Be	9	35.975	ug/L	2.179	6	11	58492	0	Standard
C	13		ug/L			44880	35227	3	Standard
Cl	37		mg/L			2442655	2593062	1	Standard
Sc	45		ug/L			850943	809493	4	Standard
Al	27	5067.033	ug/L	338.148	6	675	57313626	3	Standard
V	51	50.701	mg/L	3.423	6	3344	786050	2	Standard
V-1	51	50.518	mg/L	3.189	6	187	792367	2	Standard
Cr	52	49.713	ug/L	2.936	5	9656	333029	1	Standard
Cr	53	48.676	ug/L	1.521	3	81	39652	1	Standard
Fe	54	4872.672	mg/L	380.794	7	39663	4905560	3	Standard
Fe	57	4749.369	mg/L	294.723	6	9512	1929859	2	Standard
Mn	55	49.060	ug/L	2.637	5	286	955975	1	Standard
Ge-1	72		ug/L			25772	24352	2	KED
Co	59	48.007	ug/L	1.262	2	2	90635	2	KED
Ni	60	46.024	ug/L	2.178	4	80	26715	1	KED
Ni	62	47.495	ug/L	0.728	1	10	4356	1	KED
Cu	63	46.031	ug/L	1.722	3	49	72632	0	KED
Cu	65	45.519	ug/L	0.841	1	15	35171	1	KED
Zn	66	47.946	ug/L	1.515	3	13	8221	0	KED
Zn	67	49.409	ug/L	1.691	3	3	1372	4	KED
Zn	68	49.134	ug/L	0.806	1	8	6293	1	KED
As	75	49.825	ug/L	1.130	2	2	5095	0	KED
Se-1	78	52.484	ug/L	3.221	6	4	548	3	KED
Y	89		ug/L			577578	542226	2	Standard
Kr	83		ug/L			59	57	5	Standard
In-1	115		ug/L			9746	8819	0	KED
Mo	98	46.447	ug/L	0.095	0	15	22122	0	KED
Cd	111	46.786	ug/L	0.160	0	0	6721	0	KED
Cd	114	47.038	ug/L	0.866	1	0	17462	1	KED
In	115		ug/L			905245	819629	0	Standard
Ag	107	42.665	ug/L	0.528	1	28	691035	0	Standard
Sb	121	51.723	ug/L	0.392	0	495	602196	0	Standard
Sb	123	51.725	ug/L	0.746	1	369	466741	1	Standard
Ba	135	54.353	ug/L	0.563	1	9	178054	0	Standard
Ba	137	54.146	ug/L	0.905	1	15	307651	1	Standard
Tb	159		ug/L			1209873	1150565	3	Standard
Tl	205	45.785	ug/L	2.023	4	178	1550696	2	Standard
Pb	208	45.564	ug/L	1.943	4	214	2009632	2	Standard
Bi	209		ug/L			2532779	2250872	3	Standard
Th	232	40.891	ug/L	2.086	5	1448	1735825	2	Standard
U	238	43.041	ug/L	3.208	7	42	2090544	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB7
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, February 24, 2016 19:35:12
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416b.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
Li	6		ug/L			657253	650778	2	Standard
Be	9	0.001	ug/L	0.009	996	11	12	110	Standard
C	13		ug/L			44880	35238	4	Standard
Cl	37		mg/L			2442655	2465256	3	Standard
Sc	45		ug/L			850943	798244	1	Standard
Al	27	0.793	ug/L	1.336	168	675	9358	156	Standard
V	51	0.061	mg/L	0.022	36	3344	4064	6	Standard
V-1	51	0.112	mg/L	0.020	18	187	1909	14	Standard
Cr	52	0.003	ug/L	0.029	885	9656	9077	0	Standard
Cr	53	0.324	ug/L	0.010	3	81	336	1	Standard
Fe	54	-1.220	mg/L	1.593	130	39663	35986	2	Standard
Fe	57	-0.682	mg/L	2.197	322	9512	8642	8	Standard
Mn	55	0.015	ug/L	0.023	158	286	547	79	Standard
Ge-1	72		ug/L			25772	24316	0	KED
Co	59	0.001	ug/L	0.001	53	2	4	24	KED
Ni	60	-0.033	ug/L	0.012	37	80	57	12	KED
Ni	62	-0.049	ug/L	0.021	42	10	5	33	KED
Cu	63	-0.005	ug/L	0.004	72	49	38	15	KED
Cu	65	0.006	ug/L	0.013	212	15	19	51	KED
Zn	66	0.012	ug/L	0.036	302	13	14	41	KED
Zn	67	-0.062	ug/L	0.040	63	3	1	86	KED
Zn	68	-0.036	ug/L	0.015	41	8	3	50	KED
As	75	0.001	ug/L	0.005	437	2	2	24	KED
Se-1	78	0.040	ug/L	0.140	354	4	4	31	KED
Y	89		ug/L			577578	549181	2	Standard
Kr	83		ug/L			59	58	26	Standard
In-1	115		ug/L			9746	9166	3	KED
Mo	98	0.003	ug/L	0.009	302	15	16	27	KED
Cd	111	0.007	ug/L	0.007	99	0	0	100	KED
Cd	114	0.007	ug/L	0.005	79	0	3	69	KED
In	115		ug/L			905245	807979	1	Standard
Ag	107	0.016	ug/L	0.028	168	28	283	153	Standard
Sb	121	0.040	ug/L	0.027	67	495	903	33	Standard
Sb	123	0.048	ug/L	0.035	73	369	758	40	Standard
Ba	135	0.017	ug/L	0.027	155	9	64	134	Standard
Ba	137	0.020	ug/L	0.032	164	15	123	145	Standard
Tb	159		ug/L			1209873	1128908	0	Standard
Tl	205	0.016	ug/L	0.027	170	178	694	129	Standard
Pb	208	0.013	ug/L	0.022	163	214	772	120	Standard
Bi	209		ug/L			2532779	2403944	0	Standard
Th	232	0.090	ug/L	0.015	16	1448	5119	12	Standard
U	238	0.011	ug/L	0.019	163	42	577	152	Standard

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: ICP ICP-MS GFA CVA **Analysis Date:** 2/23/16

MZ	Analyst cc 2/24/16	Peer 2-24-16	Comment
Logbook:			
Analyst, Date, Method info	✓	✓	
Sample ID's	✓	✓	
Standard/QC solution ID's recorded	✓	✓	
Prep codes	✓	✓	
Dilution factors	✓	✓	
Crossouts/Corrections/Deletions	✓	✓	See log
Calibration:			
Blank & Standard intensities	✓	✓	
Standard deviations	✓	✓	
Curve fit	✓	✓	
Calibration Verification:			
ICV/CCV	✓	✓	See log ↓
ICB/CCB	✓	✓	
Samples:			
RSD's & SD's	✓	✓	
Internal Standards	✓	✓	See log
Carry-over	✓	✓	
Method QC:			
CRI/CRA	✓	✓	
ICSA/ICSAB	✓	✓	See log
Post Spikes/Serial Dilutions	—	—	
Analytic Spikes	—	—	
Matrix QC:			
SRM/LCS	✓	✓	AWH3 AWG4 AWG5 AWH5 AWG8
Matrix Spikes	✓	✓	
Matrix Duplicates	✓	✓	
Method Blanks	✓	✓	AWH3 AN
Data Distribution:			
Requested elements/isotope identified	✓	✓	
Correct samples identified for distribution	✓	✓	
Raw data match distributed data	✓	✓	
Data filename correct	✓	✓	
Necessary Analysts Notes and CAF's	✓	✓	CAF AWH3 AWG4 AWG5 AWH5 AWG8

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS SAMPLE RUN LOG

PE Nexlon ICP-MS Serial No. 81DN1050201

Analysis Date: 2/23/16 **Analyst:** ee

All corrections made by analyst unless otherwise noted. ee 2/24/16

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		Std Ø	E474		
		1	E522		
		2	E455		
		3	E456		
		4	E517		
		5	E523		
		Rinse			
		ICV	E156		
		ICB	E474		
		CCV1	E517		
		CCB1	E474		
		Low Check	E522		
		ICSA	E524		Cr 53 ↑
		ICSAB	E525		↓
		LR200	E361		
		LR300	E533		
		B1			
		B2			
		CCV2			
		CCB2			
		AWG4 MB	REN	2	Cr Cu Pb
		AWG5 MB	↓	↓	Cu Pb
		AWA5 MB	↓	↓	
		AVP9% C	↓	20	Sc↑, Ag Cu Pb

AVX9 : 063118

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 2/23/16 **Analyst:** ee

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		AWH1 A	REN	2	
		AWE5 A	↓	2	cu Pb
		AWG4 A	↓	5	cr cu Pb
		↓ MBSPK	↓	2	Pb↑, cr cu Pb
		AWG5 MBSPK	↓	↓	PB↑, cu Pb
		AWA5 MBSPK	↓	↓	Pb↑
		CCV3			
		CCB3			
		AWH3 MB	REN	2	Cu = 2.92
		AWE8 MB	↓	↓	
		↓ A	↓	↓	
		↓ B	↓	↓	
		AWH3 A	↓	↓	
		↓ B	↓	↓	
		↓ C	↓	↓	
		↓ D	↓	↓	
		↓ MBSPK	↓	↓	Cu, Pb↑
		AWE8 MBSPK	↓	↓	Pb↑
		CCV4			
		CCB4			
		AVP2 MB	SCN	20	
		AVX6 MB	↓	↓	
		↓ A	↓	↓	RR Zn 50x
		↓ B	↓	↓	

AVX6 02814

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ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 2/23/16 **Analyst:** ee

All corrections made by analyst unless otherwise noted. ee 2/24/16

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		AVP2 A	SWW	20	
		↓ B	↓	↓	
		AWA5 A	REN	~~2~~ 10	RA Zn 100x
		AVP2 MBSpk	SWW	20	
		AVX6 MBSpk	↓	↓	
	✓	AWG4 MBSpk	REN	2	Pb↑
		CCV5			
		CCB5			
		AWW0 MB1	REN	2	Ag Cr Pb Tl Only
		B		20	
		C			
		D			
		E			
		ADup			
		A			
		~~ISpk~~			↓
ZZZ	✓	~~ZZZZZZ~~ APost		↓	0.060mL D2363
		↓ MB1Spk	↓	~~1~~ 1/2	Ag Cr Pb Tl Cu
		CCV6			
		CCB6			
		AVX9 MB1	REN	2	
		MB2			
		B			In I_{n-1} ↓
		C ADup	↓	↓	skipped "C" in writing log.

AVX9 : 60320

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ICP/MS SAMPLE RUN LOG

PE Nexlon ICP-MS Serial No. 81DN1050201

Analysis Date: 2/23/16 **Analyst:** eq

All corrections made by analyst unless otherwise noted. eq 2/23/16

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		AVX9A	REN	2	
		ASPK			
ZZZ	✓	~~ZZZZZZ~~ APOST			0.060mL D2363
		MB1SPK			
		MB2SPK			Ni↑; LR
		CCV7			Cr^{53} Mn↓
		CCB7			~~Mn Ni^{62}~~ ↑
		AVX9D	REN	2	
		E			
	✓	F			All IS.↓
	✓	G			↓
	✓	I			All I.S.↓ but Sc
	✓	J			Ge↓
		1/4 Dup			
		H			
		HSPK			
ZZZ	✓	~~ZZZZZZ~~ HPOST			0.060mL D2363
		CCV8			Mn↓
		CCB8			Mn Ni^{62}↑
		AVY5MB	REN	2	
		AVX9K			
		L			
	✓	M			All I.S.↓
	✓	N			↓

AVX9 : 68321

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ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 2/23/16 **Analyst:** ee

All corrections made by analyst unless otherwise noted. 2/24/16

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		AV45 Adup	REN	2	Sc↑
		↓ A	↓	↓	
		Aspk			
		↓ MBSpk			
	✓	AWG5 MBSpk	↓	↓	Pb↑
		CCV9			Mn↓
		CCB9			Cr^{53} Mn Ni^{62}↑
	✓	AWK1 MB	REN	2	
	✓	AWJ0 MB	↓	↓	
	✓	↓ A			All I.S.↓ but Sc
	✓	AWK0 A			In_{-1}↓
	✓	AWK1 A		50	~~$In\ Ge_{-1}$↓~~
	✓	AWK1 A		2	$In\ Ge_{-1}$↓
	✓	↓ MBSpk		↓	Ge_{-1}↓
	✓	AWJ0 MBSpk	↓	↓	↓
	✓	MSSpk			↓
		CCV10			Cr, Mn↓ Ni^{60}, Cu^{In-1}↓, Zn^{66}, Ag+1, Pb↑
		CCB10		ee 2/24/16	Ni^{62}↑, In_{-1} Ge↓
		Rinse/DI			
					ee 2/24/16

AVX9 : 66322

Performance Check Report

Sample ID: STD Performance Check
Sample Date/Time: Tuesday, February 23, 2016 10:38:10
Sample Description:
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\STD Performance Check.mth
Dataset File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\DataSet\Default\STD Performance Check.8671
MassCal File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Conditions File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Dual Detector Mode: Pulse
Acq. Dead Time (ns): 35
Current Dead Time (ns): 35
Torch Z position (mm): 0.00

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD	Mode
	Be	9.0	2615.0	2614.973	28.381	1.1	Standard
	In	114.9	90060.1	90060.064	1668.350	1.9	Standard
	U	238.1	68353.1	68353.075	515.630	0.8	Standard
⌈	CeO	155.9	1448.5	0.016	0.000	1.7	Standard
| >	Ce	139.9	90147.0	90146.970	1166.976	1.3	Standard
⌊	Ce++	70.0	1576.7	0.017	0.000	1.0	Standard
	Bkgd	220.0	0.5	0.533	0.361	67.7	Standard

Current Conditions File Data

Current Value	Description
1.05	Nebulizer Gas Flow STD/KED [NEB]
1.20	Auxiliary Gas Flow
18.00	Plasma Gas Flow
-12.00	Deflector Voltage
1600.00	ICP RF Power
-1637.00	Analog Stage Voltage
1050.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-15.00	Cell Rod Offset STD [CRO]
7.00	Discriminator Threshold
-2.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.25	RPq
1.05	DRC Mode NEB
-8.00	DRC Mode QRO
-2.50	DRC Mode CRO
-4.00	DRC Mode Cell Entrance/Exit Voltage
0.60	Cell Gas A
0.00	Cell Gas B
250.00	Axial Field Voltage
-15.00	KED Mode CRO
-12.00	KED Mode QRO
-2.00	KED Mode Cell Entrance Voltage
-24.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
4.00	KED Cell Gas B
0.00	KED RPa
0.25	KED RPq
475.00	KED Mode Axial Field Voltage

AVX9 : 08323

SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Wizard\SmartTune\ARIdaily_UCT.swz

Start Time: 2/23/2016 10:28:07 AM
End Time: 2/23/2016 10:40:15 AM

STD Performance Check - [Failed]
Obtained Intensity (Be 9): 1245.85 - <Target not achieved>
Obtained Intensity (In 115): 59536.88
Obtained Intensity (U 238): 58176.83
Obtained Intensity (Bkgd 220): 0.67
Obtained Formula (Ce++ 70 / Ce 140): 0.017 (=1015.84 / 59197.41)
Obtained Formula (CeO 156 / Ce 140): 0.015 (=896.09 / 59197.41)

Torch Alignment - [Passed]

Vertical	Horizontal	Intensity
1.82 mm	0.65 mm	73938.85

Nebulizer Gas Flow STD/KED [NEB] - [Passed] Optimum value(s): 1.05
Obtained Intensity (In 115): 68402.37
Obtained Formula (CeO 156 / Ce 140): 0.0184 (=1246.05 / 67854.77)

Mass Calibration and Resolution - [Passed] Optimum value(s): N/A
Target/Obtained mass (7.016/7.025), Target/Obtained resolution (0.7/0.709)
Target/Obtained mass (23.985/23.975), Target/Obtained resolution (0.7/0.694)
Target/Obtained mass (114.904/114.925), Target/Obtained resolution (0.7/0.695)
Target/Obtained mass (238.05/238.025), Target/Obtained resolution (0.7/0.698)

QID STD/DRC - Optimum value(s): Correlation Coefficient = 0.999; Intercept = -11.43

KED Mode QID - Optimum value(s): Correlation Coefficient = 1.000; Intercept = -11.86

STD Performance Check - [Passed] Optimum value(s): N/A
Obtained Intensity (Be 9): 2614.97
Obtained Intensity (In 115): 90060.06
Obtained Intensity (U 238): 68353.08
Obtained Intensity (Bkgd 220): 0.53
Obtained Formula (Ce++ 70 / Ce 140): 0.017 (=1576.69 / 90146.97)
Obtained Formula (CeO 156 / Ce 140): 0.016 (=1448.47 / 90146.97)

AVX3 00324

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Blank
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, February 23, 2016 11:08:57
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022216b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L				56372	1	Standard
	Cl	37		mg/L				4442069	0	Standard
⌈>	Sc	45		ug/L				1108426	1	Standard
|	Cr	52		ug/L				28245	1	Standard
|	Cr	53		ug/L				661	5	Standard
⌊	Mn	55		ug/L				522	4	Standard
⌈>	Ge-1	72		ug/L				58771	3	KED
|	Co	59		ug/L				10	57	KED
|	Ni	60		ug/L				3	91	KED
|	Ni	62		ug/L				0		KED
|	Cu	63		ug/L				13	56	KED
|	Cu	65		ug/L				7	90	KED
|	Zn	66		ug/L				29	13	KED
|	Zn	67		ug/L				2	114	KED
|	Zn	68		ug/L				17	26	KED
|	As	75		ug/L				3	37	KED
⌊	Se-1	78		ug/L				11	10	KED
	Y	89		ug/L				764463	2	Standard
	Kr	83		ug/L				93	7	Standard
⌈>	In-1	115		ug/L				22921	4	KED
|	Mo	98		ug/L				8	11	KED
|	Cd	111		ug/L				0	100	KED
⌊	Cd	114		ug/L				2	41	KED
⌈>	In	115		ug/L				1089596	2	Standard
|	Ag	107		ug/L				38	15	Standard
|	Sb	121		ug/L				20	19	Standard
|	Sb	123		ug/L				23	20	Standard
|	Ba	135		ug/L				12	37	Standard
⌊	Ba	137		ug/L				17	40	Standard
⌈>	Tb	159		ug/L				1252627	1	Standard
|	Tl	205		ug/L				20	36	Standard
⌊	Pb	208		ug/L				128	8	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, February 23, 2016 11:13:49
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022216b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	57842	2	Standard
	Cl	37		mg/L			4442069	4552281	0	Standard
>	Sc	45		ug/L			1108426	1120174	1	Standard
|	Cr	52	0.500	ug/L	0.026	5	28245	37637	2	Standard
|	Cr	53	0.500	ug/L	0.015	2	661	1906	1	Standard
\	Mn	55	0.500	ug/L	0.017	3	522	15667	3	Standard
>	Ge-1	72		ug/L			58771	58223	2	KED
|	Co	59	0.200	ug/L	0.012	5	10	801	3	KED
|	Ni	60	0.500	ug/L	0.046	9	3	501	6	KED
|	Ni	62	0.500	ug/L	0.052	10	0	86	8	KED
|	Cu	63	0.500	ug/L	0.027	5	13	1612	3	KED
|	Cu	65	0.500	ug/L	0.014	2	7	780	4	KED
|	Zn	66	4.000	ug/L	0.102	2	29	1553	3	KED
|	Zn	67	4.000	ug/L	0.229	5	2	241	7	KED
|	Zn	68	4.000	ug/L	0 211	5	17	1086	5	KED
|	As	75	0.200	ug/L	0.025	12	3	47	12	KED
\	Se-1	78	0.500	ug/L	0.103	20	11	28	12	KED
	Y	89		ug/L			764463	795983	2	Standard
	Kr	83		ug/L			93	94	16	Standard
>	In-1	115		ug/L			22921	23188	3	KED
|	Mo	98	0.200	ug/L	0.014	6	8	210	4	KED
|	Cd	111	0.100	ug/L	0.021	21	0	35	20	KED
\	Cd	114	0.100	ug/L	0.017	17	2	88	18	KED
>	In	115		ug/L			1089596	1121819	0	Standard
|	Ag	107	0.200	ug/L	0.006	3	38	4019	2	Standard
|	Sb	121	0.200	ug/L	0.004	1	20	3224	1	Standard
|	Sb	123	0.200	ug/L	0.008	4	23	2379	4	Standard
|	Ba	135	0.500	ug/L	0.006	1	12	2193	1	Standard
\	Ba	137	0.500	ug/L	0.014	2	17	3890	2	Standard
>	Tb	159		ug/L			1252627	1300906	2	Standard
|	Tl	205	0.200	ug/L	0.007	3	20	7305	1	Standard
\	Pb	208	0.100	ug/L	0.004	4	128	4700	5	Standard

AVX9 : 66326

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 2
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, February 23, 2016 11:18:41
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022216b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	58720	1	Standard
	Cl	37		mg/L			4442069	4492614	2	Standard
>	Sc	45		ug/L			1108426	1126749	1	Standard
	Cr	52	10.003	ug/L	0.241	2	28245	234265	2	Standard
	Cr	53	10.000	ug/L	0.202	2	661	25161	3	Standard
	Mn	55	10.000	ug/L	0.288	2	522	304299	2	Standard
>	Ge-1	72		ug/L			58771	57865	1	KED
	Co	59	10.000	ug/L	0.234	2	10	39092	2	KED
	Ni	60	10.003	ug/L	0.318	3	3	11421	1	KED
	Ni	62	10.002	ug/L	0.608	6	0	1896	4	KED
	Cu	63	10.001	ug/L	0.097	0	13	32673	1	KED
	Cu	65	9.999	ug/L	0.025	0	7	15037	1	KED
	Zn	66	10.004	ug/L	0.092	0	29	3825	1	KED
	Zn	67	10.151	ug/L	0.402	3	2	668	4	KED
	Zn	68	10.139	ug/L	0.347	3	17	2964	2	KED
	As	75	10.000	ug/L	0.484	4	3	2383	3	KED
	Se-1	78	9.992	ug/L	0.608	6	11	281	4	KED
	Y	89		ug/L			764463	763995	2	Standard
	Kr	83		ug/L			93	107	5	Standard
>	In-1	115		ug/L			22921	23405	3	KED
	Mo	98	10.000	ug/L	0.360	3	8	10132	1	KED
	Cd	111	10.000	ug/L	0.174	1	0	3304	1	KED
	Cd	114	10.000	ug/L	0.543	5	2	8251	2	KED
>	In	115		ug/L			1089596	1112021	1	Standard
	Ag	107	10.000	ug/L	0.114	1	38	190001	0	Standard
	Sb	121	10.000	ug/L	0.147	1	20	153251	0	Standard
	Sb	123	10.000	ug/L	0.151	1	23	116916	1	Standard
	Ba	135	10.001	ug/L	0.031	0	12	45081	1	Standard
	Ba	137	10.001	ug/L	0.280	2	17	78419	1	Standard
>	Tb	159		ug/L			1252627	1310000	3	Standard
	Tl	205	10.000	ug/L	0.098	0	20	351816	2	Standard
	Pb	208	10.000	ug/L	0.079	0	128	459485	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 3
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, February 23, 2016 11:23:47
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022216b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	57185	1	Standard
	Cl	37		mg/L			4442069	4722443	3	Standard
>	Sc	45		ug/L			1108426	1122948	2	Standard
	Cr	52	20.012	ug/L	0.738	3	28245	439306	1	Standard
	Cr	53	20.052	ug/L	0.747	3	661	50092	3	Standard
	Mn	55	19.996	ug/L	0.361	1	522	605336	1	Standard
>	Ge-1	72		ug/L			58771	59662	1	KED
	Co	59	19.807	ug/L	0.999	5	10	76851	4	KED
	Ni	60	19.796	ug/L	0.166	0	3	22395	0	KED
	Ni	62	19.737	ug/L	0.639	3	0	3668	3	KED
	Cu	63	19.749	ug/L	0.655	3	13	63344	3	KED
	Cu	65	19.961	ug/L	0.991	4	7	30690	3	KED
	Zn	66	19.887	ug/L	0.332	1	29	7661	0	KED
	Zn	67	19.707	ug/L	0.973	4	2	1271	5	KED
	Zn	68	19.868	ug/L	0.477	2	17	5839	1	KED
	As	75	19.820	ug/L	0.579	2	3	4699	1	KED
	Se-1	78	19.810	ug/L	0.786	3	11	544	2	KED
	Y	89		ug/L			764463	798764	3	Standard
	Kr	83		ug/L			93	116	14	Standard
>	In-1	115		ug/L			22921	23436	3	KED
	Mo	98	20.183	ug/L	0.957	4	8	21235	1	KED
	Cd	111	20.012	ug/L	0.497	2	0	6635	2	KED
	Cd	114	20.031	ug/L	0.439	2	2	16660	1	KED
>	In	115		ug/L			1089596	1118364	1	Standard
	Ag	107	19.938	ug/L	0.788	3	38	376191	2	Standard
	Sb	121	20.047	ug/L	0.325	1	20	311883	0	Standard
	Sb	123	19.973	ug/L	0.231	1	23	233558	0	Standard
	Ba	135	19.966	ug/L	0.547	2	12	89879	1	Standard
	Ba	137	19.969	ug/L	0.519	2	17	156508	1	Standard
>	Tb	159		ug/L			1252627	1309743	1	Standard
	Tl	205	20.005	ug/L	0.501	2	20	704384	2	Standard
	Pb	208	19.963	ug/L	0.495	2	128	910103	1	Standard

AVX3 : 66328

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 4
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, February 23, 2016 11:29:02
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022216b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	56259	4	Standard
	Cl	37		mg/L			4442069	4565343	3	Standard
>	Sc	45		ug/L			1108426	1117014	0	Standard
	Cr	52	49.937	ug/L	0.916	1	28245	1041979	1	Standard
	Cr	53	50.012	ug/L	1.378	2	661	123475	3	Standard
	Mn	55	49.858	ug/L	0.226	0	522	1480049	0	Standard
>	Ge-1	72		ug/L			58771	59164	2	KED
	Co	59	49.959	ug/L	0.136	0	10	191473	2	KED
	Ni	60	49.697	ug/L	1.869	3	3	54081	1	KED
	Ni	62	49.754	ug/L	1.109	2	0	8953	4	KED
	Cu	63	49.680	ug/L	0.800	1	13	153081	1	KED
	Cu	65	49.710	ug/L	0.502	1	7	73669	1	KED
	Zn	66	49.787	ug/L	3.458	6	29	18575	4	KED
	Zn	67	49.542	ug/L	1.375	2	2	3031	2	KED
	Zn	68	49.832	ug/L	1.371	2	17	14264	2	KED
	As	75	50.105	ug/L	1.179	2	3	11899	0	KED
	Se-1	78	50.243	ug/L	1.394	2	11	1385	1	KED
	Y	89		ug/L			764463	785661	4	Standard
	Kr	83		ug/L			93	107	17	Standard
>	In-1	115		ug/L			22921	23306	3	KED
	Mo	98	50.041	ug/L	1.947	3	8	52573	0	KED
	Cd	111	49.910	ug/L	2.321	4	0	16300	1	KED
	Cd	114	49.895	ug/L	1.021	2	2	40839	1	KED
>	In	115		ug/L			1089596	1109725	2	Standard
	Ag	107	49.803	ug/L	1.349	2	38	914575	2	Standard
	Sb	121	49.901	ug/L	1.395	2	20	762620	1	Standard
	Sb	123	49.842	ug/L	1.686	3	23	569049	1	Standard
	Ba	135	50.162	ug/L	2.338	4	12	227610	2	Standard
	Ba	137	50.123	ug/L	1.087	2	17	394594	0	Standard
>	Tb	159		ug/L			1252627	1310733	3	Standard
	Tl	205	49.765	ug/L	0.914	1	20	1713675	4	Standard
	Pb	208	49.882	ug/L	0.738	1	128	2249194	2	Standard

AVX9 : 00029

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 5
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, February 23, 2016 11:35:58
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022216b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	57609	1	Standard
	Cl	37		mg/L			4442069	4680632	1	Standard
>	Sc	45		ug/L			1108426	1106355	1	Standard
	Cr	52	99.159	ug/L	1.447	1	28245	1967026	0	Standard
	Cr	53	99.352	ug/L	2.044	2	661	237227	3	Standard
	Mn	55	99.445	ug/L	0.828	0	522	2870500	2	Standard
>	Ge-1	72		ug/L			58771	56459	0	KED
	Co	59	100.579	ug/L	1.092	1	10	375085	0	KED
	Ni	60	100.509	ug/L	1.875	1	3	106240	2	KED
	Ni	62	100.324	ug/L	2.618	2	0	17413	3	KED
	Cu	63	100.163	ug/L	0.936	0	13	296184	1	KED
	Cu	65	99.728	ug/L	0.831	0	7	139776	1	KED
	Zn	66	99.962	ug/L	0.938	0	29	35553	0	KED
	Zn	67	101.099	ug/L	1.920	1	2	6125	1	KED
	Zn	68	100.033	ug/L	2.802	2	17	27346	3	KED
	As	75	100.392	ug/L	0.240	0	3	23059	0	KED
	Se-1	78	100.382	ug/L	2.481	2	11	2665	2	KED
	Y	89		ug/L			764463	772814	1	Standard
	Kr	83		ug/L			93	93	20	Standard
>	In-1	115		ug/L			22921	22846	2	KED
	Mo	98	99.648	ug/L	3.555	3	8	101472	2	KED
	Cd	111	99.349	ug/L	1.547	1	0	31152	1	KED
	Cd	114	99.778	ug/L	2.990	2	2	79464	0	KED
>	In	115		ug/L			1089596	1097537	2	Standard
	Ag	107	98.610	ug/L	3.354	3	38	1711081	1	Standard
	Sb	121	98.971	ug/L	0.639	0	20	1446707	1	Standard
	Sb	123	99.326	ug/L	2.723	2	23	1097105	1	Standard
	Ba	135	99.469	ug/L	0.933	0	12	438982	2	Standard
	Ba	137	99.717	ug/L	2.299	2	17	769148	0	Standard
>	Tb	159		ug/L			1252627	1302140	2	Standard
	Tl	205	100.241	ug/L	0.614	0	20	3456754	2	Standard
	Pb	208	99.737	ug/L	0.816	0	128	4429623	2	Standard

AVX9 · 66336

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Rinse sample
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, February 23, 2016 11:43:34
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022216b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			56372	56425	0	Standard
	Cl	**37**		mg/L			4442069	4384866	1	Standard
>	**Sc**	**45**		ug/L			1108426	1084263	1	Standard
	Cr	**52**	**0.026**	ug/L	0.018	68	28245	28135	2	Standard
	Cr	**53**	**-0.037**	ug/L	0.010	26	661	560	5	Standard
	Mn	**55**	**0.001**	ug/L	0.002	139	522	551	11	Standard
>	**Ge-1**	**72**		ug/L			58771	57282	1	KED
	Co	**59**	**0.019**	ug/L	0.033	176	10	79	154	KED
	Ni	**60**	**0.066**	ug/L	0.114	173	3	72	166	KED
	Ni	**62**	**0.411**	ug/L	0.694	168	0	71	168	KED
	Cu	**63**	**0.030**	ug/L	0.039	130	13	102	112	KED
	Cu	**65**	**0.054**	ug/L	0.087	162	7	82	147	KED
	Zn	**66**	**0.183**	ug/L	0.317	172	29	93	118	KED
	Zn	**67**	**1.190**	ug/L	2.051	172	2	74	166	KED
	Zn	**68**	**0.274**	ug/L	0.436	158	17	92	128	KED
	As	**75**	**0.323**	ug/L	0.533	165	3	77	157	KED
	Se-1	**78**	**2.797**	ug/L	4.555	162	11	84	141	KED
	Y	**89**		ug/L			764463	775936	0	Standard
	Kr	**83**		ug/L			93	97	10	Standard
>	**In-1**	**115**		ug/L			22921	22907	1	KED
	Mo	**98**	**0.070**	ug/L	0.011	15	8	80	13	KED
	Cd	**111**	**-0.001**	ug/L	0.002	170	0	0	86	KED
	Cd	**114**	**0.000**	ug/L	0.001	1821	2	2	44	KED
>	**In**	**115**		ug/L			1089596	1106912	1	Standard
	Ag	**107**	**0.001**	ug/L	0.000	9	38	59	1	Standard
	Sb	**121**	**0.097**	ug/L	0.002	2	20	1454	2	Standard
	Sb	**123**	**0.098**	ug/L	0.005	4	23	1115	3	Standard
	Ba	**135**	**-0.001**	ug/L	0.000	52	12	9	20	Standard
	Ba	**137**	**0.000**	ug/L	0.000	569	17	17	12	Standard
>	**Tb**	**159**		ug/L			1252627	1310076	1	Standard
	Tl	**205**	**0.005**	ug/L	0.001	10	20	198	9	Standard
	Pb	**208**	**0.003**	ug/L	0.000	17	128	252	8	Standard

AVX3 . 00331

Sample Information

Sample Date/Time: Tuesday, February 23, 2016 11:35:58
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_
Mass Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tu
Conditions File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

Calibration

Analyte	Mass	r Corr Coef	Slope	Std 1 Conc	Std 2 Conc	Std 3 Conc	Std 4 Conc	Std 5 Conc
C	13							
Cl	37							
Sc	45							
Cr	52	**0.9999**	0.018	0.50	10	20	50	100
Cr	53	**0.9999**	0.002	0.50	10	20	50	100
Mn	55	**0.9999**	0.026	0.50	10	20	50	100
Ge-1	72							
Co	59	**0.9999**	0.066	0.20	10	20	50	100
Ni	60	**0.9999**	0.019	0.50	10	20	50	100
Ni	62	**1.0000**	0.003	0.50	10	20	50	100
Cu	63	**1.0000**	0.052	0.50	10	20	50	100
Cu	65	**1.0000**	0.025	0.50	10	20	50	100
Zn	66	**1.0000**	0.006	4.00	10	20	50	100
Zn	67	**0.9997**	0.001	4.00	10	20	50	100
Zn	68	**1.0000**	0.005	4.00	10	20	50	100
As	75	**1.0000**	0.004	0.20	10	20	50	100
Se-1	78	**1.0000**	0.000	0.50	10	20	50	100
Y	89							
Kr	83							
In-1	115							
Mo	98	**1.0000**	0.045	0.20	10	20	50	100
Cd	111	**0.9999**	0.014	0.10	10	20	50	100
Cd	114	**1.0000**	0.035	0.10	10	20	50	100
In	115							
Ag	107	**0.9997**	0.016	0.20	10	20	50	100
Sb	121	**0.9998**	0.013	0.20	10	20	50	100
Sb	123	**0.9999**	0.010	0.20	10	20	50	100
Ba	135	**0.9999**	0.004	0.50	10	20	50	100
Ba	137	**1.0000**	0.007	0.50	10	20	50	100
Tb	159							
Tl	205	**1.0000**	0.026	0.20	10	20	50	100
Pb	208	**1.0000**	0.034	0.10	10	20	50	100

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICV
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, February 23, 2016 11:51:09
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	57620	0	Standard
	Cl	37		mg/L			4442069	4593100	1	Standard
>	Sc	45		ug/L			1108426	1122308	1	Standard
|	Cr	52	54.687	ug/L	1.559	2	28245	1113186	1	Standard
|	Cr	53	54.135	ug/L	2.127	3	661	131360	2	Standard
\	Mn	55	52.781	ug/L	1.319	2	522	1545296	1	Standard
>	Ge-1	72		ug/L			58771	59447	0	KED
|	Co	59	51.793	ug/L	0.386	0	10	203384	1	KED
|	Ni	60	52.144	ug/L	1.925	3	3	58018	2	KED
|	Ni	62	49.864	ug/L	0.364	0	0	9111	0	KED
|	Cu	63	50.598	ug/L	0.774	1	13	157532	1	KED
|	Cu	65	53.950	ug/L	0.538	0	7	79621	1	KED
|	Zn	66	51.050	ug/L	1.284	2	29	19130	1	KED
|	Zn	67	51.005	ug/L	0.604	1	2	3254	1	KED
|	Zn	68	50.973	ug/L	0.863	1	17	14680	2	KED
|	As	75	50.756	ug/L	0.284	0	3	12277	1	KED
\	Se-1	78	76.411	ug/L	1.264	1	11	2138	0	KED
	Y	89		ug/L			764463	818986	3	Standard
	Kr	83		ug/L			93	99	20	Standard
>	In-1	115		ug/L			22921	23584	1	KED
|	Mo	98	50.709	ug/L	2.381	4	8	53303	3	KED
|	Cd	111	50.027	ug/L	1.025	2	0	16194	0	KED
\	Cd	114	50.901	ug/L	1.184	2	2	41857	0	KED
>	In	115		ug/L			1089596	1128737	1	Standard
|	Ag	107	52.534	ug/L	0.878	1	38	937847	0	Standard
|	Sb	121	52.055	ug/L	0.945	1	20	782523	0	Standard
|	Sb	123	51.842	ug/L	0.659	1	23	589058	0	Standard
|	Ba	135	53.161	ug/L	1.339	2	12	241220	1	Standard
\	Ba	137	51.198	ug/L	0.950	1	17	406241	1	Standard
>	Tb	159		ug/L			1252627	1336282	1	Standard
|	Tl	205	50.505	ug/L	1.555	3	20	1787011	2	Standard
\	Pb	208	52.706	ug/L	1.599	3	128	2401969	2	Standard

AVXS : 00033

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICB
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, February 23, 2016 11:58:45
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	56733	7	Standard
	Cl	37		mg/L			4442069	4436563	0	Standard
>	Sc	45		ug/L			1108426	1076186	0	Standard
	Cr	52	0.029	ug/L	0.026	91	28245	27965	1	Standard
	Cr	53	-0.052	ug/L	0.009	16	661	522	3	Standard
	Mn	55	0.000	ug/L	0.001	1446	522	508	5	Standard
>	Ge-1	72		ug/L			58771	59155	2	KED
	Co	59	0.001	ug/L	0.004	737	10	12	119	KED
	Ni	60	0.003	ug/L	0.001	38	3	6	17	KED
	Ni	62	0.000	ug/L	0.000		0	0		KED
	Cu	63	0.006	ug/L	0.003	60	13	31	31	KED
	Cu	65	0.008	ug/L	0.008	104	7	19	60	KED
	Zn	66	0.020	ug/L	0.001	7	29	37	2	KED
	Zn	67	0.060	ug/L	0.121	202	2	6	121	KED
	Zn	68	0.062	ug/L	0.025	40	17	35	20	KED
	As	75	0.011	ug/L	0.009	88	3	6	35	KED
	Se-1	78	0.117	ug/L	0.076	65	11	14	16	KED
	Y	89		ug/L			764463	768566	2	Standard
	Kr	83		ug/L			93	95	14	Standard
>	In-1	115		ug/L			22921	23345	1	KED
	Mo	98	0.041	ug/L	0.006	14	8	51	10	KED
	Cd	111	0.003	ug/L	0.003	100	0	1	50	KED
	Cd	114	0.001	ug/L	0.001	172	2	3	35	KED
>	In	115		ug/L			1089596	1117327	2	Standard
	Ag	107	0.000	ug/L	0.000	91	38	43	7	Standard
	Sb	121	0.031	ug/L	0.002	7	20	488	6	Standard
	Sb	123	0.030	ug/L	0.000	1	23	359	2	Standard
	Ba	135	0.002	ug/L	0.002	149	12	20	53	Standard
	Ba	137	0.002	ug/L	0.002	128	17	29	51	Standard
>	Tb	159		ug/L			1252627	1278306	1	Standard
	Tl	205	0.005	ug/L	0.002	33	20	186	28	Standard
	Pb	208	0.004	ug/L	0.003	74	128	314	42	Standard

AVX9 · 88034

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, February 23, 2016 12:03:37
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	56894	2	Standard
	Cl	37		mg/L			4442069	4599959	1	Standard
>	Sc	45		ug/L			1108426	1102834	2	Standard
	Cr	52	50.846	ug/L	1.653	3	28245	1019187	3	Standard
	Cr	53	51.071	ug/L	1.442	2	661	121847	3	Standard
	Mn	55	50.155	ug/L	1.404	2	522	1442734	1	Standard
>	Ge-1	72		ug/L			58771	58520	1	KED
	Co	59	49.579	ug/L	2.143	4	10	191704	5	KED
	Ni	60	51.071	ug/L	1.276	2	3	55948	2	KED
	Ni	62	50.172	ug/L	1.054	2	0	9023	0	KED
	Cu	63	49.358	ug/L	1.509	3	13	151266	2	KED
	Cu	65	50.673	ug/L	1.009	1	7	73624	3	KED
	Zn	66	51.530	ug/L	0.837	1	29	19012	2	KED
	Zn	67	50.709	ug/L	1.072	2	2	3185	0	KED
	Zn	68	49.800	ug/L	0.671	1	17	14117	1	KED
	As	75	49.819	ug/L	0.529	1	3	11861	0	KED
	Se-1	78	49.690	ug/L	1.182	2	11	1373	3	KED
	Y	89		ug/L			764463	805657	1	Standard
	Kr	83		ug/L			93	99	23	Standard
>	In-1	115		ug/L			22921	23132	1	KED
	Mo	98	50.678	ug/L	0.474	0	8	52276	1	KED
	Cd	111	50.989	ug/L	1.109	2	0	16190	0	KED
	Cd	114	51.567	ug/L	1.197	2	2	41597	1	KED
>	In	115		ug/L			1089596	1114476	2	Standard
	Ag	107	50.762	ug/L	1.883	3	38	894341	1	Standard
	Sb	121	50.911	ug/L	1.266	2	20	755479	1	Standard
	Sb	123	50.421	ug/L	0.416	0	23	565657	1	Standard
	Ba	135	51.067	ug/L	0.706	1	12	228782	1	Standard
	Ba	137	50.311	ug/L	1.118	2	17	394067	1	Standard
>	Tb	159		ug/L			1252627	1330707	0	Standard
	Tl	205	47.981	ug/L	1.242	2	20	1691044	3	Standard
	Pb	208	49.953	ug/L	0.888	1	128	2267386	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, February 23, 2016 12:10:53
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	56591	3	Standard
	Cl	37		mg/L			4442069	4453858	2	Standard
>	Sc	45		ug/L			1108426	1091748	1	Standard
|	Cr	52	0.023	ug/L	0.078	342	28245	28250	4	Standard
|	Cr	53	-0.054	ug/L	0.003	4	661	525	0	Standard
L	Mn	55	0.002	ug/L	0.003	108	522	586	14	Standard
>	Ge-1	72		ug/L			58771	59187	1	KED
|	Co	59	0.000	ug/L	0.001	695	10	10	36	KED
|	Ni	60	0.001	ug/L	0.003	234	3	4	65	KED
|	Ni	62	0.010	ug/L	0.018	173	0	1	173	KED
|	Cu	63	0.007	ug/L	0.003	50	13	35	31	KED
|	Cu	65	0.003	ug/L	0.002	54	7	12	22	KED
|	Zn	66	-0.011	ug/L	0.027	245	29	26	40	KED
|	Zn	67	-0.000	ug/L	0.017	6652	2	2	43	KED
|	Zn	68	0.035	ug/L	0.014	40	17	27	15	KED
|	As	75	0.011	ug/L	0.004	40	3	6	15	KED
L	Se-1	78	0.186	ug/L	0.038	20	11	16	6	KED
	Y	89		ug/L			764463	795570	0	Standard
	Kr	83		ug/L			93	88	23	Standard
>	In-1	115		ug/L			22921	22771	0	KED
|	Mo	98	0.051	ug/L	0.006	10	8	60	9	KED
|	Cd	111	-0.001	ug/L	0.002	177	0	0	86	KED
L	Cd	114	-0.001	ug/L	0.004	571	2	1	178	KED
>	In	115		ug/L			1089596	1127945	0	Standard
|	Ag	107	0.002	ug/L	0.003	148	38	78	72	Standard
|	Sb	121	0.061	ug/L	0.001	1	20	931	1	Standard
|	Sb	123	0.063	ug/L	0.002	2	23	740	1	Standard
|	Ba	135	0.002	ug/L	0.001	22	12	23	9	Standard
L	Ba	137	0.003	ug/L	0.005	171	17	43	100	Standard
>	Tb	159		ug/L			1252627	1316910	2	Standard
|	Tl	205	0.008	ug/L	0.006	74	20	295	70	Standard
L	Pb	208	0.005	ug/L	0.004	94	128	351	59	Standard

AXYS 00336

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LOW CHECK
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, February 23, 2016 12:15:45
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	57107	3	Standard
	Cl	37		mg/L			4442069	4399803	0	Standard
⌈>	Sc	45		ug/L			1108426	1077023	0	Standard
|	Cr	52	0.572	ug/L	0.044	7	28245	38341	2	Standard
|	Cr	53	0.443	ug/L	0.018	4	661	1668	2	Standard
⌊	Mn	55	0.524	ug/L	0.012	2	522	15224	2	Standard
⌈>	Ge-1	72		ug/L			58771	58547	3	KED
|	Co	59	0.196	ug/L	0.011	5	10	767	4	KED
|	Ni	60	0.528	ug/L	0.046	8	3	580	5	KED
|	Ni	62	0.423	ug/L	0.040	9	0	76	10	KED
|	Cu	63	0.491	ug/L	0.022	4	13	1519	1	KED
|	Cu	65	0.530	ug/L	0.024	4	7	778	7	KED
|	Zn	66	4.065	ug/L	0.151	3	29	1527	2	KED
|	Zn	67	4.049	ug/L	0.285	7	2	257	9	KED
|	Zn	68	3.743	ug/L	0.060	1	17	1078	4	KED
|	As	75	0.187	ug/L	0.031	16	3	48	17	KED
⌊	Se-1	78	0.572	ug/L	0.191	33	11	26	21	KED
	Y	89		ug/L			764463	776461	2	Standard
	Kr	83		ug/L			93	106	10	Standard
⌈>	In-1	115		ug/L			22921	23613	2	KED
|	Mo	98	0.207	ug/L	0.007	3	8	226	4	KED
|	Cd	111	0.109	ug/L	0.015	14	0	36	11	KED
⌊	Cd	114	0.117	ug/L	0.004	3	2	98	1	KED
⌈>	In	115		ug/L			1089596	1134140	1	Standard
|	Ag	107	0.214	ug/L	0.011	4	38	3877	4	Standard
|	Sb	121	0.229	ug/L	0.005	2	20	3479	2	Standard
|	Sb	123	0.231	ug/L	0.005	2	23	2664	0	Standard
|	Ba	135	0.506	ug/L	0.018	3	12	2318	1	Standard
⌊	Ba	137	0.499	ug/L	0.021	4	17	3995	2	Standard
⌈>	Tb	159		ug/L			1252627	1305868	3	Standard
|	Tl	205	0.215	ug/L	0.005	2	20	7471	4	Standard
⌊	Pb	208	0.107	ug/L	0.001	1	128	4903	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICSA
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, February 23, 2016 12:20:36
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	110137	4	Standard
	Cl	37		mg/L			4442069	12072690	1	Standard
>	Sc	45		ug/L			1108426	1218775	2	Standard
	Cr	52	0.642	ug/L	0.038	5	28245	44890	3	Standard
	Cr	53	5.254	ug/L	0.142	2	661	14500	0	Standard
	Mn	55	0.126	ug/L	0.013	9	522	4580	9	Standard
>	Ge-1	72		ug/L			58771	57651	1	KED
	Co	59	0.007	ug/L	0.001	8	10	36	7	KED
	Ni	60	0.040	ug/L	0.005	12	3	46	11	KED
	Ni	62	0.082	ug/L	0.042	51	0	14	52	KED
	Cu	63	0.115	ug/L	0.008	6	13	361	4	KED
	Cu	65	0.113	ug/L	0.011	10	7	169	9	KED
	Zn	66	0.272	ug/L	0.043	15	29	128	13	KED
	Zn	67	0.299	ug/L	0.126	42	2	20	36	KED
	Zn	68	0.243	ug/L	0.065	26	17	85	20	KED
	As	75	0.019	ug/L	0.005	27	3	7	15	KED
	Se-1	78	0.095	ug/L	0.111	116	11	13	23	KED
	Y	89		ug/L			764463	836875	3	Standard
	Kr	83		ug/L			93	160	7	Standard
>	In-1	115		ug/L			22921	22950	0	KED
	Mo	98	407.373	ug/L	8.384	2	8	416823	2	KED
	Cd	111	0.052	ug/L	0.005	9	0	17	8	KED
	Cd	114	0.050	ug/L	0.012	22	2	42	21	KED
>	In	115		ug/L			1089596	1123755	2	Standard
	Ag	107	0.065	ug/L	0.017	26	38	1200	23	Standard
	Sb	121	0.033	ug/L	0.014	42	20	518	39	Standard
	Sb	123	0.034	ug/L	0.015	43	23	408	39	Standard
	Ba	135	0.043	ug/L	0.013	30	12	208	26	Standard
	Ba	137	0.038	ug/L	0.011	28	17	320	25	Standard
>	Tb	159		ug/L			1252627	1342474	1	Standard
	Tl	205	0.013	ug/L	0.009	69	20	479	67	Standard
	Pb	208	0.063	ug/L	0.008	13	128	3047	13	Standard

AVX3 : 99338

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICSAB
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, February 23, 2016 12:25:28
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	115614	5	Standard
	Cl	37		mg/L			4442069	12323324	5	Standard
>	Sc	45		ug/L			1108426	1275756	1	Standard
	Cr	52	20.686	ug/L	1.047	5	28245	498680	3	Standard
	Cr	53	24.557	ug/L	0.429	1	661	68158	0	Standard
	Mn	55	19.145	ug/L	0.429	2	522	637478	0	Standard
>	Ge-1	72		ug/L			58771	57192	1	KED
	Co	59	20.766	ug/L	0.634	3	10	78449	2	KED
	Ni	60	20.780	ug/L	0.168	0	3	22250	0	KED
	Ni	62	20.793	ug/L	0.328	1	0	3655	2	KED
	Cu	63	20.260	ug/L	0.307	1	13	60703	2	KED
	Cu	65	20.686	ug/L	0.220	1	7	29377	2	KED
	Zn	66	19.552	ug/L	0.014	0	29	7067	1	KED
	Zn	67	16.943	ug/L	0.253	1	2	1041	1	KED
	Zn	68	18.236	ug/L	0.037	0	17	5063	1	KED
	As	75	19.743	ug/L	0.293	1	3	4596	0	KED
	Se-1	78	0.124	ug/L	0.040	32	11	14	7	KED
	Y	89		ug/L			764463	850117	0	Standard
	Kr	83		ug/L			93	151	10	Standard
>	In-1	115		ug/L			22921	22309	3	KED
	Mo	98	416.163	ug/L	12.043	2	8	413694	0	KED
	Cd	111	19.987	ug/L	0.493	2	0	6119	0	KED
	Cd	114	19.983	ug/L	0.338	1	2	15548	3	KED
>	In	115		ug/L			1089596	1118876	0	Standard
	Ag	107	21.619	ug/L	0.483	2	38	382617	1	Standard
	Sb	121	0.020	ug/L	0.001	5	20	321	5	Standard
	Sb	123	0.022	ug/L	0.003	13	23	272	12	Standard
	Ba	135	0.040	ug/L	0.003	7	12	192	6	Standard
	Ba	137	0.028	ug/L	0.001	4	17	240	3	Standard
>	Tb	159		ug/L			1252627	1334971	2	Standard
	Tl	205	0.003	ug/L	0.001	16	20	139	11	Standard
	Pb	208	0.058	ug/L	0.002	2	128	2790	2	Standard

AVX9 : 88339

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LR200
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, February 23, 2016 12:33:03
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	61277	2	Standard
	Cl	37		mg/L			4442069	4756496	2	Standard
[>	Sc	45		ug/L			1108426	1128671	0	Standard
|	Cr	52	195.356	ug/L	5.270	2	28245	3925771	2	Standard
|	Cr	53	197.215	ug/L	3.842	1	661	479641	1	Standard
L	Mn	55	191.805	ug/L	5.540	2	522	5646629	2	Standard
[>	Ge-1	72		ug/L			58771	54308	1	KED
|	Co	59	199.203	ug/L	2.327	1	10	714588	1	KED
|	Ni	60	203.506	ug/L	5.194	2	3	206852	1	KED
|	Ni	62	201.280	ug/L	3.677	1	0	33596	0	KED
|	Cu	63	199.688	ug/L	4.083	2	13	567873	1	KED
|	Cu	65	199.853	ug/L	1.935	0	7	269451	2	KED
|	Zn	66	196.233	ug/L	2.734	1	29	67108	1	KED
|	Zn	67	189.522	ug/L	7.924	4	2	11040	3	KED
|	Zn	68	193.922	ug/L	4.771	2	17	50970	2	KED
|	As	75	201.460	ug/L	4.261	2	3	44500	1	KED
L	Se-1	78	191.364	ug/L	4.513	2	11	4878	2	KED
	Y	89		ug/L			764463	774021	2	Standard
	Kr	83		ug/L			93	151	7	Standard
[>	In-1	115		ug/L			22921	21810	4	KED
|	Mo	98	205.728	ug/L	12.909	6	8	199663	1	KED
|	Cd	111	196.516	ug/L	9.818	4	0	58747	0	KED
L	Cd	114	199.947	ug/L	9.732	4	2	151854	0	KED
[>	In	115		ug/L			1089596	1093566	1	Standard
|	Ag	107	202.943	ug/L	6.347	3	38	3509423	1	Standard
|	Sb	121	199.289	ug/L	3.157	1	20	2902532	1	Standard
|	Sb	123	200.450	ug/L	4.002	1	23	2206461	1	Standard
|	Ba	135	192.978	ug/L	3.097	1	12	848371	0	Standard
L	Ba	137	187.788	ug/L	2.514	1	17	1443537	1	Standard
[>	Tb	159		ug/L			1252627	1287532	1	Standard
|	Tl	205	205.217	ug/L	2.123	1	20	6996540	0	Standard
L	Pb	208	202.775	ug/L	1.386	0	128	8904409	1	Standard

AVX9 · 00340

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LR300
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, February 23, 2016 12:37:55
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	60910	2	Standard
	Cl	37		mg/L			4442069	4723729	0	Standard
>	Sc	45		ug/L			1108426	1113090	1	Standard
|	Cr	52	298.490	ug/L	9.548	3	28245	5898853	1	Standard
|	Cr	53	295.512	ug/L	3.275	1	661	708412	1	Standard
L	Mn	55	292.496	ug/L	1.189	0	522	8492379	1	Standard
>	Ge-1	72		ug/L			58771	54173	0	KED
|	Co	59	300.858	ug/L	4.743	1	10	1076482	0	KED
|	Ni	60	295.685	ug/L	7.218	2	3	299828	1	KED
|	Ni	62	296.568	ug/L	11.806	3	0	49374	3	KED
|	Cu	63	286.073	ug/L	5.241	1	13	811531	0	KED
|	Cu	65	294.883	ug/L	4.824	1	7	396516	1	KED
|	Zn	66	287.614	ug/L	8.721	3	29	98085	2	KED
|	Zn	67	276.511	ug/L	11.307	4	2	16067	3	KED
|	Zn	68	281.105	ug/L	9.242	3	17	73684	2	KED
|	As	75	296.539	ug/L	5.672	1	3	65339	0	KED
L	Se-1	78	280.839	ug/L	3.364	1	11	7136	0	KED
	Y	89		ug/L			764463	785072	1	Standard
	Kr	83		ug/L			93	203	7	Standard
>	In-1	115		ug/L			22921	21826	1	KED
|	Mo	98	311.174	ug/L	5.662	1	8	302772	1	KED
|	Cd	111	292.028	ug/L	0.833	0	0	87498	1	KED
L	Cd	114	290.512	ug/L	1.288	0	2	221125	1	KED
>	In	115		ug/L			1089596	1044197	1	Standard
|	Ag	107	303.010	ug/L	4.824	1	38	5003989	0	Standard
|	Sb	121	306.478	ug/L	3.979	1	20	4262122	0	Standard
|	Sb	123	302.693	ug/L	5.255	1	23	3181632	1	Standard
|	Ba	135	295.470	ug/L	4.298	1	12	1240322	0	Standard
L	Ba	137	301.858	ug/L	5.866	1	17	2215824	2	Standard
>	Tb	159		ug/L			1252627	1281841	2	Standard
|	Tl	205	300.547	ug/L	4.484	1	20	10201836	2	Standard
L	Pb	208	300.107	ug/L	3.040	1	128	13121364	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: B1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, February 23, 2016 12:45:30
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			56372	60137	4	Standard
	Cl	**37**		mg/L			4442069	4479378	3	Standard
>	**Sc**	**45**		ug/L			1108426	1103347	3	Standard
	Cr	**52**	**0.110**	ug/L	0.108	97	28245	30255	6	Standard
	Cr	**53**	**0.020**	ug/L	0.116	589	661	704	38	Standard
	Mn	**55**	**0.108**	ug/L	0.161	150	522	3591	128	Standard
>	**Ge-1**	**72**		ug/L			58771	56814	2	KED
	Co	**59**	**0.002**	ug/L	0.001	33	10	17	16	KED
	Ni	**60**	**0.028**	ug/L	0.007	23	3	33	18	KED
	Ni	**62**	**0.048**	ug/L	0.037	77	0	8	74	KED
	Cu	**63**	**0.025**	ug/L	0.004	15	13	88	12	KED
	Cu	**65**	**0.021**	ug/L	0.004	19	7	37	12	KED
	Zn	**66**	**0.192**	ug/L	0.038	19	29	97	15	KED
	Zn	**67**	**0.178**	ug/L	0.025	14	2	13	14	KED
	Zn	**68**	**0.233**	ug/L	0.030	13	17	81	10	KED
	As	**75**	**0.019**	ug/L	0.010	55	3	7	33	KED
	Se-1	**78**	**0.039**	ug/L	0.065	166	11	11	11	KED
	Y	**89**		ug/L			764463	771986	0	Standard
	Kr	**83**		ug/L			93	97	7	Standard
>	**In-1**	**115**		ug/L			22921	23010	1	KED
	Mo	**98**	**0.118**	ug/L	0.024	20	8	130	19	KED
	Cd	**111**	**0.002**	ug/L	0.005	230	0	1	91	KED
	Cd	**114**	**-0.001**	ug/L	0.000	18	2	1	5	KED
>	**In**	**115**		ug/L			1089596	1128928	4	Standard
	Ag	**107**	**0.080**	ug/L	0.131	163	38	1446	158	Standard
	Sb	**121**	**0.358**	ug/L	0.113	31	20	5385	29	Standard
	Sb	**123**	**0.363**	ug/L	0.121	33	23	4130	31	Standard
	Ba	**135**	**0.065**	ug/L	0.106	162	12	304	154	Standard
	Ba	**137**	**0.065**	ug/L	0.101	156	17	521	150	Standard
>	**Tb**	**159**		ug/L			1252627	1332225	2	Standard
	Tl	**205**	**0.109**	ug/L	0.089	81	20	3817	78	Standard
	Pb	**208**	**0.065**	ug/L	0.080	122	128	3052	115	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: B2
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, February 23, 2016 12:52:17
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			56372	58728	3	Standard
	Cl	**37**		mg/L			4442069	4448218	0	Standard
⌈>	**Sc**	**45**		ug/L			1108426	1108831	2	Standard
|	**Cr**	**52**	**0.089**	ug/L	0.068	76	28245	29973	1	Standard
|	**Cr**	**53**	**-0.056**	ug/L	0.012	21	661	529	6	Standard
⌊	**Mn**	**55**	**0.013**	ug/L	0.002	14	522	888	3	Standard
⌈>	**Ge-1**	**72**		ug/L			58771	57483	2	KED
|	**Co**	**59**	**-0.000**	ug/L	0.001	1400	10	9	52	KED
|	**Ni**	**60**	**0.030**	ug/L	0.006	21	3	35	18	KED
|	**Ni**	**62**	**0.040**	ug/L	0.034	84	0	6	83	KED
|	**Cu**	**63**	**0.020**	ug/L	0.001	5	13	74	4	KED
|	**Cu**	**65**	**0.016**	ug/L	0.011	69	7	30	51	KED
|	**Zn**	**66**	**0.213**	ug/L	0.037	17	29	106	10	KED
|	**Zn**	**67**	**0.185**	ug/L	0.072	38	2	13	34	KED
|	**Zn**	**68**	**0.207**	ug/L	0.041	19	17	74	15	KED
|	**As**	**75**	**0.009**	ug/L	0.003	32	3	5	9	KED
⌊	**Se-1**	**78**	**0.085**	ug/L	0.043	50	11	13	11	KED
	Y	**89**		ug/L			764463	795906	4	Standard
	Kr	**83**		ug/L			93	79	26	Standard
⌈>	**In-1**	**115**		ug/L			22921	23360	0	KED
|	**Mo**	**98**	**0.057**	ug/L	0.012	20	8	68	18	KED
|	**Cd**	**111**	**0.005**	ug/L	0.002	34	0	2	21	KED
⌊	**Cd**	**114**	**-0.002**	ug/L	0.001	55	2	0	241	KED
⌈>	**In**	**115**		ug/L			1089596	1132048	3	Standard
|	**Ag**	**107**	**0.002**	ug/L	0.001	51	38	74	28	Standard
|	**Sb**	**121**	**0.096**	ug/L	0.008	8	20	1466	5	Standard
|	**Sb**	**123**	**0.095**	ug/L	0.004	4	23	1104	1	Standard
|	**Ba**	**135**	**0.005**	ug/L	0.001	24	12	37	12	Standard
⌊	**Ba**	**137**	**0.006**	ug/L	0.002	35	17	69	26	Standard
⌈>	**Tb**	**159**		ug/L			1252627	1344583	2	Standard
|	**Tl**	**205**	**0.020**	ug/L	0.002	11	20	735	8	Standard
⌊	**Pb**	**208**	**0.014**	ug/L	0.001	10	128	769	6	Standard

AVX9 : 66343

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV2
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, February 23, 2016 12:59:03
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	59233	6	Standard
	Cl	37		mg/L			4442069	4805179	2	Standard
>	Sc	45		ug/L			1108426	1137116	2	Standard
	Cr	52	50.827	ug/L	1.392	2	28245	1050205	1	Standard
	Cr	53	50.832	ug/L	1.130	2	661	125017	1	Standard
	Mn	55	50.255	ug/L	1.304	2	522	1490507	0	Standard
>	Ge-1	72		ug/L			58771	57968	0	KED
	Co	59	49.393	ug/L	0.841	1	10	189145	2	KED
	Ni	60	50.660	ug/L	1.395	2	3	54978	2	KED
	Ni	62	48.773	ug/L	1.546	3	0	8689	2	KED
	Cu	63	50.258	ug/L	0.934	1	13	152580	1	KED
	Cu	65	52.240	ug/L	0.712	1	7	75182	1	KED
	Zn	66	50.190	ug/L	1.448	2	29	18341	2	KED
	Zn	67	49.057	ug/L	2.756	5	2	3052	5	KED
	Zn	68	50.790	ug/L	1.659	3	17	14262	3	KED
	As	75	49.888	ug/L	1.043	2	3	11766	1	KED
	Se-1	78	49.805	ug/L	0.179	0	11	1363	0	KED
	Y	89		ug/L			764463	820684	1	Standard
	Kr	83		ug/L			93	96	11	Standard
>	In-1	115		ug/L			22921	23090	1	KED
	Mo	98	50.208	ug/L	1.588	3	8	51678	1	KED
	Cd	111	51.006	ug/L	0.501	0	0	16167	0	KED
	Cd	114	51.459	ug/L	1.480	2	2	41433	2	KED
>	In	115		ug/L			1089596	1141166	2	Standard
	Ag	107	51.412	ug/L	1.031	2	38	927901	2	Standard
	Sb	121	49.974	ug/L	1.160	2	20	759349	0	Standard
	Sb	123	51.983	ug/L	1.430	2	23	597011	1	Standard
	Ba	135	50.619	ug/L	0.856	1	12	232240	2	Standard
	Ba	137	50.768	ug/L	0.814	1	17	407229	1	Standard
>	Tb	159		ug/L			1252627	1371977	0	Standard
	Tl	205	49.470	ug/L	1.344	2	20	1797470	3	Standard
	Pb	208	50.791	ug/L	1.249	2	128	2377032	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB2
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, February 23, 2016 13:06:39
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	58899	5	Standard
	Cl	37		mg/L			4442069	4406046	0	Standard
>	Sc	45		ug/L			1108426	1137098	2	Standard
	Cr	52	0.000	ug/L	0.043	68116	28245	28964	1	Standard
	Cr	53	-0.082	ug/L	0.010	12	661	479	2	Standard
	Mn	55	0.002	ug/L	0.001	49	522	582	4	Standard
>	Ge-1	72		ug/L			58771	58833	1	KED
	Co	59	-0.002	ug/L	0.001	51	10	3	86	KED
	Ni	60	0.004	ug/L	0.008	197	3	7	114	KED
	Ni	62	0.011	ug/L	0.000	1	0	1		KED
	Cu	63	0.008	ug/L	0.001	6	13	38	5	KED
	Cu	65	0.006	ug/L	0.005	88	7	16	46	KED
	Zn	66	0.015	ug/L	0.007	46	29	35	8	KED
	Zn	67	0.051	ug/L	0.032	62	2	5	33	KED
	Zn	68	0.031	ug/L	0.031	97	17	26	31	KED
	As	75	0.001	ug/L	0.007	1000	3	3	43	KED
	Se-1	78	0.017	ug/L	0.066	399	11	11	16	KED
	Y	89		ug/L			764463	806842	0	Standard
	Kr	83		ug/L			93	97	6	Standard
>	In-1	115		ug/L			22921	23671	2	KED
	Mo	98	0.050	ug/L	0.014	28	8	62	23	KED
	Cd	111	-0.001	ug/L	0.002	153	0	0	86	KED
	Cd	114	-0.002	ug/L	0.001	55	2	0	215	KED
>	In	115		ug/L			1089596	1144897	1	Standard
	Ag	107	0.002	ug/L	0.000	8	38	70	2	Standard
	Sb	121	0.078	ug/L	0.003	3	20	1218	4	Standard
	Sb	123	0.077	ug/L	0.002	2	23	908	3	Standard
	Ba	135	-0.000	ug/L	0.001	973	12	12	45	Standard
	Ba	137	0.002	ug/L	0.001	52	17	31	23	Standard
>	Tb	159		ug/L			1252627	1352325	1	Standard
	Tl	205	0.010	ug/L	0.001	6	20	363	7	Standard
	Pb	208	0.005	ug/L	0.001	16	128	349	11	Standard

AVX9 : 66345

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AWG4 MB REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, February 23, 2016 13:11:34
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	62630	1	Standard
	Cl	37		mg/L			4442069	4582088	1	Standard
>	Sc	45		ug/L			1108426	1168315	1	Standard
	Cr	52	0.046	ug/L	0.041	89	28245	30708	1	Standard
	Cr	53	-0.071	ug/L	0.013	17	661	518	5	Standard
	Mn	55	0.050	ug/L	0.002	4	522	2061	2	Standard
>	Ge-1	72		ug/L			58771	60925	0	KED
	Co	59	-0.000	ug/L	0.001	1249	10	10	47	KED
	Ni	60	0.019	ug/L	0.008	40	3	25	35	KED
	Ni	62	0.034	ug/L	0.012	34	0	6	34	KED
	Cu	63	0.029	ug/L	0.006	18	13	107	16	KED
	Cu	65	0.022	ug/L	0.006	25	7	41	20	KED
	Zn	66	0.302	ug/L	0.054	17	29	146	13	KED
	Zn	67	0.426	ug/L	0.105	24	2	30	22	KED
	Zn	68	0.291	ug/L	0.080	27	17	104	22	KED
	As	75	0.001	ug/L	0.005	349	3	4	29	KED
	Se-1	78	0.075	ug/L	0.040	54	11	13	8	KED
	Y	89		ug/L			764463	824868	0	Standard
	Kr	83		ug/L			93	108	9	Standard
>	In-1	115		ug/L			22921	23876	2	KED
	Mo	98	0.061	ug/L	0.017	27	8	74	25	KED
	Cd	111	0.001	ug/L	0.002	195	0	1	43	KED
	Cd	114	0.002	ug/L	0.001	79	2	3	28	KED
>	In	115		ug/L			1089596	1186766	1	Standard
	Ag	107	0.002	ug/L	0.001	38	38	76	15	Standard
	Sb	121	0.037	ug/L	0.002	4	20	613	3	Standard
	Sb	123	0.040	ug/L	0.002	5	23	505	3	Standard
	Ba	135	0.003	ug/L	0.002	63	12	26	31	Standard
	Ba	137	0.006	ug/L	0.001	14	17	72	11	Standard
>	Tb	159		ug/L			1252627	1379826	2	Standard
	Tl	205	0.017	ug/L	0.000	2	20	636	3	Standard
	Pb	208	0.008	ug/L	0.001	15	128	495	11	Standard

AVXS : 00345

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AWG5 MB REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, February 23, 2016 13:16:25
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			56372	62413	2	Standard
	Cl	**37**		mg/L			4442069	4523774	0	Standard
⌈>	**Sc**	**45**		ug/L			1108426	1159209	0	Standard
|	**Cr**	**52**	**0.056**	ug/L	0.051	91	28245	30687	3	Standard
|	**Cr**	**53**	**-0.060**	ug/L	0.010	16	661	541	5	Standard
⌊	**Mn**	**55**	**0.037**	ug/L	0.001	3	522	1662	1	Standard
⌈>	**Ge-1**	**72**		ug/L			58771	59369	0	KED
|	**Co**	**59**	**-0.000**	ug/L	0.001	210	10	8	32	KED
|	**Ni**	**60**	**0.017**	ug/L	0.007	44	3	21	36	KED
|	**Ni**	**62**	**0.021**	ug/L	0.010	49	0	3	50	KED
|	**Cu**	**63**	**0.037**	ug/L	0.002	6	13	127	5	KED
|	**Cu**	**65**	**0.037**	ug/L	0.006	17	7	62	15	KED
|	**Zn**	**66**	**0.402**	ug/L	0.036	8	29	180	8	KED
|	**Zn**	**67**	**0.389**	ug/L	0.049	12	2	27	10	KED
|	**Zn**	**68**	**0.404**	ug/L	0.041	10	17	133	7	KED
|	**As**	**75**	**-0.001**	ug/L	0.006	695	3	3	41	KED
⌊	**Se-1**	**78**	**0.053**	ug/L	0.047	88	11	12	9	KED
	Y	**89**		ug/L			764463	810563	1	Standard
	Kr	**83**		ug/L			93	88	14	Standard
⌈>	**In-1**	**115**		ug/L			22921	23772	3	KED
|	**Mo**	**98**	**0.025**	ug/L	0.011	43	8	36	32	KED
|	**Cd**	**111**	**0.005**	ug/L	0.005	94	0	2	57	KED
⌊	**Cd**	**114**	**-0.001**	ug/L	0.000	7	2	1	2	KED
⌈>	**In**	**115**		ug/L			1089596	1182699	0	Standard
|	**Ag**	**107**	**0.001**	ug/L	0.000	13	38	62	5	Standard
|	**Sb**	**121**	**0.027**	ug/L	0.002	8	20	443	8	Standard
|	**Sb**	**123**	**0.026**	ug/L	0.002	7	23	340	8	Standard
|	**Ba**	**135**	**0.006**	ug/L	0.002	28	12	40	19	Standard
⌊	**Ba**	**137**	**0.008**	ug/L	0.001	7	17	83	6	Standard
⌈>	**Tb**	**159**		ug/L			1252627	1371348	2	Standard
|	**Tl**	**205**	**0.006**	ug/L	0.000	5	20	228	7	Standard
⌊	**Pb**	**208**	**0.007**	ug/L	0.000	6	128	445	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AWA5 MB REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, February 23, 2016 13:21:17
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	65041	3	Standard
	Cl	37		mg/L			4442069	4569603	1	Standard
>	Sc	45		ug/L			1108426	1128165	0	Standard
	Cr	52	0.082	ug/L	0.064	77	28245	30387	4	Standard
	Cr	53	-0.063	ug/L	0.015	23	661	521	7	Standard
	Mn	55	0.071	ug/L	0.002	2	522	2608	1	Standard
>	Ge-1	72		ug/L			58771	58912	1	KED
	Co	59	0.001	ug/L	0.002	354	10	12	70	KED
	Ni	60	0.032	ug/L	0.002	6	3	38	7	KED
	Ni	62	0.049	ug/L	0.024	49	0	8	49	KED
	Cu	63	0.030	ug/L	0.006	20	13	106	18	KED
	Cu	65	0.033	ug/L	0.003	7	7	55	7	KED
	Zn	66	0.410	ug/L	0.093	22	29	181	17	KED
	Zn	67	0.433	ug/L	0.131	30	2	29	26	KED
	Zn	68	0.388	ug/L	0.040	10	17	128	7	KED
	As	75	-0.001	ug/L	0.003	448	3	3	20	KED
	Se-1	78	-0.047	ug/L	0.038	79	11	9	11	KED
	Y	89		ug/L			764463	812472	2	Standard
	Kr	83		ug/L			93	95	6	Standard
>	In-1	115		ug/L			22921	24417	0	KED
	Mo	98	0.015	ug/L	0.009	62	8	25	38	KED
	Cd	111	0.005	ug/L	0.000	1	0	2	0	KED
	Cd	114	0.002	ug/L	0.003	152	2	4	63	KED
>	In	115		ug/L			1089596	1171922	0	Standard
	Ag	107	0.001	ug/L	0.000	47	38	54	10	Standard
	Sb	121	0.021	ug/L	0.002	11	20	349	10	Standard
	Sb	123	0.018	ug/L	0.003	14	23	239	12	Standard
	Ba	135	0.009	ug/L	0.003	36	12	53	26	Standard
	Ba	137	0.010	ug/L	0.001	11	17	98	9	Standard
>	Tb	159		ug/L			1252627	1379195	2	Standard
	Tl	205	0.004	ug/L	0.001	25	20	186	24	Standard
	Pb	208	0.009	ug/L	0.001	9	128	549	5	Standard

AVX9 : 88348

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AVP0 C REN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, February 23, 2016 13:26:09
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			56372	89455	2	Standard
Cl	37		mg/L			4442069	66585893	4	Standard
> Sc	45		ug/L			1108426	1409642	2	Standard
Cr	52	0.721	ug/L	0.073	10	28245	53866	2	Standard
Cr	53	42.844	ug/L	1.223	2	661	130791	3	Standard
Mn	55	0.546	ug/L	0.003	0	522	20743	2	Standard
> Ge-1	72		ug/L			58771	55297	1	KED
Co	59	0.007	ug/L	0.001	14	10	33	11	KED
Ni	60	0.093	ug/L	0.028	29	3	99	28	KED
Ni	62	0.742	ug/L	0.163	21	0	126	23	KED
Cu	63	0.154	ug/L	0.010	6	13	459	8	KED
Cu	65	0.082	ug/L	0.009	10	7	119	10	KED
Zn	66	0.513	ug/L	0.060	11	29	206	9	KED
Zn	67	0.657	ug/L	0.110	16	2	41	14	KED
Zn	68	0.531	ug/L	0.066	12	17	158	11	KED
As	75	0.194	ug/L	0.022	11	3	46	8	KED
Se-1	78	0.553	ug/L	0.063	11	11	24	5	KED
Y	89		ug/L			764463	845499	0	Standard
Kr	83		ug/L			93	2983	4	Standard
> In-1	115		ug/L			22921	21494	1	KED
Mo	98	1.012	ug/L	0.082	8	8	977	7	KED
Cd	111	0.008	ug/L	0.002	21	0	3	17	KED
Cd	114	0.006	ug/L	0.005	90	2	6	60	KED
> In	115		ug/L			1089596	1093679	3	Standard
Ag	107	0.004	ug/L	0.000	8	38	107	8	Standard
Sb	121	0.042	ug/L	0.002	3	20	627	3	Standard
Sb	123	0.040	ug/L	0.002	6	23	467	7	Standard
Ba	135	0.866	ug/L	0.023	2	12	3820	0	Standard
Ba	137	0.881	ug/L	0.033	3	17	6785	0	Standard
> Tb	159		ug/L			1252627	1354682	2	Standard
Tl	205	0.008	ug/L	0.001	8	20	302	8	Standard
Pb	208	0.035	ug/L	0.001	1	128	1778	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AWH1 A REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, February 23, 2016 13:32:04
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	68985	1	Standard
	Cl	37		mg/L			4442069	4908372	0	Standard
⌈>	Sc	45		ug/L			1108426	1269075	2	Standard
|	Cr	52	0.702	ug/L	0.039	5	28245	48084	1	Standard
|	Cr	53	1.247	ug/L	0.035	2	661	4163	3	Standard
⌊	Mn	55	11.011	ug/L	0.190	1	522	365089	2	Standard
⌈>	Ge-1	72		ug/L			58771	63198	3	KED
|	Co	59	0.119	ug/L	0.007	5	10	507	6	KED
|	Ni	60	0.924	ug/L	0.038	4	3	1095	2	KED
|	Ni	62	1.270	ug/L	0.088	6	0	246	3	KED
|	Cu	63	8.582	ug/L	0.287	3	13	28402	2	KED
|	Cu	65	8.726	ug/L	0.209	2	7	13691	0	KED
|	Zn	66	32.056	ug/L	2.138	6	29	12766	3	KED
|	Zn	67	29.526	ug/L	1.835	6	2	2002	4	KED
|	Zn	68	31.345	ug/L	1.058	3	17	9597	1	KED
|	As	75	0.436	ug/L	0.040	9	3	115	5	KED
⌊	Se-1	78	0.015	ug/L	0.166	1141	11	12	39	KED
	Y	89		ug/L			764463	869888	1	Standard
	Kr	83		ug/L			93	133	10	Standard
⌈>	In-1	115		ug/L			22921	25056	1	KED
|	Mo	98	0.625	ug/L	0.021	3	8	708	4	KED
|	Cd	111	0.049	ug/L	0.010	20	0	17	20	KED
⌊	Cd	114	0.044	ug/L	0.010	21	2	41	21	KED
⌈>	In	115		ug/L			1089596	1252521	3	Standard
|	Ag	107	0.005	ug/L	0.000	9	38	151	7	Standard
|	Sb	121	2.533	ug/L	0.122	4	20	42240	2	Standard
|	Sb	123	2.506	ug/L	0.097	3	23	31597	1	Standard
|	Ba	135	8.678	ug/L	0.144	1	12	43700	1	Standard
⌊	Ba	137	8.485	ug/L	0.411	4	17	74670	3	Standard
⌈>	Tb	159		ug/L			1252627	1484350	1	Standard
|	Tl	205	0.007	ug/L	0.001	7	20	306	5	Standard
⌊	Pb	208	0.812	ug/L	0.020	2	128	41273	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AWG5 A REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, February 23, 2016 13:36:56
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	71720	1	Standard
	Cl	37		mg/L			4442069	5150995	3	Standard
⌈>	Sc	45		ug/L			1108426	1291392	1	Standard
|	Cr	52	1.302	ug/L	0.116	8	28245	62582	2	Standard
|	Cr	53	1.677	ug/L	0.025	1	661	5432	2	Standard
⌊	Mn	55	243.682	ug/L	3.115	1	522	8207600	0	Standard
⌈>	Ge-1	72		ug/L			58771	61531	1	KED
|	Co	59	2.612	ug/L	0.014	0	10	10626	1	KED
|	Ni	60	2.816	ug/L	0.060	2	3	3246	2	KED
|	Ni	62	2.933	ug/L	0.306	10	0	554	9	KED
|	Cu	63	13.545	ug/L	0.262	1	13	43653	0	KED
|	Cu	65	13.913	ug/L	0.240	1	7	21258	1	KED
|	Zn	66	99.111	ug/L	1.737	1	29	38414	1	KED
|	Zn	67	91.483	ug/L	2.246	2	2	6041	3	KED
|	Zn	68	95.918	ug/L	1.684	1	17	28570	0	KED
|	As	75	1.586	ug/L	0.077	4	3	400	5	KED
⌊	Se-1	78	0.038	ug/L	0.130	340	11	12	28	KED
	Y	89		ug/L			764463	870168	2	Standard
	Kr	83		ug/L			93	100	18	Standard
⌈>	In-1	115		ug/L			22921	24235	1	KED
|	Mo	98	1.662	ug/L	0.018	1	8	1804	0	KED
|	Cd	111	0.232	ug/L	0.015	6	0	78	4	KED
⌊	Cd	114	0.200	ug/L	0.012	6	2	171	7	KED
⌈>	In	115		ug/L			1089596	1176353	0	Standard
|	Ag	107	0.024	ug/L	0.001	4	38	496	4	Standard
|	Sb	121	1.003	ug/L	0.007	0	20	15732	0	Standard
|	Sb	123	0.959	ug/L	0.018	1	23	11386	1	Standard
|	Ba	135	57.715	ug/L	1.359	2	12	272970	2	Standard
⌊	Ba	137	56.819	ug/L	0.822	1	17	469906	2	Standard
⌈>	Tb	159		ug/L			1252627	1435849	1	Standard
|	Tl	205	0.008	ug/L	0.000	5	20	318	6	Standard
⌊	Pb	208	2.453	ug/L	0.029	1	128	120301	2	Standard

AVX9 : 669351

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AWG4 A REN
Sample Dil Factor: 5
Comments:
Sample Date/Time: Tuesday, February 23, 2016 13:42:51
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	658443	1	Standard
	Cl	37		mg/L			4442069	4799365	4	Standard
>	Sc	45		ug/L			1108426	1294628	2	Standard
	Cr	52	13.854	ug/L	0.610	4	28245	349824	2	Standard
	Cr	53	10.411	ug/L	0.211	2	661	29768	0	Standard
	Mn	55	116.496	ug/L	4.751	4	522	3932035	1	Standard
>	Ge-1	72		ug/L			58771	53055	1	KED
	Co	59	2.534	ug/L	0.027	1	10	8889	2	KED
	Ni	60	26.587	ug/L	0.404	1	3	26405	1	KED
	Ni	62	25.565	ug/L	0.263	1	0	4168	0	KED
	Cu	63	5.577	ug/L	0.108	1	13	15510	3	KED
	Cu	65	5.587	ug/L	0.188	3	7	7363	2	KED
	Zn	66	312.996	ug/L	6.248	1	29	104579	3	KED
	Zn	67	282.663	ug/L	3.328	1	2	16090	2	KED
	Zn	68	290.443	ug/L	2.455	0	17	74566	0	KED
	As	75	0.173	ug/L	0.021	12	3	40	9	KED
	Se-1	78	0.095	ug/L	0.082	86	11	12	15	KED
	Y	89		ug/L			764463	842703	1	Standard
	Kr	83		ug/L			93	121	7	Standard
>	In-1	115		ug/L			22921	21101	3	KED
	Mo	98	0.772	ug/L	0.034	4	8	733	2	KED
	Cd	111	0.982	ug/L	0.044	4	0	285	2	KED
	Cd	114	1.072	ug/L	0.033	3	2	790	4	KED
>	In	115		ug/L			1089596	1066298	2	Standard
	Ag	107	0.006	ug/L	0.001	17	38	133	14	Standard
	Sb	121	0.247	ug/L	0.004	1	20	3532	4	Standard
	Sb	123	0.247	ug/L	0.010	4	23	2677	2	Standard
	Ba	135	23.158	ug/L	0.739	3	12	99239	1	Standard
	Ba	137	22.665	ug/L	0.935	4	17	169789	1	Standard
>	Tb	159		ug/L			1252627	1321403	1	Standard
	Tl	205	0.002	ug/L	0.000	21	20	83	15	Standard
	Pb	208	0.207	ug/L	0.006	3	128	9473	3	Standard

AUX9 : 66352

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AWG4 MBSPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, February 23, 2016 13:50:27
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	70451	3	Standard
	Cl	37		mg/L			4442069	5083450	1	Standard
⌈>	Sc	45		ug/L			1108426	1272204	0	Standard
|	Cr	52	27.526	ug/L	0.307	1	28245	651402	1	Standard
|	Cr	53	26.892	ug/L	0.414	1	661	74375	1	Standard
⌊	Mn	55	27.864	ug/L	1.276	4	522	925383	5	Standard
⌈>	Ge-1	72		ug/L			58771	59962	1	KED
|	Co	59	28.428	ug/L	0.551	1	10	112589	0	KED
|	Ni	60	28.850	ug/L	0.685	2	3	32384	2	KED
|	Ni	62	28.756	ug/L	0.606	2	0	5300	2	KED
|	Cu	63	29.274	ug/L	0.691	2	13	91924	1	KED
|	Cu	65	30.279	ug/L	0.378	1	7	45078	2	KED
|	Zn	66	90.853	ug/L	0.315	0	29	34321	0	KED
|	Zn	67	81.991	ug/L	0.604	0	2	5276	1	KED
|	Zn	68	84.022	ug/L	1.020	1	17	24393	1	KED
|	As	75	25.849	ug/L	0.191	0	3	6308	1	KED
⌊	Se-1	78	80.023	ug/L	2.206	2	11	2258	1	KED
	Y	89		ug/L			764463	844681	1	Standard
	Kr	83		ug/L			93	100	19	Standard
⌈>	In-1	115		ug/L			22921	23106	1	KED
|	Mo	98	0.014	ug/L	0.004	26	8	23	16	KED
|	Cd	111	27.980	ug/L	0.544	1	0	8874	0	KED
⌊	Cd	114	28.190	ug/L	0.783	2	2	22716	2	KED
⌈>	In	115		ug/L			1089596	1194414	1	Standard
|	Ag	107	28.981	ug/L	0.432	1	38	547568	2	Standard
|	Sb	121	0.009	ug/L	0.001	7	20	171	7	Standard
|	Sb	123	0.010	ug/L	0.002	18	23	149	14	Standard
|	Ba	135	28.039	ug/L	0.304	1	12	134653	0	Standard
⌊	Ba	137	27.963	ug/L	0.217	0	17	234795	0	Standard
⌈>	Tb	159		ug/L			1252627	1386507	1	Standard
|	Tl	205	30.110	ug/L	0.839	2	20	1105772	3	Standard
⌊	Pb	208	30.963	ug/L	0.610	1	128	1464367	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AWG5 MBSPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, February 23, 2016 13:55:18
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	67430	3	Standard
	Cl	37		mg/L			4442069	5078640	2	Standard
>	Sc	45		ug/L			1108426	1182229	4	Standard
|	Cr	52	27.971	ug/L	1.068	3	28245	613968	1	Standard
|	Cr	53	27.244	ug/L	1.419	5	661	69905	1	Standard
L	Mn	55	28.649	ug/L	1.463	5	522	882654	0	Standard
>	Ge-1	72		ug/L			58771	59444	2	KED
|	Co	59	28.907	ug/L	1.247	4	10	113417	1	KED
|	Ni	60	29.781	ug/L	0.590	1	3	33144	3	KED
|	Ni	62	28.239	ug/L	1.454	5	0	5157	4	KED
|	Cu	63	29.872	ug/L	2.026	6	13	92895	4	KED
|	Cu	65	30.236	ug/L	1.472	4	7	44582	2	KED
|	Zn	66	89.333	ug/L	2.648	2	29	33447	2	KED
|	Zn	67	82.583	ug/L	4.000	4	2	5263	2	KED
|	Zn	68	86.343	ug/L	4.209	4	17	24828	2	KED
|	As	75	26.405	ug/L	1.163	4	3	6383	2	KED
L	Se-1	78	80.936	ug/L	2.831	3	11	2263	1	KED
	Y	89		ug/L			764463	818246	4	Standard
	Kr	83		ug/L			93	97	2	Standard
>	In-1	115		ug/L			22921	23551	1	KED
|	Mo	98	0.015	ug/L	0.003	22	8	24	15	KED
|	Cd	111	27.020	ug/L	0.546	2	0	8735	1	KED
L	Cd	114	27.563	ug/L	0.561	2	2	22637	0	KED
>	In	115		ug/L			1089596	1143534	0	Standard
|	Ag	107	29.364	ug/L	0.861	2	38	531087	2	Standard
|	Sb	121	0.009	ug/L	0.001	7	20	156	6	Standard
|	Sb	123	0.008	ug/L	0.001	16	23	120	12	Standard
|	Ba	135	28.124	ug/L	0.574	2	12	129322	2	Standard
L	Ba	137	28.252	ug/L	0.136	0	17	227129	0	Standard
>	Tb	159		ug/L			1252627	1369241	2	Standard
|	Tl	205	29.390	ug/L	1.216	4	20	1065208	3	Standard
L	Pb	208	30.237	ug/L	1.043	3	128	1411876	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AWA5 MBSPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, February 23, 2016 14:00:10
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	68959	2	Standard
	Cl	37		mg/L			4442069	5075787	1	Standard
>	Sc	45		ug/L			1108426	1252703	2	Standard
	Cr	52	27.693	ug/L	1.119	4	28245	644629	1	Standard
	Cr	53	27.218	ug/L	1.411	5	661	74044	2	Standard
	Mn	55	27.173	ug/L	1.124	4	522	887802	1	Standard
>	Ge-1	72		ug/L			58771	59696	1	KED
	Co	59	28.197	ug/L	1.094	3	10	111222	4	KED
	Ni	60	29.407	ug/L	0.041	0	3	32865	1	KED
	Ni	62	29.664	ug/L	0.957	3	0	5441	1	KED
	Cu	63	29.349	ug/L	0.360	1	13	91772	2	KED
	Cu	65	30.354	ug/L	0.414	1	7	44993	2	KED
	Zn	66	90.276	ug/L	1.573	1	29	33948	1	KED
	Zn	67	83.341	ug/L	1.143	1	2	5338	0	KED
	Zn	68	85.435	ug/L	2.724	3	17	24698	4	KED
	As	75	26.033	ug/L	0.319	1	3	6325	1	KED
	Se-1	78	81.329	ug/L	0.466	0	11	2285	1	KED
	Y	89		ug/L			764463	842176	1	Standard
	Kr	83		ug/L			93	99	26	Standard
>	In-1	115		ug/L			22921	23698	0	KED
	Mo	98	0.006	ug/L	0.003	56	8	15	21	KED
	Cd	111	27.015	ug/L	0.107	0	0	8789	1	KED
	Cd	114	27.506	ug/L	0.704	2	2	22734	2	KED
>	In	115		ug/L			1089596	1183000	1	Standard
	Ag	107	28.699	ug/L	0.321	1	38	537035	1	Standard
	Sb	121	0.009	ug/L	0.002	20	20	159	15	Standard
	Sb	123	0.007	ug/L	0.002	26	23	110	19	Standard
	Ba	135	28.614	ug/L	0.652	2	12	136085	1	Standard
	Ba	137	28.282	ug/L	0.134	0	17	235212	1	Standard
>	Tb	159		ug/L			1252627	1401343	1	Standard
	Tl	205	29.967	ug/L	0.605	2	20	1112287	3	Standard
	Pb	208	30.520	ug/L	0.555	1	128	1458826	2	Standard

AVX9 : 00355

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV3
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, February 23, 2016 14:06:06
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	58538	3	Standard
	Cl	37		mg/L			4442069	4964516	1	Standard
>	Sc	45		ug/L			1108426	1217349	0	Standard
	Cr	52	48.170	ug/L	0.374	0	28245	1067510	1	Standard
	Cr	53	49.373	ug/L	1.185	2	661	130052	2	Standard
	Mn	55	48.401	ug/L	0.569	1	522	1537518	1	Standard
>	Ge-1	72		ug/L			58771	58832	1	KED
	Co	59	48.806	ug/L	1.601	3	10	189634	2	KED
	Ni	60	49.637	ug/L	0.760	1	3	54666	1	KED
	Ni	62	49.359	ug/L	3.657	7	0	8920	6	KED
	Cu	63	50.437	ug/L	0.788	1	13	155392	0	KED
	Cu	65	51.958	ug/L	1.528	2	7	75863	1	KED
	Zn	66	50.210	ug/L	0.536	1	29	18622	0	KED
	Zn	67	50.083	ug/L	1.072	2	2	3162	1	KED
	Zn	68	49.203	ug/L	1.019	2	17	14026	3	KED
	As	75	48.820	ug/L	1.033	2	3	11684	1	KED
	Se-1	78	47.662	ug/L	1.971	4	11	1324	3	KED
	Y	89		ug/L			764463	855608	1	Standard
	Kr	83		ug/L			93	114	10	Standard
>	In-1	115		ug/L			22921	23414	1	KED
	Mo	98	48.210	ug/L	0.801	1	8	50337	2	KED
	Cd	111	50.412	ug/L	0.482	0	0	16205	1	KED
	Cd	114	50.002	ug/L	0.418	0	2	40832	1	KED
>	In	115		ug/L			1089596	1156830	1	Standard
	Ag	107	52.009	ug/L	1.802	3	38	951364	2	Standard
	Sb	121	50.737	ug/L	1.677	3	20	781582	2	Standard
	Sb	123	50.777	ug/L	1.378	2	23	591227	1	Standard
	Ba	135	50.460	ug/L	0.380	0	12	234688	0	Standard
	Ba	137	49.957	ug/L	0.726	1	17	406233	0	Standard
>	Tb	159		ug/L			1252627	1396919	2	Standard
	Tl	205	50.170	ug/L	0.550	1	20	1855996	2	Standard
	Pb	208	51.761	ug/L	1.271	2	128	2466389	3	Standard

AVX9 : 60355

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB3
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, February 23, 2016 14:15:38
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	58828	2	Standard
	Cl	37		mg/L			4442069	4766731	2	Standard
>	Sc	45		ug/L			1108426	1161051	1	Standard
	Cr	52	-0.036	ug/L	0.040	110	28245	28830	1	Standard
	Cr	53	-0.072	ug/L	0.007	9	661	514	1	Standard
	Mn	55	0.002	ug/L	0.001	43	522	611	3	Standard
>	Ge-1	72		ug/L			58771	56433	0	KED
	Co	59	-0.000	ug/L	0.002	675	10	8	65	KED
	Ni	60	0.002	ug/L	0.001	54	3	5	21	KED
	Ni	62	0.007	ug/L	0.013	173	0	1	173	KED
	Cu	63	0.007	ug/L	0.002	22	13	34	13	KED
	Cu	65	0.004	ug/L	0.005	143	7	12	60	KED
	Zn	66	0.230	ug/L	0.016	7	29	110	5	KED
	Zn	67	0.316	ug/L	0.048	15	2	21	13	KED
	Zn	68	0.258	ug/L	0.080	30	17	87	24	KED
	As	75	0.002	ug/L	0.003	158	3	3	18	KED
	Se-1	78	0.047	ug/L	0 079	167	11	11	17	KED
	Y	89		ug/L			764463	795949	1	Standard
	Kr	83		ug/L			93	91	10	Standard
>	In-1	115		ug/L			22921	23222	0	KED
	Mo	98	0.026	ug/L	0.007	26	8	36	19	KED
	Cd	111	0.003	ug/L	0.003	100	0	1	50	KED
	Cd	114	0.001	ug/L	0.005	661	2	3	129	KED
>	In	115		ug/L			1089596	1136034	1	Standard
	Ag	107	0.000	ug/L	0.001	252	38	47	38	Standard
	Sb	121	0.050	ug/L	0.004	7	20	779	7	Standard
	Sb	123	0.044	ug/L	0.003	7	23	529	6	Standard
	Ba	135	0.002	ug/L	0.001	33	12	22	14	Standard
	Ba	137	0.001	ug/L	0.000	36	17	28	13	Standard
>	Tb	159		ug/L			1252627	1385607	2	Standard
	Tl	205	0.004	ug/L	0.000	11	20	158	11	Standard
	Pb	208	0.002	ug/L	0.000	7	128	255	1	Standard

AVX9 : 88057

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AWH3 MB REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, February 23, 2016 14:20:31
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	65813	5	Standard
	Cl	37		mg/L			4442069	4825140	1	Standard
>	Sc	45		ug/L			1108426	1172820	1	Standard
	Cr	52	0.100	ug/L	0.039	39	28245	31963	2	Standard
	Cr	53	-0.053	ug/L	0.005	8	661	567	3	Standard
	Mn	55	0.039	ug/L	0.005	12	522	1746	7	Standard
>	Ge-1	72		ug/L			58771	58833	1	KED
	Co	59	-0.001	ug/L	0.001	173	10	6	78	KED
	Ni	60	0.045	ug/L	0.013	29	3	52	27	KED
	Ni	62	0.049	ug/L	0.007	13	0	8	12	KED
	Cu	63	0.925	ug/L	0.043	4	13	2862	3	KED
	Cu	65	0.891	ug/L	0.017	1	7	1309	1	KED
	Zn	66	0.445	ug/L	0.042	9	29	194	9	KED
	Zn	67	0.612	ug/L	0.157	25	2	41	25	KED
	Zn	68	0.491	ug/L	0.061	12	17	157	9	KED
	As	75	-0.001	ug/L	0.002	157	3	3	14	KED
	Se-1	78	0.046	ug/L	0.055	120	11	12	11	KED
	Y	89		ug/L			764463	819339	1	Standard
	Kr	83		ug/L			93	99	13	Standard
>	In-1	115		ug/L			22921	23581	2	KED
	Mo	98	0.032	ug/L	0.014	42	8	43	32	KED
	Cd	111	0.003	ug/L	0.003	101	0	1	50	KED
	Cd	114	0.001	ug/L	0.004	323	2	3	92	KED
>	In	115		ug/L			1089596	1192127	1	Standard
	Ag	107	0.003	ug/L	0.004	149	38	97	83	Standard
	Sb	121	0.020	ug/L	0.003	17	20	333	15	Standard
	Sb	123	0.021	ug/L	0.001	5	23	280	3	Standard
	Ba	135	0.011	ug/L	0.005	42	12	67	32	Standard
	Ba	137	0.010	ug/L	0.005	52	17	100	41	Standard
>	Tb	159		ug/L			1252627	1389870	2	Standard
	Tl	205	0.009	ug/L	0.008	93	20	335	85	Standard
	Pb	208	0.010	ug/L	0.007	69	128	597	51	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AWE8 MB REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, February 23, 2016 14:25:22
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	65720	4	Standard
	Cl	37		mg/L			4442069	4832548	2	Standard
>	Sc	45		ug/L			1108426	1202630	1	Standard
|	Cr	52	-0.003	ug/L	0.037	1103	28245	30568	1	Standard
|	Cr	53	-0.066	ug/L	0.005	6	661	547	4	Standard
L	Mn	55	0.045	ug/L	0.012	26	522	1975	21	Standard
>	Ge-1	72		ug/L			58771	59998	1	KED
|	Co	59	0.000	ug/L	0.001	1189	10	10	44	KED
|	Ni	60	0.014	ug/L	0.006	41	3	19	36	KED
|	Ni	62	0.010	ug/L	0.010	100	0	1	100	KED
|	Cu	63	0.022	ug/L	0.003	15	13	83	11	KED
|	Cu	65	0.017	ug/L	0.007	39	7	33	29	KED
|	Zn	66	0.519	ug/L	0.046	8	29	226	8	KED
|	Zn	67	0.562	ug/L	0.077	13	2	38	12	KED
|	Zn	68	0.438	ug/L	0.011	2	17	145	2	KED
|	As	75	0.000	ug/L	0.006	1899	3	3	37	KED
L	Se-1	78	0.070	ug/L	0.055	78	11	13	12	KED
	Y	89		ug/L			764463	842267	1	Standard
	Kr	83		ug/L			93	100	13	Standard
>	In-1	115		ug/L			22921	23932	2	KED
|	Mo	98	0.021	ug/L	0.006	30	8	31	19	KED
|	Cd	111	0.001	ug/L	0.002	194	0	1	43	KED
L	Cd	114	-0.003	ug/L	0.001	53	2	0	356	KED
>	In	115		ug/L			1089596	1177672	1	Standard
|	Ag	107	0.004	ug/L	0.007	162	38	121	107	Standard
|	Sb	121	0.015	ug/L	0.003	21	20	262	21	Standard
|	Sb	123	0.015	ug/L	0.004	26	23	203	24	Standard
|	Ba	135	0.010	ug/L	0.011	106	12	63	84	Standard
L	Ba	137	0.013	ug/L	0.013	99	17	125	86	Standard
>	Tb	159		ug/L			1252627	1396153	1	Standard
|	Tl	205	0.009	ug/L	0.012	134	20	344	125	Standard
L	Pb	208	0.011	ug/L	0.010	89	128	671	71	Standard

AUX9 : 69359

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AWE8 A REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, February 23, 2016 14:30:14
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	68433	4	Standard
	Cl	37		mg/L			4442069	4796043	1	Standard
>	Sc	45		ug/L			1108426	1228501	1	Standard
	Cr	52	0.536	ug/L	0.027	5	28245	42933	1	Standard
	Cr	53	0.515	ug/L	0.026	5	661	2093	2	Standard
	Mn	55	14.725	ug/L	0.272	1	522	472470	2	Standard
>	Ge-1	72		ug/L			58771	59461	0	KED
	Co	59	0.128	ug/L	0.011	8	10	511	7	KED
	Ni	60	3.082	ug/L	0.042	1	3	3434	1	KED
	Ni	62	2.893	ug/L	0.159	5	0	528	5	KED
	Cu	63	6.114	ug/L	0.078	1	13	19053	1	KED
	Cu	65	6.424	ug/L	0.086	1	7	9489	1	KED
	Zn	66	25.097	ug/L	0.847	3	29	9422	2	KED
	Zn	67	23.790	ug/L	1.047	4	2	1520	4	KED
	Zn	68	24.736	ug/L	0.076	0	17	7134	0	KED
	As	75	0.586	ug/L	0.027	4	3	145	4	KED
	Se-1	78	0.155	ug/L	0.111	71	11	15	19	KED
	Y	89		ug/L			764463	872853	2	Standard
	Kr	83		ug/L			93	100	8	Standard
>	In-1	115		ug/L			22921	24182	1	KED
	Mo	98	0.773	ug/L	0.026	3	8	842	4	KED
	Cd	111	0.093	ug/L	0.031	33	0	31	32	KED
	Cd	114	0.072	ug/L	0.006	7	2	63	7	KED
>	In	115		ug/L			1089596	1187974	1	Standard
	Ag	107	0.006	ug/L	0.001	19	38	149	12	Standard
	Sb	121	3.203	ug/L	0.054	1	20	50698	1	Standard
	Sb	123	3.189	ug/L	0.029	0	23	38161	1	Standard
	Ba	135	7.198	ug/L	0.098	1	12	34388	0	Standard
	Ba	137	7.003	ug/L	0.110	1	17	58493	1	Standard
>	Tb	159		ug/L			1252627	1406441	0	Standard
	Tl	205	0.006	ug/L	0.000	7	20	256	6	Standard
	Pb	208	0.496	ug/L	0.014	2	128	23931	2	Standard

AVX3 · 66056

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AWE8 B REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, February 23, 2016 14:35:05
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	67398	1	Standard
	Cl	37		mg/L			4442069	4884097	0	Standard
>	Sc	45		ug/L			1108426	1235273	2	Standard
	Cr	52	0.888	ug/L	0.031	3	28245	50858	2	Standard
	Cr	53	0.859	ug/L	0.054	6	661	3019	3	Standard
	Mn	55	13.710	ug/L	0.440	3	522	442259	3	Standard
>	Ge-1	72		ug/L			58771	59302	2	KED
	Co	59	0.160	ug/L	0.012	7	10	636	4	KED
	Ni	60	2.212	ug/L	0.052	2	3	2458	3	KED
	Ni	62	2.059	ug/L	0.041	1	0	375	1	KED
	Cu	63	12.246	ug/L	0.324	2	13	38034	1	KED
	Cu	65	12.112	ug/L	0.396	3	7	17844	5	KED
	Zn	66	40.962	ug/L	0.641	1	29	15319	2	KED
	Zn	67	38.154	ug/L	1.633	4	2	2428	2	KED
	Zn	68	39.573	ug/L	1.468	3	17	11366	1	KED
	As	75	0.517	ug/L	0.024	4	3	128	6	KED
	Se-1	78	0.094	ug/L	0.062	66	11	13	10	KED
	Y	89		ug/L			764463	844964	2	Standard
	Kr	83		ug/L			93	97	14	Standard
>	In-1	115		ug/L			22921	23913	3	KED
	Mo	98	0.762	ug/L	0.058	7	8	821	7	KED
	Cd	111	0.067	ug/L	0.012	18	0	22	15	KED
	Cd	114	0.066	ug/L	0.007	10	2	57	7	KED
>	In	115		ug/L			1089596	1206119	0	Standard
	Ag	107	0.005	ug/L	0.001	11	38	146	7	Standard
	Sb	121	1.565	ug/L	0.027	1	20	25154	1	Standard
	Sb	123	1.569	ug/L	0.011	0	23	19077	0	Standard
	Ba	135	12.460	ug/L	0.546	4	12	60426	3	Standard
	Ba	137	12.287	ug/L	0.146	1	17	104189	0	Standard
>	Tb	159		ug/L			1252627	1421883	3	Standard
	Tl	205	0.003	ug/L	0.000	6	20	153	3	Standard
	Pb	208	1.315	ug/L	0.030	2	128	63865	2	Standard

AVX9 : 60361

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AWH3 A REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, February 23, 2016 14:41:01
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	80074	3	Standard
	Cl	37		mg/L			4442069	5098213	0	Standard
>	Sc	45		ug/L			1108426	1275863	0	Standard
	Cr	52	149.627	ug/L	2.557	1	28245	3406689	1	Standard
	Cr	53	147.059	ug/L	0.922	0	661	404494	0	Standard
	Mn	55	11.710	ug/L	0.298	2	522	390281	2	Standard
>	Ge-1	72		ug/L			58771	50835	0	KED
	Co	59	1.599	ug/L	0.029	1	10	5376	2	KED
	Ni	60	1.467	ug/L	0.054	3	3	1398	3	KED
	Ni	62	1.715	ug/L	0.109	6	0	267	6	KED
	Cu	63	22.640	ug/L	0.468	2	13	60281	1	KED
	Cu	65	23.818	ug/L	0.617	2	7	30057	1	KED
	Zn	66	19.395	ug/L	0.383	1	29	6232	2	KED
	Zn	67	17.720	ug/L	1.555	8	2	968	9	KED
	Zn	68	18.191	ug/L	0.435	2	17	4489	2	KED
	As	75	0.100	ug/L	0.029	29	3	23	26	KED
	Se-1	78	0.229	ug/L	0.174	75	11	15	27	KED
	Y	89		ug/L			764463	828328	0	Standard
	Kr	83		ug/L			93	125	6	Standard
>	In-1	115		ug/L			22921	20068	1	KED
	Mo	98	12.957	ug/L	0.297	2	8	11598	1	KED
	Cd	111	0.121	ug/L	0.015	12	0	34	12	KED
	Cd	114	0.123	ug/L	0.015	12	2	88	11	KED
>	In	115		ug/L			1089596	1061844	0	Standard
	Ag	107	0.019	ug/L	0.002	10	38	361	8	Standard
	Sb	121	0.322	ug/L	0.008	2	20	4580	3	Standard
	Sb	123	0.314	ug/L	0.004	1	23	3379	0	Standard
	Ba	135	0.939	ug/L	0.012	1	12	4018	0	Standard
	Ba	137	0.933	ug/L	0.027	2	17	6976	2	Standard
>	Tb	159		ug/L			1252627	1316953	0	Standard
	Tl	205	0.014	ug/L	0.000	2	20	514	2	Standard
	Pb	208	0.054	ug/L	0.001	1	128	2539	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AWH3 B REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, February 23, 2016 14:45:52
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			56372	84397	3	Standard
	Cl	**37**		mg/L			4442069	5046502	1	Standard
>	**Sc**	**45**		ug/L			1108426	1269692	1	Standard
	Cr	**52**	**16.854**	ug/L	0.560	3	28245	410505	1	Standard
	Cr	**53**	**16.513**	ug/L	0.332	2	661	45866	0	Standard
	Mn	**55**	**9.004**	ug/L	0.440	4	522	298680	3	Standard
>	**Ge-1**	**72**		ug/L			58771	48908	1	KED
	Co	**59**	**1.632**	ug/L	0.041	2	10	5279	1	KED
	Ni	**60**	**0.887**	ug/L	0.060	6	3	813	5	KED
	Ni	**62**	**1.561**	ug/L	0.314	20	0	234	18	KED
	Cu	**63**	**11.139**	ug/L	0.264	2	13	28536	1	KED
	Cu	**65**	**11.136**	ug/L	0.246	2	7	13523	0	KED
	Zn	**66**	**10.185**	ug/L	0.905	8	29	3157	7	KED
	Zn	**67**	**9.154**	ug/L	0.922	10	2	481	8	KED
	Zn	**68**	**9.535**	ug/L	0.102	1	17	2271	2	KED
	As	**75**	**0.071**	ug/L	0.009	13	3	17	10	KED
	Se-1	**78**	**0.247**	ug/L	0.154	62	11	14	23	KED
	Y	**89**		ug/L			764463	826768	1	Standard
	Kr	**83**		ug/L			93	149	5	Standard
>	**In-1**	**115**		ug/L			22921	19301	1	KED
	Mo	**98**	**11.137**	ug/L	0.641	5	8	9585	4	KED
	Cd	**111**	**0.114**	ug/L	0.025	21	0	31	21	KED
	Cd	**114**	**0.095**	ug/L	0.003	3	2	66	1	KED
>	**In**	**115**		ug/L			1089596	1020651	1	Standard
	Ag	**107**	**0.001**	ug/L	0.001	45	38	58	16	Standard
	Sb	**121**	**0.231**	ug/L	0.004	1	20	3154	2	Standard
	Sb	**123**	**0.229**	ug/L	0.007	2	23	2374	1	Standard
	Ba	**135**	**0.688**	ug/L	0.025	3	12	2834	4	Standard
	Ba	**137**	**0.682**	ug/L	0.002	0	17	4907	1	Standard
>	**Tb**	**159**		ug/L			1252627	1291948	1	Standard
	Tl	**205**	**0.008**	ug/L	0.000	2	20	307	2	Standard
	Pb	**208**	**0.019**	ug/L	0.001	7	128	968	6	Standard

AWX9 : 00360

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AWH3 C REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, February 23, 2016 14:50:44
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	92826	2	Standard
	Cl	37		mg/L			4442069	4900388	2	Standard
>	Sc	45		ug/L			1108426	1218119	0	Standard
	Cr	52	30.670	ug/L	0.021	0	28245	691379	0	Standard
	Cr	53	30.012	ug/L	0.783	2	661	79392	2	Standard
	Mn	55	8.349	ug/L	0.091	1	522	265844	1	Standard
>	Ge-1	72		ug/L			58771	47261	2	KED
	Co	59	1.034	ug/L	0.018	1	10	3236	2	KED
	Ni	60	0.616	ug/L	0.016	2	3	547	4	KED
	Ni	62	1.456	ug/L	0.108	7	0	211	7	KED
	Cu	63	11.561	ug/L	0.151	1	13	28619	1	KED
	Cu	65	11.501	ug/L	0.162	1	7	13495	1	KED
	Zn	66	9.680	ug/L	0.231	2	29	2902	0	KED
	Zn	67	8.721	ug/L	1.209	13	2	443	11	KED
	Zn	68	9.136	ug/L	0.230	2	17	2103	2	KED
	As	75	0.080	ug/L	0.021	25	3	18	20	KED
	Se-1	78	0.220	ug/L	0.186	84	11	13	30	KED
	Y	89		ug/L			764463	811669	1	Standard
	Kr	83		ug/L			93	143	13	Standard
>	In-1	115		ug/L			22921	18394	1	KED
	Mo	98	12.872	ug/L	0.294	2	8	10561	1	KED
	Cd	111	0.078	ug/L	0.022	29	0	20	27	KED
	Cd	114	0.088	ug/L	0.007	8	2	58	8	KED
>	In	115		ug/L			1089596	974635	2	Standard
	Ag	107	0.002	ug/L	0.000	8	38	66	5	Standard
	Sb	121	0.163	ug/L	0.004	2	20	2137	1	Standard
	Sb	123	0.167	ug/L	0.008	4	23	1661	3	Standard
	Ba	135	0.631	ug/L	0.028	4	12	2483	5	Standard
	Ba	137	0.633	ug/L	0.017	2	17	4353	2	Standard
>	Tb	159		ug/L			1252627	1252171	2	Standard
	Tl	205	0.010	ug/L	0.000	4	20	342	1	Standard
	Pb	208	0.028	ug/L	0.001	4	128	1304	1	Standard

AVX9 : 063354

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AWH3 D REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, February 23, 2016 14:55:35
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	84619	2	Standard
	Cl	37		mg/L			4442069	4809801	2	Standard
>	Sc	45		ug/L			1108426	1290631	2	Standard
|	Cr	52	8.083	ug/L	0.266	3	28245	217194	1	Standard
|	Cr	53	7.768	ug/L	0.369	4	661	22329	2	Standard
|	Mn	55	8.761	ug/L	0.261	2	522	295422	1	Standard
>	Ge-1	72		ug/L			58771	48276	1	KED
|	Co	59	1.172	ug/L	0.016	1	10	3746	2	KED
|	Ni	60	1.159	ug/L	0.081	7	3	1049	5	KED
|	Ni	62	1.594	ug/L	0.264	16	0	236	15	KED
|	Cu	63	14.783	ug/L	0.308	2	13	37380	1	KED
|	Cu	65	15.333	ug/L	0.249	1	7	18379	1	KED
|	Zn	66	8.445	ug/L	0.361	4	29	2590	3	KED
|	Zn	67	7.433	ug/L	0.961	12	2	386	11	KED
|	Zn	68	8.133	ug/L	0.220	2	17	1913	1	KED
|	As	75	0.117	ug/L	0.031	26	3	26	24	KED
|	Se-1	78	0.102	ug/L	0.061	60	11	11	11	KED
	Y	89		ug/L			764463	827804	1	Standard
	Kr	83		ug/L			93	128	9	Standard
>	In-1	115		ug/L			22921	18359	1	KED
|	Mo	98	13.961	ug/L	0.276	1	8	11436	3	KED
|	Cd	111	0.358	ug/L	0.061	17	0	90	16	KED
|	Cd	114	0.366	ug/L	0.057	15	2	235	14	KED
>	In	115		ug/L			1089596	981878	1	Standard
|	Ag	107	0.003	ug/L	0.000	7	38	75	5	Standard
|	Sb	121	0.276	ug/L	0.006	2	20	3623	0	Standard
|	Sb	123	0.274	ug/L	0.008	3	23	2730	1	Standard
|	Ba	135	0.723	ug/L	0.029	4	12	2863	2	Standard
|	Ba	137	0.731	ug/L	0.034	4	17	5058	2	Standard
>	Tb	159		ug/L			1252627	1276454	0	Standard
|	Tl	205	0.010	ug/L	0.001	10	20	365	10	Standard
|	Pb	208	0.034	ug/L	0.002	6	128	1610	6	Standard

AVX9 : 66365

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AWH3 MBSPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, February 23, 2016 15:00:27
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	72126	2	Standard
	Cl	37		mg/L			4442069	4957885	1	Standard
>	Sc	45		ug/L			1108426	1304553	0	Standard
	Cr	52	26.386	ug/L	0.268	1	28245	641668	1	Standard
	Cr	53	25.248	ug/L	0.235	0	661	71654	0	Standard
	Mn	55	25.514	ug/L	0.690	2	522	868760	2	Standard
>	Ge-1	72		ug/L			58771	57649	2	KED
	Co	59	29.105	ug/L	1.151	3	10	110771	1	KED
	Ni	60	29.985	ug/L	1.319	4	3	32341	2	KED
	Ni	62	28.813	ug/L	0.573	1	0	5104	0	KED
	Cu	63	30.384	ug/L	0.619	2	13	91750	3	KED
	Cu	65	30.852	ug/L	1.131	3	7	44132	1	KED
	Zn	66	90.846	ug/L	4.517	4	29	32969	2	KED
	Zn	67	82.840	ug/L	3.920	4	2	5122	3	KED
	Zn	68	83.947	ug/L	0.919	1	17	23429	1	KED
	As	75	25.762	ug/L	0.436	1	3	6043	1	KED
	Se-1	78	78.242	ug/L	2.509	3	11	2122	1	KED
	Y	89		ug/L			764463	855751	2	Standard
	Kr	83		ug/L			93	123	20	Standard
>	In-1	115		ug/L			22921	22522	1	KED
	Mo	98	0.006	ug/L	0.008	127	8	15	54	KED
	Cd	111	27.668	ug/L	0.522	1	0	8553	0	KED
	Cd	114	28.189	ug/L	0.353	1	2	22141	1	KED
>	In	115		ug/L			1089596	1158426	2	Standard
	Ag	107	27.484	ug/L	0.764	2	38	503420	1	Standard
	Sb	121	0.005	ug/L	0.001	17	20	104	15	Standard
	Sb	123	0.004	ug/L	0.000	7	23	74	6	Standard
	Ba	135	28.100	ug/L	0.076	0	12	130884	2	Standard
	Ba	137	27.681	ug/L	0.673	2	17	225355	0	Standard
>	Tb	159		ug/L			1252627	1376055	2	Standard
	Tl	205	30.829	ug/L	0.770	2	20	1123838	4	Standard
	Pb	208	31.132	ug/L	0.247	0	128	1461054	1	Standard

AVX3 : 00356

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AWE8 MBSPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, February 23, 2016 15:05:18
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	70607	3	Standard
	Cl	37		mg/L			4442069	5209885	2	Standard
⌈>	Sc	45		ug/L			1108426	1308600	0	Standard
|	Cr	52	26.151	ug/L	0.959	3	28245	638252	3	Standard
|	Cr	53	25.369	ug/L	0.483	1	661	72214	1	Standard
⌊	Mn	55	25.648	ug/L	0.345	1	522	876072	1	Standard
⌈>	Ge-1	72		ug/L			58771	59204	2	KED
|	Co	59	28.201	ug/L	1.002	3	10	110220	0	KED
|	Ni	60	28.829	ug/L	0.890	3	3	31935	0	KED
|	Ni	62	27.904	ug/L	1.031	3	0	5074	0	KED
|	Cu	63	29.591	ug/L	2.052	6	13	91638	4	KED
|	Cu	65	30.452	ug/L	1.291	4	7	44724	1	KED
|	Zn	66	87.663	ug/L	3.633	4	29	32673	1	KED
|	Zn	67	79.907	ug/L	3.846	4	2	5072	1	KED
|	Zn	68	82.250	ug/L	4.246	5	17	23556	2	KED
|	As	75	24.880	ug/L	1.154	4	3	5990	2	KED
⌊	Se-1	78	77.511	ug/L	3.590	4	11	2158	1	KED
	Y	89		ug/L			764463	871899	3	Standard
	Kr	83		ug/L			93	111	15	Standard
⌈>	In-1	115		ug/L			22921	22625	1	KED
|	Mo	98	0.007	ug/L	0.002	35	8	15	14	KED
|	Cd	111	27.234	ug/L	0.859	3	0	8457	1	KED
⌊	Cd	114	27.435	ug/L	0.823	2	2	21650	3	KED
⌈>	In	115		ug/L			1089596	1155421	4	Standard
|	Ag	107	28.324	ug/L	1.515	5	38	516817	1	Standard
|	Sb	121	0.004	ug/L	0.001	35	20	80	25	Standard
|	Sb	123	0.003	ug/L	0.001	30	23	61	15	Standard
|	Ba	135	28.267	ug/L	1.021	3	12	131177	1	Standard
⌊	Ba	137	27.981	ug/L	1.854	6	17	226815	1	Standard
⌈>	Tb	159		ug/L			1252627	1395787	2	Standard
|	Tl	205	29.794	ug/L	0.236	0	20	1101205	1	Standard
⌊	Pb	208	30.814	ug/L	0.440	1	128	1467074	2	Standard

AVX9 · 00367

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV4
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, February 23, 2016 15:11:15
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	61787	5	Standard
	Cl	37		mg/L			4442069	4938808	2	Standard
>	Sc	45		ug/L			1108426	1257099	1	Standard
	Cr	52	47.292	ug/L	0.764	1	28245	1082675	0	Standard
	Cr	53	45.407	ug/L	0.587	1	661	123559	0	Standard
	Mn	55	44.988	ug/L	1.570	3	522	1475145	1	Standard
>	Ge-1	72		ug/L			58771	55354	1	KED
	Co	59	50.126	ug/L	0.424	0	10	183287	1	KED
	Ni	60	51.416	ug/L	0.303	0	3	53282	1	KED
	Ni	62	50.951	ug/L	1.634	3	0	8668	2	KED
	Cu	63	51.163	ug/L	0.946	1	13	148332	2	KED
	Cu	65	52.475	ug/L	0.518	0	7	72108	0	KED
	Zn	66	53.210	ug/L	0.401	0	29	18569	1	KED
	Zn	67	51.618	ug/L	1.492	2	2	3067	3	KED
	Zn	68	51.476	ug/L	1.039	2	17	13801	1	KED
	As	75	49.006	ug/L	0.750	1	3	11036	0	KED
	Se-1	78	48.467	ug/L	0.145	0	11	1267	0	KED
	Y	89		ug/L			764463	852716	0	Standard
	Kr	83		ug/L			93	114	4	Standard
>	In-1	115		ug/L			22921	21721	2	KED
	Mo	98	51.334	ug/L	2.270	4	8	49679	1	KED
	Cd	111	51.419	ug/L	1.432	2	0	15328	2	KED
	Cd	114	51.653	ug/L	3.136	6	2	39087	3	KED
>	In	115		ug/L			1089596	1129472	1	Standard
	Ag	107	51.371	ug/L	2.492	4	38	917413	3	Standard
	Sb	121	51.108	ug/L	0.176	0	20	768854	0	Standard
	Sb	123	51.239	ug/L	0.825	1	23	582633	2	Standard
	Ba	135	49.890	ug/L	0.822	1	12	226570	2	Standard
	Ba	137	49.298	ug/L	0.795	1	17	391395	0	Standard
>	Tb	159		ug/L			1252627	1376479	1	Standard
	Tl	205	51.816	ug/L	0.945	1	20	1889129	3	Standard
	Pb	208	52.609	ug/L	1.213	2	128	2470494	3	Standard

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AVX9 : 68368

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB4
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, February 23, 2016 15:18:51
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	61988	2	Standard
	Cl	37		mg/L			4442069	4912042	3	Standard
>	Sc	45		ug/L			1108426	1223580	1	Standard
	Cr	52	-0.096	ug/L	0.054	56	28245	29088	2	Standard
	Cr	53	-0.159	ug/L	0.002	1	661	311	1	Standard
	Mn	55	0.001	ug/L	0.000	6	522	616	1	Standard
>	Ge-1	72		ug/L			58771	56243	2	KED
	Co	59	0.000	ug/L	0.002	642	10	10	61	KED
	Ni	60	0.001	ug/L	0.002	250	3	3	50	KED
	Ni	62	0.014	ug/L	0.016	113	0	2	114	KED
	Cu	63	0.005	ug/L	0.002	36	13	27	17	KED
	Cu	65	0.003	ug/L	0.004	123	7	11	44	KED
	Zn	66	0.004	ug/L	0.023	587	29	29	25	KED
	Zn	67	0.012	ug/L	0.018	146	2	3	34	KED
	Zn	68	0.014	ug/L	0.023	164	17	20	32	KED
	As	75	0.003	ug/L	0.010	379	3	4	58	KED
	Se-1	78	0.072	ug/L	0.176	244	11	12	37	KED
	Y	89		ug/L			764463	812034	1	Standard
	Kr	83		ug/L			93	100	11	Standard
>	In-1	115		ug/L			22921	21577	2	KED
	Mo	98	0.030	ug/L	0.010	33	8	37	28	KED
	Cd	111	0.001	ug/L	0.004	301	0	1	86	KED
	Cd	114	0.000	ug/L	0.001	880	2	2	46	KED
>	In	115		ug/L			1089596	1138881	2	Standard
	Ag	107	0.001	ug/L	0.000	79	38	50	17	Standard
	Sb	121	0.052	ug/L	0.003	6	20	807	4	Standard
	Sb	123	0.052	ug/L	0.005	9	23	618	7	Standard
	Ba	135	0.001	ug/L	0.001	60	12	19	17	Standard
	Ba	137	0.001	ug/L	0.001	80	17	29	30	Standard
>	Tb	159		ug/L			1252627	1360688	2	Standard
	Tl	205	0.004	ug/L	0.000	7	20	163	4	Standard
	Pb	208	0.002	ug/L	0.001	38	128	228	13	Standard

AVX9 : 88360

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AVP2 MB SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, February 23, 2016 15:23:43
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	63665	4	Standard
	Cl	37		mg/L			4442069	4891599	4	Standard
>	Sc	45		ug/L			1108426	1247246	2	Standard
	Cr	52	-0.069	ug/L	0.067	98	28245	30246	2	Standard
	Cr	53	-0.147	ug/L	0.010	7	661	349	6	Standard
	Mn	55	0.008	ug/L	0.001	16	522	834	3	Standard
>	Ge-1	72		ug/L			58771	58424	2	KED
	Co	59	0.000	ug/L	0.002	627	10	11	72	KED
	Ni	60	0.032	ug/L	0.006	18	3	38	15	KED
	Ni	62	0.056	ug/L	0.033	58	0	10	60	KED
	Cu	63	0.010	ug/L	0.003	36	13	43	24	KED
	Cu	65	0.010	ug/L	0.007	67	7	21	44	KED
	Zn	66	0.205	ug/L	0.040	19	29	105	16	KED
	Zn	67	0.183	ug/L	0.046	25	2	13	20	KED
	Zn	68	0.198	ug/L	0.019	9	17	73	9	KED
	As	75	0.006	ug/L	0.008	141	3	4	36	KED
	Se-1	78	-0.090	ug/L	0.033	37	11	8	9	KED
	Y	89		ug/L			764463	812543	0	Standard
	Kr	83		ug/L			93	107	11	Standard
>	In-1	115		ug/L			22921	22832	2	KED
	Mo	98	0.009	ug/L	0.006	64	8	17	31	KED
	Cd	111	-0.002	ug/L	0.002	90	0	0	173	KED
	Cd	114	-0.003	ug/L	0.001	54	2	0	261	KED
>	In	115		ug/L			1089596	1168817	1	Standard
	Ag	107	0.000	ug/L	0.001	266	38	46	30	Standard
	Sb	121	0.021	ug/L	0.001	6	20	343	5	Standard
	Sb	123	0.019	ug/L	0.002	11	23	244	9	Standard
	Ba	135	0.005	ug/L	0.001	26	12	39	18	Standard
	Ba	137	0.005	ug/L	0.002	44	17	62	31	Standard
>	Tb	159		ug/L			1252627	1364858	2	Standard
	Tl	205	0.002	ug/L	0.001	36	20	93	26	Standard
	Pb	208	0.008	ug/L	0.000	4	128	533	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AVX6 MB SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, February 23, 2016 15:28:35
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	65164	2	Standard
	Cl	37		mg/L			4442069	4883870	0	Standard
>	Sc	45		ug/L			1108426	1240650	0	Standard
	Cr	52	-0.049	ug/L	0.025	51	28245	30543	2	Standard
	Cr	53	-0.143	ug/L	0.003	1	661	360	2	Standard
	Mn	55	0.007	ug/L	0.000	4	522	802	0	Standard
>	Ge-1	72		ug/L			58771	58049	1	KED
	Co	59	0.008	ug/L	0.014	182	10	38	134	KED
	Ni	60	0.027	ug/L	0.013	47	3	32	41	KED
	Ni	62	0.036	ug/L	0.022	62	0	6	62	KED
	Cu	63	0.021	ug/L	0.022	103	13	77	83	KED
	Cu	65	0.023	ug/L	0.017	73	7	40	57	KED
	Zn	66	0.145	ug/L	0.022	15	29	82	8	KED
	Zn	67	0.214	ug/L	0.155	72	2	15	61	KED
	Zn	68	0.162	ug/L	0.093	57	17	62	39	KED
	As	75	0.011	ug/L	0.030	269	3	6	113	KED
	Se-1	78	0.005	ug/L	0.084	1764	11	11	21	KED
	Y	89		ug/L			764463	828305	2	Standard
	Kr	83		ug/L			93	91	4	Standard
>	In-1	115		ug/L			22921	22633	2	KED
	Mo	98	0.010	ug/L	0.003	33	8	18	18	KED
	Cd	111	0.003	ug/L	0.000	5	0	1		KED
	Cd	114	-0.001	ug/L	0.002	321	2	1	103	KED
>	In	115		ug/L			1089596	1138903	1	Standard
	Ag	107	0.000	ug/L	0.000	48	38	48	8	Standard
	Sb	121	0.012	ug/L	0.002	15	20	203	15	Standard
	Sb	123	0.013	ug/L	0.002	12	23	171	9	Standard
	Ba	135	0.005	ug/L	0.001	16	12	36	10	Standard
	Ba	137	0.005	ug/L	0.001	12	17	53	7	Standard
>	Tb	159		ug/L			1252627	1376011	2	Standard
	Tl	205	0.002	ug/L	0.000	21	20	79	13	Standard
	Pb	208	0.011	ug/L	0.001	9	128	668	9	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AVX6 A SWN RQZn 50x
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, February 23, 2016 15:33:26
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	75907	5	Standard
	Cl	37		mg/L			4442069	4941153	2	Standard
>	Sc	45		ug/L			1108426	1352348	3	Standard
	Cr	52	39.783	ug/L	1.385	3	28245	984747	0	Standard
	Cr	53	38.426	ug/L	1.861	4	661	112541	3	Standard
	Mn	55	366.963	ug/L	15.699	4	522	12934256	1	Standard
>	Ge-1	72		ug/L			58771	57583	0	KED
	Co	59	6.765	ug/L	0.151	2	10	25739	1	KED
	Ni	60	29.969	ug/L	0.416	1	3	32309	1	KED
	Ni	62	29.181	ug/L	0.750	2	0	5165	2	KED
	Cu	63	124.726	ug/L	2.143	1	13	376157	2	KED
	Cu	65	125.672	ug/L	1.444	1	7	179640	1	KED
	Zn	66	320.008	ug/L	2.740	0	29	116020	0	KED
	Zn	67	299.625	ug/L	8.355	2	2	18511	2	KED
	Zn	68	311.065	ug/L	0.600	0	17	86684	0	KED
	As	75	4.162	ug/L	0.078	1	3	978	1	KED
	Se-1	78	0.673	ug/L	0.148	21	11	29	14	KED
	Y	89		ug/L			764463	1083650	1	Standard
	Kr	83		ug/L			93	171	8	Standard
>	In-1	115		ug/L			22921	22961	1	KED
	Mo	98	2.933	ug/L	0.050	1	8	3011	2	KED
	Cd	111	0.493	ug/L	0.019	3	0	156	5	KED
	Cd	114	0.517	ug/L	0.045	8	2	416	8	KED
>	In	115		ug/L			1089596	1139470	2	Standard
	Ag	107	0.157	ug/L	0.009	5	38	2872	4	Standard
	Sb	121	0.103	ug/L	0.008	8	20	1584	8	Standard
	Sb	123	0.106	ug/L	0.005	4	23	1237	2	Standard
	Ba	135	145.826	ug/L	3.805	2	12	668045	3	Standard
	Ba	137	144.126	ug/L	4.070	2	17	1154008	1	Standard
>	Tb	159		ug/L			1252627	1398254	2	Standard
	Tl	205	0.050	ug/L	0.002	4	20	1892	6	Standard
	Pb	208	73.603	ug/L	1.527	2	128	3510733	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AVX6 B SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, February 23, 2016 15:38:18
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	76542	2	Standard
	Cl	37		mg/L			4442069	4990988	0	Standard
⌈>	Sc	45		ug/L			1108426	1312461	2	Standard
|	Cr	52	44.783	ug/L	0.938	2	28245	1072042	0	Standard
|	Cr	53	42.173	ug/L	0.731	1	661	119871	1	Standard
⌊	Mn	55	315.453	ug/L	11.865	3	522	10794485	1	Standard
⌈>	Ge-1	72		ug/L			58771	60443	1	KED
|	Co	59	5.890	ug/L	0.115	1	10	23523	1	KED
|	Ni	60	26.806	ug/L	0.347	1	3	30333	1	KED
|	Ni	62	26.586	ug/L	0.800	3	0	4938	2	KED
|	Cu	63	148.483	ug/L	1.422	0	13	470043	1	KED
|	Cu	65	154.014	ug/L	2.768	1	7	231059	0	KED
|	Zn	66	275.446	ug/L	0.848	0	29	104830	1	KED
|	Zn	67	253.397	ug/L	4.308	1	2	16430	0	KED
|	Zn	68	262.665	ug/L	6.860	2	17	76821	1	KED
|	As	75	4.031	ug/L	0.058	1	3	994	0	KED
⌊	Se-1	78	0.634	ug/L	0.079	12	11	29	6	KED
	Y	89		ug/L			764463	1037701	2	Standard
	Kr	83		ug/L			93	186	5	Standard
⌈>	In-1	115		ug/L			22921	23252	1	KED
|	Mo	98	2.699	ug/L	0.043	1	8	2806	1	KED
|	Cd	111	0.490	ug/L	0.046	9	0	157	8	KED
⌊	Cd	114	0.485	ug/L	0.039	8	2	396	7	KED
⌈>	In	115		ug/L			1089596	1177064	0	Standard
|	Ag	107	0.116	ug/L	0.004	3	38	2196	3	Standard
|	Sb	121	0.143	ug/L	0.003	2	20	2260	2	Standard
|	Sb	123	0.144	ug/L	0.003	2	23	1728	2	Standard
|	Ba	135	107.073	ug/L	0.753	0	12	506729	1	Standard
⌊	Ba	137	103.440	ug/L	1.360	1	17	855926	1	Standard
⌈>	Tb	159		ug/L			1252627	1420275	2	Standard
|	Tl	205	0.037	ug/L	0.000	1	20	1414	3	Standard
⌊	Pb	208	50.277	ug/L	0.124	0	128	2435451	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AVP2 A SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, February 23, 2016 15:44:14
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	69002	3	Standard
	Cl	37		mg/L			4442069	4908211	2	Standard
>	Sc	45		ug/L			1108426	1341452	0	Standard
	Cr	52	19.283	ug/L	0.750	3	28245	491298	2	Standard
	Cr	53	18.809	ug/L	0.670	3	661	55085	2	Standard
	Mn	55	258.531	ug/L	2.059	0	522	9046700	1	Standard
>	Ge-1	72		ug/L			58771	58928	2	KED
	Co	59	6.508	ug/L	0.130	1	10	25336	1	KED
	Ni	60	22.629	ug/L	0.412	1	3	24958	1	KED
	Ni	62	22.615	ug/L	0.589	2	0	4095	1	KED
	Cu	63	43.032	ug/L	1.212	2	13	132753	0	KED
	Cu	65	43.879	ug/L	0.605	1	7	64180	1	KED
	Zn	66	134.039	ug/L	2.873	2	29	49732	0	KED
	Zn	67	124.640	ug/L	3.984	3	2	7877	1	KED
	Zn	68	129.216	ug/L	3.759	2	17	36853	3	KED
	As	75	2.596	ug/L	0.108	4	3	625	3	KED
	Se-1	78	0.633	ug/L	0.121	19	11	28	9	KED
	Y	89		ug/L			764463	1070265	4	Standard
	Kr	83		ug/L			93	143	12	Standard
>	In-1	115		ug/L			22921	22757	3	KED
	Mo	98	1.124	ug/L	0.097	8	8	1148	7	KED
	Cd	111	0.194	ug/L	0.019	9	0	61	7	KED
	Cd	114	0.181	ug/L	0.016	8	2	145	5	KED
>	In	115		ug/L			1089596	1154480	3	Standard
	Ag	107	0.070	ug/L	0.006	8	38	1315	5	Standard
	Sb	121	0.108	ug/L	0.007	6	20	1682	3	Standard
	Sb	123	0.102	ug/L	0.007	7	23	1209	4	Standard
	Ba	135	100.230	ug/L	3.561	3	12	464845	0	Standard
	Ba	137	96.651	ug/L	3.794	3	17	783687	0	Standard
>	Tb	159		ug/L			1252627	1403081	1	Standard
	Tl	205	0.040	ug/L	0.003	7	20	1525	5	Standard
	Pb	208	18.267	ug/L	0.589	3	128	874131	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AVP2 B SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, February 23, 2016 15:49:05
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	76663	2	Standard
	Cl	37		mg/L			4442069	4748016	2	Standard
⌈>	Sc	45		ug/L			1108426	1288424	1	Standard
|	Cr	52	20.858	ug/L	0.168	0	28245	507850	1	Standard
|	Cr	53	20.082	ug/L	0.539	2	661	56435	1	Standard
⌊	Mn	55	201.107	ug/L	3.736	1	522	6760085	2	Standard
⌈>	Ge-1	72		ug/L			58771	60352	0	KED
|	Co	59	3.441	ug/L	0.058	1	10	13725	1	KED
|	Ni	60	13.786	ug/L	0.620	4	3	15574	3	KED
|	Ni	62	13.932	ug/L	0.618	4	0	2584	4	KED
|	Cu	63	30.994	ug/L	0.656	2	13	97967	1	KED
|	Cu	65	32.074	ug/L	1.227	3	7	48050	3	KED
|	Zn	66	109.515	ug/L	2.266	2	29	41630	1	KED
|	Zn	67	102.385	ug/L	0.936	0	2	6630	0	KED
|	Zn	68	107.861	ug/L	1.307	1	17	31512	0	KED
|	As	75	2.069	ug/L	0.043	2	3	511	1	KED
⌊	Se-1	78	0.259	ug/L	0.048	18	11	18	6	KED
	Y	89		ug/L			764463	989181	2	Standard
	Kr	83		ug/L			93	142	3	Standard
⌈>	In-1	115		ug/L			22921	23572	0	KED
|	Mo	98	0.851	ug/L	0.025	2	8	903	3	KED
|	Cd	111	0.192	ug/L	0.011	5	0	63	6	KED
⌊	Cd	114	0.199	ug/L	0.019	9	2	165	9	KED
⌈>	In	115		ug/L			1089596	1187961	0	Standard
|	Ag	107	0.052	ug/L	0.001	1	38	1016	1	Standard
|	Sb	121	0.209	ug/L	0.003	1	20	3332	0	Standard
|	Sb	123	0.219	ug/L	0.002	1	23	2649	1	Standard
|	Ba	135	53.441	ug/L	0.981	1	12	255273	2	Standard
⌊	Ba	137	53.025	ug/L	1.470	2	17	442867	3	Standard
⌈>	Tb	159		ug/L			1252627	1425609	2	Standard
|	Tl	205	0.026	ug/L	0.000	1	20	986	2	Standard
⌊	Pb	208	24.913	ug/L	0.615	2	128	1211287	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AWA5 A REN RR Zn
Sample Dil Factor: 10
Comments:
Sample Date/Time: Tuesday, February 23, 2016 15:53:57
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD	Mode
	C	13		ug/L			56372	336025	2	Standard
	Cl	37		mg/L			4442069	4609658	1	Standard
>	Sc	45		ug/L			1108426	1291202	1	Standard
	Cr	52	31.201	ug/L	1.153	3	28245	744740	2	Standard
	Cr	53	28.542	ug/L	0.689	2	661	80054	0	Standard
	Mn	55	14.239	ug/L	0.745	5	522	480017	4	Standard
>	Ge-1	72		ug/L			58771	58929	1	KED
	Co	59	0.277	ug/L	0.024	8	10	1087	8	KED
	Ni	60	2.205	ug/L	0.133	6	3	2434	5	KED
	Ni	62	2.314	ug/L	0.046	1	0	419	2	KED
	Cu	63	11.662	ug/L	0.010	0	13	36005	1	KED
	Cu	65	11.947	ug/L	0.422	3	7	17476	2	KED
	Zn	66	1325.073	ug/L	27.115	2	29	491439	0	KED
	Zn	67	1185.353	ug/L	37.172	3	2	74911	1	KED
	Zn	68	1244.507	ug/L	28.090	2	17	354858	2	KED
	As	75	0.203	ug/L	0.014	6	3	52	7	KED
	Se-1	78	0.016	ug/L	0.062	377	11	11	14	KED
	Y	89		ug/L			764463	843378	2	Standard
	Kr	83		ug/L			93	102	20	Standard
>	In-1	115		ug/L			22921	23070	1	KED
	Mo	98	0.711	ug/L	0.080	11	8	739	9	KED
	Cd	111	3.411	ug/L	0.069	2	0	1080	0	KED
	Cd	114	3.326	ug/L	0.096	2	2	2677	1	KED
>	In	115		ug/L			1089596	1174976	1	Standard
	Ag	107	0.014	ug/L	0.001	3	38	293	4	Standard
	Sb	121	0.395	ug/L	0.005	1	20	6201	2	Standard
	Sb	123	0.402	ug/L	0.014	3	23	4779	2	Standard
	Ba	135	24.228	ug/L	0.260	1	12	114457	1	Standard
	Ba	137	24.652	ug/L	0.401	1	17	203609	1	Standard
>	Tb	159		ug/L			1252627	1409486	2	Standard
	Tl	205	0.003	ug/L	0.000	7	20	132	7	Standard
	Pb	208	0.586	ug/L	0.008	1	128	28334	2	Standard

AVX3 : 86376

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AVP2 MBSPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, February 23, 2016 15:58:48
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	64781	1	Standard
	Cl	37		mg/L			4442069	4509855	3	Standard
>	Sc	45		ug/L			1108426	1190269	1	Standard
	Cr	52	28.429	ug/L	0.474	1	28245	628359	0	Standard
	Cr	53	27.032	ug/L	0.164	0	661	69948	1	Standard
	Mn	55	28.209	ug/L	1.023	3	522	876294	3	Standard
>	Ge-1	72		ug/L			58771	58221	2	KED
	Co	59	27.942	ug/L	0.727	2	10	107442	2	KED
	Ni	60	29.627	ug/L	0.732	2	3	32278	0	KED
	Ni	62	28.233	ug/L	0.720	2	0	5052	3	KED
	Cu	63	29.913	ug/L	1.670	5	13	91140	3	KED
	Cu	65	30.481	ug/L	1.249	4	7	44025	1	KED
	Zn	66	93.231	ug/L	5.846	6	29	34161	4	KED
	Zn	67	84.378	ug/L	2.414	2	2	5269	0	KED
	Zn	68	86.863	ug/L	1.671	1	17	24481	2	KED
	As	75	26.997	ug/L	0.830	3	3	6393	0	KED
	Se-1	78	84.998	ug/L	2.495	2	11	2327	1	KED
	Y	89		ug/L			764463	808455	1	Standard
	Kr	83		ug/L			93	99	12	Standard
>	In-1	115		ug/L			22921	23577	1	KED
	Mo	98	0.002	ug/L	0.001	54	8	10	9	KED
	Cd	111	27.115	ug/L	1.165	4	0	8774	3	KED
	Cd	114	27.763	ug/L	0.514	1	2	22827	1	KED
>	In	115		ug/L			1089596	1170074	0	Standard
	Ag	107	28.660	ug/L	0.838	2	38	530473	3	Standard
	Sb	121	0.004	ug/L	0.001	23	20	81	17	Standard
	Sb	123	0.003	ug/L	0.000	11	23	63	6	Standard
	Ba	135	28.737	ug/L	0.249	0	12	135202	1	Standard
	Ba	137	28.237	ug/L	0.576	2	17	232285	2	Standard
>	Tb	159		ug/L			1252627	1391746	3	Standard
	Tl	205	28.785	ug/L	0.588	2	20	1060503	1	Standard
	Pb	208	29.816	ug/L	0.746	2	128	1414824	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AVX6 MBSPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, February 23, 2016 16:03:40
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	63018	3	Standard
	Cl	37		mg/L			4442069	4589885	2	Standard
>	Sc	45		ug/L			1108426	1207374	1	Standard
|	Cr	52	27.107	ug/L	0.453	1	28245	609196	1	Standard
|	Cr	53	26.127	ug/L	0.538	2	661	68597	2	Standard
L	Mn	55	26.651	ug/L	0.753	2	522	839661	1	Standard
>	Ge-1	72		ug/L			58771	57817	3	KED
|	Co	59	27.099	ug/L	0.823	3	10	103428	0	KED
|	Ni	60	28.104	ug/L	1.211	4	3	30405	3	KED
|	Ni	62	28.185	ug/L	1.247	4	0	5008	5	KED
|	Cu	63	29.061	ug/L	1.126	3	13	87949	2	KED
|	Cu	65	29.117	ug/L	0.828	2	7	41770	1	KED
|	Zn	66	88.846	ug/L	0.873	0	29	32356	2	KED
|	Zn	67	81.922	ug/L	1.554	1	2	5085	5	KED
|	Zn	68	84.498	ug/L	3.302	3	17	23635	1	KED
|	As	75	26.076	ug/L	0.403	1	3	6133	2	KED
L	Se-1	78	83.266	ug/L	1.801	2	11	2265	1	KED
	Y	89		ug/L			764463	820120	4	Standard
	Kr	83		ug/L			93	92	19	Standard
>	In-1	115		ug/L			22921	23446	0	KED
|	Mo	98	0.003	ug/L	0.004	131	8	12	32	KED
|	Cd	111	27.061	ug/L	0.235	0	0	8710	0	KED
L	Cd	114	26.700	ug/L	0.679	2	2	21831	1	KED
>	In	115		ug/L			1089596	1167447	0	Standard
|	Ag	107	27.264	ug/L	0.589	2	38	503484	2	Standard
|	Sb	121	0.004	ug/L	0.000	4	20	83	3	Standard
|	Sb	123	0.004	ug/L	0.002	47	23	70	31	Standard
|	Ba	135	28.172	ug/L	0.214	0	12	132243	0	Standard
L	Ba	137	27.824	ug/L	0.280	1	17	228360	0	Standard
>	Tb	159		ug/L			1252627	1394850	1	Standard
|	Tl	205	27.931	ug/L	0.837	2	20	1031592	2	Standard
L	Pb	208	28.593	ug/L	0.697	2	128	1360176	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AWG4 MBSPK REN Del
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, February 23, 2016 16:09:35
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	64014	2	Standard
	Cl	37		mg/L			4442069	4725042	1	Standard
>	Sc	45		ug/L			1108426	1202553	1	Standard
	Cr	52	28.199	ug/L	1.122	3	28245	629804	2	Standard
	Cr	53	27.269	ug/L	0.318	1	661	71284	2	Standard
	Mn	55	28.181	ug/L	1.204	4	522	884080	2	Standard
>	Ge-1	72		ug/L			58771	57776	0	KED
	Co	59	29.394	ug/L	0.354	1	10	112185	1	KED
	Ni	60	28.886	ug/L	0.246	0	3	31245	1	KED
	Ni	62	27.847	ug/L	0.944	3	0	4944	2	KED
	Cu	63	29.704	ug/L	0.539	1	13	89885	1	KED
	Cu	65	30.902	ug/L	0.720	2	7	44323	1	KED
	Zn	66	89.128	ug/L	0.747	0	29	32442	0	KED
	Zn	67	82.755	ug/L	1.624	1	2	5131	2	KED
	Zn	68	87.627	ug/L	2.899	3	17	24510	2	KED
	As	75	26.425	ug/L	0.344	1	3	6213	0	KED
	Se-1	78	80.406	ug/L	0.824	1	11	2187	1	KED
	Y	89		ug/L			764463	858873	1	Standard
	Kr	83		ug/L			93	97	16	Standard
>	In-1	115		ug/L			22921	22601	4	KED
	Mo	98	0.012	ug/L	0.009	74	8	21	43	KED
	Cd	111	28.316	ug/L	0.997	3	0	8778	0	KED
	Cd	114	28.655	ug/L	1.194	4	2	22563	0	KED
>	In	115		ug/L			1089596	1186707	0	Standard
	Ag	107	27.274	ug/L	0.162	0	38	511992	1	Standard
	Sb	121	0.005	ug/L	0.000	9	20	97	6	Standard
	Sb	123	0.004	ug/L	0.001	18	23	73	11	Standard
	Ba	135	28.258	ug/L	0.183	0	12	134832	0	Standard
	Ba	137	28.743	ug/L	0.063	0	17	239805	1	Standard
>	Tb	159		ug/L			1252627	1387914	1	Standard
	Tl	205	29.051	ug/L	0.454	1	20	1067701	1	Standard
	Pb	208	30.271	ug/L	0.746	2	128	1433044	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV5
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, February 23, 2016 16:15:32
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	58218	4	Standard
	Cl	37		mg/L			4442069	4833231	1	Standard
>	Sc	45		ug/L			1108426	1184541	1	Standard
	Cr	52	48.385	ug/L	1.070	2	28245	1043158	2	Standard
	Cr	53	48.568	ug/L	0.613	1	661	124490	0	Standard
	Mn	55	48.532	ug/L	1.196	2	522	1499731	1	Standard
>	Ge-1	72		ug/L			58771	58252	0	KED
	Co	59	48.348	ug/L	1.733	3	10	186051	3	KED
	Ni	60	48.713	ug/L	0.211	0	3	53123	0	KED
	Ni	62	46.726	ug/L	1.295	2	0	8365	2	KED
	Cu	63	49.123	ug/L	1.232	2	13	149890	3	KED
	Cu	65	50.877	ug/L	0.638	1	7	73571	0	KED
	Zn	66	49.905	ug/L	1.513	3	29	18327	2	KED
	Zn	67	49.148	ug/L	1.192	2	2	3073	1	KED
	Zn	68	49.565	ug/L	1.298	2	17	13987	2	KED
	As	75	48.015	ug/L	0.302	0	3	11380	0	KED
	Se-1	78	48.020	ug/L	0.579	1	11	1321	1	KED
	Y	89		ug/L			764463	839912	2	Standard
	Kr	83		ug/L			93	94	23	Standard
>	In-1	115		ug/L			22921	22759	2	KED
	Mo	98	49.621	ug/L	1.108	2	8	50344	0	KED
	Cd	111	50.287	ug/L	0.214	0	0	15713	2	KED
	Cd	114	50.558	ug/L	0.968	1	2	40122	0	KED
>	In	115		ug/L			1089596	1147084	2	Standard
	Ag	107	50.734	ug/L	2.152	4	38	920121	2	Standard
	Sb	121	50.717	ug/L	1.515	2	20	774591	1	Standard
	Sb	123	50.741	ug/L	1.059	2	23	585805	0	Standard
	Ba	135	50.647	ug/L	1.390	2	12	233507	1	Standard
	Ba	137	50.624	ug/L	1.247	2	17	408106	0	Standard
>	Tb	159		ug/L			1252627	1390868	3	Standard
	Tl	205	49.379	ug/L	0.619	1	20	1818737	3	Standard
	Pb	208	50.466	ug/L	0.887	1	128	2393619	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB5
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, February 23, 2016 16:23:08
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	58983	2	Standard
	Cl	37		mg/L			4442069	4621702	0	Standard
>	Sc	45		ug/L			1108426	1151002	1	Standard
	Cr	52	-0.042	ug/L	0.070	166	28245	28453	3	Standard
	Cr	53	-0.139	ug/L	0.005	3	661	343	5	Standard
	Mn	55	0.001	ug/L	0.001	139	522	566	4	Standard
>	Ge-1	72		ug/L			58771	58691	1	KED
	Co	59	0.000	ug/L	0.000	64	10	12	9	KED
	Ni	60	0.002	ug/L	0.002	76	3	5	33	KED
	Ni	62	0.000	ug/L	0.000		0	0		KED
	Cu	63	0.003	ug/L	0.003	76	13	24	32	KED
	Cu	65	0.007	ug/L	0.004	57	7	18	33	KED
	Zn	66	0.024	ug/L	0.033	136	29	38	31	KED
	Zn	67	0.071	ug/L	0.047	66	2	6	41	KED
	Zn	68	0.038	ug/L	0.008	20	17	28	6	KED
	As	75	0.002	ug/L	0.005	246	3	4	29	KED
	Se-1	78	0.030	ug/L	0.109	360	11	11	24	KED
	Y	89		ug/L			764463	804714	5	Standard
	Kr	83		ug/L			93	91	7	Standard
>	In-1	115		ug/L			22921	22356	3	KED
	Mo	98	0.022	ug/L	0.004	17	8	31	15	KED
	Cd	111	0.001	ug/L	0.004	307	0	1	86	KED
	Cd	114	-0.002	ug/L	0.002	61	2	0	252	KED
>	In	115		ug/L			1089596	1173139	1	Standard
	Ag	107	0.001	ug/L	0.001	84	38	54	19	Standard
	Sb	121	0.049	ug/L	0.001	2	20	793	3	Standard
	Sb	123	0.050	ug/L	0.003	5	23	618	4	Standard
	Ba	135	0.002	ug/L	0.001	47	12	22	17	Standard
	Ba	137	0.002	ug/L	0.001	39	17	34	19	Standard
>	Tb	159		ug/L			1252627	1351078	2	Standard
	Tl	205	0.005	ug/L	0.000	9	20	205	9	Standard
	Pb	208	0.002	ug/L	0.000	12	128	248	2	Standard

ANX9 : 86381

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AVW0 MB1 REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, February 23, 2016 16:32:16
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	66934	2	Standard
	Cl	37		mg/L			4442069	4726703	2	Standard
>	Sc	45		ug/L			1108426	1240574	0	Standard
	Cr	52	0.071	ug/L	0.022	30	28245	33164	0	Standard
	Cr	53	-0.053	ug/L	0.004	7	661	600	1	Standard
	Mn	55	0.127	ug/L	0.002	1	522	4701	1	Standard
>	Ge-1	72		ug/L			58771	59213	0	KED
	Co	59	0.001	ug/L	0.002	104	10	15	36	KED
	Ni	60	0.027	ug/L	0 007	26	3	33	24	KED
	Ni	62	0.028	ug/L	0.016	57	0	5	57	KED
	Cu	63	0.683	ug/L	0.003	0	13	2131	1	KED
	Cu	65	0.696	ug/L	0.036	5	7	1031	4	KED
	Zn	66	0.473	ug/L	0.073	15	29	206	12	KED
	Zn	67	0.470	ug/L	0.056	11	2	32	10	KED
	Zn	68	0.434	ug/L	0.007	1	17	142	1	KED
	As	75	-0.000	ug/L	0.004	4559	3	3	27	KED
	Se-1	78	0.020	ug/L	0.108	529	11	11	24	KED
	Y	89		ug/L			764463	843157	1	Standard
	Kr	83		ug/L			93	99	9	Standard
>	In-1	115		ug/L			22921	23926	0	KED
	Mo	98	0.044	ug/L	0.010	23	8	56	20	KED
	Cd	111	-0.000	ug/L	0.003	2275	0	0	100	KED
	Cd	114	-0.001	ug/L	0.002	150	2	1	78	KED
>	In	115		ug/L			1089596	1186338	2	Standard
	Ag	107	0.002	ug/L	0.001	37	38	81	17	Standard
	Sb	121	0.020	ug/L	0.001	4	20	333	2	Standard
	Sb	123	0.018	ug/L	0.001	7	23	237	4	Standard
	Ba	135	0.037	ug/L	0.002	4	12	191	2	Standard
	Ba	137	0.040	ug/L	0.003	6	17	349	8	Standard
>	Tb	159		ug/L			1252627	1426789	0	Standard
	Tl	205	0.006	ug/L	0.000	6	20	241	4	Standard
	Pb	208	0.011	ug/L	0.001	8	128	663	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AVW0 B REN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, February 23, 2016 16:37:07
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	59659	3	Standard
	Cl	37		mg/L			4442069	4539113	1	Standard
>	Sc	45		ug/L			1108426	1152173	0	Standard
	Cr	52	0.170	ug/L	0.055	32	28245	32824	3	Standard
	Cr	53	0.036	ug/L	0.010	27	661	776	3	Standard
	Mn	55	6.656	ug/L	0.165	2	522	200568	2	Standard
>	Ge-1	72		ug/L			58771	58077	2	KED
	Co	59	0.014	ug/L	0.004	31	10	61	24	KED
	Ni	60	0.079	ug/L	0.005	5	3	88	6	KED
	Ni	62	0.096	ug/L	0.029	30	0	17	29	KED
	Cu	63	0.063	ug/L	0.007	11	13	205	8	KED
	Cu	65	0.068	ug/L	0.011	16	7	105	13	KED
	Zn	66	1.164	ug/L	0.089	7	29	455	7	KED
	Zn	67	1.278	ug/L	0.214	16	2	81	14	KED
	Zn	68	1.195	ug/L	0.105	8	17	353	7	KED
	As	75	0.102	ug/L	0.012	11	3	27	7	KED
	Se-1	78	0.085	ug/L	0.077	90	11	13	17	KED
	Y	89		ug/L			764463	819990	2	Standard
	Kr	83		ug/L			93	86	4	Standard
>	In-1	115		ug/L			22921	23432	1	KED
	Mo	98	0.019	ug/L	0.004	19	8	28	12	KED
	Cd	111	0.005	ug/L	0.002	34	0	2	21	KED
	Cd	114	0.003	ug/L	0.003	102	2	4	48	KED
>	In	115		ug/L			1089596	1178720	2	Standard
	Ag	107	-0.000	ug/L	0.000	28771	38	41	4	Standard
	Sb	121	0.018	ug/L	0.003	15	20	310	15	Standard
	Sb	123	0.018	ug/L	0.001	3	23	237	4	Standard
	Ba	135	0.596	ug/L	0.031	5	12	2835	3	Standard
	Ba	137	0.622	ug/L	0.008	1	17	5171	3	Standard
>	Tb	159		ug/L			1252627	1391417	2	Standard
	Tl	205	0.003	ug/L	0.000	12	20	115	8	Standard
	Pb	208	0.012	ug/L	0.001	6	128	711	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AVW0 C REN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, February 23, 2016 16:41:59
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	65858	5	Standard
	Cl	37		mg/L			4442069	15910352	3	Standard
⌈>	Sc	45		ug/L			1108426	1222197	2	Standard
|	Cr	52	0.071	ug/L	0.068	95	28245	32657	2	Standard
|	Cr	53	4.698	ug/L	0.138	2	661	13079	1	Standard
⌊	Mn	55	197.150	ug/L	5.762	2	522	6282837	0	Standard
⌈>	Ge-1	72		ug/L			58771	54364	1	KED
|	Co	59	0.014	ug/L	0.002	13	10	59	12	KED
|	Ni	60	0.086	ug/L	0.010	11	3	90	11	KED
|	Ni	62	0.084	ug/L	0.007	7	0	13	7	KED
|	Cu	63	0.030	ug/L	0.005	15	13	99	13	KED
|	Cu	65	0.033	ug/L	0.012	35	7	51	30	KED
|	Zn	66	0.226	ug/L	0.023	10	29	104	6	KED
|	Zn	67	0.418	ug/L	0.063	15	2	26	12	KED
|	Zn	68	0.476	ug/L	0.018	3	17	141	4	KED
|	As	75	0.102	ug/L	0.014	14	3	25	12	KED
⌊	Se-1	78	0.157	ug/L	0.060	38	11	14	12	KED
	Y	89		ug/L			764463	850846	2	Standard
	Kr	83		ug/L			93	124	7	Standard
⌈>	In-1	115		ug/L			22921	21602	1	KED
|	Mo	98	0.348	ug/L	0.030	8	8	343	7	KED
|	Cd	111	0.000	ug/L	0.003	1601	0	0	100	KED
⌊	Cd	114	0.003	ug/L	0.001	57	2	4	27	KED
⌈>	In	115		ug/L			1089596	1096192	0	Standard
|	Ag	107	0.001	ug/L	0.001	57	38	58	18	Standard
|	Sb	121	0.012	ug/L	0.001	8	20	200	8	Standard
|	Sb	123	0.011	ug/L	0.002	16	23	145	13	Standard
|	Ba	135	4.416	ug/L	0.068	1	12	19472	1	Standard
⌊	Ba	137	4.493	ug/L	0.073	1	17	34640	1	Standard
⌈>	Tb	159		ug/L			1252627	1381591	2	Standard
|	Tl	205	0.006	ug/L	0.000	7	20	259	4	Standard
⌊	Pb	208	0.014	ug/L	0.001	5	128	797	5	Standard

AVW9 : 69384

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AVW0 D REN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, February 23, 2016 16:46:50
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	61758	2	Standard
	Cl	37		mg/L			4442069	6404083	3	Standard
>	Sc	45		ug/L			1108426	1171935	0	Standard
	Cr	52	0.069	ug/L	0.022	32	28245	31284	1	Standard
	Cr	53	1.465	ug/L	0.085	5	661	4394	4	Standard
	Mn	55	46.036	ug/L	0.925	2	522	1407847	2	Standard
>	Ge-1	72		ug/L			58771	58198	2	KED
	Co	59	0.023	ug/L	0.001	4	10	97	5	KED
	Ni	60	0.078	ug/L	0.010	13	3	87	11	KED
	Ni	62	0.078	ug/L	0.023	28	0	13	28	KED
	Cu	63	0.049	ug/L	0.007	14	13	163	14	KED
	Cu	65	0.040	ug/L	0.004	9	7	64	10	KED
	Zn	66	0.557	ug/L	0.080	14	29	233	12	KED
	Zn	67	0.600	ug/L	0.178	29	2	40	28	KED
	Zn	68	0.628	ug/L	0.010	1	17	194	1	KED
	As	75	0.045	ug/L	0.006	14	3	14	11	KED
	Se-1	78	0.009	ug/L	0.035	379	11	11	10	KED
	Y	89		ug/L			764463	813905	4	Standard
	Kr	83		ug/L			93	101	12	Standard
>	In-1	115		ug/L			22921	23282	1	KED
	Mo	98	0.204	ug/L	0.015	7	8	220	5	KED
	Cd	111	0.004	ug/L	0.003	87	0	2	49	KED
	Cd	114	-0.000	ug/L	0.001	282	2	2	51	KED
>	In	115		ug/L			1089596	1169648	1	Standard
	Ag	107	-0.000	ug/L	0.001	2144	38	40	51	Standard
	Sb	121	0.012	ug/L	0.001	5	20	215	5	Standard
	Sb	123	0.011	ug/L	0.002	14	23	158	10	Standard
	Ba	135	1.370	ug/L	0.026	1	12	6457	1	Standard
	Ba	137	1.344	ug/L	0.041	3	17	11068	1	Standard
>	Tb	159		ug/L			1252627	1391456	1	Standard
	Tl	205	0.007	ug/L	0.000	6	20	279	4	Standard
	Pb	208	0.006	ug/L	0.001	8	128	437	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AVW0 E REN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, February 23, 2016 16:51:42
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	73080	5	Standard
	Cl	37		mg/L			4442069	16613852	3	Standard
⌈>	Sc	45		ug/L			1108426	1263018	0	Standard
|	Cr	52	0.162	ug/L	0.035	21	28245	35810	1	Standard
|	Cr	53	8.429	ug/L	0.112	1	661	23661	1	Standard
⌊	Mn	55	570.438	ug/L	6.083	1	522	18792984	0	Standard
⌈>	Ge-1	72		ug/L			58771	55864	1	KED
|	Co	59	0.027	ug/L	0.005	18	10	107	16	KED
|	Ni	60	0.104	ug/L	0.022	20	3	111	19	KED
|	Ni	62	0.255	ug/L	0.030	11	0	43	11	KED
|	Cu	63	0.069	ug/L	0.001	1	13	215	0	KED
|	Cu	65	0.068	ug/L	0.002	2	7	102	2	KED
|	Zn	66	0.291	ug/L	0.029	9	29	130	8	KED
|	Zn	67	0.711	ug/L	0.199	28	2	45	27	KED
|	Zn	68	0.510	ug/L	0.047	9	17	154	9	KED
|	As	75	0.107	ug/L	0.012	11	3	27	11	KED
⌊	Se-1	78	0.215	ug/L	0.030	14	11	16	5	KED
	Y	89		ug/L			764463	862334	1	Standard
	Kr	83		ug/L			93	243	3	Standard
⌈>	In-1	115		ug/L			22921	21854	0	KED
|	Mo	98	3.319	ug/L	0.125	3	8	3242	3	KED
|	Cd	111	0.006	ug/L	0.006	97	0	2	66	KED
⌊	Cd	114	-0.002	ug/L	0.001	81	2	1	90	KED
⌈>	In	115		ug/L			1089596	1135088	0	Standard
|	Ag	107	0.001	ug/L	0.001	65	38	60	22	Standard
|	Sb	121	0.028	ug/L	0.001	3	20	441	3	Standard
|	Sb	123	0.029	ug/L	0.000	1	23	356	0	Standard
|	Ba	135	3.806	ug/L	0.148	3	12	17378	3	Standard
⌊	Ba	137	3.708	ug/L	0.045	1	17	29605	0	Standard
⌈>	Tb	159		ug/L			1252627	1416247	1	Standard
|	Tl	205	0.003	ug/L	0.001	26	20	133	21	Standard
⌊	Pb	208	0.016	ug/L	0.001	4	128	934	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AVW0 ADUP REN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, February 23, 2016 16:56:33
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	69892	1	Standard
	Cl	37		mg/L			4442069	8753496	2	Standard
>	Sc	45		ug/L			1108426	1258094	1	Standard
	Cr	52	**0.070**	ug/L	0.024	33	28245	33625	2	Standard
	Cr	53	**3.271**	ug/L	0.093	2	661	9606	3	Standard
	Mn	55	**629.166**	ug/L	13.126	2	522	20643240	1	Standard
>	Ge-1	72		ug/L			58771	56366	1	KED
	Co	59	**1.929**	ug/L	0.072	3	10	7189	2	KED
	Ni	60	**4.954**	ug/L	0.074	1	3	5229	0	KED
	Ni	62	**5.066**	ug/L	0.221	4	0	878	5	KED
	Cu	63	**0.107**	ug/L	0.009	8	13	328	9	KED
	Cu	65	**0.117**	ug/L	0.017	14	7	170	12	KED
	Zn	66	**0.320**	ug/L	0.027	8	29	142	7	KED
	Zn	67	**0.863**	ug/L	0.202	23	2	54	22	KED
	Zn	68	**0.790**	ug/L	0.037	4	17	232	3	KED
	As	75	**0.230**	ug/L	0.052	22	3	56	21	KED
	Se-1	78	**0.131**	ug/L	0.083	63	11	14	16	KED
	Y	89		ug/L			764463	841042	2	Standard
	Kr	83		ug/L			93	114	5	Standard
>	In-1	115		ug/L			22921	21907	2	KED
	Mo	98	**0.616**	ug/L	0.023	3	8	609	5	KED
	Cd	111	**0.020**	ug/L	0.002	9	0	6	7	KED
	Cd	114	**0.015**	ug/L	0.006	39	2	14	34	KED
>	In	115		ug/L			1089596	1127928	0	Standard
	Ag	107	**0.002**	ug/L	0.001	68	38	69	30	Standard
	Sb	121	**0.024**	ug/L	0.002	9	20	380	8	Standard
	Sb	123	**0.021**	ug/L	0.000	2	23	263	2	Standard
	Ba	135	**7.857**	ug/L	0.247	3	12	35634	2	Standard
	Ba	137	**7.799**	ug/L	0.121	1	17	61855	1	Standard
>	Tb	159		ug/L			1252627	1382161	2	Standard
	Tl	205	**0.004**	ug/L	0.001	11	20	187	12	Standard
	Pb	208	**0.009**	ug/L	0.001	8	128	576	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AVW0 A REN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, February 23, 2016 17:01:25
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	69471	3	Standard
	Cl	37		mg/L			4442069	8626002	0	Standard
>	Sc	45		ug/L			1108426	1238762	2	Standard
	Cr	52	**0.090**	ug/L	0.063	69	28245	33516	1	Standard
	Cr	53	**3.362**	ug/L	0.077	2	661	9697	1	Standard
	Mn	55	**638.979**	ug/L	20.208	3	522	20643405	3	Standard
>	Ge-1	72		ug/L			58771	55260	0	KED
	Co	59	**2.019**	ug/L	0.029	1	10	7380	0	KED
	Ni	60	**5.189**	ug/L	0.080	1	3	5371	1	KED
	Ni	62	**5.289**	ug/L	0.205	3	0	898	4	KED
	Cu	63	**0.119**	ug/L	0.003	2	13	357	2	KED
	Cu	65	**0.123**	ug/L	0.005	3	7	175	4	KED
	Zn	66	**0.480**	ug/L	0.084	17	29	194	14	KED
	Zn	67	**1.064**	ug/L	0.254	23	2	65	22	KED
	Zn	68	**0.811**	ug/L	0.059	7	17	233	7	KED
	As	75	**0.197**	ug/L	0.005	2	3	47	1	KED
	Se-1	78	**0.062**	ug/L	0.053	84	11	12	12	KED
	Y	89		ug/L			764463	823761	0	Standard
	Kr	83		ug/L			93	120	11	Standard
>	In-1	115		ug/L			22921	20703	0	KED
	Mo	98	**0.704**	ug/L	0.089	12	8	657	12	KED
	Cd	111	**0.022**	ug/L	0.013	58	0	6	51	KED
	Cd	114	**0.018**	ug/L	0.006	31	2	15	26	KED
>	In	115		ug/L			1089596	1114903	3	Standard
	Ag	107	**0.002**	ug/L	0.000	9	38	68	4	Standard
	Sb	121	**0.025**	ug/L	0.002	6	20	384	4	Standard
	Sb	123	**0.021**	ug/L	0.002	10	23	262	10	Standard
	Ba	135	**8.157**	ug/L	0.269	3	12	36553	1	Standard
	Ba	137	**8.056**	ug/L	0.331	4	17	63101	1	Standard
>	Tb	159		ug/L			1252627	1379010	1	Standard
	Tl	205	**0.004**	ug/L	0.000	10	20	173	9	Standard
	Pb	208	**0.009**	ug/L	0.001	14	128	570	11	Standard

AVX9 : 66388

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AVW0 ASPK REN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, February 23, 2016 17:06:16
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	69601	6	Standard
	Cl	37		mg/L			4442069	8715691	4	Standard
>	Sc	45		ug/L			1108426	1247094	1	Standard
|	Cr	52	2.863	ug/L	0.066	2	28245	94878	0	Standard
|	Cr	53	5.989	ug/L	0.045	0	661	16815	1	Standard
L	Mn	55	634.479	ug/L	9.360	1	522	20638465	1	Standard
>	Ge-1	72		ug/L			58771	54425	1	KED
|	Co	59	4.900	ug/L	0.017	0	10	17624	1	KED
|	Ni	60	7.915	ug/L	0.128	1	3	8067	2	KED
|	Ni	62	7.811	ug/L	0.165	2	0	1306	2	KED
|	Cu	63	2.866	ug/L	0.049	1	13	8182	1	KED
|	Cu	65	2.868	ug/L	0.047	1	7	3881	0	KED
|	Zn	66	9.241	ug/L	0.031	0	29	3193	1	KED
|	Zn	67	8.206	ug/L	0.446	5	2	481	4	KED
|	Zn	68	8.809	ug/L	0.411	4	17	2336	4	KED
|	As	75	2.968	ug/L	0.102	3	3	660	4	KED
L	Se-1	78	8.648	ug/L	0.471	5	11	230	5	KED
	Y	89		ug/L			764463	832748	3	Standard
	Kr	83		ug/L			93	118	0	Standard
>	In-1	115		ug/L			22921	21142	1	KED
|	Mo	98	3.377	ug/L	0.049	1	8	3190	1	KED
|	Cd	111	2.762	ug/L	0.053	1	0	802	0	KED
L	Cd	114	2.742	ug/L	0.185	6	2	2022	5	KED
>	In	115		ug/L			1089596	1102598	0	Standard
|	Ag	107	2.621	ug/L	0.029	1	38	45751	1	Standard
|	Sb	121	2.717	ug/L	0.022	0	20	39924	0	Standard
|	Sb	123	2.700	ug/L	0.036	1	23	29997	1	Standard
|	Ba	135	11.203	ug/L	0.211	1	12	49671	1	Standard
L	Ba	137	11.286	ug/L	0.321	2	17	87493	2	Standard
>	Tb	159		ug/L			1252627	1378414	1	Standard
|	Tl	205	2.851	ug/L	0.108	3	20	104107	4	Standard
L	Pb	208	2.888	ug/L	0.066	2	128	135920	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AVW0 APOST REN ZZZZZ-ee 2/24/16
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, February 23, 2016 17:11:08
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	70680	2	Standard
	Cl	37		mg/L			4442069	8786224	0	Standard
>	Sc	45		ug/L			1108426	1230607	0	Standard
	Cr	52	24.201	ug/L	0.237	0	28245	557737	0	Standard
	Cr	53	26.413	ug/L	1.132	4	661	70664	3	Standard
	Mn	55	664.791	ug/L	13.178	1	522	21337347	1	Standard
>	Ge-1	72		ug/L			58771	54020	1	KED
	Co	59	27.295	ug/L	0.768	2	10	97382	1	KED
	Ni	60	29.751	ug/L	0.784	2	3	30081	1	KED
	Ni	62	28.123	ug/L	1.217	4	0	4668	3	KED
	Cu	63	24.271	ug/L	0.850	3	13	68676	3	KED
	Cu	65	24.651	ug/L	0.889	3	7	33052	2	KED
	Zn	66	74.894	ug/L	1.432	1	29	25493	2	KED
	Zn	67	71.149	ug/L	0.745	1	2	4125	1	KED
	Zn	68	71.159	ug/L	0.611	0	17	18614	0	KED
	As	75	24.520	ug/L	0.465	1	3	5390	1	KED
	Se-1	78	74.181	ug/L	1.571	2	11	1887	1	KED
	Y	89		ug/L			764463	814447	0	Standard
	Kr	83		ug/L			93	119	23	Standard
>	In-1	115		ug/L			22921	20626	1	KED
	Mo	98	0.662	ug/L	0.057	8	8	616	7	KED
	Cd	111	23.859	ug/L	0.775	3	0	6753	1	KED
	Cd	114	24.474	ug/L	0.298	1	2	17604	0	KED
>	In	115		ug/L			1089596	1098017	3	Standard
	Ag	107	24.349	ug/L	1.552	6	38	422339	3	Standard
	Sb	121	0.026	ug/L	0.003	12	20	405	11	Standard
	Sb	123	0.025	ug/L	0.002	6	23	297	7	Standard
	Ba	135	33.624	ug/L	1.042	3	12	148368	1	Standard
	Ba	137	33.241	ug/L	0.741	2	17	256488	1	Standard
>	Tb	159		ug/L			1252627	1371072	1	Standard
	Tl	205	24.392	ug/L	1.209	4	20	885821	5	Standard
	Pb	208	24.915	ug/L	0.687	2	128	1165202	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AVW0 MB1SPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, February 23, 2016 17:18:44
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	67663	1	Standard
	Cl	37		mg/L			4442069	5181766	0	Standard
⌈>	Sc	45		ug/L			1108426	1200579	3	Standard
|	Cr	52	28.392	ug/L	0.639	2	28245	632776	1	Standard
|	Cr	53	27.499	ug/L	0.980	3	661	71711	2	Standard
⌊	Mn	55	28.378	ug/L	1.018	3	522	888523	1	Standard
⌈>	Ge-1	72		ug/L			58771	57609	1	KED
|	Co	59	28.299	ug/L	0.410	1	10	107683	0	KED
|	Ni	60	29.927	ug/L	0.401	1	3	32275	0	KED
|	Ni	62	29.033	ug/L	0.619	2	0	5140	1	KED
|	Cu	63	29.193	ug/L	0.461	1	13	88080	0	KED
|	Cu	65	30.082	ug/L	0.864	2	7	43022	2	KED
|	Zn	66	85.458	ug/L	0.315	0	29	31019	1	KED
|	Zn	67	80.488	ug/L	2.630	3	2	4975	2	KED
|	Zn	68	80.047	ug/L	0.943	1	17	22329	1	KED
|	As	75	25.349	ug/L	0.260	1	3	5943	0	KED
⌊	Se-1	78	75.263	ug/L	0.478	0	11	2041	0	KED
	Y	89		ug/L			764463	824329	1	Standard
	Kr	83		ug/L			93	106	12	Standard
⌈>	In-1	115		ug/L			22921	23608	0	KED
|	Mo	98	23.310	ug/L	0.534	2	8	24542	2	KED
|	Cd	111	26.123	ug/L	0.175	0	0	8467	0	KED
⌊	Cd	114	25.764	ug/L	0.355	1	2	21214	1	KED
⌈>	In	115		ug/L			1089596	1194162	0	Standard
|	Ag	107	27.010	ug/L	0.451	1	38	510174	0	Standard
|	Sb	121	23.933	ug/L	0.587	2	20	380650	1	Standard
|	Sb	123	24.588	ug/L	0.271	1	23	295607	1	Standard
|	Ba	135	28.225	ug/L	0.698	2	12	135511	1	Standard
⌊	Ba	137	27.979	ug/L	0.751	2	17	234871	2	Standard
⌈>	Tb	159		ug/L			1252627	1416419	2	Standard
|	Tl	205	28.917	ug/L	1.204	4	20	1084135	2	Standard
⌊	Pb	208	29.932	ug/L	1.349	4	128	1445191	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV6
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, February 23, 2016 17:24:40
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	58473	2	Standard
	Cl	37		mg/L			4442069	4967490	3	Standard
>	Sc	45		ug/L			1108426	1163589	2	Standard
	Cr	52	49.700	ug/L	1.044	2	28245	1051439	0	Standard
	Cr	53	48.849	ug/L	1.151	2	661	122969	1	Standard
	Mn	55	48.534	ug/L	0.696	1	522	1473236	1	Standard
>	Ge-1	72		ug/L			58771	57817	0	KED
	Co	59	49.064	ug/L	1.938	3	10	187366	3	KED
	Ni	60	48.593	ug/L	0.329	0	3	52597	1	KED
	Ni	62	48.839	ug/L	1.678	3	0	8680	3	KED
	Cu	63	48.886	ug/L	1.203	2	13	148027	2	KED
	Cu	65	50.137	ug/L	0.943	1	7	71965	2	KED
	Zn	66	50.336	ug/L	0.375	0	29	18348	0	KED
	Zn	67	48.670	ug/L	2.354	4	2	3020	4	KED
	Zn	68	49.010	ug/L	1.027	2	17	13727	2	KED
	As	75	47.209	ug/L	0.747	1	3	11105	1	KED
	Se-1	78	47.380	ug/L	0.318	0	11	1294	1	KED
	Y	89		ug/L			764463	808946	3	Standard
	Kr	83		ug/L			93	102	17	Standard
>	In-1	115		ug/L			22921	22341	2	KED
	Mo	98	51.552	ug/L	2.030	3	8	51326	1	KED
	Cd	111	51.577	ug/L	1.359	2	0	15813	0	KED
	Cd	114	52.684	ug/L	2.190	4	2	41024	1	KED
>	In	115		ug/L			1089596	1158847	0	Standard
	Ag	107	51.037	ug/L	1.542	3	38	935402	2	Standard
	Sb	121	50.356	ug/L	0.361	0	20	777237	0	Standard
	Sb	123	50.765	ug/L	1.542	3	23	592150	2	Standard
	Ba	135	50.458	ug/L	0.349	0	12	235099	0	Standard
	Ba	137	49.704	ug/L	1.016	2	17	404879	1	Standard
>	Tb	159		ug/L			1252627	1386505	1	Standard
	Tl	205	50.375	ug/L	1.325	2	20	1849570	2	Standard
	Pb	208	51.406	ug/L	0.817	1	128	2431057	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB6
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, February 23, 2016 17:32:16
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	58672	1	Standard
	Cl	37		mg/L			4442069	4721197	2	Standard
>	Sc	45		ug/L			1108426	1098632	1	Standard
	Cr	52	-0.011	ug/L	0.024	225	28245	27786	0	Standard
	Cr	53	-0.043	ug/L	0.006	13	661	553	3	Standard
	Mn	55	0.003	ug/L	0.001	42	522	605	5	Standard
>	Ge-1	72		ug/L			58771	56004	1	KED
	Co	59	-0.000	ug/L	0.001	191	10	8	35	KED
	Ni	60	0.001	ug/L	0.002	240	3	3	50	KED
	Ni	62	0.007	ug/L	0.013	173	0	1	173	KED
	Cu	63	0.005	ug/L	0.004	67	13	29	38	KED
	Cu	65	0.003	ug/L	0.002	45	7	12	18	KED
	Zn	66	0.027	ug/L	0.019	69	29	38	17	KED
	Zn	67	0.024	ug/L	0.056	237	2	3	86	KED
	Zn	68	0.034	ug/L	0.026	75	17	26	25	KED
	As	75	0.007	ug/L	0.006	86	3	5	28	KED
	Se-1	78	0.056	ug/L	0.031	56	11	12	8	KED
	Y	89		ug/L			764463	762065	1	Standard
	Kr	83		ug/L			93	91	15	Standard
>	In-1	115		ug/L			22921	21966	3	KED
	Mo	98	0.026	ug/L	0.010	38	8	34	25	KED
	Cd	111	0.001	ug/L	0.002	162	0	1	43	KED
	Cd	114	-0.001	ug/L	0.002	350	2	1	104	KED
>	In	115		ug/L			1089596	1125698	1	Standard
	Ag	107	0.008	ug/L	0.002	26	38	186	22	Standard
	Sb	121	0.052	ug/L	0.002	3	20	801	4	Standard
	Sb	123	0.054	ug/L	0.007	12	23	638	11	Standard
	Ba	135	-0.001	ug/L	0.002	251	12	10	70	Standard
	Ba	137	0.001	ug/L	0.001	53	17	26	18	Standard
>	Tb	159		ug/L			1252627	1329356	0	Standard
	Tl	205	0.005	ug/L	0.000	7	20	205	6	Standard
	Pb	208	0.002	ug/L	0.000	15	128	217	5	Standard

AVX9 : 68393

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AVX9 MB1 REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, February 23, 2016 17:37:08
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	61805	5	Standard
	Cl	37		mg/L			4442069	4727319	0	Standard
>	Sc	45		ug/L			1108426	1121472	0	Standard
	Cr	52	0.074	ug/L	0.066	88	28245	30045	4	Standard
	Cr	53	-0.039	ug/L	0.018	45	661	574	6	Standard
	Mn	55	0.040	ug/L	0.001	3	522	1705	3	Standard
>	Ge-1	72		ug/L			58771	55915	1	KED
	Co	59	0.001	ug/L	0.003	222	10	14	76	KED
	Ni	60	0.028	ug/L	0.014	50	3	32	44	KED
	Ni	62	0.033	ug/L	0.019	57	0	5	57	KED
	Cu	63	0.176	ug/L	0.010	5	13	528	7	KED
	Cu	65	0.170	ug/L	0.016	9	7	243	8	KED
	Zn	66	1.484	ug/L	0.067	4	29	550	2	KED
	Zn	67	1.369	ug/L	0.194	14	2	84	13	KED
	Zn	68	1.513	ug/L	0.088	5	17	426	5	KED
	As	75	0.000	ug/L	0.004	7522	3	3	28	KED
	Se-1	78	-0.041	ug/L	0.108	264	11	9	30	KED
	Y	89		ug/L			764463	791508	2	Standard
	Kr	83		ug/L			93	90	14	Standard
>	In-1	115		ug/L			22921	22494	1	KED
	Mo	98	0.045	ug/L	0.020	44	8	54	37	KED
	Cd	111	0.027	ug/L	0.043	162	0	9	146	KED
	Cd	114	0.011	ug/L	0.019	168	2	11	132	KED
>	In	115		ug/L			1089596	1132072	0	Standard
	Ag	107	0.005	ug/L	0.001	22	38	133	16	Standard
	Sb	121	0.020	ug/L	0.001	2	20	321	2	Standard
	Sb	123	0.021	ug/L	0.002	9	23	260	8	Standard
	Ba	135	0.011	ug/L	0.003	25	12	64	19	Standard
	Ba	137	0.012	ug/L	0.003	21	17	110	18	Standard
>	Tb	159		ug/L			1252627	1345500	1	Standard
	Tl	205	0.005	ug/L	0.000	5	20	199	6	Standard
	Pb	208	0.008	ug/L	0.001	8	128	508	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AVX9 MB2 REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, February 23, 2016 17:42:00
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	59283	0	Standard
	Cl	37		mg/L			4442069	4591533	1	Standard
⌈>	Sc	45		ug/L			1108426	1110983	2	Standard
|	Cr	52	**0.026**	ug/L	0.037	142	28245	28812	1	Standard
|	Cr	53	**-0.038**	ug/L	0.017	44	661	572	8	Standard
⌊	Mn	55	**0.219**	ug/L	0.006	2	522	6862	1	Standard
⌈>	Ge-1	72		ug/L			58771	55614	0	KED
|	Co	59	**-0.000**	ug/L	0.001	1895	10	9	20	KED
|	Ni	60	**0.014**	ug/L	0.009	63	3	17	52	KED
|	Ni	62	**0.041**	ug/L	0.007	16	0	6	15	KED
|	Cu	63	**0.057**	ug/L	0.001	2	13	179	2	KED
|	Cu	65	**0.061**	ug/L	0.007	11	7	90	10	KED
|	Zn	66	**0.563**	ug/L	0.037	6	29	225	4	KED
|	Zn	67	**0.684**	ug/L	0.109	15	2	43	14	KED
|	Zn	68	**0.581**	ug/L	0.033	5	17	173	5	KED
|	As	75	**-0.004**	ug/L	0.003	76	3	2	28	KED
⌊	Se-1	78	**-0.020**	ug/L	0.036	182	11	10	9	KED
	Y	89		ug/L			764463	799059	3	Standard
	Kr	83		ug/L			93	91	3	Standard
⌈>	In-1	115		ug/L			22921	22665	1	KED
|	Mo	98	**0.006**	ug/L	0.004	72	8	14	27	KED
|	Cd	111	**0.001**	ug/L	0.002	170	0	1	43	KED
⌊	Cd	114	**-0.002**	ug/L	0.002	144	2	1	166	KED
⌈>	In	115		ug/L			1089596	1151357	2	Standard
|	Ag	107	**0.003**	ug/L	0.001	34	38	93	17	Standard
|	Sb	121	**0.012**	ug/L	0.001	5	20	210	3	Standard
|	Sb	123	**0.011**	ug/L	0.001	9	23	148	9	Standard
|	Ba	135	**0.022**	ug/L	0.001	5	12	114	5	Standard
⌊	Ba	137	**0.023**	ug/L	0.002	10	17	203	8	Standard
⌈>	Tb	159		ug/L			1252627	1344373	1	Standard
|	Tl	205	**0.002**	ug/L	0.000	11	20	86	8	Standard
⌊	Pb	208	**0.011**	ug/L	0.001	6	128	637	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AVX9 B REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, February 23, 2016 17:46:51
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD	Mode
	C	13		ug/L			56372	93914	1	Standard
	Cl	37		mg/L			4442069	196320851	0	Standard
>	Sc	45		ug/L			1108426	1159183	3	Standard
	Cr	52	2.286	ug/L	0.119	5	28245	76394	5	Standard
	Cr	53	72.123	ug/L	1.835	2	661	180592	4	Standard
	Mn	55	842.923	ug/L	21.876	2	522	25475835	1	Standard
>	Ge-1	72		ug/L			58771	35373	0	KED
	Co	59	0.103	ug/L	0.008	7	10	246	7	KED
	Ni	60	0.683	ug/L	0.049	7	3	453	6	KED
	Ni	62	4.712	ug/L	0.241	5	0	512	5	KED
	Cu	63	2.007	ug/L	0.122	6	13	3728	6	KED
	Cu	65	1.304	ug/L	0.035	2	7	1149	2	KED
	Zn	66	3.619	ug/L	0.217	5	29	823	5	KED
	Zn	67	26.556	ug/L	2.097	7	2	1009	8	KED
	Zn	68	20.975	ug/L	0.519	2	17	3600	2	KED
	As	75	1.293	ug/L	0.021	1	3	188	0	KED
	Se-1	78	1.780	ug/L	0.299	16	11	36	13	KED
	Y	89		ug/L			764463	624459	1	Standard
	Kr	83		ug/L			93	63172	5	Standard
>	In-1	115		ug/L			22921	13626	2	KED
	Mo	98	0.961	ug/L	0.011	1	8	589	1	KED
	Cd	111	0.019	ug/L	0.013	67	0	4	58	KED
	Cd	114	0.001	ug/L	0.005	325	2	2	104	KED
>	In	115		ug/L			1089596	617500	1	Standard
	Ag	107	0.034	ug/L	0.002	4	38	351	5	Standard
	Sb	121	0.134	ug/L	0.010	7	20	1114	6	Standard
	Sb	123	0.128	ug/L	0.003	2	23	810	3	Standard
	Ba	135	586.050	ug/L	11.737	2	12	1454715	1	Standard
	Ba	137	594.875	ug/L	26.934	4	17	2581119	3	Standard
>	Tb	159		ug/L			1252627	769398	1	Standard
	Tl	205	0.006	ug/L	0.001	14	20	138	14	Standard
	Pb	208	0.086	ug/L	0.003	3	128	2334	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AVX9 C REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, February 23, 2016 17:51:43
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	75073	2	Standard
	Cl	37		mg/L			4442069	51138186	1	Standard
>	Sc	45		ug/L			1108426	1202532	2	Standard
|	Cr	52	1.436	ug/L	0.034	2	28245	61156	1	Standard
|	Cr	53	16.892	ug/L	0.699	4	661	44394	1	Standard
\	Mn	55	1850.320	ug/L	35.093	1	522	58019225	1	Standard
>	Ge-1	72		ug/L			58771	41463	1	KED
|	Co	59	2.316	ug/L	0.021	0	10	6348	0	KED
|	Ni	60	9.870	ug/L	0.223	2	3	7661	0	KED
|	Ni	62	14.777	ug/L	0.172	1	0	1883	1	KED
|	Cu	63	3.035	ug/L	0.054	1	13	6598	2	KED
|	Cu	65	2.655	ug/L	0.015	0	7	2738	1	KED
|	Zn	66	3.403	ug/L	0.139	4	29	909	4	KED
|	Zn	67	17.058	ug/L	0.472	2	2	760	4	KED
|	Zn	68	13.275	ug/L	0.409	3	17	2676	4	KED
|	As	75	12.860	ug/L	0.097	0	3	2171	2	KED
\	Se-1	78	0.791	ug/L	0.177	22	11	23	13	KED
	Y	89		ug/L			764463	638721	2	Standard
	Kr	83		ug/L			93	12331	1	Standard
>	In-1	115		ug/L			22921	16871	1	KED
|	Mo	98	2.549	ug/L	0.153	6	8	1923	5	KED
|	Cd	111	0.007	ug/L	0.002	34	0	2	24	KED
\	Cd	114	0.010	ug/L	0.008	76	2	7	57	KED
>	In	115		ug/L			1089596	797125	2	Standard
|	Ag	107	0.010	ug/L	0.001	9	38	158	5	Standard
|	Sb	121	0.111	ug/L	0.002	2	20	1195	3	Standard
|	Sb	123	0.099	ug/L	0.003	2	23	808	0	Standard
|	Ba	135	262.153	ug/L	5.220	1	12	839850	0	Standard
\	Ba	137	253.676	ug/L	8.756	3	17	1420609	0	Standard
>	Tb	159		ug/L			1252627	971489	1	Standard
|	Tl	205	0.004	ug/L	0.001	20	20	116	17	Standard
\	Pb	208	0.215	ug/L	0.003	1	128	7224	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AVX9 ADUP REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, February 23, 2016 17:56:35
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	73542	3	Standard
	Cl	37		mg/L			4442069	5530837	4	Standard
⌈>	Sc	45		ug/L			1108426	1190613	0	Standard
|	Cr	52	53.822	ug/L	0.134	0	28245	1162998	0	Standard
|	Cr	53	57.007	ug/L	0.798	1	661	146757	1	Standard
⌊	Mn	55	72.447	ug/L	2.125	2	522	2250245	2	Standard
⌈>	Ge-1	72		ug/L			58771	48366	2	KED
|	Co	59	1.357	ug/L	0.025	1	10	4344	2	KED
|	Ni	60	8.992	ug/L	0.247	2	3	8141	1	KED
|	Ni	62	10.536	ug/L	0.237	2	0	1565	0	KED
|	Cu	63	24.256	ug/L	0.365	1	13	61446	2	KED
|	Cu	65	24.282	ug/L	0.735	3	7	29148	1	KED
|	Zn	66	6.793	ug/L	0.123	1	29	2092	3	KED
|	Zn	67	7.425	ug/L	0.104	1	2	387	2	KED
|	Zn	68	7.034	ug/L	0.306	4	17	1661	6	KED
|	As	75	16.745	ug/L	0.167	0	3	3296	1	KED
⌊	Se-1	78	1.429	ug/L	0.432	30	11	41	24	KED
	Y	89		ug/L			764463	923439	4	Standard
	Kr	83		ug/L			93	1846	8	Standard
⌈>	In-1	115		ug/L			22921	20244	1	KED
|	Mo	98	6.920	ug/L	0.120	1	8	6252	0	KED
|	Cd	111	0.202	ug/L	0.030	14	0	56	13	KED
⌊	Cd	114	0.222	ug/L	0.018	8	2	159	8	KED
⌈>	In	115		ug/L			1089596	960067	0	Standard
|	Ag	107	0.066	ug/L	0.001	1	38	1043	1	Standard
|	Sb	121	0.478	ug/L	0.011	2	20	6128	2	Standard
|	Sb	123	0.474	ug/L	0.009	1	23	4596	1	Standard
|	Ba	135	7.995	ug/L	0.077	0	12	30872	1	Standard
⌊	Ba	137	7.929	ug/L	0.138	1	17	53525	1	Standard
⌈>	Tb	159		ug/L			1252627	1230969	2	Standard
|	Tl	205	0.009	ug/L	0.000	5	20	308	5	Standard
⌊	Pb	208	2.094	ug/L	0.044	2	128	88060	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AVX9 A REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, February 23, 2016 18:01:26
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	71695	4	Standard
	Cl	37		mg/L			4442069	5519329	1	Standard
>	Sc	45		ug/L			1108426	1215295	3	Standard
|	Cr	52	52.531	ug/L	2.128	4	28245	1158446	1	Standard
|	Cr	53	54.233	ug/L	1.860	3	661	142483	2	Standard
|	Mn	55	70.505	ug/L	2.381	3	522	2233986	0	Standard
>	Ge-1	72		ug/L			58771	46263	0	KED
|	Co	59	1.378	ug/L	0.049	3	10	4219	2	KED
|	Ni	60	9.068	ug/L	0.055	0	3	7856	0	KED
|	Ni	62	9.587	ug/L	0.510	5	0	1363	5	KED
|	Cu	63	24.066	ug/L	0.773	3	13	58310	2	KED
|	Cu	65	24.619	ug/L	0.469	1	7	28276	1	KED
|	Zn	66	6.707	ug/L	0.060	0	29	1976	1	KED
|	Zn	67	6.934	ug/L	0.235	3	2	346	2	KED
|	Zn	68	6.723	ug/L	0.501	7	17	1518	7	KED
|	As	75	16.654	ug/L	0.180	1	3	3136	0	KED
|	Se-1	78	1.522	ug/L	0.164	10	11	41	8	KED
	Y	89		ug/L			764463	893658	3	Standard
	Kr	83		ug/L			93	715	9	Standard
>	In-1	115		ug/L			22921	19250	3	KED
|	Mo	98	7.396	ug/L	0.269	3	8	6352	3	KED
|	Cd	111	0.199	ug/L	0.032	16	0	53	12	KED
|	Cd	114	0.210	ug/L	0.049	23	2	142	20	KED
>	In	115		ug/L			1089596	935310	0	Standard
|	Ag	107	0.066	ug/L	0.001	1	38	1012	0	Standard
|	Sb	121	0.485	ug/L	0.004	0	20	6055	0	Standard
|	Sb	123	0.482	ug/L	0.017	3	23	4562	2	Standard
|	Ba	135	8.211	ug/L	0.154	1	12	30886	1	Standard
|	Ba	137	7.928	ug/L	0.073	0	17	52143	1	Standard
>	Tb	159		ug/L			1252627	1224214	1	Standard
|	Tl	205	0.009	ug/L	0.000	3	20	315	1	Standard
|	Pb	208	2.129	ug/L	0.049	2	128	89060	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AVX9 ASPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, February 23, 2016 18:06:18
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	71815	3	Standard
	Cl	37		mg/L			4442069	5494318	5	Standard
>	Sc	45		ug/L			1108426	1182076	2	Standard
|	Cr	52	74.916	ug/L	2.324	3	28245	1594752	1	Standard
|	Cr	53	74.419	ug/L	0.971	1	661	189988	2	Standard
\	Mn	55	90.640	ug/L	0.809	0	522	2794955	1	Standard
>	Ge-1	72		ug/L			58771	45453	0	KED
|	Co	59	28.694	ug/L	0.512	1	10	86151	1	KED
|	Ni	60	35.897	ug/L	0.665	1	3	30548	2	KED
|	Ni	62	36.593	ug/L	0.380	1	0	5112	1	KED
|	Cu	63	50.166	ug/L	1.101	2	13	119431	2	KED
|	Cu	65	52.024	ug/L	1.178	2	7	58706	2	KED
|	Zn	66	84.214	ug/L	0.442	0	29	24117	0	KED
|	Zn	67	81.273	ug/L	2.601	3	2	3964	3	KED
|	Zn	68	80.928	ug/L	2.458	3	17	17811	2	KED
|	As	75	41.839	ug/L	0.391	0	3	7737	0	KED
\	Se-1	78	73.444	ug/L	1.287	1	11	1572	1	KED
	Y	89		ug/L			764463	881398	2	Standard
	Kr	83		ug/L			93	470	2	Standard
>	In-1	115		ug/L			22921	19472	0	KED
|	Mo	98	6.912	ug/L	0.144	2	8	6007	1	KED
|	Cd	111	24.816	ug/L	0.607	2	0	6633	1	KED
\	Cd	114	24.700	ug/L	0.054	0	2	16776	1	KED
>	In	115		ug/L			1089596	932481	0	Standard
|	Ag	107	22.664	ug/L	0.284	1	38	334285	1	Standard
|	Sb	121	0.453	ug/L	0.002	0	20	5648	0	Standard
|	Sb	123	0.467	ug/L	0.005	0	23	4403	1	Standard
|	Ba	135	36.631	ug/L	0.767	2	12	137333	1	Standard
\	Ba	137	36.529	ug/L	0.961	2	17	239431	1	Standard
>	Tb	159		ug/L			1252627	1199518	4	Standard
|	Tl	205	25.655	ug/L	0.475	1	20	814653	2	Standard
\	Pb	208	28.185	ug/L	0.896	3	128	1152815	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AVX9 APOST REN ZZZZZZ ee 2/24/16
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, February 23, 2016 18:11:09
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	74803	1	Standard
	Cl	37		mg/L			4442069	5465034	2	Standard
>	Sc	45		ug/L			1108426	1206228	1	Standard
|	Cr	52	71.225	ug/L	1.532	2	28245	1549352	2	Standard
|	Cr	53	72.678	ug/L	0.626	0	661	189347	0	Standard
L	Mn	55	89.068	ug/L	1.915	2	522	2802467	1	Standard
>	Ge-1	72		ug/L			58771	44553	1	KED
|	Co	59	26.741	ug/L	0.431	1	10	78696	1	KED
|	Ni	60	33.941	ug/L	0.883	2	3	28309	2	KED
|	Ni	62	34.797	ug/L	0.376	1	0	4765	2	KED
|	Cu	63	49.572	ug/L	1.250	2	13	115647	1	KED
|	Cu	65	49.125	ug/L	1.185	2	7	54325	1	KED
|	Zn	66	79.088	ug/L	0.782	0	29	22200	0	KED
|	Zn	67	73.533	ug/L	0.736	1	2	3516	2	KED
|	Zn	68	74.811	ug/L	1.502	2	17	16138	1	KED
|	As	75	39.654	ug/L	0.663	1	3	7187	0	KED
L	Se-1	78	67.372	ug/L	2.685	3	11	1414	3	KED
	Y	89		ug/L			764463	885266	3	Standard
	Kr	83		ug/L			93	407	5	Standard
>	In-1	115		ug/L			22921	19209	2	KED
|	Mo	98	7.174	ug/L	0.351	4	8	6146	2	KED
|	Cd	111	21.587	ug/L	0.512	2	0	5691	0	KED
L	Cd	114	21.557	ug/L	0.409	1	2	14439	0	KED
>	In	115		ug/L			1089596	914017	1	Standard
|	Ag	107	24.335	ug/L	0.309	1	38	351820	1	Standard
|	Sb	121	0.484	ug/L	0.008	1	20	5903	2	Standard
|	Sb	123	0.484	ug/L	0.005	0	23	4476	0	Standard
|	Ba	135	33.605	ug/L	0.511	1	12	123483	0	Standard
L	Ba	137	33.554	ug/L	0.534	1	17	215582	1	Standard
>	Tb	159		ug/L			1252627	1193289	1	Standard
|	Tl	205	23.906	ug/L	0.250	1	20	755499	2	Standard
L	Pb	208	25.715	ug/L	0.471	1	128	1046895	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AVX9 MB1SPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, February 23, 2016 18:18:45
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	60194	2	Standard
	Cl	37		mg/L			4442069	3536604	3	Standard
>	Sc	45		ug/L			1108426	1087188	1	Standard
|	Cr	52	26.767	ug/L	0.604	2	28245	541952	0	Standard
|	Cr	53	26.476	ug/L	0.551	2	661	62572	0	Standard
|	Mn	55	25.731	ug/L	0.388	1	522	730132	1	Standard
>	Ge-1	72		ug/L			58771	47051	1	KED
|	Co	59	29.248	ug/L	0.632	2	10	90890	0	KED
|	Ni	60	29.813	ug/L	1.921	6	3	26243	4	KED
|	Ni	62	29.745	ug/L	0.325	1	0	4301	0	KED
|	Cu	63	30.380	ug/L	1.019	3	13	74843	1	KED
|	Cu	65	31.241	ug/L	1.447	4	7	36480	3	KED
|	Zn	66	91.548	ug/L	3.011	3	29	27135	3	KED
|	Zn	67	82.558	ug/L	4.683	5	2	4167	4	KED
|	Zn	68	84.300	ug/L	2.289	2	17	19200	1	KED
|	As	75	26.133	ug/L	0.566	2	3	5003	0	KED
|	Se-1	78	78.937	ug/L	0.750	0	11	1748	1	KED
	Y	89		ug/L			764463	678274	2	Standard
	Kr	83		ug/L			93	121	16	Standard
>	In-1	115		ug/L			22921	19276	2	KED
|	Mo	98	0.004	ug/L	0.001	37	8	10	11	KED
|	Cd	111	27.350	ug/L	1.202	4	0	7232	2	KED
|	Cd	114	27.855	ug/L	1.144	4	2	18716	2	KED
>	In	115		ug/L			1089596	970428	1	Standard
|	Ag	107	28.188	ug/L	0.505	1	38	432630	1	Standard
|	Sb	121	0.004	ug/L	0.001	31	20	65	21	Standard
|	Sb	123	0.003	ug/L	0.001	36	23	54	23	Standard
|	Ba	135	28.612	ug/L	0.575	2	12	111616	0	Standard
|	Ba	137	28.446	ug/L	0.513	1	17	194045	1	Standard
>	Tb	159		ug/L			1252627	1198120	1	Standard
|	Tl	205	29.849	ug/L	0.656	2	20	947038	2	Standard
|	Pb	208	30.372	ug/L	0.320	1	128	1241350	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AVX9 MB2SPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, February 23, 2016 18:23:36
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	60323	0	Standard
	Cl	37		mg/L			4442069	3795530	2	Standard
>	Sc	45		ug/L			1108426	1107694	4	Standard
|	Cr	52	26.503	ug/L	0.787	2	28245	546721	2	Standard
|	Cr	53	26.240	ug/L	0.739	2	661	63153	1	Standard
L	Mn	55	25.380	ug/L	1.026	4	522	732963	0	Standard
>	Ge-1	72		ug/L			58771	46607	1	KED
|	Co	59	29.125	ug/L	0.480	1	10	89672	2	KED
|	Ni	60	30.513	ug/L	0.060	0	3	26625	1	KED
|	Ni	62	29.308	ug/L	0.795	2	0	4198	2	KED
|	Cu	63	30.816	ug/L	1.078	3	13	75214	2	KED
|	Cu	65	31.512	ug/L	0.423	1	7	36461	0	KED
|	Zn	66	93.452	ug/L	2.920	3	29	27438	2	KED
|	Zn	67	84.501	ug/L	0.444	0	2	4226	0	KED
|	Zn	68	87.903	ug/L	2.425	2	17	19832	1	KED
|	As	75	26.502	ug/L	0.408	1	3	5027	2	KED
L	Se-1	78	80.979	ug/L	2.167	2	11	1776	3	KED
	Y	89		ug/L			764463	679909	1	Standard
	Kr	83		ug/L			93	119	10	Standard
>	In-1	115		ug/L			22921	20213	2	KED
|	Mo	98	0.005	ug/L	0.003	64	8	12	24	KED
|	Cd	111	26.406	ug/L	1.039	3	0	7322	1	KED
L	Cd	114	27.115	ug/L	0.644	2	2	19108	1	KED
>	In	115		ug/L			1089596	971973	1	Standard
|	Ag	107	28.437	ug/L	0.185	0	38	437188	1	Standard
|	Sb	121	0.004	ug/L	0.001	21	20	75	16	Standard
|	Sb	123	0.003	ug/L	0.001	28	23	53	18	Standard
|	Ba	135	29.056	ug/L	0.316	1	12	113544	1	Standard
L	Ba	137	28.543	ug/L	0.781	2	17	194983	1	Standard
>	Tb	159		ug/L			1252627	1191844	1	Standard
|	Tl	205	30.380	ug/L	0.447	1	20	958956	2	Standard
L	Pb	208	30.583	ug/L	0.616	2	128	1243436	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV7
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, February 23, 2016 18:29:33
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD	Mode
	C	13		ug/L			56372	54385	4	Standard
	Cl	37		mg/L			4442069	3650487	1	Standard
⌈>	Sc	45		ug/L			1108426	1118631	2	Standard
|	Cr	52	45.419	ug/L	0.729	1	28245	926338	0	Standard
|	Cr	53	44.617	ug/L	0.778	1	661	108043	1	Standard
⌊	Mn	55	43.449	ug/L	1.445	3	522	1267702	1	Standard
⌈>	Ge-1	72		ug/L			58771	46333	0	KED
|	Co	59	51.186	ug/L	0.906	1	10	156658	1	KED
|	Ni	60	51.950	ug/L	0.324	0	3	45060	0	KED
|	Ni	62	50.894	ug/L	0.707	1	0	7248	1	KED
|	Cu	63	52.955	ug/L	0.815	1	13	128502	1	KED
|	Cu	65	53.225	ug/L	1.431	2	7	61220	2	KED
|	Zn	66	52.308	ug/L	0.155	0	29	15279	0	KED
|	Zn	67	51.930	ug/L	0.373	0	2	2583	1	KED
|	Zn	68	51.831	ug/L	1.473	2	17	11633	3	KED
|	As	75	48.790	ug/L	0.816	1	3	9197	1	KED
⌊	Se-1	78	49.159	ug/L	0.755	1	11	1075	1	KED
	Y	89		ug/L			764463	677427	5	Standard
	Kr	83		ug/L			93	123	26	Standard
⌈>	In-1	115		ug/L			22921	19905	2	KED
|	Mo	98	46.595	ug/L	0.857	1	8	41347	0	KED
|	Cd	111	48.847	ug/L	0.803	1	0	13345	0	KED
⌊	Cd	114	48.230	ug/L	1.009	2	2	33472	0	KED
⌈>	In	115		ug/L			1089596	977114	1	Standard
|	Ag	107	51.497	ug/L	1.272	2	38	795759	1	Standard
|	Sb	121	51.485	ug/L	1.359	2	20	669917	1	Standard
|	Sb	123	52.264	ug/L	1.365	2	23	514000	1	Standard
|	Ba	135	50.387	ug/L	1.706	3	12	197895	2	Standard
⌊	Ba	137	49.214	ug/L	1.344	2	17	337989	1	Standard
⌈>	Tb	159		ug/L			1252627	1181506	2	Standard
|	Tl	205	52.095	ug/L	2.463	4	20	1629085	3	Standard
⌊	Pb	208	52.236	ug/L	2.420	4	128	2104355	4	Standard

AVX9 · 98HGU

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB7
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, February 23, 2016 18:37:09
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	53684	1	Standard
	Cl	37		mg/L			4442069	3634425	1	Standard
⌈>	Sc	45		ug/L			1108426	1095574	2	Standard
|	Cr	52	-0.162	ug/L	0.029	18	28245	24783	3	Standard
|	Cr	53	0.214	ug/L	0.003	1	661	1158	2	Standard
⌊	Mn	55	0.004	ug/L	0.001	16	522	643	1	Standard
⌈>	Ge-1	72		ug/L			58771	46377	0	KED
|	Co	59	0.021	ug/L	0.029	138	10	73	124	KED
|	Ni	60	0.024	ug/L	0.025	102	3	23	92	KED
|	Ni	62	0.071	ug/L	0.062	86	0	10	86	KED
|	Cu	63	0.039	ug/L	0.049	124	13	107	112	KED
|	Cu	65	0.034	ug/L	0.053	157	7	45	136	KED
|	Zn	66	0.069	ug/L	0.067	97	29	43	46	KED
|	Zn	67	0.113	ug/L	0.075	66	2	7	50	KED
|	Zn	68	0.109	ug/L	0.136	124	17	38	80	KED
|	As	75	0.022	ug/L	0.027	126	3	6	74	KED
⌊	Se-1	78	0.020	ug/L	0.061	306	11	9	14	KED
	Y	89		ug/L			764463	684176	4	Standard
	Kr	83		ug/L			93	80	10	Standard
⌈>	In-1	115		ug/L			22921	19058	2	KED
|	Mo	98	0.020	ug/L	0.014	70	8	24	50	KED
|	Cd	111	0.002	ug/L	0.002	120	0	1	43	KED
⌊	Cd	114	0.001	ug/L	0.004	637	2	2	115	KED
⌈>	In	115		ug/L			1089596	957938	1	Standard
|	Ag	107	-0.000	ug/L	0.000	187	38	31	18	Standard
|	Sb	121	0.057	ug/L	0.003	5	20	747	5	Standard
|	Sb	123	0.057	ug/L	0.001	1	23	570	0	Standard
|	Ba	135	-0.000	ug/L	0.002	1612	12	10	61	Standard
⌊	Ba	137	0.001	ug/L	0.001	264	17	18	47	Standard
⌈>	Tb	159		ug/L			1252627	1189894	2	Standard
|	Tl	205	0.006	ug/L	0.000	5	20	204	3	Standard
⌊	Pb	208	0.002	ug/L	0.000	17	128	189	8	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AVX9 D REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, February 23, 2016 18:42:01
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	71221	2	Standard
	Cl	37		mg/L			4442069	5615449	7	Standard
>	Sc	45		ug/L			1108426	1271616	3	Standard
	Cr	52	46.044	ug/L	1.996	4	28245	1066330	0	Standard
	Cr	53	47.778	ug/L	2.073	4	661	131383	1	Standard
	Mn	55	69.449	ug/L	2.024	2	522	2302963	1	Standard
>	Ge-1	72		ug/L			58771	45508	0	KED
	Co	59	1.314	ug/L	0.043	3	10	3958	4	KED
	Ni	60	8.364	ug/L	0.158	1	3	7128	2	KED
	Ni	62	8.302	ug/L	0.072	0	0	1161	0	KED
	Cu	63	22.063	ug/L	0.238	1	13	52593	1	KED
	Cu	65	22.227	ug/L	0.492	2	7	25112	1	KED
	Zn	66	8.163	ug/L	0.031	0	29	2361	0	KED
	Zn	67	8.441	ug/L	0.137	1	2	413	0	KED
	Zn	68	8.537	ug/L	0.120	1	17	1893	0	KED
	As	75	16.122	ug/L	0.283	1	3	2987	1	KED
	Se-1	78	1.034	ug/L	0.171	16	11	30	11	KED
	Y	89		ug/L			764463	927563	4	Standard
	Kr	83		ug/L			93	210	5	Standard
>	In-1	115		ug/L			22921	18627	1	KED
	Mo	98	6.784	ug/L	0.230	3	8	5640	2	KED
	Cd	111	0.188	ug/L	0.019	10	0	48	9	KED
	Cd	114	0.187	ug/L	0.021	11	2	123	9	KED
>	In	115		ug/L			1089596	936427	1	Standard
	Ag	107	0.061	ug/L	0.002	3	38	942	2	Standard
	Sb	121	0.459	ug/L	0.008	1	20	5739	0	Standard
	Sb	123	0.465	ug/L	0.007	1	23	4402	0	Standard
	Ba	135	7.632	ug/L	0.054	0	12	28741	1	Standard
	Ba	137	7.555	ug/L	0.110	1	17	49744	1	Standard
>	Tb	159		ug/L			1252627	1229854	0	Standard
	Tl	205	0.010	ug/L	0.000	4	20	354	3	Standard
	Pb	208	2.045	ug/L	0.046	2	128	85907	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AVX9 E REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, February 23, 2016 18:46:53
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	61500	5	Standard
	Cl	37		mg/L			4442069	3854434	1	Standard
>	Sc	45		ug/L			1108426	1223742	0	Standard
	Cr	52	**2.516**	ug/L	0.021	0	28245	85600	0	Standard
	Cr	53	**2.958**	ug/L	0.073	2	661	8520	1	Standard
	Mn	55	**578.704**	ug/L	12.111	2	522	18471181	1	Standard
>	Ge-1	72		ug/L			58771	45947	1	KED
	Co	59	**0.257**	ug/L	0.019	7	10	787	5	KED
	Ni	60	**1.576**	ug/L	0.103	6	3	1357	5	KED
	Ni	62	**1.744**	ug/L	0.122	6	0	246	6	KED
	Cu	63	**2.242**	ug/L	0.093	4	13	5402	2	KED
	Cu	65	**2.284**	ug/L	0.094	4	7	2611	4	KED
	Zn	66	**58.420**	ug/L	0.105	0	29	16919	1	KED
	Zn	67	**53.380**	ug/L	1.810	3	2	2632	3	KED
	Zn	68	**55.807**	ug/L	2.407	4	17	12415	2	KED
	As	75	**3.501**	ug/L	0.164	4	3	657	5	KED
	Se-1	78	**0.163**	ug/L	0.085	51	11	12	16	KED
	Y	89		ug/L			764463	708969	1	Standard
	Kr	83		ug/L			93	89	11	Standard
>	In-1	115		ug/L			22921	19085	0	KED
	Mo	98	**1.713**	ug/L	0.009	0	8	1464	0	KED
	Cd	111	**0.030**	ug/L	0.017	56	0	8	50	KED
	Cd	114	**0.016**	ug/L	0.012	75	2	12	63	KED
>	In	115		ug/L			1089596	934713	2	Standard
	Ag	107	**0.016**	ug/L	0.002	13	38	262	9	Standard
	Sb	121	**0.221**	ug/L	0.006	2	20	2763	0	Standard
	Sb	123	**0.217**	ug/L	0.002	0	23	2063	2	Standard
	Ba	135	**35.893**	ug/L	1.014	2	12	134873	2	Standard
	Ba	137	**35.731**	ug/L	0.342	0	17	234772	1	Standard
>	Tb	159		ug/L			1252627	1152961	3	Standard
	Tl	205	**0.005**	ug/L	0.000	5	20	184	6	Standard
	Pb	208	**1.711**	ug/L	0.020	1	128	67431	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AVX9 F REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, February 23, 2016 18:51:44
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

Del

All I.S. ↓

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	39594	0	Standard
	Cl	37		mg/L			4442069	207452067	1	Standard
>	Sc	45		ug/L			1108426	427662	1	Standard
	Cr	52	1.984	ug/L	0.104	5	28245	25902	4	Standard
	Cr	53	82.817	ug/L	2.695	3	661	76486	4	Standard
	Mn	55	8.486	ug/L	0.263	3	522	94870	3	Standard
>	Ge-1	72		ug/L			58771	13110	0	KED
	Co	59	0.187	ug/L	0.008	4	10	164	3	KED
	Ni	60	2.853	ug/L	0.165	5	3	700	6	KED
	Ni	62	18.736	ug/L	0.448	2	0	754	1	KED
	Cu	63	10.474	ug/L	0.201	1	13	7194	1	KED
	Cu	65	4.191	ug/L	0.248	5	7	1365	5	KED
	Zn	66	9.723	ug/L	0.279	2	29	808	2	KED
	Zn	67	9.579	ug/L	0.990	10	2	135	9	KED
	Zn	68	9.197	ug/L	0.503	5	17	587	5	KED
	As	75	1.991	ug/L	0.100	5	3	106	4	KED
	Se-1	78	3.729	ug/L	0.555	14	11	25	14	KED
	Y	89		ug/L			764463	273233	0	Standard
	Kr	83		ug/L			93	443892	5	Standard
>	In-1	115		ug/L			22921	6105	0	KED
	Mo	98	10.521	ug/L	0.346	3	8	2866	3	KED
	Cd	111	0.092	ug/L	0.024	26	0	7	24	KED
	Cd	114	0.081	ug/L	0.032	39	2	17	37	KED
>	In	115		ug/L			1089596	262001	1	Standard
	Ag	107	0.037	ug/L	0.003	9	38	160	7	Standard
	Sb	121	0.884	ug/L	0.015	1	20	3087	0	Standard
	Sb	123	0.637	ug/L	0.018	2	23	1686	2	Standard
	Ba	135	30.397	ug/L	0.173	0	12	32021	1	Standard
	Ba	137	29.813	ug/L	0.445	1	17	54917	2	Standard
>	Tb	159		ug/L			1252627	320758	2	Standard
	Tl	205	0.018	ug/L	0.001	8	20	156	6	Standard
	Pb	208	0.206	ug/L	0.009	4	128	2283	2	Standard

AVX9 - 60103

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AVX9 G REN
Sample Dil Factor: 2
Del
Comments:
Sample Date/Time: Tuesday, February 23, 2016 18:56:36
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	38900	0	Standard
	Cl	37		mg/L			4442069	202814597	1	Standard
>	Sc	45		ug/L			1108426	430587	0	Standard
	Cr	52	1.321	ug/L	0.041	3	28245	21025	1	Standard
	Cr	53	72.907	ug/L	0.205	0	661	67808	0	Standard
	Mn	55	8.222	ug/L	0.047	0	522	92548	1	Standard
>	Ge-1	72		ug/L			58771	13269	1	KED
	Co	59	0.413	ug/L	0.038	9	10	364	9	KED
	Ni	60	3.234	ug/L	0.085	2	3	803	1	KED
	Ni	62	31.509	ug/L	1.146	3	0	1285	3	KED
	Cu	63	16.018	ug/L	0.045	0	13	11135	1	KED
	Cu	65	4.484	ug/L	0.022	0	7	1478	1	KED
	Zn	66	11.909	ug/L	0.475	3	29	1001	3	KED
	Zn	67	11.422	ug/L	0.481	4	2	163	4	KED
	Zn	68	11.458	ug/L	0.309	2	17	739	3	KED
	As	75	1.876	ug/L	0.091	4	3	102	4	KED
	Se-1	78	3.916	ug/L	0.477	12	11	26	9	KED
	Y	89		ug/L			764463	279149	0	Standard
	Kr	83		ug/L			93	960773	3	Standard
>	In-1	115		ug/L			22921	6479	2	KED
	Mo	98	9.928	ug/L	0.308	3	8	2869	1	KED
	Cd	111	0.118	ug/L	0.023	19	0	10	18	KED
	Cd	114	0.089	ug/L	0.054	60	2	20	56	KED
>	In	115		ug/L			1089596	253546	0	Standard
	Ag	107	0.032	ug/L	0.002	6	38	139	5	Standard
	Sb	121	1.498	ug/L	0.053	3	20	5063	3	Standard
	Sb	123	0.949	ug/L	0.020	2	23	2427	2	Standard
	Ba	135	47.367	ug/L	0.685	1	12	48291	2	Standard
	Ba	137	46.409	ug/L	0.601	1	17	82722	1	Standard
>	Tb	159		ug/L			1252627	308004	2	Standard
	Tl	205	0.025	ug/L	0.001	3	20	210	6	Standard
	Pb	208	0.620	ug/L	0.020	3	128	6545	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AVX9 I REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, February 23, 2016 19:01:27

Del

Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			56372	65441	1	Standard
Cl	37		mg/L			4442069	113589444	1	Standard
> Sc	45		ug/L			1108426	712071	2	Standard
Cr	52	2.367	ug/L	0.146	6	28245	47911	1	Standard
Cr	53	74.615	ug/L	2.168	2	661	114701	0	Standard
Mn	55	950.558	ug/L	37.124	3	522	17644676	1	Standard
> Ge-1	72		ug/L			58771	23683	0	KED
Co	59	0.148	ug/L	0.001	0	10	236	1	KED
Ni	60	0.294	ug/L	0.016	5	3	131	5	KED
Ni	62	9.580	ug/L	0.903	9	0	697	8	KED
Cu	63	1.900	ug/L	0.059	3	13	2362	3	KED
Cu	65	0.318	ug/L	0.036	11	7	189	11	KED
Zn	66	0.899	ug/L	0.068	7	29	146	7	KED
Zn	67	24.709	ug/L	1.148	4	2	628	3	KED
Zn	68	17.597	ug/L	0.645	3	17	2023	3	KED
As	75	1.097	ug/L	0.082	7	3	107	7	KED
Se-1	78	1.042	ug/L	0.352	33	11	16	24	KED
Y	89		ug/L			764463	418659	1	Standard
Kr	83		ug/L			93	156583	1	Standard
> In-1	115		ug/L			22921	10939	1	KED
Mo	98	0.802	ug/L	0.044	5	8	395	6	KED
Cd	111	0.005	ug/L	0.004	70	0	1	43	KED
Cd	114	-0.003	ug/L	0.003	96	2	0	1285	KED
> In	115		ug/L			1089596	452033	2	Standard
Ag	107	0.015	ug/L	0.004	26	38	122	22	Standard
Sb	121	0.179	ug/L	0.008	4	20	1085	2	Standard
Sb	123	0.152	ug/L	0.013	8	23	700	6	Standard
Ba	135	598.340	ug/L	3.161	0	12	1087416	2	Standard
Ba	137	577.053	ug/L	4.184	0	17	1833687	2	Standard
> Tb	159		ug/L			1252627	532727	3	Standard
Tl	205	0.001	ug/L	0.001	67	20	26	41	Standard
Pb	208	0.039	ug/L	0.002	6	128	761	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AVX9 J REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, February 23, 2016 19:06:19
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

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	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	73515	4	Standard
	Cl	37		mg/L			4442069	46905596	4	Standard
⌈>	Sc	45		ug/L			1108426	959516	0	Standard
|	Cr	52	2.231	ug/L	0.055	2	28245	62279	1	Standard
|	Cr	53	30.213	ug/L	0.482	1	661	62947	0	Standard
⌊	Mn	55	1963.899	ug/L	31.455	1	522	49147844	0	Standard
⌈>	Ge-1	72		ug/L			58771	34689	1	KED
|	Co	59	2.090	ug/L	0.022	1	10	4796	2	KED
|	Ni	60	9.487	ug/L	0.304	3	3	6161	2	KED
|	Ni	62	13.191	ug/L	0.297	2	0	1406	1	KED
|	Cu	63	2.617	ug/L	0.115	4	13	4763	4	KED
|	Cu	65	2.465	ug/L	0.035	1	7	2127	2	KED
|	Zn	66	2.586	ug/L	0.119	4	29	582	3	KED
|	Zn	67	14.580	ug/L	0.380	2	2	544	3	KED
|	Zn	68	11.446	ug/L	0.306	2	17	1931	2	KED
|	As	75	13.058	ug/L	0.342	2	3	1844	1	KED
⌊	Se-1	78	0.592	ug/L	0.136	23	11	16	14	KED
	Y	89		ug/L			764463	568225	1	Standard
	Kr	83		ug/L			93	81796	1	Standard
⌈>	In-1	115		ug/L			22921	15996	1	KED
|	Mo	98	2.413	ug/L	0.051	2	8	1727	1	KED
|	Cd	111	0.007	ug/L	0.002	34	0	2	24	KED
⌊	Cd	114	0.002	ug/L	0.004	212	2	2	80	KED
⌈>	In	115		ug/L			1089596	681359	1	Standard
|	Ag	107	0.008	ug/L	0.001	8	38	115	5	Standard
|	Sb	121	0.132	ug/L	0.005	3	20	1210	4	Standard
|	Sb	123	0.113	ug/L	0.007	5	23	788	4	Standard
|	Ba	135	241.553	ug/L	3.056	1	12	661795	2	Standard
⌊	Ba	137	236.159	ug/L	2.419	1	17	1131051	0	Standard
⌈>	Tb	159		ug/L			1252627	814481	3	Standard
|	Tl	205	0.002	ug/L	0.000	24	20	46	13	Standard
⌊	Pb	208	0.215	ug/L	0.003	1	128	6057	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AVX9 HDUP REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, February 23, 2016 19:11:10
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	85311	3	Standard
	Cl	37		mg/L			4442069	6046399	1	Standard
>	Sc	45		ug/L			1108426	1222446	1	Standard
|	Cr	52	47.273	ug/L	0.308	0	28245	1052530	0	Standard
|	Cr	53	60.819	ug/L	0.903	1	661	160695	0	Standard
L	Mn	55	73.186	ug/L	0.113	0	522	2334177	1	Standard
>	Ge-1	72		ug/L			58771	50648	0	KED
|	Co	59	1.177	ug/L	0.045	3	10	3947	3	KED
|	Ni	60	7.783	ug/L	0.221	2	3	7382	2	KED
|	Ni	62	8.814	ug/L	0.160	1	0	1372	1	KED
|	Cu	63	19.647	ug/L	0.370	1	13	52123	1	KED
|	Cu	65	19.996	ug/L	0.124	0	7	25145	0	KED
|	Zn	66	5.400	ug/L	0.211	3	29	1747	3	KED
|	Zn	67	6.189	ug/L	0.306	4	2	338	4	KED
|	Zn	68	5.384	ug/L	0.106	1	17	1334	2	KED
|	As	75	16.419	ug/L	0.129	0	3	3385	0	KED
L	Se-1	78	1.249	ug/L	0.189	15	11	39	11	KED
	Y	89		ug/L			764463	887102	2	Standard
	Kr	83		ug/L			93	52893	2	Standard
>	In-1	115		ug/L			22921	21362	1	KED
|	Mo	98	6.864	ug/L	0.244	3	8	6544	2	KED
|	Cd	111	0.179	ug/L	0.015	8	0	53	9	KED
L	Cd	114	0.176	ug/L	0.030	17	2	133	16	KED
>	In	115		ug/L			1089596	949912	1	Standard
|	Ag	107	0.055	ug/L	0.002	3	38	866	2	Standard
|	Sb	121	0.451	ug/L	0.021	4	20	5718	3	Standard
|	Sb	123	0.443	ug/L	0.003	0	23	4257	1	Standard
|	Ba	135	6.023	ug/L	0.098	1	12	23011	0	Standard
L	Ba	137	5.986	ug/L	0.312	5	17	39974	4	Standard
>	Tb	159		ug/L			1252627	1176984	2	Standard
|	Tl	205	0.007	ug/L	0.001	8	20	227	5	Standard
L	Pb	208	1.499	ug/L	0.029	1	128	60298	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AVX9 H REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, February 23, 2016 19:16:02
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			56372	84393	2	Standard
	Cl	**37**		mg/L			4442069	6099167	2	Standard
>	**Sc**	**45**		ug/L			1108426	1258263	1	Standard
	Cr	**52**	**44.668**	ug/L	0.516	1	28245	1025449	1	Standard
	Cr	**53**	**55.578**	ug/L	1.227	2	661	151214	1	Standard
	Mn	**55**	**67.939**	ug/L	2.318	3	522	2229787	2	Standard
>	**Ge-1**	**72**		ug/L			58771	51471	2	KED
	Co	**59**	**1.175**	ug/L	0.047	3	10	4000	3	KED
	Ni	**60**	**7.409**	ug/L	0.217	2	3	7138	1	KED
	Ni	**62**	**8.756**	ug/L	0.214	2	0	1384	1	KED
	Cu	**63**	**18.448**	ug/L	0.942	5	13	49698	2	KED
	Cu	**65**	**18.884**	ug/L	0.575	3	7	24121	0	KED
	Zn	**66**	**5.099**	ug/L	0.353	6	29	1676	4	KED
	Zn	**67**	**5.404**	ug/L	0.381	7	2	300	5	KED
	Zn	**68**	**5.031**	ug/L	0.350	6	17	1267	6	KED
	As	**75**	**16.109**	ug/L	0.237	1	3	3375	1	KED
	Se-1	**78**	**1.050**	ug/L	0.295	28	11	34	18	KED
	Y	**89**		ug/L			764463	876628	3	Standard
	Kr	**83**		ug/L			93	58245	3	Standard
>	**In-1**	**115**		ug/L			22921	21397	0	KED
	Mo	**98**	**6.696**	ug/L	0.060	0	8	6396	0	KED
	Cd	**111**	**0.181**	ug/L	0.025	13	0	53	13	KED
	Cd	**114**	**0.197**	ug/L	0.037	18	2	149	18	KED
>	**In**	**115**		ug/L			1089596	959193	2	Standard
	Ag	**107**	**0.052**	ug/L	0.002	4	38	826	6	Standard
	Sb	**121**	**0.441**	ug/L	0.007	1	20	5653	1	Standard
	Sb	**123**	**0.423**	ug/L	0.022	5	23	4098	3	Standard
	Ba	**135**	**6.082**	ug/L	0.179	2	12	23460	2	Standard
	Ba	**137**	**5.916**	ug/L	0.201	3	17	39887	1	Standard
>	**Tb**	**159**		ug/L			1252627	1218740	1	Standard
	Tl	**205**	**0.006**	ug/L	0.001	14	20	227	14	Standard
	Pb	**208**	**1.466**	ug/L	0.057	3	128	61095	5	Standard

AVX9 : 08116

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AVX9 HSPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, February 23, 2016 19:20:54
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	86702	2	Standard
	Cl	37		mg/L			4442069	6135686	7	Standard
>	Sc	45		ug/L			1108426	1211558	2	Standard
	Cr	52	69.341	ug/L	3.110	4	28245	1514699	1	Standard
	Cr	53	78.522	ug/L	1.462	1	661	205423	2	Standard
	Mn	55	91.750	ug/L	1.687	1	522	2899174	0	Standard
>	Ge-1	72		ug/L			58771	51160	1	KED
	Co	59	30.082	ug/L	0.463	1	10	101660	2	KED
	Ni	60	35.970	ug/L	0.972	2	3	34440	1	KED
	Ni	62	36.291	ug/L	0.833	2	0	5706	2	KED
	Cu	63	47.837	ug/L	1.869	3	13	128123	2	KED
	Cu	65	48.567	ug/L	0.942	1	7	61669	0	KED
	Zn	66	85.792	ug/L	0.749	0	29	27653	1	KED
	Zn	67	80.866	ug/L	4.328	5	2	4437	3	KED
	Zn	68	83.015	ug/L	2.421	2	17	20558	1	KED
	As	75	41.245	ug/L	0.117	0	3	8586	1	KED
	Se-1	78	76.580	ug/L	2.064	2	11	1844	1	KED
	Y	89		ug/L			764463	890118	1	Standard
	Kr	83		ug/L			93	79628	1	Standard
>	In-1	115		ug/L			22921	21575	1	KED
	Mo	98	6.724	ug/L	0.041	0	8	6476	2	KED
	Cd	111	25.300	ug/L	0.468	1	0	7493	0	KED
	Cd	114	24.773	ug/L	0.417	1	2	18638	0	KED
>	In	115		ug/L			1089596	954091	0	Standard
	Ag	107	21.393	ug/L	0.254	1	38	322871	1	Standard
	Sb	121	0.455	ug/L	0.007	1	20	5804	1	Standard
	Sb	123	0.443	ug/L	0.005	1	23	4274	0	Standard
	Ba	135	37.321	ug/L	0.613	1	12	143164	1	Standard
	Ba	137	36.251	ug/L	1.616	4	17	243128	4	Standard
>	Tb	159		ug/L			1252627	1220503	2	Standard
	Tl	205	23.925	ug/L	0.326	1	20	773427	3	Standard
	Pb	208	25.476	ug/L	0.564	2	128	1060945	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AVX9 HPOST REN 2/24/16
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, February 23, 2016 19:25:45
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	83342	1	Standard
	Cl	37		mg/L			4442069	6077706	1	Standard
>	Sc	45		ug/L			1108426	1231649	2	Standard
	Cr	52	64.884	ug/L	2.356	3	28245	1443037	1	Standard
	Cr	53	72.993	ug/L	1.394	1	661	194127	0	Standard
	Mn	55	87.140	ug/L	3.767	4	522	2798062	1	Standard
>	Ge-1	72		ug/L			58771	52525	0	KED
	Co	59	26.471	ug/L	0.358	1	10	91846	1	KED
	Ni	60	31.510	ug/L	1.241	3	3	30986	4	KED
	Ni	62	33.234	ug/L	1.139	3	0	5364	2	KED
	Cu	63	42.282	ug/L	0.622	1	13	116327	2	KED
	Cu	65	42.921	ug/L	0.832	1	7	55967	1	KED
	Zn	66	73.909	ug/L	1.758	2	29	24462	2	KED
	Zn	67	68.874	ug/L	1.504	2	2	3883	2	KED
	Zn	68	71.141	ug/L	0.930	1	17	18094	0	KED
	As	75	37.785	ug/L	0.377	0	3	8075	0	KED
	Se-1	78	66.660	ug/L	0.524	0	11	1650	1	KED
	Y	89		ug/L			764463	894315	2	Standard
	Kr	83		ug/L			93	89069	0	Standard
>	In-1	115		ug/L			22921	21906	1	KED
	Mo	98	6.387	ug/L	0.129	2	8	6246	2	KED
	Cd	111	21.157	ug/L	0.483	2	0	6363	2	KED
	Cd	114	21.435	ug/L	0.639	2	2	16377	3	KED
>	In	115		ug/L			1089596	963961	1	Standard
	Ag	107	21.832	ug/L	0.584	2	38	332800	1	Standard
	Sb	121	0.454	ug/L	0.010	2	20	5846	1	Standard
	Sb	123	0.439	ug/L	0.009	2	23	4283	0	Standard
	Ba	135	32.234	ug/L	0.418	1	12	124942	2	Standard
	Ba	137	31.529	ug/L	0.536	1	17	213694	2	Standard
>	Tb	159		ug/L			1252627	1229904	2	Standard
	Tl	205	21.492	ug/L	0.321	1	20	700154	3	Standard
	Pb	208	22.811	ug/L	0.530	2	128	957210	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV8
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, February 23, 2016 19:33:22
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	65601	0	Standard
	Cl	37		mg/L			4442069	3907337	1	Standard
>	Sc	45		ug/L			1108426	1108890	0	Standard
|	Cr	52	46.732	ug/L	0.764	1	28245	944173	1	Standard
|	Cr	53	54.638	ug/L	0.884	1	661	131031	1	Standard
L	Mn	55	42.260	ug/L	1.216	2	522	1222801	2	Standard
>	Ge-1	72		ug/L			58771	53224	0	KED
|	Co	59	49.947	ug/L	0.102	0	10	175602	0	KED
|	Ni	60	50.934	ug/L	0.880	1	3	50749	1	KED
|	Ni	62	52.274	ug/L	2.061	3	0	8550	3	KED
|	Cu	63	52.408	ug/L	0.760	1	13	146080	0	KED
|	Cu	65	52.785	ug/L	1.577	2	7	69746	3	KED
|	Zn	66	52.388	ug/L	1.000	1	29	17576	0	KED
|	Zn	67	51.374	ug/L	1.545	3	2	2935	3	KED
|	Zn	68	50.972	ug/L	1.568	3	17	13140	2	KED
|	As	75	48.923	ug/L	0.790	1	3	10593	0	KED
L	Se-1	78	48.873	ug/L	0.691	1	11	1228	1	KED
	Y	89		ug/L			764463	694426	1	Standard
	Kr	83		ug/L			93	75762	0	Standard
>	In-1	115		ug/L			22921	22443	0	KED
|	Mo	98	48.428	ug/L	0.647	1	8	48464	0	KED
|	Cd	111	49.033	ug/L	0.573	1	0	15107	0	KED
L	Cd	114	48.837	ug/L	1.017	2	2	38225	1	KED
>	In	115		ug/L			1089596	1019890	1	Standard
|	Ag	107	45.769	ug/L	1.066	2	38	738242	1	Standard
|	Sb	121	51.206	ug/L	0.234	0	20	695604	1	Standard
|	Sb	123	51.772	ug/L	0.655	1	23	531527	0	Standard
|	Ba	135	52.399	ug/L	1.402	2	12	214900	3	Standard
L	Ba	137	51.762	ug/L	1.177	2	17	371173	3	Standard
>	Tb	159		ug/L			1252627	1255559	2	Standard
|	Tl	205	46.908	ug/L	0.890	1	20	1560144	4	Standard
L	Pb	208	46.429	ug/L	1.278	2	128	1989141	5	Standard

AVX9 : 66415

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB8
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, February 23, 2016 19:40:58
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			56372	61227	5	Standard
Cl	37		mg/L			4442069	3934866	3	Standard
> Sc	45		ug/L			1108426	1074559	1	Standard
Cr	52	0.274	ug/L	0.042	15	28245	32569	0	Standard
Cr	53	9.316	ug/L	0.260	2	661	22175	1	Standard
Mn	55	0.119	ug/L	0.002	1	522	3832	0	Standard
> Ge-1	72		ug/L			58771	52608	2	KED
Co	59	0.001	ug/L	0.001	97	10	13	34	KED
Ni	60	0.009	ug/L	0.003	35	3	11	28	KED
Ni	62	2.309	ug/L	0.023	1	0	373	1	KED
Cu	63	0.077	ug/L	0.009	11	13	223	8	KED
Cu	65	0.022	ug/L	0.010	43	7	35	37	KED
Zn	66	0.036	ug/L	0.021	58	29	38	19	KED
Zn	67	0.063	ug/L	0.104	166	2	5	100	KED
Zn	68	0.050	ug/L	0.018	36	17	28	17	KED
As	75	0.046	ug/L	0.006	13	3	13	9	KED
Se-1	78	0.163	ug/L	0.047	28	11	13	10	KED
Y	89		ug/L			764463	670076	2	Standard
Kr	83		ug/L			93	64599	1	Standard
> In-1	115		ug/L			22921	21744	2	KED
Mo	98	0.020	ug/L	0.008	37	8	27	26	KED
Cd	111	0.002	ug/L	0.007	284	0	1	124	KED
Cd	114	-0.001	ug/L	0.000	18	2	1	5	KED
> In	115		ug/L			1089596	979202	1	Standard
Ag	107	0.002	ug/L	0.000	10	38	60	5	Standard
Sb	121	0.076	ug/L	0.002	2	20	1010	2	Standard
Sb	123	0.061	ug/L	0.006	9	23	623	8	Standard
Ba	135	0.003	ug/L	0.001	45	12	21	22	Standard
Ba	137	0.002	ug/L	0.000	18	17	29	9	Standard
> Tb	159		ug/L			1252627	1217075	1	Standard
Tl	205	0.009	ug/L	0.001	7	20	294	6	Standard
Pb	208	0.003	ug/L	0.000	14	128	245	8	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AVY5 MB REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, February 23, 2016 19:45:50
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	67127	1	Standard
	Cl	37		mg/L			4442069	3966643	3	Standard
>	Sc	45		ug/L			1108426	1093607	1	Standard
	Cr	52	0.307	ug/L	0.039	12	28245	33811	3	Standard
	Cr	53	8.665	ug/L	0.125	1	661	21039	0	Standard
	Mn	55	0.124	ug/L	0.002	1	522	4063	0	Standard
>	Ge-1	72		ug/L			58771	53101	1	KED
	Co	59	0.001	ug/L	0.001	90	10	13	28	KED
	Ni	60	0.023	ug/L	0.004	15	3	26	15	KED
	Ni	62	2.150	ug/L	0.192	8	0	351	9	KED
	Cu	63	0.099	ug/L	0.004	3	13	288	2	KED
	Cu	65	0.066	ug/L	0.004	5	7	93	7	KED
	Zn	66	0.442	ug/L	0.055	12	29	174	8	KED
	Zn	67	0.518	ug/L	0.199	38	2	31	35	KED
	Zn	68	0.395	ug/L	0.023	5	17	117	4	KED
	As	75	0.041	ug/L	0.015	36	3	12	24	KED
	Se-1	78	0.120	ug/L	0.011	9	11	13	2	KED
	Y	89		ug/L			764463	678751	1	Standard
	Kr	83		ug/L			93	55459	0	Standard
>	In-1	115		ug/L			22921	21720	0	KED
	Mo	98	0.037	ug/L	0.008	20	8	44	17	KED
	Cd	111	0.001	ug/L	0.007	585	0	1	173	KED
	Cd	114	-0.004	ug/L	0.001	35	2	0	212	KED
>	In	115		ug/L			1089596	981404	0	Standard
	Ag	107	0.003	ug/L	0.000	16	38	80	8	Standard
	Sb	121	0.039	ug/L	0.003	7	20	528	7	Standard
	Sb	123	0.028	ug/L	0.001	4	23	293	4	Standard
	Ba	135	0.019	ug/L	0.004	19	12	84	16	Standard
	Ba	137	0.020	ug/L	0.001	3	17	156	2	Standard
>	Tb	159		ug/L			1252627	1227492	3	Standard
	Tl	205	0.005	ug/L	0.001	15	20	196	15	Standard
	Pb	208	0.006	ug/L	0.000	7	128	380	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AVX9 K REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, February 23, 2016 19:50:42
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	88372	4	Standard
	Cl	37		mg/L			4442069	6073701	7	Standard
>	Sc	45		ug/L			1108426	1211310	1	Standard
|	Cr	52	44.776	ug/L	0.966	2	28245	989484	2	Standard
|	Cr	53	52.838	ug/L	0.991	1	661	138423	0	Standard
\	Mn	55	68.231	ug/L	2.116	3	522	2155708	1	Standard
>	Ge-1	72		ug/L			58771	48613	0	KED
|	Co	59	1.290	ug/L	0.020	1	10	4149	1	KED
|	Ni	60	7.759	ug/L	0.096	1	3	7063	1	KED
|	Ni	62	9.537	ug/L	0.516	5	0	1424	4	KED
|	Cu	63	19.715	ug/L	0.451	2	13	50202	2	KED
|	Cu	65	19.894	ug/L	0.606	3	7	24010	2	KED
|	Zn	66	5.293	ug/L	0.248	4	29	1644	5	KED
|	Zn	67	5.853	ug/L	0.500	8	2	307	8	KED
|	Zn	68	5.191	ug/L	0.092	1	17	1235	1	KED
|	As	75	16.318	ug/L	0.116	0	3	3229	0	KED
\	Se-1	78	1.284	ug/L	0.098	7	11	38	5	KED
	Y	89		ug/L			764463	885062	3	Standard
	Kr	83		ug/L			93	47970	3	Standard
>	In-1	115		ug/L			22921	20639	1	KED
|	Mo	98	6.385	ug/L	0.234	3	8	5881	2	KED
|	Cd	111	0.173	ug/L	0.028	16	0	49	17	KED
\	Cd	114	0.210	ug/L	0.008	3	2	153	4	KED
>	In	115		ug/L			1089596	946205	2	Standard
|	Ag	107	0.050	ug/L	0.001	2	38	780	1	Standard
|	Sb	121	0.507	ug/L	0.015	3	20	6409	0	Standard
|	Sb	123	0.498	ug/L	0.011	2	23	4769	4	Standard
|	Ba	135	6.575	ug/L	0.280	4	12	25006	2	Standard
\	Ba	137	6.422	ug/L	0.115	1	17	42716	1	Standard
>	Tb	159		ug/L			1252627	1201273	4	Standard
|	Tl	205	0.009	ug/L	0.001	7	20	300	7	Standard
\	Pb	208	1.652	ug/L	0.017	1	128	67835	5	Standard

AVX9 : 60415

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AVX9 L REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, February 23, 2016 19:55:33
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	78717	2	Standard
	Cl	37		mg/L			4442069	4099857	1	Standard
>	Sc	45		ug/L			1108426	1206134	0	Standard
	Cr	52	2.610	ug/L	0.060	2	28245	86367	1	Standard
	Cr	53	13.915	ug/L	0.056	0	661	36834	0	Standard
	Mn	55	597.289	ug/L	10.802	1	522	18790575	1	Standard
>	Ge-1	72		ug/L			58771	50411	0	KED
	Co	59	0.261	ug/L	0.015	5	10	876	4	KED
	Ni	60	1.548	ug/L	0.054	3	3	1463	2	KED
	Ni	62	3.232	ug/L	0.321	9	0	500	10	KED
	Cu	63	0.747	ug/L	0.056	7	13	1983	7	KED
	Cu	65	0.726	ug/L	0.034	4	7	915	5	KED
	Zn	66	9.729	ug/L	0.057	0	29	3112	0	KED
	Zn	67	11.688	ug/L	0.673	5	2	634	6	KED
	Zn	68	11.330	ug/L	0.274	2	17	2778	2	KED
	As	75	3.479	ug/L	0.101	2	3	716	1	KED
	Se-1	78	0.228	ug/L	0.082	35	11	14	12	KED
	Y	89		ug/L			764463	707079	0	Standard
	Kr	83		ug/L			93	28063	3	Standard
>	In-1	115		ug/L			22921	20857	1	KED
	Mo	98	1.422	ug/L	0.062	4	8	1329	3	KED
	Cd	111	0.011	ug/L	0.009	74	0	4	58	KED
	Cd	114	0.012	ug/L	0.007	58	2	10	46	KED
>	In	115		ug/L			1089596	969041	4	Standard
	Ag	107	0.010	ug/L	0.001	5	38	188	6	Standard
	Sb	121	0.213	ug/L	0.007	3	20	2769	1	Standard
	Sb	123	0.218	ug/L	0.002	1	23	2142	3	Standard
	Ba	135	35.895	ug/L	0.944	2	12	139761	2	Standard
	Ba	137	35.511	ug/L	0.392	1	17	241855	3	Standard
>	Tb	159		ug/L			1252627	1121025	2	Standard
	Tl	205	0.006	ug/L	0.001	16	20	201	16	Standard
	Pb	208	0.965	ug/L	0.040	4	128	37036	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AVX9 M REN
Sample Dil Factor: 2
Del
Comments:
Sample Date/Time: Tuesday, February 23, 2016 20:00:25
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	43746	2	Standard
	Cl	37		mg/L			4442069	216888286	0	Standard
>	Sc	45		ug/L			1108426	443470	2	Standard
	Cr	52	1.061	ug/L	0.046	4	28245	19609	0	Standard
	Cr	53	90.326	ug/L	0.878	0	661	86467	3	Standard
	Mn	55	1.649	ug/L	0.217	13	522	19315	14	Standard
>	Ge-1	72		ug/L			58771	12383	1	KED
	Co	59	0.066	ug/L	0.006	9	10	55	8	KED
	Ni	60	2.215	ug/L	0.136	6	3	514	7	KED
	Ni	62	12.555	ug/L	0.430	3	0	478	5	KED
	Cu	63	6.328	ug/L	0.067	1	13	4106	2	KED
	Cu	65	5.507	ug/L	0.223	4	7	1694	5	KED
	Zn	66	6.503	ug/L	0.619	9	29	513	10	KED
	Zn	67	6.081	ug/L	0.390	6	2	81	5	KED
	Zn	68	6.494	ug/L	0.326	5	17	393	6	KED
	As	75	1.759	ug/L	0.070	4	3	89	3	KED
	Se-1	78	1.379	ug/L	0.491	35	11	10	26	KED
	Y	89		ug/L			764463	264920	1	Standard
	Kr	83		ug/L			93	641934	0	Standard
>	In-1	115		ug/L			22921	5944	2	KED
	Mo	98	10.466	ug/L	0.144	1	8	2776	3	KED
	Cd	111	0.103	ug/L	0.043	41	0	8	38	KED
	Cd	114	0.071	ug/L	0.017	23	2	15	24	KED
>	In	115		ug/L			1089596	243874	1	Standard
	Ag	107	0.387	ug/L	0.030	7	38	1499	7	Standard
	Sb	121	0.652	ug/L	0.039	6	20	2122	5	Standard
	Sb	123	0.603	ug/L	0.023	3	23	1485	4	Standard
	Ba	135	29.160	ug/L	0.412	1	12	28593	1	Standard
	Ba	137	28.691	ug/L	0.690	2	17	49189	2	Standard
>	Tb	159		ug/L			1252627	299553	2	Standard
	Tl	205	0.019	ug/L	0.003	16	20	158	13	Standard
	Pb	208	0.028	ug/L	0.006	19	128	320	14	Standard

AVX9 · 9GH21

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AVX9 N REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, February 23, 2016 20:05:16
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	45486	0	Standard
	Cl	37		mg/L			4442069	221270259	1	Standard
>	Sc	45		ug/L			1108426	478740	0	Standard
	Cr	52	0.429	ug/L	0.043	10	28245	15829	2	Standard
	Cr	53	61.118	ug/L	0.405	0	661	63246	0	Standard
	Mn	55	1.260	ug/L	0.021	1	522	15964	1	Standard
>	Ge-1	72		ug/L			58771	13809	1	KED
	Co	59	0.092	ug/L	0.023	25	10	85	23	KED
	Ni	60	2.122	ug/L	0.064	3	3	549	3	KED
	Ni	62	15.437	ug/L	0.986	6	0	655	6	KED
	Cu	63	7.185	ug/L	0.273	3	13	5197	2	KED
	Cu	65	4.215	ug/L	0.062	1	7	1447	3	KED
	Zn	66	9.003	ug/L	0.365	4	29	789	5	KED
	Zn	67	8.959	ug/L	0.981	10	2	133	11	KED
	Zn	68	8.947	ug/L	0.149	1	17	601	1	KED
	As	75	1.787	ug/L	0.132	7	3	101	7	KED
	Se-1	78	1.932	ug/L	0.397	20	11	15	15	KED
	Y	89		ug/L			764463	276923	2	Standard
	Kr	83		ug/L			93	674813	2	Standard
>	In-1	115		ug/L			22921	6335	4	KED
	Mo	98	10.063	ug/L	0.658	6	8	2839	3	KED
	Cd	111	0.093	ug/L	0.059	63	0	8	58	KED
	Cd	114	0.070	ug/L	0.060	86	2	15	80	KED
>	In	115		ug/L			1089596	251638	2	Standard
	Ag	107	0.256	ug/L	0.011	4	38	1028	3	Standard
	Sb	121	0.776	ug/L	0.025	3	20	2604	1	Standard
	Sb	123	0.738	ug/L	0.004	0	23	1873	2	Standard
	Ba	135	44.219	ug/L	0.487	1	12	44744	3	Standard
	Ba	137	43.472	ug/L	0.555	1	17	76906	2	Standard
>	Tb	159		ug/L			1252627	313348	4	Standard
	Tl	205	0.026	ug/L	0.002	8	20	218	11	Standard
	Pb	208	0.071	ug/L	0.004	5	128	794	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AVY5 ADUP REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, February 23, 2016 20:12:52
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			56372	128478	2	Standard
Cl	37		mg/L			4442069	10868270	3	Standard
> Sc	45		ug/L			1108426	1439399	1	Standard
Cr	52	6.016	ug/L	0.217	3	28245	189708	1	Standard
Cr	53	12.642	ug/L	0.142	1	661	40012	0	Standard
Mn	55	920.842	ug/L	23.158	2	522	34567760	1	Standard
> Ge-1	72		ug/L			58771	55097	3	KED
Co	59	2.362	ug/L	0.076	3	10	8598	0	KED
Ni	60	5.981	ug/L	0.072	1	3	6170	2	KED
Ni	62	7.897	ug/L	0.051	0	0	1337	2	KED
Cu	63	13.013	ug/L	0.450	3	13	37533	0	KED
Cu	65	13.078	ug/L	0.557	4	7	17879	2	KED
Zn	66	73.572	ug/L	1.634	2	29	25532	1	KED
Zn	67	72.178	ug/L	4.966	6	2	4262	3	KED
Zn	68	74.192	ug/L	3.217	4	17	19776	1	KED
As	75	4.971	ug/L	0.197	3	3	1116	0	KED
Se-1	78	0.452	ug/L	0.051	11	11	22	3	KED
Y	89		ug/L			764463	859568	2	Standard
Kr	83		ug/L			93	79630	1	Standard
> In-1	115		ug/L			22921	20954	0	KED
Mo	98	2.339	ug/L	0.141	6	8	2193	6	KED
Cd	111	0.438	ug/L	0.063	14	0	126	14	KED
Cd	114	0.502	ug/L	0.011	2	2	368	1	KED
> In	115		ug/L			1089596	955530	0	Standard
Ag	107	0.053	ug/L	0.001	1	38	829	1	Standard
Sb	121	1.202	ug/L	0.010	0	20	15318	1	Standard
Sb	123	1.199	ug/L	0.010	0	23	11549	0	Standard
Ba	135	95.093	ug/L	2.364	2	12	365375	3	Standard
Ba	137	92.722	ug/L	1.696	1	17	622891	2	Standard
> Tb	159		ug/L			1252627	1182167	5	Standard
Tl	205	0.019	ug/L	0.001	4	20	604	4	Standard
Pb	208	7.970	ug/L	0.062	0	128	321466	5	Standard

AVX9 : 80H23

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AVY5 A REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, February 23, 2016 20:17:43
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			56372	120573	0	Standard
Cl	37		mg/L			4442069	10762773	4	Standard
> Sc	45		ug/L			1108426	1426714	2	Standard
Cr	52	5.736	ug/L	0.187	3	28245	180937	0	Standard
Cr	53	12.219	ug/L	0.104	0	661	38359	1	Standard
Mn	55	879.074	ug/L	10.678	1	522	32716925	2	Standard
> Ge-1	72		ug/L			58771	53182	1	KED
Co	59	2.366	ug/L	0.064	2	10	8318	1	KED
Ni	60	5.809	ug/L	0.051	0	3	5786	2	KED
Ni	62	7.308	ug/L	0.355	4	0	1194	4	KED
Cu	63	12.685	ug/L	0.376	2	13	35333	2	KED
Cu	65	12.869	ug/L	0.402	3	7	16989	1	KED
Zn	66	75.070	ug/L	1.689	2	29	25152	0	KED
Zn	67	72.101	ug/L	1.770	2	2	4114	1	KED
Zn	68	75.286	ug/L	2.659	3	17	19383	2	KED
As	75	5.135	ug/L	0.019	0	3	1114	1	KED
Se-1	78	0.483	ug/L	0.166	34	11	22	17	KED
Y	89		ug/L			764463	873535	2	Standard
Kr	83		ug/L			93	66894	1	Standard
> In-1	115		ug/L			22921	20793	1	KED
Mo	98	2.368	ug/L	0.079	3	8	2202	2	KED
Cd	111	0.453	ug/L	0.038	8	0	130	6	KED
Cd	114	0.443	ug/L	0.072	16	2	323	16	KED
> In	115		ug/L			1089596	939548	2	Standard
Ag	107	0.035	ug/L	0.005	13	38	555	10	Standard
Sb	121	1.207	ug/L	0.009	0	20	15117	1	Standard
Sb	123	1.203	ug/L	0.009	0	23	11401	2	Standard
Ba	135	94.078	ug/L	1.302	1	12	355377	2	Standard
Ba	137	93.080	ug/L	1.080	1	17	614764	2	Standard
> Tb	159		ug/L			1252627	1184825	4	Standard
Tl	205	0.012	ug/L	0.001	9	20	395	9	Standard
Pb	208	7.932	ug/L	0.078	0	128	320720	5	Standard

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ICP-MS Quantitative Analysis - Summary Report

Sample ID: AVY5 ASPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, February 23, 2016 20:22:35
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	119507	1	Standard
	Cl	37		mg/L			4442069	9731677	3	Standard
>	Sc	45		ug/L			1108426	1396499	0	Standard
|	Cr	52	28.256	ug/L	0.545	1	28245	733093	2	Standard
|	Cr	53	33.018	ug/L	0.417	1	661	100051	1	Standard
L	Mn	55	903.155	ug/L	22.283	2	522	32896554	2	Standard
>	Ge-1	72		ug/L			58771	53604	1	KED
|	Co	59	29.996	ug/L	0.524	1	10	106200	1	KED
|	Ni	60	32.903	ug/L	0.398	1	3	33017	1	KED
|	Ni	62	34.125	ug/L	1.047	3	0	5620	1	KED
|	Cu	63	37.968	ug/L	1.345	3	13	106569	2	KED
|	Cu	65	38.417	ug/L	0.787	2	7	51113	0	KED
|	Zn	66	149.220	ug/L	5.594	3	29	50361	2	KED
|	Zn	67	141.082	ug/L	5.478	3	2	8111	2	KED
|	Zn	68	141.799	ug/L	1.762	1	17	36788	0	KED
|	As	75	29.835	ug/L	0.356	1	3	6507	1	KED
L	Se-1	78	72.966	ug/L	2.592	3	11	1841	1	KED
	Y	89		ug/L			764463	847259	1	Standard
	Kr	83		ug/L			93	63290	2	Standard
>	In-1	115		ug/L			22921	20757	2	KED
|	Mo	98	2.107	ug/L	0.135	6	8	1956	4	KED
|	Cd	111	24.995	ug/L	0.624	2	0	7120	0	KED
L	Cd	114	24.298	ug/L	0.372	1	2	17588	1	KED
>	In	115		ug/L			1089596	929348	0	Standard
|	Ag	107	19.189	ug/L	0.270	1	38	282096	1	Standard
|	Sb	121	1.175	ug/L	0.024	2	20	14557	2	Standard
|	Sb	123	1.185	ug/L	0.019	1	23	11104	1	Standard
|	Ba	135	119.480	ug/L	3.084	2	12	446436	2	Standard
L	Ba	137	117.699	ug/L	0.656	0	17	768961	0	Standard
>	Tb	159		ug/L			1252627	1176950	2	Standard
|	Tl	205	26.477	ug/L	0.255	0	20	825400	3	Standard
L	Pb	208	33.602	ug/L	0.820	2	128	1349578	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AVY5 MBSPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, February 23, 2016 20:30:11
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD	Mode
	C	13		ug/L			56372	91710	1	Standard
	Cl	37		mg/L			4442069	5835539	2	Standard
⌈>	Sc	45		ug/L			1108426	1301924	0	Standard
|	Cr	52	26.529	ug/L	0.692	2	28245	643647	2	Standard
|	Cr	53	29.518	ug/L	0.456	1	661	83474	1	Standard
⌊	Mn	55	25.949	ug/L	0.522	2	522	881812	2	Standard
⌈>	Ge-1	72		ug/L			58771	56360	1	KED
|	Co	59	28.747	ug/L	0.649	2	10	106999	0	KED
|	Ni	60	29.331	ug/L	0.500	1	3	30949	2	KED
|	Ni	62	29.922	ug/L	0.287	0	0	5184	2	KED
|	Cu	63	29.400	ug/L	1.388	4	13	86744	3	KED
|	Cu	65	30.446	ug/L	1.358	4	7	42581	2	KED
|	Zn	66	90.970	ug/L	2.485	2	29	32296	2	KED
|	Zn	67	84.204	ug/L	3.188	3	2	5091	2	KED
|	Zn	68	85.018	ug/L	3.768	4	17	23189	2	KED
|	As	75	25.170	ug/L	0.464	1	3	5772	0	KED
⌊	Se-1	78	79.644	ug/L	2.505	3	11	2112	1	KED
	Y	89		ug/L			764463	801912	1	Standard
	Kr	83		ug/L			93	54810	1	Standard
⌈>	In-1	115		ug/L			22921	21292	3	KED
|	Mo	98	0.016	ug/L	0.005	28	8	23	19	KED
|	Cd	111	26.671	ug/L	0.820	3	0	7791	0	KED
⌊	Cd	114	26.748	ug/L	0.883	3	2	19851	1	KED
⌈>	In	115		ug/L			1089596	975039	0	Standard
|	Ag	107	26.826	ug/L	0.799	2	38	413801	3	Standard
|	Sb	121	0.019	ug/L	0.001	5	20	259	5	Standard
|	Sb	123	0.011	ug/L	0.001	10	23	126	8	Standard
|	Ba	135	28.207	ug/L	0.950	3	12	110569	2	Standard
⌊	Ba	137	27.748	ug/L	0.948	3	17	190183	2	Standard
⌈>	Tb	159		ug/L			1252627	1214949	4	Standard
|	Tl	205	28.603	ug/L	0.987	3	20	920660	6	Standard
⌊	Pb	208	29.600	ug/L	0.592	2	128	1226574	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AWG5 MBSPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, February 23, 2016 20:35:02
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD	Mode
	C	13		ug/L			56372	92971	3	Standard
	Cl	37		mg/L			4442069	5664091	3	Standard
>	Sc	45		ug/L			1108426	1331599	2	Standard
	Cr	52	25.603	ug/L	0.881	3	28245	636216	1	Standard
	Cr	53	27.689	ug/L	0.184	0	661	80129	1	Standard
	Mn	55	25.827	ug/L	0.890	3	522	897373	2	Standard
>	Ge-1	72		ug/L			58771	54301	1	KED
	Co	59	29.014	ug/L	0.392	1	10	104061	1	KED
	Ni	60	29.964	ug/L	0.788	2	3	30450	0	KED
	Ni	62	30.087	ug/L	1.622	5	0	5018	3	KED
	Cu	63	29.722	ug/L	1.030	3	13	84497	1	KED
	Cu	65	30.651	ug/L	0.826	2	7	41307	0	KED
	Zn	66	92.941	ug/L	3.901	4	29	31786	3	KED
	Zn	67	83.885	ug/L	1.850	2	2	4887	0	KED
	Zn	68	87.602	ug/L	2.134	2	17	23025	0	KED
	As	75	25.352	ug/L	0.584	2	3	5601	0	KED
	Se-1	78	79.895	ug/L	1.521	1	11	2042	1	KED
	Y	89		ug/L			764463	805819	2	Standard
	Kr	83		ug/L			93	51316	1	Standard
>	In-1	115		ug/L			22921	20502	2	KED
	Mo	98	0.010	ug/L	0.005	49	8	17	28	KED
	Cd	111	27.039	ug/L	0.633	2	0	7608	0	KED
	Cd	114	27.103	ug/L	0.306	1	2	19377	1	KED
>	In	115		ug/L			1089596	956352	0	Standard
	Ag	107	27.003	ug/L	0.582	2	38	408479	2	Standard
	Sb	121	0.016	ug/L	0.001	8	20	217	6	Standard
	Sb	123	0.008	ug/L	0.000	5	23	92	4	Standard
	Ba	135	28.040	ug/L	0.353	1	12	107819	0	Standard
	Ba	137	27.806	ug/L	0.987	3	17	186923	2	Standard
>	Tb	159		ug/L			1252627	1154950	3	Standard
	Tl	205	30.714	ug/L	0.655	2	20	939625	5	Standard
	Pb	208	30.996	ug/L	0.491	1	128	1221187	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV9
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, February 23, 2016 20:40:59
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	88822	1	Standard
	Cl	37		mg/L			4442069	5535378	1	Standard
>	Sc	45		ug/L			1108426	1290681	1	Standard
	Cr	52	46.011	ug/L	0.329	0	28245	1082538	1	Standard
	Cr	53	47.709	ug/L	1.050	2	661	133271	2	Standard
	Mn	55	44.461	ug/L	1.340	3	522	1497159	2	Standard
>	Ge-1	72		ug/L			58771	51499	0	KED
	Co	59	50.585	ug/L	0.969	1	10	172076	1	KED
	Ni	60	52.716	ug/L	0.880	1	3	50822	1	KED
	Ni	62	52.519	ug/L	0.903	1	0	8314	2	KED
	Cu	63	52.404	ug/L	0.145	0	13	141347	0	KED
	Cu	65	52.596	ug/L	0.802	1	7	67243	1	KED
	Zn	66	53.221	ug/L	0.650	1	29	17278	0	KED
	Zn	67	51.569	ug/L	0.493	0	2	2851	1	KED
	Zn	68	51.471	ug/L	1.017	1	17	12840	1	KED
	As	75	47.244	ug/L	0.318	0	3	9899	0	KED
	Se-1	78	47.230	ug/L	0.562	1	11	1149	0	KED
	Y	89		ug/L			764463	809610	2	Standard
	Kr	83		ug/L			93	43774	1	Standard
>	In-1	115		ug/L			22921	19275	0	KED
	Mo	98	48.293	ug/L	0.302	0	8	41510	1	KED
	Cd	111	49.001	ug/L	0.288	0	0	12967	1	KED
	Cd	114	48.942	ug/L	0.677	1	2	32903	1	KED
>	In	115		ug/L			1089596	915783	0	Standard
	Ag	107	50.622	ug/L	0.549	1	38	733263	0	Standard
	Sb	121	49.857	ug/L	0.935	1	20	608134	1	Standard
	Sb	123	50.137	ug/L	0.840	1	23	462230	1	Standard
	Ba	135	48.637	ug/L	1.816	3	12	179057	3	Standard
	Ba	137	47.618	ug/L	1.553	3	17	306526	2	Standard
>	Tb	159		ug/L			1252627	1131805	2	Standard
	Tl	205	53.242	ug/L	1.819	3	20	1596238	5	Standard
	Pb	208	54.779	ug/L	0.790	1	128	2114986	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB9
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, February 23, 2016 20:48:35
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrShort.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022316.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			56372	84783	5	Standard
	Cl	37		mg/L			4442069	5459555	1	Standard
>	Sc	45		ug/L			1108426	1269733	1	Standard
	Cr	52	-0.198	ug/L	0.014	7	28245	27908	0	Standard
	Cr	53	1.969	ug/L	0.071	3	661	6136	2	Standard
	Mn	55	0.665	ug/L	0.019	2	522	22610	1	Standard
>	Ge-1	72		ug/L			58771	47504	1	KED
	Co	59	0.020	ug/L	0.002	12	10	70	9	KED
	Ni	60	0.341	ug/L	0.024	7	3	306	8	KED
	Ni	62	1.623	ug/L	0.084	5	0	236	3	KED
	Cu	63	0.039	ug/L	0.011	29	13	107	26	KED
	Cu	65	0.007	ug/L	0.008	105	7	14	60	KED
	Zn	66	0.070	ug/L	0.031	43	29	45	19	KED
	Zn	67	0.185	ug/L	0.230	124	2	11	101	KED
	Zn	68	0.056	ug/L	0.035	62	17	27	29	KED
	As	75	0.039	ug/L	0.013	33	3	10	25	KED
	Se-1	78	0.225	ug/L	0.073	32	11	13	10	KED
	Y	89		ug/L			764463	779639	1	Standard
	Kr	83		ug/L			93	25215	2	Standard
>	In-1	115		ug/L			22921	17647	1	KED
	Mo	98	0.022	ug/L	0.012	53	8	24	38	KED
	Cd	111	-0.000	ug/L	0.002	543	0	0	86	KED
	Cd	114	-0.000	ug/L	0.003	5677	2	1	100	KED
>	In	115		ug/L			1089596	888426	1	Standard
	Ag	107	0.001	ug/L	0.000	38	38	45	10	Standard
	Sb	121	0.057	ug/L	0.001	2	20	688	3	Standard
	Sb	123	0.051	ug/L	0.001	2	23	477	1	Standard
	Ba	135	-0.000	ug/L	0.001	2012	12	10	39	Standard
	Ba	137	0.001	ug/L	0.001	91	17	22	34	Standard
>	Tb	159		ug/L			1252627	1068671	0	Standard
	Tl	205	0.009	ug/L	0.002	16	20	278	15	Standard
	Pb	208	0.004	ug/L	0.000	10	128	261	6	Standard

AVX9 : 08429

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: ICP/ICP-MS/GFA CVA **Analysis Date:** 2/25/16

M2	Analyst ee 2/26/16	Peer 2-26-16	Comment
Logbook:			
Analyst, Date, Method info	✓	✓	
Sample ID's	✓	✓	See log
Standard/QC solution ID's recorded	✓	✓	
Prep codes	✓	✓	
Dilution factors	✓	✓	
Crossouts/Corrections/Deletions	✓	✓	See Log
Calibration:			
Blank & Standard intensities	✓	✓	
Standard deviations	✓	✓	
Curve fit	✓	✓	
Calibration Verification:			
ICV/CCV	✓	✓	
ICB/CCB	✓	✓	
Samples:			
RSD's & SD's	✓	✓	
Internal Standards	✓	✓	
Carry-over	✓	✓	
Method QC:			
CRI/CRA	✓	✓	
ICSA/ICSAB	✓	✓	See log
Post Spikes/Serial Dilutions	—	—	
Analytic Spikes	—	—	
Matrix QC:			
SRM/LCS	✓	✓	
Matrix Spikes	✓	✓	
Matrix Duplicates	✓	✓	
Method Blanks	✓	✓	
Data Distribution:			
Requested elements/isotope identified	✓	✓	
Correct samples identified for distribution	✓	✓	
Raw data match distributed data	✓	✓	
Data filename correct	✓	✓	
Necessary Analysts Notes and CAF's	✓	✓	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS SAMPLE RUN LOG

PE Nexlon ICP-MS Serial No. 81DN1050201

Analysis Date: 2/25/16 **Analyst:** ee

All corrections made by analyst unless otherwise noted. ee 2/25/16

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		STD	~~E474~~ E474		
		1	~~E522~~ ~~E455~~		
		2	E455 ~~E454~~		
		3	E456		
		4	E517		
		5	E523		
		Rinse			
		ICV	E156		
		ICB	E474		
		CCV1	E517		
		CCB1	E474		
		Low Check	~~E522~~ ~~E455~~		
		ICSA	E524		V.V., Cr 53↑
		ICSAB	E525		↓
		LR200	E361		
		LR300	E533		
		B1			
		B2			
		CCV2			
		CCB2			
		AWI9 MB	SWN	25	Al Ag Only
		AWJ9 MB	REN	2	Cd only
		AWJ8 MB	↓	↓	Ag only
		↓ A	↓	↓	↓

AVX9 : 80431

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS SAMPLE RUN LOG

PE Nexlon ICP-MS Serial No. 81DN1050201

Analysis Date: 2/~~24~~ 25/16 ee 2/25/16 **Analyst:** ee

All corrections made by analyst unless otherwise noted. ee 2/26/16

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
	✓	AWK1 A	REN	10	
		AWJ9 A	↓	2	Cd only
		↓ MBSPK	↓	↓	↓
		AWJØ MBSPK	↓	↓	Ag only
Label		AVX9 MB2SPK	↓	↓	Ni only
		AWI9 MBSPK	SWN	20	Al Ag Ba only
		CCV3			
		CCB3			
		~~AWD5 MB~~	~~REN~~	~~2~~	
		AWI9 A	SWN	20	Al Ag Cr Fe
		↓ B	↓	↓	Al Ag Fe
		C	↓	↓	Al Ag
		↓ D	↓	↓	Al Ag Fe
		AVY2 A	REN	2 ee	2/26/16
		AWD5 A	↓	↓	
		↓ B	↓	↓	
		C	↓	↓	
		↓ MBSPK	↓	↓	
		CCV4			
		CCB4			
		AWM7 MB	REN	2	
		AWF6 MB1	↓	↓	
		↓ MB2	↓	↓	
		↓ B	↓	↓	

Performance Check Report

Sample ID: STD Performance Check
Sample Date/Time: Thursday, February 25, 2016 11:41:45
Sample Description:
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\STD Performance Check.mth
Dataset File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\DataSet\Default\STD Performance Check.8715
MassCal File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Conditions File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Dual Detector Mode: Pulse
Acq. Dead Time (ns): 35
Current Dead Time (ns): 35
Torch Z position (mm): 0.00

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD	Mode
	Be	9.0	2004.1	2004.141	42.645	2.1	Standard
	In	114.9	70435.8	70435.755	487.545	0.7	Standard
	U	238.1	61883.5	61883.483	382.065	0.6	Standard
⌈	CeO	155.9	1441.8	0.022	0.001	2.8	Standard
|>	Ce	139.9	67038.0	67037.996	401.029	0.6	Standard
⌊	Ce++	70.0	1440.5	0.021	0.000	2.2	Standard
	Bkgd	220.0	0.0	0.033	0.075	223.6	Standard

Current Conditions File Data

Current Value	Description
1.07	Nebulizer Gas Flow STD/KED [NEB]
1.20	Auxiliary Gas Flow
18.00	Plasma Gas Flow
-12.00	Deflector Voltage
1600.00	ICP RF Power
-1637.00	Analog Stage Voltage
1050.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-15.00	Cell Rod Offset STD [CRO]
7.00	Discriminator Threshold
-2.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.25	RPq
1.07	DRC Mode NEB
-8.00	DRC Mode QRO
-2.50	DRC Mode CRO
-4.00	DRC Mode Cell Entrance/Exit Voltage
0.60	Cell Gas A
0.00	Cell Gas B
250.00	Axial Field Voltage
-15.00	KED Mode CRO
-12.00	KED Mode QRO
-2.00	KED Mode Cell Entrance Voltage
-24.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
4.00	KED Cell Gas B
0.00	KED RPa
0.25	KED RPq
475.00	KED Mode Axial Field Voltage

AVX9 : 00433

SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Wizard\SmartTune\ARIdaily_UCT.swz

Start Time: 2/25/2016 11:23:50 AM
End Time: 2/25/2016 11:25:55 AM

STD Performance Check - [Failed]
Obtained Intensity (Be 9): 2113.82
Obtained Intensity (In 115): 82784.58
Obtained Intensity (U 238): 68242.02
Obtained Intensity (Bkgd 220): 0.03
Obtained Formula (Ce++ 70 / Ce 140): 0.035 (=2543.85 / 73683.88) - <Target not achieved>
Obtained Formula (CeO 156 / Ce 140): 0.025 (=1846.32 / 73683.88) - <Target not achieved>

SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Wizard\SmartTune\ARIdaily_UCT.swz

Start Time: 2/25/2016 11:26:31 AM
End Time: 2/25/2016 11:36:26 AM

Torch Alignment - [Passed]

Vertical	Horizontal	Intensity
1.36 mm	0.74 mm	84184.32

Nebulizer Gas Flow STD/KED [NEB] - [Passed] Optimum value(s): 1.07
Obtained Intensity (In 115): 71379.88
Obtained Formula (CeO 156 / Ce 140): 0.0192 (=1323.06 / 68929.90)

Mass Calibration and Resolution - [Passed] Optimum value(s): N/A
Target/Obtained mass (7.016/6.975), Target/Obtained resolution (0.7/0.713)
Target/Obtained mass (23.985/24.025), Target/Obtained resolution (0.7/0.698)
Target/Obtained mass (114.904/114.875), Target/Obtained resolution (0.7/0.694)
Target/Obtained mass (238.05/238.025), Target/Obtained resolution (0.7/0.701)

QID STD/DRC - Optimum value(s): Correlation Coefficient = 1.000; Intercept = -12.51

KED Mode QID - Optimum value(s): Correlation Coefficient = 1.000; Intercept = -13.20

STD Performance Check - [Failed]
Obtained Intensity (Be 9): 1989.14 - <Target not achieved> Reran. ee 2/25/16
Obtained Intensity (In 115): 71266.40
Obtained Intensity (U 238): 61882.01
Obtained Intensity (Bkgd 220): 0.20
Obtained Formula (Ce++ 70 / Ce 140): 0.022 (=1484.88 / 67400.91)
Obtained Formula (CeO 156 / Ce 140): 0.022 (=1453.01 / 67400.91)

AVX9 : 88135

SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Wizard\SmartTune\ARIdaily_UCT.swz

Start Time: 2/25/2016 11:41:44 AM
End Time: 2/25/2016 11:43:49 AM

STD Performance Check - [Passed] Optimum value(s): N/A
Obtained Intensity (Be 9): 2004.14
Obtained Intensity (In 115): 70435.75
Obtained Intensity (U 238): 61883.48
Obtained Intensity (Bkgd 220): 0.03
Obtained Formula (Ce++ 70 / Ce 140): 0.021 (=1440.54 / 67038.00)
Obtained Formula (CeO 156 / Ce 140): 0.022 (=1441.81 / 67038.00)

AVX9 : 00435

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Blank
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, February 25, 2016 12:14:54
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
[>	Li	6		ug/L				697067	4	Standard
[	Be	9		ug/L				2	114	Standard
	C	13		ug/L				39099	3	Standard
	Cl	37		mg/L				2965482	0	Standard
[>	Sc	45		ug/L				882076	0	Standard
[	Al	27		ug/L				529	4	Standard
[	V	51		mg/L				3896	1	Standard
[	V-1	51		mg/L				397	9	Standard
[	Cr	52		ug/L				10944	1	Standard
[	Cr	53		ug/L				117	4	Standard
[	Fe	54		mg/L				44949	3	Standard
[	Fe	57		mg/L				9916	4	Standard
[	Mn	55		ug/L				280	3	Standard
[>	Ge-1	72		ug/L				34048	0	KED
[	Co	59		ug/L				1	86	KED
[	Ni	60		ug/L				2	43	KED
[	Ni	62		ug/L				0		KED
[	Cu	63		ug/L				8	26	KED
[	Cu	65		ug/L				5	21	KED
[	Zn	66		ug/L				6	17	KED
[	Zn	67		ug/L				1	100	KED
[	Zn	68		ug/L				4	137	KED
[	As	75		ug/L				2	40	KED
[	Se-1	78		ug/L				3	27	KED
	Y	89		ug/L				578761	1	Standard
	Kr	83		ug/L				63	16	Standard
[>	In-1	115		ug/L				12060	2	KED
[	Mo	98		ug/L				3	124	KED
[	Cd	111		ug/L				0	173	KED
[	Cd	114		ug/L				1	184	KED
[>	In	115		ug/L				849100	0	Standard
[	Ag	107		ug/L				22	26	Standard
[	Sb	121		ug/L				19	31	Standard
[	Sb	123		ug/L				16	19	Standard
[	Ba	135		ug/L				8	75	Standard
[	Ba	137		ug/L				16	40	Standard
[>	Tb	159		ug/L				1018646	2	Standard
[	Tl	205		ug/L				24	31	Standard
[	Pb	208		ug/L				122	14	Standard
[	Bi	209		ug/L				2160030	7	Standard
[	Th	232		ug/L				43	31	Standard
[	U	238		ug/L				23	24	Standard

AVX9 : 66437

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, February 25, 2016 12:19:59
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
⌈>	**Li**	**6**		ug/L			697067	723947	1	Standard
⌊	**Be**	**9**	**0.200**	ug/L	0.018	9	2	286	7	Standard
	C	**13**		ug/L			39099	40221	3	Standard
	Cl	**37**		mg/L			2965482	2876542	0	Standard
⌈>	**Sc**	**45**		ug/L			882076	928556	2	Standard
|	**Al**	**27**	**20.000**	ug/L	0.850	4	529	311377	3	Standard
|	**V**	**51**	**0.200**	mg/L	0.019	9	3896	7437	2	Standard
|	**V-1**	**51**	**0.200**	mg/L	0.007	3	397	4145	0	Standard
|	**Cr**	**52**	**0.500**	ug/L	0.089	17	10944	14489	1	Standard
|	**Cr**	**53**	**0.500**	ug/L	0.030	6	117	584	4	Standard
|	**Fe**	**54**	**20.000**	mg/L	1.794	8	44949	68779	0	Standard
|	**Fe**	**57**	**20.000**	mg/L	2.940	14	9916	19238	3	Standard
⌊	**Mn**	**55**	**0.500**	ug/L	0.016	3	280	11466	0	Standard
⌈>	**Ge-1**	**72**		ug/L			34048	34503	0	KED
|	**Co**	**59**	**0.200**	ug/L	0.010	4	1	566	5	KED
|	**Ni**	**60**	**0.500**	ug/L	0.038	7	2	345	7	KED
|	**Ni**	**62**	**0.500**	ug/L	0.111	22	0	55	21	KED
|	**Cu**	**63**	**0.500**	ug/L	0.008	1	8	1087	1	KED
|	**Cu**	**65**	**0.500**	ug/L	0.043	8	5	505	8	KED
|	**Zn**	**66**	**4.000**	ug/L	0.157	3	6	1000	3	KED
|	**Zn**	**67**	**4.000**	ug/L	0.299	7	1	153	6	KED
|	**Zn**	**68**	**4.000**	ug/L	0.309	7	4	707	7	KED
|	**As**	**75**	**0.200**	ug/L	0.030	15	2	26	13	KED
⌊	**Se-1**	**78**	**0.500**	ug/L	0.099	19	3	12	13	KED
	Y	**89**		ug/L			578761	587226	0	Standard
	Kr	**83**		ug/L			63	53	49	Standard
⌈>	**In-1**	**115**		ug/L			12060	12136	1	KED
|	**Mo**	**98**	**0.200**	ug/L	0.013	6	3	112	7	KED
|	**Cd**	**111**	**0.100**	ug/L	0.022	22	0	20	20	KED
⌊	**Cd**	**114**	**0.100**	ug/L	0.015	15	1	41	13	KED
⌈>	**In**	**115**		ug/L			849100	854129	1	Standard
|	**Ag**	**107**	**0.200**	ug/L	0.009	4	22	3393	4	Standard
|	**Sb**	**121**	**0.200**	ug/L	0.006	3	19	2544	4	Standard
|	**Sb**	**123**	**0.200**	ug/L	0.004	2	16	1936	1	Standard
|	**Ba**	**135**	**0.500**	ug/L	0.006	1	8	1781	1	Standard
⌊	**Ba**	**137**	**0.500**	ug/L	0.017	3	16	3049	3	Standard
⌈>	**Tb**	**159**		ug/L			1018646	1027162	2	Standard
|	**Tl**	**205**	**0.200**	ug/L	0.006	2	24	6294	4	Standard
|	**Pb**	**208**	**0.100**	ug/L	0.003	2	122	4237	3	Standard
|	**Bi**	**209**		ug/L			2160030	2285841	3	Standard
|	**Th**	**232**	**0.200**	ug/L	0.011	5	43	4434	4	Standard
⌊	**U**	**238**	**0.200**	ug/L	0.003	1	23	8363	2	Standard

AVX9 · 66438

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 2
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, February 25, 2016 12:25:05
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
⌈>	Li	6		ug/L			697067	716236	2	Standard
⌊	Be	9	10.000	ug/L	0.428	4	2	14756	2	Standard
	C	13		ug/L			39099	41050	1	Standard
	Cl	37		mg/L			2965482	2965746	0	Standard
⌈>	Sc	45		ug/L			882076	940249	2	Standard
|	Al	27	999.996	ug/L	29.349	2	529	15600275	1	Standard
|	V	51	10.000	mg/L	0.429	4	3896	193575	2	Standard
|	V-1	51	10.000	mg/L	0.507	5	397	190370	3	Standard
|	Cr	52	10.006	ug/L	0.275	2	10944	90654	2	Standard
|	Cr	53	9.999	ug/L	0.481	4	117	9218	2	Standard
|	Fe	54	1000.028	mg/L	36.333	3	44949	1217820	1	Standard
|	Fe	57	1000.025	mg/L	23.410	2	9916	486495	0	Standard
⌊	Mn	55	10.001	ug/L	0.411	4	280	233737	1	Standard
⌈>	Ge-1	72		ug/L			34048	34687	1	KED
|	Co	59	9.999	ug/L	0.452	4	1	25186	3	KED
|	Ni	60	10.003	ug/L	0.160	1	2	7734	0	KED
|	Ni	62	10.000	ug/L	0.535	5	0	1128	5	KED
|	Cu	63	9.999	ug/L	0.161	1	8	20678	0	KED
|	Cu	65	10.000	ug/L	0.314	3	5	10048	2	KED
|	Zn	66	9.995	ug/L	0.439	4	6	2495	3	KED
|	Zn	67	9.943	ug/L	0.539	5	1	368	5	KED
|	Zn	68	10.085	ug/L	0.861	8	4	1887	9	KED
|	As	75	10.001	ug/L	0.185	1	2	1404	0	KED
⌊	Se-1	78	9.999	ug/L	0.650	6	3	169	6	KED
	Y	89		ug/L			578761	604705	2	Standard
	Kr	83		ug/L			63	63	17	Standard
⌈>	In-1	115		ug/L			12060	12282	2	KED
|	Mo	98	10.000	ug/L	0.224	2	3	6175	0	KED
|	Cd	111	10.000	ug/L	0.715	7	0	1822	5	KED
⌊	Cd	114	10.000	ug/L	0.407	4	1	4730	2	KED
⌈>	In	115		ug/L			849100	867109	1	Standard
|	Ag	107	10.000	ug/L	0.102	1	22	163325	0	Standard
|	Sb	121	10.000	ug/L	0.220	2	19	123841	1	Standard
|	Sb	123	10.000	ug/L	0.053	0	16	95888	1	Standard
|	Ba	135	10.000	ug/L	0.132	1	8	36039	0	Standard
⌊	Ba	137	10.000	ug/L	0.093	0	16	60783	2	Standard
⌈>	Tb	159		ug/L			1018646	1039776	0	Standard
|	Tl	205	10.000	ug/L	0.336	3	24	307322	3	Standard
|	Pb	208	10.000	ug/L	0.388	3	122	397500	3	Standard
|	Bi	209		ug/L			2160030	2248288	0	Standard
|	Th	232	10.001	ug/L	0.352	3	43	301431	3	Standard
⌊	U	238	10.000	ug/L	0.065	0	23	412500	0	Standard

AVX9 : 80433

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 3
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, February 25, 2016 12:30:23
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
⌈>	**Li**	**6**		ug/L			697067	705219	5	Standard
⌊	**Be**	**9**	**20.010**	ug/L	1.182	5	2	29092	3	Standard
	C	**13**		ug/L			39099	41390	1	Standard
	Cl	**37**		mg/L			2965482	2990182	1	Standard
⌈>	**Sc**	**45**		ug/L			882076	930237	2	Standard
|	**Al**	**27**	**2007.628**	ug/L	58.911	2	529	31463312	1	Standard
|	**V**	**51**	**19.943**	mg/L	0.308	1	3896	373727	0	Standard
|	**V-1**	**51**	**19.954**	mg/L	0.243	1	397	372172	1	Standard
|	**Cr**	**52**	**20.114**	ug/L	0.686	3	10944	172235	1	Standard
|	**Cr**	**53**	**20.179**	ug/L	0.903	4	117	18965	4	Standard
|	**Fe**	**54**	**2019.689**	mg/L	25.120	1	44949	2481678	1	Standard
|	**Fe**	**57**	**2006.735**	mg/L	77.086	3	9916	968011	1	Standard
⌊	**Mn**	**55**	**20.062**	ug/L	0.825	4	280	469452	1	Standard
⌈>	**Ge-1**	**72**		ug/L			34048	35554	2	KED
|	**Co**	**59**	**20.035**	ug/L	0.257	1	1	52100	1	KED
|	**Ni**	**60**	**19.778**	ug/L	0.691	3	2	15000	1	KED
|	**Ni**	**62**	**20.076**	ug/L	0.405	2	0	2358	1	KED
|	**Cu**	**63**	**19.981**	ug/L	0.110	0	8	42193	1	KED
|	**Cu**	**65**	**19.953**	ug/L	0.232	1	5	20357	1	KED
|	**Zn**	**66**	**19.941**	ug/L	0.864	4	6	5042	2	KED
|	**Zn**	**67**	**20.255**	ug/L	1.196	5	1	801	3	KED
|	**Zn**	**68**	**20.059**	ug/L	0.703	3	4	3881	4	KED
|	**As**	**75**	**19.926**	ug/L	0.774	3	2	2823	3	KED
⌊	**Se-1**	**78**	**19.700**	ug/L	0.561	2	3	320	0	KED
	Y	**89**		ug/L			578761	605100	2	Standard
	Kr	**83**		ug/L			63	69	24	Standard
⌈>	**In-1**	**115**		ug/L			12060	12331	2	KED
|	**Mo**	**98**	**19.943**	ug/L	0.436	2	3	12223	0	KED
|	**Cd**	**111**	**20.094**	ug/L	0.890	4	0	3749	2	KED
⌊	**Cd**	**114**	**19.987**	ug/L	0.068	0	1	9472	1	KED
⌈>	**In**	**115**		ug/L			849100	858846	0	Standard
|	**Ag**	**107**	**20.071**	ug/L	0.496	2	22	329295	1	Standard
|	**Sb**	**121**	**20.046**	ug/L	0.473	2	19	248145	1	Standard
|	**Sb**	**123**	**20.024**	ug/L	0.545	2	16	191039	1	Standard
|	**Ba**	**135**	**19.842**	ug/L	0.544	2	8	68645	1	Standard
⌊	**Ba**	**137**	**20.038**	ug/L	0.518	2	16	121535	1	Standard
⌈>	**Tb**	**159**		ug/L			1018646	1042696	0	Standard
|	**Tl**	**205**	**19.954**	ug/L	1.187	5	24	609347	5	Standard
|	**Pb**	**208**	**20.000**	ug/L	1.069	5	122	797160	5	Standard
|	**Bi**	**209**		ug/L			2160030	2255992	3	Standard
|	**Th**	**232**	**20.112**	ug/L	1.198	5	43	621708	5	Standard
⌊	**U**	**238**	**20.037**	ug/L	0.886	4	23	835002	4	Standard

AVX9 : 00448

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 4
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, February 25, 2016 12:35:52
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
[>	Li	6		ug/L			697067	733985	1	Standard
[	Be	9	49.786	ug/L	1.112	2	2	73867	1	Standard
	C	13		ug/L			39099	39836	0	Standard
	Cl	37		mg/L			2965482	2942352	0	Standard
[>	Sc	45		ug/L			882076	945629	0	Standard
[	Al	27	4979.521	ug/L	94.726	1	529	77775455	2	Standard
[	V	51	49.679	mg/L	2.930	5	3896	911065	5	Standard
[	V-1	51	49.693	mg/L	3.114	6	397	913429	5	Standard
[	Cr	52	49.612	ug/L	1.081	2	10944	399823	2	Standard
[	Cr	53	49.703	ug/L	1.601	3	117	45935	2	Standard
[	Fe	54	4996.655	mg/L	173.380	3	44949	6149503	2	Standard
[	Fe	57	4992.569	mg/L	53.175	1	9916	2415950	1	Standard
[	Mn	55	49.588	ug/L	1.469	2	280	1132879	2	Standard
[>	Ge-1	72		ug/L			34048	34934	2	KED
[	Co	59	49.955	ug/L	2.228	4	1	126987	1	KED
[	Ni	60	49.885	ug/L	1.352	2	2	36754	1	KED
[	Ni	62	49.973	ug/L	2.586	5	0	5747	2	KED
[	Cu	63	49.738	ug/L	1.408	2	8	100516	1	KED
[	Cu	65	49.852	ug/L	1.375	2	5	49223	0	KED
[	Zn	66	49.654	ug/L	0.773	1	6	11933	2	KED
[	Zn	67	50.130	ug/L	1.362	2	1	1971	2	KED
[	Zn	68	49.689	ug/L	2.085	4	4	9155	1	KED
[	As	75	50.047	ug/L	1.296	2	2	6997	0	KED
[	Se-1	78	49.779	ug/L	2.491	5	3	772	4	KED
	Y	89		ug/L			578761	609400	3	Standard
	Kr	83		ug/L			63	72	12	Standard
[>	In-1	115		ug/L			12060	12127	1	KED
[	Mo	98	50.060	ug/L	0.208	0	3	30361	1	KED
[	Cd	111	49.971	ug/L	1.510	3	0	9144	2	KED
[	Cd	114	50.099	ug/L	0.546	1	1	23581	2	KED
[>	In	115		ug/L			849100	850840	1	Standard
[	Ag	107	49.822	ug/L	1.010	2	22	795526	0	Standard
[	Sb	121	49.900	ug/L	0.697	1	19	605863	0	Standard
[	Sb	123	49.778	ug/L	0.995	1	16	460300	2	Standard
[	Ba	135	50.006	ug/L	0.903	1	8	171522	2	Standard
[	Ba	137	50.022	ug/L	0.571	1	16	301260	2	Standard
[>	Tb	159		ug/L			1018646	1036728	1	Standard
[	Tl	205	49.825	ug/L	1.528	3	24	1487208	4	Standard
[	Pb	208	49.765	ug/L	0.689	1	122	1926825	2	Standard
[	Bi	209		ug/L			2160030	2137345	6	Standard
[	Th	232	50.426	ug/L	1.116	2	43	1619195	3	Standard
[	U	238	50.115	ug/L	2.377	4	23	2101406	5	Standard

AVX9 : 60H41

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 5
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, February 25, 2016 12:43:01
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
⌈>	**Li**	**6**		ug/L			697067	697424	4	Standard
⌊	**Be**	**9**	**101.206**	ug/L	6.634	6	2	148369	1	Standard
	C	**13**		ug/L			39099	38665	5	Standard
	Cl	**37**		mg/L			2965482	2953112	1	Standard
⌈>	**Sc**	**45**		ug/L			882076	946899	2	Standard
|	**Al**	**27**	**9956.842**	ug/L	266.277	2	529	153471610	2	Standard
|	**V**	**51**	**99.629**	mg/L	2.303	2	3896	1802860	0	Standard
|	**V-1**	**51**	**99.716**	mg/L	2.485	2	397	1817591	0	Standard
|	**Cr**	**52**	**99.389**	ug/L	4.208	4	10944	774274	2	Standard
|	**Cr**	**53**	**99.959**	ug/L	4.920	4	117	92203	2	Standard
|	**Fe**	**54**	**9897.533**	mg/L	9.113	0	44949	11752814	2	Standard
|	**Fe**	**57**	**9936.237**	mg/L	446.453	4	9916	4701241	2	Standard
⌊	**Mn**	**55**	**100.231**	ug/L	4.275	4	280	2309421	2	Standard
⌈>	**Ge-1**	**72**		ug/L			34048	34346	0	KED
|	**Co**	**59**	**99.731**	ug/L	1.793	1	1	247207	0	KED
|	**Ni**	**60**	**99.779**	ug/L	1.801	1	2	71776	2	KED
|	**Ni**	**62**	**100.346**	ug/L	1.263	1	0	11490	1	KED
|	**Cu**	**63**	**99.431**	ug/L	1.642	1	8	193948	1	KED
|	**Cu**	**65**	**99.435**	ug/L	1.118	1	5	94780	1	KED
|	**Zn**	**66**	**99.272**	ug/L	3.815	3	6	22896	3	KED
|	**Zn**	**67**	**99.101**	ug/L	5.692	5	1	3719	5	KED
|	**Zn**	**68**	**99.187**	ug/L	3.107	3	4	17504	2	KED
|	**As**	**75**	**99.941**	ug/L	0.344	0	2	13715	1	KED
⌊	**Se-1**	**78**	**99.673**	ug/L	0.297	0	3	1500	0	KED
	Y	**89**		ug/L			578761	597545	1	Standard
	Kr	**83**		ug/L			63	66	23	Standard
⌈>	**In-1**	**115**		ug/L			12060	11904	1	KED
|	**Mo**	**98**	**100.324**	ug/L	1.398	1	3	60370	0	KED
|	**Cd**	**111**	**99.772**	ug/L	1.364	1	0	17790	1	KED
⌊	**Cd**	**114**	**99.759**	ug/L	2.452	2	1	45714	0	KED
⌈>	**In**	**115**		ug/L			849100	854737	2	Standard
|	**Ag**	**107**	**97.950**	ug/L	2.758	2	22	1470449	1	Standard
|	**Sb**	**121**	**99.177**	ug/L	0.656	0	19	1177422	1	Standard
|	**Sb**	**123**	**99.546**	ug/L	0.440	0	16	910853	1	Standard
|	**Ba**	**135**	**99.402**	ug/L	1.319	1	8	335718	1	Standard
⌊	**Ba**	**137**	**99.456**	ug/L	0.771	0	16	590956	2	Standard
⌈>	**Tb**	**159**		ug/L			1018646	1024455	0	Standard
|	**Tl**	**205**	**100.988**	ug/L	2.180	2	24	3079640	3	Standard
|	**Pb**	**208**	**99.788**	ug/L	3.802	3	122	3791573	4	Standard
|	**Bi**	**209**		ug/L			2160030	1957798	0	Standard
|	**Th**	**232**	**102.396**	ug/L	1.763	1	43	3530698	2	Standard
⌊	**U**	**238**	**100.212**	ug/L	1.311	1	23	4180502	2	Standard

AVX9:08442

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Rinse sample
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, February 25, 2016 12:50:50
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022416b.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
Li	**6**		ug/L			697067	675589	0	Standard
Be	**9**	**0.001**	ug/L	0.001	56	2	4	24	Standard
C	**13**		ug/L			39099	39123	3	Standard
Cl	**37**		mg/L			2965482	2885097	3	Standard
Sc	**45**		ug/L			882076	918399	2	Standard
Al	**27**	**0.005**	ug/L	0.003	50	529	630	5	Standard
V	**51**	**-0.016**	mg/L	0.007	45	3896	3770	0	Standard
V-1	**51**	**-0.005**	mg/L	0.003	56	397	318	16	Standard
Cr	**52**	**-0.075**	ug/L	0.050	67	10944	10832	2	Standard
Cr	**53**	**-0.003**	ug/L	0.018	664	117	120	15	Standard
Fe	**54**	**-1.924**	mg/L	0.549	28	44949	44594	3	Standard
Fe	**57**	**0.693**	mg/L	0.580	83	9916	10641	3	Standard
Mn	**55**	**-0.000**	ug/L	0.002	1062	280	288	14	Standard
Ge-1	**72**		ug/L			34048	34070	1	KED
Co	**59**	**0.006**	ug/L	0.006	88	1	16	81	KED
Ni	**60**	**0.005**	ug/L	0.011	208	2	6	124	KED
Ni	**62**	**0.006**	ug/L	0.010	173	0	0	173	KED
Cu	**63**	**0.013**	ug/L	0.008	62	8	33	46	KED
Cu	**65**	**0.013**	ug/L	0.011	88	5	17	61	KED
Zn	**66**	**0.017**	ug/L	0.005	30	6	10	10	KED
Zn	**67**	**-0.017**	ug/L	0.029	171	1	1	86	KED
Zn	**68**	**0.015**	ug/L	0.039	260	4	6	95	KED
As	**75**	**-0.002**	ug/L	0.002	91	2	2	13	KED
Se-1	**78**	**0.116**	ug/L	0.157	135	3	5	44	KED
Y	**89**		ug/L			578761	581976	1	Standard
Kr	**83**		ug/L			63	55	15	Standard
In-1	**115**		ug/L			12060	12206	3	KED
Mo	**98**	**0.057**	ug/L	0.009	15	3	38	17	KED
Cd	**111**	**0.002**	ug/L	0.005	313	0	0	100	KED
Cd	**114**	**-0.003**	ug/L	0.000	2	1	0	173	KED
In	**115**		ug/L			849100	837677	2	Standard
Ag	**107**	**0.001**	ug/L	0.000	29	22	36	10	Standard
Sb	**121**	**0.098**	ug/L	0.003	2	19	1154	4	Standard
Sb	**123**	**0.098**	ug/L	0.006	6	16	891	3	Standard
Ba	**135**	**0.002**	ug/L	0.003	134	8	15	61	Standard
Ba	**137**	**0.002**	ug/L	0.001	65	16	29	26	Standard
Tb	**159**		ug/L			1018646	1014781	2	Standard
Tl	**205**	**0.005**	ug/L	0.001	22	24	161	17	Standard
Pb	**208**	**0.002**	ug/L	0.001	45	122	181	12	Standard
Bi	**209**		ug/L			2160030	2234344	2	Standard
Th	**232**	**0.148**	ug/L	0.007	4	43	5092	6	Standard
U	**238**	**0.001**	ug/L	0.000	13	23	77	11	Standard

Sample Information

Sample Date/Time: Thursday, February 25, 2016 12:43:01
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_
Mass Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tu
Conditions File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022516.cal

Calibration

Analyte	Mass	r Corr Coef	Slope	Std 1 Conc	Std 2 Conc	Std 3 Conc	Std 4 Conc	Std 5 Conc
Li	6							
Be	9	**0.9997**	0.002	0.20	10	20	50	100
C	13							
Cl	37							
Sc	45							
Al	27	**1.0000**	0.016	20.00	1000	2000	5000	10000
V	51	**1.0000**	0.019	0.20	10	20	50	100
V-1	51	**1.0000**	0.019	0.20	10	20	50	100
Cr	52	**0.9999**	0.008	0.50	10	20	50	100
Cr	53	**1.0000**	0.001	0.50	10	20	50	100
Fe	54	**0.9998**	0.001	20.00	1000	2000	5000	10000
Fe	57	**0.9999**	0.000	20.00	1000	2000	5000	10000
Mn	55	**1.0000**	0.024	0.50	10	20	50	100
Ge-1	72							
Co	59	**1.0000**	0.072	0.20	10	20	50	100
Ni	60	**1.0000**	0.021	0.50	10	20	50	100
Ni	62	**1.0000**	0.003	0.50	10	20	50	100
Cu	63	**0.9999**	0.057	0.50	10	20	50	100
Cu	65	**0.9999**	0.028	0.50	10	20	50	100
Zn	66	**0.9999**	0.007	4.00	10	20	50	100
Zn	67	**0.9998**	0.001	4.00	10	20	50	100
Zn	68	**0.9999**	0.005	4.00	10	20	50	100
As	75	**1.0000**	0.004	0.20	10	20	50	100
Se-1	78	**1.0000**	0.000	0.50	10	20	50	100
Y	89							
Kr	83							
In-1	115							
Mo	98	**1.0000**	0.051	0.20	10	20	50	100
Cd	111	**1.0000**	0.015	0.10	10	20	50	100
Cd	114	**1.0000**	0.039	0.10	10	20	50	100
In	115							
Ag	107	**0.9993**	0.018	0.20	10	20	50	100
Sb	121	**0.9999**	0.014	0.20	10	20	50	100
Sb	123	**1.0000**	0.011	0.20	10	20	50	100
Ba	135	**0.9999**	0.004	0.50	10	20	50	100
Ba	137	**1.0000**	0.007	0.50	10	20	50	100
Tb	159							
Tl	205	**0.9998**	0.030	0.20	10	20	50	100
Pb	208	**1.0000**	0.037	0.10	10	20	50	100
Bi	209							
Th	232	**0.9990**	0.034	0.20	10	20	50	100
U	238	**1.0000**	0.041	0.20	10	20	50	100

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICV
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, February 25, 2016 12:58:39
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022516.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
Li	**6**		ug/L			697067	719501	3	Standard
Be	**9**	**48.522**	ug/L	2.497	5	2	73460	2	Standard
C	**13**		ug/L			39099	41657	4	Standard
Cl	**37**		mg/L			2965482	3015925	1	Standard
Sc	**45**		ug/L			882076	951073	2	Standard
Al	**27**	**5216.600**	ug/L	165.546	3	529	80743182	1	Standard
V	**51**	**52.566**	mg/L	0.545	1	3896	957604	1	Standard
V-1	**51**	**52.487**	mg/L	0.821	1	397	961296	0	Standard
Cr	**52**	**54.161**	ug/L	0.390	0	10944	429393	2	Standard
Cr	**53**	**53.569**	ug/L	1.881	3	117	49702	1	Standard
Fe	**54**	**5015.090**	mg/L	58.827	1	44949	6004498	1	Standard
Fe	**57**	**5106.540**	mg/L	84.460	1	9916	2432918	0	Standard
Mn	**55**	**51.216**	ug/L	1.456	2	280	1185841	2	Standard
Ge-1	**72**		ug/L			34048	34575	2	KED
Co	**59**	**53.206**	ug/L	0.488	0	1	132788	3	KED
Ni	**60**	**52.743**	ug/L	2.707	5	2	38160	2	KED
Ni	**62**	**52.831**	ug/L	2.706	5	0	6084	2	KED
Cu	**63**	**52.818**	ug/L	3.090	5	8	103613	3	KED
Cu	**65**	**53.593**	ug/L	1.235	2	5	51409	0	KED
Zn	**66**	**50.874**	ug/L	2.142	4	6	11813	3	KED
Zn	**67**	**52.307**	ug/L	2.414	4	1	1976	3	KED
Zn	**68**	**52.206**	ug/L	4.066	7	4	9263	5	KED
As	**75**	**52.049**	ug/L	1.826	3	2	7187	0	KED
Se-1	**78**	**80.512**	ug/L	2.579	3	3	1220	1	KED
Y	**89**		ug/L			578761	597122	3	Standard
Kr	**83**		ug/L			63	69	31	Standard
In-1	**115**		ug/L			12060	11882	1	KED
Mo	**98**	**51.086**	ug/L	1.862	3	3	30678	1	KED
Cd	**111**	**50.617**	ug/L	0.969	1	0	9008	0	KED
Cd	**114**	**51.139**	ug/L	1.412	2	1	23392	1	KED
In	**115**		ug/L			849100	864362	1	Standard
Ag	**107**	**53.156**	ug/L	0.874	1	22	807164	1	Standard
Sb	**121**	**51.588**	ug/L	0.621	1	19	619322	0	Standard
Sb	**123**	**50.718**	ug/L	0.482	0	16	469318	1	Standard
Ba	**135**	**51.670**	ug/L	1.136	2	8	176466	0	Standard
Ba	**137**	**51.340**	ug/L	0.949	1	16	308464	1	Standard
Tb	**159**		ug/L			1018646	1057166	2	Standard
Tl	**205**	**48.276**	ug/L	2.616	5	24	1518035	3	Standard
Pb	**208**	**51.751**	ug/L	1.940	3	122	2028389	3	Standard
Bi	**209**		ug/L			2160030	2114221	6	Standard
Th	**232**	**47.296**	ug/L	2.067	4	43	1682338	4	Standard
U	**238**	**49.123**	ug/L	2.519	5	23	2114335	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICB
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, February 25, 2016 13:06:28
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022516.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
Li	**6**		ug/L			697067	730357	2	Standard
Be	**9**	**0.002**	ug/L	0.004	156	2	6	91	Standard
C	**13**		ug/L			39099	39301	0	Standard
Cl	**37**		mg/L			2965482	2845241	2	Standard
Sc	**45**		ug/L			882076	934495	1	Standard
Al	**27**	**0.004**	ug/L	0.006	159	529	618	14	Standard
V	**51**	**-0.015**	mg/L	0.005	32	3896	3859	2	Standard
V-1	**51**	**-0.006**	mg/L	0.001	10	397	318	3	Standard
Cr	**52**	**-0.087**	ug/L	0.029	33	10944	10933	1	Standard
Cr	**53**	**-0.024**	ug/L	0.004	17	117	103	2	Standard
Fe	**54**	**-1.967**	mg/L	0.418	21	44949	45328	2	Standard
Fe	**57**	**0.536**	mg/L	0.623	116	9916	10752	1	Standard
Mn	**55**	**0.000**	ug/L	0.001	436	280	301	6	Standard
Ge-1	**72**		ug/L			34048	34424	0	KED
Co	**59**	**0.001**	ug/L	0.002	151	1	4	107	KED
Ni	**60**	**0.001**	ug/L	0.005	659	2	3	124	KED
Ni	**62**	**0.000**	ug/L	0.000		0	0		KED
Cu	**63**	**0.003**	ug/L	0.001	37	8	13	14	KED
Cu	**65**	**0.004**	ug/L	0.001	30	5	8	12	KED
Zn	**66**	**0.011**	ug/L	0.005	42	6	8	12	KED
Zn	**67**	**-0.051**	ug/L	0.000	0	1	0		KED
Zn	**68**	**0.007**	ug/L	0.022	311	4	5	66	KED
As	**75**	**-0.003**	ug/L	0.005	209	2	2	35	KED
Se-1	**78**	**0.197**	ug/L	0.082	41	3	6	18	KED
Y	**89**		ug/L			578761	592526	0	Standard
Kr	**83**		ug/L			63	55	3	Standard
In-1	**115**		ug/L			12060	11978	1	KED
Mo	**98**	**0.042**	ug/L	0.006	14	3	28	11	KED
Cd	**111**	**0.000**	ug/L	0.003	5884	0	0	86	KED
Cd	**114**	**-0.001**	ug/L	0.002	177	1	0	188	KED
In	**115**		ug/L			849100	844623	1	Standard
Ag	**107**	**0.001**	ug/L	0.001	108	22	40	46	Standard
Sb	**121**	**0.031**	ug/L	0.003	8	19	379	7	Standard
Sb	**123**	**0.034**	ug/L	0.002	5	16	323	5	Standard
Ba	**135**	**0.002**	ug/L	0.003	129	8	15	56	Standard
Ba	**137**	**0.002**	ug/L	0.002	92	16	28	40	Standard
Tb	**159**		ug/L			1018646	1040575	2	Standard
Tl	**205**	**0.004**	ug/L	0.000	9	24	144	5	Standard
Pb	**208**	**0.001**	ug/L	0.000	41	122	163	12	Standard
Bi	**209**		ug/L			2160030	2302461	5	Standard
Th	**232**	**0.090**	ug/L	0.001	1	43	3188	4	Standard
U	**238**	**0.001**	ug/L	0.000	14	23	57	6	Standard

AUX9 : 80446

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, February 25, 2016 13:11:33
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022516.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
[>	**Li**	**6**		ug/L			697067	716980	0	Standard
[	**Be**	**9**	**46.934**	ug/L	1.178	2	2	70877	2	Standard
	C	**13**		ug/L			39099	38639	2	Standard
	Cl	**37**		mg/L			2965482	2948504	1	Standard
[>	**Sc**	**45**		ug/L			882076	923907	2	Standard
[	**Al**	**27**	**5186.320**	ug/L	113.514	2	529	78006383	2	Standard
[	**V**	**51**	**50.951**	mg/L	2.221	4	3896	901378	2	Standard
[	**V-1**	**51**	**50.880**	mg/L	1.924	3	397	904996	1	Standard
[	**Cr**	**52**	**50.749**	ug/L	2.140	4	10944	391333	2	Standard
[	**Cr**	**53**	**50.313**	ug/L	2.054	4	117	45377	4	Standard
[	**Fe**	**54**	**4962.690**	mg/L	65.550	1	44949	5773051	2	Standard
[	**Fe**	**57**	**5155.047**	mg/L	129.541	2	9916	2385568	1	Standard
[	**Mn**	**55**	**49.926**	ug/L	1.461	2	280	1123066	2	Standard
[>	**Ge-1**	**72**		ug/L			34048	34307	1	KED
[	**Co**	**59**	**50.056**	ug/L	0.310	0	1	123942	1	KED
[	**Ni**	**60**	**50.541**	ug/L	2.189	4	2	36298	2	KED
[	**Ni**	**62**	**51.050**	ug/L	1.917	3	0	5838	3	KED
[	**Cu**	**63**	**51.030**	ug/L	1.106	2	8	99444	3	KED
[	**Cu**	**65**	**51.869**	ug/L	1.853	3	5	49372	2	KED
[	**Zn**	**66**	**51.767**	ug/L	1.133	2	6	11930	1	KED
[	**Zn**	**67**	**54.097**	ug/L	2.648	4	1	2028	4	KED
[	**Zn**	**68**	**50.845**	ug/L	1.008	1	4	8964	1	KED
[	**As**	**75**	**50.072**	ug/L	0.863	1	2	6863	0	KED
[	**Se-1**	**78**	**49.101**	ug/L	1.873	3	3	740	2	KED
	Y	**89**		ug/L			578761	593350	1	Standard
	Kr	**83**		ug/L			63	72	14	Standard
[>	**In-1**	**115**		ug/L			12060	11939	2	KED
[	**Mo**	**98**	**50.149**	ug/L	2.572	5	3	30249	3	KED
[	**Cd**	**111**	**49.564**	ug/L	2.010	4	0	8860	2	KED
[	**Cd**	**114**	**50.107**	ug/L	1.753	3	1	23029	2	KED
[>	**In**	**115**		ug/L			849100	854275	0	Standard
[	**Ag**	**107**	**51.639**	ug/L	1.617	3	22	775061	3	Standard
[	**Sb**	**121**	**50.462**	ug/L	0.187	0	19	598808	0	Standard
[	**Sb**	**123**	**50.064**	ug/L	0.458	0	16	457865	0	Standard
[	**Ba**	**135**	**50.560**	ug/L	0.340	0	8	170707	1	Standard
[	**Ba**	**137**	**49.819**	ug/L	0.415	0	16	295859	0	Standard
[>	**Tb**	**159**		ug/L			1018646	1028105	2	Standard
[	**Tl**	**205**	**48.057**	ug/L	0.755	1	24	1470372	2	Standard
[	**Pb**	**208**	**50.663**	ug/L	1.214	2	122	1931390	3	Standard
[	**Bi**	**209**		ug/L			2160030	2073882	8	Standard
[	**Th**	**232**	**46.737**	ug/L	0.496	1	43	1617258	3	Standard
[	**U**	**238**	**47.705**	ug/L	1.346	2	23	1997871	4	Standard

AVX9 · 66447

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, February 25, 2016 13:19:02
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022516.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
⌈>	**Li**	**6**		ug/L			697067	719695	4	Standard
⌊	**Be**	**9**	**0.002**	ug/L	0.003	184	2	5	86	Standard
	C	**13**		ug/L			39099	39540	5	Standard
	Cl	**37**		mg/L			2965482	2898826	3	Standard
⌈>	**Sc**	**45**		ug/L			882076	909887	3	Standard
⌈	**Al**	**27**	**0.009**	ug/L	0.014	142	529	688	31	Standard
⌈	**V**	**51**	**-0.013**	mg/L	0.011	81	3896	3789	4	Standard
⌈	**V-1**	**51**	**-0.006**	mg/L	0.002	40	397	309	16	Standard
⌈	**Cr**	**52**	**-0.068**	ug/L	0.082	120	10944	10774	3	Standard
⌈	**Cr**	**53**	**-0.019**	ug/L	0.009	45	117	104	5	Standard
⌈	**Fe**	**54**	**-1.179**	mg/L	0.494	41	44949	45014	2	Standard
⌈	**Fe**	**57**	**0.972**	mg/L	0.373	38	9916	10666	2	Standard
⌊	**Mn**	**55**	**0.001**	ug/L	0.000	27	280	308	2	Standard
⌈>	**Ge-1**	**72**		ug/L			34048	34255	1	KED
⌈	**Co**	**59**	**0.001**	ug/L	0.002	149	1	4	107	KED
⌈	**Ni**	**60**	**0.003**	ug/L	0.007	257	2	4	107	KED
⌈	**Ni**	**62**	**0.005**	ug/L	0.009	173	0	0	173	KED
⌈	**Cu**	**63**	**0.006**	ug/L	0.005	73	8	20	45	KED
⌈	**Cu**	**65**	**0.006**	ug/L	0.008	138	5	10	73	KED
⌈	**Zn**	**66**	**0.033**	ug/L	0.045	138	6	13	75	KED
⌈	**Zn**	**67**	**-0.034**	ug/L	0.029	84	1	0	173	KED
⌈	**Zn**	**68**	**0.036**	ug/L	0.016	43	4	10	26	KED
⌈	**As**	**75**	**0.008**	ug/L	0.011	135	2	3	43	KED
⌊	**Se-1**	**78**	**0.072**	ug/L	0.079	110	3	4	26	KED
	Y	**89**		ug/L			578761	583024	3	Standard
	Kr	**83**		ug/L			63	39	19	Standard
⌈>	**In-1**	**115**		ug/L			12060	12160	3	KED
⌈	**Mo**	**98**	**0.046**	ug/L	0.007	14	3	31	12	KED
⌈	**Cd**	**111**	**0.000**	ug/L	0.003	6661	0	0	86	KED
⌊	**Cd**	**114**	**-0.000**	ug/L	0.002	3726	1	1	86	KED
⌈>	**In**	**115**		ug/L			849100	837629	3	Standard
⌈	**Ag**	**107**	**0.000**	ug/L	0.001	138	22	27	30	Standard
⌈	**Sb**	**121**	**0.064**	ug/L	0.001	0	19	761	2	Standard
⌈	**Sb**	**123**	**0.062**	ug/L	0.004	6	16	575	4	Standard
⌈	**Ba**	**135**	**0.001**	ug/L	0.003	286	8	12	77	Standard
⌊	**Ba**	**137**	**0.001**	ug/L	0.001	86	16	24	26	Standard
⌈>	**Tb**	**159**		ug/L			1018646	1014400	2	Standard
⌈	**Tl**	**205**	**0.006**	ug/L	0.000	5	24	197	2	Standard
⌈	**Pb**	**208**	**0.002**	ug/L	0.000	29	122	179	11	Standard
⌈	**Bi**	**209**		ug/L			2160030	2255766	1	Standard
⌈	**Th**	**232**	**0.118**	ug/L	0.004	3	43	4067	4	Standard
⌊	**U**	**238**	**0.001**	ug/L	0.000	11	23	69	9	Standard

AVX9 : 66448

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LOW CHECK
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, February 25, 2016 13:24:07
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022516.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
Li	6		ug/L			697067	702625	1	Standard
Be	9	0.206	ug/L	0.025	11	2	307	12	Standard
C	13		ug/L			39099	39966	0	Standard
Cl	37		mg/L			2965482	2846033	3	Standard
Sc	45		ug/L			882076	923276	0	Standard
Al	27	20.706	ug/L	0.185	0	529	311796	0	Standard
V	51	0.195	mg/L	0.013	6	3896	7503	2	Standard
V-1	51	0.203	mg/L	0.009	4	397	4031	5	Standard
Cr	52	0.470	ug/L	0.078	16	10944	14969	3	Standard
Cr	53	0.509	ug/L	0.057	11	117	581	9	Standard
Fe	54	18.010	mg/L	0.410	2	44949	67815	1	Standard
Fe	57	21.842	mg/L	0.703	3	9916	20440	2	Standard
Mn	55	0.512	ug/L	0.004	0	280	11801	1	Standard
Ge-1	72		ug/L			34048	34375	2	KED
Co	59	0.197	ug/L	0.008	3	1	491	5	KED
Ni	60	0.528	ug/L	0.026	4	2	382	3	KED
Ni	62	0.460	ug/L	0.001	0	0	52	2	KED
Cu	63	0.529	ug/L	0.023	4	8	1041	4	KED
Cu	65	0.548	ug/L	0.044	7	5	527	5	KED
Zn	66	4.234	ug/L	0.259	6	6	982	3	KED
Zn	67	3.444	ug/L	0.716	20	1	131	21	KED
Zn	68	4.094	ug/L	0.213	5	4	727	6	KED
As	75	0.210	ug/L	0.011	5	2	31	4	KED
Se-1	78	0.601	ug/L	0.113	18	3	12	12	KED
Y	89		ug/L			578761	587485	1	Standard
Kr	83		ug/L			63	65	1	Standard
In-1	115		ug/L			12060	11862	2	KED
Mo	98	0.223	ug/L	0.006	2	3	137	4	KED
Cd	111	0.102	ug/L	0.027	26	0	18	25	KED
Cd	114	0.102	ug/L	0.018	17	1	47	14	KED
In	115		ug/L			849100	847495	1	Standard
Ag	107	0.227	ug/L	0.004	1	22	3405	1	Standard
Sb	121	0.233	ug/L	0.011	4	19	2765	4	Standard
Sb	123	0.234	ug/L	0.005	2	16	2137	3	Standard
Ba	135	0.535	ug/L	0.026	4	8	1801	4	Standard
Ba	137	0.497	ug/L	0.009	1	16	2945	2	Standard
Tb	159		ug/L			1018646	1019887	2	Standard
Tl	205	0.208	ug/L	0.002	1	24	6330	3	Standard
Pb	208	0.107	ug/L	0.002	2	122	4169	0	Standard
Bi	209		ug/L			2160030	2243386	3	Standard
Th	232	0.182	ug/L	0.004	2	43	6276	4	Standard
U	238	0.203	ug/L	0.003	1	23	8450	3	Standard

AVX9 · 08445

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICSA
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, February 25, 2016 13:29:11
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022516.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
[>	**Li**	**6**		ug/L			697067	688514	5	Standard
[	**Be**	**9**	**0.009**	ug/L	0.003	31	2	15	25	Standard
	C	**13**		ug/L			39099	71890	4	Standard
	Cl	**37**		mg/L			2965482	8243319	1	Standard
[>	**Sc**	**45**		ug/L			882076	919053	0	Standard
[	**Al**	**27**	**21629.130**	ug/L	422.557	1	529	323675701	2	Standard
[	**V**	**51**	**0.644**	mg/L	0.007	1	3896	15340	1	Standard
[	**V-1**	**51**	**1.285**	mg/L	0.011	0	397	23155	0	Standard
[	**Cr**	**52**	**0.507**	ug/L	0.090	17	10944	15182	5	Standard
[	**Cr**	**53**	**4.574**	ug/L	0.045	0	117	4214	1	Standard
[	**Fe**	**54**	**20202.051**	mg/L	276.448	1	44949	23232883	0	Standard
[	**Fe**	**57**	**20407.950**	mg/L	738.440	3	9916	9365631	3	Standard
[	**Mn**	**55**	**0.112**	ug/L	0.004	3	280	2803	2	Standard
[>	**Ge-1**	**72**		ug/L			34048	33437	2	KED
[	**Co**	**59**	**0.005**	ug/L	0.002	39	1	13	37	KED
[	**Ni**	**60**	**0.046**	ug/L	0.006	12	2	34	13	KED
[	**Ni**	**62**	**0.091**	ug/L	0.027	29	0	10	28	KED
[	**Cu**	**63**	**0.129**	ug/L	0.003	2	8	253	3	KED
[	**Cu**	**65**	**0.129**	ug/L	0.009	6	5	124	4	KED
[	**Zn**	**66**	**0.379**	ug/L	0.052	13	6	91	15	KED
[	**Zn**	**67**	**0.210**	ug/L	0.057	27	1	9	20	KED
[	**Zn**	**68**	**0.251**	ug/L	0.039	15	4	47	16	KED
[	**As**	**75**	**0.012**	ug/L	0.007	57	2	3	24	KED
[	**Se-1**	**78**	**0.168**	ug/L	0.276	163	3	6	65	KED
	Y	**89**		ug/L			578761	574873	3	Standard
	Kr	**83**		ug/L			63	118	12	Standard
[>	**In-1**	**115**		ug/L			12060	11826	0	KED
[	**Mo**	**98**	**405.717**	ug/L	1.212	0	3	242564	0	KED
[	**Cd**	**111**	**0.095**	ug/L	0.027	28	0	17	26	KED
[	**Cd**	**114**	**0.034**	ug/L	0.019	56	1	16	52	KED
[>	**In**	**115**		ug/L			849100	814586	1	Standard
[	**Ag**	**107**	**0.056**	ug/L	0.003	5	22	820	6	Standard
[	**Sb**	**121**	**0.024**	ug/L	0.002	7	19	287	6	Standard
[	**Sb**	**123**	**0.024**	ug/L	0.005	21	16	225	20	Standard
[	**Ba**	**135**	**0.042**	ug/L	0.005	12	8	145	13	Standard
[	**Ba**	**137**	**0.031**	ug/L	0.003	8	16	192	6	Standard
[>	**Tb**	**159**		ug/L			1018646	1003124	0	Standard
[	**Tl**	**205**	**0.007**	ug/L	0.001	8	24	247	8	Standard
[	**Pb**	**208**	**0.056**	ug/L	0.001	1	122	2201	0	Standard
[	**Bi**	**209**		ug/L			2160030	1880880	1	Standard
[	**Th**	**232**	**0.076**	ug/L	0.004	5	43	2613	5	Standard
[	**U**	**238**	**0.000**	ug/L	0.000	75	23	37	28	Standard

AUX9 · 80458

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICSAB
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, February 25, 2016 13:34:16
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022516.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
[>	Li	6		ug/L			697067	666495	3	Standard
[	Be	9	0.010	ug/L	0.006	55	2	16	46	Standard
	C	13		ug/L			39099	73850	3	Standard
	Cl	37		mg/L			2965482	8074430	2	Standard
[>	Sc	45		ug/L			882076	932453	1	Standard
[	Al	27	21768.139	ug/L	82.210	0	529	330465220	1	Standard
[	V	51	0.506	mg/L	0.124	24	3896	13132	18	Standard
[	V-1	51	1.286	mg/L	0.058	4	397	23490	2	Standard
[	Cr	52	21.253	ug/L	0.433	2	10944	172217	2	Standard
[	Cr	53	24.961	ug/L	1.192	4	117	22773	3	Standard
[	Fe	54	20142.776	mg/L	357.333	1	44949	23500128	0	Standard
[	Fe	57	20481.732	mg/L	696.265	3	9916	9534322	1	Standard
[	Mn	55	20.230	ug/L	0.906	4	280	459326	3	Standard
[>	Ge-1	72		ug/L			34048	33050	1	KED
[	Co	59	20.731	ug/L	0.810	3	1	49432	2	KED
[	Ni	60	21.130	ug/L	0.106	0	2	14628	2	KED
[	Ni	62	20.525	ug/L	0.927	4	0	2261	4	KED
[	Cu	63	20.529	ug/L	1.017	4	8	38518	3	KED
[	Cu	65	20.397	ug/L	0.918	4	5	18704	2	KED
[	Zn	66	19.740	ug/L	0.224	1	6	4386	1	KED
[	Zn	67	18.796	ug/L	1.207	6	1	680	7	KED
[	Zn	68	18.453	ug/L	0.624	3	4	3136	1	KED
[	As	75	20.066	ug/L	0.773	3	2	2650	3	KED
[	Se-1	78	0.172	ug/L	0.012	6	3	6	4	KED
	Y	89		ug/L			578761	592330	0	Standard
	Kr	83		ug/L			63	92	14	Standard
[>	In-1	115		ug/L			12060	11699	3	KED
[	Mo	98	402.638	ug/L	20.342	5	3	237861	1	KED
[	Cd	111	19.389	ug/L	0.690	3	0	3395	1	KED
[	Cd	114	19.646	ug/L	1.056	5	1	8840	1	KED
[>	In	115		ug/L			849100	817418	1	Standard
[	Ag	107	21.880	ug/L	0.167	0	22	314266	2	Standard
[	Sb	121	0.019	ug/L	0.002	10	19	233	9	Standard
[	Sb	123	0.020	ug/L	0.003	13	16	189	11	Standard
[	Ba	135	0.042	ug/L	0.002	3	8	143	3	Standard
[	Ba	137	0.036	ug/L	0.002	6	16	219	5	Standard
[>	Tb	159		ug/L			1018646	978289	1	Standard
[	Tl	205	0.004	ug/L	0.001	33	24	149	26	Standard
[	Pb	208	0.058	ug/L	0.001	2	122	2224	2	Standard
[	Bi	209		ug/L			2160030	1873669	4	Standard
[	Th	232	0.038	ug/L	0.002	4	43	1290	3	Standard
[	U	238	0.001	ug/L	0.001	102	23	61	63	Standard

AVX9 . 60451

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LR200
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, February 25, 2016 13:42:05
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022516.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
⌈>	**Li**	**6**		ug/L			697067	650862	3	Standard
⌊	**Be**	**9**	**207.880**	ug/L	8.922	4	2	284716	1	Standard
	C	**13**		ug/L			39099	42088	1	Standard
	Cl	**37**		mg/L			2965482	3005984	2	Standard
⌈>	**Sc**	**45**		ug/L			882076	892438	1	Standard
|	**Al**	**27**	**21644.375**	ug/L	432.643	1	529	314441547	0	Standard
|	**V**	**51**	**207.204**	mg/L	5.347	2	3896	3530059	1	Standard
|	**V-1**	**51**	**208.180**	mg/L	4.549	2	397	3576643	0	Standard
|	**Cr**	**52**	**191.865**	ug/L	3.833	1	10944	1398922	1	Standard
|	**Cr**	**53**	**198.941**	ug/L	2.062	1	117	172975	2	Standard
|	**Fe**	**54**	**19860.653**	mg/L	359.443	1	44949	22180700	2	Standard
|	**Fe**	**57**	**20063.015**	mg/L	248.407	1	9916	8941007	0	Standard
⌊	**Mn**	**55**	**201.847**	ug/L	2.583	1	280	4385351	0	Standard
⌈>	**Ge-1**	**72**		ug/L			34048	31474	2	KED
|	**Co**	**59**	**201.497**	ug/L	7.400	3	1	457439	0	KED
|	**Ni**	**60**	**199.270**	ug/L	2.296	1	2	131328	1	KED
|	**Ni**	**62**	**196.928**	ug/L	4.092	2	0	20657	1	KED
|	**Cu**	**63**	**197.824**	ug/L	7.053	3	8	353405	1	KED
|	**Cu**	**65**	**197.841**	ug/L	3.602	1	5	172759	1	KED
|	**Zn**	**66**	**197.660**	ug/L	8.976	4	6	41745	2	KED
|	**Zn**	**67**	**197.395**	ug/L	10.074	5	1	6782	2	KED
|	**Zn**	**68**	**193.924**	ug/L	3.514	1	4	31351	1	KED
|	**As**	**75**	**201.970**	ug/L	4.565	2	2	25386	0	KED
⌊	**Se-1**	**78**	**194.514**	ug/L	6.520	3	3	2678	0	KED
	Y	**89**		ug/L			578761	577113	1	Standard
	Kr	**83**		ug/L			63	104	5	Standard
⌈>	**In-1**	**115**		ug/L			12060	11110	1	KED
|	**Mo**	**98**	**209.735**	ug/L	6.301	3	3	117773	1	KED
|	**Cd**	**111**	**200.453**	ug/L	5.000	2	0	33351	0	KED
⌊	**Cd**	**114**	**199.501**	ug/L	1.694	0	1	85350	2	KED
⌈>	**In**	**115**		ug/L			849100	797599	2	Standard
|	**Ag**	**107**	**210.636**	ug/L	2.722	1	22	2951741	2	Standard
|	**Sb**	**121**	**205.993**	ug/L	6.180	3	19	2281171	0	Standard
|	**Sb**	**123**	**197.119**	ug/L	3.891	1	16	1682754	1	Standard
|	**Ba**	**135**	**199.023**	ug/L	7.325	3	8	627000	1	Standard
⌊	**Ba**	**137**	**196.927**	ug/L	3.384	1	16	1091567	0	Standard
⌈>	**Tb**	**159**		ug/L			1018646	972527	1	Standard
|	**Tl**	**205**	**199.614**	ug/L	4.016	2	24	5777693	2	Standard
|	**Pb**	**208**	**198.316**	ug/L	5.896	2	122	7151873	3	Standard
|	**Bi**	**209**		ug/L			2160030	1848333	3	Standard
|	**Th**	**232**	**218.578**	ug/L	4.839	2	43	7153468	2	Standard
⌊	**U**	**238**	**205.080**	ug/L	6.837	3	23	8122269	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LR300
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, February 25, 2016 13:47:10
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022516.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
>	Li	6		ug/L			697067	655066	5	Standard
	Be	9	292.010	ug/L	16.375	5	2	402107	0	Standard
	C	13		ug/L			39099	41442	4	Standard
	Cl	37		mg/L			2965482	3010962	3	Standard
>	Sc	45		ug/L			882076	850058	1	Standard
	Al	27	31978.160	ug/L	489.742	1	529	442514614	0	Standard
	V	51	310.994	mg/L	3.116	1	3896	5045648	1	Standard
	V-1	51	310.054	mg/L	1.518	0	397	5074561	1	Standard
	Cr	52	315.954	ug/L	3.422	1	10944	2187528	0	Standard
	Cr	53	309.713	ug/L	9.907	3	117	256437	3	Standard
	Fe	54	30154.972	mg/L	1028.817	3	44949	32055373	3	Standard
	Fe	57	31053.245	mg/L	250.118	0	9916	13178243	2	Standard
	Mn	55	304.978	ug/L	9.844	3	280	6309675	1	Standard
>	Ge-1	72		ug/L			34048	30648	2	KED
	Co	59	302.817	ug/L	11.728	3	1	669439	1	KED
	Ni	60	296.946	ug/L	16.232	5	2	190408	2	KED
	Ni	62	296.401	ug/L	8.270	2	0	30271	0	KED
	Cu	63	288.353	ug/L	8.740	3	8	501645	0	KED
	Cu	65	288.569	ug/L	8.008	2	5	245329	0	KED
	Zn	66	288.212	ug/L	6.433	2	6	59294	0	KED
	Zn	67	282.759	ug/L	10.787	3	1	9462	0	KED
	Zn	68	282.316	ug/L	5.364	1	4	44439	0	KED
	As	75	301.119	ug/L	9.895	3	2	36847	0	KED
	Se-1	78	292.341	ug/L	6.210	2	3	3919	0	KED
	Y	89		ug/L			578761	543889	0	Standard
	Kr	83		ug/L			63	132	17	Standard
>	In-1	115		ug/L			12060	10973	2	KED
	Mo	98	312.143	ug/L	5.930	1	3	173101	0	KED
	Cd	111	291.739	ug/L	8.666	2	0	47927	0	KED
	Cd	114	294.342	ug/L	8.617	2	1	124306	1	KED
>	In	115		ug/L			849100	777018	0	Standard
	Ag	107	308.632	ug/L	4.911	1	22	4213246	1	Standard
	Sb	121	306.201	ug/L	2.304	0	19	3304917	1	Standard
	Sb	123	303.790	ug/L	1.611	0	16	2527145	1	Standard
	Ba	135	295.457	ug/L	5.682	1	8	907330	2	Standard
	Ba	137	293.070	ug/L	4.132	1	16	1583052	1	Standard
>	Tb	159		ug/L			1018646	953109	1	Standard
	Tl	205	287.464	ug/L	6.096	2	24	8155673	3	Standard
	Pb	208	296.096	ug/L	9.150	3	122	10466342	4	Standard
	Bi	209		ug/L			2160030	1711749	4	Standard
	Th	232	329.207	ug/L	6.439	1	43	10560362	2	Standard
	U	238	298.174	ug/L	6.229	2	23	11573807	3	Standard

AVXO 08453

ICP-MS Quantitative Analysis - Summary Report

Sample ID: B1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, February 25, 2016 13:54:59
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022516.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
⌈>	**Li**	**6**		ug/L			697067	675565	3	Standard
⌊	**Be**	**9**	**0.008**	ug/L	0.004	50	2	13	41	Standard
	C	**13**		ug/L			39099	43099	3	Standard
	Cl	**37**		mg/L			2965482	2907566	1	Standard
⌈>	**Sc**	**45**		ug/L			882076	901684	2	Standard
|	**Al**	**27**	**0.433**	ug/L	0.053	12	529	6884	9	Standard
|	**V**	**51**	**-0.003**	mg/L	0.008	289	3896	3937	3	Standard
|	**V-1**	**51**	**0.004**	mg/L	0.002	44	397	473	5	Standard
|	**Cr**	**52**	**-0.009**	ug/L	0.051	594	10944	11124	3	Standard
|	**Cr**	**53**	**0.033**	ug/L	0.010	30	117	149	6	Standard
|	**Fe**	**54**	**-0.097**	mg/L	1.469	1514	44949	45823	2	Standard
|	**Fe**	**57**	**1.454**	mg/L	0.585	40	9916	10787	0	Standard
⌊	**Mn**	**55**	**0.011**	ug/L	0.001	13	280	519	4	Standard
⌈>	**Ge-1**	**72**		ug/L			34048	33649	1	KED
|	**Co**	**59**	**0.006**	ug/L	0.007	109	1	15	100	KED
|	**Ni**	**60**	**0.031**	ug/L	0.011	36	2	24	31	KED
|	**Ni**	**62**	**0.051**	ug/L	0.017	33	0	5	33	KED
|	**Cu**	**63**	**0.033**	ug/L	0.009	27	8	71	24	KED
|	**Cu**	**65**	**0.027**	ug/L	0.012	43	5	29	36	KED
|	**Zn**	**66**	**0.371**	ug/L	0.035	9	6	90	9	KED
|	**Zn**	**67**	**0.277**	ug/L	0.057	20	1	12	18	KED
|	**Zn**	**68**	**0.401**	ug/L	0.080	19	4	73	18	KED
|	**As**	**75**	**0.019**	ug/L	0.015	76	2	4	39	KED
⌊	**Se-1**	**78**	**0.197**	ug/L	0.154	77	3	6	34	KED
	Y	**89**		ug/L			578761	584697	3	Standard
	Kr	**83**		ug/L			63	52	24	Standard
⌈>	**In-1**	**115**		ug/L			12060	11774	3	KED
|	**Mo**	**98**	**0.098**	ug/L	0.007	7	3	61	9	KED
|	**Cd**	**111**	**0.002**	ug/L	0.006	287	0	0	100	KED
⌊	**Cd**	**114**	**-0.000**	ug/L	0.002	2552	1	1	86	KED
⌈>	**In**	**115**		ug/L			849100	813458	1	Standard
|	**Ag**	**107**	**0.004**	ug/L	0.001	36	22	78	27	Standard
|	**Sb**	**121**	**0.323**	ug/L	0.012	3	19	3673	5	Standard
|	**Sb**	**123**	**0.312**	ug/L	0.003	0	16	2729	0	Standard
|	**Ba**	**135**	**0.009**	ug/L	0.003	38	8	37	30	Standard
⌊	**Ba**	**137**	**0.010**	ug/L	0.001	11	16	73	10	Standard
⌈>	**Tb**	**159**		ug/L			1018646	990299	0	Standard
|	**Tl**	**205**	**0.072**	ug/L	0.007	9	24	2142	8	Standard
|	**Pb**	**208**	**0.018**	ug/L	0.001	2	122	775	1	Standard
|	**Bi**	**209**		ug/L			2160030	2259564	0	Standard
|	**Th**	**232**	**0.187**	ug/L	0.002	1	43	6286	1	Standard
⌊	**U**	**238**	**0.003**	ug/L	0.000	6	23	148	4	Standard

AVX9 : 60454

ICP-MS Quantitative Analysis - Summary Report

Sample ID: B2
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, February 25, 2016 14:01:59
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022516.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
⌈>	**Li**	**6**		ug/L			697067	672585	4	Standard
⌊	**Be**	**9**	**0.005**	ug/L	0.001	22	2	8	12	Standard
	C	**13**		ug/L			39099	42044	5	Standard
	Cl	**37**		mg/L			2965482	2795193	1	Standard
⌈>	**Sc**	**45**		ug/L			882076	909708	1	Standard
|	**Al**	**27**	**0.372**	ug/L	0.007	1	529	6048	0	Standard
|	**V**	**51**	**-0.003**	mg/L	0.003	122	3896	3972	0	Standard
|	**V-1**	**51**	**-0.001**	mg/L	0.001	134	397	390	5	Standard
|	**Cr**	**52**	**0.010**	ug/L	0.016	170	10944	11356	0	Standard
|	**Cr**	**53**	**0.018**	ug/L	0.004	22	117	137	1	Standard
|	**Fe**	**54**	**-0.881**	mg/L	1.136	129	44949	45361	3	Standard
|	**Fe**	**57**	**1.272**	mg/L	1.201	94	9916	10800	4	Standard
⌊	**Mn**	**55**	**0.011**	ug/L	0.000	1	280	523	0	Standard
⌈>	**Ge-1**	**72**		ug/L			34048	33120	2	KED
|	**Co**	**59**	**0.002**	ug/L	0.001	21	1	6	15	KED
|	**Ni**	**60**	**0.024**	ug/L	0.005	21	2	19	17	KED
|	**Ni**	**62**	**0.012**	ug/L	0.010	86	0	1	86	KED
|	**Cu**	**63**	**0.019**	ug/L	0.005	27	8	43	24	KED
|	**Cu**	**65**	**0.010**	ug/L	0.012	119	5	13	77	KED
|	**Zn**	**66**	**0.427**	ug/L	0.066	15	6	100	13	KED
|	**Zn**	**67**	**0.283**	ug/L	0.035	12	1	12	9	KED
|	**Zn**	**68**	**0.367**	ug/L	0.021	5	4	66	2	KED
|	**As**	**75**	**-0.001**	ug/L	0.005	673	2	2	32	KED
⌊	**Se-1**	**78**	**0.041**	ug/L	0.074	181	3	4	24	KED
	Y	**89**		ug/L			578761	587351	2	Standard
	Kr	**83**		ug/L			63	55	3	Standard
⌈>	**In-1**	**115**		ug/L			12060	11771	4	KED
|	**Mo**	**98**	**0.052**	ug/L	0.012	23	3	34	20	KED
|	**Cd**	**111**	**0.000**	ug/L	0.006	3260	0	0	173	KED
⌊	**Cd**	**114**	**0.002**	ug/L	0.004	278	1	1	102	KED
⌈>	**In**	**115**		ug/L			849100	834198	1	Standard
|	**Ag**	**107**	**0.001**	ug/L	0.000	30	22	36	13	Standard
|	**Sb**	**121**	**0.097**	ug/L	0.006	5	19	1144	4	Standard
|	**Sb**	**123**	**0.089**	ug/L	0.003	3	16	809	4	Standard
|	**Ba**	**135**	**0.005**	ug/L	0.002	40	8	26	25	Standard
⌊	**Ba**	**137**	**0.007**	ug/L	0.001	14	16	53	8	Standard
⌈>	**Tb**	**159**		ug/L			1018646	986176	2	Standard
|	**Tl**	**205**	**0.024**	ug/L	0.002	7	24	717	8	Standard
|	**Pb**	**208**	**0.012**	ug/L	0.000	3	122	560	5	Standard
|	**Bi**	**209**		ug/L			2160030	2180950	7	Standard
|	**Th**	**232**	**0.051**	ug/L	0.001	1	43	1739	3	Standard
⌊	**U**	**238**	**0.001**	ug/L	0.000	31	23	53	19	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV2
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, February 25, 2016 14:08:58
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022516.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
[>	**Li**	**6**		ug/L			697067	733562	3	Standard
[	**Be**	**9**	**48.945**	ug/L	1.163	2	2	75595	1	Standard
	C	**13**		ug/L			39099	41203	5	Standard
	Cl	**37**		mg/L			2965482	3023001	2	Standard
[>	**Sc**	**45**		ug/L			882076	926038	1	Standard
[	**Al**	**27**	**5199.296**	ug/L	162.796	3	529	78373708	2	Standard
[	**V**	**51**	**49.492**	mg/L	0.703	1	3896	878133	0	Standard
[	**V-1**	**51**	**49.904**	mg/L	0.852	1	397	890008	0	Standard
[	**Cr**	**52**	**49.188**	ug/L	1.877	3	10944	380708	3	Standard
[	**Cr**	**53**	**51.814**	ug/L	2.185	4	117	46817	2	Standard
[	**Fe**	**54**	**5095.956**	mg/L	156.265	3	44949	5939157	1	Standard
[	**Fe**	**57**	**5120.321**	mg/L	95.862	1	9916	2375609	1	Standard
[	**Mn**	**55**	**49.986**	ug/L	1.415	2	280	1126930	1	Standard
[>	**Ge-1**	**72**		ug/L			34048	33754	4	KED
[	**Co**	**59**	**49.534**	ug/L	2.529	5	1	120504	1	KED
[	**Ni**	**60**	**49.842**	ug/L	2.074	4	2	35193	0	KED
[	**Ni**	**62**	**49.521**	ug/L	1.592	3	0	5568	1	KED
[	**Cu**	**63**	**51.204**	ug/L	2.453	4	8	98038	1	KED
[	**Cu**	**65**	**50.881**	ug/L	2.383	4	5	47612	2	KED
[	**Zn**	**66**	**51.396**	ug/L	2.790	5	6	11638	2	KED
[	**Zn**	**67**	**50.854**	ug/L	3.231	6	1	1873	2	KED
[	**Zn**	**68**	**51.137**	ug/L	2.450	4	4	8859	0	KED
[	**As**	**75**	**49.955**	ug/L	2.497	4	2	6728	0	KED
[	**Se-1**	**78**	**50.505**	ug/L	2.761	5	3	747	1	KED
	Y	**89**		ug/L			578761	591561	0	Standard
	Kr	**83**		ug/L			63	60	16	Standard
[>	**In-1**	**115**		ug/L			12060	11759	2	KED
[	**Mo**	**98**	**49.995**	ug/L	1.292	2	3	29713	1	KED
[	**Cd**	**111**	**50.308**	ug/L	1.541	3	0	8858	1	KED
[	**Cd**	**114**	**49.874**	ug/L	1.464	2	1	22573	0	KED
[>	**In**	**115**		ug/L			849100	848934	0	Standard
[	**Ag**	**107**	**52.400**	ug/L	0.880	1	22	781568	1	Standard
[	**Sb**	**121**	**50.264**	ug/L	0.442	0	19	592733	0	Standard
[	**Sb**	**123**	**50.121**	ug/L	0.337	0	16	455544	0	Standard
[	**Ba**	**135**	**50.332**	ug/L	1.189	2	8	168873	2	Standard
[	**Ba**	**137**	**49.963**	ug/L	1.164	2	16	294870	2	Standard
[>	**Tb**	**159**		ug/L			1018646	1014414	1	Standard
[	**Tl**	**205**	**48.363**	ug/L	0.986	2	24	1460287	2	Standard
[	**Pb**	**208**	**50.881**	ug/L	0.834	1	122	1914126	2	Standard
[	**Bi**	**209**		ug/L			2160030	2183307	2	Standard
[	**Th**	**232**	**47.393**	ug/L	0.983	2	43	1618171	3	Standard
[	**U**	**238**	**50.782**	ug/L	3.000	5	23	2098204	6	Standard

AVX9 : 66456

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB2
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, February 25, 2016 14:16:48
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022516.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
[>	**Li**	**6**		ug/L			697067	704051	2	Standard
[	**Be**	**9**	**0.004**	ug/L	0.001	30	2	8	24	Standard
	C	**13**		ug/L			39099	41641	3	Standard
	Cl	**37**		mg/L			2965482	2860343	2	Standard
[>	**Sc**	**45**		ug/L			882076	908704	2	Standard
[	**Al**	**27**	**0.007**	ug/L	0.006	77	529	656	15	Standard
[	**V**	**51**	**-0.011**	mg/L	0.004	40	3896	3822	0	Standard
[	**V-1**	**51**	**-0.003**	mg/L	0.000	4	397	353	2	Standard
[	**Cr**	**52**	**-0.064**	ug/L	0.027	42	10944	10802	0	Standard
[	**Cr**	**53**	**-0.011**	ug/L	0.009	76	117	111	7	Standard
[	**Fe**	**54**	**-1.520**	mg/L	1.190	78	44949	44558	0	Standard
[	**Fe**	**57**	**1.118**	mg/L	0.324	28	9916	10722	2	Standard
[	**Mn**	**55**	**0.001**	ug/L	0.001	98	280	302	2	Standard
[>	**Ge-1**	**72**		ug/L			34048	33676	2	KED
[	**Co**	**59**	**0.001**	ug/L	0.001	72	1	3	50	KED
[	**Ni**	**60**	**0.004**	ug/L	0.002	45	2	5	21	KED
[	**Ni**	**62**	**0.011**	ug/L	0.010	86	0	1	86	KED
[	**Cu**	**63**	**0.010**	ug/L	0.004	37	8	26	24	KED
[	**Cu**	**65**	**0.008**	ug/L	0.003	38	5	12	24	KED
[	**Zn**	**66**	**0.017**	ug/L	0.027	158	6	10	60	KED
[	**Zn**	**67**	**0.036**	ug/L	0.062	172	1	3	69	KED
[	**Zn**	**68**	**0.011**	ug/L	0.007	57	4	6	17	KED
[	**As**	**75**	**0.000**	ug/L	0.009	11779	2	2	52	KED
[	**Se-1**	**78**	**0.079**	ug/L	0.101	127	3	4	30	KED
	Y	**89**		ug/L			578761	571679	2	Standard
	Kr	**83**		ug/L			63	57	13	Standard
[>	**In-1**	**115**		ug/L			12060	11886	2	KED
[	**Mo**	**98**	**0.047**	ug/L	0.013	27	3	31	27	KED
[	**Cd**	**111**	**0.004**	ug/L	0.008	226	0	1	114	KED
[	**Cd**	**114**	**0.004**	ug/L	0.002	53	1	3	34	KED
[>	**In**	**115**		ug/L			849100	823715	2	Standard
[	**Ag**	**107**	**0.001**	ug/L	0.001	54	22	37	20	Standard
[	**Sb**	**121**	**0.083**	ug/L	0.002	2	19	965	1	Standard
[	**Sb**	**123**	**0.078**	ug/L	0.004	4	16	706	2	Standard
[	**Ba**	**135**	**0.002**	ug/L	0.001	59	8	16	29	Standard
[	**Ba**	**137**	**0.000**	ug/L	0.001	155	16	18	21	Standard
[>	**Tb**	**159**		ug/L			1018646	983667	0	Standard
[	**Tl**	**205**	**0.013**	ug/L	0.001	5	24	399	5	Standard
[	**Pb**	**208**	**0.004**	ug/L	0.001	18	122	269	10	Standard
[	**Bi**	**209**		ug/L			2160030	2241441	3	Standard
[	**Th**	**232**	**0.118**	ug/L	0.005	3	43	3956	4	Standard
[	**U**	**238**	**0.001**	ug/L	0.000	60	23	46	30	Standard

AVXS : 08457

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AWI9 MB SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, February 25, 2016 14:22:10
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022516.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
[>	**Li**	**6**		ug/L			697067	712909	1	Standard
[	**Be**	**9**	**0.003**	ug/L	0.001	25	2	6	15	Standard
	C	**13**		ug/L			39099	43601	2	Standard
	Cl	**37**		mg/L			2965482	2889546	1	Standard
[>	**Sc**	**45**		ug/L			882076	921721	1	Standard
[	**Al**	**27**	**0.363**	ug/L	0.009	2	529	5995	2	Standard
[	**V**	**51**	**-0.004**	mg/L	0.010	229	3896	3993	4	Standard
[	**V-1**	**51**	**-0.004**	mg/L	0.002	60	397	344	10	Standard
[	**Cr**	**52**	**-0.003**	ug/L	0.071	2175	10944	11409	4	Standard
[	**Cr**	**53**	**-0.001**	ug/L	0.016	2160	117	122	10	Standard
[	**Fe**	**54**	**6.017**	mg/L	1.122	18	44949	53881	1	Standard
[	**Fe**	**57**	**1.569**	mg/L	0.669	42	9916	11080	1	Standard
[	**Mn**	**55**	**0.008**	ug/L	0.001	16	280	478	7	Standard
[>	**Ge-1**	**72**		ug/L			34048	33302	0	KED
[	**Co**	**59**	**0.001**	ug/L	0.001	149	1	3	91	KED
[	**Ni**	**60**	**0.017**	ug/L	0.014	80	2	14	66	KED
[	**Ni**	**62**	**0.023**	ug/L	0.010	42	0	2	43	KED
[	**Cu**	**63**	**0.011**	ug/L	0.008	77	8	27	55	KED
[	**Cu**	**65**	**0.011**	ug/L	0.000	1	5	15	0	KED
[	**Zn**	**66**	**0.265**	ug/L	0.092	34	6	65	30	KED
[	**Zn**	**67**	**0.314**	ug/L	0.238	75	1	13	65	KED
[	**Zn**	**68**	**0.245**	ug/L	0.050	20	4	46	19	KED
[	**As**	**75**	**-0.010**	ug/L	0.004	35	2	0	50	KED
[	**Se-1**	**78**	**0.191**	ug/L	0.047	24	3	6	11	KED
	Y	**89**		ug/L			578761	580927	0	Standard
	Kr	**83**		ug/L			63	63	19	Standard
[>	**In-1**	**115**		ug/L			12060	12044	4	KED
[	**Mo**	**98**	**0.038**	ug/L	0.017	44	3	26	43	KED
[	**Cd**	**111**	**-0.002**	ug/L	0.003	161	0	0	173	KED
[	**Cd**	**114**	**0.001**	ug/L	0.000	16	1	1	1	KED
[>	**In**	**115**		ug/L			849100	854654	0	Standard
[	**Ag**	**107**	**0.000**	ug/L	0.000	36	22	29	9	Standard
[	**Sb**	**121**	**0.035**	ug/L	0.002	5	19	430	4	Standard
[	**Sb**	**123**	**0.035**	ug/L	0.004	11	16	335	11	Standard
[	**Ba**	**135**	**0.001**	ug/L	0.000	24	8	13	7	Standard
[	**Ba**	**137**	**0.004**	ug/L	0.001	17	16	40	10	Standard
[>	**Tb**	**159**		ug/L			1018646	993327	2	Standard
[	**Tl**	**205**	**0.009**	ug/L	0.001	11	24	283	8	Standard
[	**Pb**	**208**	**0.006**	ug/L	0.000	8	122	329	3	Standard
[	**Bi**	**209**		ug/L			2160030	2193776	8	Standard
[	**Th**	**232**	**0.059**	ug/L	0.002	4	43	2000	2	Standard
[	**U**	**238**	**0.001**	ug/L	0.000	67	23	44	34	Standard

AVX9 · 68458

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AWJ9 MB REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, February 25, 2016 14:27:15
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022516.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
[>	**Li**	**6**		ug/L			697067	754004	6	Standard
[	**Be**	**9**	**0.001**	ug/L	0.002	347	2	3	100	Standard
	C	**13**		ug/L			39099	45591	1	Standard
	Cl	**37**		mg/L			2965482	2950696	4	Standard
[>	**Sc**	**45**		ug/L			882076	923984	3	Standard
[	**Al**	**27**	**0.893**	ug/L	0.028	3	529	13979	1	Standard
[	**V**	**51**	**-0.006**	mg/L	0.007	117	3896	3977	0	Standard
[	**V-1**	**51**	**-0.002**	mg/L	0.001	37	397	387	2	Standard
[	**Cr**	**52**	**-0.033**	ug/L	0.037	112	10944	11212	1	Standard
[	**Cr**	**53**	**-0.005**	ug/L	0.006	121	117	119	7	Standard
[	**Fe**	**54**	**10.528**	mg/L	2.290	21	44949	59174	1	Standard
[	**Fe**	**57**	**2.544**	mg/L	1.705	67	9916	11543	3	Standard
[	**Mn**	**55**	**0.096**	ug/L	0.003	3	280	2448	1	Standard
[>	**Ge-1**	**72**		ug/L			34048	33334	1	KED
[	**Co**	**59**	**0.002**	ug/L	0.002	78	1	6	62	KED
[	**Ni**	**60**	**0.016**	ug/L	0.002	10	2	13	7	KED
[	**Ni**	**62**	**0.023**	ug/L	0.026	114	0	2	114	KED
[	**Cu**	**63**	**0.112**	ug/L	0.021	18	8	220	19	KED
[	**Cu**	**65**	**0.122**	ug/L	0.008	6	5	117	6	KED
[	**Zn**	**66**	**2.374**	ug/L	0.264	11	6	537	11	KED
[	**Zn**	**67**	**2.009**	ug/L	0.403	20	1	74	18	KED
[	**Zn**	**68**	**2.296**	ug/L	0.031	1	4	397	0	KED
[	**As**	**75**	**0.003**	ug/L	0.011	417	2	2	56	KED
[	**Se-1**	**78**	**0.158**	ug/L	0.071	45	3	5	16	KED
	Y	**89**		ug/L			578761	597437	3	Standard
	Kr	**83**		ug/L			63	47	26	Standard
[>	**In-1**	**115**		ug/L			12060	11866	1	KED
[	**Mo**	**98**	**0.071**	ug/L	0.014	19	3	45	18	KED
[	**Cd**	**111**	**-0.004**	ug/L	0.000	0	0	0		KED
[	**Cd**	**114**	**-0.001**	ug/L	0.005	556	1	0	267	KED
[>	**In**	**115**		ug/L			849100	840931	0	Standard
[	**Ag**	**107**	**0.001**	ug/L	0.000	60	22	34	22	Standard
[	**Sb**	**121**	**0.028**	ug/L	0.003	9	19	347	9	Standard
[	**Sb**	**123**	**0.025**	ug/L	0.004	16	16	246	15	Standard
[	**Ba**	**135**	**0.008**	ug/L	0.002	26	8	34	19	Standard
[	**Ba**	**137**	**0.011**	ug/L	0.001	5	16	78	4	Standard
[>	**Tb**	**159**		ug/L			1018646	1016774	0	Standard
[	**Tl**	**205**	**0.017**	ug/L	0.002	9	24	527	9	Standard
[	**Pb**	**208**	**0.008**	ug/L	0.001	16	122	414	12	Standard
[	**Bi**	**209**		ug/L			2160030	2187332	8	Standard
[	**Th**	**232**	**0.033**	ug/L	0.001	4	43	1183	4	Standard
[	**U**	**238**	**0.001**	ug/L	0.000	32	23	50	16	Standard

AVX9 : 80453

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AWJ0 MB REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, February 25, 2016 14:32:20
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022516.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
⌜>	**Li**	**6**		ug/L			697067	746766	1	Standard
⌞	**Be**	**9**	**0.004**	ug/L	0.003	72	2	8	48	Standard
	C	**13**		ug/L			39099	45379	3	Standard
	Cl	**37**		mg/L			2965482	2913163	2	Standard
⌜>	**Sc**	**45**		ug/L			882076	939200	0	Standard
⎢	**Al**	**27**	**0.860**	ug/L	0.022	2	529	13712	3	Standard
⎢	**V**	**51**	**-0.007**	mg/L	0.003	46	3896	4027	1	Standard
⎢	**V-1**	**51**	**-0.002**	mg/L	0.002	133	397	395	8	Standard
⎢	**Cr**	**52**	**-0.042**	ug/L	0.027	65	10944	11334	1	Standard
⎢	**Cr**	**53**	**-0.007**	ug/L	0.016	252	117	119	12	Standard
⎢	**Fe**	**54**	**11.248**	mg/L	0.481	4	44949	61055	1	Standard
⎢	**Fe**	**57**	**2.691**	mg/L	1.038	38	9916	11819	3	Standard
⎣	**Mn**	**55**	**0.031**	ug/L	0.002	5	280	1012	4	Standard
⌜>	**Ge-1**	**72**		ug/L			34048	34151	0	KED
⎢	**Co**	**59**	**0.002**	ug/L	0.001	74	1	5	57	KED
⎢	**Ni**	**60**	**0.012**	ug/L	0.001	12	2	10	10	KED
⎢	**Ni**	**62**	**0.011**	ug/L	0.019	173	0	1	173	KED
⎢	**Cu**	**63**	**0.022**	ug/L	0.007	30	8	50	25	KED
⎢	**Cu**	**65**	**0.017**	ug/L	0.008	47	5	21	35	KED
⎢	**Zn**	**66**	**0.399**	ug/L	0.032	8	6	97	7	KED
⎢	**Zn**	**67**	**0.340**	ug/L	0.056	16	1	14	15	KED
⎢	**Zn**	**68**	**0.304**	ug/L	0.047	15	4	57	14	KED
⎢	**As**	**75**	**-0.002**	ug/L	0.008	328	2	2	53	KED
⎣	**Se-1**	**78**	**0.160**	ug/L	0.215	134	3	6	52	KED
	Y	**89**		ug/L			578761	592710	2	Standard
	Kr	**83**		ug/L			63	55	16	Standard
⌜>	**In-1**	**115**		ug/L			12060	11969	1	KED
⎢	**Mo**	**98**	**0.035**	ug/L	0.011	31	3	24	27	KED
⎢	**Cd**	**111**	**-0.002**	ug/L	0.003	168	0	0	173	KED
⎣	**Cd**	**114**	**0.001**	ug/L	0.004	515	1	1	113	KED
⌜>	**In**	**115**		ug/L			849100	852654	2	Standard
⎢	**Ag**	**107**	**0.001**	ug/L	0.001	140	22	33	46	Standard
⎢	**Sb**	**121**	**0.022**	ug/L	0.002	8	19	278	10	Standard
⎢	**Sb**	**123**	**0.019**	ug/L	0.002	10	16	193	9	Standard
⎢	**Ba**	**135**	**0.004**	ug/L	0.003	64	8	22	40	Standard
⎣	**Ba**	**137**	**0.004**	ug/L	0.003	69	16	38	38	Standard
⌜>	**Tb**	**159**		ug/L			1018646	1009725	1	Standard
⎢	**Tl**	**205**	**0.007**	ug/L	0.000	6	24	233	3	Standard
⎢	**Pb**	**208**	**0.005**	ug/L	0.001	13	122	306	9	Standard
⎢	**Bi**	**209**		ug/L			2160030	2264785	1	Standard
⎢	**Th**	**232**	**0.023**	ug/L	0.002	8	43	826	8	Standard
⎣	**U**	**238**	**0.000**	ug/L	0.000	19	23	35	8	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AWJ0 A REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, February 25, 2016 14:37:25
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022516.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
⌈>	**Li**	**6**		ug/L			697067	527365	4	Standard
⌊	**Be**	**9**	**0.008**	ug/L	0.006	76	2	10	61	Standard
	C	**13**		ug/L			39099	55198	2	Standard
	Cl	**37**		mg/L			2965482	2887790	0	Standard
⌈>	**Sc**	**45**		ug/L			882076	797072	1	Standard
|	**Al**	**27**	**87.051**	ug/L	1.722	1	529	1130007	1	Standard
|	**V**	**51**	**32.329**	mg/L	0.839	2	3896	494910	1	Standard
|	**V-1**	**51**	**32.158**	mg/L	0.742	2	397	493766	1	Standard
|	**Cr**	**52**	**16.668**	ug/L	0.630	3	10944	117574	3	Standard
|	**Cr**	**53**	**16.512**	ug/L	0.204	1	117	12920	2	Standard
|	**Fe**	**54**	**12670.465**	mg/L	111.942	0	44949	12654300	2	Standard
|	**Fe**	**57**	**12809.686**	mg/L	212.606	1	9916	5102986	2	Standard
⌊	**Mn**	**55**	**20.344**	ug/L	0.081	0	280	395040	1	Standard
⌈>	**Ge-1**	**72**		ug/L			34048	20761	1	KED
|	**Co**	**59**	**7.696**	ug/L	0.168	2	1	11532	2	KED
|	**Ni**	**60**	**15.524**	ug/L	0.238	1	2	6750	0	KED
|	**Ni**	**62**	**16.151**	ug/L	0.331	2	0	1118	3	KED
|	**Cu**	**63**	**5.875**	ug/L	0.133	2	8	6931	1	KED
|	**Cu**	**65**	**5.751**	ug/L	0.212	3	5	3315	2	KED
|	**Zn**	**66**	**153.141**	ug/L	1.541	1	6	21351	1	KED
|	**Zn**	**67**	**141.099**	ug/L	4.074	2	1	3202	4	KED
|	**Zn**	**68**	**142.446**	ug/L	3.661	2	4	15191	1	KED
|	**As**	**75**	**0.174**	ug/L	0.055	31	2	15	28	KED
⌊	**Se-1**	**78**	**0.278**	ug/L	0.256	92	3	4	50	KED
	Y	**89**		ug/L			578761	542146	1	Standard
	Kr	**83**		ug/L			63	175	5	Standard
⌈>	**In-1**	**115**		ug/L			12060	8368	4	KED
|	**Mo**	**98**	**2.189**	ug/L	0.180	8	3	926	6	KED
|	**Cd**	**111**	**4.156**	ug/L	0.400	9	0	520	5	KED
⌊	**Cd**	**114**	**4.221**	ug/L	0.280	6	1	1358	3	KED
⌈>	**In**	**115**		ug/L			849100	570510	1	Standard
|	**Ag**	**107**	**0.005**	ug/L	0.001	18	22	60	12	Standard
|	**Sb**	**121**	**0.293**	ug/L	0.007	2	19	2337	1	Standard
|	**Sb**	**123**	**0.301**	ug/L	0.012	4	16	1846	3	Standard
|	**Ba**	**135**	**4.130**	ug/L	0.073	1	8	9315	0	Standard
⌊	**Ba**	**137**	**4.122**	ug/L	0.040	0	16	16356	0	Standard
⌈>	**Tb**	**159**		ug/L			1018646	726968	2	Standard
|	**Tl**	**205**	**0.013**	ug/L	0.002	12	24	290	9	Standard
|	**Pb**	**208**	**0.656**	ug/L	0.004	0	122	17784	2	Standard
|	**Bi**	**209**		ug/L			2160030	1161670	4	Standard
|	**Th**	**232**	**0.166**	ug/L	0.002	1	43	4099	3	Standard
⌊	**U**	**238**	**0.114**	ug/L	0.003	2	23	3393	4	Standard

AUX9 · 20HE1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AWK1 A REN
Sample Dil Factor: 10
Comments:
Sample Date/Time: Thursday, February 25, 2016 14:43:33
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022516.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
[>	**Li**	**6**		ug/L			697067	696421	3	Standard
[	**Be**	**9**	**0.004**	ug/L	0.001	32	2	8	24	Standard
	C	**13**		ug/L			39099	81276	1	Standard
	Cl	**37**		mg/L			2965482	2996189	1	Standard
[>	**Sc**	**45**		ug/L			882076	938765	1	Standard
[	**Al**	**27**	**41.228**	ug/L	0.438	1	529	630683	1	Standard
[	**V**	**51**	**-1.471**	mg/L	0.872	59	3896	-22049	68	Standard
[	**V-1**	**51**	**0.580**	mg/L	0.007	1	397	10903	2	Standard
[	**Cr**	**52**	**128.195**	ug/L	2.385	1	10944	987324	3	Standard
[	**Cr**	**53**	**133.506**	ug/L	3.354	2	117	122105	1	Standard
[	**Fe**	**54**	**3872.985**	mg/L	61.405	1	44949	4588669	2	Standard
[	**Fe**	**57**	**3741.698**	mg/L	59.799	1	9916	1763044	3	Standard
[	**Mn**	**55**	**29.857**	ug/L	0.907	3	280	682430	1	Standard
[>	**Ge-1**	**72**		ug/L			34048	33940	2	KED
[	**Co**	**59**	**0.362**	ug/L	0.020	5	1	886	3	KED
[	**Ni**	**60**	**3.561**	ug/L	0.125	3	2	2532	1	KED
[	**Ni**	**62**	**3.687**	ug/L	0.182	4	0	417	5	KED
[	**Cu**	**63**	**5.033**	ug/L	0.204	4	8	9708	3	KED
[	**Cu**	**65**	**4.931**	ug/L	0.163	3	5	4647	2	KED
[	**Zn**	**66**	**140.695**	ug/L	6.392	4	6	32049	2	KED
[	**Zn**	**67**	**125.338**	ug/L	4.610	3	1	4647	2	KED
[	**Zn**	**68**	**129.817**	ug/L	3.701	2	4	22630	0	KED
[	**As**	**75**	**0.096**	ug/L	0.014	14	2	15	13	KED
[	**Se-1**	**78**	**0.129**	ug/L	0.063	48	3	5	17	KED
	Y	**89**		ug/L			578761	598000	1	Standard
	Kr	**83**		ug/L			63	116	3	Standard
[>	**In-1**	**115**		ug/L			12060	12186	2	KED
[	**Mo**	**98**	**1.056**	ug/L	0.053	5	3	653	6	KED
[	**Cd**	**111**	**0.840**	ug/L	0.055	6	0	153	6	KED
[	**Cd**	**114**	**0.867**	ug/L	0.062	7	1	407	7	KED
[>	**In**	**115**		ug/L			849100	840716	0	Standard
[	**Ag**	**107**	**0.116**	ug/L	0.016	13	22	1737	13	Standard
[	**Sb**	**121**	**0.238**	ug/L	0.007	2	19	2802	2	Standard
[	**Sb**	**123**	**0.235**	ug/L	0.007	2	16	2130	3	Standard
[	**Ba**	**135**	**5.166**	ug/L	0.084	1	8	17171	1	Standard
[	**Ba**	**137**	**5.095**	ug/L	0.081	1	16	29792	1	Standard
[>	**Tb**	**159**		ug/L			1018646	998924	1	Standard
[	**Tl**	**205**	**0.003**	ug/L	0.001	18	24	114	12	Standard
[	**Pb**	**208**	**0.155**	ug/L	0.003	1	122	5877	3	Standard
[	**Bi**	**209**		ug/L			2160030	2041660	8	Standard
[	**Th**	**232**	**0.026**	ug/L	0.000	1	43	907	2	Standard
[	**U**	**238**	**0.047**	ug/L	0.002	4	23	1925	4	Standard

AUX9 : 90:52

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AWJ9 A REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, February 25, 2016 14:49:42
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022516.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
⌈>	**Li**	**6**		ug/L			697067	601196	1	Standard
⌊	**Be**	**9**	**0.004**	ug/L	0.003	60	2	7	43	Standard
	C	**13**		ug/L			39099	767121	1	Standard
	Cl	**37**		mg/L			2965482	2968993	2	Standard
⌈>	**Sc**	**45**		ug/L			882076	843217	2	Standard
|	**Al**	**27**	**20.955**	ug/L	0.605	2	529	288033	0	Standard
|	**V**	**51**	**1.357**	mg/L	0.116	8	3896	25519	4	Standard
|	**V-1**	**51**	**0.373**	mg/L	0.006	1	397	6431	1	Standard
|	**Cr**	**52**	**14.448**	ug/L	0.845	5	10944	109126	3	Standard
|	**Cr**	**53**	**7.449**	ug/L	0.141	1	117	6227	2	Standard
|	**Fe**	**54**	**3304.018**	mg/L	97.924	2	44949	3520465	0	Standard
|	**Fe**	**57**	**3851.765**	mg/L	72.590	1	9916	1629211	1	Standard
⌊	**Mn**	**55**	**15.611**	ug/L	0.286	1	280	320635	0	Standard
⌈>	**Ge-1**	**72**		ug/L			34048	26720	1	KED
|	**Co**	**59**	**2.012**	ug/L	0.078	3	1	3881	3	KED
|	**Ni**	**60**	**26.296**	ug/L	0.321	1	2	14716	0	KED
|	**Ni**	**62**	**26.179**	ug/L	1.252	4	0	2332	4	KED
|	**Cu**	**63**	**3.934**	ug/L	0.057	1	8	5976	1	KED
|	**Cu**	**65**	**3.972**	ug/L	0.222	5	5	2950	6	KED
|	**Zn**	**66**	**43.177**	ug/L	0.964	2	6	7750	1	KED
|	**Zn**	**67**	**41.617**	ug/L	1.887	4	1	1215	3	KED
|	**Zn**	**68**	**41.234**	ug/L	0.572	1	4	5663	0	KED
|	**As**	**75**	**0.212**	ug/L	0.012	5	2	24	4	KED
⌊	**Se-1**	**78**	**0.272**	ug/L	0.148	54	3	6	27	KED
	Y	**89**		ug/L			578761	562869	0	Standard
	Kr	**83**		ug/L			63	108	12	Standard
⌈>	**In-1**	**115**		ug/L			12060	10303	2	KED
|	**Mo**	**98**	**0.530**	ug/L	0.044	8	3	279	9	KED
|	**Cd**	**111**	**0.182**	ug/L	0.022	11	0	28	10	KED
⌊	**Cd**	**114**	**0.167**	ug/L	0.015	8	1	67	6	KED
⌈>	**In**	**115**		ug/L			849100	707414	0	Standard
|	**Ag**	**107**	**0.006**	ug/L	0.002	29	22	88	23	Standard
|	**Sb**	**121**	**0.167**	ug/L	0.002	1	19	1660	0	Standard
|	**Sb**	**123**	**0.164**	ug/L	0.012	7	16	1259	6	Standard
|	**Ba**	**135**	**35.614**	ug/L	0.692	1	8	99565	1	Standard
⌊	**Ba**	**137**	**34.719**	ug/L	1.213	3	16	170720	2	Standard
⌈>	**Tb**	**159**		ug/L			1018646	880160	2	Standard
|	**Tl**	**205**	**0.003**	ug/L	0.000	11	24	89	7	Standard
|	**Pb**	**208**	**0.091**	ug/L	0.001	1	122	3087	3	Standard
|	**Bi**	**209**		ug/L			2160030	1462310	2	Standard
|	**Th**	**232**	**0.019**	ug/L	0.001	7	43	606	8	Standard
⌊	**U**	**238**	**0.005**	ug/L	0.000	4	23	207	3	Standard

AVX9 : 88463

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AWJ9 MBSPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, February 25, 2016 14:54:47
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022516.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
⌈>	**Li**	**6**		ug/L			697067	700172	2	Standard
⌊	**Be**	**9**	**27.529**	ug/L	1.356	4	2	40568	2	Standard
	C	**13**		ug/L			39099	47752	5	Standard
	Cl	**37**		mg/L			2965482	3107651	3	Standard
⌈>	**Sc**	**45**		ug/L			882076	912600	1	Standard
⌈	**Al**	**27**	**1.094**	ug/L	0.015	1	529	16806	3	Standard
⌈	**V**	**51**	**28.776**	mg/L	1.030	3	3896	504724	2	Standard
⌈	**V-1**	**51**	**28.721**	mg/L	1.046	3	397	504903	2	Standard
⌈	**Cr**	**52**	**28.963**	ug/L	0.292	1	10944	225569	1	Standard
⌈	**Cr**	**53**	**28.607**	ug/L	1.502	5	117	25546	6	Standard
⌈	**Fe**	**54**	**19.321**	mg/L	1.897	9	44949	68501	1	Standard
⌈	**Fe**	**57**	**2.483**	mg/L	0.955	38	9916	11386	2	Standard
⌊	**Mn**	**55**	**28.978**	ug/L	1.979	6	280	643586	5	Standard
⌈>	**Ge-1**	**72**		ug/L			34048	34321	2	KED
⌈	**Co**	**59**	**28.641**	ug/L	0.613	2	1	70935	1	KED
⌈	**Ni**	**60**	**29.830**	ug/L	1.268	4	2	21430	2	KED
⌈	**Ni**	**62**	**28.628**	ug/L	2.471	8	0	3271	6	KED
⌈	**Cu**	**63**	**30.248**	ug/L	0.649	2	8	58953	1	KED
⌈	**Cu**	**65**	**30.331**	ug/L	1.150	3	5	28878	1	KED
⌈	**Zn**	**66**	**90.182**	ug/L	0.869	0	6	20791	3	KED
⌈	**Zn**	**67**	**86.471**	ug/L	5.841	6	1	3242	5	KED
⌈	**Zn**	**68**	**85.702**	ug/L	2.096	2	4	15109	0	KED
⌈	**As**	**75**	**27.067**	ug/L	0.291	1	2	3714	3	KED
⌊	**Se-1**	**78**	**82.706**	ug/L	0.780	0	3	1244	1	KED
	Y	**89**		ug/L			578761	585114	3	Standard
	Kr	**83**		ug/L			63	71	7	Standard
⌈>	**In-1**	**115**		ug/L			12060	12431	1	KED
⌈	**Mo**	**98**	**0.024**	ug/L	0.002	6	3	18	6	KED
⌈	**Cd**	**111**	**27.401**	ug/L	0.679	2	0	5101	1	KED
⌊	**Cd**	**114**	**27.834**	ug/L	0.594	2	1	13321	0	KED
⌈>	**In**	**115**		ug/L			849100	845274	0	Standard
⌈	**Ag**	**107**	**29.447**	ug/L	0.439	1	22	437327	1	Standard
⌈	**Sb**	**121**	**0.009**	ug/L	0.002	20	19	127	18	Standard
⌈	**Sb**	**123**	**0.010**	ug/L	0.002	19	16	105	16	Standard
⌈	**Ba**	**135**	**29.468**	ug/L	0.913	3	8	98437	2	Standard
⌊	**Ba**	**137**	**28.991**	ug/L	0.288	0	16	170355	0	Standard
⌈>	**Tb**	**159**		ug/L			1018646	1005246	1	Standard
⌈	**Tl**	**205**	**28.396**	ug/L	0.264	0	24	849546	1	Standard
⌈	**Pb**	**208**	**29.857**	ug/L	0.649	2	122	1113047	3	Standard
⌈	**Bi**	**209**		ug/L			2160030	2200139	8	Standard
⌈	**Th**	**232**	**26.711**	ug/L	0.312	1	43	903603	1	Standard
⌊	**U**	**238**	**27.777**	ug/L	0.967	3	23	1136860	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AWJ0 MBSPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, February 25, 2016 14:59:52
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022516.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
[>	**Li**	**6**		ug/L			697067	684468	2	Standard
[	**Be**	**9**	**27.916**	ug/L	1.182	4	2	40240	3	Standard
	C	**13**		ug/L			39099	45058	1	Standard
	Cl	**37**		mg/L			2965482	3238361	2	Standard
[>	**Sc**	**45**		ug/L			882076	906236	0	Standard
[	**Al**	**27**	**0.994**	ug/L	0.040	4	529	15210	3	Standard
[	**V**	**51**	**28.742**	mg/L	0.797	2	3896	500753	2	Standard
[	**V-1**	**51**	**28.649**	mg/L	0.770	2	397	500216	2	Standard
[	**Cr**	**52**	**29.645**	ug/L	0.474	1	10944	229033	1	Standard
[	**Cr**	**53**	**29.002**	ug/L	0.726	2	117	25709	2	Standard
[	**Fe**	**54**	**19.307**	mg/L	2.472	12	44949	68024	3	Standard
[	**Fe**	**57**	**0.835**	mg/L	0.830	99	9916	10566	3	Standard
[	**Mn**	**55**	**29.741**	ug/L	0.361	1	280	656460	1	Standard
[>	**Ge-1**	**72**		ug/L			34048	34008	0	KED
[	**Co**	**59**	**28.401**	ug/L	0.500	1	1	69713	1	KED
[	**Ni**	**60**	**29.292**	ug/L	0.432	1	2	20864	1	KED
[	**Ni**	**62**	**29.801**	ug/L	0.835	2	0	3378	2	KED
[	**Cu**	**63**	**30.074**	ug/L	0.581	1	8	58096	2	KED
[	**Cu**	**65**	**29.800**	ug/L	0.771	2	5	28129	2	KED
[	**Zn**	**66**	**89.231**	ug/L	3.700	4	6	20380	3	KED
[	**Zn**	**67**	**84.555**	ug/L	3.961	4	1	3143	4	KED
[	**Zn**	**68**	**85.429**	ug/L	1.650	1	4	14930	2	KED
[	**As**	**75**	**26.851**	ug/L	0.205	0	2	3650	0	KED
[	**Se-1**	**78**	**84.183**	ug/L	0.802	0	3	1255	0	KED
	Y	**89**		ug/L			578761	590825	1	Standard
	Kr	**83**		ug/L			63	73	19	Standard
[>	**In-1**	**115**		ug/L			12060	12152	0	KED
[	**Mo**	**98**	**0.014**	ug/L	0.010	68	3	12	50	KED
[	**Cd**	**111**	**27.674**	ug/L	0.762	2	0	5037	2	KED
[	**Cd**	**114**	**27.752**	ug/L	0.424	1	1	12986	1	KED
[>	**In**	**115**		ug/L			849100	825365	2	Standard
[	**Ag**	**107**	**29.733**	ug/L	1.532	5	22	430908	3	Standard
[	**Sb**	**121**	**0.010**	ug/L	0.001	10	19	135	10	Standard
[	**Sb**	**123**	**0.011**	ug/L	0.001	10	16	117	6	Standard
[	**Ba**	**135**	**30.144**	ug/L	0.846	2	8	98319	3	Standard
[	**Ba**	**137**	**30.013**	ug/L	0.440	1	16	172184	1	Standard
[>	**Tb**	**159**		ug/L			1018646	1013172	1	Standard
[	**Tl**	**205**	**28.325**	ug/L	0.976	3	24	854127	3	Standard
[	**Pb**	**208**	**29.619**	ug/L	0.737	2	122	1112885	3	Standard
[	**Bi**	**209**		ug/L			2160030	2191663	10	Standard
[	**Th**	**232**	**26.744**	ug/L	0.608	2	43	911915	2	Standard
[	**U**	**238**	**27.597**	ug/L	1.063	3	23	1138776	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AVX9 MB2SPK
Sample Dil Factor: 2 Ni
Comments:
Sample Date/Time: Thursday, February 25, 2016 15:04:57
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022516.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
[>	Li	6		ug/L			697067	684353	0	Standard
[	Be	9	27.203	ug/L	0.306	1	2	39215	1	Standard
	C	13		ug/L			39099	44418	1	Standard
	Cl	37		mg/L			2965482	3072244	1	Standard
[>	Sc	45		ug/L			882076	909817	2	Standard
[	Al	27	0.923	ug/L	0.020	2	529	14208	0	Standard
[	V	51	28.749	mg/L	0.937	3	3896	502681	1	Standard
[	V-1	51	28.637	mg/L	0.795	2	397	501851	1	Standard
[	Cr	52	28.671	ug/L	0.974	3	10944	222654	1	Standard
[	Cr	53	27.972	ug/L	0.464	1	117	24894	1	Standard
[	Fe	54	18.732	mg/L	1.996	10	44949	67616	1	Standard
[	Fe	57	0.710	mg/L	0.402	56	9916	10548	0	Standard
[	Mn	55	28.840	ug/L	0.747	2	280	638870	0	Standard
[>	Ge-1	72		ug/L			34048	33876	0	KED
[	Co	59	28.994	ug/L	1.278	4	1	70879	3	KED
[	Ni	60	28.762	ug/L	0.350	1	2	20408	1	KED
[	Ni	62	28.281	ug/L	0.503	1	0	3194	1	KED
[	Cu	63	29.772	ug/L	1.373	4	8	57281	4	KED
[	Cu	65	29.168	ug/L	0.839	2	5	27425	2	KED
[	Zn	66	89.543	ug/L	0.991	1	6	20373	0	KED
[	Zn	67	83.055	ug/L	3.955	4	1	3075	5	KED
[	Zn	68	82.579	ug/L	0.316	0	4	14375	0	KED
[	As	75	27.063	ug/L	0.438	1	2	3664	0	KED
[	Se-1	78	82.788	ug/L	1.040	1	3	1230	1	KED
	Y	89		ug/L			578761	570309	1	Standard
	Kr	83		ug/L			63	60	22	Standard
[>	In-1	115		ug/L			12060	11992	1	KED
[	Mo	98	0.009	ug/L	0.004	41	3	8	24	KED
[	Cd	111	27.230	ug/L	0.595	2	0	4890	0	KED
[	Cd	114	27.917	ug/L	0.775	2	1	12888	1	KED
[>	In	115		ug/L			849100	861313	1	Standard
[	Ag	107	26.796	ug/L	0.619	2	22	405416	1	Standard
[	Sb	121	0.008	ug/L	0.001	9	19	118	7	Standard
[	Sb	123	0.008	ug/L	0.001	10	16	95	8	Standard
[	Ba	135	29.314	ug/L	0.568	1	8	99768	0	Standard
[	Ba	137	28.666	ug/L	0.776	2	16	171621	2	Standard
[>	Tb	159		ug/L			1018646	1012786	1	Standard
[	Tl	205	27.643	ug/L	0.869	3	24	833217	3	Standard
[	Pb	208	29.224	ug/L	1.016	3	122	1097435	3	Standard
[	Bi	209		ug/L			2160030	2267858	1	Standard
[	Th	232	26.574	ug/L	0.609	2	43	905791	2	Standard
[	U	238	27.007	ug/L	0.723	2	23	1113727	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: AWI9 MBSPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, February 25, 2016 15:10:01
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022516.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
⌈>	**Li**	**6**		ug/L			697067	684385	2	Standard
⌊	**Be**	**9**	**26.886**	ug/L	0.996	3	2	38757	4	Standard
	C	**13**		ug/L			39099	41740	3	Standard
	Cl	**37**		mg/L			2965482	3091729	0	Standard
⌈>	**Sc**	**45**		ug/L			882076	886123	0	Standard
⌈	**Al**	**27**	**523.915**	ug/L	20.160	3	529	7557803	3	Standard
⌈	**V**	**51**	**29.534**	mg/L	1.163	3	3896	502955	3	Standard
⌈	**V-1**	**51**	**29.487**	mg/L	1.329	4	397	503328	3	Standard
⌈	**Cr**	**52**	**29.512**	ug/L	0.689	2	10944	222995	2	Standard
⌈	**Cr**	**53**	**29.216**	ug/L	0.798	2	117	25317	1	Standard
⌈	**Fe**	**54**	**528.582**	mg/L	12.920	2	44949	630148	2	Standard
⌈	**Fe**	**57**	**516.700**	mg/L	11.981	2	9916	238395	3	Standard
⌊	**Mn**	**55**	**29.332**	ug/L	0.305	1	280	633088	1	Standard
⌈>	**Ge-1**	**72**		ug/L			34048	33453	1	KED
⌈	**Co**	**59**	**28.830**	ug/L	0.367	1	1	69605	0	KED
⌈	**Ni**	**60**	**28.875**	ug/L	0.546	1	2	20228	0	KED
⌈	**Ni**	**62**	**29.428**	ug/L	1.645	5	0	3280	4	KED
⌈	**Cu**	**63**	**30.098**	ug/L	0.404	1	8	57184	1	KED
⌈	**Cu**	**65**	**29.837**	ug/L	0.436	1	5	27703	1	KED
⌈	**Zn**	**66**	**94.256**	ug/L	3.064	3	6	21173	2	KED
⌈	**Zn**	**67**	**88.586**	ug/L	4.311	4	1	3237	3	KED
⌈	**Zn**	**68**	**88.360**	ug/L	0.912	1	4	15189	1	KED
⌈	**As**	**75**	**27.846**	ug/L	0.823	2	2	3722	2	KED
⌊	**Se-1**	**78**	**88.010**	ug/L	1.844	2	3	1290	0	KED
	Y	**89**		ug/L			578761	581007	0	Standard
	Kr	**83**		ug/L			63	76	18	Standard
⌈>	**In-1**	**115**		ug/L			12060	12127	1	KED
⌈	**Mo**	**98**	**25.225**	ug/L	0.079	0	3	15468	1	KED
⌈	**Cd**	**111**	**27.709**	ug/L	0.687	2	0	5033	2	KED
⌊	**Cd**	**114**	**28.234**	ug/L	1.017	3	1	13185	4	KED
⌈>	**In**	**115**		ug/L			849100	839026	2	Standard
⌈	**Ag**	**107**	**29.202**	ug/L	0.844	2	22	430352	2	Standard
⌈	**Sb**	**121**	**26.411**	ug/L	0.602	2	19	307698	0	Standard
⌈	**Sb**	**123**	**26.216**	ug/L	0.516	1	16	235420	1	Standard
⌈	**Ba**	**135**	**29.064**	ug/L	0.828	2	8	96340	1	Standard
⌊	**Ba**	**137**	**29.179**	ug/L	0.785	2	16	170121	0	Standard
⌈>	**Tb**	**159**		ug/L			1018646	1022036	1	Standard
⌈	**Tl**	**205**	**27.500**	ug/L	0.983	3	24	836729	4	Standard
⌈	**Pb**	**208**	**28.990**	ug/L	0.726	2	122	1098916	3	Standard
⌈	**Bi**	**209**		ug/L			2160030	2187543	7	Standard
⌈	**Th**	**232**	**25.906**	ug/L	1.089	4	43	891318	5	Standard
⌊	**U**	**238**	**26.876**	ug/L	0.765	2	23	1118659	3	Standard

AWI9 : 96467

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV3
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, February 25, 2016 15:16:11
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022516.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
[>	**Li**	**6**		ug/L			697067	691291	1	Standard
[	**Be**	**9**	**50.172**	ug/L	2.245	4	2	73030	3	Standard
	C	**13**		ug/L			39099	39621	2	Standard
	Cl	**37**		mg/L			2965482	3059795	5	Standard
[>	**Sc**	**45**		ug/L			882076	909288	1	Standard
|	**Al**	**27**	**5208.102**	ug/L	189.041	3	529	77085514	3	Standard
|	**V**	**51**	**50.896**	mg/L	1.273	2	3896	886436	0	Standard
|	**V-1**	**51**	**50.826**	mg/L	1.018	2	397	889979	0	Standard
|	**Cr**	**52**	**50.902**	ug/L	1.034	2	10944	386399	0	Standard
|	**Cr**	**53**	**50.459**	ug/L	0.754	1	117	44796	3	Standard
|	**Fe**	**54**	**5229.575**	mg/L	111.801	2	44949	5983627	0	Standard
|	**Fe**	**57**	**5195.020**	mg/L	126.579	2	9916	2366696	3	Standard
[	**Mn**	**55**	**50.483**	ug/L	0.489	0	280	1117757	1	Standard
[>	**Ge-1**	**72**		ug/L			34048	33827	0	KED
|	**Co**	**59**	**49.951**	ug/L	0.681	1	1	121968	2	KED
|	**Ni**	**60**	**50.568**	ug/L	1.063	2	2	35824	1	KED
|	**Ni**	**62**	**48.413**	ug/L	1.356	2	0	5459	2	KED
|	**Cu**	**63**	**51.270**	ug/L	0.214	0	8	98506	0	KED
|	**Cu**	**65**	**50.280**	ug/L	0.870	1	5	47204	1	KED
|	**Zn**	**66**	**51.188**	ug/L	1.008	1	6	11632	1	KED
|	**Zn**	**67**	**53.621**	ug/L	1.682	3	1	1983	3	KED
|	**Zn**	**68**	**49.317**	ug/L	1.771	3	4	8573	2	KED
|	**As**	**75**	**49.520**	ug/L	0.554	1	2	6693	0	KED
[	**Se-1**	**78**	**50.618**	ug/L	0.194	0	3	752	0	KED
	Y	**89**		ug/L			578761	581792	6	Standard
	Kr	**83**		ug/L			63	75	20	Standard
[>	**In-1**	**115**		ug/L			12060	11743	2	KED
|	**Mo**	**98**	**49.712**	ug/L	0.478	0	3	29512	1	KED
|	**Cd**	**111**	**51.163**	ug/L	0.873	1	0	8999	1	KED
[	**Cd**	**114**	**50.127**	ug/L	1.364	2	1	22659	0	KED
[>	**In**	**115**		ug/L			849100	834814	0	Standard
|	**Ag**	**107**	**53.184**	ug/L	0.821	1	22	780010	1	Standard
|	**Sb**	**121**	**50.978**	ug/L	1.283	2	19	591055	1	Standard
|	**Sb**	**123**	**50.964**	ug/L	1.422	2	16	455407	1	Standard
|	**Ba**	**135**	**51.917**	ug/L	0.866	1	8	171272	0	Standard
[	**Ba**	**137**	**50.426**	ug/L	1.796	3	16	292571	2	Standard
[>	**Tb**	**159**		ug/L			1018646	1016028	4	Standard
|	**Tl**	**205**	**48.463**	ug/L	1.707	3	24	1464227	2	Standard
|	**Pb**	**208**	**50.501**	ug/L	0.860	1	122	1902162	3	Standard
|	**Bi**	**209**		ug/L			2160030	2027169	7	Standard
|	**Th**	**232**	**46.663**	ug/L	1.299	2	43	1595450	4	Standard
[	**U**	**238**	**48.964**	ug/L	1.781	3	23	2025661	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB3
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, February 25, 2016 15:24:01
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8nominSeKED_UCT_CrAlFe.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\022516.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
[>	**Li**	**6**		ug/L			697067	681749	2	Standard
[	**Be**	**9**	**0.001**	ug/L	0.004	310	2	4	137	Standard
	C	**13**		ug/L			39099	38365	0	Standard
	Cl	**37**		mg/L			2965482	2895975	1	Standard
[>	**Sc**	**45**		ug/L			882076	873052	1	Standard
[	**Al**	**27**	**0.010**	ug/L	0.002	19	529	663	4	Standard
[	**V**	**51**	**-0.010**	mg/L	0.009	88	3896	3688	4	Standard
[	**V-1**	**51**	**-0.010**	mg/L	0.001	9	397	217	7	Standard
[	**Cr**	**52**	**-0.031**	ug/L	0.049	157	10944	10611	3	Standard
[	**Cr**	**53**	**-0.032**	ug/L	0.017	52	117	89	15	Standard
[	**Fe**	**54**	**0.588**	mg/L	1.535	261	44949	45126	3	Standard
[	**Fe**	**57**	**0.329**	mg/L	0.430	130	9916	9960	3	Standard
[	**Mn**	**55**	**0.002**	ug/L	0.001	62	280	311	8	Standard
[>	**Ge-1**	**72**		ug/L			34048	33535	1	KED
[	**Co**	**59**	**0.002**	ug/L	0.001	43	1	5	33	KED
[	**Ni**	**60**	**0.006**	ug/L	0.004	77	2	6	45	KED
[	**Ni**	**62**	**0.017**	ug/L	0.017	99	0	1	100	KED
[	**Cu**	**63**	**0.005**	ug/L	0.001	22	8	17	11	KED
[	**Cu**	**65**	**0.006**	ug/L	0.003	58	5	10	28	KED
[	**Zn**	**66**	**0.026**	ug/L	0.005	21	6	12	9	KED
[	**Zn**	**67**	**0.001**	ug/L	0.001	66	1	1		KED
[	**Zn**	**68**	**0.015**	ug/L	0.017	111	4	6	41	KED
[	**As**	**75**	**0.006**	ug/L	0.007	118	2	3	31	KED
[	**Se-1**	**78**	**0.112**	ug/L	0.149	132	3	5	41	KED
	Y	**89**		ug/L			578761	570810	2	Standard
	Kr	**83**		ug/L			63	61	18	Standard
[>	**In-1**	**115**		ug/L			12060	11679	1	KED
[	**Mo**	**98**	**0.048**	ug/L	0.008	16	3	31	16	KED
[	**Cd**	**111**	**-0.002**	ug/L	0.003	177	0	0	173	KED
[	**Cd**	**114**	**0.002**	ug/L	0.004	283	1	1	104	KED
[>	**In**	**115**		ug/L			849100	828919	1	Standard
[	**Ag**	**107**	**0.001**	ug/L	0.000	17	22	30	6	Standard
[	**Sb**	**121**	**0.054**	ug/L	0.002	4	19	645	3	Standard
[	**Sb**	**123**	**0.055**	ug/L	0.004	7	16	502	7	Standard
[	**Ba**	**135**	**0.002**	ug/L	0.002	97	8	15	43	Standard
[	**Ba**	**137**	**0.002**	ug/L	0.002	77	16	30	37	Standard
[>	**Tb**	**159**		ug/L			1018646	987738	1	Standard
[	**Tl**	**205**	**0.004**	ug/L	0.000	5	24	130	4	Standard
[	**Pb**	**208**	**0.003**	ug/L	0.001	40	122	234	21	Standard
[	**Bi**	**209**		ug/L			2160030	2167129	6	Standard
[	**Th**	**232**	**0.131**	ug/L	0.005	4	43	4385	5	Standard
[	**U**	**238**	**0.001**	ug/L	0.000	34	23	50	17	Standard

General Chemistry Raw Data
Analyst Notes and Raw Data

ARI Job ID: AVX9

AVX9 : 06/19

2-18-16
WAC

TOTAL DISSOLVED SOLIDS (TDS) BENCHSHEET DATE: 2/12/16 16:00

Method : SM 2540 C-97 ANALYST: UW

Objective is to have at least 25 mg of dry weight residue. If residue after the first reading is <25 mg add an additional 100 mL of filtered sample.

Total residue weight should be less than 200 mg!

TDS (mg/l) calculated as:
Final wt (mg) = (minimum Dry Wt - Tare Wt)*1000 after drying at 180C
(NOTE: if additional volume is added, first dry wt will be ignored!)

TDS = [(Final Wt)/ Sample Volume (orig + added)] x 1000

442 TDS Standard ***ARI #*** ***D004681***

0.80 g NaHCO3 0.80 g Na2SO4 0.40 g NaCl in 4000 mL = 500 mg/L

DQL Standard (50 mg/L) *Dilute* 10.0 *mL 500 mg/L to* 100 mL = 50 mg/L

Instrumentation ***Drying Oven ID:*** 12 ***Analytical Balance ID:*** 1123230597

SAMPLE ID	DISH #	SAMPLE VOL (ml) ORIGINAL	SAMPLE VOL (ml) ADDED	TARE WT (grams)	180C Dry Weight (grams) 1	2	3	4	FINAL WT (mg)	TDS (mg/l)
Cal Weight ID					CV-02	CV-02	CV-02	CV-02		
Date & Time -->					2/16/16 9:30	2/16/16 16;25	2/17/16 13:15	2/18/16 8:10		
Cal Wt (g)	100.0000				99.9998	99 9997	99.9997	99.9999		
record weights to 4 places					*Cal OK!*	*Cal OK!*	*Cal OK!*	*Cal OK!*		
BLANK		200		115.5655	115.5652	115.5615	115.5633	115.5647	-4.0	**< 5**
LCS # D004681		100		122.7639	122.8149	122.8111	122.8134	122.8148	47.2	**472**
										94%
QLS # D003098		200		130.1575	130.1698	130.1664	130.1688	130.1692	8.9	**44.5**
AVX9 A6		100		121.7179	121.7679	121.7638	121.7641	STOP	45.9	**459**
AVX9 A6 dup		100		132.2529	132.3020	132.2975	132.2998	132.3017	44.6	**446**
										RPD =2.9
AVX9 B1		10		18.6544	18.7568	18.7513	18.7498	18.7508	95.4	**9540**
AVX9 C1		10		18.6366	18.6721	18.6709	18.6705	STOP	33.9	**3390**
AVX9 D3		100		116.7169	116.7656	116.7614	116.7630	116.7650	44.5	**445**
AVX9 E3		200		105.3362	105.3939	105.3894	105.3907	105.3924	53.2	**266**
~~AVX9 F1~~		~~200~~		~~115.4204~~	~~121.4249~~	~~121.2185~~	~~121.1636~~	~~121.3029~~	~~5743.2~~	~~**28720**~~
~~AVX9 G1~~		~~200~~		~~114.4531~~	~~120.4733~~	~~120.3008~~	~~120.2191~~	~~120.3345~~	~~5766.0~~	~~**28830**~~

AVX9 . 00471

2-22-16
UAL

TOTAL DISSOLVED SOLIDS (TDS) BENCHSHEET DATE: 2/16/16 11:30

Method : SM 2540 C-97 ANALYST: UW

Objective is to have at least 25 mg of dry weight residue. If residue after the first reading is <25 mg add an additional 100 mL of filtered sample.

Total residue weight should be less than 200 mg!

TDS (mg/l) calculated as:
Final wt (mg) = (minimum Dry Wt - Tare Wt)*1000 after drying at 180C
(NOTE: if additional volume is added, first dry wt will be ignored!)

TDS = [(Final Wt)/ Sample Volume (orig + added)] x 1000

442 TDS Standard ***ARI #*** ***D004681***

0.80 g NaHCO3 0.80 g Na2SO4 0.40 g NaCl in 4000 mL = 500 mg/L

DQL Standard (50 mg/L) *Dilute* 10.0 *mL 500 mg/L to* 100 mL = 50 mg/L

Instrumentation ***Drying Oven ID:*** 12 ***Analytical Balance ID:*** 1123230597

SAMPLE ID	DISH #	SAMPLE VOL (ml) ORIGINAL	SAMPLE VOL (ml) ADDED	TARE WT (grams)	180C Dry Weight (grams) 1	2	3	4	FINAL WT (mg)	TDS (mg/l)
Cal Weight ID					CV-02	CV-02	CV-02	CV-02		
Date & Time -->					2/18/16 8:10	2/18/16 14:20	2/19/16 9:20	2/19/16 15:25		
Cal Wt (g) 100.0000					99.9999	99.9998	99.9998	99.9998		
record weights to 4 places					*Cal OK!*	*Cal OK!*	*Cal OK!*	*Cal OK!*		
BLANK		200		118.5903	118.5894	118.5887	118.5885	118.5884	-1.9	**< 5**
LCS # D004681		100		131.0217	131.0728	131.0711	131.0720	131.0706	48.9	**489**
										98%
QLS # D003098		200		125.0877	125.0995	125.0979	125.0982	STOP	10.2	**51**
AVT9 C2		200		123.8353	123.8358	123.8347	123.8351	STOP	-0.6	**< 5**
AVT9 C2 dup		200		114.5988	114.5979	114.5975	STOP		-1.3	**< 5**
										RPD = NA
AVX9 F1		10		18.0970	18.4054	18.3930	18.3896	18.3882	291.2	**29120**
AVX9 G1		10		18.6836	18.9794	18.9680	18.9647	18.9635	279.9	**27990**

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Conventionals Laboratory Analyst Notes

ARI Job No.: AVT9/AVX9

Client ID:

Parameter: TDS

Client Project:

List problems, concerns, corrective actions and any other pertinent information
Analyst accidentally used wrong amount on first run on 2-12.
Re-done on 2-16 within hold time.
AVT9-C, AVX9-F, AVX9-G

Analyst Initials:	W	Date:	2-16-16

6147F

Revision 007
AVX9 : 00470 6/11/10

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

September 2, 2016

Robert Trahan
GeoEngineers, Inc.
600 Stewart, Suite 1700
Seattle, WA 98101-1233

Re: Analytical Data for Project 5147-006-11
Laboratory Reference No. 1608-259

Dear Robert:

Enclosed are the analytical results and associated quality control data for samples submitted on August 19, 2016.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 2, 2016
Samples Submitted: August 19, 2016
Laboratory Reference: 1608-259
Project: 5147-006-11

Case Narrative

Samples were collected on August 18 and 19, 2016 and received by the laboratory on August 19, 2016. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

PAHs EPA 8270D/SIM Analysis

Sample MW-4_081816 had one surrogate recovery out of control limits. This is within allowance of our standard operating procedure as long as the recovery is above 10%.

Dissolved Metals by EPA 200.8/7470A Analysis

The dissolved field filter samples, MW-8_081816, MW-1_081816, and MW-DUP_081816 were received containing solid material. The samples were digested according to OnSite Environmental standard operating procedure.

Please note that any other QA/QC issues associated with these extractions and analyses will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 2, 2016
Samples Submitted: August 19, 2016
Laboratory Reference: 1608-259
Project: 5147-006-11

ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
MW-8_081816	08-259-01	Water	8-18-16	8-19-16	
MW-1_081816	08-259-02	Water	8-18-16	8-19-16	
MW-4_081816	08-259-03	Water	8-18-16	8-19-16	
MW-DUP_081816	08-259-04	Water	8-18-16	8-19-16	
MW-2B_081916	08-259-05	Water	8-19-16	8-19-16	
MW-3A_081916	08-259-06	Water	8-19-16	8-19-16	
MW-6_081916	08-259-07	Water	8-19-16	8-19-16	
MW-7_081916	08-259-08	Water	8-19-16	8-19-16	

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 2, 2016
Samples Submitted: August 19, 2016
Laboratory Reference: 1608-259
Project: 5147-006-11

PAHs EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-8_081816**					
Laboratory ID:	08-259-01					
Naphthalene	**ND**	0.10	EPA 8270D/SIM	8-23-16	8-24-16	
2-Methylnaphthalene	**ND**	0.10	EPA 8270D/SIM	8-23-16	8-24-16	
1-Methylnaphthalene	**ND**	0.10	EPA 8270D/SIM	8-23-16	8-24-16	
Acenaphthylene	**ND**	0.10	EPA 8270D/SIM	8-23-16	8-24-16	
Acenaphthene	**ND**	0.10	EPA 8270D/SIM	8-23-16	8-24-16	
Fluorene	**ND**	0.10	EPA 8270D/SIM	8-23-16	8-24-16	
Phenanthrene	**ND**	0.10	EPA 8270D/SIM	8-23-16	8-24-16	
Anthracene	**ND**	0.10	EPA 8270D/SIM	8-23-16	8-24-16	
Fluoranthene	**ND**	0.10	EPA 8270D/SIM	8-23-16	8-24-16	
Pyrene	**ND**	0.10	EPA 8270D/SIM	8-23-16	8-24-16	
Benzo[a]anthracene	**ND**	0.010	EPA 8270D/SIM	8-23-16	8-24-16	
Chrysene	**ND**	0.010	EPA 8270D/SIM	8-23-16	8-24-16	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270D/SIM	8-23-16	8-24-16	
Benzo(j,k)fluoranthene	**ND**	0.010	EPA 8270D/SIM	8-23-16	8-24-16	
Benzo[a]pyrene	**ND**	0.010	EPA 8270D/SIM	8-23-16	8-24-16	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270D/SIM	8-23-16	8-24-16	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270D/SIM	8-23-16	8-24-16	
Benzo[g,h,i]perylene	**ND**	0.010	EPA 8270D/SIM	8-23-16	8-24-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*64*	*33 - 117*				
Pyrene-d10	*90*	*35 - 140*				
Terphenyl-d14	*90*	*33 - 117*				

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 2, 2016
Samples Submitted: August 19, 2016
Laboratory Reference: 1608-259
Project: 5147-006-11

PAHs EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-4_081816**					
Laboratory ID:	08-259-03					
Naphthalene	**ND**	0.10	EPA 8270D/SIM	8-23-16	8-24-16	
2-Methylnaphthalene	**ND**	0.10	EPA 8270D/SIM	8-23-16	8-24-16	
1-Methylnaphthalene	**ND**	0.10	EPA 8270D/SIM	8-23-16	8-24-16	
Acenaphthylene	**ND**	0.10	EPA 8270D/SIM	8-23-16	8-24-16	
Acenaphthene	**ND**	0.10	EPA 8270D/SIM	8-23-16	8-24-16	
Fluorene	**ND**	0.10	EPA 8270D/SIM	8-23-16	8-24-16	
Phenanthrene	**ND**	0.10	EPA 8270D/SIM	8-23-16	8-24-16	
Anthracene	**ND**	0.10	EPA 8270D/SIM	8-23-16	8-24-16	
Fluoranthene	**ND**	0.10	EPA 8270D/SIM	8-23-16	8-24-16	
Pyrene	**ND**	0.10	EPA 8270D/SIM	8-23-16	8-24-16	
Benzo[a]anthracene	**0.013**	0.010	EPA 8270D/SIM	8-23-16	8-24-16	
Chrysene	**ND**	0.010	EPA 8270D/SIM	8-23-16	8-24-16	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270D/SIM	8-23-16	8-24-16	
Benzo(j,k)fluoranthene	**ND**	0.010	EPA 8270D/SIM	8-23-16	8-24-16	
Benzo[a]pyrene	**ND**	0.010	EPA 8270D/SIM	8-23-16	8-24-16	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270D/SIM	8-23-16	8-24-16	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270D/SIM	8-23-16	8-24-16	
Benzo[g,h,i]perylene	**ND**	0.010	EPA 8270D/SIM	8-23-16	8-24-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*124*	*33 - 117*				Q
Pyrene-d10	*84*	*35 - 140*				
Terphenyl-d14	*104*	*33 - 117*				

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Date of Report: September 2, 2016
Samples Submitted: August 19, 2016
Laboratory Reference: 1608-259
Project: 5147-006-11

PAHs EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-DUP_081816**					
Laboratory ID:	08-259-04					
Naphthalene	**ND**	0.10	EPA 8270D/SIM	8-23-16	8-24-16	
2-Methylnaphthalene	**ND**	0.10	EPA 8270D/SIM	8-23-16	8-24-16	
1-Methylnaphthalene	**ND**	0.10	EPA 8270D/SIM	8-23-16	8-24-16	
Acenaphthylene	**ND**	0.10	EPA 8270D/SIM	8-23-16	8-24-16	
Acenaphthene	**ND**	0.10	EPA 8270D/SIM	8-23-16	8-24-16	
Fluorene	**ND**	0.10	EPA 8270D/SIM	8-23-16	8-24-16	
Phenanthrene	**ND**	0.10	EPA 8270D/SIM	8-23-16	8-24-16	
Anthracene	**ND**	0.10	EPA 8270D/SIM	8-23-16	8-24-16	
Fluoranthene	**ND**	0.10	EPA 8270D/SIM	8-23-16	8-24-16	
Pyrene	**ND**	0.10	EPA 8270D/SIM	8-23-16	8-24-16	
Benzo[a]anthracene	**ND**	0.010	EPA 8270D/SIM	8-23-16	8-24-16	
Chrysene	**ND**	0.010	EPA 8270D/SIM	8-23-16	8-24-16	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270D/SIM	8-23-16	8-24-16	
Benzo(j,k)fluoranthene	**ND**	0.010	EPA 8270D/SIM	8-23-16	8-24-16	
Benzo[a]pyrene	**ND**	0.010	EPA 8270D/SIM	8-23-16	8-24-16	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270D/SIM	8-23-16	8-24-16	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270D/SIM	8-23-16	8-24-16	
Benzo[g,h,i]perylene	**ND**	0.010	EPA 8270D/SIM	8-23-16	8-24-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*89*	*33 - 117*				
Pyrene-d10	*89*	*35 - 140*				
Terphenyl-d14	*97*	*33 - 117*				

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Date of Report: September 2, 2016
Samples Submitted: August 19, 2016
Laboratory Reference: 1608-259
Project: 5147-006-11

TOTAL METALS
EPA 6020A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	08-259-01					
Client ID:	**MW-8_081816**					
Arsenic	**16**	7.8	6020A	8-24-16	8-24-16	
Nickel	**ND**	7.8	6020A	8-24-16	8-24-16	
Lab ID:	08-259-02					
Client ID:	**MW-1_081816**					
Arsenic	**9.2**	7.8	6020A	8-24-16	8-24-16	
Lab ID:	08-259-03					
Client ID:	**MW-4_081816**					
Arsenic	**ND**	7.8	6020A	8-24-16	8-24-16	
Lab ID:	08-259-04					
Client ID:	**MW-DUP_081816**					
Arsenic	**14**	7.8	6020A	8-24-16	8-24-16	
Nickel	**ND**	7.8	6020A	8-24-16	8-24-16	
Lab ID:	08-259-05					
Client ID:	**MW-2B_081916**					
Arsenic	**ND**	7.8	6020A	8-24-16	8-24-16	
Nickel	**ND**	7.8	6020A	8-24-16	8-24-16	
Lab ID:	08-259-06					
Client ID:	**MW-3A_081916**					
Nickel	**ND**	7.8	6020A	8-24-16	8-24-16	

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Date of Report: September 2, 2016
Samples Submitted: August 19, 2016
Laboratory Reference: 1608-259
Project: 5147-006-11

TOTAL METALS
EPA 6020A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	08-259-07					
Client ID:	**MW-6_081916**					
Nickel	**ND**	7.8	6020A	8-24-16	8-24-16	
Lab ID:	08-259-08					
Client ID:	**MW-7_081916**					
Arsenic	**12**	7.8	6020A	8-24-16	8-24-16	
Nickel	**11**	7.8	6020A	8-24-16	8-24-16	

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Date of Report: September 2, 2016
Samples Submitted: August 19, 2016
Laboratory Reference: 1608-259
Project: 5147-006-11

DISSOLVED METALS
EPA 6020A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	08-259-01					
Client ID:	**MW-8_081816**					
Arsenic	**15**	7.8	6020A		8-24-16	
Nickel	**ND**	7.8	6020A		8-24-16	
Lab ID:	08-259-02					
Client ID:	**MW-1_081816**					
Arsenic	**ND**	7.8	6020A		8-24-16	
Lab ID:	08-259-03					
Client ID:	**MW-4_081816**					
Arsenic	**ND**	7.0	6020A		8-24-16	
Lab ID:	08-259-04					
Client ID:	**MW-DUP_081816**					
Arsenic	**14**	7.8	6020A		8-24-16	
Nickel	**ND**	7.8	6020A		8-24-16	
Lab ID:	08-259-05					
Client ID:	**MW-2B_081916**					
Arsenic	**ND**	7.0	6020A		8-24-16	
Nickel	**ND**	7.0	6020A		8-24-16	
Lab ID:	08-259-06					
Client ID:	**MW-3A_081916**					
Nickel	**ND**	7.0	6020A		8-24-16	

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Date of Report: September 2, 2016
Samples Submitted: August 19, 2016
Laboratory Reference: 1608-259
Project: 5147-006-11

DISSOLVED METALS
EPA 6020A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	08-259-07					
Client ID:	**MW-6_081916**					
Nickel	**ND**	7.0	6020A		8-24-16	
Lab ID:	08-259-08					
Client ID:	**MW-7_081916**					
Arsenic	**11**	7.0	6020A		8-24-16	
Nickel	**10**	7.0	6020A		8-24-16	

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Date of Report: September 2, 2016
Samples Submitted: August 19, 2016
Laboratory Reference: 1608-259
Project: 5147-006-11

TOTAL DISSOLVED SOLIDS
SM 2540C

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-8_081816**					
Laboratory ID:	08-259-01					
Total Dissolved Solids	**440**	13	SM 2540C	8-22-16	8-23-16	
Client ID:	**MW-1_081816**					
Laboratory ID:	08-259-02					
Total Dissolved Solids	**2900**	13	SM 2540C	8-22-16	8-23-16	
Client ID:	**MW-4_081816**					
Laboratory ID:	08-259-03					
Total Dissolved Solids	**400**	13	SM 2540C	8-22-16	8-23-16	
Client ID:	**MW-DUP_081816**					
Laboratory ID:	08-259-04					
Total Dissolved Solids	**450**	13	SM 2540C	8-22-16	8-23-16	
Client ID:	**MW-2B_081916**					
Laboratory ID:	08-259-05					
Total Dissolved Solids	**9100**	13	SM 2540C	8-22-16	8-23-16	
Client ID:	**MW-3A_081916**					
Laboratory ID:	08-259-06					
Total Dissolved Solids	**31000**	13	SM 2540C	8-22-16	8-23-16	
Client ID:	**MW-6_081916**					
Laboratory ID:	08-259-07					
Total Dissolved Solids	**31000**	13	SM 2540C	8-22-16	8-23-16	

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Date of Report: September 2, 2016
Samples Submitted: August 19, 2016
Laboratory Reference: 1608-259
Project: 5147-006-11

TOTAL DISSOLVED SOLIDS
SM 2540C

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-7_081916**					
Laboratory ID:	08-259-08					
Total Dissolved Solids	**7400**	13	SM 2540C	8-22-16	8-23-16	

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Date of Report: September 2, 2016
Samples Submitted: August 19, 2016
Laboratory Reference: 1608-259
Project: 5147-006-11

PAHs EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0823W2					
Naphthalene	**ND**	0.10	EPA 8270D/SIM	8-23-16	8-24-16	
2-Methylnaphthalene	**ND**	0.10	EPA 8270D/SIM	8-23-16	8-24-16	
1-Methylnaphthalene	**ND**	0.10	EPA 8270D/SIM	8-23-16	8-24-16	
Acenaphthylene	**ND**	0.10	EPA 8270D/SIM	8-23-16	8-24-16	
Acenaphthene	**ND**	0.10	EPA 8270D/SIM	8-23-16	8-24-16	
Fluorene	**ND**	0.10	EPA 8270D/SIM	8-23-16	8-24-16	
Phenanthrene	**ND**	0.10	EPA 8270D/SIM	8-23-16	8-24-16	
Anthracene	**ND**	0.10	EPA 8270D/SIM	8-23-16	8-24-16	
Fluoranthene	**ND**	0.10	EPA 8270D/SIM	8-23-16	8-24-16	
Pyrene	**ND**	0.10	EPA 8270D/SIM	8-23-16	8-24-16	
Benzo[a]anthracene	**ND**	0.010	EPA 8270D/SIM	8-23-16	8-24-16	
Chrysene	**ND**	0.010	EPA 8270D/SIM	8-23-16	8-24-16	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270D/SIM	8-23-16	8-24-16	
Benzo(j,k)fluoranthene	**ND**	0.010	EPA 8270D/SIM	8-23-16	8-24-16	
Benzo[a]pyrene	**ND**	0.010	EPA 8270D/SIM	8-23-16	8-24-16	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270D/SIM	8-23-16	8-24-16	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270D/SIM	8-23-16	8-24-16	
Benzo[g,h,i]perylene	**ND**	0.010	EPA 8270D/SIM	8-23-16	8-24-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*72*	*33 - 117*				
Pyrene-d10	*106*	*35 - 140*				
Terphenyl-d14	*96*	*33 - 117*				

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Date of Report: September 2, 2016
Samples Submitted: August 19, 2016
Laboratory Reference: 1608-259
Project: 5147-006-11

PAHs EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0823W2									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	**0.392**	**0.415**	0.500	0.500	78	83	46 - 99	6	37	
Acenaphthylene	**0.406**	**0.412**	0.500	0.500	81	82	37 - 116	1	26	
Acenaphthene	**0.419**	**0.433**	0.500	0.500	84	87	51 - 106	3	30	
Fluorene	**0.406**	**0.421**	0.500	0.500	81	84	55 - 108	4	31	
Phenanthrene	**0.396**	**0.422**	0.500	0.500	79	84	53 - 107	6	30	
Anthracene	**0.424**	**0.449**	0.500	0.500	85	90	52 - 140	6	27	
Fluoranthene	**0.378**	**0.399**	0.500	0.500	76	80	62 - 112	5	24	
Pyrene	**0.464**	**0.489**	0.500	0.500	93	98	59 - 118	5	28	
Benzo[a]anthracene	**0.499**	**0.534**	0.500	0.500	100	107	58 - 132	7	26	
Chrysene	**0.529**	**0.526**	0.500	0.500	106	105	63 - 113	1	25	
Benzo[b]fluoranthene	**0.559**	**0.519**	0.500	0.500	112	104	56 - 124	7	27	
Benzo(j,k)fluoranthene	**0.537**	**0.503**	0.500	0.500	107	101	62 - 121	7	31	
Benzo[a]pyrene	**0.446**	**0.470**	0.500	0.500	89	94	50 - 131	5	25	
Indeno(1,2,3-c,d)pyrene	**0.370**	**0.397**	0.500	0.500	74	79	60 - 120	7	26	
Dibenz[a,h]anthracene	**0.358**	**0.389**	0.500	0.500	72	78	61 - 115	8	26	
Benzo[g,h,i]perylene	**0.407**	**0.453**	0.500	0.500	81	91	60 - 116	11	26	
Surrogate:										
2-Fluorobiphenyl					*71*	*69*	*33 - 117*			
Pyrene-d10					*76*	*81*	*35 - 140*			
Terphenyl-d14					*91*	*92*	*33 - 117*			

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Date of Report: September 2, 2016
Samples Submitted: August 19, 2016
Laboratory Reference: 1608-259
Project: 5147-006-11

TOTAL METALS
EPA 6020A
METHOD BLANK QUALITY CONTROL

Date Extracted: 8-24-16
Date Analyzed: 8-24-16

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB0824WM1

Analyte	Method	Result	PQL
Arsenic	6020A	**ND**	7.8
Nickel	6020A	**ND**	7.8

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Date of Report: September 2, 2016
Samples Submitted: August 19, 2016
Laboratory Reference: 1608-259
Project: 5147-006-11

TOTAL METALS
EPA 6020A
DUPLICATE QUALITY CONTROL

Date Extracted: 8-24-16
Date Analyzed: 8-24-16

Matrix: Water
Units: ug/L (ppb)

Lab ID: 08-259-01

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**15.8**	**15.3**	3	7.8	
Nickel	**ND**	**ND**	NA	7.8	

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Date of Report: September 2, 2016
Samples Submitted: August 19, 2016
Laboratory Reference: 1608-259
Project: 5147-006-11

TOTAL METALS
EPA 6020A
MS/MSD QUALITY CONTROL

Date Extracted: 8-24-16
Date Analyzed: 8-24-16

Matrix: Water
Units: ug/L (ppb)

Lab ID: 08-259-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	222	**242**	102	**250**	105	3	
Nickel	222	**218**	98	**219**	99	1	

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Date of Report: September 2, 2016
Samples Submitted: August 19, 2016
Laboratory Reference: 1608-259
Project: 5147-006-11

TOTAL METALS
EPA 6020A
CONTINUING CALIBRATION SUMMARY

Analyte	Lab ID	True Value (ppm)	Calc. Value	Percent Difference	Control Limits
Arsenic	ICV082416X	0.0500	0.0499	0.20	+/- 10%
Nickel	ICV082416X	0.0500	0.0494	1.2	+/- 10%
Arsenic	LLICV1082416X	0.000500	0.000468	6.4	+/- 30%
Nickel	LLICV1082416X	0.000500	0.000493	1.4	+/- 30%
Arsenic	CCV1082416X	0.0400	0.0395	1.3	+/- 10%
Nickel	CCV1082416X	0.0400	0.0390	2.5	+/- 10%
Arsenic	CCV2082416X	0.0400	0.0391	2.3	+/- 10%
Nickel	CCV2082416X	0.0400	0.0373	6.8	+/- 10%
Arsenic	LLCCV2082416X	0.000500	0.000465	7.0	+/- 30%
Nickel	LLCCV2082416X	0.000500	0.000483	3.4	+/- 30%
Arsenic	CCV3082416X	0.0400	0.0402	-0.50	+/- 10%
Nickel	CCV3082416X	0.0400	0.0388	3.0	+/- 10%
Arsenic	LLCCV3082416X	0.000500	0.000491	1.8	+/- 30%
Nickel	LLCCV3082416X	0.000500	0.000458	8.4	+/- 30%
Arsenic	CCV4082416X	0.0400	0.0394	1.5	+/- 10%
Nickel	CCV4082416X	0.0400	0.0380	5.0	+/- 10%
Arsenic	LLCCV4082416X	0.000500	0.000515	-3.0	+/- 30%
Nickel	LLCCV4082416X	0.000500	0.000461	7.8	+/- 30%
Arsenic	CCV5082416X	0.0400	0.0399	0.25	+/- 10%
Nickel	CCV5082416X	0.0400	0.0378	5.5	+/- 10%
Arsenic	LLCCV5082416X	0.000500	0.000518	-3.6	+/- 30%
Nickel	LLCCV5082416X	0.000500	0.000440	12	+/- 30%

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Date of Report: September 2, 2016
Samples Submitted: August 19, 2016
Laboratory Reference: 1608-259
Project: 5147-006-11

DISSOLVED METALS
EPA 6020A
METHOD BLANK QUALITY CONTROL

Date Analyzed: 8-24-16

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB0824D1

Analyte	Method	Result	PQL
Arsenic	6020A	**ND**	7.0
Nickel	6020A	**ND**	7.0

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Date of Report: September 2, 2016
Samples Submitted: August 19, 2016
Laboratory Reference: 1608-259
Project: 5147-006-11

DISSOLVED METALS
EPA 6020A
METHOD BLANK QUALITY CONTROL

Date Analyzed: 8-24-16

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB0824DM1

Analyte	Method	Result	PQL
Arsenic	6020A	**ND**	7.8
Nickel	6020A	**ND**	7.8

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: September 2, 2016
Samples Submitted: August 19, 2016
Laboratory Reference: 1608-259
Project: 5147-006-11

DISSOLVED METALS
EPA 6020A
DUPLICATE QUALITY CONTROL

Date Analyzed: 8-24-16

Matrix: Water
Units: ug/L (ppb)

Lab ID: 08-259-03

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**ND**	**ND**	NA	14.0	
Nickel	**ND**	**ND**	NA	14.0	

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Date of Report: September 2, 2016
Samples Submitted: August 19, 2016
Laboratory Reference: 1608-259
Project: 5147-006-11

DISSOLVED METALS
EPA 6020A
DUPLICATE QUALITY CONTROL

Date Analyzed: 8-24-16

Matrix: Water
Units: ug/L (ppb)

Lab ID: 08-259-01

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**14.5**	**14.3**	2	7.8	
Nickel	**ND**	**ND**	NA	7.8	

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Date of Report: September 2, 2016
Samples Submitted: August 19, 2016
Laboratory Reference: 1608-259
Project: 5147-006-11

DISSOLVED METALS
EPA 6020A
MS/MSD QUALITY CONTROL

Date Analyzed: 8-24-16

Matrix: Water
Units: ug/L (ppb)

Lab ID: 08-259-03

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	400	**385**	96	**387**	97	1	
Nickel	400	**357**	89	**357**	89	0	

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Date of Report: September 2, 2016
Samples Submitted: August 19, 2016
Laboratory Reference: 1608-259
Project: 5147-006-11

DISSOLVED METALS
EPA 6020A
MS/MSD QUALITY CONTROL

Date Analyzed: 8-24-16

Matrix: Water
Units: ug/L (ppb)

Lab ID: 08-259-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	200	**224**	105	**234**	110	4	
Nickel	200	**206**	103	**212**	106	3	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 2, 2016
Samples Submitted: August 19, 2016
Laboratory Reference: 1608-259
Project: 5147-006-11

DISSOLVED METALS
EPA 6020A
CONTINUING CALIBRATION SUMMARY

Analyte	Lab ID	True Value (ppm)	Calc. Value	Percent Difference	Control Limits
Arsenic	ICV082416X	0.0500	0.0499	0.20	+/- 10%
Nickel	ICV082416X	0.0500	0.0494	1.2	+/- 10%
Arsenic	LLICV1082416X	0.000500	0.000468	6.4	+/- 30%
Nickel	LLICV1082416X	0.000500	0.000493	1.4	+/- 30%
Arsenic	CCV1082416X	0.0400	0.0395	1.3	+/- 10%
Nickel	CCV1082416X	0.0400	0.0390	2.5	+/- 10%
Arsenic	CCV2082416X	0.0400	0.0391	2.3	+/- 10%
Nickel	CCV2082416X	0.0400	0.0373	6.8	+/- 10%
Arsenic	LLCCV2082416X	0.000500	0.000465	7.0	+/- 30%
Nickel	LLCCV2082416X	0.000500	0.000483	3.4	+/- 30%
Arsenic	CCV3082416X	0.0400	0.0402	-0.50	+/- 10%
Nickel	CCV3082416X	0.0400	0.0388	3.0	+/- 10%
Arsenic	LLCCV3082416X	0.000500	0.000491	1.8	+/- 30%
Nickel	LLCCV3082416X	0.000500	0.000458	8.4	+/- 30%
Arsenic	CCV4082416X	0.0400	0.0394	1.5	+/- 10%
Nickel	CCV4082416X	0.0400	0.0380	5.0	+/- 10%
Arsenic	LLCCV4082416X	0.000500	0.000515	-3.0	+/- 30%
Nickel	LLCCV4082416X	0.000500	0.000461	7.8	+/- 30%

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Date of Report: September 2, 2016
Samples Submitted: August 19, 2016
Laboratory Reference: 1608-259
Project: 5147-006-11

TOTAL DISSOLVED SOLIDS
SM 2540C
QUALITY CONTROL

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0822W1					
Total Dissolved Solids	**ND**	13	SM 2540C	8-22-16	8-23-16	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	08-259-01								
	ORIG	DUP							
Total Dissolved Solids	**441**	**428**	NA	NA	NA	NA	3	16	
SPIKE BLANK									
Laboratory ID:	SB0823W1								
	SB		SB		SB				
Total Dissolved Solids	**476**		500	NA	95	85-108	NA	NA	

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OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

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Chain of Custody

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: GEOENGINEERS
Project Number: 5147-006-11
Project Name: PORT OF ANACORTES - DCI
Project Manager: ROBERT TRAHAN
Sampled by: NATHAN SOLOMON

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 08-259

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	TOTAL METALS 6010/6020	DISSOLVED METALS 6010/6020	TDS (SM2540C)	MS/MSD		% Moisture
1	MW8_081816	8.18.16	1115	WATER	8								X									X	X	X	X		
2	MW-1_081816		0920		3																	X	X	X			
3	MW-4_081816				4								X									X	X	X			
4	MW-DUP_081816		1200		4								X									X	X	X			
5	MW-2B_081916	8.19.16	1330		3																	X	X	X			
6	MW-3A_081916		1240		3																	X	X	X			
7	MW-6_081916		1105		3																	X	X	X			
8	MW-7_081916		1345		3																	X	X	X			

	Signature	Company	Date	Time
Relinquished		GEI	8.19.16	1505
Received		OSE	8.19.16	5:05p
Relinquished				
Received				
Relinquished				
Received				

Comments/Special Instructions
METALS = ARSENIC; NICKEL
SEE ATTACHED TABLE 3 FOR CLARIFICATION

Reviewed/Date _____ Reviewed/Date _____ Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☐ Level IV ☐ Electronic Data Deliverables (EDDs) ☐ _____

Sample/Cooler Receipt and Acceptance Checklist

Client: GES

Client Project Name/Number: 5147-006-11

OnSite Project Number: 08-259

Initiated by: DM

Date Initiated: 8.19.16

1.0 Cooler Verification

1.1 Were there custody seals on the outside of the cooler?	Yes	No	N/A	1 2 3 4
1.2 Were the custody seals intact?	Yes	No	N/A	1 2 3 4
1.3 Were the custody seals signed and dated by last custodian?	Yes	No	N/A	1 2 3 4
1.4 Were the samples delivered on ice or blue ice?	Yes	No		1 2 3 4
1.5 Were samples received between 0-6 degrees Celsius?	Yes	No	Temperature: 5°C	
1.6 Have shipping bills (if any) been attached to the back of this form?	Yes	N/A		
1.7 How were the samples delivered?	Client	Courier	UPS/FedEx	OSE Pickup / Other

2.0 Chain of Custody Verification

2.1 Was a Chain of Custody submitted with the samples?	Yes	No	1 2 3 4
2.2 Was the COC legible and written in permanent ink?	Yes	No	1 2 3 4
2.3 Have samples been relinquished and accepted by each custodian?	Yes	No	1 2 3 4
2.4 Did the sample labels (ID, date, time, preservative) agree with COC?	Yes	No	1 2 3 4
2.5 Were all of the samples listed on the COC submitted?	Yes	No	1 2 3 4
2.6 Were any of the samples submitted omitted from the COC?	Yes	No	1 2 3 4

3.0 Sample Verification

3.1 Were any sample containers broken or compromised?	Yes	No		1 2 3 4
3.2 Were any sample labels missing or illegible?	Yes	No		1 2 3 4
3.3 Have the correct containers been used for each analysis requested?	Yes	No		1 2 3 4
3.4 Have the samples been correctly preserved?	Yes	No	N/A	1 2 3 4
3.5 Are volatiles samples free from headspace and bubbles greater than 6mm?	Yes	No	N/A	1 2 3 4
3.6 Is there sufficient sample submitted to perform requested analyses?	Yes	No		1 2 3 4
3.7 Have any holding times already expired or will expire in 24 hours?	Yes	No		1 2 3 4
3.8 Was method 5035A used?	Yes	No	N/A	1 2 3 4
3.9 If 5035A was used, which sampling option was used (#1, 2, or 3).	#		N/A	1 2 3 4

Explain any discrepancies:

1 - Discuss issue in Case Narrative

2 - Process Sample As-is

3 - Client contacted to discuss problem

4 - Sample cannot be analyzed or client does not wish to proceed

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

February 28, 2017

Robert Trahan
GeoEngineers, Inc.
600 Stewart, Suite 1700
Seattle, WA 98101-1233

Re: Analytical Data for Project 5147-006-11
Laboratory Reference No. 1702-162

Dear Robert:

Enclosed are the analytical results and associated quality control data for samples submitted on February 17, 2017.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: February 28, 2017
Samples Submitted: February 17, 2017
Laboratory Reference: 1702-162
Project: 5147-006-11

Case Narrative

Samples were collected on February 15 and 16, 2017 and received by the laboratory on February 17, 2017. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Dissolved Metals EPA 6020A Analysis

The dissolved field filter samples MW-1_021517 and MW-8_021517 were received containing solid material. The samples were digested according to OnSite Environmental standard operating procedure.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

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Date of Report: February 28, 2017
Samples Submitted: February 17, 2017
Laboratory Reference: 1702-162
Project: 5147-006-11

ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
MW-1_021517	02-162-01	Water	2-15-17	2-17-17	
MW-2B_021517	02-162-02	Water	2-15-17	2-17-17	
MW-3A_021617	02-162-03	Water	2-16-17	2-17-17	
MW-4_021517	02-162-04	Water	2-15-17	2-17-17	
MW-6_021617	02-162-05	Water	2-16-17	2-17-17	
MW-7_021617	02-162-06	Water	2-16-17	2-17-17	
MW-DUP_021517	02-162-07	Water	2-15-17	2-17-17	
MW-8_021517	02-162-08	Water	2-15-17	2-17-17	

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Date of Report: February 28, 2017
Samples Submitted: February 17, 2017
Laboratory Reference: 1702-162
Project: 5147-006-11

cPAHs EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-4_021517**					
Laboratory ID:	02-162-04					
Benzo[a]anthracene	**ND**	0.0094	EPA 8270D/SIM	2-21-17	2-21-17	
Chrysene	**ND**	0.0094	EPA 8270D/SIM	2-21-17	2-21-17	
Benzo[b]fluoranthene	**ND**	0.0094	EPA 8270D/SIM	2-21-17	2-21-17	
Benzo(j,k)fluoranthene	**ND**	0.0094	EPA 8270D/SIM	2-21-17	2-21-17	
Benzo[a]pyrene	**ND**	0.0094	EPA 8270D/SIM	2-21-17	2-21-17	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0094	EPA 8270D/SIM	2-21-17	2-21-17	
Dibenz[a,h]anthracene	**ND**	0.0094	EPA 8270D/SIM	2-21-17	2-21-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*58*	*30 - 124*				
Pyrene-d10	*55*	*40 - 143*				
Terphenyl-d14	*60*	*27 - 127*				

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Date of Report: February 28, 2017
Samples Submitted: February 17, 2017
Laboratory Reference: 1702-162
Project: 5147-006-11

cPAHs EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-DUP_021517**					
Laboratory ID:	02-162-07					
Benzo[a]anthracene	**ND**	0.0094	EPA 8270D/SIM	2-17-17	2-19-17	
Chrysene	**ND**	0.0094	EPA 8270D/SIM	2-17-17	2-19-17	
Benzo[b]fluoranthene	**ND**	0.0094	EPA 8270D/SIM	2-17-17	2-19-17	
Benzo(j,k)fluoranthene	**ND**	0.0094	EPA 8270D/SIM	2-17-17	2-19-17	
Benzo[a]pyrene	**ND**	0.0094	EPA 8270D/SIM	2-17-17	2-19-17	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0094	EPA 8270D/SIM	2-17-17	2-19-17	
Dibenz[a,h]anthracene	**ND**	0.0094	EPA 8270D/SIM	2-17-17	2-19-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*53*	*30 - 124*				
Pyrene-d10	*57*	*40 - 143*				
Terphenyl-d14	*71*	*27 - 127*				

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Date of Report: February 28, 2017
Samples Submitted: February 17, 2017
Laboratory Reference: 1702-162
Project: 5147-006-11

cPAHs EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-8_021517**					
Laboratory ID:	02-162-08					
Benzo[a]anthracene	**ND**	0.0094	EPA 8270D/SIM	2-17-17	2-19-17	
Chrysene	**ND**	0.0094	EPA 8270D/SIM	2-17-17	2-19-17	
Benzo[b]fluoranthene	**ND**	0.0094	EPA 8270D/SIM	2-17-17	2-19-17	
Benzo(j,k)fluoranthene	**ND**	0.0094	EPA 8270D/SIM	2-17-17	2-19-17	
Benzo[a]pyrene	**ND**	0.0094	EPA 8270D/SIM	2-17-17	2-19-17	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0094	EPA 8270D/SIM	2-17-17	2-19-17	
Dibenz[a,h]anthracene	**ND**	0.0094	EPA 8270D/SIM	2-17-17	2-19-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*54*	*30 - 124*				
Pyrene-d10	*57*	*40 - 143*				
Terphenyl-d14	*62*	*27 - 127*				

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Date of Report: February 28, 2017
Samples Submitted: February 17, 2017
Laboratory Reference: 1702-162
Project: 5147-006-11

TOTAL METALS
EPA 6020A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-162-01					
Client ID:	**MW-1_021517**					
Arsenic	**11**	5.6	6020A	2-27-17	2-27-17	
Lab ID:	02-162-02					
Client ID:	**MW-2B_021517**					
Arsenic	**ND**	5.6	6020A	2-27-17	2-27-17	
Nickel	**8.2**	5.6	6020A	2-27-17	2-27-17	
Lab ID:	02-162-03					
Client ID:	**MW-3A_021617**					
Nickel	**ND**	5.6	6020A	2-27-17	2-27-17	
Lab ID:	02-162-04					
Client ID:	**MW-4_021517**					
Arsenic	**ND**	5.6	6020A	2-27-17	2-27-17	
Lab ID:	02-162-05					
Client ID:	**MW-6_021617**					
Nickel	**ND**	5.6	6020A	2-27-17	2-27-17	
Lab ID:	02-162-06					
Client ID:	**MW-7_021617**					
Arsenic	**9.2**	5.6	6020A	2-27-17	2-27-17	
Nickel	**6.7**	5.6	6020A	2-27-17	2-27-17	

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Date of Report: February 28, 2017
Samples Submitted: February 17, 2017
Laboratory Reference: 1702-162
Project: 5147-006-11

TOTAL METALS
EPA 6020A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-162-07					
Client ID:	**MW-DUP_021517**					
Arsenic	**ND**	5.6	6020A	2-27-17	2-27-17	
Nickel	**ND**	5.6	6020A	2-27-17	2-27-17	
Lab ID:	02-162-08					
Client ID:	**MW-8_021517**					
Arsenic	**12**	5.6	6020A	2-27-17	2-27-17	
Nickel	**ND**	5.6	6020A	2-27-17	2-27-17	

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Date of Report: February 28, 2017
Samples Submitted: February 17, 2017
Laboratory Reference: 1702-162
Project: 5147-006-11

DISSOLVED METALS
EPA 6020A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-162-01					
Client ID:	**MW-1_021517**					
Arsenic	**5.6**	5.6	6020A		2-27-17	
Lab ID:	02-162-02					
Client ID:	**MW-2B_021517**					
Arsenic	**ND**	5.0	6020A		2-27-17	
Nickel	**8.3**	5.0	6020A		2-27-17	
Lab ID:	02-162-03					
Client ID:	**MW-3A_021617**					
Nickel	**ND**	5.0	6020A		2-27-17	
Lab ID:	02-162-04					
Client ID:	**MW-4_021517**					
Arsenic	**ND**	5.0	6020A		2-27-17	
Lab ID:	02-162-05					
Client ID:	**MW-6_021617**					
Nickel	**ND**	5.0	6020A		2-27-17	
Lab ID:	02-162-06					
Client ID:	**MW-7_021617**					
Arsenic	**7.1**	5.0	6020A		2-27-17	
Nickel	**6.6**	5.0	6020A		2-27-17	

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Date of Report: February 28, 2017
Samples Submitted: February 17, 2017
Laboratory Reference: 1702-162
Project: 5147-006-11

DISSOLVED METALS
EPA 6020A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-162-07					
Client ID:	**MW-DUP_021517**					
Arsenic	**ND**	5.0	6020A		2-27-17	
Nickel	**ND**	5.0	6020A		2-27-17	
Lab ID:	02-162-08					
Client ID:	**MW-8_021517**					
Arsenic	**12**	5.6	6020A		2-27-17	
Nickel	**ND**	5.6	6020A		2-27-17	

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Date of Report: February 28, 2017
Samples Submitted: February 17, 2017
Laboratory Reference: 1702-162
Project: 5147-006-11

TOTAL DISSOLVED SOLIDS
SM 2540C

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-1_021517**					
Laboratory ID:	02-162-01					
Total Dissolved Solids	**7000**	13	SM 2540C	2-21-17	2-22-17	
Client ID:	**MW-2B_021517**					
Laboratory ID:	02-162-02					
Total Dissolved Solids	**11000**	13	SM 2540C	2-21-17	2-22-17	
Client ID:	**MW-3A_021617**					
Laboratory ID:	02-162-03					
Total Dissolved Solids	**30000**	13	SM 2540C	2-21-17	2-22-17	
Client ID:	**MW-4_021517**					
Laboratory ID:	02-162-04					
Total Dissolved Solids	**270**	13	SM 2540C	2-21-17	2-22-17	
Client ID:	**MW-6_021617**					
Laboratory ID:	02-162-05					
Total Dissolved Solids	**31000**	13	SM 2540C	2-21-17	2-22-17	
Client ID:	**MW-7_021617**					
Laboratory ID:	02-162-06					
Total Dissolved Solids	**7100**	13	SM 2540C	2-21-17	2-22-17	
Client ID:	**MW-DUP_021517**					
Laboratory ID:	02-162-07					
Total Dissolved Solids	**93**	13	SM 2540C	2-21-17	2-22-17	

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Date of Report: February 28, 2017
Samples Submitted: February 17, 2017
Laboratory Reference: 1702-162
Project: 5147-006-11

TOTAL DISSOLVED SOLIDS
SM 2540C

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-8_021517**					
Laboratory ID:	02-162-08					
Total Dissolved Solids	**520**	13	SM 2540C	2-21-17	2-22-17	

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: February 28, 2017
Samples Submitted: February 17, 2017
Laboratory Reference: 1702-162
Project: 5147-006-11

cPAHs EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0217W1					
Benzo[a]anthracene	**ND**	0.010	EPA 8270D/SIM	2-17-17	2-19-17	
Chrysene	**ND**	0.010	EPA 8270D/SIM	2-17-17	2-19-17	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270D/SIM	2-17-17	2-19-17	
Benzo(j,k)fluoranthene	**ND**	0.010	EPA 8270D/SIM	2-17-17	2-19-17	
Benzo[a]pyrene	**ND**	0.010	EPA 8270D/SIM	2-17-17	2-19-17	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270D/SIM	2-17-17	2-19-17	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270D/SIM	2-17-17	2-19-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*55*	*30 - 124*				
Pyrene-d10	*59*	*40 - 143*				
Terphenyl-d14	*66*	*27 - 127*				
Laboratory ID:	MB0221W1					
Benzo[a]anthracene	**ND**	0.010	EPA 8270D/SIM	2-21-17	2-22-17	
Chrysene	**ND**	0.010	EPA 8270D/SIM	2-21-17	2-22-17	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270D/SIM	2-21-17	2-22-17	
Benzo(j,k)fluoranthene	**ND**	0.010	EPA 8270D/SIM	2-21-17	2-22-17	
Benzo[a]pyrene	**ND**	0.010	EPA 8270D/SIM	2-21-17	2-22-17	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270D/SIM	2-21-17	2-22-17	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270D/SIM	2-21-17	2-22-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*65*	*30 - 124*				
Pyrene-d10	*70*	*40 - 143*				
Terphenyl-d14	*74*	*27 - 127*				

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: February 28, 2017
Samples Submitted: February 17, 2017
Laboratory Reference: 1702-162
Project: 5147-006-11

cPAHs EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0217W1									
	SB	SBD	SB	SBD	SB	SBD				
Benzo[a]anthracene	**0.381**	**0.381**	0.500	0.500	76	76	71 - 117	0	28	
Chrysene	**0.329**	**0.336**	0.500	0.500	66	67	53 - 110	2	25	
Benzo[b]fluoranthene	**0.356**	**0.357**	0.500	0.500	71	71	53 - 123	0	37	
Benzo(j,k)fluoranthene	**0.333**	**0.342**	0.500	0.500	67	68	52 - 119	3	41	
Benzo[a]pyrene	**0.330**	**0.322**	0.500	0.500	66	64	37 - 129	2	33	
Indeno(1,2,3-c,d)pyrene	**0.372**	**0.372**	0.500	0.500	74	74	45 - 128	0	31	
Dibenz[a,h]anthracene	**0.348**	**0.349**	0.500	0.500	70	70	54 - 120	0	30	
Surrogate:										
2-Fluorobiphenyl					*54*	*59*	*30 - 124*			
Pyrene-d10					*65*	*66*	*40 - 143*			
Terphenyl-d14					*72*	*77*	*27 - 127*			
SPIKE BLANKS										
Laboratory ID:	SB0221W1									
	SB	SBD	SB	SBD	SB	SBD				
Benzo[a]anthracene	**0.487**	**0.456**	0.500	0.500	97	91	71 - 117	7	28	
Chrysene	**0.408**	**0.385**	0.500	0.500	82	77	53 - 110	6	25	
Benzo[b]fluoranthene	**0.465**	**0.459**	0.500	0.500	93	92	53 - 123	1	37	
Benzo(j,k)fluoranthene	**0.438**	**0.398**	0.500	0.500	88	80	52 - 119	10	41	
Benzo[a]pyrene	**0.446**	**0.425**	0.500	0.500	89	85	37 - 129	5	33	
Indeno(1,2,3-c,d)pyrene	**0.434**	**0.400**	0.500	0.500	87	80	45 - 128	8	31	
Dibenz[a,h]anthracene	**0.452**	**0.431**	0.500	0.500	90	86	54 - 120	5	30	
Surrogate:										
2-Fluorobiphenyl					*88*	*79*	*30 - 124*			
Pyrene-d10					*81*	*76*	*40 - 143*			
Terphenyl-d14					*88*	*83*	*27 - 127*			

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: February 28, 2017
Samples Submitted: February 17, 2017
Laboratory Reference: 1702-162
Project: 5147-006-11

TOTAL METALS
EPA 6020A
METHOD BLANK QUALITY CONTROL

Date Extracted: 2-27-17
Date Analyzed: 2-27-17

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB0227WM2

Analyte	Method	Result	PQL
Arsenic	6020A	**ND**	5.6
Nickel	6020A	**ND**	5.6

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: February 28, 2017
Samples Submitted: February 17, 2017
Laboratory Reference: 1702-162
Project: 5147-006-11

TOTAL METALS
EPA 6020A
DUPLICATE QUALITY CONTROL

Date Extracted: 2-27-17
Date Analyzed: 2-27-17

Matrix: Water
Units: ug/L (ppb)

Lab ID: 02-162-08

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**11.7**	**13.6**	15	5.6	
Nickel	**ND**	**ND**	NA	5.6	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: February 28, 2017
Samples Submitted: February 17, 2017
Laboratory Reference: 1702-162
Project: 5147-006-11

TOTAL METALS
EPA 6020A
MS/MSD QUALITY CONTROL

Date Extracted: 2-27-17
Date Analyzed: 2-27-17

Matrix: Water
Units: ug/L (ppb)

Lab ID: 02-162-08

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	222	**241**	103	**246**	106	2	
Nickel	222	**209**	94	**215**	97	3	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: February 28, 2017
Samples Submitted: February 17, 2017
Laboratory Reference: 1702-162
Project: 5147-006-11

TOTAL METALS
EPA 6020A
CONTINUING CALIBRATION SUMMARY

Analyte	Lab ID	True Value (ppm)	Calc. Value	Percent Difference	Control Limits
Arsenic	ICV022717X	0.0500	0.0495	1.0	+/- 10%
Nickel	ICV022717X	0.0500	0.0509	-1.8	+/- 10%
Arsenic	LLICV022717X	0.000500	0.000548	-9.6	+/- 30%
Nickel	LLICV022717X	0.000500	0.000474	5.2	+/- 30%
Arsenic	CCV1022717X	0.0400	0.0388	3.0	+/- 10%
Nickel	CCV1022717X	0.0400	0.0394	1.5	+/- 10%
Arsenic	CCV2022717X	0.0400	0.0400	0	+/- 10%
Nickel	CCV2022717X	0.0400	0.0382	4.5	+/- 10%
Arsenic	LLCCV2022717X	0.000500	0.000445	11	+/- 30%
Nickel	LLCCV2022717X	0.000500	0.000454	9.2	+/- 30%
Arsenic	CCV3022717X	0.0400	0.0392	2.0	+/- 10%
Nickel	CCV3022717X	0.0400	0.0379	5.2	+/- 10%
Arsenic	LLCCV3022717X	0.000500	0.000482	3.6	+/- 30%
Nickel	LLCCV3022717X	0.000500	0.000473	5.4	+/- 30%
Arsenic	CCV4022717X	0.0400	0.0391	2.3	+/- 10%
Nickel	CCV4022717X	0.0400	0.0380	5.0	+/- 10%
Arsenic	LLCCV4022717X	0.000500	0.000518	-3.6	+/- 30%
Nickel	LLCCV4022717X	0.000500	0.000442	12	+/- 30%
Arsenic	CCV5022717X	0.0400	0.0389	2.8	+/- 10%
Nickel	CCV5022717X	0.0400	0.0380	5.0	+/- 10%
Arsenic	LLCCV5022717X	0.000500	0.000484	3.2	+/- 30%
Nickel	LLCCV5022717X	0.000500	0.000437	13	+/- 30%

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: February 28, 2017
Samples Submitted: February 17, 2017
Laboratory Reference: 1702-162
Project: 5147-006-11

DISSOLVED METALS
EPA 6020A
METHOD BLANK QUALITY CONTROL

Date Analyzed: 2-27-17

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB0227D1

Analyte	Method	Result	PQL
Arsenic	6020A	**ND**	5.0
Nickel	6020A	**ND**	5.0

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: February 28, 2017
Samples Submitted: February 17, 2017
Laboratory Reference: 1702-162
Project: 5147-006-11

DISSOLVED METALS
EPA 6020A
METHOD BLANK QUALITY CONTROL

Date Extracted:	2-27-17
Date Analyzed:	2-27-17
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	MB0227WM2

Analyte	Method	Result	PQL
Arsenic	6020A	**ND**	5.6
Nickel	6020A	**ND**	5.6

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and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: February 28, 2017
Samples Submitted: February 17, 2017
Laboratory Reference: 1702-162
Project: 5147-006-11

DISSOLVED METALS
EPA 6020A
DUPLICATE QUALITY CONTROL

Date Analyzed: 2-27-17

Matrix: Water
Units: ug/L (ppb)

Lab ID: 02-162-02

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**ND**	**ND**	NA	5.0	
Nickel	**8.25**	**7.90**	4	5.0	

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Date of Report: February 28, 2017
Samples Submitted: February 17, 2017
Laboratory Reference: 1702-162
Project: 5147-006-11

DISSOLVED METALS
EPA 6020A
DUPLICATE QUALITY CONTROL

Date Extracted: 2-27-17
Date Analyzed: 2-27-17

Matrix: Water
Units: ug/L (ppb)

Lab ID: 02-162-08

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**11.7**	**13.6**	15	5.6	
Nickel	**ND**	**ND**	NA	5.6	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: February 28, 2017
Samples Submitted: February 17, 2017
Laboratory Reference: 1702-162
Project: 5147-006-11

DISSOLVED METALS
EPA 6020A
MS/MSD QUALITY CONTROL

Date Analyzed: 2-27-17

Matrix: Water
Units: ug/L (ppb)

Lab ID: 02-162-02

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	200	**211**	105	**212**	106	0	
Nickel	200	**197**	94	**199**	95	1	

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and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: February 28, 2017
Samples Submitted: February 17, 2017
Laboratory Reference: 1702-162
Project: 5147-006-11

DISSOLVED METALS
EPA 6020A
MS/MSD QUALITY CONTROL

Date Extracted: 2-27-17
Date Analyzed: 2-27-17

Matrix: Water
Units: ug/L (ppb)

Lab ID: 02-162-08

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	222	**241**	103	**246**	106	2	
Nickel	222	**209**	94	**215**	97	3	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: February 28, 2017
Samples Submitted: February 17, 2017
Laboratory Reference: 1702-162
Project: 5147-006-11

DISSOLVED METALS
EPA 6020A
CONTINUING CALIBRATION SUMMARY

Analyte	Lab ID	True Value (ppm)	Calc. Value	Percent Difference	Control Limits
Arsenic	ICV022717X	0.0500	0.0495	1.0	+/- 10%
Nickel	ICV022717X	0.0500	0.0509	-1.8	+/- 10%
Arsenic	LLICV022717X	0.000500	0.000548	-9.6	+/- 30%
Nickel	LLICV022717X	0.000500	0.000474	5.2	+/- 30%
Arsenic	CCV1022717X	0.0400	0.0388	3.0	+/- 10%
Nickel	CCV1022717X	0.0400	0.0394	1.5	+/- 10%
Arsenic	CCV2022717X	0.0400	0.0400	0	+/- 10%
Nickel	CCV2022717X	0.0400	0.0382	4.5	+/- 10%
Arsenic	LLCCV2022717X	0.000500	0.000445	11	+/- 30%
Nickel	LLCCV2022717X	0.000500	0.000454	9.2	+/- 30%
Arsenic	CCV3022717X	0.0400	0.0392	2.0	+/- 10%
Nickel	CCV3022717X	0.0400	0.0379	5.2	+/- 10%
Arsenic	LLCCV3022717X	0.000500	0.000482	3.6	+/- 30%
Nickel	LLCCV3022717X	0.000500	0.000473	5.4	+/- 30%
Arsenic	CCV4022717X	0.0400	0.0391	2.3	+/- 10%
Nickel	CCV4022717X	0.0400	0.0380	5.0	+/- 10%
Arsenic	LLCCV4022717X	0.000500	0.000518	-3.6	+/- 30%
Nickel	LLCCV4022717X	0.000500	0.000442	12	+/- 30%
Arsenic	CCV5022717X	0.0400	0.0389	2.8	+/- 10%
Nickel	CCV5022717X	0.0400	0.0380	5.0	+/- 10%
Arsenic	LLCCV5022717X	0.000500	0.000484	3.2	+/- 30%
Nickel	LLCCV5022717X	0.000500	0.000437	13	+/- 30%

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: February 28, 2017
Samples Submitted: February 17, 2017
Laboratory Reference: 1702-162
Project: 5147-006-11

TOTAL DISSOLVED SOLIDS
SM 2540C
QUALITY CONTROL

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0221W1					
Total Dissolved Solids	**ND**	13	SM 2540C	2-21-17	2-22-17	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	02-162-08								
	ORIG	DUP							
Total Dissolved Solids	**516**	**469**	NA	NA	NA	NA	10	16	
SPIKE BLANK									
Laboratory ID:	SB0221W1								
	SB		SB		SB				
Total Dissolved Solids	**505**		500	NA	101	89-108	NA	NA	

This report pertains to the samples analyzed in accordance with the chain of custody,
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OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

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Chain of Custody

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: GEOENGINEERS INC.
Project Number: 5147-006-11
Project Name: DAKOTA CREEK INDUSTRIES SITE
Project Manager: ROBERT TRAHAN
Sampled by: NATHAN SOLOMON

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 02-162

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	~~PAHs 8270D/SIM (low level)~~ cPAHs	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	~~TCLP Metals~~ TOTAL ARSENIC	~~HEM (oil and grease) 1664A~~ D/S. Arsenic	TOTAL METALS - Nickel	DISSOLVED METALS - Nickel	TDS	MS/MSD	% Moisture
1	MW-1_021517	2.15.17	1205	WATER	5								~~X~~	X							X	X	~~X~~	~~X~~	X		
2	MW-2B_021517	2.15.17	1420		5								~~X~~	X							X	X	X	X	X		
3	MW-3A_021617	2.16.17	1455		5								~~X~~	X									X	X	X		
4	MW-4_021517	2.15.17	1005		5								X								X	X	~~X~~	~~X~~	X		
5	MW-6_021617	2.16.17	1855		5								~~X~~	X									X	X	X		
6	MW-7_021617	2.16.17	1230		5								~~X~~	X							X	X	X	X	X		
7	MW-DUP_021517	2.15.17	1200		5								X								X	X	X	X	X		
8	MW-8_021517	2.15.17	1310		10 1								X								X	X	X	X	X	X	

	Signature	Company	Date	Time
Relinquished		GEI	2.17.17	1010
Received			2/17/17	1010
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions
DISSOLVED METALS = FIELD FILTER

Data Package: Standard ☐ Level III ☐ Level IV ☐
Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

Sample/Cooler Receipt and Acceptance Checklist

Client: GES

Client Project Name/Number: 5147-006-11

OnSite Project Number: 02-162

Initiated by: MM

Date Initiated: 2/17/17

1.0 Cooler Verification

1.1 Were there custody seals on the outside of the cooler?	Yes	No	N/A	1 2 3 4
1.2 Were the custody seals intact?	Yes	No	N/A	1 2 3 4
1.3 Were the custody seals signed and dated by last custodian?	Yes	No	N/A	1 2 3 4
1.4 Were the samples delivered on ice or blue ice?	Yes	No		1 2 3 4
1.5 Were samples received between 0-6 degrees Celsius?	Yes	No	Temperature: 3.4	
1.6 Have shipping bills (if any) been attached to the back of this form?	Yes	N/A		
1.7 How were the samples delivered?	Client	Courier	UPS/FedEx	OSE Pickup Other

2.0 Chain of Custody Verification

2.1 Was a Chain of Custody submitted with the samples?	Yes	No	1 2 3 4
2.2 Was the COC legible and written in permanent ink?	Yes	No	1 2 3 4
2.3 Have samples been relinquished and accepted by each custodian?	Yes	No	1 2 3 4
2.4 Did the sample labels (ID, date, time, preservative) agree with COC?	Yes	No	1 2 3 4
2.5 Were all of the samples listed on the COC submitted?	Yes	No	1 2 3 4
2.6 Were any of the samples submitted omitted from the COC?	Yes	No	1 2 3 4

3.0 Sample Verification

3.1 Were any sample containers broken or compromised?	Yes	No		1 2 3 4
3.2 Were any sample labels missing or illegible?	Yes	No		1 2 3 4
3.3 Have the correct containers been used for each analysis requested?	Yes	No		1 2 3 4
3.4 Have the samples been correctly preserved?	Yes	No	N/A	1 2 3 4
3.5 Are volatiles samples free from headspace and bubbles greater than 6mm?	Yes	No	N/A	1 2 3 4
3.6 Is there sufficient sample submitted to perform requested analyses?	Yes	No		1 2 3 4
3.7 Have any holding times already expired or will expire in 24 hours?	Yes	No		1 2 3 4
3.8 Was method 5035A used?	Yes	No	N/A	1 2 3 4
3.9 If 5035A was used, which sampling option was used (#1, 2, or 3).	#		N/A	1 2 3 4

Explain any discrepancies:

1 - Discuss issue in Case Narrative

2 - Process Sample As-is

3 - Client contacted to discuss problem

4 - Sample cannot be analyzed or client does not wish to proceed

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

September 5, 2017

Robert Trahan
GeoEngineers, Inc.
600 Stewart, Suite 1700
Seattle, WA 98101-1233

Re: Analytical Data for Project 5147-006-11
Laboratory Reference No. 1708-302

Dear Robert:

Enclosed are the analytical results and associated quality control data for samples submitted on August 24, 2017.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 5, 2017
Samples Submitted: August 24, 2017
Laboratory Reference: 1708-302
Project: 5147-006-11

Case Narrative

Samples were collected on August 23 and 24, 2017 and received by the laboratory on August 24, 2017. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Dissolved Metals EPA 200.8 Analysis

The dissolved field filter samples MW-1_08232017, MW-8_08232017, and DUP_08232017 were received containing solid material. The samples were digested according to OnSite Environmental standard operating procedure.

PAHs EPA 8270D/SIM Analysis

Samples MW-4_08242017, MW-8_08232017, and DUP_08232017 were originally extracted on 8-28-17. Samples MW-8 and DUP were assumed to be duplicates of each other. Because the results for these samples were incongruous, the sample set was re-extracted. Samples MW-8_08232017 and DUP_08232017 were re-extracted from 500 ml polyethylene bottles. In the re-extraction the results for samples MW-8 and DUP were reversed, leading us to believe that these two samples are non-homogenous. Both sets of data have been reported.

The original method blank, and matrix spike duplicate, and both extractions of sample MW-4_08242017 all had one surrogate recovery out of control limits. This is within allowance of our standard operating procedure as long as the recovery is above 10%.

The original sample MS/MSD pair had several recoveries fall outside of control limits believed to be caused by sample matrix. The SB/SBD pair extracted with this batch had all parameters in control.

Please note that any other QA/QC issues associated with these extractions and analyses will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

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Date of Report: September 5, 2017
Samples Submitted: August 24, 2017
Laboratory Reference: 1708-302
Project: 5147-006-11

ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
MW-1_08232017	08-302-01	Water	8-23-17	8-24-17	
MW-2B_08232017	08-302-02	Water	8-23-17	8-24-17	
MW-3A_08242017	08-302-03	Water	8-24-17	8-24-17	
MW-4_08242017	08-302-04	Water	8-24-17	8-24-17	
MW-6_08242017	08-302-05	Water	8-24-17	8-24-17	
MW-7_08232017	08-302-06	Water	8-23-17	8-24-17	
MW-8_08232017	08-302-07	Water	8-23-17	8-24-17	
DUP_08232017	08-302-08	Water	8-23-17	8-24-17	

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Date of Report: September 5, 2017
Samples Submitted: August 24, 2017
Laboratory Reference: 1708-302
Project: 5147-006-11

TOTAL METALS
EPA 200.8

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	08-302-01					
Client ID:	**MW-1_08232017**					
Arsenic	**ND**	5.6	200.8	9-1-17	9-1-17	
Lab ID:	08-302-02					
Client ID:	**MW-2B_08232017**					
Arsenic	**6.0**	5.6	200.8	9-1-17	9-1-17	
Nickel	**6.9**	5.6	200.8	9-1-17	9-1-17	
Lab ID:	08-302-03					
Client ID:	**MW-3A_08242017**					
Nickel	**ND**	5.6	200.8	9-1-17	9-1-17	
Lab ID:	08-302-04					
Client ID:	**MW-4_08242017**					
Arsenic	**ND**	5.6	200.8	9-1-17	9-1-17	
Lab ID:	08-302-05					
Client ID:	**MW-6_08242017**					
Nickel	**ND**	5.6	200.8	9-1-17	9-1-17	
Lab ID:	08-302-06					
Client ID:	**MW-7_08232017**					
Arsenic	**14**	5.6	200.8	9-1-17	9-1-17	
Nickel	**8.8**	5.6	200.8	9-1-17	9-1-17	

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Date of Report: September 5, 2017
Samples Submitted: August 24, 2017
Laboratory Reference: 1708-302
Project: 5147-006-11

TOTAL METALS
EPA 200.8

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	08-302-07					
Client ID:	**MW-8_08232017**					
Arsenic	**17**	5.6	200.8	9-1-17	9-1-17	
Nickel	**6.7**	5.6	200.8	9-1-17	9-1-17	
Lab ID:	08-302-08					
Client ID:	**DUP_08232017**					
Arsenic	**17**	5.6	200.8	9-1-17	9-1-17	
Nickel	**6.0**	5.6	200.8	9-1-17	9-1-17	

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Date of Report: September 5, 2017
Samples Submitted: August 24, 2017
Laboratory Reference: 1708-302
Project: 5147-006-11

DISSOLVED METALS
EPA 200.8

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	08-302-01					
Client ID:	**MW-1_08232017**					
Arsenic	**ND**	5.6	200.8	9-1-17	9-1-17	
Lab ID:	08-302-02					
Client ID:	**MW-2B_08232017**					
Arsenic	**6.5**	5.0	200.8		9-1-17	
Nickel	**6.0**	5.0	200.8		9-1-17	
Lab ID:	08-302-03					
Client ID:	**MW-3A_08242017**					
Nickel	**ND**	5.0	200.8		9-1-17	
Lab ID:	08-302-04					
Client ID:	**MW-4_08242017**					
Arsenic	**ND**	5.0	200.8		9-1-17	
Lab ID:	08-302-05					
Client ID:	**MW-6_08242017**					
Nickel	**ND**	5.0	200.8		9-1-17	
Lab ID:	08-302-06					
Client ID:	**MW-7_08232017**					
Arsenic	**12**	5.0	200.8		9-1-17	
Nickel	**9.3**	5.0	200.8		9-1-17	

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Date of Report: September 5, 2017
Samples Submitted: August 24, 2017
Laboratory Reference: 1708-302
Project: 5147-006-11

DISSOLVED METALS
EPA 200.8

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	08-302-07					
Client ID:	**MW-8_08232017**					
Arsenic	**17**	5.6	200.8	9-1-17	9-1-17	
Nickel	**ND**	5.6	200.8	9-1-17	9-1-17	
Lab ID:	08-302-08					
Client ID:	**DUP_08232017**					
Arsenic	**15**	5.6	200.8	9-1-17	9-1-17	
Nickel	**ND**	5.6	200.8	9-1-17	9-1-17	

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Date of Report: September 5, 2017
Samples Submitted: August 24, 2017
Laboratory Reference: 1708-302
Project: 5147-006-11

TOTAL DISSOLVED SOLIDS
SM 2540C

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-1_08232017**					
Laboratory ID:	08-302-01					
Total Dissolved Solids	**4700**	13	SM 2540C	8-28-17	8-30-17	
Client ID:	**MW-2B_08232017**					
Laboratory ID:	08-302-02					
Total Dissolved Solids	**11000**	13	SM 2540C	8-28-17	8-30-17	
Client ID:	**MW-3A_08242017**					
Laboratory ID:	08-302-03					
Total Dissolved Solids	**33000**	13	SM 2540C	8-28-17	8-30-17	
Client ID:	**MW-4_08242017**					
Laboratory ID:	08-302-04					
Total Dissolved Solids	**380**	13	SM 2540C	8-28-17	8-30-17	
Client ID:	**MW-6_08242017**					
Laboratory ID:	08-302-05					
Total Dissolved Solids	**32000**	13	SM 2540C	8-28-17	8-30-17	
Client ID:	**MW-7_08232017**					
Laboratory ID:	08-302-06					
Total Dissolved Solids	**6800**	13	SM 2540C	8-28-17	8-30-17	
Client ID:	**MW-8_08232017**					
Laboratory ID:	08-302-07					
Total Dissolved Solids	**630**	13	SM 2540C	8-28-17	8-30-17	

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Date of Report: September 5, 2017
Samples Submitted: August 24, 2017
Laboratory Reference: 1708-302
Project: 5147-006-11

TOTAL DISSOLVED SOLIDS
SM 2540C

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**DUP_08232017**					
Laboratory ID:	08-302-08					
Total Dissolved Solids	**620**	13	SM 2540C	8-28-17	8-30-17	

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Date of Report: September 5, 2017
Samples Submitted: August 24, 2017
Laboratory Reference: 1708-302
Project: 5147-006-11

cPAHs EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-4_08242017**					
Laboratory ID:	08-302-04					
Benzo[a]anthracene	**ND**	0.0093	EPA 8270D/SIM	8-28-17	8-29-17	
Chrysene	**ND**	0.012	EPA 8270D/SIM	8-28-17	8-29-17	
Benzo[b]fluoranthene	**ND**	0.0093	EPA 8270D/SIM	8-28-17	8-29-17	
Benzo(j,k)fluoranthene	**ND**	0.0093	EPA 8270D/SIM	8-28-17	8-29-17	
Benzo[a]pyrene	**ND**	0.0093	EPA 8270D/SIM	8-28-17	8-29-17	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0093	EPA 8270D/SIM	8-28-17	8-29-17	
Dibenz[a,h]anthracene	**ND**	0.0093	EPA 8270D/SIM	8-28-17	8-29-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*39*	*30 - 124*				
Pyrene-d10	*35*	*40 - 143*				Q
Terphenyl-d14	*52*	*27 - 127*				

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Date of Report: September 5, 2017
Samples Submitted: August 24, 2017
Laboratory Reference: 1708-302
Project: 5147-006-11

cPAHs EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-4_08242017**					
Laboratory ID:	08-302-04					
Benzo[a]anthracene	**ND**	0.0094	EPA 8270D/SIM	8-30-17	8-30-17	
Chrysene	**ND**	0.0094	EPA 8270D/SIM	8-30-17	8-30-17	
Benzo[b]fluoranthene	**ND**	0.0094	EPA 8270D/SIM	8-30-17	8-30-17	
Benzo(j,k)fluoranthene	**ND**	0.0094	EPA 8270D/SIM	8-30-17	8-30-17	
Benzo[a]pyrene	**ND**	0.0094	EPA 8270D/SIM	8-30-17	8-30-17	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0094	EPA 8270D/SIM	8-30-17	8-30-17	
Dibenz[a,h]anthracene	**ND**	0.0094	EPA 8270D/SIM	8-30-17	8-30-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*35*	*30 - 124*				
Pyrene-d10	*32*	*40 - 143*				Q
Terphenyl-d14	*38*	*27 - 127*				

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Date of Report: September 5, 2017
Samples Submitted: August 24, 2017
Laboratory Reference: 1708-302
Project: 5147-006-11

cPAHs EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-8_08232017**					
Laboratory ID:	08-302-07					
Benzo[a]anthracene	**ND**	0.0094	EPA 8270D/SIM	8-28-17	8-29-17	
Chrysene	**ND**	0.012	EPA 8270D/SIM	8-28-17	8-29-17	
Benzo[b]fluoranthene	**ND**	0.0094	EPA 8270D/SIM	8-28-17	8-29-17	
Benzo(j,k)fluoranthene	**ND**	0.0094	EPA 8270D/SIM	8-28-17	8-29-17	
Benzo[a]pyrene	**ND**	0.0094	EPA 8270D/SIM	8-28-17	8-29-17	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0094	EPA 8270D/SIM	8-28-17	8-29-17	
Dibenz[a,h]anthracene	**ND**	0.0094	EPA 8270D/SIM	8-28-17	8-29-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*64*	*30 - 124*				
Pyrene-d10	*58*	*40 - 143*				
Terphenyl-d14	*93*	*27 - 127*				

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Date of Report: September 5, 2017
Samples Submitted: August 24, 2017
Laboratory Reference: 1708-302
Project: 5147-006-11

cPAHs EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-8_08232017**					
Laboratory ID:	08-302-07					
Benzo[a]anthracene	**0.10**	0.024	EPA 8270D/SIM	8-30-17	8-30-17	
Chrysene	**0.14**	0.024	EPA 8270D/SIM	8-30-17	8-30-17	
Benzo[b]fluoranthene	**0.18**	0.024	EPA 8270D/SIM	8-30-17	8-30-17	
Benzo(j,k)fluoranthene	**0.067**	0.024	EPA 8270D/SIM	8-30-17	8-30-17	
Benzo[a]pyrene	**0.12**	0.024	EPA 8270D/SIM	8-30-17	8-30-17	
Indeno(1,2,3-c,d)pyrene	**0.094**	0.024	EPA 8270D/SIM	8-30-17	8-30-17	
Dibenz[a,h]anthracene	**ND**	0.024	EPA 8270D/SIM	8-30-17	8-30-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*63*	*30 - 124*				
Pyrene-d10	*72*	*40 - 143*				
Terphenyl-d14	*90*	*27 - 127*				

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Samples Submitted: August 24, 2017
Laboratory Reference: 1708-302
Project: 5147-006-11

cPAHs EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**DUP_08232017**					
Laboratory ID:	08-302-08					
Benzo[a]anthracene	**0.020**	0.0094	EPA 8270D/SIM	8-28-17	8-29-17	
Chrysene	**0.029**	0.012	EPA 8270D/SIM	8-28-17	8-29-17	
Benzo[b]fluoranthene	**0.042**	0.0094	EPA 8270D/SIM	8-28-17	8-29-17	
Benzo(j,k)fluoranthene	**0.014**	0.0094	EPA 8270D/SIM	8-28-17	8-29-17	
Benzo[a]pyrene	**0.029**	0.0094	EPA 8270D/SIM	8-28-17	8-29-17	
Indeno(1,2,3-c,d)pyrene	**0.026**	0.0094	EPA 8270D/SIM	8-28-17	8-29-17	
Dibenz[a,h]anthracene	**ND**	0.0094	EPA 8270D/SIM	8-28-17	8-29-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*75*	*30 - 124*				
Pyrene-d10	*72*	*40 - 143*				
Terphenyl-d14	*125*	*27 - 127*				

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Laboratory Reference: 1708-302
Project: 5147-006-11

cPAHs EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**DUP_08232017**					
Laboratory ID:	08-302-08					
Benzo[a]anthracene	**ND**	0.024	EPA 8270D/SIM	8-30-17	8-30-17	
Chrysene	**ND**	0.024	EPA 8270D/SIM	8-30-17	8-30-17	
Benzo[b]fluoranthene	**ND**	0.024	EPA 8270D/SIM	8-30-17	8-30-17	
Benzo(j,k)fluoranthene	**ND**	0.024	EPA 8270D/SIM	8-30-17	8-30-17	
Benzo[a]pyrene	**ND**	0.024	EPA 8270D/SIM	8-30-17	8-30-17	
Indeno(1,2,3-c,d)pyrene	**ND**	0.024	EPA 8270D/SIM	8-30-17	8-30-17	
Dibenz[a,h]anthracene	**ND**	0.024	EPA 8270D/SIM	8-30-17	8-30-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*64*	*30 - 124*				
Pyrene-d10	*54*	*40 - 143*				
Terphenyl-d14	*76*	*27 - 127*				

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Date of Report: September 5, 2017
Samples Submitted: August 24, 2017
Laboratory Reference: 1708-302
Project: 5147-006-11

TOTAL METALS
EPA 200.8
METHOD BLANK QUALITY CONTROL

Date Extracted: 9-1-17
Date Analyzed: 9-1-17

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB0901WM2

Analyte	Method	Result	PQL
Arsenic	200.8	**ND**	5.6
Nickel	200.8	**ND**	5.6

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Date of Report: September 5, 2017
Samples Submitted: August 24, 2017
Laboratory Reference: 1708-302
Project: 5147-006-11

TOTAL METALS
EPA 200.8
DUPLICATE QUALITY CONTROL

Date Extracted: 9-1-17
Date Analyzed: 9-1-17

Matrix: Water
Units: ug/L (ppb)

Lab ID: 08-302-07

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**17.3**	**18.1**	4	5.6	
Nickel	**6.67**	**6.67**	0	5.6	

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Date of Report: September 5, 2017
Samples Submitted: August 24, 2017
Laboratory Reference: 1708-302
Project: 5147-006-11

TOTAL METALS
EPA 200.8
MS/MSD QUALITY CONTROL

Date Extracted: 9-1-17
Date Analyzed: 9-1-17

Matrix: Water
Units: ug/L (ppb)

Lab ID: 08-302-07

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	222	**258**	108	**256**	108	1	
Nickel	222	**238**	104	**233**	102	2	

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Date of Report: September 5, 2017
Samples Submitted: August 24, 2017
Laboratory Reference: 1708-302
Project: 5147-006-11

TOTAL METALS
EPA 200.8
CONTINUING CALIBRATION SUMMARY

Analyte	Lab ID	True Value (ppm)	Calc. Value	Percent Difference	Control Limits
Arsenic	ICV090117X	0.0500	0.0462	7.6	+/- 10%
Nickel	ICV090117X	0.0500	0.0501	-0.20	+/- 10%
Arsenic	CCV1090117X	0.0400	0.0404	-1.0	+/- 10%
Nickel	CCV1090117X	0.0400	0.0406	-1.5	+/- 10%
Arsenic	CCV1090117X	0.0200	0.0202	-1.0	+/- 10%
Nickel	CCV1090117X	0.0200	0.0202	-1.0	+/- 10%
Arsenic	CCV2090117X	0.0400	0.0406	-1.5	+/- 10%
Nickel	CCV2090117X	0.0400	0.0407	-1.8	+/- 10%
Arsenic	CCV2090117X	0.0200	0.0204	-2.0	+/- 10%
Nickel	CCV2090117X	0.0200	0.0202	-1.0	+/- 10%
Arsenic	CCV3090117X	0.0400	0.0403	-0.75	+/- 10%
Nickel	CCV3090117X	0.0400	0.0396	1.0	+/- 10%
Arsenic	CCV3090117X	0.0200	0.0209	-4.5	+/- 10%
Nickel	CCV3090117X	0.0200	0.0203	-1.5	+/- 10%

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Date of Report: September 5, 2017
Samples Submitted: August 24, 2017
Laboratory Reference: 1708-302
Project: 5147-006-11

DISSOLVED METALS
EPA 200.8
METHOD BLANK QUALITY CONTROL

Date Extracted:	9-1-17
Date Analyzed:	9-1-17
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	MB0901DM1

Analyte	Method	Result	PQL
Arsenic	200.8	**ND**	5.6
Nickel	200.8	**ND**	5.6

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Date of Report: September 5, 2017
Samples Submitted: August 24, 2017
Laboratory Reference: 1708-302
Project: 5147-006-11

DISSOLVED METALS
EPA 200.8
METHOD BLANK QUALITY CONTROL

Date Analyzed: 9-1-17

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB0901D1

Analyte	Method	Result	PQL
Arsenic	200.8	**ND**	3.0
Nickel	200.8	**ND**	20

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Date of Report: September 5, 2017
Samples Submitted: August 24, 2017
Laboratory Reference: 1708-302
Project: 5147-006-11

DISSOLVED METALS
EPA 200.8
DUPLICATE QUALITY CONTROL

Date Extracted: 9-1-17
Date Analyzed: 9-1-17

Matrix: Water
Units: ug/L (ppb)

Lab ID: 08-302-07

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**16.6**	**15.5**	7	5.6	
Nickel	**ND**	**ND**	NA	5.6	

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Date of Report: September 5, 2017
Samples Submitted: August 24, 2017
Laboratory Reference: 1708-302
Project: 5147-006-11

DISSOLVED METALS
EPA 200.8
DUPLICATE QUALITY CONTROL

Date Analyzed: 9-1-17

Matrix: Water
Units: ug/L (ppb)

Lab ID: 08-302-06

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**11.5**	**12.9**	11	3.0	
Nickel	**9.25**	**9.20**	1	20	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 5, 2017
Samples Submitted: August 24, 2017
Laboratory Reference: 1708-302
Project: 5147-006-11

DISSOLVED METALS
EPA 200.8
MS/MSD QUALITY CONTROL

Date Extracted: 9-1-17
Date Analyzed: 9-1-17

Matrix: Water
Units: ug/L (ppb)

Lab ID: 08-302-07

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	222	**244**	102	**247**	104	1	
Nickel	222	**198**	89	**205**	92	4	

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Date of Report: September 5, 2017
Samples Submitted: August 24, 2017
Laboratory Reference: 1708-302
Project: 5147-006-11

DISSOLVED METALS
EPA 200.8
MS/MSD QUALITY CONTROL

Date Analyzed: 9-1-17

Matrix: Water
Units: ug/L (ppb)

Lab ID: 08-302-06

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	200	**217**	103	**217**	103	0	
Nickel	200	**180**	85	**177**	84	2	

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and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 5, 2017
Samples Submitted: August 24, 2017
Laboratory Reference: 1708-302
Project: 5147-006-11

DISSOLVED METALS
EPA 200.8
CONTINUING CALIBRATION SUMMARY

Analyte	Lab ID	True Value (ppm)	Calc. Value	Percent Difference	Control Limits
Arsenic	ICV090117X	0.0500	0.0472	5.6	+/- 10%
Nickel	ICV090117X	0.0500	0.0503	-0.60	+/- 10%
Arsenic	CCV1090117X	0.0400	0.0397	0.75	+/- 10%
Nickel	CCV1090117X	0.0400	0.0386	3.5	+/- 10%
Arsenic	CCV1090117X	0.0200	0.0203	-1.5	+/- 10%
Nickel	CCV1090117X	0.0200	0.0191	4.5	+/- 10%
Arsenic	CCV2090117X	0.0400	0.0391	2.3	+/- 10%
Nickel	CCV2090117X	0.0400	0.0366	8.5	+/- 10%
Arsenic	CCV2090117X	0.0200	0.0204	-2.0	+/- 10%
Nickel	CCV2090117X	0.0200	0.0194	3.0	+/- 10%
Arsenic	CCV3090117X	0.0400	0.0413	-3.3	+/- 10%
Nickel	CCV3090117X	0.0400	0.0384	4.0	+/- 10%
Arsenic	CCV3090117X	0.0200	0.0207	-3.5	+/- 10%
Nickel	CCV3090117X	0.0200	0.0187	6.5	+/- 10%
Arsenic	CCV4090117X	0.0400	0.0414	-3.5	+/- 10%
Nickel	CCV4090117X	0.0400	0.0371	7.3	+/- 10%
Arsenic	CCV4090117X	0.0200	0.0211	-5.5	+/- 10%
Nickel	CCV4090117X	0.0200	0.0186	7.0	+/- 10%
Arsenic	CCV5090117X	0.0400	0.0409	-2.3	+/- 10%
Nickel	CCV5090117X	0.0400	0.0363	9.3	+/- 10%
Arsenic	CCV5090117X	0.0200	0.0206	-3.0	+/- 10%
Nickel	CCV5090117X	0.0200	0.0183	8.5	+/- 10%

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Date of Report: September 5, 2017
Samples Submitted: August 24, 2017
Laboratory Reference: 1708-302
Project: 5147-006-11

TOTAL DISSOLVED SOLIDS
SM 2540C
QUALITY CONTROL

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0828W1					
Total Dissolved Solids	**ND**	13	SM 2540C	8-28-17	8-30-17	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	08-302-07								
	ORIG	DUP							
Total Dissolved Solids	**629**	**633**	NA	NA	NA	NA	1	16	
SPIKE BLANK									
Laboratory ID:	SB0828W1								
	SB		SB		SB				
Total Dissolved Solids	**529**		500	NA	106	89-108	NA	NA	

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Date of Report: September 5, 2017
Samples Submitted: August 24, 2017
Laboratory Reference: 1708-302
Project: 5147-006-11

cPAHs EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0828W1					
Benzo[a]anthracene	**ND**	0.010	EPA 8270D/SIM	8-28-17	8-29-17	
Chrysene	**ND**	0.013	EPA 8270D/SIM	8-28-17	8-29-17	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270D/SIM	8-28-17	8-29-17	
Benzo(j,k)fluoranthene	**ND**	0.010	EPA 8270D/SIM	8-28-17	8-29-17	
Benzo[a]pyrene	**ND**	0.010	EPA 8270D/SIM	8-28-17	8-29-17	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270D/SIM	8-28-17	8-29-17	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270D/SIM	8-28-17	8-29-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*71*	*30 - 124*				
Pyrene-d10	*73*	*40 - 143*				
Terphenyl-d14	*131*	*27 - 127*				Q

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 5, 2017
Samples Submitted: August 24, 2017
Laboratory Reference: 1708-302
Project: 5147-006-11

cPAHs EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0830W1					
Benzo[a]anthracene	**ND**	0.010	EPA 8270D/SIM	8-30-17	8-30-17	
Chrysene	**ND**	0.010	EPA 8270D/SIM	8-30-17	8-30-17	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270D/SIM	8-30-17	8-30-17	
Benzo(j,k)fluoranthene	**ND**	0.010	EPA 8270D/SIM	8-30-17	8-30-17	
Benzo[a]pyrene	**ND**	0.010	EPA 8270D/SIM	8-30-17	8-30-17	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270D/SIM	8-30-17	8-30-17	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270D/SIM	8-30-17	8-30-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*67*	*30 - 124*				
Pyrene-d10	*74*	*40 - 143*				
Terphenyl-d14	*92*	*27 - 127*				

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: September 5, 2017
Samples Submitted: August 24, 2017
Laboratory Reference: 1708-302
Project: 5147-006-11

cPAHs EPA 8270D/SIM
MS/MSD QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES											
Laboratory ID:	08-302-07										
	MS	MSD	MS	MSD		MS	MSD				
Benzo[a]anthracene	**0.475**	**0.414**	1.00	1.00	ND	48	41	71 - 117	14	28	II
Chrysene	**0.430**	**0.382**	1.00	1.00	ND	43	38	53 - 110	12	25	II
Benzo[b]fluoranthene	**0.445**	**0.382**	1.00	1.00	ND	45	38	53 - 123	15	37	II
Benzo(j,k)fluoranthene	**0.430**	**0.393**	1.00	1.00	ND	43	39	52 - 119	9	41	II
Benzo[a]pyrene	**0.423**	**0.370**	1.00	1.00	ND	42	37	37 - 129	13	33	
Indeno(1,2,3-c,d)pyrene	**0.400**	**0.344**	1.00	1.00	ND	40	34	45 - 128	15	31	II
Dibenz[a,h]anthracene	**0.419**	**0.363**	1.00	1.00	ND	42	36	54 - 120	14	30	II
Surrogate:											
2-Fluorobiphenyl						*45*	*36*	*30 - 124*			
Pyrene-d10						*40*	*36*	*40 - 143*			Q
Terphenyl-d14						*55*	*44*	*27 - 127*			

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Date of Report: September 5, 2017
Samples Submitted: August 24, 2017
Laboratory Reference: 1708-302
Project: 5147-006-11

cPAHs EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0830W1									
	SB	SBD	SB	SBD	SB	SBD				
Benzo[a]anthracene	**0.446**	**0.468**	0.500	0.500	89	94	71 - 117	5	28	
Chrysene	**0.404**	**0.427**	0.500	0.500	81	85	53 - 110	6	25	
Benzo[b]fluoranthene	**0.402**	**0.432**	0.500	0.500	80	86	53 - 123	7	37	
Benzo(j,k)fluoranthene	**0.422**	**0.437**	0.500	0.500	84	87	52 - 119	3	41	
Benzo[a]pyrene	**0.395**	**0.418**	0.500	0.500	79	84	37 - 129	6	33	
Indeno(1,2,3-c,d)pyrene	**0.343**	**0.376**	0.500	0.500	69	75	45 - 128	9	31	
Dibenz[a,h]anthracene	**0.346**	**0.378**	0.500	0.500	69	76	54 - 120	9	30	
Surrogate:										
2-Fluorobiphenyl					*70*	*73*	*30 - 124*			
Pyrene-d10					*76*	*79*	*40 - 143*			
Terphenyl-d14					*99*	*98*	*27 - 127*			

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OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

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Chain of Custody

Page 1 of 1

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: GeoEngineers Inc
Project Number: 5147-006-11
Project Name: POA - Dakota Creek Industries
Project Manager: Robert Trahan
Sampled by: Nathan Solomon

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 08-302

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	TOTAL METALS	DISSOLVED METALS	TOTAL DISSOLVED SOLIDS	GPAH	% Moisture MS/MSD
1	MW-1_08232017	8.23.17	1135	WATER	3																		X	X	X		
2	MW-2B_08232017	8.23.17	1205		3																		X	X	X		
3	MW-3A_08242017	8.24.17	1220		3																		X	X	X		
4	MW-4_08~~23~~24/2017	8.~~23~~24.17	1315		4																		X	X	X	X	
5	MW-6_08~~24~~23/2017	8.~~24~~23.17	1135		3																		X	X	X		
6	MW-7_08~~24~~23/2017	8.~~24~~23.17	1025		3																		X	X	X		
7	MW-8_08232017	8.23.17	1010		8																		X	X	X	X	X
8	DUP_08232017	8.23.17	1020	↓	4																		X	X	X	X	

	Signature	Company	Date	Time
Relinquished		GeoEngineers	08.24.17	1540
Received			8/24/17	1540
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

METALS TO BE RUN SEE ATT:
MW-1 ARSENIC
MW-2B ARSENIC/NICKEL
MW-3A NICKEL
MW-4 ARSENIC
~~MW-5 NICKEL~~
MW-6 ~~ARSENIC~~/NICKEL
MW-7 ARSENIC/NICKEL
MW-8 ARSENIC/NICKEL
DUP ARSENIC/NICKEL

FF = FIELD FILTER

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

Sample/Cooler Receipt and Acceptance Checklist

Client: GES

Client Project Name/Number: 5147-006-11

OnSite Project Number: 08-302

Initiated by: MW

Date Initiated: 8/24/17

1.0 Cooler Verification

1.1 Were there custody seals on the outside of the cooler?	Yes	No	(N/A)	1 2 3 4
1.2 Were the custody seals intact?	Yes	No	(N/A)	1 2 3 4
1.3 Were the custody seals signed and dated by last custodian?	Yes	No	(N/A)	1 2 3 4
1.4 Were the samples delivered on ice or blue ice?	(Yes)	No		1 2 3 4
1.5 Were samples received between 0-6 degrees Celsius?	(Yes)	No	Temperature: 5	
1.6 Have shipping bills (if any) been attached to the back of this form?	Yes	(N/A)		
1.7 How were the samples delivered?	(Client)	Courier	UPS/FedEx	OSE Pickup Other

2.0 Chain of Custody Verification

2.1 Was a Chain of Custody submitted with the samples?	(Yes)	No	1 2 3 4
2.2 Was the COC legible and written in permanent ink?	(Yes)	No	1 2 3 4
2.3 Have samples been relinquished and accepted by each custodian?	(Yes)	No	1 2 3 4
2.4 Did the sample labels (ID, date, time, preservative) agree with COC?	Yes	(No)	1 2 3 4
2.5 Were all of the samples listed on the COC submitted?	(Yes)	No	1 2 3 4
2.6 Were any of the samples submitted omitted from the COC?	Yes	(No)	1 2 3 4

3.0 Sample Verification

3.1 Were any sample containers broken or compromised?	(Yes)	No		1 2 3 4
3.2 Were any sample labels missing or illegible?	(Yes)	No		1 2 3 4
3.3 Have the correct containers been used for each analysis requested?	(Yes)	No		1 2 3 4
3.4 Have the samples been correctly preserved?	Yes	No	N/A	1 2 3 4
3.5 Are volatiles samples free from headspace and bubbles greater than 6mm?	Yes	No	(N/A)	1 2 3 4
3.6 Is there sufficient sample submitted to perform requested analyses?	(Yes)	No		1 2 3 4
3.7 Have any holding times already expired or will expire in 24 hours?	Yes	(No)		1 2 3 4
3.8 Was method 5035A used?	Yes	No	(N/A)	1 2 3 4
3.9 If 5035A was used, which sampling option was used (#1, 2, or 3).	#		(N/A)	1 2 3 4

Explain any discrepancies:

2.4) Sample 4) 08232017 on COC 082417 on labels
Sample 6) 08242017 on COC 082317 on labels

3.1) Sample 2) Total & Dissolved not labeled

1 - Discuss issue in Case Narrative

2 - Process Sample As-is

3 - Client contacted to discuss problem

4 - Sample cannot be analyzed or client does not wish to proceed

1317 South 13th Avenue Kelso, Washington 98626 (360) 577-7222 (360) 636-1068 fax

Columbia Analytical Services INC.
An Employee - Owned Company

September 17, 2008 Analytical Report for Service Request No: K0808184

Victoria England
GeoEngineers, Inc.
600 Stewart St.
Suite 1700
Seattle, WA 98101

RE: Dakota Creek Confirmation Sampling/5147-006-04

Dear Victoria:

Enclosed are the results of the samples submitted to our laboratory on August 27, 2008. For your reference, these analyses have been assigned our service request number K0808184.

All analyses were performed according to our laboratory's quality assurance program. Where applicable, the methods cited conform to the Methods Update Rule (effective 4/11/2007), which relates to the use of analytical methods for the drinking water and waste water programs. The test results meet requirements of the NELAC standards. Exceptions are noted in the case narrative report where applicable. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please call if you have any questions. My extension is 3376. You may also contact me via Email at GSalata@caslab.com.

Respectfully submitted,

Columbia Analytical Services, Inc.

Gregory Salata, Ph.D.
Project Chemist

GS/lb

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
U	The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
i	The MRL/MDL has been elevated due to a matrix interference.
X	See case narrative.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
B	The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL has been elevated due to a matrix interference.
X	See case narrative.
*	The duplicate analysis not within control limits. See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results (25% for CLP Pesticides).
U	The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
i	The MRL/MDL has been elevated due to a chromatographic interference.
X	See case narrative.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

Columbia Analytical Services, Inc.
Kelso, WA
State Certifications, Accreditations, and Licenses

Program	Number
Alaska DEC UST	UST-040
Arizona DHS	AZ0339
Arkansas - DEQ	88-0637
California DHS	2286
Colorado DPHE	-
Florida DOH	E87412
Hawaii DOH	-
Idaho DHW	-
Indiana DOH	C-WA-01
Louisiana DEQ	3016
Louisiana DHH	LA050010
Maine DHS	WA0035
Michigan DEQ	9949
Minnesota DOH	053-999-368
Montana DPHHS	CERT0047
Nevada DEP	WA35
New Jersey DEP	WA005
New Mexico ED	-
North Carolina DWQ	605
Oklahoma DEQ	9801
Oregon - DHS	WA200001
South Carolina DHEC	61002
Utah DOH	COLU
Washington DOE	C1203
Wisconsin DNR	998386840
Wyoming (EPA Region 8)	-

Case Narrative

COLUMBIA ANALYTICAL SERVICES, INC.

Client:	GeoEngineers, Inc.	**Service Request No.:**	K0808184
Project:	Dakota Creek Confirmation Sampling/5147-006-04	**Date Received:**	08/27/08
Sample Matrix:	Soil		

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier III validation deliverables including summary forms and all of the associated raw data for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Two soil samples were received for analysis at Columbia Analytical Services on 08/27/08. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

General Chemistry Parameters

No anomalies associated with the analysis of these samples were observed.

Total Metals

No anomalies associated with the analysis of these samples were observed.

PCB Aroclors by EPA Method 8082

No anomalies associated with the analysis of these samples were observed.

Semivolatile Organic Compounds by EPA Method 8270C

Relative Percent Difference Exceptions:
The Relative Percent Difference (RPD) for Pentachlorophenol in the replicate matrix spike analyses of sample SMA5-3 was outside control criteria. In general, the RPD was relatively high for all spiked compounds, which indicates a low bias in the Matrix Spike (MS). All spike recoveries in the MS, DMS, and associated Laboratory Control Sample (LCS) were within acceptance limits, indicating the analytical batch was in control. No further corrective action was appropriate.

Lab Control Sample Exceptions:
The advisory criterion was exceeded for 2,4-Dimethylphenol in the replicate Laboratory Control Samples (LCS/DLCS) KWG0808956-3 and KWG0808956-4. As per the CAS/Kelso Standard Operating Procedure (SOP) for this method, these compounds are not included in the subset of analytes used to control the analysis. The recovery information reported for these analytes is for advisory purposes only (i.e. to provide additional detail related to the performance of each individual compound). No further corrective action was required.

No other anomalies associated with the analysis of these samples were observed.

Polynuclear Aromatic Hydrocarbons by EPA Method 8270C

No anomalies associated with the analysis of these samples were observed.

Approved by _____ **Date** 9/23/08

Chain of Custody Documentation

Columbia Analytical Services, Inc.
An Employee - Owned Company

CHAIN OF CUSTODY

1317 South 13th Ave. • Kelso, WA 98626 • (360) 577-7222 • (800) 695-7222x07 • FAX (360) 636-1068

SR#: KCS08184

PAGE 1 OF 1 COC # 1

PROJECT NAME: DAKOTA CREEK CONFIRMATION SAMPLING
PROJECT NUMBER: 5147-006-04
PROJECT MANAGER: JOHN HERZOG
COMPANY/ADDRESS: GEOENGINEERS
600 STEWART ST SUITE 17000
CITY/STATE/ZIP: SEATTLE, WA 98102
E-MAIL ADDRESS:
PHONE #: 206 728-2674 FAX#:
SAMPLER'S SIGNATURE:

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	Semivolatile Organics by GC/MS 625 ☐ 8270 ☐ 8270LL ☐	Volatile Organics 624 ☐ 8260 ☐	Hydrocarbons 8021 ☐ BTEX ☐ Gas ☐ Diesel ☐ Oil ☐ (*see below) ☐ Fuel Fingerprint ☐ NW-HCID ☐	Oil & Grease/TRPH 1664 SGT ☐ 1664 HEM ☐	PCB's Aroclors ☐ Congeners ☐	Pesticides/Herbicides 608 ☐ 8081A ☐ 8141A ☐ 8151A ☐	Chlorophenolics - 8151M Tri ☐ Tetra ☐ PCP ☐	PAHS 8310 ☐ SIM ☐	Metals, Total or Dissolved (See list below)	Cyanide ☐	Hex-Chrom ☐	pH, Cond., Cl, SO_4, PO_4, F, NO_2, NO_3, BOD, TSS, TDS (circle)	NH_3-N, COD, Total-P, TKN, TOC, DOC (circle) NO_2+NO_3	TOX 9020 ☐ AOX 1650 ☐ 506 ☐	FROZEN Archive				REMARKS
SMA5-3	8/26	9:00		Sed	2																	X				hold for further instruction
SMA5-2	8/26	9:30		Sed	2																	X				

REPORT REQUIREMENTS

___ I. Routine Report: Method Blank, Surrogate, as required
___ II. Report Dup., MS, MSD as required
___ III. Data Validation Report (includes all raw data)
___ IV. CLP Deliverable Report
___ V. EDD

INVOICE INFORMATION

P.O. # _____
Bill To: _____

TURNAROUND REQUIREMENTS

____ 24 hr. ____ 48 hr.
____ 5 Day
____ Standard (10-15 working days)
____ Provide FAX Results

Requested Report Date _____

Circle which metals are to be analyzed:

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER:_____ (CIRCLE ONE)

SPECIAL INSTRUCTIONS/COMMENTS:

[redacted]

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature:	Signature:	Signature:	Signature:
Date/Time: 8/26/08 10:05	Date/Time: 8/27/08 12	Date/Time:	Date/Time:
Printed Name: JOHN HERZOG	Printed Name:	Printed Name:	Printed Name:
Firm: GEO	Firm: CAS	Firm:	Firm:

RCOC #1 06/03

Columbia Analytical Services, Inc.
Cooler Receipt and Preservation Form

PC Wreg

Client / Project: Geo Eng Service Request K08 08184

Received: 8.27.08 Opened: 8.27.08 By: DW

1. Samples were received via? *US Mail* *Fed Ex* *UPS* *DHL* *GH* *GS* *PDX* (Courier) *Hand Delivered*
2. Samples were received in: (circle) (*Cooler*) *Box* *Envelope* *Other* _____ NA
3. Were custody seals on coolers? NA (Y) N If yes, how many and where? _____
   If present, were custody seals intact? (Y) N If present, were they signed and dated? (Y) N
4. Is shipper's air-bill filed? If not, record air-bill number: _____ NA Y N

5. **Temperature of cooler(s) upon receipt (°C):** 1.6
   Temperature Blank (°C): NP
6. If applicable, list Chain of Custody Numbers: _____
7. Packing material used. *Inserts* *Baggies* (*Bubble Wrap*) *Gel Packs* (*Wet Ice*) *Sleeves* *Other* Paper
8. Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N
9. **Did all bottles arrive in good condition (unbroken)?** *Indicate in the table below.* NA (Y) N
10. Were all sample labels complete (i.e analysis, preservation, etc.)? NA (Y) N
11. Did all sample labels and tags agree with custody papers? *Indicate in the table below* NA (Y) N
12. **Were appropriate bottles/containers and volumes received for the tests indicated?** NA (Y) N
13. Were the pH-preserved bottles tested* received at the appropriate pH? *Indicate in the table below* (NA) Y N
14. Were VOA vials and 1631 Mercury bottles received without headspace? *Indicate in the table below.* (NA) Y N
15. **Are CWA Microbiology samples received with >1/2 the 24hr. hold time remaining from collection?** (NA) Y N
16. Was C12/Res negative? (NA) Y N

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Sample ID	Bottle Count	Bottle Type	Out of Temp	Head-space	Broken	pH	Reagent	Volume added	Reagent Lot Number	Initials

*Does not include all pH preserved sample aliquots received. See sample receiving SOP (SMO-GEN).

Additional Notes, Discrepancies, & Resolutions: _____

Total Solids

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirm/5147-006-04
Sample Matrix: Soil

Service Request: K0808184

Total Solids

Prep Method: NONE
Analysis Method: 160.3M
Test Notes:

Units: PERCENT
Basis: Wet

Sample Name	Lab Code	Date Collected	Date Received	Date Analyzed	Result	Result Notes
SMA5-3	K0808184-001	08/26/2008	08/27/2008	09/04/2008	85.0	
SMA5-2	K0808184-002	08/26/2008	08/27/2008	09/04/2008	83.6	

Client:	GeoEngineers, Inc.	**Service Request:**	K0808184
Project:	Dakota Creek Confirm/5147-006-04	**Date Collected:**	08/26/2008
Sample Matrix:	Soil	**Date Received:**	08/27/2008
		Date Analyzed:	09/04/2008

Duplicate Sample Summary
Total Solids

Prep Method:	NONE	**Units:**	PERCENT
Analysis Method:	160.3M	**Basis:**	Wet
Test Notes:			

Sample Name	Lab Code	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
SMA5-3	K0808184-001	85.0	83.3	84.2	2	

COLUMBIA ANALYTICAL SERVICES, INC.

EPA Method 160.3 - Total Solids

126000

Group ID:	KWG0809032				
Analyst:	TNguyen			**Reviewed By:**	
Date Acquired:	09/04/2008 10:15	**Oven TempStart:**	105 DEG C	**Date Reviewed:**	9/9/08
Date Completed:	09/05/2008 08:58	**Oven TempEnd:**	105 DEG C		

#	Lab Code	Client ID	Matrix	Tare	Tare+Wet	Tare+Dry	% Solids	QC Ref Sample	Comments
1	K0807816-001	08MMZoneC18-SO	SOIL	1.31g	13.87g	11.63g	82.2		
2	K0807816-002	08MMZoneC19-SO	SOIL	1.31g	8.94g	7.56g	81.9		
3	K0807816-003	08MMZoneC20-SO	SOIL	1.32g	8.54g	7.45g	84.9		
4	K0807816-004	08MMZoneC21-SO	SOIL	1.32g	11.53g	10.11g	86.1		
5	K0807816-005	08MMZoneC21-SOA	SOIL	1.31g	9.57g	8.32g	84.9		
6	K0807952-001	Rejects	PAPERBOA	1.31g	8.37g	8.20g	97.6		
7	K0807952-002	Accepts	PAPERBOA	1.31g	2.87g	2.79g	94.9		
8	K0807952-003	Feed	PAPERBOA	1.31g	3.10g	3.01g	95.0		
9	K0807981-001	SW1B-SD-082008	SOIL	1.32g	13.16g	10.96g	81.4		
10	K0807981-002	SW2B-SD-082008	SOIL	1.32g	12.04g	5.69g	40.8		
11	K0807981-003	SW3B-SD-082008	SOIL	1.32g	13.88g	11.77g	83.2		
12	K0807981-004	SD-FD-082008	SOIL	1.31g	11.38g	9.95g	85.8		
13	K0808007-001	TS1 2008	SOIL	1.31g	9.64g	6.62g	63.7		
14	K0808007-002	TS2 2008	SOIL	1.31g	9.08g	4.72g	43.9		
15	K0808009-001	6110608-VC-AP10-C-0-0.9	SEDIMENT	1.32g	14.58g	12.45g	83.9		
16	K0808009-002	6110608-VC-AP10-C-0.9-1.9	SEDIMENT	1.31g	11.86g	10.72g	89.2		
17	K0808009-003	6110608-VC-AP20-A-0-1.3	SEDIMENT	1.31g	12.68g	9.23g	69.7		
18	K0808009-004	6110608-VC-AP20-A-1.3-2.8	SEDIMENT	1.32g	12.11g	9.51g	75.9		
19	K0808009-005	6110608-VC-AP20-A-2.8-4.2	SEDIMENT	1.31g	11.06g	8.78g	76.6		
20	K0808009-006	6110608-VC-AP19MOD-A-0-2.0	SEDIMENT	1.31g	15.53g	11.87g	74.3		
21	K0808009-007	6110608-VC-AP19MOD-A-2.0-4.0	SEDIMENT	1.32g	14.58g	11.54g	77.1		
22	K0808109-001	AFS-G1808	SOIL	1.31g	12.20g	11.76g	96.0		
23	K0808109-002	AFS-G2808	SOIL	1.31g	6.41g	5.55g	83.1		
24	K0808112-001	McN-A	SOIL	1.33g	9.34g	2.70g	17.1		

Group ID:	KWG0809032		
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		Date Reviewed:	9/9/08

#	Lab Code	Client ID	Matrix	Tare	Tare+Wet	Tare+Dry	% Solids	QC Ref Sample	Comments
25	K0808112-002	McN-B	SOIL	1.32g	9.09g	2.50g	15.2		
26	K0808112-003	McN-C	SOIL	1.31g	9.83g	2.89g	18.5		
27	K0808112-004	C3	SOIL	1.31g	9.43g	3.68g	29.2		
28	K0808112-005	C1	SOIL	1.33g	9.38g	4.40g	38.1		
29	K0808113-001	08A-0064-C1DS	SEDIMENT	1.31g	13.33g	11.15g	81.9		
30	K0808113-002	08A-0064-C2AS	SEDIMENT	1.31g	13.36g	6.99g	47.1		
31	K0808113-003	08A-0064-C2BS	SEDIMENT	1.31g	20.47g	17.64g	85.2		
32	K0808113-004	08A-0064-C2BT	SEDIMENT	1.30g	13.05g	11.43g	86.2		
33	K0808113-005	08A-0064-C2CS	SEDIMENT	1.30g	14.46g	12.46g	84.8		
34	K0808176-007	08A-0051-G2AT	SEDIMENT	1.31g	11.26g	9.11g	78.4		
35	K0808184-001	SMA5-3	SOIL	1.31g	9.84g	8.56g	85.0		
36	K0808184-002	SMA5-2	SOIL	1.32g	9.14g	7.86g	83.6		
37	K0808185-001	NECF08-1	SEDIMENT	1.31g	9.64g	7.40g	73.1		
38	K0808185-002	NECF08-2	SEDIMENT	1.32g	9.95g	7.75g	74.5		
39	K0808185-003	NECF08-3	SEDIMENT	1.32g	11.39g	8.93g	75.6		
40	K0808185-004	SPMA08-1	SEDIMENT	1.32g	8.66g	3.08g	24.0		
41	K0808235-001	WA-9+00 BC04	SEDIMENT	1.31g	9.35g	7.41g	75.9		
42	K0808235-002	OR-12+45 BC12	SEDIMENT	1.30g	15.36g	11.72g	74.1		
43	K0808235-003	OR-20+30 BC22	SEDIMENT	1.32g	9.72g	7.18g	69.8		
44	K0808235-004	OR-33+10 BC30	SEDIMENT	1.32g	8.99g	7.56g	81.4		
45	K0808235-005	OR-33+20 BC31	SEDIMENT	1.32g	8.39g	6.91g	79.1		
46	K0808235-006	OR-35+15 BC33	SEDIMENT	1.31g	10.77g	8.39g	74.8		
47	K0808235-007	OR-56+25 BC38	SEDIMENT	1.30g	9.14g	7.09g	73.9		
48	K0808235-008	OR-56+25 BC47	SEDIMENT	1.31g	8.50g	6.61g	73.7		
49	K0808235-009	CR-WA67+00 BC57	SEDIMENT	1.30g	15.45g	11.36g	71.1		
50	K0808235-010	OR-84+40 BC68	SEDIMENT	1.32g	11.18g	9.03g	78.2		
51	K0808235-011	OR-86+00 BC70	SEDIMENT	1.33g	12.99g	10.09g	75.1		
52	K0808235-012	OR-86+20 BC71	SEDIMENT	1.31g	9.49g	7.71g	78.2		
53	K0808235-013	OR-86+50 BC72	SEDIMENT	1.32g	10.35g	8.70g	81.7		
54	K0808235-014	OR-97+00 BC83	SEDIMENT	1.32g	12.39g	10.32g	81.3		
55	K0808235-015	WA-97+100 BC85	SEDIMENT	1.31g	10.26g	8.81g	83.8		

Group ID:	KWG0809032		
Analyst:	TNguyen	**Reviewed By:**	
Date Acquired:	09/04/2008 10:15	**Oven TempStart:**	105 DEG C
Date Completed:	09/05/2008 08:58	**Oven TempEnd:**	105 DEG C
		Date Reviewed:	9/9/08

#	Lab Code	Client ID	Matrix	Tare	Tare+Wet	Tare+Dry	% Solids	QC Ref Sample	Comments
56	K0808235-016	WA-99+30 BC88	SEDIMENT	1.32g	10.94g	9.26g	82.5		
57	K0808235-017	WA-100+25 BC90	SEDIMENT	1.33g	12.58g	9.92g	76.4		
58	K0808235-018	WA-102+20 BC93	SEDIMENT	1.32g	10.87g	8.77g	78.0		
59	K0808235-019	WA-102+40 BC94	SEDIMENT	1.32g	9.11g	7.28g	76.5		
60	K0808235-020	OR-09+30 BC04A	SEDIMENT	1.31g	11.02g	7.04g	59.0		
61	K0808235-021	OR-13+05 BC14	SEDIMENT	1.31g	11.33g	6.77g	54.5		
62	K0808235-022	CL-80+40 BC65	SEDIMENT	1.31g	11.36g	7.67g	63.3		
63	K0808235-023	OR-100+40 BC91	SEDIMENT	1.32g	10.06g	6.45g	58.7		
64	K0808251-001	SJPond08-A18-1-01	SEDIMENT	1.31g	13.66g	6.19g	39.5		
65	K0808251-002	SJPond08-A18-2-01	SEDIMENT	1.30g	10.56g	4.02g	29.4		
66	K0808251-003	SJPond08-A18-3-01	SEDIMENT	1.30g	11.68g	3.81g	24.2		
67	K0808251-004	SJPond08-A18-4-01	SEDIMENT	1.29g	10.25g	3.93g	29.5		
68	K0808254-001	Santa Clara River	SOIL	1.31g	13.19g	11.34g	84.4		
69	K0808254-002	Arena Location	SOIL	1.32g	14.12g	13.63g	96.2		
70	K0808254-003	Orchard Location	SOIL	1.30g	8.18g	8.10g	98.8		
71	K0808258-001	Select Fill	SEDIMENT	1.31g	11.11g	10.65g	95.3		
72	K0808258-002	Base Cap 3	SEDIMENT	1.31g	11.77g	11.18g	94.4		
73	K0808277-001	08A-0056-C2HS	SEDIMENT	1.30g	9.65g	6.59g	63.4		
74	K0808277-002	08A-0056-C2HT	SEDIMENT	1.30g	14.44g	10.04g	66.5		
75	K0808277-003	08A-0056-C2GS	SEDIMENT	1.31g	10.71g	5.57g	45.3		
76	K0808277-004	08A-0056-C2IS	SEDIMENT	1.30g	14.09g	11.07g	76.4		
77	K0808277-005	08A-0056-C1AS	SEDIMENT	1.32g	12.81g	5.87g	39.6		
78	K0808277-006	08A-0056-G6AS	SEDIMENT	1.32g	9.23g	5.71g	55.5		
79	K0808277-007	08A-0065-C1CT	SEDIMENT	1.30g	8.32g	7.12g	82.9		
80	K0808277-008	08A-0065-C3ES	SEDIMENT	1.30g	10.06g	7.70g	73.1		
81	K0808277-009	08A-0065-C3CS	SEDIMENT	1.31g	12.31g	10.11g	80.0		
82	K0808277-010	08A-0065-C3DS	SEDIMENT	1.31g	10.17g	8.09g	76.5		
83	K0808277-011	08A-0065-C1AS	SEDIMENT	1.30g	8.63g	4.33g	41.3		
84	K0808277-012	08A-0065-C1BS	SEDIMENT	1.31g	8.57g	6.43g	70.5		
85	K0808277-013	08A-0065-C1DS	SEDIMENT	1.33g	14.97g	12.08g	78.8		
86	K0808277-014	08A-0065-C1CS	SEDIMENT	1.31g	8.57g	7.32g	82.8		

Group ID:	KWG0809032		
Analyst:	TNguyen	**Reviewed By:**	
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		Date Reviewed:	9/9/08

#	Lab Code	Client ID	Matrix	Tare	Tare+Wet	Tare+Dry	% Solids	QC Ref Sample	Comments
87	K0808280-001	FBB ASH 6th floor	SOIL	1.31g	5.59g	5.52g	98.4		
88	K0808280-002	FBB ASH 2nd floor	SOIL	1.31g	12.34g	12.33g	99.9		
89	K0808280-003	FBB ASH above Shaker	SOIL	1.31g	4.80g	4.79g	99.7		
90	K0808311-001	08 FCS RISO AREA D OP04	SOIL	1.31g	13.90g	11.12g	77.9		
91	K0808311-002	08 FCS RISO AREA D OP01	SOIL	1.31g	10.22g	6.82g	61.8		
92	K0808311-003	08 FCS RISO HYSPILL 01	SOIL	1.30g	10.05g	9.20g	90.3		
93	K0808311-004	08 FCSRI TB34	SOIL	1.32g	9.27g	6.98g	71.2		
94	K0808334-001	Dewatered WWT Sludge	SOIL	39.3452g	46.7999g	41.7866g	32.7		Used balance# 26
95	K0808345-001	DU 1-08	SOIL	1.31g	13.07g	13.04g	99.7		Air dry and grd
96	K0808345-002	DU 2-08	SOIL	1.33g	14.09g	14.05g	99.7		Air dry and grd
97	K0808345-003	DU 2-08 Duplicate	SOIL	1.30g	11.02g	10.99g	99.7		Air dry and grd
98	K0808364-001	Santa Clarita River	SOIL	1.32g	12.31g	10.87g	86.9		
99	K0808364-002	Arena Location	SOIL	1.31g	10.11g	9.42g	92.2		
100	K0808364-003	Orchard Location	SOIL	1.32g	8.67g	8.48g	97.4		
101	K0808370-001	DG-01-090208	SOIL	1.30g	20.06g	17.44g	86.0		
102	K0808370-002	TL-01-090208	SOIL	1.30g	13.57g	11.30g	81.5		
103	K0808370-003	UG-01-090208	SOIL	1.30g	13.68g	12.07g	87.0		
104	K0808424-001	Dewatered Sludge 3rd. Qtr.	SLUDGE, SOLID	1.31g	8.09g	2.26g	14.0		
105	KWG0809032-1	Duplicate Client Sample	SEDIMENT	1.30g	14.32g	12.29g	84.4	K0808113-005	
106	KWG0809032-10	Duplicate Client Sample	SEDIMENT	1.31g	12.42g	7.24g	53.4	K0808235-021	
107	KWG0809032-11	Duplicate Client Sample	SOIL	1.31g	9.99g	6.83g	63.6	K0808007-001	
108	KWG0809032-12	Duplicate Client Sample	SOIL	1.32g	9.58g	2.74g	17.2	K0808112-001	
109	KWG0809032-13	Duplicate Client Sample	SOIL	1.32g	11.67g	9.86g	82.5	K0807816-003	
110	KWG0809032-14	Duplicate Client Sample	SEDIMENT	1.32g	8.54g	6.55g	72.4	K0808185-001	
111	KWG0809032-15	Duplicate Client Sample	SEDIMENT	1.31g	17.63g	12.05g	65.8	K0808277-001	
112	KWG0809032-16	Duplicate Client Sample	SEDIMENT	1.31g	8.88g	4.28g	39.2	K0808277-011	
113	KWG0809032-17	Duplicate Client Sample	SEDIMENT	1.30g	10.38g	4.00g	29.7	K0808251-004	
114	KWG0809032-18	Duplicate Client Sample	SOIL	1.31g	6.86g	6.07g	85.8	K0808109-002	
115	KWG0809032-19	Duplicate Client Sample	PAPERBOA	1.32g	8.22g	8.03g	97.2	K0807952-001	
116	KWG0809032-2	Duplicate Client Sample	SOIL	1.31g	15.11g	13.27g	86.7	K0808370-003	

Group ID:	KWG0809032		
Analyst:	TNguyen	**Reviewed By:**	
Date Acquired:	09/04/2008 10:15	**Oven TempStart:**	105 DEG C
Date Completed:	09/05/2008 08:58	**Oven TempEnd:**	105 DEG C
		Date Reviewed:	9/9/08

#	Lab Code	Client ID	Matrix	Tare	Tare+Wet	Tare+Dry	% Solids	QC Ref Sample	Comments
117	KWG0809032-20	Duplicate Client Sample	SLUDGE, SOLID	1.31g	8.80g	2.35g	13.9	K0808424-001	
118	KWG0809032-21	Duplicate Client Sample	SEDIMENT	1.32g	15.02g	12.81g	83.9	K0808009-001	
119	KWG0809032-22	Duplicate Client Sample	SOIL	1.31g	10.88g	9.39g	84.4	K0808254-001	
120	KWG0809032-23	Duplicate Client Sample	SOIL	1.31g	10.28g	8.91g	84.7	K0808364-001	
121	KWG0809032-24	Duplicate Client Sample	SOIL	1.31g	10.77g	9.19g	83.3	K0808184-001	
122	KWG0809032-25	Duplicate Client Sample	SOIL	1.30g	11.72g	11.70g	99.8	K0808345-001	
123	KWG0809032-3	Duplicate Client Sample	SOIL	1.31g	5.23g	5.23g	100	K0808280-003	
124	KWG0809032-4	Duplicate Client Sample	SOIL	1.33g	13.98g	11.99g	84.3	K0807981-001	
125	KWG0809032-5	Duplicate Client Sample	SOIL	33.9748g	41.5586g	36.4657g	32.8	K0808334-001	
126	KWG0809032-6	Duplicate Client Sample	SOIL	1.31g	13.43g	10.73g	77.7	K0808311-001	
127	KWG0809032-7	Duplicate Client Sample	SEDIMENT	1.30g	11.72g	11.17g	94.7	K0808258-002	
128	KWG0809032-8	Duplicate Client Sample	SEDIMENT	1.32g	10.61g	8.40g	76.2	K0808235-001	
129	KWG0809032-9	Duplicate Client Sample	SEDIMENT	1.32g	10.14g	7.92g	74.8	K0808235-011	

General Chemistry Parameters

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : GeoEngineers, Inc.
Project Name : Dakota Creek Confirmation Sampling
Project Number : 5147-006-04
Sample Matrix : SOIL

Service Request : K0808184
Date Collected : 08/26/08
Date Received : 08/27/08

Carbon, Total Organic (TOC)

Prep Method : SOP
Analysis Method : PSEP TOC
Test Notes :

Units : Percent
Basis : Dry

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Result	Result Notes
SMA5-3	K0808184-001	0.05	0.04	1	9/1/2008	09/03/08	0.44	
SMA5-2	K0808184-002	0.05	0.04	1	9/1/2008	09/03/08	0.32	
Method Blank	K0808184-MB	0.05	0.04	1	NA	09/03/08	ND	
Method Blank	K0808184-MB	0.05	0.04	1	NA	09/08/08	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : GeoEngineers, Inc.
Project Name : Dakota Creek Confirmation Sampling
Project Number : 5147-006-04
Sample Matrix : SOIL

Service Request : K0808184
Date Collected : 8/26/2008
Date Received : 8/27/2008
Date Prepared : 09/01/08
Date Analyzed : 09/08/08

Triplicate Summary
Inorganic Parameters

Sample Name : SMA5-3
Lab Code : K0808184-001TPL
Test Notes :

Units : Percent
Basis : Dry

Analyte	Prep Method	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Triplicate Sample Result	Average	Relative Standard Deviation	Result Notes
Carbon, Total Organic (TOC)	SOP	PSEP TOC	0.05	0.44	0.53	0.59	0.52	15	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : GeoEngineers, Inc.
Project Name : Dakota Creek Confirmation Sampling
Project Number : 5147-006-04
Sample Matrix : SOIL

Service Request : K0808184
Date Collected : 8/26/2008
Date Received : 8/27/2008
Date Prepared : 09/01/08
Date Analyzed : 09/03/08

Matrix Spike Summary
Inorganic Parameters

Sample Name : SMA5-3
Lab Code : K0808184-001MS
Test Notes :

Units : Percent
Basis : Dry

Analyte	Prep Method	Analysis Method	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Carbon, Total Organic (TOC)	SOP	PSEP TOC	0.05	3.36	0.44	3.62	95	75-114	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client :	GeoEngineers, Inc.	**Service Request :**	K0808184
Project Name :	Dakota Creek Confirmation Sampling	**Date Collected :**	NA
Project Number :	5147-006-04	**Date Received :**	NA
Sample Matrix :	SOIL	**Date Prepared :**	NA
		Date Analyzed :	09/03/08

Laboratory Control Sample Summary
Inorganic Parameters

Sample Name :	Lab Control Sample	Units :	Percent
Lab Code :	K0808184-LCS	Basis :	Dry
Test Notes :			

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Carbon, Total Organic (TOC)	NONE	PSEP TOC	0.42	0.47	112	74-123	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client :	GeoEngineers, Inc.	**Service Request :**	K0808184
Project Name :	Dakota Creek Confirmation Sampling	**Date Collected :**	NA
Project Number :	5147-006-04	**Date Received :**	NA
Sample Matrix :	SOIL	**Date Prepared :**	NA
		Date Analyzed :	09/08/08

Laboratory Control Sample Summary
Inorganic Parameters

Sample Name :	Laboratory Control Sample	Units :	Percent
Lab Code :	K0808184-LCS	Basis :	Dry
Test Notes :			

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Carbon, Total Organic (TOC)	NONE	PSEP TOC	0.42	0.40	95	74-123	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : GeoEngineers, Inc.
Project : Dakota Creek Confirmation Sampling

Service Request : K0808184
Date Collected : NA
Date Received : NA

Carbon, Total Organic (TOC)
PSEP TOC
Units: Percent

CONTINUING CALIBRATION VERIFICATION (CCV)

	Date Analyzed	True Value	Measured Value	Percent Recovery
CCV1 Result	9/3/2008	20.0	19.7	99
CCV2 Result	9/3/2008	20.0	19.7	99
CCV3 Result	9/3/2008	20.0	19.9	100
CCV4 Result	9/3/2008	20.0	19.4	97
CCV5 Result	9/3/2008	20.0	19.9	100
CCV6 Result	9/3/2008	20.0	19.4	97
CCV1 Result	9/8/2008	20.0	19.5	98
CCV2 Result	9/8/2008	20.0	19.1	96
CCV3 Result	9/8/2008	20.0	19.2	96

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : GeoEngineers, Inc.
Project : Dakota Creek Confirmation Sampling

Service Request : K0808184
Date Collected : NA
Date Received : NA

Carbon, Total Organic (TOC)
PSEP TOC
Units: Percent

CONTINUING CALIBRATION BLANK (CCB)

	Date Analyzed	MRL	Blank Value
CCB1 Result	9/3/2008	0.05	ND
CCB2 Result	9/3/2008	0.05	ND
CCB3 Result	9/3/2008	0.05	ND
CCB4 Result	9/3/2008	0.05	ND
CCB5 Result	9/3/2008	0.05	ND
CCB6 Result	9/3/2008	0.05	ND
CCB1 Result	9/8/2008	0.05	ND
CCB2 Result	9/8/2008	0.05	ND
CCB3 Result	9/8/2008	0.05	ND

Work Request # Original K7804), K7463, K7659, K8184, K8305, K7292

Tier: III II II III II III

Date Analyzed: 9/3/08

Analyst: AMacKenzie

Analysis: TOC Soil

DATA QUALITY REPORT
INORGANICS

Run# 125786

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

1.	Is the method name and number correct and appropriate?		yes/no/NA
2.	Holding times met for all analyses and for all samples?		yes/no/NA
3.	Are calculations correct?		yes/no/NA
4.	Is the reporting basis correct? (Dry Weight)		yes/no/NA
5.	All quality control criteria met?		yes/no/NA
	a.	Is the calibration curve correlation coefficient ≥ 0.995?	yes/no/NA
	b.	MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency?	yes/no/NA
	c.	Are ICVs, CCVs, and CCBs all within acceptance limits?	yes/no/NA
	d.	Are results for methods blanks all ND?	yes/no/NA
	e.	Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.)	yes/no/NA
	f.	Are all exceptions explained?	yes/no/NA
6.	Are all service requests that apply attached?		yes/no/NA
7.	Are all samples labelled correctly?		yes/no/NA
8.	Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample)		yes/no/NA
9.	Are detection limits and units reported correctly?		yes/no/NA
10.	Are proper Analysis/Extraction stickers included on report?		yes/no/NA
11.	Is the unused space on the benchsheet crossed out?		yes/no/NA
12.	Was analysis turned in by the due date? (n-2) (If not record SR#)		yes/no/NA

COMMENTS:

8305-8, 9, 10 to -16, 7292-3-3D, 8184-1T - NR for this batch (only one LCS/MB, but over 20 samples analyzed)

Final Approved by: _____ Date: 9/4/08

DQREPORT

Columbia Analytical Services, Inc.

Service Request #: K7804, K7463, K7659, K8184, K8305 Method: 9060s / PSEP (Combustion/Coulometric)

Analysis For: Total Organic Carbon (TOC) K7292 Matrix: Soil / Dry Weight Basis

Sample Number	mg Sample Injected	Sample Reading, µg C	Baseline Reading, µg C	Net µg C	% Carbon
CCV-1	11.5	2275.2	8.2	2267.0	19.7
CCB-1	50.0	9.1	8.2	0.9	< 0.05
LCS-1	42.5	206.5	8.2	198.3	0.47
MB-1	50.0	8.5	8.2	0.3	< 0.05
K7804-1	20.4	1105.1	8.2	1096.9	5.38
K7804-1D	18.8	1089.1	8.2	1080.9	5.75
K7804-1T	17.7	1087.4	8.2	1079.2	6.10
K7804-1Q	20.1	1232.4	8.2	1224.2	6.09
K7804-1MS	13.5	2649.3	8.2	2641.1	19.56
K7804-2	13.7	967.9	8.2	959.7	7.01
K7804-2D	12.3	872.2	8.2	864.0	7.02
K7804-3	23.8	1680.3	8.2	1672.1	7.03
CCV-2	13.2	2614.6	8.2	2606.4	19.7
CCB-2	50.0	19.3	8.2	11.1	< 0.05
K7804-3D	17.8	1230.7	8.2	1222.5	6.87
K7804-4	30.0	893.2	8.2	885.0	2.95
K7804-4D	32.2	919.9	8.2	911.7	2.83
K7804-5	34.6	448.1	8.2	439.9	1.27
K7804-5D	32.4	396.4	8.2	388.2	1.20
K7804-6	26.9	41.9	8.2	33.7	0.13
K7804-6D	32.9	44.3	8.2	36.1	0.11
K7804-7	21.3	1137.1	8.2	1128.9	5.30
K7804-7D	20.6	1075.4	8.2	1067.2	5.18
K7804-9	25.8	60.4	8.2	52.2	0.20
CCV-3	7.4	1479.7	8.2	1471.5	19.9
CCB-3	50.0	27.1	8.2	18.9	< 0.05

Acid Purge Time: 1 minute **Reading Time:** 5 minutes **TOC % =** (Net Reading)(µg 0.1) / mg Sample Injected

CCV : Urea Baker (lot #A17584) ID#: TOCS/1-10-J TV = 20.0%C

CCV1 = 99 CCV2 = 99 CCV3= 99

LCS: ERA Cat#: 542 Lot#: D006-542 ID#: TOCS/1-10-R TV = 0.42%C %REC= 111 112

Comments :

K7804-1=9.8 mg x 20 / 13.5=14.5 % REC=95% 98 5.83 RSD=6

K8184-1=4.9 mg x 20 / 29.2= 3.36 % REC=95% 0.49 RSD=5

Analyzed By:		Date:9/3/08	Time:0930
Reveiwed By:		Date:	9/4/08

Columbia Analytical Services, Inc.

Service Request #: 0 Method: 9060s / PSEP (Combustion/Coulometric)

Analysis For: Total Organic Carbon (TOC) Matrix: Soil / Dry Weight Basis

Sample Number	mg Sample Injected	Sample Reading, µg C	Baseline Reading, µg C	Net µg C	% Carbon
K7804-9D	26.5	72.9	8.2	64.7	0.24
K7804-10	20.7	473.8	8.2	465.6	2.25
K7804-10D	21.0	542.9	8.2	534.7	2.55
K7463-3	12.2	1421.4	8.2	1413.2	11.586
K7659-1	① ~~27~~ 27.7	2052.8	8.2	2044.6	① ~~75.73~~ 7.38
K7659-4	20.3	4022.8	8.2	4014.6	19.78
K8184-1	31.7	147.6	8.2	139.4	0.44
K8184-1D	21.0	118.5	8.2	110.3	0.53
K8184-1MS	29.2	1065.8	8.2	1057.6	3.62
K8184-2	29.8	102.7	8.2	94.5	0.32
CCV-4	7.3	1427.9	8.2	1419.7	19.4
CCB-4	50.0	31.0	8.2	22.8	< 0.05
K8305-1	8.7	291.7	8.2	283.5	3.26
K8305-2	12.8	267.2	8.2	259.0	2.02
K8305-3	12.7	396.6	8.2	388.4	3.06
K8305-4	12.1	253.9	8.2	245.7	2.03
K8305-5	14.2	413.4	8.2	405.2	2.85
K8305-6	15.4	383.3	8.2	375.1	2.44
K8305-7	15.8	386.1	8.2	377.9	2.39
K8305-8 NR	21.2	415.9	8.2	407.7	1.92
K8305-9 ↓	13.2	336.9	8.2	328.7	2.49
K8305-10 ↓	11.5	276.5	8.2	268.3	2.33
CCV-5	7.7	1537.3	8.2	1529.1	19.9
CCB-5	50.0	6.7	8.2	-1.5	< 0.05

NR ↓

Acid Purge Time: 1 minute **Reading Time:** 5 minutes **TOC % =** (Net Reading)(µg 0.1) / mg Sample Injected

CCV : Urea Baker (lot #A17584) ID#: TOCS/1-10-J TV = 20.0%C

CCV4= 97 CCV5= 99

LCS: ERA Cat#: 542 Lot#: D006-542 ID#: ~~TOCS/1-10-R~~ TV = 0.42%C %REC= 111

Comments : ① DL 9/4/08

Analyzed By: Anai Kang		Date:9/3/08	Time:0930
Reveiwed By: DL		Date:	9/4/08

Columbia Analytical Services, Inc.

Service Request #: 0 Method: 9060s / PSEP (Combustion/Coulometric)

Analysis For: Total Organic Carbon (TOC) Matrix: Soil / Dry Weight Basis

Sample Number	mg Sample Injected	Sample Reading, µg C	Baseline Reading, µg C	Net µg C	% Carbon
K8305-11	13.2	361.1	8.2	352.9	2.67
K8305-12	16.8	355.5	8.2	347.3	2.07
K8305-13	16.2	429.4	8.2	421.2	2.60
K8305-14	8.4	1414.9	8.2	1406.7	16.75
K8305-15	5.5	797.3	8.2	789.1	14.35
K8305-16	8.4	975.6	8.2	967.4	11.52
K7292-3	29.7	302.3	8.2	294.1	0.99
K7292-3D	29.8	335.1	8.2	326.9	1.10
K8184-1T	18.8	100.7	8.2	92.5	0.49
CCV-6	10.8	2105.7	8.2	2097.5	19.42
CCB-6	50.0	9.8	8.2	1.6	< 0.05
CCV-7					
CCB-7					
CCV-8					
CCB-8					

NR

Acid Purge Time: 1 minute **Reading Time:** 5 minutes **TOC % =** $\frac{\text{(Net Reading)(µg 0.1)}}{\text{mg Sample Injected}}$

CCV : Urea Baker (lot #A17584) ID#: TOCS/1-10-J TV = 20.0%C

CCV6= #REF! CCV7= #VALUE!

LCS: ERA Cat#: 542 Lot#: D006-542 ID#: ~~TOCS/1-10-R~~ TV = 0.42%C %REC= 111

Comments : 9/9/4/08

Analyzed By:	Date:9/3/08 Time:0930
Reveiwed By:	Date: 9/4/08

TOC Soil Benchsheet

Sample #	mg Sample	Reading	Date Baked	Baseline
CCV-1	11.5	2275.2		6.4
CCB-1	50.0	9.1		9.8
LCS-1	42.5	206.5		8.5
MB-1	50.0	8.5		Avg
K7804-1	20.4	1105.1	8/22/2008	8.2
K7804-1D	18.8	1089.1	8/22/2008	
K7804-1T	17.7	1087.4	8/22/2008	
K7804-1Q	20.1	1232.4	8/22/2008	
K7804-1MS	13.5	2649.3	8/22/2008	
K7804-2	13.7	967.9	8/22/2008	
K7804-2D	12.3	872.2	8/22/2008	
K7804-3	23.8	1680.3	8/22/2008	
CCV-2	13.2	2614.6		
CCB-2	50.0	19.3		
K7804-3D	17.8	1230.7	8/22/2008	
K7804-4	30.0	893.2	8/22/2008	
K7804-4D	32.2	919.9	8/22/2008	
K7804-5	34.6	448.1	8/22/2008	
K7804-5D	32.4	396.4	8/22/2008	
K7804-6	26.9	41.9	8/22/2008	
K7804-6D	32.9	44.3	8/22/2008	
K7804-7	21.3	1137.1	8/22/2008	
K7804-7D	20.6	1075.4	8/22/2008	
K7804-9	25.8	60.4	8/22/2008	
CCV-3	7.4	1479.7		
CCB-3	50.0	27.1		
K7804-9D	26.5	72.9	8/22/2008	
K7804-10	20.7	473.8	8/22/2008	
K7804-10D	21.0	542.9	8/22/2008	
K7463-3	12.2	1421.4	9/2/2008	
K7659-1	2.7	2052.8	8/21/2008	
K7659-4	20.3	4022.8	8/21/2008	
K8184-1	31.7	147.6	9/2/2008	
K8184-1D	21.0	118.5	9/2/2008	
K8184-1MS	29.2	1065.8	9/2/2008	
K8184-2	29.8	102.7	9/2/2008	
CCV-4	7.3	1427.9		
CCB-4	50.0	31.0		
K8305-1	8.7	291.7	9/2/2008	
K8305-2	12.8	267.2	9/2/2008	
K8305-3	12.7	396.6	9/2/2008	
K8305-4	12.1	253.9	9/2/2008	
K8305-5	14.2	413.4	9/2/2008	
K8305-6	15.4	383.3	9/2/2008	
K8305-7	15.8	386.1	9/2/2008	
K8305-8	21.2	415.9	9/2/2008	
K8305-9	13.2	336.9	9/2/2008	
K8305-10	11.5	276.5	9/2/2008	
CCV-5	7.7	1537.3		
CCB-5	50.0	6.7		
K8305-11	13.2	361.1	9/2/2008	
K8305-12	16.8	355.5	9/2/2008	
K8305-13	16.2	429.4	9/2/2008	
K8305-14	8.4	1414.9	9/2/2008	
K8305-15	5.5	797.3	9/2/2008	
K8305-16	8.4	975.6	9/2/2008	
K7292-3	29.7	302.3	8/21/2008	
K7292-3D	29.8	335.1	8/21/2008	
K8184-1T	18.8	100.7	9/2/2008	
CCV-6	10.8	2105.7		
CCB-6	50.0	9.8		
CCV-7				
CCB-7				
CCV-8				
CCB-8				

JMackey 9/3/08

TOC Soil Benchsheet

125786

Sample #	mg Sample	Reading	Date Baked	Baseline
CCV-1	11.5	2275.2		6.4
CCB-1	50	9.1		9.8
LCS	42.5	206.5		8.5
MB	50	8.5		8.2 Avg
K7804-1	20.4	1105.1	8/22	
-1d	18.8	1089.1		
-1t	17.7	1087.4		
-1q	20.1	1232.4		
-1ms	13.5	2649.3		9.8mg*20/13.5 = 14.5
-2	13.7	967.9		
-2d	12.3	872.2		
-3	23.8	1680.3		
CCV-2	13.2	2614.6		
CCB-2	50	19.3		
K7804-3d	17.8	1230.7	8/22	
-4	30.6	893.2		
-4d	32.2	919.9		
-5	34.6	448.1		
-5d	32.4	396.4		
-6	26.9	41.9		
-6d	32.9	44.3		
-7	21.3	1137.1		
-7d	20.6	1075.4		
-9	25.8	60.4		
CCV-3	7.4	1479.7		
CCB-3	50	27.1		
K7804-9d	26.5	72.9	8/22	
-10	20.7	① ~~26.7~~ 473.8		
-10d	21.6	542.9		
K7463-3	12.2	1421.4	9/2/08	
K7659-1	27.7	2052.8	8/21	
-4	20.3	4022.8		
K8184-1	31.7	147.6	9/2	
-1d	21.6	118.5		
-1ms	29.2	1065.8		4.9mg*20/29.2 = 3.36
-2	29.8	102.7		
CCV-4	7.3	1427.9		
CCB-4	50	31.0		
K8305-1	8.7	291.7	9/2	
-2	12.8	267.2		
-3	12.7	396.6		
-4	12.1	253.9		
-5	14.2	413.4		
-6	15.4	383.3		
-7	15.8	386.1		
-8	21.2	415.9		
-9	13.2	336.9		
-10	11.5	276.5		
CCV-5	7.7	1537.3		
CCB-5	50	6.7		
K8305-11	13.2	361.1	9/2	
-12	16.8	355.5		
-13	16.2	429.4		
-14	8.4	1414.9		

BR 9/4/08

① [illegible] 9/2/08 7:39

TOC Soil Benchsheet

Sample #	mg Sample	Reading	Date Baked	Baseline
CCV-1				
CCB-1				
LCS				
MB				Avg
K68305-15	5.5	2973	9/2	
-16	8.4	4756	↓	
K67292-3	29.7	302.3	8/21	
K67292-3d	29.8	335.1	↓	
K68184-1t	18.8	100.7	9/2/08	
CCV-2 6	10.8	2105.7		
CCB-2 6	50	9.8		
CCV-3				
CCB-3				
CCV-4				
CCB-4				
CCV-5				
CCB-5				

Anna Kazi

Work Request # Original (K7601), K7649, K7292, K8184, K7981, K8463, K8235, K8042, K8305

Tier: III III III III III III III III II

Date Analyzed: 918108

Analyst: AmacKenzie

Analysis: TOC Soil

DATA QUALITY REPORT
INORGANICS

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

1.		Is the method name and number correct and appropriate?	yes/no/NA
2.		Holding times met for all analyses and for all samples?	yes/no/NA
3.		Are calculations correct?	yes/no/NA
4.		Is the reporting basis correct? (Dry Weight)	yes/no/NA
5.		All quality control criteria met?	yes/no/NA
	a.	Is the calibration curve correlation coefficient ≥ 0.995?	yes/no/NA
	b.	MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency?	yes/no/NA
	c.	Are ICVs, CCVs, and CCBs all within acceptance limits?	yes/no/NA
	d.	Are results for methods blanks all ND?	yes/no/NA
	e.	Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.)	yes/no/NA
	f.	Are all exceptions explained?	yes/no/NA
6.		Are all service requests that apply attached?	yes/no/NA
7.		Are all samples labelled correctly?	yes/no/NA
8.		Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample)	yes/no/NA
9.		Are detection limits and units reported correctly?	yes/no/NA
10.		Are proper Analysis/Extraction stickers included on report?	yes/no/NA
11.		Is the unused space on the benchsheet crossed out?	yes/no/NA
12.		Was analysis turned in by the due date? (n-2) (If not record SR#)	yes/no/NA

COMMENTS:

K8184 Due 9/10 Rush

K8463 Due 9/11 Rush

K8042 Due 8/27 Rush

K8305 Due 9/8 Rush

Final Approved by: JH Date: 9/10/08

DQREPORT

Columbia Analytical Services, Inc.

Service Request #: K7601, K7649, K7292, K8184, K7981 Method: 9060s / PSEP (Combustion/Coulometric)

Analysis For: Total Organic Carbon (TOC) K8463, K8235 K8042, K8305 Matrix: Soil / Dry Weight Basis

Sample Number	mg Sample Injected	Sample Reading, µg C	Baseline Reading, µg C	Net µg C	% Carbon
CCV-1	7.2	1407.6	4.9	1402.7	19.5
CCB-1	50.0	7.6	4.9	2.7	< 0.05
LCS-1	50.2	205.4	4.9	200.5	0.40
MB-1	50.0	8.9	4.9	4.0	< 0.05
K7601-5	13.3	946.3	4.9	941.4	7.08
K7601-5D	12.4	895.0	4.9	890.1	7.18
K7601-7	15.0	940.6	4.9	935.7	6.24
K7601-7D	20.6	1263.0	4.9	1258.1	6.11
K7601-9	16.2	1010.4	4.9	1005.5	6.21
K7601-9D	17.8	1085.8	4.9	1080.9	6.07
K7601-10	58.7	276.3	4.9	271.4	0.46
K7601-10D	54.5	231.0	4.9	226.1	0.41
CCV-2	12.5	2390.7	4.9	2385.8	19.1
CCB-2	50.0	8.1	4.9	3.2	< 0.05
K7649-1	22.2	1339.6	4.9	1334.7	6.01
K7649-1D	23.9	1446.3	4.9	1441.4	6.03
K7649-2	39.6	72.9	4.9	68.0	0.17
K7649-2D	38.3	67.8	4.9	62.9	0.16
K7649-3	27.0	1062.8	4.9	1057.9	3.92
K7649-3D	31.6	1281.7	4.9	1276.8	4.04
K7292-3	27.0	298.7	4.9	293.8	1.09
K7292-3D	32.2	321.3	4.9	316.4	0.98
K8184-1T	30.8	185.9	4.9	181.0	0.59
K7981-1	25.8	1446.6	4.9	1441.7	5.59
CCV-3	8.4	1620.8	4.9	1615.9	19.2
CCB-3	50.0	9.1	4.9	4.2	< 0.05

Acid Purge Time: 1 minute **Reading Time:** 5 minutes **TOC % =** (Net Reading)(µg 0.1) / mg Sample Injected

CCV : Urea Baker (lot #A17584) ID#: TOCS/1-10-J TV = 20.0%C

CCV1 = ~~97~~ 98 CCV2 = ~~95~~ 96 CCV3= 96

LCS: ERA Cat#: 542 Lot#: D006-542 ID#: PO3/2-26-E TV = 0.42%C %REC= 95

Comments : ① [illegible] 9/10/08

K8305-8 = 7.5 mg x 20 / 18.3 = 8.2	% REC= 96%	1.93 RSD= 2
K8305-14 = 7.9 mg x 20 / 13.5 = 11.7	% REC= 93%	16.6 RSD= 1
K8463-1 = 9.3 mg x 20 / 13.6 = 13.7	% REC= 92%	
K8463-1D = 6.9 mg x 20 / 14.5 = 9.5	% REC= 91%	21.75 RPD= 18

Analyzed By: [illegible]	Date:9-8-08	Time:1000
Reveiwed By: [illegible]	Date:	9/10/08

TOC.XLT

Columbia Analytical Services, Inc.

Service Request #: 0 Method: 9060s / PSEP (Combustion/Coulometric)

Analysis For: Total Organic Carbon (TOC) Matrix: Soil / Dry Weight Basis

Sample Number	mg Sample Injected	Sample Reading, µg C	Baseline Reading, µg C	Net µg C	% Carbon
K7981-2	16.4	1392.6	4.9	1387.7	8.46
K7981-3	15.8	4226.8	4.9	4221.9	26.72
K7981-4	24.4	3388.9	4.9	3384.0	13.87
K8463-1	13.8	1543.9	4.9	1539.0	11.15
K8235-16	45.0	34.0	4.9	29.1	0.06
K8235-20	33.0	443.1	4.9	438.2	1.33
K8235-21	23.7	363.6	4.9	358.7	1.51
K8042-5	42.1	103.2	4.9	98.3	0.23
K8042-6	43.9	258.9	4.9	254.0	0.58
K8042-11	45.0	297.5	4.9	292.6	0.65
CCV-4	11.7	2259.0	4.9	2254.1	19.3
CCB-4	50.0	7.2	4.9	2.3	< 0.05
MB-2	50.0	7.5	4.9	2.6	< 0.05
LCS-2	53.2	236.3	4.9	231.4	0.43
K8042-15	33.5	104.0	4.9	99.1	0.30
K8305-8	23.4	457.9	4.9	453.0	1.94
K8305-8D	17.0	327.5	4.9	322.6	1.90
K8305-8T	25.1	499.4	4.9	494.5	1.97
K8305-8MS	18.3	1804.3	4.9	1799.4	9.83
K8305-9	19.2	444.9	4.9	440.0	2.29
K8305-10	19.5	903.3	4.9	898.4	4.61
K8305-11	18.8	535.6	4.9	530.7	2.82
CCV-5	7.1	1371.8	4.9	1366.9	19.3
CCB-5	50.0	8.7	4.9	3.8	< 0.05

Acid Purge Time: 1 minute **Reading Time:** 5 minutes **TOC % =** (Net Reading)(µg 0.1) / mg Sample Injected

CCV : Urea Baker (lot #A17584) ID#: TOCS/1-10-J TV = 20.0%C

CCV4= 96 97 CCV5= 96 97

LCS: ERA Cat#: 542 Lot#: D006-542 ID#: PO3/2-26-E TV = 0.42%C %REC= 95

Comments :

Analyzed By: Anderson	Date:9-8-08 Time:1000
Reveiwed By:	Date: 9/10/08

Columbia Analytical Services, Inc.

Service Request #: 0 Method: 9060s / PSEP (Combustion/Coulometric)

Analysis For: Total Organic Carbon (TOC) Matrix: Soil / Dry Weight Basis

Sample Number	mg Sample Injected	Sample Reading, µg C	Baseline Reading, µg C	Net µg C	% Carbon
K8305-12	19.5	404.3	4.9	399.4	2.05
K8305-13	① ~~20.0~~ 20.1	593.6	4.9	588.7	① ~~2.94~~ 2.93
K8305-14	13.3	2209.5	4.9	2204.6	16.58 9
K8305-14D	13.7	2293.7	4.9	2288.8	16.71 10
K8305-14T	12.6	2065.9	4.9	2061.0	16.36 4
K8305-14MS	13.5	3706.5	4.9	3701.6	27.42 10
K8305-15	10.3	1435.7	4.9	1430.8	13.89 9
K8305-16	15.0	1779.3	4.9	1774.4	11.83 10
K8463-1MS	13.6	3235.2	4.9	3230.3	23.75 8
K8463-1MSD	14.5	2874.9	4.9	2870.0	19.79 8
CCV-6	8.5	1712.5	4.9	1707.6	20.09 1
CCB-6	50.0	11.7	4.9	6.8	< 0.05
CCV-7					
CCB-7					
CCV-8					
CCB-8					

Acid Purge Time: 1 minute **Reading Time:** 5 minutes **TOC %** = (Net Reading)(µg 0.1) / mg Sample Injected

CCV : Urea Baker (lot #A17584) ID#: TOCS/1-10-J TV = 20.0%C

CCV6= 100 101 CCV7= #VALUE!

① 8/19/10/08

LCS: ERA Cat#: 542 Lot#: D006-542 ID#: PO3/2-26-E TV = 0.42%C %REC= 95

Comments :

Analyzed By: [signature]	Date:9-8-08 Time:1000
Reveiwed By: [signature]	Date: 9/10/08

TOC.XLT

TOC Soil Benchsheet

Sample #	mg Sample	Reading	Date Baked	Baseline
CCV-1	7.2	1407.6		4.0
CCB-1	50.0	7.6		5.4
LCS-1	50.2	205.4		5.3
MB-1	50.0	8.9		Avg
K7601-5	13.3	946.3	8/22/2008	4.9
K7601-5D	12.4	895.0	8/22/2008	
K7601-7	15.0	940.6	8/22/2008	
K7601-7D	20.6	1263.0	8/22/2008	
K7601-9	16.2	1010.4	8/22/2008	
K7601-9D	17.8	1085.8	8/22/2008	
K7601-10	58.7	276.3	8/22/2008	
K7601-10D	54.5	231.0	8/22/2008	
CCV-2	12.5	2390.7		
CCB-2	50.0	8.1		
K7649-1	22.2	1339.6	8/27/2008	
K7649-1D	23.9	1446.3	8/27/2008	
K7649-2	39.6	72.9	8/27/2008	
K7649-2D	38.3	67.8	8/27/2008	
K7649-3	27.0	1062.8	8/27/2008	
K7649-3D	31.6	1281.7	8/27/2008	
K7292-3	27.0	298.7	8/21/2008	
K7292-3D	32.2	321.3	8/21/2008	
K8184-1T	30.8	185.9	9/2/2008	
K7981-1	25.8	1446.6	8/26/2008	
CCV-3	8.4	1620.8		
CCB-3	50.0	9.1		
K7981-2	16.4	1392.6	8/26/2008	
K7981-3	15.8	4226.8	8/27/2008	
K7981-4	24.4	3388.9	8/28/2008	
K8463-1	13.8	1543.9	9/2/2008	
K8235-16	45.0	34.0	8/29/2008	
K8235-20	33.0	443.1	8/30/2008	
K8235-21	23.7	363.6	8/31/2008	
K8042-5	42.1	103.2	9/1/2008	
K8042-6	43.9	258.9	9/2/2008	
K8042-11	45.0	297.5	9/3/2008	
CCV-4	11.7	2259.0		
CCB-4	50.0	7.2		
MB-2	50.0	7.5	9/6/2008	
LCS-2	53.2	236.3	9/7/2008	
K8042-15	33.5	104.0	9/8/2008	
K8305-8	23.4	457.9	9/2/2008	
K8305-8D	17.0	327.5	9/2/2008	
K8305-8T	25.1	499.4	9/2/2008	
K8305-8MS	18.3	1804.3	9/2/2008	
K8305-9	19.2	444.9	9/2/2008	
K8305-10	19.5	903.3	9/2/2008	
K8305-11	18.8	535.6	9/2/2008	
CCV-5	7.1	1371.8		
CCB-5	50.0	8.7		
K8305-12	19.5	404.3	9/2/2008	
K8305-13	20.0	593.6	9/2/2008	
K8305-14	13.3	2209.5	9/2/2008	
K8305-14D	13.7	2293.7	9/2/2008	
K8305-14T	12.6	2065.9	9/2/2008	
K8305-14MS	13.5	3706.5	9/2/2008	
K8305-15	10.3	1435.7	9/2/2008	
K8305-16	15.0	1779.3	9/2/2008	
K8463-1MS	13.6	3235.2	9/2/2008	
K8463-1MSD	14.5	2874.9	9/2/2008	
CCV-6	8.5	1712.5		
CCB-6	50.0	11.7		
CCV-7				
CCB-7				
CCV-8				
CCB-8				

Anne Kang 9/8/08

TOC Soil Benchsheet

PUMP# 126275

Sample #	mg Sample	Reading	Date Baked	Baseline
CCV-1	7.2	1409.6		4.0
CCB-1	50	7.6		3.4
LCS	50.2	205.4		5.3
MB	50	8.9		4.9 Avg
K7601-5	13.3	9463	8/27	
-5d	12.4	8950		
-7	15.0	940.6		
-7d	20.6	1263.6		
-9	16.2	1010.4		
-9d	17.8	1085.8		
-10	58.7	276.3		
-10d	54.5	231.0		
CCV-2	12.5	2390.7		
CCB-2	56	8.1		
K7649-1	22.2	1339.6	8/27	
-1d	239	1446.3		
-2	39.6	72.9		
-2d	38.3	67.8		
-3	270	1062.8		
-3d	31.6	1281.7		
K7292-3	27.0	298.7	8/21	
-3d	32.2	321.3		
K8184-rt	30.8	185.9	9/2	
K7981-1	25.8	1446.0	8/26	
CCV-3	8.4	1620.5		
CCB-3	50	9.1		
K7981-2	16.4	1392.6		
-3	15.8	4226.8		
-4	24.4	3388.9		
K8463-1	13.8	1543.9	9/2	
K8235-16	45.6	34.0	8/29	
-20	33.0	743.1		
-21	23.7	363.6		
K8042-5	42.1	108.2	8/26	
-6	43.9	258.9		
-11	45.0	297.5		
CCV-4	11.7	2590		
CCB-4	50	7.2		
MB-2	50	7.5		
LCS-2	53.2	230.3		
K8042-15	33.5	1241.0	8/26	
K8305-8	23.4	457.9	9/2	
-8d	17.0	327.5		
-8t	25.1	499.4		
-8ms	18.3	1804.3		
-9	19.2	444.9		
-10	19.5	963.3		
-11	18.8	535.6		
CCV-5	~~10.5~~ 7.1	1371.8		
CCB-5	50	8.7		
K8305-12	19.5	404.3		
-13	20.1	593.6		
-14	13.3	2209.5		
-14d	13.7	2293.7		

7.5 mg * 20 / 18.3 = 8.2

9/10/08

CAM 9/15/08

AMacKenzie 9/8/08

TOC Soil Benchsheet

Sample #	mg Sample	Reading	Date Baked
K8305-14t	12.6	2065.9	912
-14ms	13.5	3706.5	
-15	16.3	① 143x5.7	
-16	15.0	1779.3	
K8463-1ms	13.6	32352	
1msd	14.5	2874.9	
CCV-6	8.5	1712.5	
CCB-6	50	11.7	
CCV-7			
CCB-7			
CCV-8			
CCB-8			
CCV-5			
CCB-5			

7.9 mg*20/13.5 = 11.7

9.3mg*20/13.6 = 13.7

6.9 mg*20/14.5 = ~~13.7~~ 9.5

①AM 9/8/08

9/10/08

AMacKenzie 9/8/08

Metals

Columbia Analytical Services

- Cover Page -
INORGANIC ANALYSIS DATA PACKAGE

Client: GeoEngineers, Inc.
Project Name: Dakota Creek Confirmation Sampling
Project No.: 5147-006-04

Service Request: K0808184

Sample Name:	Lab Code:
SMA5-3	K0808184-001
SMA5-3D	K0808184-001D
SMA5-3S	K0808184-001S
SMA5-2	K0808184-002
SMA5-2D	K0808184-002D
SMA5-2S	K0808184-002S
Method Blank	K0808184-MB

Comments:

Approved By: JC **Date:** 9/10/08

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	GeoEngineers, Inc.	**Service Request:**	K0808184
Project No.:	5147-006-04	**Date Collected:**	8/26/08
Project Name:	Dakota Creek Confirmation Sampli	**Date Received:**	8/27/08
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: SMA5-3 **Lab Code:** K0808184-001

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	7060A	0.8	0.4	5.0	09/05/08	09/08/08	1.9		
Cadmium	6010B	1.0	0.2	2.0	09/04/08	09/10/08	0.3	B	
Chromium	6010B	2.0	0.7	2.0	09/04/08	09/10/08	33.3		
Copper	6010B	2.0	0.9	2.0	09/04/08	09/10/08	25.9		
Lead	6010B	19.6	2.9	2.0	09/04/08	09/10/08	2.9	U	
Mercury	7471A	0.017	0.002	1.0	09/04/08	09/05/08	0.036		
Silver	6010B	2.0	0.8	2.0	09/04/08	09/10/08	0.8	U	
Zinc	6010B	2.0	0.4	2.0	09/04/08	09/10/08	41.7		

% Solids: 85.0

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	GeoEngineers, Inc.	**Service Request:**	K0808184
Project No.:	5147-006-04	**Date Collected:**	8/26/08
Project Name:	Dakota Creek Confirmation Sampli	**Date Received:**	8/27/08
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: SMA5-2 **Lab Code:** K0808184-002

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	7060A	0.8	0.4	5.0	09/05/08	09/08/08	4.2		
Cadmium	6010B	1.0	0.2	2.0	09/04/08	09/10/08	0.3	B	
Chromium	6010B	2.0	0.7	2.0	09/04/08	09/10/08	35.3		
Copper	6010B	2.0	0.9	2.0	09/04/08	09/10/08	29.1		
Lead	6010B	19.8	3.0	2.0	09/04/08	09/10/08	3.0	B	
Mercury	7471A	0.018	0.002	1.0	09/04/08	09/05/08	0.041		
Silver	6010B	2.0	0.8	2.0	09/04/08	09/10/08	0.8	U	
Zinc	6010B	2.0	0.4	2.0	09/04/08	09/10/08	53.0		

% Solids: 83.6

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: GeoEngineers, Inc. **Service Request:** K0808184

Project No.: 5147-006-04 **Date Collected:**

Project Name: Dakota Creek Confirmation Sampli **Date Received:**

Matrix: SOIL **Units:** mg/Kg

Basis: DRY

Sample Name: Method Blank **Lab Code:** K0808184-MB

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	7060A	1.0	0.5	5.0	09/05/08	09/08/08	0.8	B	
Cadmium	6010B	1.0	0.2	2.0	09/04/08	09/10/08	0.2	U	
Chromium	6010B	2.0	0.7	2.0	09/04/08	09/10/08	0.7	U	
Copper	6010B	2.0	0.9	2.0	09/04/08	09/10/08	0.9	U	
Lead	6010B	20.0	3.0	2.0	09/04/08	09/10/08	3.0	U	
Mercury	7471A	0.020	0.002	1.0	09/04/08	09/05/08	0.002	U	
Silver	6010B	2.0	0.8	2.0	09/04/08	09/10/08	0.8	U	
Zinc	6010B	2.0	0.4	2.0	09/04/08	09/10/08	0.4	U	

% Solids: 100.0

Comments:

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: GeoEngineers, Inc. Service Request: K0808184

Project No.: 5147-006-04

Project Name: Dakota Creek Confirmation Sampli

ICV Source: Inorganic Ventures CCV Source: CAS MIXED

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Arsenic	25.0	25.4	102	30.0	31.5	105	30.6	102	7060A
Cadmium	1250	1214	97	500	499	100	483	97	6010B
Chromium	500	495	99	500	500	100	482	96	6010B
Copper	625	611	98	500	495	99	488	98	6010B
Lead	2500	2441	98	500	488	98	471	94	6010B
Mercury	5.00	5.31	106	5.00	5.29	106	5.22	104	7471A
Silver	625	620	99	500	494	99	491	98	6010B
Zinc	1250	1220	98	500	488	98	476	95	6010B

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: GeoEngineers, Inc. Service Request: K0808184

Project No.: 5147-006-04

Project Name: Dakota Creek Confirmation Sampli

ICV Source: Inorganic Ventures CCV Source: CAS MIXED

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Arsenic				30.0	29.4	98	30.0	100	7060A
Mercury				5.00	5.32	106	5.38	108	7471A

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: GeoEngineers, Inc. Service Request: K0808184

Project No.: 5147-006-04

Project Name: Dakota Creek Confirmation Sampli

ICV Source: Inorganic Ventures CCV Source: CAS MIXED

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Mercury				5.00	5.48	110			7471A

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: GeoEngineers, Inc. **Service Request:** K0808184

Project No.: 5147-006-04

Project Name: Dakota Creek Confirmation Sampli

ICV Source: Inorganic Ventures CCV Source: CAS MIXED

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Mercury	5.00	5.26	105	5.00	5.29	106	5.23	105	7471A

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: GeoEngineers, Inc. **Service Request:** K0808184

Project No.: 5147-006-04

Project Name: Dakota Creek Confirmation Sampli

ICV Source: Inorganic Ventures CCV Source: CAS MIXED

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Mercury				5.00	5.40	108	5.33	107	7471A

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: GeoEngineers, Inc. Service Request: K0808184

Project No.: 5147-006-04

Project Name: Dakota Creek Confirmation Sampli

ICV Source: Inorganic Ventures CCV Source: CAS MIXED

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Mercury				5.00	5.38	108	5.25	105	7471A

Metals
- 2b -
CRDL STANDARD FOR AA AND ICP

Client: GeoEngineers, Inc. Service Request: K0808184

Project No.: 5147-006-04

Project Name: Dakota Creek Confirmation Sampli

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP Initial			Final	
	True	Found	%R	True	Found	%R	Found	%R
Arsenic	5.0	6.0	120					
Cadmium				5.0	5.0	100		
Chromium				5.0	2.2	44		
Copper				10.0	11.9	119		
Mercury	0.20	0.19	95					
Silver				10.0	8.5	85		
Zinc				10.0	10.4	104		

Metals
- 2b -
CRDL STANDARD FOR AA AND ICP

Client: GeoEngineers, Inc. Service Request: K0808184

Project No.: 5147-006-04

Project Name: Dakota Creek Confirmation Sampli

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP Initial			CRDL Standard for ICP Final	
	True	Found	%R	True	Found	%R	Found	%R
Mercury	0.20	0.20	100					

Metals

BLANKS

Client: GeoEngineers, Inc. Service Request: K0808184

Project No.: 5147-006-04

Project Name: Dakota Creek Confirmation Sampli

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Method
Arsenic	1.0	U	1.0	U	1.0	U	1.0	U	7060A
Cadmium	0.6	U	0.6	U	0.6	U			6010B
Chromium	-2.0	B	2.0	U	-3.2	B			6010B
Copper	7.0	U	7.0	U	7.0	U			6010B
Mercury	-0.020	B	0.020	U	0.020	U	0.020	U	7471A
Silver	6.0	U	6.0	U	6.0	U			6010B
Zinc	7.0	U	7.0	U	7.0	U			6010B

Metals

BLANKS

Client: GeoEngineers, Inc. Service Request: K0808184

Project No.: 5147-006-04

Project Name: Dakota Creek Confirmation Sampli

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Method
Arsenic			1.0	U					7060A
Mercury			-0.020	B	-0.020	B			7471A

Metals

BLANKS

Client: GeoEngineers, Inc. Service Request: K0808184

Project No.: 5147-006-04

Project Name: Dakota Creek Confirmation Sampli

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Method
Mercury	-0.020	B	0.020	U	0.020	U	0.020	U	7471A

Metals

- 3 -

BLANKS

Client: GeoEngineers, Inc. Service Request: K0808184

Project No.: 5147-006-04

Project Name: Dakota Creek Confirmation Sampli

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Method
Mercury			0.020	U	0.020	U	0.020	U	7471A

Metals

- 4 -

ICP INTERFERENCE CHECK SAMPLE

Client: GeoEngineers, Inc. Service Request: K0808184

Project No.: 5147-006-04

Project Name: Dakota Creek Confirmation Sampli

ICP ID Number: K-ICP-AES-02 ICS Source: Inorganic Ventures

Concentration Units): ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Cadmium		1000	3	983.2	98.3			
Chromium		500	-5	493.3	98.7			
Copper		500	-2	471.4	94.3			
Silver		1000	1	987.2	98.7			
Zinc		1000	8	955.3	95.5			

80-120% control criteria is not applicable to interfering elements (Al,Ca,Fe,Mg).

Metals

- 5A -

SPIKE SAMPLE RECOVERY

Client:	GeoEngineers, Inc.	Service Request:	K0808184
Project No.:	5147-006-04	Units:	MG/KG
Project Name:	Dakota Creek Confirmation Sampli	Basis:	DRY
Matrix:	SOIL	% Solids:	85.0

Sample Name: SMA5-3S Lab Code: K0808184-001S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Mercury	64 - 127	0.494		0.036		0.44	104.1		7471A

An empty field in the Control Limit column indicates the control limit is not applicable

Metals

- 5A -

SPIKE SAMPLE RECOVERY

Client:	GeoEngineers, Inc.	Service Request:	K0808184
Project No.:	5147-006-04	Units:	MG/KG
Project Name:	Dakota Creek Confirmation Sampli	Basis:	DRY
Matrix:	SOIL	% Solids:	83.6

Sample Name: SMA5-2S

Lab Code: K0808184-002S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Arsenic	45 - 135	10.9		4.2		6.84	98.0		7060A
Cadmium	65 - 135	10.3		0.3	B	9.97	100.3		6010B
Chromium	48 - 156	75.7		35.3		39.87	101.3		6010B
Copper	45 - 148	80.1		29.1		49.84	102.3		6010B
Lead	45 - 150	105		3.0	B	99.68	102.3		6010B
Silver	48 - 141	8.8		0.8	U	9.97	88.3		6010B
Zinc	31 - 160	148		53.0		99.68	95.3		6010B

An empty field in the Control Limit column indicates the control limit is not applicable

Metals

- 6 -

DUPLICATES

Client:	GeoEngineers, Inc.	**Service Request:**	K0808184
Project No.:	5147-006-04	**Units:**	MG/KG
Project Name:	Dakota Creek Confirmation Sampli	**Basis:**	DRY
Matrix:	SOIL	**% Solids:**	85.0

Sample Name: SMA5-3D **Lab Code:** K0808184-001D

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Mercury		0.036		0.038		5.4		7471A

An empty field in the Control Limit column indicates the control limit is not applicable.

Metals

- 6 -

DUPLICATES

Client:	GeoEngineers, Inc.	Service Request:	K0808184
Project No.:	5147-006-04	Units:	MG/KG
Project Name:	Dakota Creek Confirmation Sampli	Basis:	DRY
Matrix:	SOIL	% Solids:	83.6

Sample Name: SMA5-2D Lab Code: K0808184-002D

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Arsenic		4.2		4.9		15.4		7060A
Cadmium		0.3	B	0.3	B	0.0		6010B
Chromium	30	35.3		35.0		0.9		6010B
Copper	30	29.1		31.0		6.3		6010B
Lead		3.0	B	3.0	U	200.0		6010B
Silver		0.8	U	0.8	U			6010B
Zinc	30	53.0		60.6		13.4		6010B

An empty field in the Control Limit column indicates the control limit is not applicable.

Metals

- 7 -

LABORATORY CONTROL SAMPLE

Client: GeoEngineers, Inc. Service Request: K0808184

Project No.: 5147-006-04

Project Name: Dakota Creek Confirmation Sampli

Aqueous LCS Source: Solid LCS Source: ERA D045540

Analyte	Aqueous (ug/L)			Solid (mg/kg)				
	True	Found	%R	True	Found	C	Limits	%R
Arsenic				146	144		76 126	98.6
Cadmium				91.9	101		92 125	109.9
Chromium				176	195		93 125	110.8
Copper				70	74.9		85 121	107.0
Lead				68.1	69.2		76 138	101.6
Mercury				1.77	1.730		76 121	97.7
Silver				93	95.9		89 120	103.1
Zinc				402	434		89 125	108.0

Metals

- 9 -

ICP SERIAL DILUTIONS

Client: GeoEngineers, Inc. Service Request: K0808184

Project No.: 5147-006-04 Units: UG/L

Project Name: Dakota Creek Confirmation Sampli

Sample Name: SMA5-2L Lab Code: K0808184-002L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Cadmium	1.31		25.00	U	100.0		P
Chromium	178.74		155.30		13.1	E	P
Copper	147.17		128.00		13.0		P
Lead	15.03		500.00	U	100.0		P
Silver	1.40		50.00	U	100.0		P
Zinc	267.97		247.70		7.6		P

Metals

- 10 -

DETECTION LIMITS

Client: GeoEngineers, Inc. Service Request: K0808184

Project No.: 5147-006-04

Project Name: Dakota Creek Confirmation Sampli

ICP/ICP-MS ID #:

GFAA ID #: K-GFAA-07 AA ID #:

Analyte	Wave-length (nm)	Back-ground	MRL ug/L	MDL ug/L	M
Arsenic	193.60		5.0	1.0	F

Comments:

Metals

- 10 -

DETECTION LIMITS

Client: GeoEngineers, Inc. Service Request: K0808184

Project No.: 5147-006-04

Project Name: Dakota Creek Confirmation Sampli

ICP/ICP-MS ID #:

GFAA ID #: AA ID #: K-CVAA-01

Analyte	Wave-length (nm)	Back-ground	MRL ug/L	MDL ug/L	M
Mercury	253.70		0.20	0.020	CV

Comments:

Metals

- 10 -

DETECTION LIMITS

Client: GeoEngineers, Inc. Service Request: K0808184

Project No.: 5147-006-04

Project Name: Dakota Creek Confirmation Sampli

ICP/ICP-MS ID #: K-ICP-AES-02

GFAA ID #: AA ID #:

Analyte	Wave-length (nm)	Back-ground	MRL ug/L	MDL ug/L	M
Cadmium	226.50		5.0	0.6	P
Chromium	267.72		10.0	2.0	P
Copper	324.75		10.0	7.0	P
Lead	220.35		100	20.0	P
Silver	328.07		10.0	6.0	P
Zinc	206.2		10.0	7.0	P

Comments:

Columbia Analytical Services

Metals

- 11A -

ICP INTERELEMENT CORRECTION FACTORS

Client: GeoEngineers, Inc. Service Request: K0808184

Project No.: 5147-006-04

Project Name: Dakota Creek Confirmation Sampli

ICP ID Number: K-ICP-AES-02

Analyte	Wave-length (nm)	Interelement Correction Factors for: Al	Ca	Fe	Mg	As
Aluminum	308.215	0.0000000	0.0000000	0.0007950	0.0000000	0.0000000
Antimony	206.838	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	189.042	0.0000000	0.0000000	-0.0001000	0.0000000	0.0000000
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.042	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boron	249.678	0.0000000	0.0000000	0.0003800	0.0000000	0.0000000
Cadmium	228.802	0.0000000	0.0000000	0.0000840	0.0000000	0.0000000
Calcium	318.1	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.616	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper	324.754	0.0000000	0.0000000	-0.0000200	0.0000000	0.0000000
Iron	271.4	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	-0.0001000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	279.5	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	-0.0000840	0.0000000	0.0000000
Phosphorus	214.9	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.491	0.0000000	0.0000000	-0.0005000	0.0000000	0.0000000
Selenium	196.026	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silicon	228.158	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	588.995	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	421.552	0.0000000	0.0000760	0.0000000	0.0000000	0.0000000
Thallium	190.864	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Tin	189.989	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	334.941	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.402	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Zinc	213.856	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

Comments:

Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: GeoEngineers, Inc. Service Request: K0808184

Project No.: 5147-006-04

Project Name: Dakota Creek Confirmation Sampli

ICP ID Number: K-ICP-AES-02

Analyte	Wave-length (nm)	Interelement Correction Factors for: Co	Cr	Mn	Mo	Ni
Aluminum	308.215	0.0000000	-0.0022700	0.0000000	0.0000000	0.0000000
Antimony	206.838	0.0000000	0.0165000	0.0000000	-0.0218000	0.0000000
Arsenic	189.042	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.042	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boron	249.678	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	228.802	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Calcium	318.1	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0003700	0.0000800	0.0000000
Cobalt	228.616	0.0000000	0.0000000	0.0000000	-0.0000080	0.0000000
Copper	324.754	0.0000000	0.0000000	0.0000000	0.0002000	0.0000000
Iron	271.4	0.0774000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0000000	0.0000000	0.0000000	-0.0015700	0.0000000
Magnesium	279.5	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0002160	0.0000000	0.0000000	0.0000000	0.0000000
Phosphorus	214.9	0.0000000	0.0000000	0.0000000	-0.0014700	0.0000000
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.026	0.0000000	0.0000000	0.0000000	0.0000000	-0.0005400
Silicon	228.158	0.0000000	0.0000000	-0.0033800	0.0000000	0.0000000
Silver	328.068	0.0000000	-0.0000940	0.0001800	-0.0003000	0.0000000
Sodium	588.995	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	421.552	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.864	0.0082700	0.0000000	0.0000000	0.0000000	0.0000000
Tin	189.989	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	334.941	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.402	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Zinc	213.856	0.0000000	-0.0011700	0.0000000	-0.0001390	0.0000000

Comments:

Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: GeoEngineers, Inc. Service Request: K0808184

Project No.: 5147-006-04

Project Name: Dakota Creek Confirmation Sampli

ICP ID Number: K-ICP-AES-02

Analyte	Wave-length (nm)	Interelement Correction Factors for: P	Sb	Sn	Ti	V
Aluminum	308.215	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.838	0.0000000	0.0000000	0.0000000	0.0005700	0.0000000
Arsenic	189.042	0.0000000	0.0000000	0.0000000	0.0005700	0.0000000
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	-0.0008400
Beryllium	313.042	0.0000000	0.0000000	0.0000000	-0.0004400	0.0003450
Boron	249.678	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	228.802	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Calcium	318.1	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000360	0.0000000	0.0000000	0.0000000	-0.0001260
Cobalt	228.616	0.0000000	0.0000000	0.0000000	0.0016500	0.0000000
Copper	324.754	0.0000000	0.0000000	0.0000000	0.0000000	-0.0030000
Iron	271.4	0.0000000	0.0000000	0.0000000	0.0000000	-0.1500000
Lead	220.353	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	279.5	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Phosphorus	214.9	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.026	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silicon	228.158	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0000000	-0.0007800	-0.0006840
Sodium	588.995	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	421.552	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.864	0.0000000	0.0000000	0.0000000	-0.0018900	-0.0024700
Tin	189.989	0.0000000	0.0000000	0.0000000	-0.0029600	0.0000000
Titanium	334.941	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.402	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Zinc	213.856	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

Comments:

Metals
-12-
ICP LINEAR RANGES (QUARTERLY)

Client: GeoEngineers, Inc. **Service Request:** K0808184

Project No.: 5147-006-04

Project Name: Dakota Creek Confirmation Sampli

ICP ID Number: K-ICP-AES-02

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Cadmium	5.000	18000	6010B
Chromium	5.000	90000	6010B
Copper	5.000	9000	6010B
Lead	5.000	180000	6010B
Silver	5.000	1800	6010B
Zinc	5.000	180000	6010B

Comments:

Metals
-13-
PREPARATION LOG

Client: GeoEngineers, Inc. Service Request: K0808184

Project No.: 5147-006-04

Project Name: Dakota Creek Confirmation Sampli

Method: F

Sample ID	Preparation Date	Initial Weight (g)	Final Volume (mL)
K0808184-001	9/5/08	1.42	100.0
K0808184-002	9/5/08	1.42	100.0
K0808184-002D	9/5/08	1.41	100.0
K0808184-002S	9/5/08	1.40	100.0
K0808184-MB	9/5/08	1.00	100.0
LCSS	9/5/08	1.00	100.0

Metals
-13-
PREPARATION LOG

Client: GeoEngineers, Inc. **Service Request:** K0808184

Project No.: 5147-006-04

Project Name: Dakota Creek Confirmation Sampli

Method: CV

Sample ID	Preparation Date	Initial Weight (g)	Final Volume (mL)
K0808184-001	9/4/08	0.71	50.0
K0808184-001D	9/4/08	0.62	50.0
K0808184-001S	9/4/08	0.67	50.0
K0808184-002	9/4/08	0.65	50.0
K0808184-MB	9/4/08	0.50	50.0
LCSS	9/4/08	0.26	50.0

Metals
-13-
PREPARATION LOG

Client: GeoEngineers, Inc. **Service Request:** K0808184

Project No.: 5147-006-04

Project Name: Dakota Creek Confirmation Sampli

Method: P

Sample ID	Preparation Date	Initial Weight (g)	Final Volume (mL)
K0808184-001	9/4/08	1.20	100.0
K0808184-002	9/4/08	1.21	100.0
K0808184-002D	9/4/08	1.20	100.0
K0808184-002S	9/4/08	1.20	100.0
K0808184-MB	9/4/08	1.00	100.0
LCSS	9/4/08	1.00	100.0

Metals
- 14 -
ANALYSIS RUN LOG

Client: GeoEngineers, Inc. Service Request: K0808184

Project No.: 5147-006-04

Project Name: Dakota Creek Confirmation Sampli

Instrument ID Number: K-GFAA-07 Method: F

Start Date: 9/8/08 End Date: 9/8/08

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN			
ZZZZZZ	1	09:31																												
CAL ZERO	1	09:45				X																								
STANDARD 1	1	09:49				X																								
STANDARD 2	1	09:53				X																								
STANDARD 3	1	09:57				X																								
STANDARD 4	1	10:01				X																								
STANDARD 5	1	10:04				X																								
ICV1	1	10:08				X																								
ICB1	1	10:12				X																								
CRDL1	1	10:16				X																								
CCV1	1	10:19				X																								
CCB1	1	10:23				X																								
ZZZZZZ	1	10:27																												
ZZZZZZ	1	10:31																												
ZZZZZZ	1	10:34																												
ZZZZZZ	1	10:38																												
ZZZZZZ	1	10:42																												
ZZZZZZ	1	10:46																												
ZZZZZZ	1	10:50																												
ZZZZZZ	1	10:54																												
ZZZZZZ	1	10:57																												
K0808184-MB	5	11:01				X																								
CCV2	1	11:05				X																								
CCB2	1	11:09				X																								
LCSS	50	11:12				X																								
ZZZZZZ	1	11:16																												
ZZZZZZ	1	11:20																												
ZZZZZZ	1	11:24																												
ZZZZZZ	1	11:28																												
ZZZZZZ	1	11:31																												
ZZZZZZ	1	11:35																												
ZZZZZZ	1	11:39																												

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
- 14 -
ANALYSIS RUN LOG

Client: GeoEngineers, Inc. **Service Request:** K0808184

Project No.: 5147-006-04

Project Name: Dakota Creek Confirmation Sampli

Instrument ID Number: K-GFAA-07 **Method:** F

Start Date: 9/8/08 **End Date:** 9/8/08

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN			
K0808184-001	5	11:43				X																								
K0808184-001A	5	11:47	101			X																								
CCV3	1	11:50				X																								
CCB3	1	11:54				X																								
K0808184-002	5	11:58				X																								
K0808184-002D	5	12:02				X																								
K0808184-002S	5	12:05				X																								
ZZZZZZ	1	12:17																												
CCV4	1	12:21				X																								
CCB4	1	12:24				X																								

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
- 14 -
ANALYSIS RUN LOG

Client: GeoEngineers, Inc. Service Request: K0808184

Project No.: 5147-006-04

Project Name: Dakota Creek Confirmation Sampli

Instrument ID Number: K-CVAA-01 Method: CV

Start Date: 9/5/08 End Date: 9/5/08

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN			
Calibration Zero	1	08:49																X												
Standard #1	1	08:50																X												
Standard #2	1	08:52																X												
Standard #3	1	08:54																X												
Standard #4	1	08:56																X												
Standard #5	1	08:58																X												
ICV1	1	08:59																X												
ICB1	1	09:01																X												
CCV1	1	09:03																X												
CCB1	1	09:05																X												
CRDL1	1	09:06																X												
ZZZZZZ	1	09:08																												
ZZZZZZ	1	09:10																												
ZZZZZZ	1	09:12																												
ZZZZZZ	1	09:16																												
ZZZZZZ	1	09:18																												
ZZZZZZ	1	09:20																												
ZZZZZZ	1	09:21																												
ZZZZZZ	1	09:23																												
ZZZZZZ	1	09:25																												
CCV2	1	09:27																X												
CCB2	1	09:28																X												
ZZZZZZ	1	09:30																												
ZZZZZZ	1	09:32																												
ZZZZZZ	1	09:34																												
ZZZZZZ	1	09:36																												
ZZZZZZ	1	09:38																												
ZZZZZZ	5	09:41																												
ZZZZZZ	1	09:48																												
ZZZZZZ	1	09:53																												
ZZZZZZ	1	09:55																												
ZZZZZZ	1	09:57																												

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
- 14 -
ANALYSIS RUN LOG

Client: GeoEngineers, Inc. **Service Request:** K0808184

Project No.: 5147-006-04

Project Name: Dakota Creek Confirmation Sampli

Instrument ID Number: K-CVAA-01 **Method:** CV

Start Date: 9/5/08 **End Date:** 9/5/08

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CCV3	1	09:59																X									
CCB3	1	10:00																X									
ZZZZZZ	1	10:02																									
ZZZZZZ	1	10:06																									
ZZZZZZ	1	10:07																									
ZZZZZZ	1	10:09																									
ZZZZZZ	1	10:11																									
ZZZZZZ	1	10:13																									
ZZZZZZ	1	10:15																									
ZZZZZZ	1	10:16																									
ZZZZZZ	1	10:18																									
ZZZZZZ	1	10:20																									
CCV4	1	10:22																X									
CCB4	1	10:23																X									
ZZZZZZ	1	10:25																									
ZZZZZZ	1	10:27																									
ZZZZZZ	1	10:29																									
ZZZZZZ	1	10:31																									
ZZZZZZ	1	10:32																									
ZZZZZZ	1	10:34																									
ZZZZZZ	1	10:36																									
K0808184-MB	1	10:40																X									
LCSS	2	10:41																X									
ZZZZZZ	1	10:43																									
CCV5	1	10:47																X									
CCB5	1	10:49																X									

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
- 14 -
ANALYSIS RUN LOG

Client: GeoEngineers, Inc. Service Request: K0808184

Project No.: 5147-006-04

Project Name: Dakota Creek Confirmation Sampli

Instrument ID Number: K-CVAA-01 Method: CV

Start Date: 9/5/08 End Date: 9/5/08

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN			
Calibration Zero	1	10:53																X												
Standard #1	1	10:54																X												
Standard #2	1	10:56																X												
Standard #3	1	10:58																X												
Standard #4	1	11:00																X												
Standard #5	1	11:02																X												
ICV2	1	11:03																X												
ICB2	1	11:05																X												
CCV1	1	11:07																X												
CCB1	1	11:09																X												
CRDL1	1	11:13																X												
ZZZZZZ	1	11:18																												
ZZZZZZ	1	11:19																												
ZZZZZZ	1	11:22																												
ZZZZZZ	1	11:25																												
ZZZZZZ	1	11:27																												
ZZZZZZ	1	11:29																												
ZZZZZZ	1	11:30																												
ZZZZZZ	1	11:32																												
ZZZZZZ	1	11:34																												
CCV2	1	11:36																X												
CCB2	1	11:38																X												
ZZZZZZ	1	11:39																												
ZZZZZZ	1	11:41																												
ZZZZZZ	1	11:43																												
ZZZZZZ	1	11:45																												
ZZZZZZ	1	11:47																												
ZZZZZZ	1	11:48																												
ZZZZZZ	1	11:50																												
ZZZZZZ	1	11:52																												
ZZZZZZ	1	11:54																												
K0808184-001	1	11:56																X												

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Metals
- 14 -
ANALYSIS RUN LOG

Client: GeoEngineers, Inc. **Service Request:** K0808184

Project No.: 5147-006-04

Project Name: Dakota Creek Confirmation Sampli

Instrument ID Number: K-CVAA-01 **Method:** CV

Start Date: 9/5/08 **End Date:** 9/5/08

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CCV3	1	11:57																X									
CCB3	1	11:59																X									
K0808184-001D	1	12:01																X									
K0808184-001S	1	12:03																X									
K0808184-002	1	12:05																X									
ZZZZZZ	1	12:07																									
ZZZZZZ	1	12:09																									
ZZZZZZ	1	12:11																									
ZZZZZZ	1	12:13																									
ZZZZZZ	1	12:15																									
ZZZZZZ	1	12:20																									
ZZZZZZ	1	12:22																									
CCV4	1	12:24																X									
CCB4	1	12:25																X									
ZZZZZZ	1	12:27																									
ZZZZZZ	1	12:29																									
ZZZZZZ	1	12:31																									
ZZZZZZ	1	12:33																									
ZZZZZZ	1	12:34																									
ZZZZZZ	1	12:36																									
ZZZZZZ	1	12:38																									
ZZZZZZ	1	12:40																									
ZZZZZZ	1	12:42																									
ZZZZZZ	1	12:44																									
CCV5	1	12:45																X									
CCB5	1	12:47																X									
ZZZZZZ	1	12:49																									
ZZZZZZ	1	12:51																									
ZZZZZZ	1	12:53																									
ZZZZZZ	1	12:54																									
ZZZZZZ	1	12:56																									
ZZZZZZ	1	12:58																									

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Metals
- 14 -
ANALYSIS RUN LOG

Client: GeoEngineers, Inc. Service Request: K0808184

Project No.: 5147-006-04

Project Name: Dakota Creek Confirmation Sampli

Instrument ID Number: K-CVAA-01 Method: CV

Start Date: 9/5/08 End Date: 9/5/08

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN			
ZZZZZZ	1	13:00																												
CCV6	1	13:02																X												
CCB6	1	13:04																X												

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
- 14 -
ANALYSIS RUN LOG

Client: GeoEngineers, Inc. Service Request: K0808184

Project No.: 5147-006-04

Project Name: Dakota Creek Confirmation Sampli

Instrument ID Number: K-ICP-AES-02 Method: P

Start Date: 9/10/08 End Date: 9/10/08

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
Blank	1	11:23							X		X		X		X							X				X	
STDA	1	11:26							X		X		X		X							X				X	
STDB	1	11:29																									
ICV1	1	11:32							X		X		X		X							X				X	
ZZZZZZ	1	11:40																									
ZZZZZZ	1	11:44																									
ICB1	1	11:48							X		X		X									X				X	
CCV1	1	11:55							X		X		X		X							X				X	
ZZZZZZ	1	12:00																									
CCB1	1	12:32							X		X		X									X				X	
CRDL1	1	12:37							X		X		X									X				X	
ICS-A1	1	12:41							X		X		X									X				X	
ICS-AB1	1	12:44							X		X		X									X				X	
K0808184-MB	2	12:56							X		X		X		X							X				X	
LCSS	2	12:59							X		X		X		X							X				X	
K0808184-002	2	13:02							X		X		X		X							X				X	
K0808184-002D	2	13:05							X		X		X		X							X				X	
K0808184-002L	10	13:08							X		X		X		X							X				X	
K0808184-002S	2	13:12							X		X		X		X							X				X	
K0808184-001	2	13:16							X		X		X		X							X				X	
CCV2	1	13:20							X		X		X		X							X				X	
ZZZZZZ	1	13:23																									
CCB2	1	13:26							X		X		X									X				X	
ZZZZZZ	1	13:30																									
ZZZZZZ	1	13:35																									
ZZZZZZ	1	13:38																									
ZZZZZZ	1	13:44																									
ZZZZZZ	1	13:47																									
ZZZZZZ	1	13:51																									
ZZZZZZ	1	13:55																									
ZZZZZZ	1	13:59																									
ZZZZZZ	1	14:04																									

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Columbia Analytical Services
Metals Digestion Sheet

Service Request Number(s): K0808184, K0808094, K0807947

Star Lims Run No.: 73511 BLUE

Method: CLP 3010A 3020A 3005A 3050B CLP Hot Block Other-

Analysis for: ICP ICP-MS GFAA Flame AA Other

Sample	Initial Weight (g)	Dry	Wet	Initial Volume(ml)	Final Volume (ml)	Matrix
K0808184 K0808094 K0807947 BLANK	1.03		X		100	10% HNO3, HCl
↓ -LCSS	1.00					
K0808184 - 1	1.~~00~~20 [illegible]					
- 2	1.~~00~~21 [illegible]					
- 2d	1.~~00~~20 [illegible]					
- 2s	1.~~01~~20 [illegible]					
K0808094 - 6	1.01					
↓ - 12	1.01					
K0807947 - 1	3.00					

MH 9-4-08

Time Digestion Started: 8:45am **Balance I.D.:** 2 **Date Balance Checked** 9-3-08

Lot # Acids Used: HNO3 G07057 **HCl** 48060 **H_2O_2** 48047824 **HF**

LCSS (circle appropriate) **ERA CLP Soil Lot # D045540** **Other:**

GFAA LCSW = GFLCSW, MET1-64-R, _____ mls. added

ICP LCSW = QCP-CICV-1, MET1-66-G, _____ mls. added

QCP CICV-2, MET1-66-E, _____ mls. added

QCP CICV-3, MET1-63-C, _____ mls. added

SS6, MET1-69-D, _____ mls. Added

TCLP Spike/LCSE

TSS1 MET1-64-P _____ mls. added

SPIKE INFO

SS1-MET1-69-C, 2.00 mls added SS4-MET1-67-P _____ mls added SS7-MET1-68-L _____ mls added

SS5-MET1-67-T, 1.00 mls added 200.8 1000ppb Stock (MS12-13-C) _____ mls added

SS6-MET1-69-D, 1.00 mls added Ag 1000ppb Stock (MS12-30-H) _____ mls added

Additional spikes:

Comments:

Analyst Cedric Aberle / [illegible] **Date** 9/3/08 / 9-4-08

Reviewer [illegible] **Date** 9/8/08

metdig.xls

METALS SPIKE FORM

Service Request # K0808184, K0808094, K080F947
Q.C. Sample # 8184-2

Circle type of digest: GFAA (ICP) FAA ICP-MS Other:_____ Initials / Date: MH, 9-4-08
Circle type of sample: (Soil) Water Misc. Sludge Oil Other:_____

Solution Name	Element	mLs of 1000ppm Solution	Final Volume	Solution Conc. mg/L	Enter mls Added	
SS1-MET1-69-C	HNO3	50.0	1000ml	-	2.00	Expires:4/1/09
	Al	100**	1000ml	200		
	Ag	100**	1000ml	5		
	Ba	100**	1000ml	200		
	Be	100**	1000ml	5		
	Cd	100**	1000ml	5		
	Co	100**	1000ml	50		
	Cr	100**	1000ml	20		
	Cu	100**	1000ml	25		
	Fe	100**	1000ml	100		
	Pb	100**	1000ml	50		
	Mn	100**	1000ml	50		
	Ni	100**	1000ml	50		
	Sb	50	1000ml	50		
	V	100**	1000ml	50		
	Zn	100**	1000ml	50		
SS4-MET1-67-P	HNO3	25.0	500ml	-		Expires:1/2/09
	As	2.0	500ml	4		
	Cd	2.0	500ml	4		
	Pb	2.0	500ml	4		
	Se	2.0	500ml	4		
	Tl	2.0	500ml	4		
	Cu	2.0	500ml	4		
SS5-MET1-67-T	HNO3	25.0	500ml	-	1.00	Expires:1/6/09
	As	50.0	500ml	100		
	Se	50.0	500ml	100		
	Tl	50.0	500ml	100		
SS6-MET1-69-D	HNO3	25	500ml	-	1.00	Expires: 2/01/09
	B	50	500ml	100		
	Mo	50	500ml	100		
SS7-MET1-68-L	HNO3	10.0	200ml	-		Expires:11/16/08
	K**	20	200ml	1000		
	Na**	20	200ml	1000		
	Mg**	20	200ml	1000		
	Ca**	20	200ml	1000		
GFLCSW (MET1-64-R)	HNO3	10.0	1000ml	-		Expires: 1/1/09
	As, Pb, Se, Tl	5.0	1000ml	2.5		
	Cd	-	-	1.25		
	Cu	2.5	1000ml	2.5		
QCP-CICV-1 (MET1-66-G)	Ca, Mg, Na, K	no dilution	-	2500		Expires:7/1/09
	Al, Ba	no dilution	-	1000		
	Fe	no dilution	-	500		
	Co, Mn, Ni, V, Zn	no dilution	-	250		
	Cu, Ag	no dilution	-	125		
	Cr	no dilution	-	100		
	Be	no dilution	-	25		
QCP-CICV-2 (MET1-66-E)	Sb	no dilution	-	500		Expires: 7/1/09
QCP-CICV-3 (MET1-66-F)	As, Pb, Se, Tl	no dilution	-	500		Expires: 7/1/09
	Cd	no dilution	-	250		

* Denotes volume of mixed stock standard.
** Denotes 10,000 ppm individual stock standards.

Standard	mls of standard	ppm	Logbook #	Exp. Date

Columbia Analytical Services
Metals Digestion Sheet

Service Request Number(s) : K0808094, K0808184, K0807947

Star Lims Run No.: 73608

Method : CLP 3010A 3020A 3005A 3050B CLP Hot Block Other-

Analysis for : ICP ICP-MS GFAA Flame AA Other

Sample	Initial Weight (g)	Dry	Wet	Initial Volume(ml)	Final Volume (ml)	Matrix
K0808094, K0808184 K0807947 - Blank	1.01		X		100	10% HNO_3
-LCSS	1.00					
K0807947 - 1	3.03					
K0808094 - 6	1.21					
-12	1.20					
-12D	1.21					
-12S	1.20					
K0808184 - 1	1.42					
-2	1.42					
-2D	1.41					
-2S	1.40					

MH 9-5-08

Time Digestion Started: 2:20 PM **Balance I.D.:** 28 **Date Balance Checked** 9-5-08

Lot # Acids Used: HNO3 G07057 **HCl** ~~48060~~ MH 9-5-08 **H_2O_2** 48047824 **HF**

LCSS (circle appropriate) **ERA CLP Soil Lot # D045540** **Other:**

GFAA LCSW = GFLCSW, MET1-64-R, _____ mls. added

ICP LCSW = QCP-CICV-1, MET1-66-G, _____ mls. added

QCP CICV-2, MET1-66-E, _____ mls. added

QCP CICV-3, MET1-63-C, _____ mls. added

SS6, MET1-69-D, _____ mls. Added

TCLP Spike/LCSE

TSS1 MET1-64-P _____ mls. added

SPIKE INFO

SS1-MET1-69-C, _____ mls added SS4-MET1-67-P 2.00 mls added SS7-MET1-68-L _____ mls added

SS5-MET1-67-T, _____ mls added 200.8 1000ppb Stock (MS12-31-C) _____ mls added

SS6-MET1-69-D, _____ mls added Ag 1000ppb Stock (MS12-30-H) _____ mls added

Additional spikes:

Comments:

Analyst [signature] **Date** 9-5-08

Reviewer [signature] **Date** 9/8/08

metdig.xls

METALS SPIKE FORM

Service Request # K0806094, K0809184, K0807947

Q.C. Sample # 9094-12, 9184-2

Circle type of digest: (GFAA) ICP FAA ICP-MS Other:_____ Initials / Date: MM 9-5-08

Circle type of sample: (Soil) Water Misc. Sludge Oil Other:_____

Solution Name	Element	mLs of 1000ppm Solution	Final Volume	Solution Conc. mg/L	Enter mls Added	
SS1-MET1-69-C	HNO3	50.0	1000ml	-		Expires:4/1/09
	Al	100*	1000ml	200		
	Ag	100*	1000ml	5		
	Ba	100*	1000ml	200		
	Be	100*	1000ml	5		
	Cd	100*	1000ml	5		
	Co	100*	1000ml	50		
	Cr	100*	1000ml	20		
	Cu	100*	1000ml	25		
	Fe	100*	1000ml	100		
	Pb	100*	1000ml	50		
	Mn	100*	1000ml	50		
	Ni	100*	1000ml	50		
	Sb	50	1000ml	50		
	V	100*	1000ml	50		
	Zn	100*	1000ml	50		
SS4-MET1-67-P	HNO3	25.0	500ml	-		Expires:1/2/09
	As	2.0	500ml	4		
	Cd	2.0	500ml	4		
	Pb	2.0	500ml	4		
	Se	2.0	500ml	4	2.00	
	Tl	2.0	500ml	4		
	Cu	2.0	500ml	4		
SS5-MET1-67-T	HNO3	25.0	500ml	-		Expires:1/6/09
	As	50.0	500ml	100		
	Se	50.0	500ml	100		
	Tl	50.0	500ml	100		
SS6-MET1-69-D	HNO3	25	500ml	-		Expires: 2/01/09
	B	50	500ml	100		
	Mo	50	500ml	100		
SS7-MET1-68-L	HNO3	10.0	200ml	-		Expires:11/16/08
	K**	20	200ml	1000		
	Na**	20	200ml	1000		
	Mg**	20	200ml	1000		
	Ca**	20	200ml	1000		
GFLCSW (MET1-64-R)	HNO3	10.0	100ml	-		Expires: 1/1/09
	As, Pb, Se, Tl	5.0	1000ml	2.5		
	Cd	-	-	1.25		
	Cu	2.5	1000ml	2.5		
QCP-CICV 1 (MET1-66-G)	Ca, Mg, Na, K	no dilution	-	2500		Expires:7/1/09
	Al, Ba	no dilution	-	1000		
	Fe	no dilution	-	500		
	Co, Mn, Ni, V, Zn	no dilution	-	250		
	Cu, Ag	no dilution	-	125		
	Cr	no dilution	-	100		
	Be	no dilution	-	25		
QCP-CICV-2 (MET1-66-E)	Sb	no dilution	-	500		Expires: 7/1/09
QCP-CICV-3 (MET1-66-F)	As, Pb, Se, Tl	no dilution	-	500		Expires: 7/1/09
	Cd	no dilution	-	250		

* Denotes volume of mixed stock standard.

** Denotes 10,000 ppm individual stock standards.

Standard	mls of standard	ppm	Logbook #	Exp. Date

GFAA Data Review Form

Element: As

Instrument: K-GFAA-07

Analytical Batch
KA0629312

Analysis Lot #:

Run Date: 9-8-08

StarLims #: 126305

CRA Source: Gf2-4-C

ICV Source: Gf1-100-B

Calibration Source: Gf2-5-C

CCV Source: Gf2-4-B

Modifier: Gf2-1-4

Service Request Numbers: K7956, K8262, ~~K7974~~ K7947 fw 9-8-08, K8094, K8184

Batch Qc: K7901

	Yes	No	NA
1) Appropriate standardization completed	✓		
2) ICV within 10% of true value	✓		
3) CCVs in control	✓		
4) CCBs and or ICBs below MRL	✓		
5) All reported samples within calibration range	✓		
6) Calculations correct	✓		

Comments:

Primary Reviewed By: RW

Review Date: 9-8-08

Secondary Reviewed By: JDB

Review Date: 9/9/08

COLUMBIA ANALYTICAL SERVICES, INC.
GFAA Run Log

Method: (Circle Method(s) Used)	**Service Request # :**
(As) 7060A Pb: 7421 Se: 7740 Tl: 7841 Cr: 7191 Sb: 7041 Cu: 7211 200.9 Other:	K7996, K7901 BQC, K8262, K7974, K8094, K8184

	SAMPLE NUMBER	Measured (ug/l)	Dilution factor	Recoveries (ICV, CCV, CRA, LCS Post-Spk., Matrix Spk.)	200 series (x)	Comments
1	~ICV	25.45		102%		
2	~ICB	0.76				
3	~CRDL	5.98		120%		
4	~CCV	31.53		105%		
5	~CCB	0.42				
6	K0807956-001	1.55	-			
7	K0807956-001A	21.51	-	100%		
8	K0808262-MB	0.97	-			
9	LCSW K0808262	24.77	-	99%		
10	K0807901-001 bqc	3.15	-			
11	K0807901-001D	2.74	-			
12	K0807901-001S	42.33	-	98%		
13	K0808262-001	3.11	-			
14	K0808262-001A	17.18	-	70%		
15	K0807974-MB K7947	1.68	-			
16	~CCV	30.58		102%		
17	~CCB	0.47				
18	LCSS K0807974 pw 9-8-08	28.86	1/50	99%		
19	K0807974-001 K7947-	6.60	1/5			
20	K0807974-001A ↓	23.53	1/5	85%		
21	K0808094-006	4.23	1/5			
22	K0808094-006A	22.76	1/5	93%		
23	K0808094-012	3.35	1/5			
24	K0808094-012D	4.24	1/5			
25	K0808094-012S	18.17	1/5	93%		
26	K0808184-001	4.51	1/5			
27	K0808184-001A	24.74	1/5	101%		
28	~CCV	29.39		98%		
29	~CCB	-0.28				
30	K0808184-002	10.06	1/5			

True Values/QC Limits: 7000 series listed	LCSW (200 series + 15%)	Water Spike (200 series + 30%)	LCSS (ERA D045540) (200 series + 15%)	Soil Spike (200 series + 30%)
Arsenic:	25.0ppb (77-113%)	40.0ppb (58-131%)	146mg/kg (76-126%)	80ppb (45-135%)
Lead:	25.0ppb (75-114%)	40.0ppb (64-122%)	67.5mg/kg (68-133%)	80ppb (42-141%)
Selenium:	25.0ppb (75-115%)	40.0ppb (43-133%)	70.5mg/kg (78-137%)	80ppb (48-130%)
Thallium:	25.0ppb (87-113%)	40.0ppb (53-132%)	82.1mg/kg (80-120%)	80ppb (36-135%)

Analyst	**Date:**		**Page Number:**
	9-8-08		1

COLUMBIA ANALYTICAL SERVICES, INC.

GFAA Run Log

Method: (Circle Method(s) Used)	**Service Request # :**
(As) 7060A Pb: 7421 Se: 7740 Tl: 7841 Cr: 7191 Sb: 7041 Cu: 7211 200.9 Other:	K8184

	SAMPLE NUMBER	Measured (ug/l)	Dilution factor	Recoveries (ICV, CCV, CRA, LCS Post-Spk., Matrix Spk.)	200 series (x)	Comments
1	K0808184-002D	11.62	1/5			
2	K0808184-002S	25.50	1/5	97%		
3	-	-0.07				
4	-	0.14				
5	~CRDL	5.00				
6	~CCV	30.01		100%		
7	~CCB	0.08				
8						
9						
10						
11						
12						
13						
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22						
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24						
25						
26						
27						
28						
29						
30						

True Values/QC Limits: 7000 series listed	LCSW (200 series ± 15%)	Water Spike (200 series ± 30%)	LCSS (ERA D045540) (7000 & 200 series)	Soil Spike (200 series ± 30%)
Arsenic:	25.0ppb (79-115%)	40.0ppb (55-138%)	146mg/kg (77-122%)	80ppb (41-137%)
Lead:	25.0ppb (78-112%)	40.0ppb (54-138%)	67.5mg/kg (67-132%)	80ppb (41-140%)
Selenium:	25.0ppb (81-116%)	40.0ppb (31-138%)	70.5mg/kg (76-136%)	80ppb (45-132%)
Thallium:	25.0ppb (88-117%)	40.0ppb (40-136%)	82.1mg/kg (80-120%)	80ppb (39-132%)

Analyst	**Date:**		**Page Number:**
Robert A. Warren	9-8-08		2

Analyst rnorris
Date Started 8:47 AM 09/08/2008
Worksheet As 9-8-08
Comment K-GFAA-07
Methods As

Method: As Routine (Zeeman)

W4502: Sample uncalibrated

Sample ID	Conc µg/L	%RSD	Mean Abs	BG Abs	Readings			
RSD check	UNCALm	0.6	0.1385	-0.0335	0.1391	0.1380	/08/2008	1:20 AM
CAL ZERO	0.00	84.7	-0.0009	-0.0118	-0.0015	-0.0004	/08/2008	5:46 AM
STANDARD 1	5.00	12.6	0.0229	-0.0150	0.0208	0.0249	/08/2008	9:36 AM
STANDARD 2	20.00	0.5	0.1116	-0.0239	0.1112	0.1120	/08/2008	3:24 AM
STANDARD 3	30.00	3.4	0.1642	-0.0054	0.1602	0.1682	/08/2008	7:12 AM
STANDARD 4	40.00	1.3	0.2230	0.0005	0.2210	0.2251	/08/2008	1:00 AM
	QC Test: Correlation coefficient 0.9998 within 0.9950 limit							
STANDARD 5	60.00	0.6	0.3339	-0.0020	0.3354	0.3324	/08/2008	4:48 AM
	Curve Fit = Linear Origin							
	Characteristic Conc = 1.58 µg/L							
	r = 0.9998							
	Calculated Conc = -0.17 4.12 20.10 29.57 40.17							
	Residuals = 0.17 0.88 -0.10 0.43 -0.17							
	QC Test: ICV recovery 101.8%R - within limits							
~ICV	25.45	1.3	0.1413	-0.0174	0.1426	0.1400	/08/2008	8:34 AM
	QC Test: ICB Concentration 0.76 less than limit							
~ICB	0.76	70.8	0.0042	-0.0001	0.0064	0.0021	/08/2008	2:14 AM
	QC Test: CRDL recovery 119.6%R - within limits							
~CRDL	5.98	6.6	0.0332	-0.0351	0.0317	0.0348	/08/2008	6:04 AM
	QC Test: CCV recovery 105.1%R - within limits							
~CCV	31.53	1.6	0.1751	-0.0024	0.1771	0.1731	/08/2008	9:52 AM
	QC Test: CCB Concentration 0.42 less than limit							
~CCB	0.42	>100	0.0023	-0.0079	0.0080	-0.0034	/08/2008	3:32 AM
K0807956-001	1.55	14.8	0.0086	-0.0099	0.0077	0.0095	/08/2008	7:20 AM
K0807956-001A	21.51	1.4	0.1194	0.0118	0.1206	0.1182	/08/2008	1:08 AM
K0808262-MB	0.97	3.6	0.0054	-0.0506	0.0055	0.0052	/08/2008	4:56 AM
LCSW K0808262	24.77	4.0	0.1375	-0.0154	0.1337	0.1414	/08/2008	8:46 AM
K0807901-001 bq	3.15	13.1	0.0175	0.0045	0.0191	0.0159	/08/2008	2:34 AM
K0807901-001D	2.74	1.2	0.0152	-0.0252	0.0154	0.0151	/08/2008	6:24 AM
K0807901-001S	42.33	2.8	0.2350	0.0052	0.2303	0.2397	/08/2008	0:14 AM
K0808262-001	3.11	26.9	0.0173	0.0615	0.0140	0.0205	/08/2008	4:02 AM
K0808262-001A	17.18	3.7	0.0954	0.0388	0.0979	0.0929	/08/2008	7:52 AM
K0807974-MB	1.68	34.5	0.0093	-0.0385	0.0116	0.0070	/08/2008	1:40 AM
	QC Test: CCV recovery 101.9%R - within limits							
~CCV	30.58	2.1	0.1698	-0.0294	0.1724	0.1673	/08/2008	5:30 AM
	QC Test: CCB Concentration 0.47 less than limit							
~CCB	0.47	>100	0.0026	-0.0321	0.0051	0.0002	/08/2008	9:10 AM
LCSS K0807974 1	28.86	0.7	0.1602	0.0173	0.1610	0.1595	/08/2008	2:58 AM
K0807974-001 1/5	6.60	5.8	0.0367	0.2869	0.0382	0.0352	/08/2008	6:46 AM
K0807974-001A	23.53	2.3	0.1307	0.2884	0.1286	0.1327	/08/2008	0:34 AM
K0808094-006 1/5	4.23	1.0	0.0235	0.2381	0.0233	0.0236	/08/2008	4:22 AM
K0808094-006A	22.76	2.4	0.1264	0.1987	0.1285	0.1243	/08/2008	8:08 AM
K0808094-012	3.35	12.5	0.0186	0.1749	0.0203	0.0170	/08/2008	1:56 AM
K0808094-012D	4.24	28.6	0.0235	0.1718	0.0283	0.0188	/08/2008	5:42 AM
K0808094-012S	18.17	3.0	0.1009	0.1352	0.0987	0.1030	/08/2008	9:30 AM
K0808184-001 1/5	4.51	7.5	0.0251	0.4433	0.0237	0.0264	/08/2008	3:16 AM
K0808184-001A	24.74	3.0	0.1374	0.4281	0.1344	0.1403	/08/2008	7:02 AM
	QC Test: CCV recovery 98.0%R - within limits							

Sample ID	Conc µg/L	%RSD	Mean Abs	BG Abs	Readings			
~CCV	29.39	1.4	0.1632	-0.0087	0.1617	0.1648	/08/2008	0:50 AM
	QC Test: CCB Concentration -0.28 less than limit							
~CCB	-0.28	>100	-0.0016	-0.0253	0.0015	-0.0046	/08/2008	4:30 AM
K0808184-002	10.06	1.2	0.0559	0.4067	0.0564	0.0554	/08/2008	8:20 AM
K0808184-002D	11.62	2.7	0.0645	0.4484	0.0633	0.0658	/08/2008	02:06 PM
K0808184-002S	25.50	0.8	0.1416	0.4115	0.1423	0.1408	/08/2008	05:52 PM
	-0.07	>100	-0.0004	0.0041	0.0017	-0.0025	/08/2008	09:40 PM
	0.14	>100	0.0008	-0.0040	0.0016	-0.0001	/08/2008	13:28 PM
	QC Test: CRDL recovery 100.0%R - within limits							
~CRDL	5.00	2.3	0.0278	-0.0072	0.0282	0.0273	/08/2008	17:16 PM
	QC Test: CCV recovery 100.0%R - within limits							
~CCV	30.01	1.2	0.1666	0.0080	0.1653	0.1680	/08/2008	21:04 PM
	QC Test: CCB Concentration 0.08 less than limit							
~CCB	0.08	>100	0.0005	-0.0127	0.0009	0.0000	/08/2008	24:44 PM

Worksheet created from template 8:47:28 AM 09/08/2008
Worksheet details:
Name: As 9-8-08
Analyst: rnorris
Comments:K-GFAA-07

Optimize stopped 8:47:34 AM 09/08/2008

Optimize started [As Routine] 8:47:34 AM 09/08/2008

Optimize stopped 8:58:06 AM 09/08/2008
Worksheet Saved

(AA Online)

Method: As Routine (Zeeman)

Instrument settings:
Wavelength:193.7 nm, Slit Width:0.2 nm, Lamp Current:10.0 mA, Background Correction:BC On

Measurement settings:
Calibration Mode: Concentration, Measurement Mode: Peak Area, Smoothing: 5 point
Replicates Standard: 2, Replicates Sample: 2

Furnace settings:
Multiple Inject: Off
Hot Inject: Off
Modifier 1 Co Inject, Modifier 1 Volume: 6 uL
Modifier 2 Co Inject, Modifier 2 Volume: 2 uL
Workhead Height: 0.0 mm, Pre Last Dry Step: 2, Post Last Dry Step: 3

Step No	Temp deg C	Time sec	Gas Flow L/min	Gas Type	Read	Store
1	85	5.0	3.0	Normal	No	No
2	95	40.0	3.0	Normal	No	No
3	600	10.0	3.0	Alternate	No	No
4	1300	5.0	3.0	Alternate	No	No
5	1300	1.0	3.0	Alternate	No	No
6	1290	2.0	0.0	Alternate	No	Yes
7	2600	0.6	0.0	Alternate	Yes	Yes
8	2600	2.0	0.0	Alternate	Yes	Yes
9	2600	2.0	3.0	Alternate	No	Yes

Instrument Zero [Postread=-0.0022Abs, Gain=68%]

Tube	Sample ID	Conc µg/L	%RSD	Mean Abs	BG Abs	Readings	
1:1	RSD check	UNCALm	8.2	0.1265	0.0411	0.1192	0.1338

9:04:04 AM 09/08/2008

W4502: Sample uncalibrated

1:1	RSD check	UNCALm	4.5	0.1335	-0.0002	0.1292	0.1378
						9:10:48 AM	09/08/2008
W4502: Sample uncalibrated							
1:1	RSD check	UNCALm	0.8	0.1411	-0.0398	0.1419	0.1403
						9:14:44 AM	09/08/2008
W4502: Sample uncalibrated							
1:1	RSD check	UNCALm	3.8	0.1438	-0.0066	0.1399	0.1477
						9:20:18 AM	09/08/2008
W4502: Sample uncalibrated							
1:1	RSD check	UNCALm	3.9	0.1387	0.0098	0.1349	0.1425
						9:26:54 AM	09/08/2008
W4502: Sample uncalibrated							
1:1	RSD check	UNCALm	0.6	0.1385	-0.0335	0.1391	0.1380
						9:31:20 AM	09/08/2008

RSD = 2.74 %

CVAA Mercury Data Review Form

Element: Hg

Analysis Lot #: 126100

Cal. STD/CCV Source: HG1-74-Q

Service Request Numbers:

K0807715, K0807664, K0807835, K0807681, K0808183, K0808228, K0808258, K0808184, K0808089, K0808091, K0808199

	Yes	No	NA
1) Appropriate standardization completed	X		
2) ICV within 10% of true value	X		
3) CCVs in control	X		
4) CCBs and or ICBs below MRL	X		
5) All reported samples within calibration range	X		
6) Calculations correct	X		

Comments:
K0808258 & K0808184 - wet weights used in calculations
% TS not available.

Data reviewed against service request(s) to ensure no samples were omitted: MS (initials)

Primary Reviewed By: MAS Date: 9/5/08

Secondary Reviewed By: JDB Date: 9/5/08

COLUMBIA ANALYTICAL SERVICES, INC. PRINTOUT WITH: _____
ANALYTICAL WORKSHEET

Method: (Circle One) 7470A 7471A 245.1	Service Request # : K0807715, K0807664, K0807835, K0807681, K0808183, K0808228, K0808258, K0808184, K0808089, K0808091, K0808199
Analysis For: Hg	

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g) or (mL)	Initial Dilution (mL)	Dilution Factor	(µg/L) Measured	Sample Actual (mg/kg)	Sample Actual (µg/L)
1	ICV1	~	~	~	5.31		106%
2	ICB1	~	~	~	-0.02		< 0.2
3	CCV1	~	~	~	5.29		106%
4	CCB1	~	~	~	0.00		< 0.2
5	CRA	~	~	~	0.19		95%
6	K0807715-MB	0.537	50	~	-0.02	-0.002	
7	LCSS K0807715 1/2	0.253	50	1/2	4.27	1.688	95%
8	K0807715-004	0.541	50	~	0.02	0.002	
9	K0807715-004A		50	~	4.84		97%
10	K0807715-004D	0.526	50	~	0.02	0.002	
11	K0807715-004S	0.526	50	~	5.12	0.487	102%
12	K0807715-005	0.539	50	~	0.00	0.000	
13	K0807715-006	0.605	50	~	0.04	0.003	
14	K0807715-014	0.574	50	~	0.01	0.001	
15	CCV2	~	~	~	5.22		104%
16	CCB2	~	~	~	-0.01		< 0.2
17	K0807664-001	0.531	50	~	0.17	0.016	
18	K0807664-001D	0.523	50	~	0.16	0.015	
19	K0807664-001S	0.525	50	~	5.07	0.483	101%
20	K0807835-001	0.537	50	~	9.43	0.878	
21	K0807681-003	0.633	50	~	0.04	0.003	
22	K0807835-001 1/5	0.537	50	1/5	2.91	1.355	
23	K0807835-001L		50	1/25	0.62		7%
24	K0808183MB	0.507	50	~	-0.02	-0.002	
25	LCSS K0808183 1/2	0.252	50	~	4.07	~~0.808~~ 1.615	91%

NS 9/5/08

Comments: Reporting Levels:

Soil/Tissue Spike Level:		K0807715-004S=0.475mg/kg, K0807664-001S=0.476mg/kg			
Post Spike Level:		x @ 5 µg/L			
Method	**Spike Level**	**MRL**	**LCS Limit**	**MS Limit**	**RPD**
7470A Water	1.0 µg/L	0.2 µg/L	84-117%	78-122%	20%
245.1 Water	1.0 µg/L	0.2 µg/L	85-115%	70-131%	20%
7470A TCLP	5.0 µg/L	1.0 µg/L	85-115%	75-125%	20%
7471A Soil LCSS	1.77 mg/kg	0.02 mg/kg	76-121%	64-127%	30%
7471A Tissue Tort	0.27 mg/kg	0.02 mg/kg	78-122%	60-130%	30%

Analyst:	Date:	Page Number:
[signature]	9/5/08	1

[HgSoilRunForm] HG1.XLS

COLUMBIA ANALYTICAL SERVICES, INC. PRINTOUT WITH:_____
ANALYTICAL WORKSHEET

Method: (Circle One) 7470A (7471A) 245.1	Service Request # :
Analysis For: Hg	

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g) or (mL)	Initial Dilution (mL)	Dilution Factor	(µg/L) Measured	Sample Actual (mg/kg)	Sample Actual (µg/L)
26	K0808183-001	0.591	50	~	0.07	0.006	
27	CCV3	~	~	~	5.32		106%
28	CCB3	~	~	~	-0.01		< 0.2
29	K0808183-001A		50	~	5.14		101%
30	K0808183-002	0.581	50	~	0.07	0.006	
31	K0808183-003	0.562	50	~	0.16	0.014	
32	K0808183-004	0.562	50	~	2.29	0.204	
33	K0808183-005	0.597	50	~	0.89	0.075	
34	K0808183-006	0.554	50	~	0.40	0.036	
35	K0808183-007	0.559	50	~	0.30	0.027	
36	K0808183-008	0.525	50	~	0.00	0.000	
37	K0808183-009	0.550	50	~	0.02	0.002	
38	K0808183-009D	0.553	50	~	0.03	0.003	
39	CCV4	~	~	~	5.38		108%
40	CCB4	~	~	~	-0.02		< 0.2
41	K0808183-009S	0.548	50	~	4.97	0.453	99%
42	K0808183-010	0.662	50	~	0.00	0.000	
43	K0808183-011	0.500	50	~	0.04	0.004	
44	K0808183-012	0.632	50	~	0.00	0.000	
45	K0808183-013	0.614	50	~	0.10	0.008	
46	K0808183-014	0.598	50	~	0.05	0.004	
47	K0808183-004L		50	~	0.50		9%
48	K0808228-MB	0.502	50	~	-0.01	-0.001	
49	LCSS K0808228 1/2	0.256	50	1/2	4.44	1.734	98%
50	K0808228-001	0.509	50	~	3.78	0.371	

Comments: Reporting Levels:

Soil/Tissue Spike Level:		K0808183-009S=0.456mg/kg			
Post Spike Level:					
Method	**Spike Level**	**MRL**	**LCS Limit**	**MS Limit**	**RPD**
7470A Water	1.0 µg/L	0.2 µg/L	84-117%	78-122%	20%
245.1 Water	1.0 µg/L	0.2 µg/L	85-115%	70-131%	20%
7470A TCLP	5.0 µg/L	1.0 µg/L	85-115%	75-125%	20%
7471A Soil LCSS	1.77 mg/kg	0.02 mg/kg	76-121%	64-127%	30%
7471A Tissue Tort	0.27 mg/kg	0.02 mg/kg	78-122%	60-130%	30%

Analyst:	Date:	Page Number:
[signature]	9/5/08	2

[HgSoilRunForm] HG2.XLS

COLUMBIA ANALYTICAL SERVICES, INC. PRINTOUT WITH:_____
ANALYTICAL WORKSHEET

Method: (Circle One) 7470A (7471A) 245.1	Service Request # :
Analysis For: Hg	

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g) or (mL)	Initial Dilution (mL)	Dilution Factor	(µg/L) Measured	Sample Actual (mg/kg)	Sample Actual (µg/L)
51	CCV5	~	~	~	5.48		110%
52	CCB5	~	~	~	-0.02		< 0.2
53	ICV2	~	~	~	5.26		105%
54	ICB2	~	~	~	-0.02		< 0.2
55	CCV6	~	~	~	5.29		106%
56	CCB6	~	~	~	0.00		< 0.2
57	CRA	~	~	~	0.20		100%
58	K0808228-001L		50	~	0.76		1%
59	K0808228-001A		50	~	8.36		92%
60	~~K0808228-002~~	~~0.559~~	~~50~~	~	~~11.50~~ MS 91508 <		
61	K0808228-003	0.617	50	~	3.47	0.281	
62	K0808228-004	0.531	50	~	4.90	0.461	
63	K0808228-005	0.527	50	~	1.15	0.109	
64	K0808228-006	0.547	50	~	3.83	0.350	
65	K0808228-007	0.532	50	~	0.34	0.032	
66	K0808228-008	0.517	50	~	1.17	0.113	
67	CCV9	~	~	~	5.23		105%
68	CCB9	~	~	~	0.00		< 0.2
69	K0808228-009	0.594	50	~	0.01	0.001	
70	K0808228-010	0.584	50	~	0.00	0.000	
71	K0808228-010D	0.573	50	~	0.01	0.001	
72	K0808228-010S	0.570	50	~	5.16	0.453	103%
73	K0808228-011	0.534	50	~	0.02	0.002	
74	K0808258-001	0.674	50	~	0.02	0.001	
75	K0808258-001D	0.626	50	~	0.03	0.002	

Comments: Reporting Levels:

Soil/Tissue Spike Level: K0808228-010S=0.439mg/kg

Post Spike Level:

Method	Spike Level	MRL	LCS Limit	MS Limit	RPD
7470A Water	1.0 µg/L	0.2 µg/L	84-117%	78-122%	20%
245.1 Water	1.0 µg/L	0.2 µg/L	85-115%	70-131%	20%
7470A TCLP	5.0 µg/L	1.0 µg/L	85-115%	75-125%	20%
7471A Soil LCSS	1.77 mg/kg	0.02 mg/kg	76-121%	64-127%	30%
7471A Tissue Tort	0.27 mg/kg	0.02 mg/kg	78-122%	60-130%	30%

Analyst:	Date:	Page Number:
[signature]	9/5/08	3

[HgSoilRunForm] HG3.XLS

COLUMBIA ANALYTICAL SERVICES, INC.
ANALYTICAL WORKSHEET

PRINTOUT WITH:_____

Method: (Circle One) 7470A 7471A 245.1	Service Request # :
Analysis For: Hg	

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g) or (mL)	Initial Dilution (mL)	Dilution Factor	(µg/L) Measured	Sample Actual (mg/kg)	Sample Actual (µg/L)
76	K0808258-001S	0.690	50	~	5.28	0.383	106%
77	K0808258-002	0.573	50	~	0.00	0.000	
78	K0808184-001	0.713	50	~	0.44	0.031	
79	CCV10	~	~	~	5.40		108%
80	CCB10	~	~	~	0.00		< 0.2
81	K0808184-001D	0.619	50	~	0.40	0.032	
82	K0808184-001S	0.667	50	~	5.60	0.420	112%
83	K0808184-002	0.649	50	~	0.44	0.034	
84	K0808228-002 1/10	0.531	50	10	1.63	1.535	
85	K0808089-MB	0.519	50	~	-0.01	-0.001	
86	LCSW K0808089	0.562	50	~	5.44		109%
87	K0808089-001	0.591	50	~	0.20	0.017	
88	K0808089-002	0.533	50	~	0.17	0.016	
89	K0808089-002A		50	~	4.99		96%
90	K0808089-002S	0.530	50	~	5.18	0.489	104%
91	CCV11	~	~	~	5.33		107%
92	CCB11	~	~	~	0.00		< 0.2
93	K0808089-002SD	0.538	50	~	5.04	0.468	101%
94	K0808089-003	0.548	50	~	0.15	0.014	
95	K0808089-004	0.662	50	~	0.32	0.024	
96	K0808089-005	0.605	50	~	0.20	0.017	
97	K0808091-001	0.596	50	~	0.70	0.059	
98	K0808091-002	0.613	50	~	0.65	0.053	
99	K0808091-003	0.704	50	~	0.36	0.026	
100	K0808091-004	0.550	50	~	0.75	0.068	

RPD=0.4% MS 9/5/08

Comments: Reporting Levels:

Soil/Tissue Spike Level: K0808258-001S=0.362mg/kg, K0808184-001S=0.375mg/kg

Post Spike Level: K0808089-002S=0.472mg/kg, K0808089-002SD=0.465mg/kg

Method	Spike Level	MRL	LCS Limit	MS Limit	RPD
7470A Water	1.0 µg/L	0.2 µg/L	84-117%	78-122%	20%
245.1 Water	1.0 µg/L	0.2 µg/L	85-115%	70-131%	20%
7470A TCLP	5.0 µg/L	1.0 µg/L	85-115%	75-125%	20%
7471A Soil LCSS	1.77 mg/kg	0.02 mg/kg	76-121%	64-127%	30%
7471A Tissue Tort	0.27 mg/kg	0.02 mg/kg	78-122%	60-130%	30%

Analyst:	Date:	Page Number:
M. Lissa Ath	9/5/08	4

[HgSoilRunForm] HG4.XLS

COLUMBIA ANALYTICAL SERVICES, INC. PRINTOUT WITH: _____
ANALYTICAL WORKSHEET

Method: (Circle One) 7470A 7471A 245.1	Service Request # :
Analysis For: Hg	

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g) or (mL)	Initial Dilution (mL)	Dilution Factor	(µg/L) Measured	Sample Actual (mg/kg)	Sample Actual (µg/L)
101	K0808091-005	0.695	50	~	2.02	0.145	
102	K0808199-014	0.738	50	~	1.49	0.101	
103	CCV12	~	~	~	5.38		108%
104	CCB12	~	~	~	-0.01		< 0.2
105	K0808199-020	0.372	50	~	1.39	0.187	
106	K0808199-021	0.647	50	~	1.03	0.080	
107	K0808199-023	0.643	50	~	1.08	0.084	
108	K0808199-023S	0.634	50	~	5.74	0.453	82%
109	K0808199-023SD	0.592	50	~	5.70	0.481	114% RPD=6%
110	K0808199-024	0.286	50	~	0.48	0.084	
111	K0808199-025	0.563	50	~	0.58	0.052	
112	CCV13	~	~	~	5.25		105%
113	CCB13	~	~	~	0.00		< 0.2
114							
115							
116							
117							
118							
119							
120							
121							
122							
123							
124							
125							

Comments: Reporting Levels:

Soil/Tissue Spike Level: K0808199-023S=0.552mg/kg, K0808199-023SD=0.422mg/kg

Post Spike Level:

Method	Spike Level	MRL	LCS Limit	MS Limit	RPD
7470A Water	1.0 µg/L	0.2 µg/L	84-117%	78-122%	20%
245.1 Water	1.0 µg/L	0.2 µg/L	85-115%	70-131%	20%
7470A TCLP	5.0 µg/L	1.0 µg/L	85-115%	75-125%	20%
7471A Soil LCSS	1.77 mg/kg	0.02 mg/kg	76-121%	64-127%	30%
7471A Tissue Tort	0.27 mg/kg	0.02 mg/kg	78-122%	60-130%	30%

Analyst:	Date:	Page Number:
[signature]	9/5/08	5

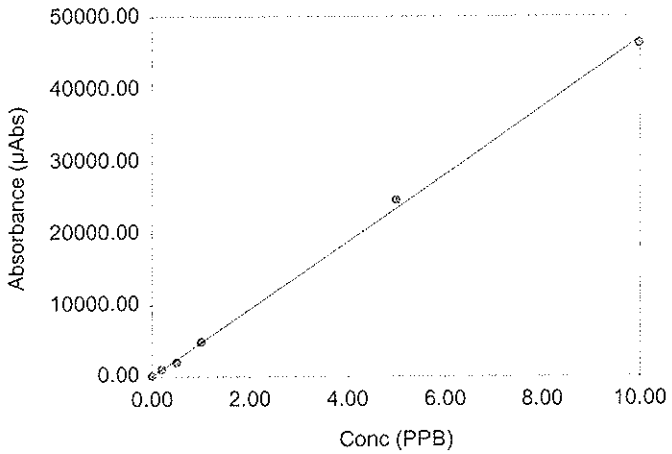
[HgSoilRunForm] HG5.XLS

CETAC Hg Analysis Report - 08090501.DB - Friday, September 05, 2008, 1:05:28 PM

Analyst M. Smith
Date Started Friday, September 05, 2008, 08:49:12
Worksheet Hg 090508A
Comment K-CVAA-01

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
Calibration Zero	05-Sep-2008, 08:49	0.00	6.31	104.00	100	107	111	96	
Standard #1	05-Sep-2008, 08:50	0.20	2.00	1020.00	996	1011	1031	1042	
Standard #2	05-Sep-2008, 08:52	0.50	0.38	1950.00	1949	1960	1961	1947	
Standard #3	05-Sep-2008, 08:54	1.00	0.17	4810.00	4815	4802	4816	4821	
Standard #4	05-Sep-2008, 08:56	5.00	0.46	24700.00	24573	24694	24848	24688	
Standard #5	05-Sep-2008, 08:58	10.00	0.32	46300.00	46284	46440	46382	46102	

Calibration Data



Int.	0.000
Slope	4691.733
Correlation	0.99940

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
ICV1	05-Sep-2008, 08:59	5.31	0.93	24900.00	25139	25047	24711	24683	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
ICB1	05-Sep-2008, 09:01	-0.02	6.79	-112.00	-108	-105	-111	-122	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
CCV1	05-Sep-2008, 09:03	5.29	0.64	24800.00	24712	24916	24982	24650	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
CCB1	05-Sep-2008, 09:05	-0.00	50.30	-17.10	-13	-7	-26	-22	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
CRA	05-Sep-2008, 09:06	0.19	1.01	902.00	903	904	911	889	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
K0807715-MB	05-Sep-2008, 09:08	-0.02	4.77	-79.70	-76	-85	-79	-78	
LCSS K0807715 1/2	05-Sep-2008, 09:10	4.27	0.59	20000.00	19892	19997	20109	20157	
K0807715-004	05-Sep-2008, 09:12	0.02	7.43	85.20	80	91	90	80	
K0807715-004A	05-Sep-2008, 09:16	4.84	0.55	22700.00	22546	22693	22811	22805	
K0807715-004D	05-Sep-2008, 09:18	0.02	6.43	116.00	107	119	115	125	
K0807715-004S	05-Sep-2008, 09:20	5.12	1.39	24000.00	24413	24162	23935	23625	
K0807715-005	05-Sep-2008, 09:21	0.00	30.50	21.70	27	26	13	21	
K0807715-006	05-Sep-2008, 09:23	0.04	2.04	167.00	166	167	172	165	
K0807715-014	05-Sep-2008, 09:25	0.01	12.20	54.40	45	56	55	61	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
CCV2	05-Sep-2008, 09:27	5.22	0.38	24500.00	24381	24505	24605	24511	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
CCB2	05-Sep-2008, 09:28	-0.01	20.40	-40.60	-29	-45	-48	-40	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
K0807664-001	05-Sep-2008, 09:30	0.17	1.17	820.00	822	810	816	833	
K0807664-001D	05-Sep-2008, 09:32	0.16	2.39	764.00	739	761	777	779	
K0807664-001S	05-Sep-2008, 09:34	5.07	0.38	23800.00	23696	23786	23841	23910	
K0807837-001S matrix spike	05-Sep-2008, 09:36	9.43	0.42	44200.00	43970	44301	44408	44228	
K0807681-003	05-Sep-2008, 09:38	0.04	4.64	171.00	167	167	167	183	

CETAC Hg Analysis Report - 08090501.DB - Friday, September 05, 2008, 1:05:30 PM

Analyst M. Smith
Date Started Friday, September 05, 2008, 09:41:13
Worksheet Hg 090508A
Comment K-CVAA-01

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
K0807835-001	05-Sep-2008, 09:41	2.91	1.43	13700.00	13497	13592	13598	13942	
K0807835-001L	05-Sep-2008, 09:48	0.62	0.92	2920.00	2886	2904	2929	2947	
K0808183MB	05-Sep-2008, 09:53	-0.02	12.40	-88.30	-105	-85	-84	-80	
LCSS K0808183 1/2	05-Sep-2008, 09:55	4.07	0.49	19100.00	19096	19220	19147	18997	
K0808183-001	05-Sep-2008, 09:57	0.07	1.49	343.00	336	346	347	341	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
CCV3	05-Sep-2008, 09:59	5.32	0.67	25000.00	24776	24965	25183	24945	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
CCB3	05-Sep-2008, 10:00	-0.01	34.50	-26.20	-24	-32	-15	-35	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
K0808183-001A	05-Sep-2008, 10:02	5.14	0.30	24100.00	24013	24168	24163	24102	
K0808183-002	05-Sep-2008, 10:06	0.07	3.36	330.00	316	329	343	332	
K0808183-003	05-Sep-2008, 10:07	0.16	1.14	752.00	740	751	757	759	
K0808183-004	05-Sep-2008, 10:09	2.29	0.82	10700.00	10650	10690	10755	10852	
K0808183-005	05-Sep-2008, 10:11	0.89	0.26	4200.00	4187	4199	4196	4213	
K0808183-006	05-Sep-2008, 10:13	0.40	1.21	1860.00	1832	1856	1859	1887	
K0808183-007	05-Sep-2008, 10:15	0.30	0.61	1420.00	1408	1426	1423	1426	
K0808183-008	05-Sep-2008, 10:16	0.00	249.00	6.91	-16	8	9	26	
K0808183-009	05-Sep-2008, 10:18	0.02	0.55	103.00	102	104	103	103	
K0808183-009D	05-Sep-2008, 10:20	0.03	6.67	138.00	125	140	146	142	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
CCV4	05-Sep-2008, 10:22	5.38	0.60	25200.00	25025	25173	25326	25351	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
CCB4	05-Sep-2008, 10:23	-0.02	4.90	-77.30	-78	-77	-73	-82	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
K0808183-009S	05-Sep-2008, 10:25	4.97	0.57	23300.00	23298	23460	23408	23157	
K0808183-010	05-Sep-2008, 10:27	-0.00	34.40	-17.40	-25	-19	-10	-16	
K0808183-011	05-Sep-2008, 10:29	0.04	4.07	179.00	170	177	184	186	
K0808183-012	05-Sep-2008, 10:31	-0.00	298.00	-6.32	-29	-11	-0	15	
K0808183-013	05-Sep-2008, 10:32	0.10	1.31	446.00	438	447	452	448	
K0808183-014	05-Sep-2008, 10:34	0.05	6.80	251.00	237	239	258	273	
K0808183-004L	05-Sep-2008, 10:36	0.50	1.08	2370.00	2337	2355	2379	2395	
K0808228-MB	05-Sep-2008, 10:40	-0.01	19.20	-67.60	-84	-70	-63	-53	
LCSS K0808228 1/2	05-Sep-2008, 10:41	4.44	0.44	20800.00	20749	20775	20852	20952	
K0808228-001	05-Sep-2008, 10:43	3.78	0.45	17700.00	17611	17708	17784	17777	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
CCV5	05-Sep-2008, 10:47	5.48	0.74	25700.00	25485	25580	25816	25887	

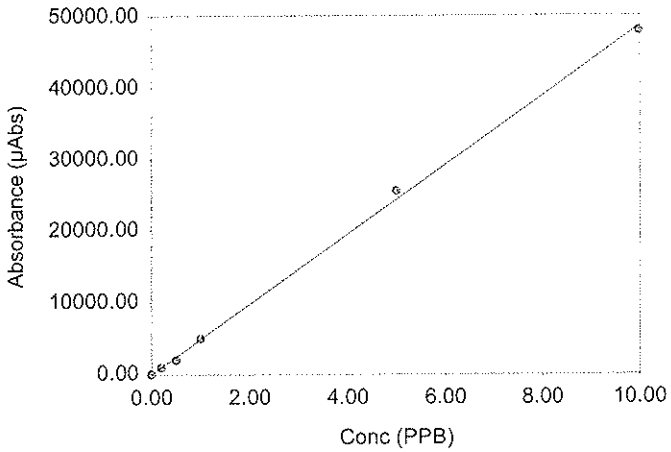
Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
CCB5	05-Sep-2008, 10:49	-0.02	2.81	-116.00	-114	-117	-112	-119	

CETAC Hg Analysis Report - 08090501.DB - Friday, September 05, 2008, 1:05:30 PM

Analyst M. Smith
Date Started Friday, September 05, 2008, 10:53:11
Worksheet Hg 090508A
Comment K-CVAA-01

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
Calibration Zero	05-Sep-2008, 10:53	0.00	1.51	84.40	83	84	85	86	
Standard #1	05-Sep-2008, 10:54	0.20	1.33	1020.00	1013	1012	1005	1036	
Standard #2	05-Sep-2008, 10:56	0.50	0.52	2030.00	2019	2025	2036	2042	
Standard #3	05-Sep-2008, 10:58	1.00	0.72	4950.00	4908	4941	4979	4984	
Standard #4	05-Sep-2008, 11:00	5.00	0.30	25500.00	25437	25582	25612	25545	
Standard #5	05-Sep-2008, 11:02	10.00	0.44	47900.00	47645	48106	48075	47885	

Calibration Data



Int.	0.000
Slope	4855.249
Correlation	0.99942

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
ICV2	05-Sep-2008, 11:03	5.26	0.53	25600.00	25671	25567	25362	25620	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
ICB2	05-Sep-2008, 11:05	-0.02	15.40	-80.90	-63	-89	-82	-90	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
CCV6	05-Sep-2008, 11:07	5.29	1.11	25700.00	25266	25701	25853	25887	
CCB6	05-Sep-2008, 11:09	-0.00	162.00	-1.72	-4	-4	1	-0	Q

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
CRA	05-Sep-2008, 11:13	0.20	0.93	981.00	968	989	984	982	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
K0808228-001L	05-Sep-2008, 11:18	0.76	0.49	3680.00	3699	3681	3657	3671	
K0808228-001A	05-Sep-2008, 11:19	8.36	0.38	40600.00	40383	40560	40758	40596	
~~K0808228-002~~	~~05-Sep-2008, 11:22~~	~~Sat'd.~~	~~0.00~~	~~55700.00~~	~~55655~~	~~55655~~	~~55655~~	~~55655~~	
K0808228-003	05-Sep-2008, 11:25	3.47	0.40	16800.00	16760	16783	16875	16896	
K0808228-004	05-Sep-2008, 11:27	4.90	0.15	23800.00	23733	23738	23795	23802	
K0808228-005	05-Sep-2008, 11:29	1.15	0.74	5590.00	5558	5567	5600	5649	
K0808228-006	05-Sep-2008, 11:30	3.83	0.42	18600.00	18490	18556	18645	18652	
K0808228-007	05-Sep-2008, 11:32	0.34	1.91	1660.00	1617	1651	1671	1691	
K0808228-008	05-Sep-2008, 11:34	1.17	0.09	5700.00	5706	5705	5696	5698	

SO MS 9/6/08

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
CCV9	05-Sep-2008, 11:36	5.23	0.98	25400.00	25259	25140	25390	25718	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
CCB9	05-Sep-2008, 11:38	-0.00	1010.00	-0.55	3	1	-9	3	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
K0808228-009	05-Sep-2008, 11:39	0.01	12.20	62.70	53	66	71	61	
K0808228-010	05-Sep-2008, 11:41	0.00	75.00	14.80	2	20	9	27	
K0808228-010D	05-Sep-2008, 11:43	0.01	41.40	26.40	11	27	31	36	
K0808228-010S	05-Sep-2008, 11:45	5.16	0.41	25000.00	24904	24997	25080	25141	
K0808228-011	05-Sep-2008, 11:47	0.02	9.48	80.50	70	81	82	88	
K0808258-001	05-Sep-2008, 11:48	0.02	15.30	100.00	78	101	112	109	
K0808258-001D	05-Sep-2008, 11:50	0.03	8.03	123.00	108	129	124	130	
K0808258-001S	05-Sep-2008, 11:52	5.28	0.46	25600.00	25550	25729	25728	25503	

CETAC Hg Analysis Report - 08090501.DB - Friday, September 05, 2008, 1:05:31 PM

Analyst M. Smith
Date Started Friday, September 05, 2008, 11:54:21
Worksheet Hg 090508A
Comment K-CVAA-01

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
K0808258-002	05-Sep-2008, 11:54	0.00	80.60	22.40	2	46	23	19	
K0808184-001	05-Sep-2008, 11:56	0.44	0.68	2120.00	2098	2115	2130	2127	
CCV10	05-Sep-2008, 11:57	5.40	0.82	26200.00	25956	26079	26350	26405	
CCB10	05-Sep-2008, 11:59	0.00	78.00	6.99	3	14	3	8	
K0808184-001D	05-Sep-2008, 12:01	0.40	0.68	1960.00	1943	1975	1960	1966	
K0808184-001S	05-Sep-2008, 12:03	5.60	0.67	27200.00	26993	27111	27283	27403	
K0808184-002	05-Sep-2008, 12:05	0.44	1.08	2160.00	2129	2158	2173	2182	
K0808228-004 1/10	05-Sep-2008, 12:07	1.63	1.24	7920.00	7813	7858	7964	8028	
K0808089-MB	05-Sep-2008, 12:09	-0.01	15.70	-55.80	-69	-52	-50	-53	
LCSW K0808089	05-Sep-2008, 12:11	5.44	0.40	26400.00	26275	26420	26490	26508	
K0808089-001	05-Sep-2008, 12:13	0.20	0.78	970.00	965	977	961	975	
K0808089-002	05-Sep-2008, 12:15	0.17	1.81	835.00	814	844	834	848	
K0808089-002A	05-Sep-2008, 12:20	4.99	0.26	24200.00	24162	24231	24280	24144	
K0808089-002S	05-Sep-2008, 12:22	5.18	0.82	25200.00	25018	24986	25239	25426	
CCV11	05-Sep-2008, 12:24	5.33	0.44	25900.00	25740	25866	25972	25990	
CCB11	05-Sep-2008, 12:25	-0.00	45.70	-14.10	-21	-12	-6	-18	
K0808089-002SD	05-Sep-2008, 12:27	5.04	1.22	24500.00	24188	24269	24562	24842	
K0808089-003	05-Sep-2008, 12:29	0.15	1.25	727.00	715	726	734	734	
K0808089-004	05-Sep-2008, 12:31	0.32	2.45	1530.00	1490	1523	1547	1579	
K0808089-005	05-Sep-2008, 12:33	0.20	1.40	995.00	976	1009	996	999	
K0808091-001	05-Sep-2008, 12:34	0.70	1.66	3380.00	3301	3372	3426	3413	
K0808091-002	05-Sep-2008, 12:36	0.65	1.85	3150.00	3087	3125	3182	3218	
K0808091-003	05-Sep-2008, 12:38	0.36	1.71	1750.00	1710	1752	1773	1774	
K0808091-004	05-Sep-2008, 12:40	0.75	1.03	3650.00	3598	3636	3669	3682	
K0808091-005	05-Sep-2008, 12:42	2.02	0.92	9790.00	9700	9739	9847	9893	
K0808199-014	05-Sep-2008, 12:44	1.49	0.32	7260.00	7226	7255	7278	7271	
CCV12	05-Sep-2008, 12:45	5.38	0.29	26100.00	26088	26169	26234	26072	
CCB12	05-Sep-2008, 12:47	-0.01	12.10	-58.60	-59	-50	-67	-57	
K0808199-020	05-Sep-2008, 12:49	1.39	2.58	6770.00	6636	6673	6754	7022	
K0808199-021	05-Sep-2008, 12:51	1.03	0.73	5020.00	4966	5019	5042	5045	
K0808199-023	05-Sep-2008, 12:53	1.08	0.53	5240.00	5204	5241	5263	5262	
K0808199-023S	05-Sep-2008, 12:54	5.74	0.55	27900.00	27693	27823	27981	28028	
K0808199-023SD	05-Sep-2008, 12:56	5.70	0.28	27700.00	27594	27672	27778	27648	
K0808199-024	05-Sep-2008, 12:58	0.48	1.16	2310.00	2269	2317	2322	2326	
K0808199-025	05-Sep-2008, 13:00	0.58	2.73	2820.00	2717	2793	2863	2888	
CCV13	05-Sep-2008, 13:02	5.25	0.49	25500.00	25377	25482	25497	25675	
CCB13	05-Sep-2008, 13:04	0.00	302.00	3.95	-14	9	12	9	

Columbia Analytical Services

EPA METHOD 7471A

Service Request Number(s) :	K0807715, K0807664, K0807835, K0807681
PREP RUN: 73551	

Sample	Wet Weight (g)	% Solids	Dry Weight (g)	Final Volume (mL)
MB	0.537			50
LCSS	0.253			
K0807715-004	0.576	94.0	0.541	
-004S D	0.560	95.1	0.526	
-004SDS	0.560	97	0.526	
-005	0.567	95.1	0.539	
-006	0.647	93.5	0.605	
-014	0.575	99.8	0.574	
K0807664-001	0.697	76.2	0.531	
K0807664-001 D	0.690		0.526	
K0807664-001 S	0.689		0.525	
K0807835-001	2.728	19.7	0.537	
K0807681-003	0.707	89.6	0.633	
				MS 9/4/08
Std. 0.2	0.1 * mL			50
Std. 0.5	0.25 * mL			50
Std. 1.0	0.5 * mL			50
Std. 5.0	2.5 * mL			50
Std. 10.0	5.0 * mL			50
ICV	0.25 ** mL			50

Start Time: 12:00 **Finish Time:** 12:30 **Hot block Temp.:** 95° C

Balance#: 1

Lot # of Reagents Used:

HNO_3: G07057	**$K_2S_2O_8$: C45H07**	**NaCl : E29582**
H_2SO_4: 46137	**$KMnO_4$: E34589**	**NH_2OH-HCL: G02628**
HCL: 78060	**$SnCl_2$: G01612**	**ERA CLP Soil: D045540**

*** Source Standard:** HG1-74-Q **100 ppb** **Spike =** 0.25 **ml** HG1-74-M **1000 ppb**

****Source Standard: ICV** HG1-74-L **1000 ppb** **LCSW=** **ml ICV **Source Standard**

Comments:

Analyst: Melissa Clifton / [signature] **Date:** 9/4/08

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Columbia Analytical Services

EPA METHOD 7471A

Service Request Number(s) :	K0808183
PREP RUN:	735:34

Dry Weigh % Solids

Sample	Wet Weight (g)	~~% Solids~~ MS 9/4/08	~~Dry Weight (g)~~	Final Volume (mL)
MB	0.507			50
LCSS	0.252			
K0808183-001	0.750	0.591	78.9	
-002	0.709	0.581	82.0	
-003	0.722	0.562	77.9	
-004	0.935	0.562	60.1	
-005	0.978	0.597	61.0	
-006	0.693	0.554	79.9	
-007	0.663	0.559	85 853	
-008	0.615	0.525		
-009	0.628	0.550	87.5	
-009D	0.632	0.553		
-009S	0.626	0.548		
-010	0.767	0.662	86.3	
-011	0.622	0.500	80.4	
-012	0.769	0.632	82.2	
-013	0.746	0.614	82.3	
-014	0.736	0.598	81.2	
				MS 9/4/08
Std. 0.2	0.1 * mL			50
Std. 0.5	0.25 * mL			50
Std. 1.0	0.5 * mL			50
Std. 5.0	2.5 * mL			50
Std. 10.0	5.0 * mL			50
ICV	0.25 ** mL			50

Start Time: 2:00 **Finish Time:** 2:30 **Hot block Temp.:** 95° C **Balance#:** 1

Lot # of Reagents Used:

HNO_3: G07057	**$K_2S_2O_8$: C45H07**	**NaCl : E29582**
H_2SO_4: 46137	**$KMnO_4$: E34589**	**NH_2OH-HCL: G02628**
HCL: 78060	**$SnCl_2$: G01612**	**ERA CLP Soil: D045540**

* Source Standard: HG1-94-Q 100 ppb Spike = 0.25 ml HG1-94-K 1000 ppb

**Source Standard: ICV HG1-94-L 1000 ppb LCSW= ml ICV **Source Standard

Comments:

Analyst: Melissa Smith / Date: 9/4/08

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Columbia Analytical Services

EPA METHOD 7471A

Service Request Number(s) :	K0808228, K0808258, K0808184
PREP RUN: 73588	

Sample	Wet Weight (g)	% Solids	Dry Weight (g)	Final Volume (mL)
MB	0.502			50
LCSS	0.256			
K0808228-001	0.694	73.3	0.509	
-002	0.801	69.8	0.559	
-003	0.805	76.6	0.617	
-004	0.770	68.9	0.531	
-005	0.663	79.5	0.527	
-006	0.720	76.0	0.547	
-007	0.792	79.8	0.632	
-008	0.612	84.4	0.517	
-009	0.664	89.6	0.594	
-010	0.645	90.6	0.584	
-010SD	0.632		0.573	
-010SD	0.640		0.580	
-011	0.612	87.2	0.534	
K0808258-001	0.674			
-001DD	0.626			
-001SD	0.690			
-002	0.573			
K0808184-001 -001	0.713			
-001D	0.619			
-001S	0.667			
-002	0.649			
				MS 9/4/08
Std. 0.2	0.1 * mL			50
Std. 0.5	0.25 * mL			50
Std. 1.0	0.5 * mL			50
Std. 5.0	2.5 * mL			50
Std. 10.0	5.0 * mL			50
ICV	0.25 ** mL			50

Start Time: 2:00 **Finish Time:** 2:30 **Hot block Temp.:** 95° C

Balance#: 1

Lot # of Reagents Used:

HNO_3: G07057	**$K_2S_2O_8$: C45H07**	**NaCl : E29582**
H_2SO_4: 46137	**$KMnO_4$: E34589**	**NH_2OH-HCL: G02628**
HCL: 78060	**$SnCl_2$: G01612**	**ERA CLP Soil: D045540**

*** Source Standard:** HG1-74-Q **100 ppb** **Spike =** 0.25 **ml** HG1-74-M **1000 ppb**

****Source Standard: ICV** HG1-74-L **1000 ppb** **LCSW=** **ml ICV **Source Standard**

Comments:

Analyst: Melissa Ash [signature] / [signature] **Date:** 9/4/08

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Columbia Analytical Services

EPA METHOD 7471A

Service Request Number(s) :	K0808089, K0808091, K0808199
PREP RUN: 73589	

Sample	Wet Weight (g)	% Solids	Dry Weight (g)	Final Volume (mL)
MB	0.519			50
LCSW	0.562			
K0808089-001	0.684	86.4	0.591	
-002	0.576	92.6	0.533	
-002D	0.572		0.530	
-002DS	0.581		0.538	
-003	0.613	89.4	0.548	
-004	0.760	87.1	0.662	
-005	0.717	84.4	0.605	
K0808091-001	0.683	87.3	0.596	
K0808091-002	0.702	87.3	0.613	
K0808091-003	0.780	90.3	0.704	
K0808091-004	0.662	83.1	0.550	
K0808091-005	0.833	83.4	0.695	
K0808199-014	1.487	49.6	0.738	
-020	0.823	45.2	0.372	
-021	0.854	76.0	0.647	
-023	0.778	82.6	0.643	
-023DS	0.767		0.634	
-023SD	0.717		0.592	
-024	0.730	39.2	0.286	
-025	0.764	73.7	0.563	
				MS 9/4/08
Std. 0.2	0.1 * mL			50
Std. 0.5	0.25 * mL			50
Std. 1.0	0.5 * mL			50
Std. 5.0	2.5 * mL			50
Std. 10.0	5.0 * mL			50
ICV	0.25 ** mL			50

Start Time: 1:00 **Finish Time:** 1:30 **Hot block Temp.:** 95° C
Balance#: 1

Lot # of Reagents Used:

HNO_3: G07057	**$K_2S_2O_8$: C45H07**	**NaCl : E29582**
H_2SO_4: 46137	**$KMnO_4$: E34589**	**NH_2OH-HCL: G02628**
HCL: 78060	**$SnCl_2$: G01612**	**ERA CLP Soil: D045540**

*** Source Standard:** HG1-74-Q **100 ppb** **Spike =** 0.25 **ml** HG1-74-M **1000 ppb**
****Source Standard: ICV** HG1-74-L **1000 ppb** **LCSW=** 0.25 **ml ICV **Source Standard**

Comments:

Analyst: Melissa Alcott / [signature] **Date:** 9/4/08

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Service Request # K0808184
Instrument ID# K-ICP-AES-02

ICP-OES Data Review Form

	Yes	No
1. Standardization completed	✓	
2. ICV within 10 % of true value	✓	
3. ICB below MRL	✓	
4. CRI standard analyzed.	✓	
5. ICS standards within 20% of true value	✓	
6. All preceding CCVs within 10 % of true value	✓	
7. Following CCV within 10 % of true value	✓	
8. Bracketing CCBs below MRL	✓	
9. Method Blank below MRL	✓	
10. MS-MSD or Dup-MS and LCS within CAS control limits	✓	
11. All analytes within instrument linear range	✓	
12. Adequate rinse out time allowed between samples to eliminate memory effect	✓	

Comments:
Don't report P(1782) NR Ba after CCV2; NR Be, Ca 3181, Fe 2714, Na + Sr after CCB2.

Primary Review by 3C Date 9/10/08

Secondary Review by EmA Date 9/10/08

Method: O8A Sample Name: Blank Operator:
Comment:
Run Time: 09/10/08 11:23 Type: Std Mode: IR Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335
Line	237.312 {141}	206.833 {162}	189.042 {177}	233.527 {144}
Avg	.1300	.0332	-.0118	-.0002
Stddev	.0392	.0430	.0147	.0001
%RSD	30.13	129.6	124.8	67.05
#1	.1577	.0636	-.0014	-.0001
#2	.1023	.0028	-.0221	-.0003

Elem	Be3130	B_2497	Cd2265	Ca3179
Line	313.042 {107}	249.773 {134}	226.502 {148}	317.933 {105}
Avg	-.0018	.3306	.0004	-.0005
Stddev	.0000	.0060	.0001	.0001
%RSD	1.352	1.821	39.27	29.94
#1	-.0018	.3348	.0004	-.0004
#2	-.0018	.3263	.0003	-.0006

Elem	Ca3181	Cr2677	Co2286	Cu3247
Line	318.128 {105}	267.716 {125}	228.616 {147}	324.754 {103}
Avg	-.0001	-.0001	.0001	-.0774
Stddev	.0001	.0002	.0000	.0078
%RSD	211.3	242.8	42.28	10.06
#1	-.0001	-.0002	.0001	-.0829
#2	.0000	.0001	.0000	-.0719

Elem	Fe2599	Fe2714	Pb2203	Mg2025
Line	259.940 {129}	271.441 {124}	220.353 {152}	202.582 {166}
Avg	.0010	.0004	.0001	.0941
Stddev	.0002	.0001	.0001	.0039
%RSD	19.19	24.23	63.46	4.114
#1	.0012	.0004	.0002	.0913
#2	.0009	.0005	.0001	.0968

Elem	Mg2795	Mn2576	Mo2020	Ni2316
Line	279.553 {120}	257.610 {131}	202.030 {166}	231.604 {145}
Avg	.1893	.0009	.0002	-.0003
Stddev	.0177	.0001	.0000	.0001
%RSD	9.330	12.10	9.777	31.30
#1	.1768	.0009	.0002	-.0003
#2	.2018	.0008	.0001	-.0004

Elem	K_7664	Se1960	Ag3280	Na5895
Line	766.490 { 44}	196.090 {171}	328.068 {102}	589.592 { 57}
Avg	1.175	-.0318	-.0553	.0056
Stddev	.218	.0215	.0000	.0004
%RSD	18.59	67.60	.0400	6.941
#1	1.329	-.0166	-.0552	.0059
#2	1.020	-.0470	-.0553	.0053

Sample Name: Blank Run Time: 09/10/08 11:23

Elem	Sn1899	V_3102	Zn2062	P_1782
Line	189.989 {176}	310.230 {108}	206.200 {163}	178.287 {188}
Avg	.0005	.0062	.0005	.1521
Stddev	.0000	.0002	.0001	.0040
%RSD	.1247	2.553	29.10	2.617
#1	.0005	.0060	.0004	.1550
#2	.0005	.0063	.0006	.1493

Elem	P_2149	Si2516	Ti3234	Tl1908
Line	214.914 {156}	251.612 {134}	323.452 {104}	190.864 {176}
Avg	.0581	.1784	.0044	-.0001
Stddev	.0352	.0097	.0002	.0000
%RSD	60.65	5.436	5.122	8.195
#1	.0830	.1716	.0042	-.0001
#2	.0332	.1853	.0045	-.0001

Elem	Li6707	Sr4077
Line	670.784 { 50}	407.771 { 82}
Avg	.7765	.0029
Stddev	.0120	.0001
%RSD	1.549	2.721
#1	.7680	.0029
#2	.7850	.0030

Int. Std.	Sc3572
Line	357.253 { 94}
Avg	216.65
Stddev	1.53
%RSD	.70828
#1	215.57
#2	217.74

9/10/08

9/10/08

Method: O8A Sample Name: STDA Operator:
Comment: ICP5-55-A
Run Time: 09/10/08 11:26 Type: Std Mode: IR Corr.Fact: 1.000000

Elem	Sb2068	As1890	B_2497	Cd2265
Line	206.833 {162}	189.042 {177}	249.773 {134}	226.502 {148}
Avg	2.620	4.080	44.28	.2398
Stddev	.092	.062	.10	.0007
%RSD	3.509	1.531	.2151	.3118
#1	2.555	4.036	44.21	.2393
#2	2.685	4.124	44.35	.2403

Elem	Ca3179	Cr2677	Co2286	Cu3247
Line	317.933 {105}	267.716 {125}	228.616 {147}	324.754 {103}
Avg	.1634	.0966	.1571	17.89
Stddev	.0001	.0000	.0008	.04
%RSD	.0448	.0476	.5212	.1956
#1	.1635	.0966	.1566	17.91
#2	.1633	.0966	.1577	17.86

Elem	Fe2599	Pb2203	Mg2795	Mn2576
Line	259.940 {129}	220.353 {152}	279.553 {120}	257.610 {131}
Avg	.3358	.0151	2047.	2.435
Stddev	.0003	.0000	3.	.008
%RSD	.0767	.2996	.1559	.3101
#1	.3356	.0151	2045.	2.430
#2	.3360	.0150	2050.	2.440

Elem	Mo2020	Ni2316	Se1960	Ag3280
Line	202.030 {166}	231.604 {145}	196.090 {171}	328.068 {102}
Avg	.1245	.1463	3.862	17.77
Stddev	.0008	.0004	.084	.04
%RSD	.6376	.2823	2.176	.2212
#1	.1239	.1460	3.803	17.74
#2	.1251	.1466	3.922	17.80

Elem	Sn1899	V_3102	Zn2062	Ti3234
Line	189.989 {176}	310.230 {108}	206.200 {163}	323.452 {104}
Avg	.0286	.1414	.1420	.1568
Stddev	.0003	.0004	.0003	.0004
%RSD	.9802	.2484	.2088	.2337
#1	.0288	.1411	.1423	.1565
#2	.0284	.1416	.1418	.1570

Elem	Tl1908
Line	190.864 {176}
Avg	.0120
Stddev	.0000
%RSD	.1587
#1	.0120
#2	.0120

Sample Name: STDA Run Time: 09/10/08 11:26

Int. Std.	Sc3572
Line	357.253 (94)
Avg	213.59
Stddev	.30
%RSD	.14118
#1	213.37
#2	213.80

Method: O8A Sample Name: STDB Operator:
Comment: ICP5-55-B
Run Time: 09/10/08 11:29 Type: Std Mode: IR Corr.Fact: 1.000000

Elem	Al2373	Ba2335	Be3130	Ca3181
Line	237.312 {141}	233.527 {144}	313.042 {107}	318.128 {105}
Avg	17.13	2.268	.4736	.2093
Stddev	.13	.016	.0012	.0019
%RSD	.7702	.7010	.2437	.8952
#1	17.04	2.257	.4744	.2106
#2	17.22	2.280	.4727	.2079

Elem	Fe2714	Mg2025	K_7664	Na5895
Line	271.441 {124}	202.582 {166}	766.490 { 44}	589.592 { 57}
Avg	.7190	52.17	151.3	2.653
Stddev	.0009	.00	.1	.018
%RSD	.1315	.0080	.0737	.6618
#1	.7183	52.16	151.2	2.666
#2	.7197	52.17	151.4	2.641

Elem	P_1782	P_2149	Si2516	Li6707
Line	178.287 {188}	214.914 {156}	251.612 {134}	670.784 { 50}
Avg	13.50	44.48	87.72	295.0
Stddev	.04	.02	.14	.8
%RSD	.2847	.0366	.1588	.2665
#1	13.53	44.49	87.62	295.5
#2	13.47	44.47	87.82	294.4

Elem	Sr4077
Line	407.771 { 82}
Avg	6.741
Stddev	.025
%RSD	.3663
#1	6.759
#2	6.724

Int. Std.	Sc3572
Line	357.253 { 94}
Avg	209.48
Stddev	.66
%RSD	.31480
#1	209.01
#2	209.95

Method: O8A Sample Name: ICV1 Operator: JC
Comment: ICP5-43-B (126502) (091008)
Run Time: 09/10/08 11:32 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.026	2.599	2.511	4.979	.1243	.0403
Stddev	.041	.005	.016	.100	.0027	.0003
%RSD	.8247	.1877	.6289	1.999	2.196	.6639
#1	4.997	2.596	2.500	4.909	.1223	.0405
#2	5.055	2.603	2.522	5.049	.1262	.0401
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	5.000	2.500	2.500	5.000	.1250	
Range	5.000%	5.000%	5.000%	5.000%	5.000%	

Elem	Cd2265	Ca3181	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.214	12.08	.4951	1.228	.6113	2.464
Stddev	.014	.34	.0112	.018	.0046	.045
%RSD	1.174	2.823	2.272	1.488	.7448	1.810
#1	1.204	11.84	.4871	1.215	.6080	2.432
#2	1.224	12.32	.5030	1.241	.6145	2.495
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1.250	12.50	.5000	1.250	.6250	2.500
Range	5.000%	5.000%	5.000%	5.000%	5.000%	5.000%

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.441	12.46	1.216	1.997	1.222	12.39
Stddev	.065	.07	.033	.032	.018	.07
%RSD	2.672	.5822	2.745	1.603	1.501	.5504
#1	2.395	12.51	1.193	1.974	1.209	12.34
#2	2.487	12.41	1.240	2.019	1.235	12.44
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	2.500	12.50	1.250	2.000	1.250	12.50
Range	5.000%	5.000%	5.000%	5.000%	5.000%	5.000%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.546	.6204	12.22	.0053	1.231	1.220
Stddev	.023	.0094	.44	.0059	.029	.027
%RSD	.9097	1.516	3.634	111.5	2.375	2.221
#1	2.563	.6137	11.91	.0011	1.210	1.201
#2	2.530	.6270	12.54	.0095	1.251	1.239
Check ?	QC Pass	QC Pass	QC Pass	None	QC Pass	QC Pass
Value	2.500	.6250	12.50		1.250	1.250
Range	5.000%	5.000%	5.000%		5.000%	5.000%

Sample Name: ICV1 Run Time: 09/10/08 11:32

Elem	P_1782	P_2149	Si2516	Ti3234	Tl1908	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3098	.0134	.4274	1.979	2.483	-.0009
Stddev	.0176	.0204	.0004	.019	.092	.0003
%RSD	5.686	151.9	.0824	.9456	3.701	28.36
#1	.2974	.0278	.4276	1.966	2.418	-.0011
#2	.3223	-.0010	.4271	1.992	2.548	-.0007
Check ?	None	None	None	QC Pass	QC Pass	None
Value				2.000	2.500	
Range				5.000%	5.000%	

Elem	Sr4077
Units	ppm
Avg	.0017
Stddev	.0001
%RSD	5.839
#1	.0017
#2	.0016
Check ?	None
Value	
Range	

Int. Std.	Sc3572
Units	Cts/S
Avg	214.95
Stddev	4.07
%RSD	1.8947
#1	217.83
#2	212.07

Method: O8A Sample Name: ICVB1 Operator: JC
Comment: ICP5-37-A (126502) (091008)
Run Time: 09/10/08 11:40 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0135	.0043	-.0041	.0007	.0001
Stddev	.0295	.0015	.0005	.0003	.0001
%RSD	218.0	34.43	11.72	42.73	93.79
#1	-.0344	.0054	-.0044	.0009	.0001
#2	.0073	.0033	-.0037	.0005	.0000
Check ?	None	None	None	None	None
Value					
Range					

Elem	B_2497	Cd2265	Ca3179	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0084	-.0004	4.930	-.0029	.0019
Stddev	.0006	.0009	.092	.0009	.0006
%RSD	7.443	249.5	1.859	30.44	32.87
#1	.0088	-.0010	4.866	-.0023	.0015
#2	.0079	.0003	4.995	-.0036	.0024
Check ?	None	None	QC Pass	None	None
Value			5.000		
Range			5.000%		

Elem	Cu3247	Fe2714	Pb2203	Mg2795	Mn2576
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0005	24.61	-.0087	5.051	.0005
Stddev	.0006	.49	.0070	.021	.0000
%RSD	103.1	2.002	80.17	.4238	1.190
#1	.0001	24.27	-.0137	5.036	.0005
#2	.0009	24.96	-.0038	5.066	.0005
Check ?	None	QC Pass	None	QC Pass	None
Value		25.00		5.000	
Range		5.000%		5.000%	

Elem	Mo2020	Ni2316	K_7664	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0033	-.0020	-.0073	.0064	.0000
Stddev	.0010	.0000	.0044	.0081	.002
%RSD	30.74	.5195	60.86	126.5	68410.
#1	.0041	-.0020	-.0042	.0007	-.0012
#2	.0026	-.0020	-.0104	.0121	.0012
Check ?	None	None	None	None	None
Value					
Range					

Sample Name: ICVB1 Run Time: 09/10/08 11:40

Elem	Na5895	Sn1899	V_3102	Zn2062	P_1782
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0034	-.0070	.0005	.0015	-.0005
Stddev	.0067	.0103	.0007	.0006	.0103
%RSD	197.4	146.4	124.7	39.19	2067.
#1	-.0013	.0002	.0001	.0011	-.0078
#2	.0081	-.0143	.0010	.0019	.0068
Check ?	None	None	None	None	None
Value					
Range					

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0017	.0011	-.0014	-.0032	-.0013
Stddev	.0105	.0015	.0001	.0269	.0005
%RSD	610.4	128.3	6.720	831.3	41.12
#1	.0057	.0022	-.0014	-.0222	-.0017
#2	-.0091	.0001	-.0015	.0158	-.0009
Check ?	None	None	None	None	None
Value					
Range					

Elem	Sr4077
Units	ppm
Avg	.0006
Stddev	.0000
%RSD	7.074
#1	.0006
#2	.0006
Check ?	None
Value	
Range	

Int. Std.	Sc3572
Units	Cts/S
Avg	215.04
Stddev	2.79
%RSD	1.2965
#1	217.02
#2	213.07

Method: O8A Sample Name: ICVC1 Operator: JC
Comment: ICP5-49-A (126502) (091008)
Run Time: 09/10/08 11:44 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9829	.0147	.0013	.0001	.0001	5.241
Stddev	.0057	.0074	.0129	.0001	.0000	.008
%RSD	.5827	50.17	965.7	126.5	16.49	.1445
#1	.9870	.0095	-.0078	.0000	.0001	5.236
#2	.9789	.0200	.0105	.0002	.0001	5.246
Check ?	None	None	None	None	None	QC Pass
Value						5.000
Range						5.000%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0007	.0192	-.0020	.0015	-.0012	.0053
Stddev	.0001	.0008	.0007	.0002	.0030	.0015
%RSD	10.16	4.298	32.26	13.70	247.1	29.15
#1	-.0008	.0198	-.0025	.0016	.0009	.0064
#2	-.0007	.0186	-.0016	.0013	-.0034	.0042
Check ?	None	None	None	None	None	None
Value						
Range						

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0053	.0008	.0002	.0027	.0006	-.0033
Stddev	.0015	.0001	.0000	.0006	.0010	.0141
%RSD	28.35	18.25	19.84	23.43	157.6	432.1
#1	-.0063	.0009	.0002	.0023	.0013	.0067
#2	-.0042	.0007	.0002	.0032	-.0001	-.0132
Check ?	None	None	None	None	None	None
Value						
Range						

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0049	.0005	.0443	5.023	.0012	.0016
Stddev	.0020	.0020	.0001	.033	.0007	.0001
%RSD	40.75	424.3	.3175	.6545	60.36	8.269
#1	.0035	.0019	.0442	5.000	.0007	.0017
#2	.0064	-.0009	.0444	5.047	.0017	.0015
Check ?	None	None	None	QC Pass	None	None
Value				5.000		
Range				5.000%		

Sample Name: ICVC1 Run Time: 09/10/08 11:44

Elem	P_1782	P_2149	Si2516	Ti3234	Tl1908	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.024	4.853	4.962	-.0022	-.0083	5.144
Stddev	.022	.032	.002	.0014	.0222	.010
%RSD	.4351	.6655	.0305	64.80	269.4	.1922
#1	5.039	4.830	4.961	-.0012	.0075	5.151
#2	5.008	4.875	4.963	-.0033	-.0240	5.137
Check ?	QC Pass	QC Pass	QC Pass	None	None	QC Pass
Value	5.000	5.000	5.000			5.000
Range	5.000%	5.000%	5.000%			5.000%

Elem	Sr4077
Units	ppm
Avg	4.817
Stddev	.030
%RSD	.6135
#1	4.838
#2	4.797
Check ?	QC Pass
Value	5.000
Range	5.000%

Int. Std.	Sc3572
Units	Cts/S
Avg	218.66
Stddev	.35
%RSD	.15900
#1	218.42
#2	218.91

1317 South 13th Avenue Kelso, Washington 98626 (360) 577-7222 (360) 636-1068 fax

Columbia Analytical Services INC.
An Employee - Owned Company

October 28, 2008 Analytical Report for Service Request No: K0808300

Victoria England
GeoEngineers, Inc.
600 Stewart St.
Suite 1700
Seattle, WA 98101

RE: Port of Anacortes Dakota Creek Industries/5147 006 04

Dear Victoria:

Enclosed are the results of the samples submitted to our laboratory on August 29, 2008. For your reference, these analyses have been assigned our service request number K0808300.

All analyses were performed according to our laboratory's quality assurance program. Where applicable, the methods cited conform to the Methods Update Rule (effective 4/11/2007), which relates to the use of analytical methods for the drinking water and waste water programs. The test results meet requirements of the NELAC standards. Exceptions are noted in the case narrative report where applicable. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please call if you have any questions. My extension is 3376. You may also contact me via Email at GSalata@caslab.com.

Respectfully submitted,

Columbia Analytical Services, Inc.

Gregory Salata, Ph.D.
Project Chemist

GS/lb

NELAP Accredited ACIL Seal of Excellence Award 100% Recycled

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
U	The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
i	The MRL/MDL has been elevated due to a matrix interference.
X	See case narrative.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
B	The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL has been elevated due to a matrix interference.
X	See case narrative.
*	The duplicate analysis not within control limits. See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results (25% for CLP Pesticides).
U	The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
i	The MRL/MDL has been elevated due to a chromatographic interference.
X	See case narrative.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

Columbia Analytical Services, Inc.
Kelso, WA
State Certifications, Accreditations, and Licenses

Program	Number
Alaska DEC UST	UST-040
Arizona DHS	AZ0339
Arkansas - DEQ	88-0637
California DHS	2286
Colorado DPHE	-
Florida DOH	E87412
Hawaii DOH	-
Idaho DHW	-
Indiana DOH	C-WA-01
Louisiana DEQ	3016
Louisiana DHH	LA050010
Maine DHS	WA0035
Michigan DEQ	9949
Minnesota DOH	053-999-368
Montana DPHHS	CERT0047
Nevada DEP	WA35
New Jersey DEP	WA005
New Mexico ED	-
North Carolina DWQ	605
Oklahoma DEQ	9801
Oregon - DHS	WA200001
South Carolina DHEC	61002
Utah DOH	COLU
Washington DOE	C1203
Wisconsin DNR	998386840
Wyoming (EPA Region 8)	-

Case Narrative

COLUMBIA ANALYTICAL SERVICES, INC.

Client:	GeoEngineers, Inc.	**Service Request No.:**	K0808300
Project:	Port of Anacortes Dakota Creek Industries/ 5147 006 04	**Date Received:**	08/29/08
Sample Matrix:	Soil		

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier III validation deliverables including summary forms and all of the associated raw data for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Four soil samples were received for analysis at Columbia Analytical Services on 08/29/08. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were frozen at –20°C upon receipt at the laboratory.

General Chemistry Parameters

No anomalies associated with the analysis of these samples were observed.

Total Metals

Relative Percent Difference Exceptions:
The Relative Percent Difference (RPD) for the replicate analysis of Chromium and Lead in sample SMA3-2 was outside the normal CAS control limits. The variability in the results is attributed to the heterogeneous character of the sample. Standard mixing techniques were used, but were not sufficient for complete homogenization of this sample.

No other anomalies associated with the analysis of these samples were observed.

PCB Aroclors by EPA Method 8082

No anomalies associated with the analysis of these samples were observed.

Semivolatile Organic Compounds by EPA Method 8270C

No anomalies associated with the analysis of these samples were observed.

Polynuclear Aromatic Hydrocarbons by EPA Method 8270C

Initial Calibration Exceptions:
The primary evaluation criterion was exceeded for 2,4,6-Tribromophenol, Pentachlorophenol, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene in Initial Calibration (ICAL) ID CAL7814. In accordance with CAS standard operating procedures, the alternative evaluation specified in the EPA method was performed using the mean Relative Standard Deviation (RSD) of all analytes in the calibration. The result of the mean RSD calculation was 9.8%. The calibration meets the alternative evaluation criteria. Note that CAS/Kelso policy does not allow the use of averaging if any analyte in the ICAL exceeds 30% RSD.

Approved by _____ **Date** 10/29/08

Matrix Spike Recovery Exceptions:
The recoveries of numerous analytes are below the control criteria listed on the report summary in the Duplicate Matrix Spike (MSD) of sample Batch QC. All recoveries were biased low. This corresponds to a low bias in surrogate recoveries for this sample. The low bias indicated something happened to the DMS during the extraction process. All recoveries in the Matrix Spike and associated replicate Laboratory Control Samples (LCS/DLCS) were within control criteria, indicating the issue is isolated to the DMS. No further corrective action was taken.

Relative Percent Difference Exceptions:
The Relative Percent Difference (RPD) for all analytes in the replicate matrix spike analyses of sample Batch QC was outside control criteria. All spike recoveries in the MS and associated replicate Laboratory Control Sample (LCS/DLCS) were within acceptance limits, indicating the analytical batch was in control. No further corrective action was appropriate.

No other anomalies associated with the analysis of these samples were observed.

Approved by _____ **Date** 10/09/08

Chain of Custody Documentation

CHAIN OF CUSTODY

Columbia Analytical Services, Inc.
An Employee - Owned Company

1317 South 13th Ave. • Kelso, WA 98626 • (360) 577-7222 • (800) 695-7222x07 • FAX (360) 636-1068

SR#: K0808300

PAGE 1 OF 1 COC #

PROJECT NAME	Port of Anacortes Dakota Creek Industries
PROJECT NUMBER	5147 006 04
PROJECT MANAGER	John Herzog
COMPANY/ADDRESS	GeoEngineers 1600 Stewart St. Ste # 1700
CITY/STATE/ZIP	Seattle, WA 98101
E-MAIL ADDRESS	JHerzog@geoengineers.com
PHONE #	206 728 2674 FAX#
SAMPLER'S SIGNATURE	

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	Semivolatile Organics by GC/MS 625☐ 8270☐ 8270LL☐	Volatile Organics 624☐ 8260☐ 8021☐ BTEX☐	Hydrocarbons (*see below) Gas☐ Diesel☐ Oil☐	☐ Fuel Fingerprint (FIQ) ☐ NW-HCID Screen	Oil & Grease/TRPH 1664 HEM☐ 1664 SGT☐	PCB's Aroclors☐ Congeners☐	Pesticides/Herbicides 608☐ 8081A☐ 8141A☐ 8151A☐	Chlorophenolics - 8151M Tri☐ Tetra☐ PCP☐	PAHS 8310☐ SIM☐	Metals, Total or Dissolved (See list below)	Cyanide☐ Hex-Chrom☐	pH; Cond., Cl, SO_4, PO_4, F, NO_2, NO_3, BOD, TSS, TDS (circle)	NH_3-N, COD, Total-P, TKN, TOC, DOC (circle) NO_2+NO_3	TOX 9020☐ AOX 1650☐ 506☐	Archive Evergreen				REMARKS
SMA3-3	8/28/08	1000		S	2															X				
SMA3-4	"	1015		S	2															X				
SMA3-2	"	1145		S	2															X				
SMA3-5	"	1130		S	2															X				

REPORT REQUIREMENTS

___ I. Routine Report: Method Blank, Surrogate, as required

___ II. Report Dup., MS, MSD as required

___ III. Data Validation Report (includes all raw data)

X IV. CLP Deliverable Report

___ V. EDD

INVOICE INFORMATION

P.O. # _____

Bill To: _____

TURNAROUND REQUIREMENTS

___ 24 hr. ___ 48 hr.

___ 5 Day

___ Standard (10-15 working days)

___ Provide FAX Results

_____ Requested Report Date

Circle which metals are to be analyzed:

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER:_____ (CIRCLE ONE)

SPECIAL INSTRUCTIONS/COMMENTS:

Container Supply Number 9923

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature: 8/29/08 9Am	Signature: 8/29/08 1630	Signature:	Signature:
Date/Time:	Date/Time:	Date/Time:	Date/Time:
Printed Name: Victoria England	Printed Name:	Printed Name:	Printed Name:
Firm: GeoEngineers	Firm:	Firm:	Firm:

RCOC #1 06/03

Columbia Analytical Services, Inc.
Cooler Receipt and Preservation Form

PC Greg

Client / Project: GeoEng. Service Request K08 08300

Received: 8/29/08 Opened: 8/29/08 By:

1. Samples were received via? *US Mail* *Fed Ex* *UPS* *DHL* *GH* *GS* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) *Cooler* *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA (Y) N If yes, how many and where? 1F
   If present, were custody seals intact? (Y) N If present, were they signed and dated? (Y) N
4. Is shipper's air-bill filed? If not, record air-bill number: _____ (NA) Y N

5. **Temperature of cooler(s) upon receipt (°C):** 6-3
   Temperature Blank (°C): 3.0
6. If applicable, list Chain of Custody Numbers:
7. Packing material used. *Inserts* *Baggies* *Bubble Wrap* *Gel Packs* *Wet Ice* *Sleeves* *Other* _____
8. Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N
9. **Did all bottles arrive in good condition (unbroken)?** *Indicate in the table below.* NA (Y) N
10. Were all sample labels complete (i.e analysis, preservation, etc.)? NA (Y) N
11. Did all sample labels and tags agree with custody papers? *Indicate in the table below* NA (Y) N
12. **Were appropriate bottles/containers and volumes received for the tests indicated?** NA (Y) N
13. Were the pH-preserved bottles tested* received at the appropriate pH? *Indicate in the table below* (NA) Y N
14. Were VOA vials and 1631 Mercury bottles received without headspace? *Indicate in the table below.* (NA) Y N
15. **Are CWA Microbiology samples received with >1/2 the 24hr. hold time remaining from collection?** (NA) Y N
16. Was C12/Res negative? (NA) Y N

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Sample ID	Bottle Count	Bottle Type	Out of Temp	Head-space	Broken	pH	Reagent	Volume added	Reagent Lot Number	Initials

*Does not include all pH preserved sample aliquots received. *See sample receiving SOP (SMO-GEN).*

Additional Notes, Discrepancies, & Resolutions: _____

General Chemistry Parameters

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : GeoEngineers, Inc.
Project Name : Port of Anacortes Dakota Creek Industries
Project Number : 5147 006 04
Sample Matrix : SOIL

Service Request : K0808300
Date Collected : 08/28/08
Date Received : 08/29/08

Carbon, Total Organic (TOC)

Prep Method : SOP
Analysis Method : PSEP TOC
Test Notes :

Units : Percent
Basis : Dry

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Result	Result Notes
SMA3-2	K0808300-003	0.05	0.02	1	10/7/2008	10/09/08	0.09	
Method Blank	K0808300-MB	0.05	0.02	1	NA	10/09/08	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : GeoEngineers, Inc.
Project Name : Port of Anacortes Dakota Creek Industries
Project Number : 5147 006 04
Sample Matrix : SEDIMENT

Service Request : K0808300
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 10/09/08

Triplicate Summary
Inorganic Parameters

Sample Name : Batch QC
Lab Code : K0809382-013TPL
Test Notes :

Units : Percent
Basis : Dry

Analyte	Prep Method	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Triplicate Sample Result	Average	Relative Standard Deviation	Result Notes
Carbon, Total Organic (TOC)	SOP	PSEP TOC	0.05	1.42	1.42	1.40	1.42	1	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : GeoEngineers, Inc.
Project Name : Port of Anacortes Dakota Creek Industries
Project Number : 5147 006 04
Sample Matrix : SEDIMENT

Service Request : K0808300
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 10/09/08

Matrix Spike Summary
Inorganic Parameters

Sample Name : Batch QC
Lab Code : K0809382-013MS
Test Notes :

Units : Percent
Basis : Dry

Analyte	Prep Method	Analysis Method	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Carbon, Total Organic (TOC)	SOP	PSEP TOC	0.05	4.60	1.42	5.92	98	75-114	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client :	GeoEngineers, Inc.	**Service Request :**	K0808300
Project Name :	Port of Anacortes Dakota Creek Industries	**Date Collected :**	NA
Project Number :	5147 006 04	**Date Received :**	NA
Sample Matrix :	SOIL	**Date Prepared :**	NA
		Date Analyzed :	10/09/08

Laboratory Control Sample Summary
Inorganic Parameters

Sample Name :	Lab Control Sample	Units :	Percent
Lab Code :	K0808300-LCS	Basis :	Dry
Test Notes :			

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Carbon, Total Organic (TOC)	SOP	PSEP TOC	0.42	0.37	88	74-123	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : GeoEngineers, Inc.
Project : Port of Anacortes Dakota Creek Industries

Service Request : K0808300
Date Collected : NA
Date Received : NA

Carbon, Total Organic (TOC)
PSEP TOC
Units: Percent

CONTINUING CALIBRATION VERIFICATION (CCV)

	Date Analyzed	True Value	Measured Value	Percent Recovery
CCV1 Result	10/9/2008	20.0	18.7	94
CCV2 Result	10/9/2008	20.0	19.3	97
CCV3 Result	10/9/2008	20.0	18.1	91
CCV4 Result	10/9/2008	20.0	19.0	95
CCV5 Result	10/9/2008	20.0	19.0	95
CCV6 Result	10/9/2008	20.0	19.0	95
CCV7 Result	10/9/2008	20.0	19.3	97

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : GeoEngineers, Inc.
Project : Port of Anacortes Dakota Creek Industries

Service Request : K0808300
Date Collected : NA
Date Received : NA

Carbon, Total Organic (TOC)
PSEP TOC
Units: Percent

CONTINUING CALIBRATION BLANK (CCB)

	Date Analyzed	MRL	Blank Value
CCB1 Result	10/9/2008	0.05	ND
CCB2 Result	10/9/2008	0.05	ND
CCB3 Result	10/9/2008	0.05	ND
CCB4 Result	10/9/2008	0.05	ND
CCB5 Result	10/9/2008	0.05	ND
CCB6 Result	10/9/2008	0.05	ND
CCB7 Result	10/9/2008	0.05	ND

Work Request # (Original K9382) K9549 K8300 K9442 K9520 K9579

Tier: III II III III III III

Date Analyzed: 10/10/08

analysis ~~Analyst~~: TOC Soil PSEP/L Kahn

Analyst ~~Analysis~~: G Beatty

DATA QUALITY REPORT
INORGANICS

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

1.	Is the method name and number correct and appropriate?	yes/no/NA
2.	Holding times met for all analyses and for all samples?	yes/no/NA
3.	Are calculations correct?	yes/no/NA
4.	Is the reporting basis correct? (Dry Weight)	yes/no/NA
5.	All quality control criteria met?	yes/no/NA
a.	Is the calibration curve correlation coefficient ≥ 0.995?	yes/no/NA
b.	MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency?	yes/no/NA
c.	Are ICVs, CCVs, and CCBs all within acceptance limits?	yes/no/NA
d.	Are results for methods blanks all ND?	yes/no/NA
e.	Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.)	yes/no/NA
f.	Are all exceptions explained?	yes/no/NA
6.	Are all service requests that apply attached?	yes/no/NA
7.	Are all samples labelled correctly?	yes/no/NA
8.	Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample)	yes/no/NA
9.	Are detection limits and units reported correctly?	yes/no/NA
10.	Are proper Analysis/Extraction stickers included on report?	yes/no/NA
11.	Is the unused space on the benchsheet crossed out?	yes/no/NA
12.	Was analysis turned in by the due date? (n-2) (If not record SR#)	yes/no/NA

K8300

COMMENTS:

K8300-3 = Rush

Final Approved by: SM Date: 10/19/08

DQREPORT

Columbia Analytical Services, Inc.

#129989

Service Request #: K9382/K9549/K8300/K9442/K9520/K9579
Method: 9060s / PSEP (Combustion/Coulometric)
Analysis For: Total Organic Carbon (TOC)
Matrix: Soil / Dry Weight Basis

Sample Number	mg Sample Injected	Sample Reading, µg C	Baseline Reading, µg C	Net µg C	% Carbon
CCV-1	13.0	2443.4	6.7	2436.7	18.7
CCB-1	50.0	14.2	6.7	7.5	< 0.05
LCS-1	46.7	180.4	6.7	173.7	0.37
MB-1	50.0	13.9	6.7	7.2	< 0.05
K9382-13	35.2	505.4	6.7	498.7	1.42
K9382-13d	36.0	516.9	6.7	510.2	1.42
K9382-13t	37.3	529.0	6.7	522.3	1.40
K9382-13ms	27.4	1630.1	6.7	1623.4	5.92
K9549-7	60.1	181.9	6.7	175.2	0.29
K9549-8	37.4	774.6	6.7	767.9	2.05
K9549-11	33.2	481.6	6.7	474.9	1.43
K9549-12	40.1	495.8	6.7	489.1	1.22
CCV-2	11.6	2239.9	6.7	2233.2	19.3
CCB-2	50.0	28.1	6.7	21.4	< 0.05
K9549-13	44.9	527.4	6.7	520.7	1.16
K9549-14	42.5	525.6	6.7	518.9	1.22
K9549-15	39.8	465.1	6.7	458.4	1.15
K9549-16	47.4	543.4	6.7	536.7	1.13
K9549-17	41.8	506.7	6.7	500.0	1.20
K9549-17d	38.6	450.7	6.7	444.0	1.15
K9549-17t	37.3	423.3	6.7	416.6	1.12
K9549-17ms	36.7	1375.8	6.7	1369.1	3.73
K8300-3	45.4	46.3	6.7	39.6	0.09
K9442-1	73.6	206.9	6.7	200.2	0.27
CCV-3	13.4	2428.7	6.7	2422.0	18.1
CCB-3	50.0	12.5	6.7	5.8	< 0.05

Acid Purge Time: 1 minute **Reading Time:** 5 minutes **TOC % =** (Net Reading)(µg 0.1) / mg Sample Injected

CCV : Urea Baker (lot #A17584) ID#: TOCS/1-10-J TV = 20.0%C

CCV1 = 94 CCV2 = 96 CCV3= 90

LCS: ERA Cat#: 542 Lot#: D006-542 ID#: PO3/2-26-E TV = 0.42%C %REC= 89/105

Comments :

K9382-13ms = 6.3mg X 20% / 27.4mg =	4.60	X = 1.41	RSD <1	%Rec = 98
K9549-17ms = 5.0mg X 20% / 36.7mg =	2.72	X = 1.16	RSD = 3	%Rec = 93
K9442-1ms = 2.9mg X 20% / 55.2mg =	1.05	X = 0.26	RSD = 12	%Rec = 101
K9442-1msd=3.7mg X 20% / 54.7 =	1.35			%Rec = 87

Analyzed By:	Date:10/9/08 Time:0900
Reveiwed By:	Date: 10/17/08

TOC.XLT

Columbia Analytical Services, Inc.

Service Request #: K9382/K9549/K8300/K9442/K9520/K9579 Method: 9060s / PSEP (Combustion/Coulometric)

Analysis For: Total Organic Carbon (TOC) Matrix: Soil / Dry Weight Basis

Sample Number	mg Sample Injected	Sample Reading, µg C	Baseline Reading, µg C	Net µg C	% Carbon
K9442-1d	56.2	164.0	6.7	157.3	0.28
K9442-1t	53.1	123.8	6.7	117.1	0.22
K9442-1q	63.0	125.0	6.7	118.3	0.19
K9442-1ms	55.2	742.1	6.7	735.4	1.33
K9442-2	63.2	37.3	6.7	30.6	< 0.05
K9442-2d	60.9	27.4	6.7	20.7	< 0.05
K9442-3	56.9	19.7	6.7	13.0	< 0.05
K9442-3d	62.9	22.7	6.7	16.0	< 0.05
K9442-5	59.7	1026.6	6.7	1019.9	1.71
K9442-5d	57.5	1039.6	6.7	1032.9	1.80
CCV-4	6.8	1295.3	6.7	1288.6	19.0
CCB-4	50.0	7.8	6.7	1.1	< 0.05
K9442-6	55.7	2027.4	6.7	2020.7	3.63
K9442-6d	52.6	1857.5	6.7	1850.8	3.52
K9442-1msd	54.7	796.3	6.7	789.6	1.44
K9520-1	43.6	2482.8	6.7	2476.1	5.68
K9520-1d	39.8	2321.0	6.7	2314.3	5.81
K9520-2	54.3	1213.3	6.7	1206.6	2.22
K9520-2d	50.1	1178.2	6.7	1171.5	2.34
K9520-3	32.6	320.9	6.7	314.2	0.96
K9520-3d	49.3	440.6	6.7	433.9	0.88
K9520-5	46.9	4244.8	6.7	4238.1	9.04
CCV-5	6.8	1301.5	6.7	1294.8	19.0
CCB-5	50.0	6.0	6.7	-0.7	< 0.05

RPD —

RPD —

RPD = 5

RPD = 3

RPD = 2

RPD = 5

RPD = 9

Acid Purge Time: 1 minute **Reading Time:** 5 minutes **TOC % =** (Net Reading)(µg 0.1) / mg Sample Injected

CCV : Urea Baker (lot #A17584) ID#: TOCS/1-10-J TV = 20.0%C

CCV4= 95 CCV5= 95

LCS: ERA Cat#: 542 Lot#: D006-542 ID#: PO3/2-26-E TV = 0.42%C %REC= 89

Comments :

Analyzed By:	Date:10/9/08 Time: 0900
Reveiwed By:	Date: 10/17/08

TOC.XLT

Columbia Analytical Services, Inc.

Service Request #: K9382/K9549/K8300/K9442/K9520/K9579 Method: 9060s / PSEP (Combustion/Coulometric)

Analysis For: Total Organic Carbon (TOC) Matrix: Soil / Dry Weight Basis

Sample Number	mg Sample Injected	Sample Reading, µg C	Baseline Reading, µg C	Net µg C	% Carbon	
K9520-5d	36.6	3314	6.7	3307.3	9.04	RPD <1
K9520-7	40.6	3797.7	6.7	3791	9.34	RPD=2
K9520-7d	47.3	4496.8	6.7	4490.1	9.49	
K9520-8	28	3304.1	6.7	3297.4	11.8	
MB-2	50	6.8	6.7	0.1	< 0.05	
LCS-2	50.5	230.2	6.7	223.5	0.44	
K9520-8d	24.7	2957.8	6.7	2951.1	11.9	RPD=<1
K9520-12	35.7	3755.2	6.7	3748.5	10.5	RPD=3
K9520-12d	29	3153.1	6.7	3146.4	10.8	
K9520-13	28	2535.1	6.7	2528.4	9.03	
CCV-6	6.9	1320.4	6.7	1313.7	19.0	
CCB-6	50	6	6.7	-0.7	< 0.05	
K9520-13d	30.1	2642.8	6.7	2636.1	8.76	
K9520-13t	28.6	2662.6	6.7	2655.9	9.29	
K9520-13q	24.9	2269.9	6.7	2263.2	9.09	
K9520-13ms	24.1	4118.4	6.7	4111.7	17.1	
K9520-13msd	22.1	4541.3	6.7	4534.6	20.5	
K9579-1	34.5	2564.6	6.7	2557.9	7.41	RPD=3
K9579-1d	43.6	3352.9	6.7	3346.2	7.67	
K9579-2	47.7	464.4	6.7	457.7	0.96	RPD=1
K9579-2d	39.2	380.7	6.7	374	0.95	
CCV-7	7.5	1456.3	6.7	1449.6	19.3	
CCB-7	50	14.8	6.7	8.1	< 0.05	

Acid Purge Time: 1 minute **Reading Time:** 5 minutes **TOC % =** $\frac{\text{(Net Reading)(µg 0.1)}}{\text{mg Sample Injected}}$

CCV : Urea Baker (lot #A17584) ID#: TOCS/1-10-J TV = 20.0%C

CCV6= 95 CCV7= 97

LCS: ERA Cat#: 542 Lot#: D006-542 ID#: PO3/2-26-E TV = 0.42%C %REC= 89

Comments :

K9520-13ms = 10.5mg X 20% / 24.1mg =	8.71	X = 9.04	RSD = 2	%Rec = 93
K9520-13msd = 12.4mg X 20% / 22.1mg =	11.2			%Rec = 102

Analyzed By:	[signature]	Date:10/9/08	Time: 0900
Reveiwed By:	[signature]	Date: 10/17/08	

TOC Soil Benchsheet

Sample #	mg Sample	Reading	Date Baked	Baseline
CCV-1	13.0	2443.4		6.9
CCB-1	50.0	14.2		6.6
LCS-1	46.7	180.4		6.5
MB-1	50.0	13.9		Avg
K9382-13	35.2	505.4	9/29/2008	6.7
K9382-13d	36.0	516.9	9/29/2008	
K9382-13t	37.3	529.0	9/29/2008	
K9382-13ms	27.4	1630.1	9/29/2008	
K9549-7	60.1	181.9	10/1/2008	
K9549-8	37.4	774.6	10/1/2008	
K9549-11	33.2	481.6	10/1/2008	
K9549-12	40.1	495.8	10/1/2008	
CCV-2	11.6	2239.9		
CCB-2	50.0	28.1		
K9549-13	44.9	527.4	10/1/2008	
K9549-14	42.5	525.6	10/1/2008	
K9549-15	39.8	465.1	10/1/2008	
K9549-16	47.4	543.4	10/1/2008	
K9549-17	41.8	506.7	10/1/2008	
K9549-17d	38.6	450.7	10/1/2008	
K9549-17t	37.3	423.3	10/1/2008	
K9549-17ms	36.7	1375.8	10/1/2008	
K8300-3	45.4	46.3	10/8/2008	
K9442-1	73.6	206.9	9/29/2008	
CCV-3	13.4	2428.7		
CCB-3	50.0	12.5		
K9442-1d	56.2	164.0	9/29/2008	
K9442-1t	53.1	123.8	9/29/2008	
K9442-1q	63.0	125.0	9/29/2008	
K9442-1ms	55.2	742.1	9/29/2008	
K9442-2	63.2	37.3	9/29/2008	
K9442-2d	60.9	27.4	9/29/2008	
K9442-3	56.9	19.7	9/29/2008	
K9442-3d	62.9	22.7	9/29/2008	
K9442-5	59.7	1026.6	9/29/2008	
K9442-5d	57.5	1039.6	9/29/2008	
CCV-4	6.8	1295.3		
CCB-4	50.0	7.8		
K9442-6	55.7	2027.4	9/29/2008	
K9442-6d	52.6	1857.5	9/29/2008	
K9442-1msd	54.7	796.3	9/29/2008	
K9520-1	43.6	2482.8	9/30/2008	
K9520-1d	39.8	2321.0	9/30/2008	
K9520-2	54.3	1213.3	9/30/2008	
K9520-2d	50.1	1178.2	9/30/2008	
K9520-3	32.6	320.9	9/30/2008	
K9520-3d	49.3	440.6	9/30/2008	
K9520-5	46.9	4244.8	9/30/2008	
CCV-5	6.8	1301.5		
CCB-5	50.0	6.0		
K9520-5d	36.6	3314.0	9/30/2008	
K9520-7	40.6	3797.7	9/30/2008	
K9520-7d	47.3	4496.8	9/30/2008	
K9520-8	28.0	3304.1	9/30/2008	
MB-2	50.0	6.8		
LCS-2	50.5	230.2		
K9520-8d	24.7	2957.8	9/30/2008	
K9520-12	35.7	3755.2	9/30/2008	
K9520-12d	29.0	3153.1	9/30/2008	
K9520-13	28.0	2535.1	9/30/2008	
CCV-6	6.9	1320.4		
CCB-6	50.0	6.0		
K9520-13d	30.1	2642.8	9/30/2008	
K9520-13t	28.6	2662.6	9/30/2008	
K9520-13q	24.9	2269.9	9/30/2008	
K9520-13ms	24.1	4118.4	9/30/2008	
K9520-13msd	22.1	4541.3	9/30/2008	
K9579-1	34.5	2564.6	10/3/2008	
K9579-1d	43.6	3352.9	10/3/2008	
K9579-2	47.7	464.4	10/3/2008	
K9579-2d	39.2	380.7	10/3/2008	
CCV-7	7.5	1456.3		
CCB-7	50.0	14.8		
		N/A		
CCV-8				
CCB-8				

10/14/08

G. Beatty 10/10/08 0900

K9387
K9549
K8300
K9442
K9520
K9579

TOC Soil Benchsheet

#129989

Sample #	mg Sample	Reading	Date Baked	Baseline
CCV-1	13.0	2443.4		6.9
CCB-1	50	14.2		6.6
LCS	46.7	180.4		6.5
MB	50	13.9		Avg
K9382-13	35.2	505.4	9/29/08	
-13d	36.0	516.9		
-13t	37.3	529.0		9382-13ms
-13ms	27.4	1630.1		6.3mg X 20%
9549-7	60.1	181.9	10/1/08	
-8	37.4	774.6		
① ~~-9~~ 11	33.2	481.6		
① ~~-10~~ 12	40.1	495.8		
CCV-2	11.6	① ~~2270~~ 2238.9		
CCB-2	50	28.1		
K9549-13	44.9	527.4		
-14	42.5	525.6		
-15	39.8	465.1		
-16	47.4	543.4		
-17	41.8	506.7		
-17d	38.6	450.7		
-17t ~~-17~~ ①	37.3	423.3		9549-17ms
-17ms	36.7	1375.8		5.0mg x 20%
K8300-3	45.4	46.3	10/8/08	
K9442-1	73.6	206.9	9/29/08	
CCV-3	13.4	2428.7		
CCB-3	50	12.5		
K9442-1d	56.2	164.0		
-1t	53.1	123.8		
-1Q	63.0	125.0		K9442-1ms
-1ms	55.2	742.1		2.9mg x 20%
-2	63.2	37.3		
-2d	60.9	27.4		
-3	56.9	19.7		
-3d	62.9	22.7		
-5	① ~~65.3~~ 59.7	① ~~1582.9~~ 1026.6		
-5d	57.5	1039.6		
CCV-4	6.8	1295.3		
CCB-4	50	7.8		
K9442-6	55.7	2027.4		
-6d	52.6	1857.5		9442-1msd
-1Msd	54.7	796.3		3.7mg x 20%
K9520-1	43.6	2482.8	9/30/08	
-1d	39.8	2321.0		
-2	54.3	1213.3		
-2d	50.1	1178.2		
-3	32.6	320.9		
-3d	49.3	440.6		
① ~~4~~ 5	46.9	4244.5		
CCV-5	6.8	1301.5		
CCB-5	50	6.0		
9520-~~4d~~ 5d	36.6	3314.0		
① ~~-5~~ 7	40.6	3797.7		
① ~~-5d~~ 7d	47.3	4496.8		
① ~~-7~~ 8	28.0	3304.1		

10/17/08

① [illegible] 10/9/08

① [illegible] 10/9/08 0900

TOC Soil Benchsheet

Sample #	mg Sample	Reading	Date Baked
mB2	50	6.8	
LCS2	50.5	230.2	
9520-8d	① x24.7	2957.8	9/30/08
9520-12	35.7	3755.2	
-12d	29.0	3153.1	
-13	28.0	2535.1	
CCV-6	6.9	1320.4	
CCB-6	50	6.0	
9520-13d	30.1	2642.8	
-13t	28.6	2662.6	
-13Q	24.9	2269.9	
-13ms	24.1	4118.4	
-13msd	① ~~25.5~~ 22.1	4541.3	
K9579-1	34.5	2564.6	10/3/08
-1d	43.6	3352.9	
-2	47.7	464.4	
-2d	39.2	380.7	
CCV-7	7.5	1456.3	
CCB-7	50	14.8	
CCV-8			
CCB-8			
CCV-5			
CCB-5			

9520-13ms
10.5mg x 20%
9520-13msd.
12.4mg x 20%.

N/A

10/17/08

GB 10/9/08 G Bartley 10/9/08 @900

Metals

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	GeoEngineers, Inc.	**Service Request:**	K0808300
Project:	Port of Anacortes Dakota Creek Industries/5147 006 04	**Date Collected:**	08/28/08
Sample Matrix:	Soil	**Date Received:**	08/29/08

Mercury, Total

Prep Method:	METHOD	Units:	ng/g
Analysis Method:	1631E	Basis:	Dry
Test Notes:			

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
SMA3-2	K0808300-003	1.0	0.2	40	10/15/08	10/16/08	22.1	
Method Blank 1	K0808300-MB1	1.0	0.2	40	10/15/08	10/16/08	ND	
Method Blank 2	K0808300-MB2	1.0	0.2	40	10/15/08	10/16/08	ND	
Method Blank 3	K0808300-MB3	1.0	0.2	40	10/15/08	10/16/08	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	GeoEngineers, Inc.	**Service Request:**	K0808300
Project:	Port of Anacortes Dakota Creek Industries/5147 006 04	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
		Date Extracted:	10/15/08
		Date Analyzed:	10/16/08

Matrix Spike/Duplicate Matrix Spike Summary
Total Metals

Sample Name:	Batch QC	Units:	ng/g
Lab Code:	K0810000-002S, K0810000-002SD	Basis:	Dry
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Spike Level MS	Spike Level DMS	Sample Result	Spike Result MS	Spike Result DMS	Percent Recovery MS	Percent Recovery DMS	CAS Acceptance Limits	Relative Percent Difference	Result Notes
Mercury	METHOD	1631E	1.0	315	294	36.0	345	327	98	99	70-130	<1	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	GeoEngineers, Inc.	**Service Request:**	K0808300
Project:	Port of Anacortes Dakota Creek Industries/5147 006 04	**Date Collected:**	NA
LCS Matrix:	Water	**Date Received:**	NA
		Date Extracted:	NA
		Date Analyzed:	10/16/08

Ongoing Precision and Recovery (OPR) Sample Summary
Total Metals

Sample Name: Ongoing Precision and Recovery (Initial)

Units: ng/g
Basis: NA

Test Notes:

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Mercury	METHOD	1631E	5.00	5.55	111	70-130	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	GeoEngineers, Inc.	**Service Request:**	K0808300
Project:	Port of Anacortes Dakota Creek Industries/5147 006 04	**Date Collected:**	NA
LCS Matrix:	Water	**Date Received:**	NA
		Date Extracted:	NA
		Date Analyzed:	10/16/08

Ongoing Precision and Recovery (OPR) Sample Summary
Total Metals

Sample Name: Ongoing Precision and Recovery (Final)

Units: ng/g
Basis: NA

Test Notes:

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Mercury	METHOD	1631E	5.00	5.35	107	70-130	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	GeoEngineers, Inc.	**Service Request:**	K0808300
Project:	Port of Anacortes Dakota Creek Industries/5147 006 04	**Date Collected:**	NA
LCS Matrix:	Soil	**Date Received:**	NA
		Date Extracted:	10/15/08
		Date Analyzed:	10/16/08

Quality Control Sample (QCS) Summary
Total Metals

Sample Name:	Quality Control Sample	Units:	ng/g
Lab Code:		Basis:	Dry
Test Notes:			

Source: MESS-3

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Mercury	METHOD	1631E	91.0	89.8	99	70-130	

Service Request # K0807765, K0808300, K0809679, K0810000
MS/MSD with # K0807765, K0810000
StarLims # 130808

1631 Soil Data Review Form

	Yes	No	NA
1. 20 samples (or less) in batch	X		
2. MS/MSD every 10 samples	X		
3. Current Calibration factor used	X		
4. Calibration data included	X		
5. Method blank below MRL	X		
6. Verification Standards ran	X		
7. Mean of Bubbler Blanks less than 25 pg	X		
8. OPR, QCS in control (70-130%)	X		
9. MS/MSD recovery 70-130%	X		
10. Spike RPD within 30%	X		
11. All samples within the linear range	X		
12. Dilution factors calculated	X		
13. Bench sheet signed	X		
14. Reagent Blank below 20 pg	X		
15. Verification Standards Passed (77-123%)	X		

Comments

Primary Reviewed by _____ Date 10/16/08

Secondary Reviewed by JDB Date 10/14/08

Batch Number: KP0713663
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 10/16/08
Analyst Name: Dena

Run Duration:	2.25	Integration Mode:	Total Hg
Heating Time:	1.75	Integration Type:	Peak Area
Retention Start Time:	.75	Result Units:	µg/Kg
Retention Stop Time:	1.75		
Calibration File:	Curve 10-8-08.brd		

10/16/08

Extr/Prep Batch
KP0713663

Reagents

Name	Lot Number
BrCl	RE2-14-E
SnCl+HCl	RE2-14-I

Standards

Name	Concentration	Lot Number
VER STD	10000ppb	AF1-38-J
OPR STD	40000ppb	AF1-39-B

Comments

PMT: 589
OFFSET: 5,085
NOISE: 356

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Batch Number: KP0713663
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 10/16/08
Analyst Name: Dena

Run	Run Type	Name/ID	Method Blank	Peak	Peak Area	Analyzed Result (pg)	Final Result (µg/Kg)	QA Results	Criteria	Notes
1	QCS	VER-1		1	5,191,748	532	5.32	106	77-123	accept
2	MBA	MB-1		1	17,087	-1.68	-0.0674	-0.0674	< 1	accept
3	MBA	MB-2		1	46,263	1.31	0.0523	0.0523	< 1	accept
4	OPR	OPR-1		1	2,738,395	277	5.55	111	70-130	accept
~~5~~	~~IPR~~	~~QCS-1~~ Bubbler Error		~~1~~	~~3,762,813~~	~~382~~	~~7.65~~	~~153~~	~~70-130~~	~~reject~~
6	IPR	MESS-3		1	27,443,646	2,810	89.8	98.7	70-130	accept
7	S	K0807765-001		1	170,873	14.1	0.502		< HS	accept
8	MS	K0807765-001		1	25,128,190	2,570	92.7	102	70-130	accept
9	MSD	K0807765-001		1	20,887,810	2,140	78.7	85.0	70-130	accept
10	CB	BB (VER)		1	57,626	5.91		5.91	< 50	accept
11	IPR	QCS-1		1	2,554,486	259	5.17	103	70-130	accept
12	S	K0807765-002		1	1,734,321	174	6.04		< HS	accept
13	S	K0807765-003		1	2,557,782	259	9.59		< HS	accept
14	S	K0807765-004		1	687,111	67.0	2.47		< HS	accept
15	S	K0807765-005		1	226,400	19.8	0.705		< HS	accept
16	S	K0807765-006		1	564,895	54.5	1.94		< HS	accept
17	S	K0809676-004		1	29,630,990	3,040	837		< HS	accept
18	QCS	VER-2		3	4,508,039	462	4.62	92.5	77-123	accept
19	S	K0808300-003		1	4,126,776	420	16.2		< HS	accept
20	S	K0810000-001		1	6,734,650	687	32.0		< HS	accept
21	S	HG STD CHK		1	34,931,637	3,580	6,980		< HS	accept
22	CB	BB (VER)		1	13,063	1.34		1.34	< 50	accept
23	S	K0810000-002		1	8,161,986	834	36.0		< HS	accept
24	MS	K0810000-002		1	66,778,395	6,850	345	98.2	70-130	accept
25	MSD	K0810000-002		1	67,887,492	6,960	327	99.1	70-130	accept
26	MBA	MB-3		1	9,253	-2.49	-0.0995	-0.0995	< 1	accept
27	OPR	OPR-2		1	2,641,663	267	5.35	107	70-130	accept
28	QCS	VER-3		1	5,039,294	517	5.17	103	77-123	accept
29	CB	BB (VER)		1	29,860	3.06		3.06	< 50	accept

HgGuru ver 3.0 (c) 2003 Brooks Rand LLC

Batch Number: KP0713663
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 10/16/08
Analyst Name: Dena

Bias and Precision

Run Type	Name/ID	Final Result	Units	Spike Level	Source Result	% REC	% REC Limit	RPD	RPD Limit	Notes
MS	K0807765-001	92.7	µg/Kg	90	0.502	102	70-130			accept
	K0810000-002	345	µg/Kg	315	36.0	98.2	70-130			accept
MSD	K0807765-001	78.7	µg/Kg	92	0.502	85.0	70-130	16.4	< 30	accept
	K0810000-002	327	µg/Kg	294	36.0	99.1	70-130	5.36	< 30	accept
IPR	~~QCS-1~~	~~7.65~~	~~µg/Kg~~	~~5~~		~~153~~	~~70-130~~			~~reject~~
	MESS-3	89.8	µg/Kg	91		98.7	70-130			accept
	QCS-1	5.17	µg/Kg	5		103	70-130			accept
OPR	OPR-1	5.55	µg/Kg	5		111	70-130			accept
	OPR-2	5.35	µg/Kg	5		107	70-130			accept
QCS	VER-1	5.32	µg/Kg	5		106	77-123			accept
	VER-2	4.62	µg/Kg	5		92.5	77-123			accept
	VER-3	5.17	µg/Kg	5		103	77-123			accept

10/16/08

Calibration

QA Sample Type	Name/ID	Analyzed Result	Units	Spike Level	% REC	% REC Limit	RSD	RSD Limit	Notes
Calibration	20	18.6	pg	20	93.0	75-125			accept
	50	53.0	pg	50	106	75-125			accept
	200	186	pg	200	93.0	75-125			accept
	500	510	pg	500	102	75-125			accept
	2000	2,110	pg	2000	106	75-125			accept
	5000	5,240	pg	5000	105	75-125			accept
	15000	14,600	pg	15000	97.3	75-125			accept
Calibration Factor		0.000103	pg/PA				5.82	< 15	accept
Calibration Date		10/8/08							

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Batch Number: KP0713663
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 10/16/08
Analyst Name: Dena

Blank Summary

QA Sample Type	Name/ID	Analyzed Result	Units	Criteria	StDev	StDev Limit	Notes
CB	BB (VER)	5.91	pg	< 50			accept
	BB (VER)	1.34	pg	< 50			accept
	BB (VER)	3.06	pg	< 50			accept
Average		3.44	pg	< 25	2.31	< 10	accept
MBA	MB-1	-0.0674	µg/Kg	< 1			accept
	MB-2	0.0523	µg/Kg	< 1			accept
	MB-3	-0.0995	µg/Kg	< 1			accept
Average		-0.0382	µg/Kg		0.0800		

Comments

PMT: 589
OFFSET: 5,085
NOISE: 356

HgGuru ver 3.0 (c) 2003 Brooks Rand LLC

Batch Number: KP0713663
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 10/16/08
Analyst Name: Dena

Run	Name/ID	Final Result (µg/Kg)	Notes
21	HG STD CHK	6,980	accepted
7	K0807765-001	0.502	accepted
12	K0807765-002	6.04	accepted
13	K0807765-003	9.59	accepted
14	K0807765-004	2.47	accepted
15	K0807765-005	0.705	accepted
16	K0807765-006	1.94	accepted
19	K0808300-003	16.2	accepted
17	K0809676-004	837	accepted
20	K0810000-001	32.0	accepted
23	K0810000-002	36.0	accepted

HgGuru ver 3.0 (c) 2003 Brooks Rand LLC

Batch Number: KP0713663
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 10/16/08
Analyst Name: Dena

Run	Run Type	Name/ID	Method Blank	Sample Vol/Wt	Dilution Vol (ml)	Analyzed Vol (ml)	Expected Value	Notes
1	QCS	VER-1		100	100	100	5	
2	MBA	MB-1		400	40	2.5		
3	MBA	MB-2		400	40	2.5		
4	OPR	OPR-1		400	40	5	5	
~~5~~	~~IPR~~	~~QCS-1~~		~~400~~	~~40~~	~~5~~	~~5~~	10/16/08
6	IPR	MESS-3		313	40	4	91	
7	S	K0807765-001		449	40	2.5		
8	MS	K0807765-001		444	40	2.5	90	
9	MSD	K0807765-001		435	40	2.5	92	
10	CB	BB (VER)		100	100	100		
11	IPR	QCS-1		400	40	5	5	
12	S	K0807765-002		462	40	2.5		
13	S	K0807765-003		432	40	2.5		
14	S	K0807765-004		435	40	2.5		
15	S	K0807765-005		449	40	2.5		
16	S	K0807765-006		450	40	2.5		
17	S	K0809676-004		58	40	2.5		
18	QCS	VER-2		100	100	100	5	
19	S	K0808300-003		414	40	2.5		
20	S	K0810000-001		344	40	2.5		
21	S	HG STD CHK		41	40	0.5		
22	CB	BB (VER)		100	100	100		
23	S	K0810000-002		370	40	2.5		
24	MS	K0810000-002		317	40	2.5	315	
25	MSD	K0810000-002		340	40	2.5	294	
26	MBA	MB-3		400	40	2.5		
27	OPR	OPR-2		400	40	5	5	
28	QCS	VER-3		100	100	100	5	
29	CB	BB (VER)		100	100	100		

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Columbia Analytical Services
Metals Digestion Sheet

StarLims Number: 76100

Method : **1631EApp.** Analysis for : **CVAFS**

Sample	Matrices	Dry	Wet	Initial Weight (g)	Final Volume (ml)	Matrix
VER-1	Water		x	100ml	100ml	0.5% BrCl
VER-2	Water		x	100ml	100ml	0.5% BrCl
Method Blank		x		0.4000	40	0.02N BrCl
Method Blank		x		0.4000	40	0.02N BrCl
Method Blank		x		0.4000	40	0.02N BrCl
OPR-1		x		0.4000	40	0.02N BrCl
QCS-1		x		0.4000	40	0.02N BrCl
MESS-3				0.313	40	0.02N BrCl
K0807765-001				0.449	40	0.02N BrCl
K0807765-001MS				0.444	40	0.02N BrCl
K0807765-001DMS				0.435	40	0.02N BrCl
K0807765-002				0.462	40	0.02N BrCl
K0807765-003				0.432	40	0.02N BrCl
K0807765-004				0.435	40	0.02N BrCl
K0807765-005				0.449	40	0.02N BrCl
K0807765-006				0.450	40	0.02N BrCl
K0808300-003				0.414	40	0.02N BrCl
K0809679-004				0.416	40	0.02N BrCl
K0810000-001				0.397	40	0.02N BrCl
K0810000-002				0.432	40	0.02N BrCl
K0810000-002MS				0.370	40	0.02N BrCl
K0810000-002DMS				0.397	40	0.02N BrCl
HG STD				0.0410	40	0.02N BrCl
OPR-2				0.4000	40	0.02N BrCl
VER-3	Water		x	100ml	100ml	0.5% BrCl

BrCl = RE2-14-E

AF1 - 39-B *(40ppm)* **OPR: 0.05ml** **QCS: 0.2ml (10ppm)** AF1-39-A

1st MS / DMS: 1.0ml **Balance ID:** 21 B

2nd MS / DMS: 0.1ml (AF1-35-B)

Comments:

Time Digestion Started:

Analyst _____ **Date** 10/15/08

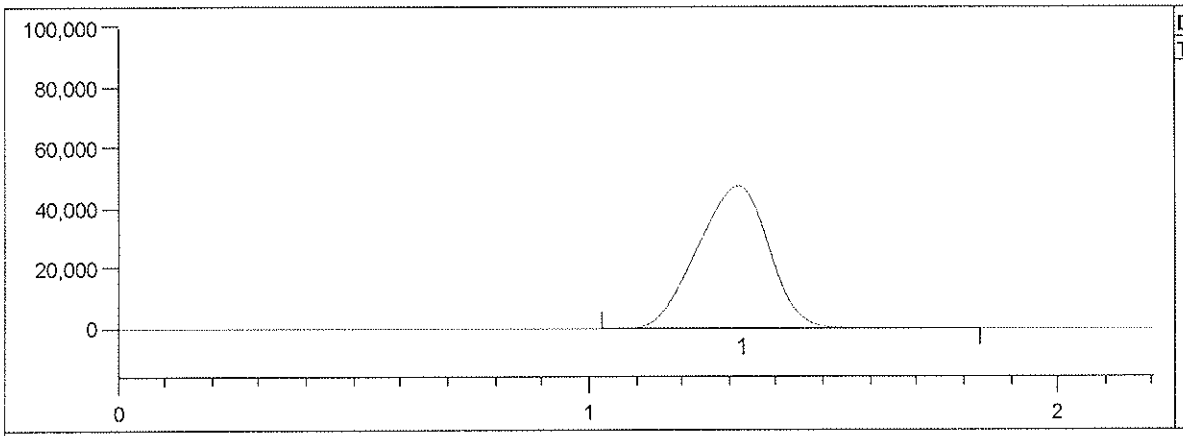
1631Dig.XLS
6/17/2004

Sample ID	Wet Weight (g)	Precent Solids (%)	Dry Weight (g)
K0809679-004	0.416	14.0	0.058
K081000-001	0.397	86.7	0.344
K081000-002	0.432	85.7	0.370
K081000-002MS	0.370	85.7	0.317
K081000-002DMS	0.397	85.7	0.340

Batch Number: KP0713663
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 10/16/08
Analyst Name: Dena

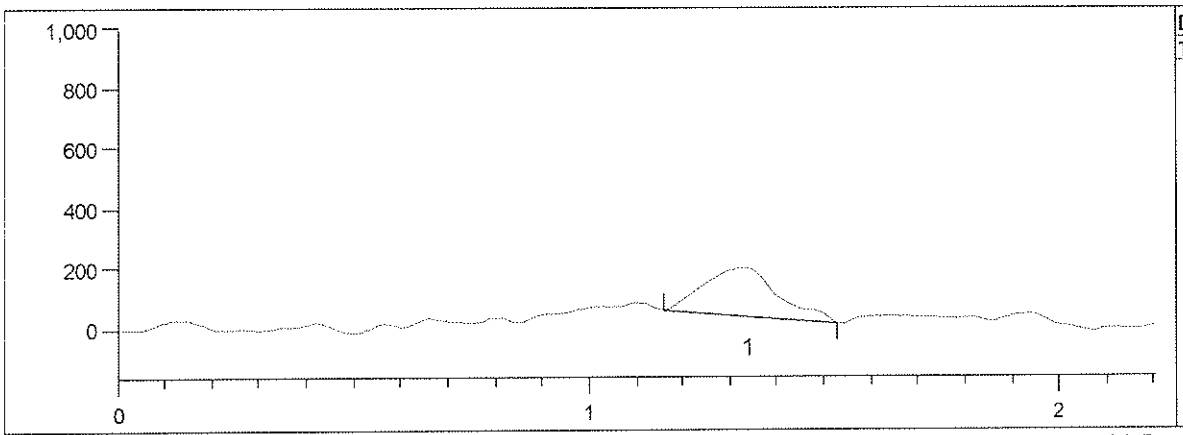


Date: 10/16/08
Time: 8:24 AM

Peak	rt	Area
1	1.34	5,191,748

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
1	QCS	VER-1		1	5,191,748	532	5.32	106	77-123	accept

Notes:

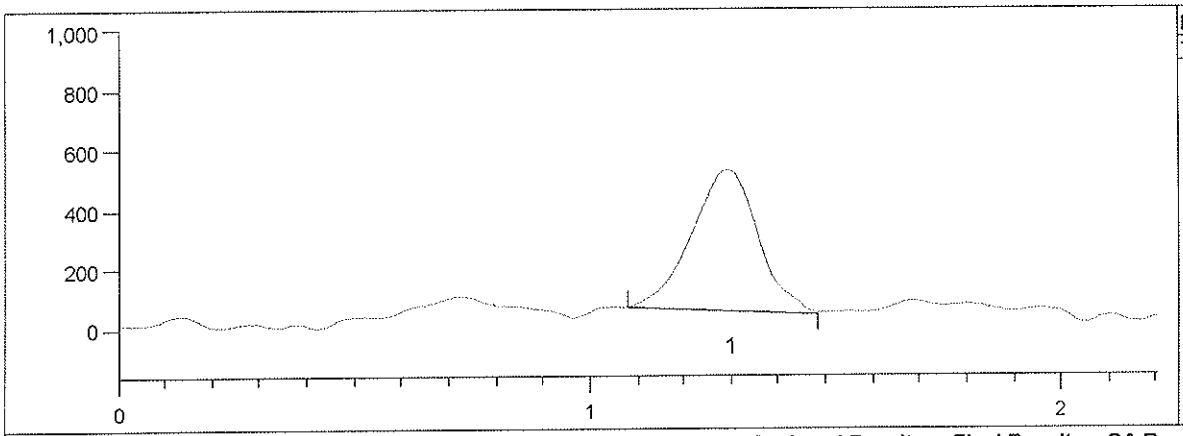


Date: 10/16/08
Time: 8:27 AM

Peak	rt	Area
1	1.35	17,087

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
2	MBA	MB-1		1	17,087	-1.68	-0.0674	-0.0674	< 1	accept

Notes:



Date: 10/16/08
Time: 8:30 AM

Peak	rt	Area
1	1.32	46,263

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
3	MBA	MB-2		1	46,263	1.31	0.0523	0.0523	< 1	accept

Notes:

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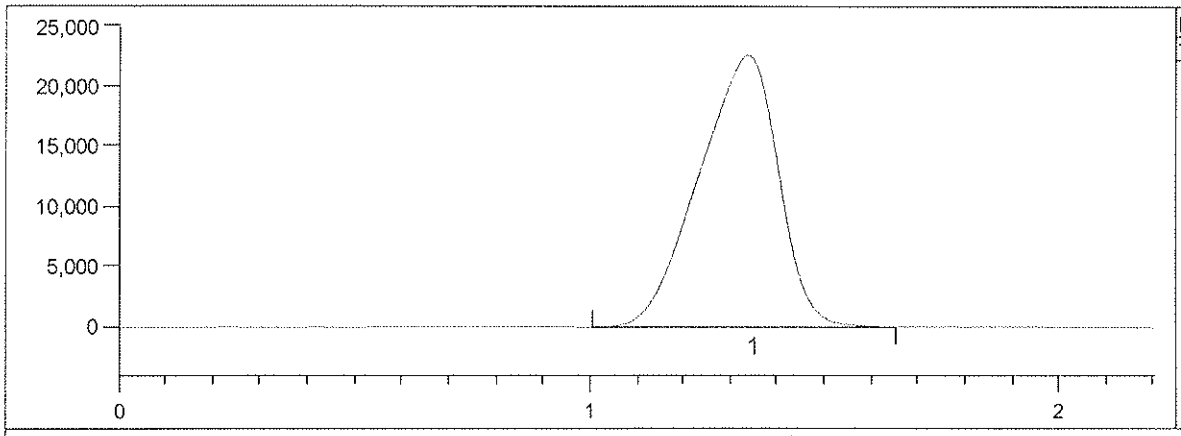
Batch Number: KP0713663
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 10/16/08
Analyst Name: Dena

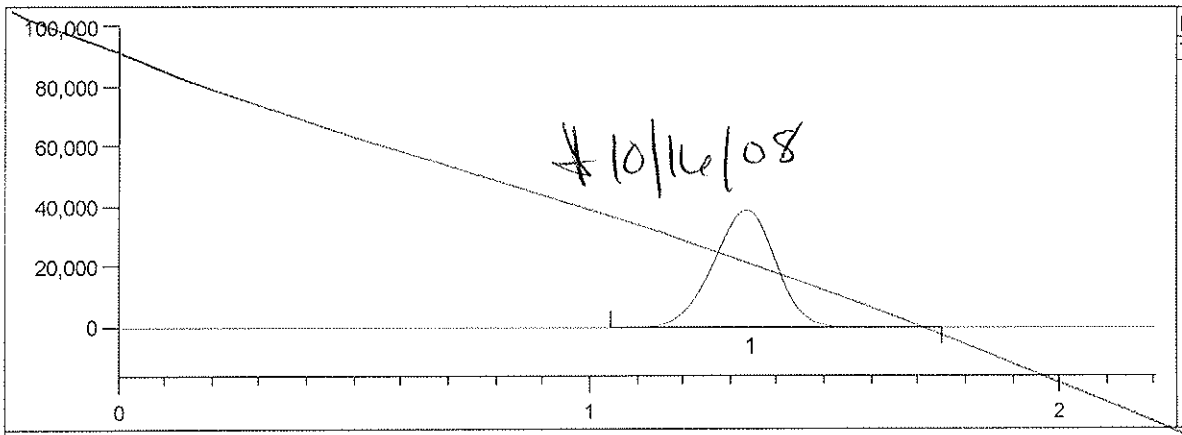


Date: 10/16/08
Time: 8:33 AM

Peak	rt	Area
1	1.36	2,738,395

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
4	OPR	OPR-1		1	2,738,395	277	5.55	111	70-130	accept

Notes:



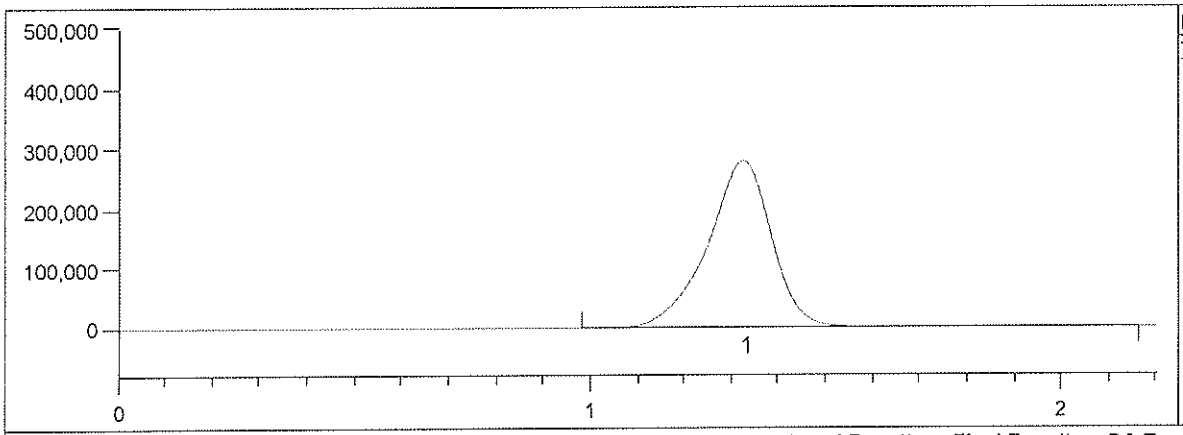
#10/16/08

Date: 10/16/08
Time: 8:36 AM

Peak	rt	Area
1	1.36	3,762,813

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
5	IPR	QCS-1		1	3,762,813	382	7.65	153	70-130	reject

Notes:



Date: 10/16/08
Time: 8:39 AM

Peak	rt	Area
1	1.35	27,443,646

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
6	IPR	MESS-3		1	27,443,646	2,810	89.8	98.7	70-130	accept

Notes:

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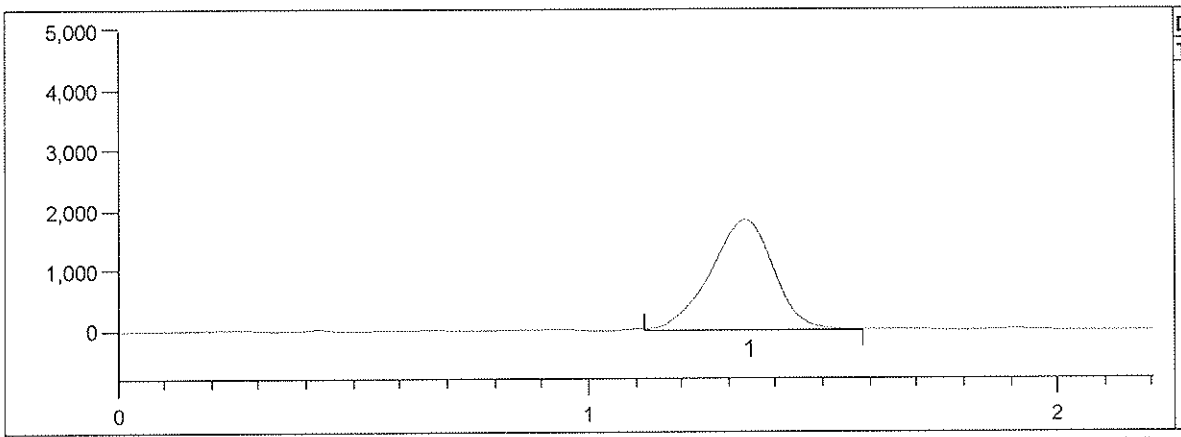
Batch Number: KP0713663
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 10/16/08
Analyst Name: Dena

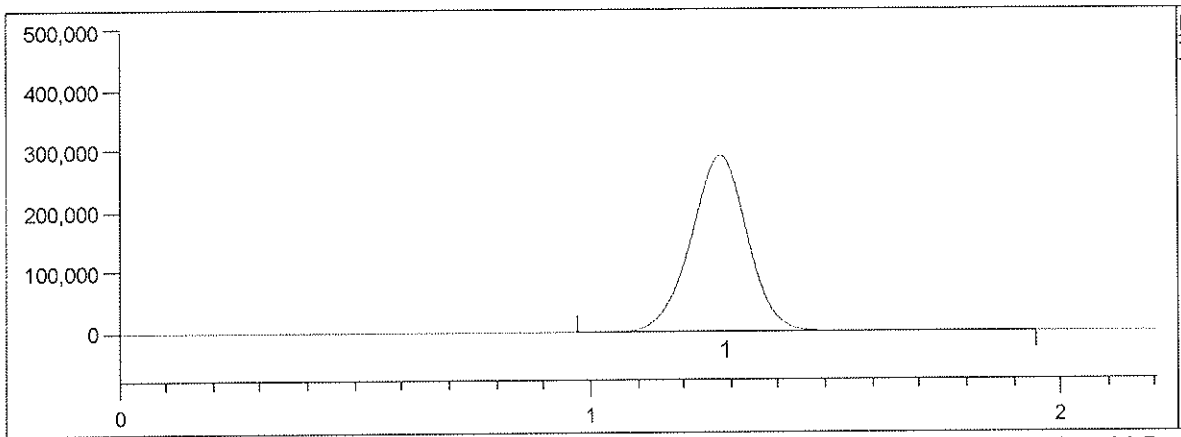


Date: 10/16/08
Time: 8:42 AM

Peak	rt	Area
1	1.36	170,873

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
7	S	K0807765-001		1	170,873	14.1	0.502		< HS	accept

Notes:

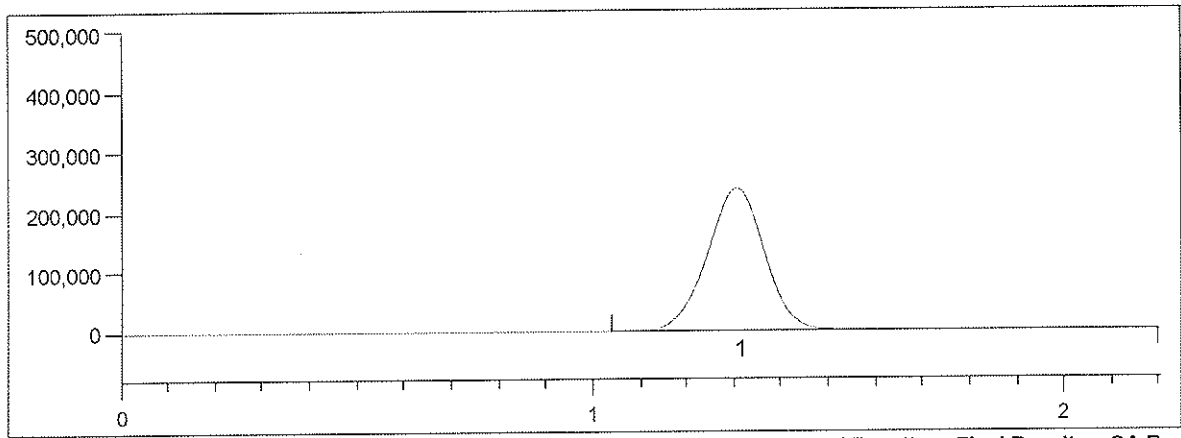


Date: 10/16/08
Time: 8:44 AM

Peak	rt	Area
1	1.30	25,128,190

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
8	MS	K0807765-001		1	25,128,190	2,570	92.7	102	70-130	accept

Notes:



Date: 10/16/08
Time: 8:48 AM

Peak	rt	Area
1	1.33	20,887,810

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
9	MSD	K0807765-001		1	20,887,810	2,140	78.7	85.0	70-130	accept

Notes:

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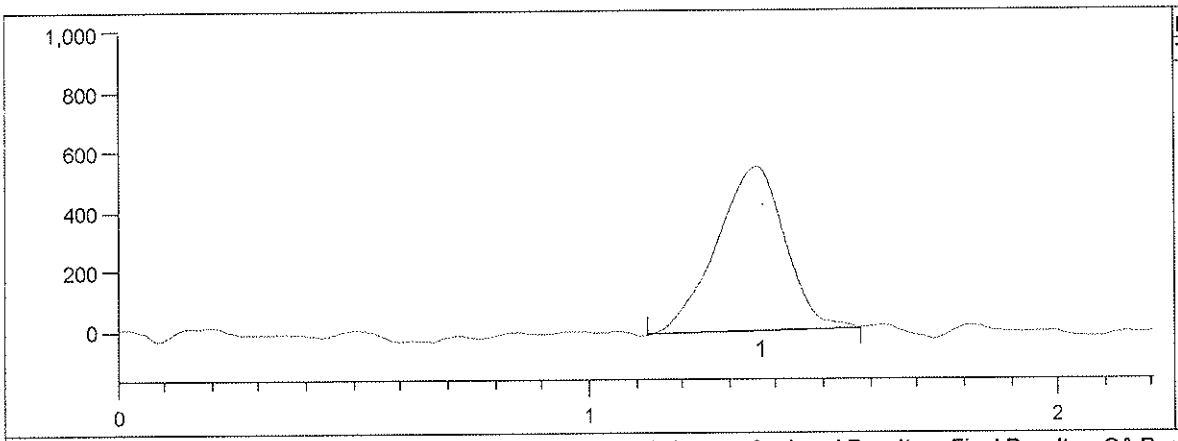
Batch Number: KP0713663
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 10/16/08
Analyst Name: Dena

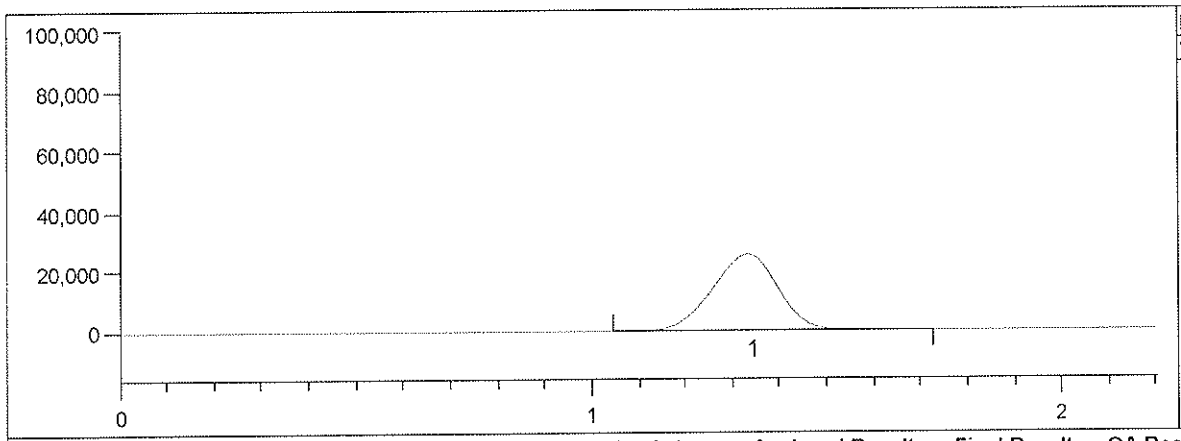


Date: 10/16/08
Time: 9:22 AM

Peak	rt	Area
1	1.38	57,626

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
10	CB	BB (VER)		1	57,626	5.91		5.91	< 50	accept

Notes:

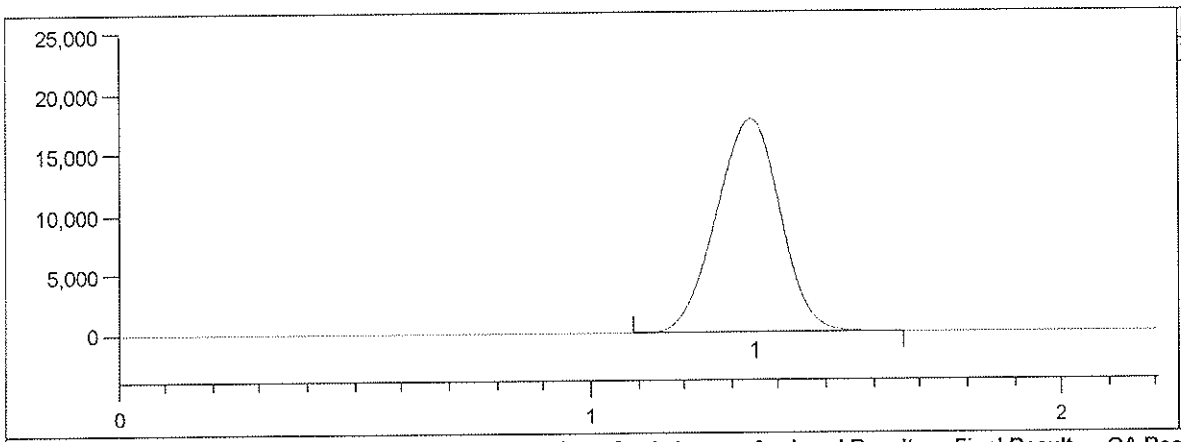


Date: 10/16/08
Time: 9:25 AM

Peak	rt	Area
1	1.36	2,554,486

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
11	IPR	QCS-1		1	2,554,486	259	5.17	103	70-130	accept

Notes:



Date: 10/16/08
Time: 9:28 AM

Peak	rt	Area
1	1.36	1,734,321

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
12	S	K0807765-002		1	1,734,321	174	6.04		< HS	accept

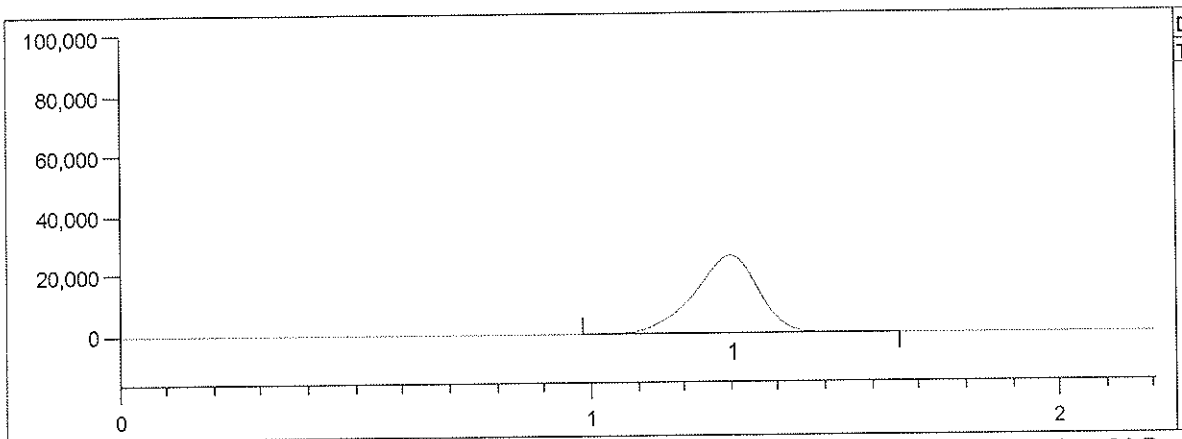
Notes:

HgGuru ver 3.0 (c) 2003 Brooks Rand LLC

Batch Number: KP0713663
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 10/16/08
Analyst Name: Dena

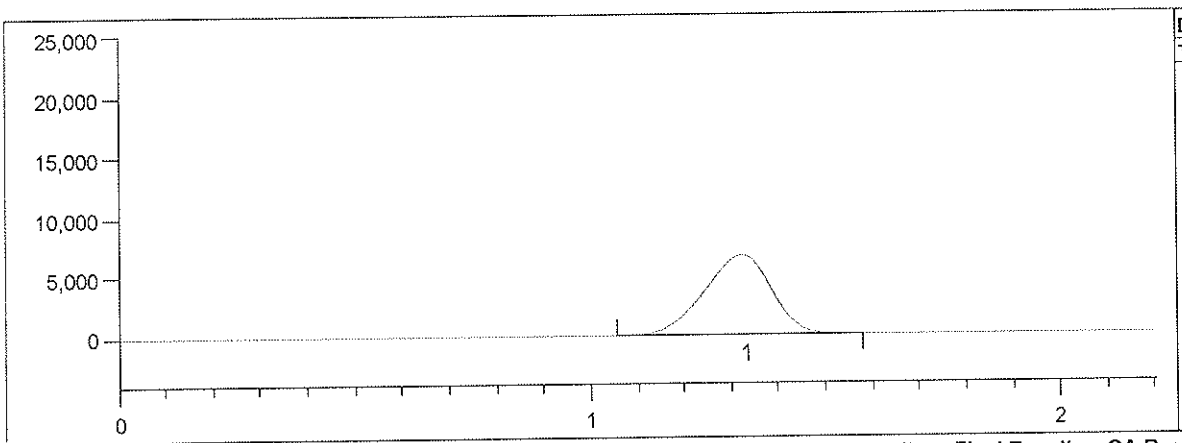


Date: 10/16/08
Time: 9:31 AM

Peak	rt	Area
1	1.32	2,557,782

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
13	S	K0807765-003		1	2,557,782	259	9.59		< HS	accept

Notes:

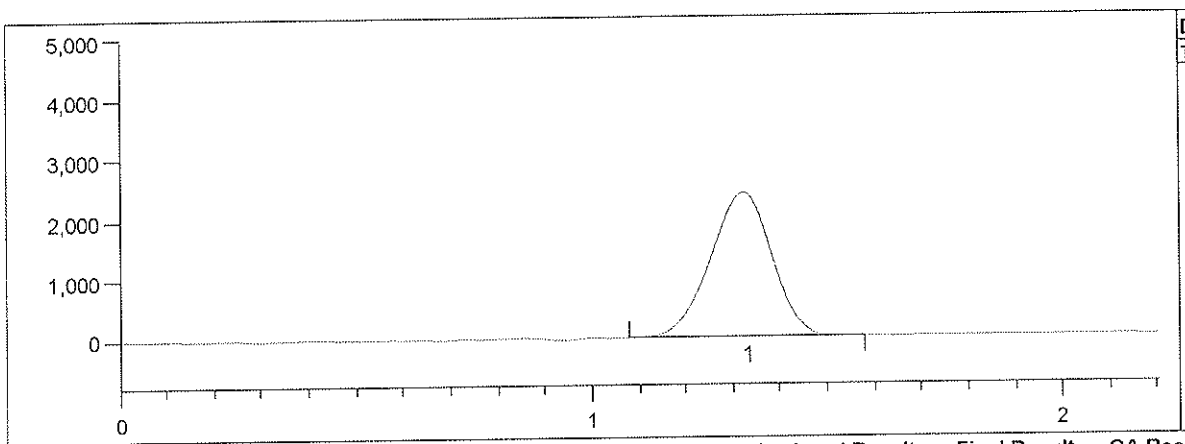


Date: 10/16/08
Time: 9:34 AM

Peak	rt	Area
1	1.35	687,111

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
14	S	K0807765-004		1	687,111	67.0	2.47		< HS	accept

Notes:



Date: 10/16/08
Time: 9:39 AM

Peak	rt	Area
1	1.35	226,400

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
15	S	K0807765-005		1	226,400	19.8	0.705		< HS	accept

Notes:

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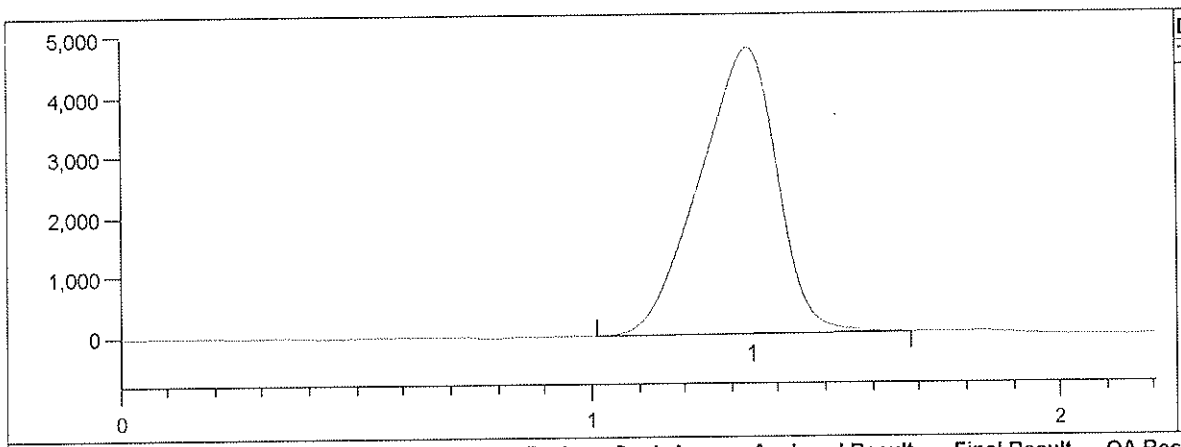
Batch Number: KP0713663
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 10/16/08
Analyst Name: Dena

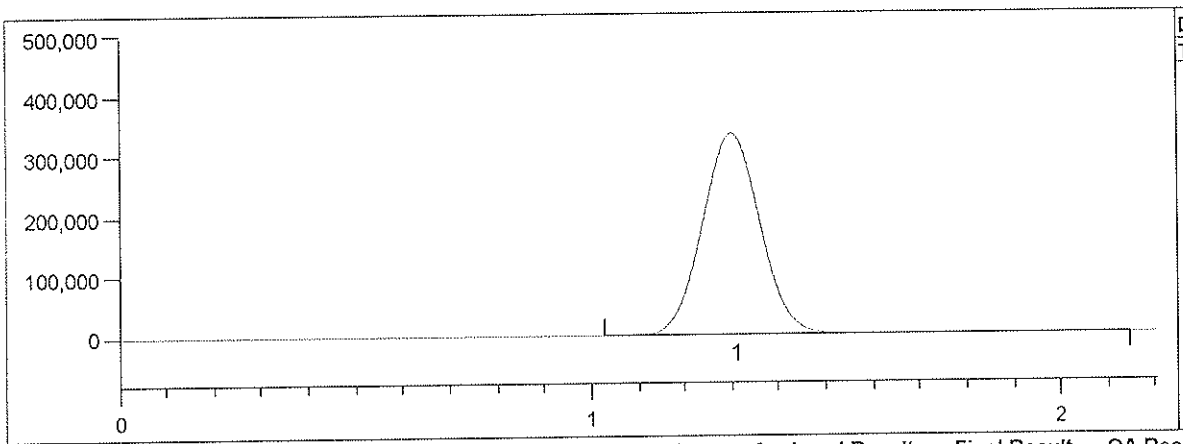


Date: 10/16/08
Time: 9:42 AM

Peak	rt	Area
1	1.36	564,895

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
16	S	K0807765-006		1	564,895	54.5	1.94		< HS	accept

Notes:

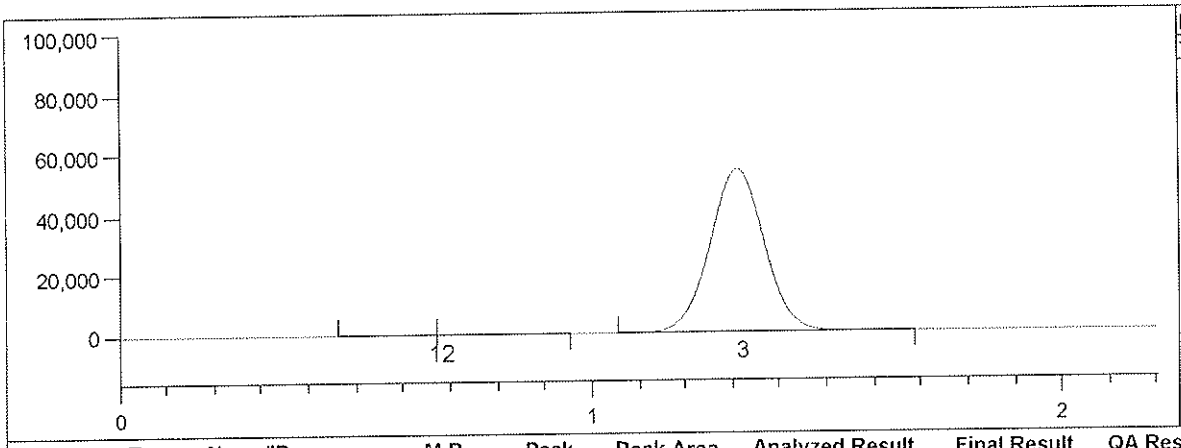


Date: 10/16/08
Time: 9:45 AM

Peak	rt	Area
1	1.32	29,630,990

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
17	S	K0809676-004		1	29,630,990	3,040	837		< HS	accept

Notes:



Date: 10/16/08
Time: 9:48 AM

Peak	rt	Area
1	0.67	26,986
2	0.70	31,205
3	1.34	4,508,039

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
18	QCS	VER-2		3	4,508,039	462	4.62	92.5	77-123	accept

Notes:

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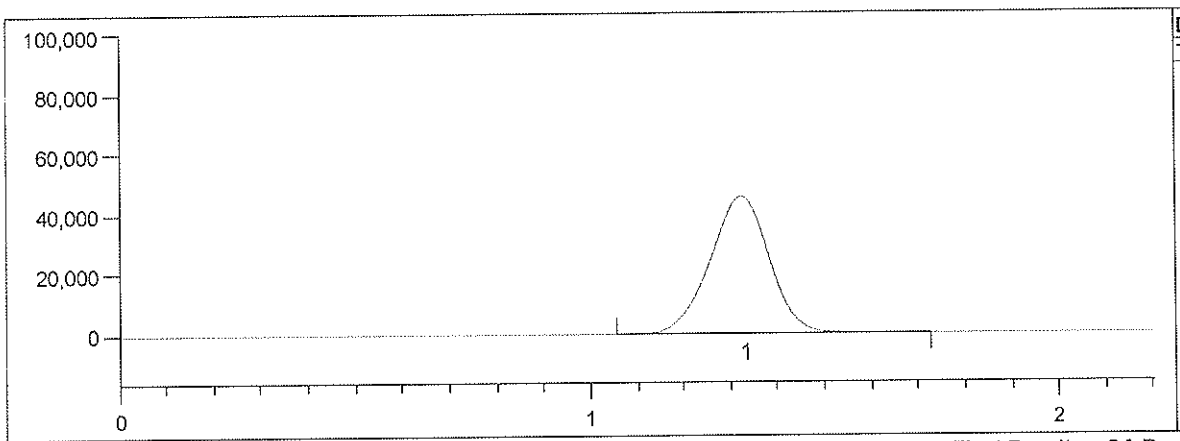
Batch Number: KP0713663
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 10/16/08
Analyst Name: Dena

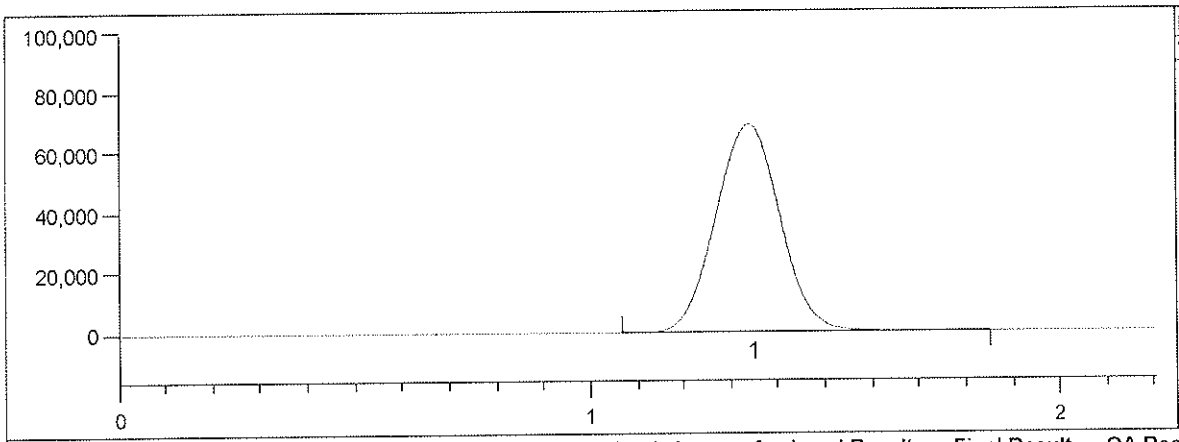


Date: 10/16/08
Time: 9:52 AM

Peak	rt	Area
1	1.35	4,126,776

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
19	S	K0808300-003		1	4,126,776	420	16.2		< HS	accept

Notes:

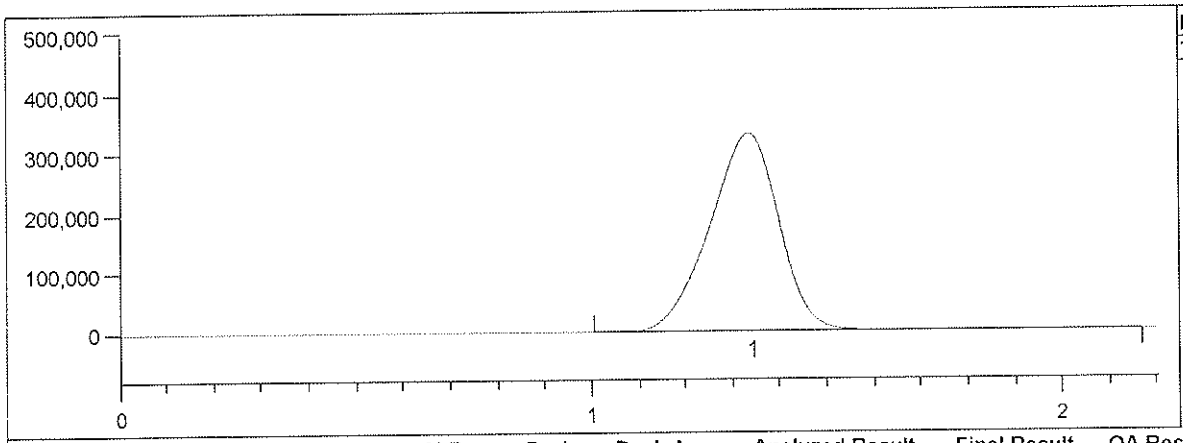


Date: 10/16/08
Time: 9:55 AM

Peak	rt	Area
1	1.36	6,734,650

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
20	S	K0810000-001		1	6,734,650	687	32.0		< HS	accept

Notes:



Date: 10/16/08
Time: 9:57 AM

Peak	rt	Area
1	1.36	34,931,637

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
21	S	HG STD CHK		1	34,931,637	3,580	6,980		< HS	accept

Notes:

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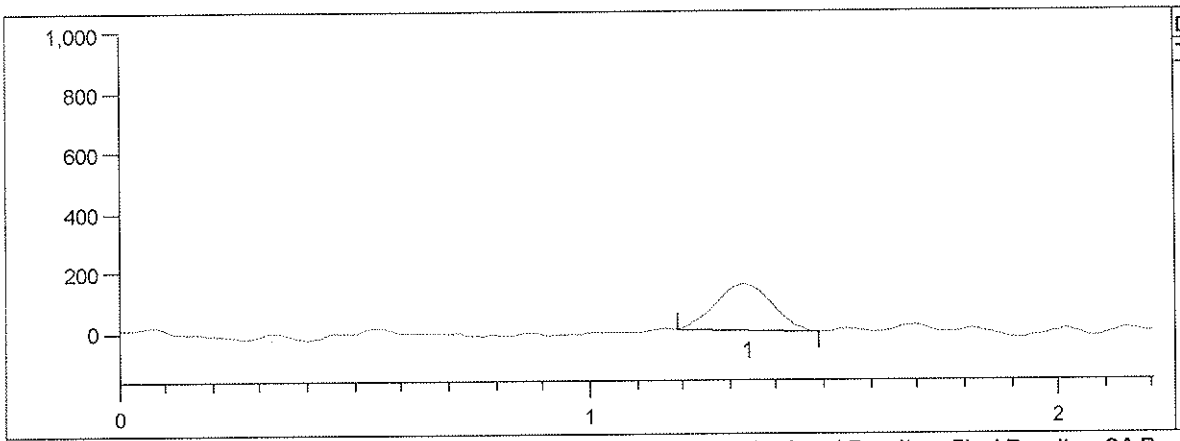
Batch Number: KP0713663
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 10/16/08
Analyst Name: Dena

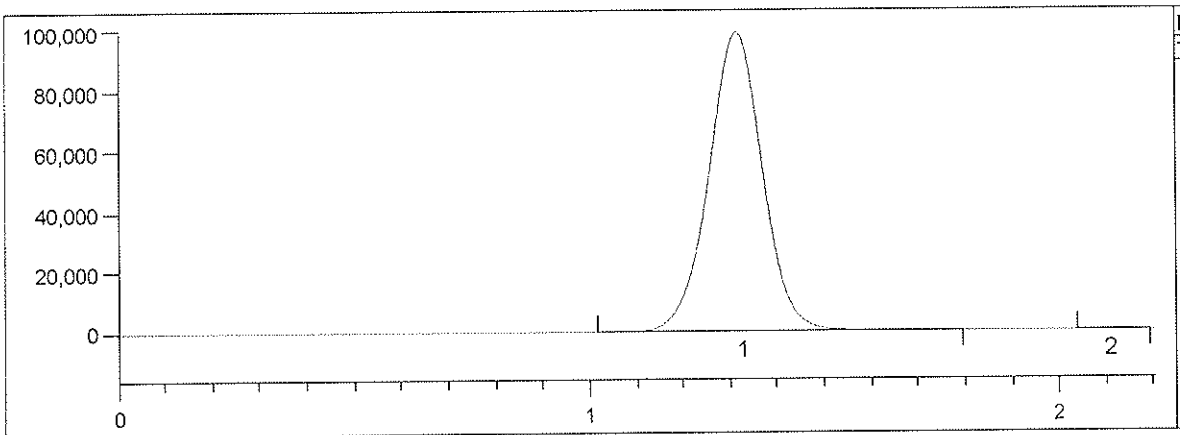


Date: 10/16/08
Time: 10:14 AM

Peak	rt	Area
1	1.35	13,063

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
22	CB	BB (VER)		1	13,063	1.34		1.34	< 50	accept

Notes:

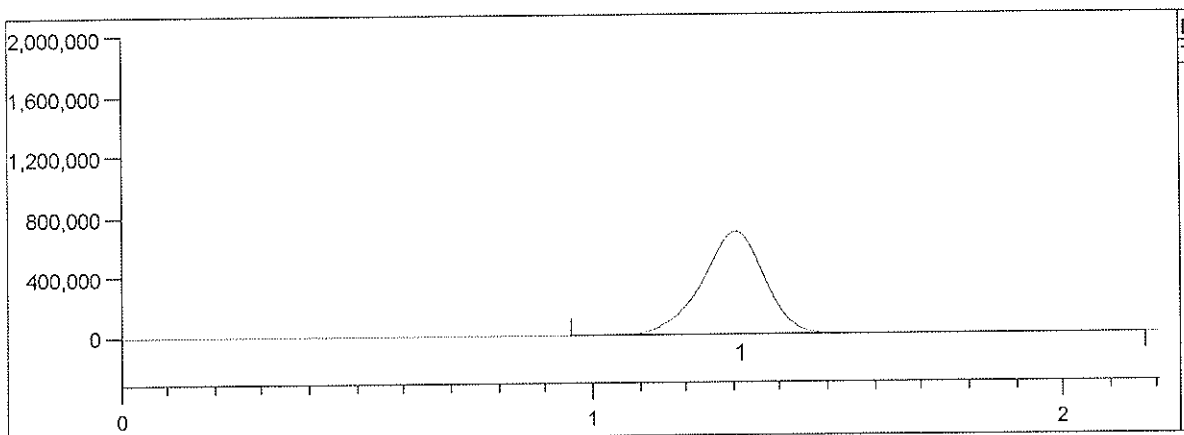


Date: 10/16/08
Time: 10:46 AM

Peak	rt	Area
1	1.34	8,161,986
2	2.14	2,079

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
23	S	K0810000-002		1	8,161,986	834	36.0		< HS	accept

Notes:



Date: 10/16/08
Time: 10:50 AM

Peak	rt	Area
1	1.33	66,778,395

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
24	MS	K0810000-002		1	66,778,395	6,850	345	98.2	70-130	accept

Notes:

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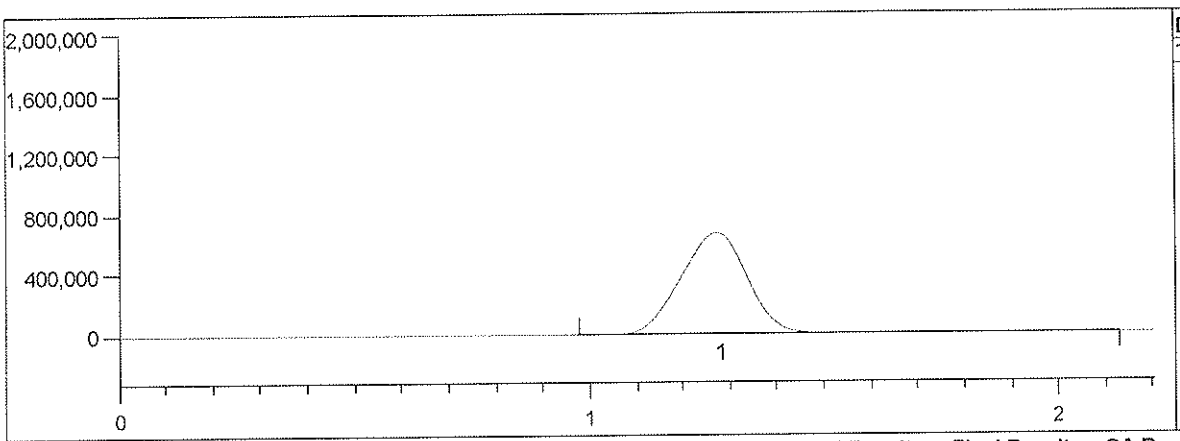
Batch Number: KP0713663
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 10/16/08
Analyst Name: Dena

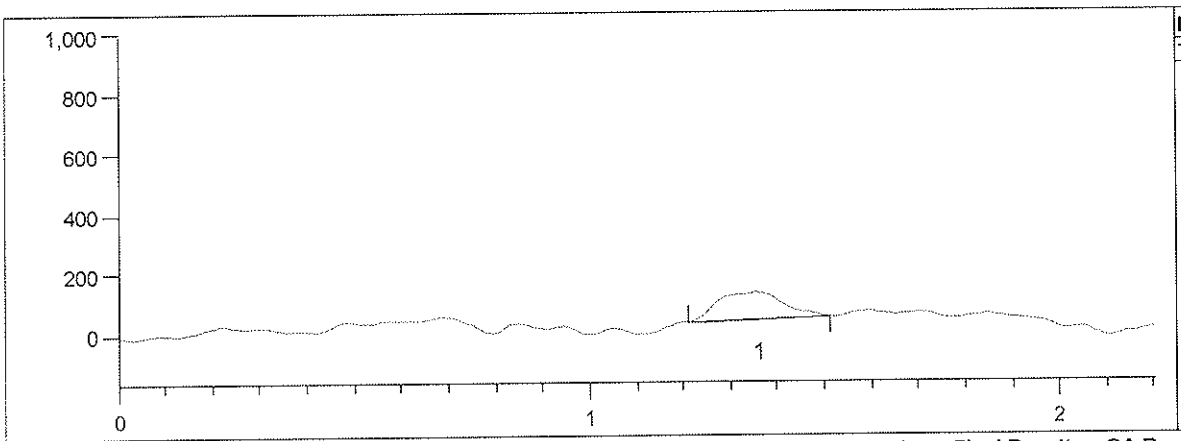


Date: 10/16/08
Time: 10:53 AM

Peak	rt	Area
1	1.30	67,887,492

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
25	MSD	K0810000-002		1	67,887,492	6,960	327	99.1	70-130	accept

Notes:

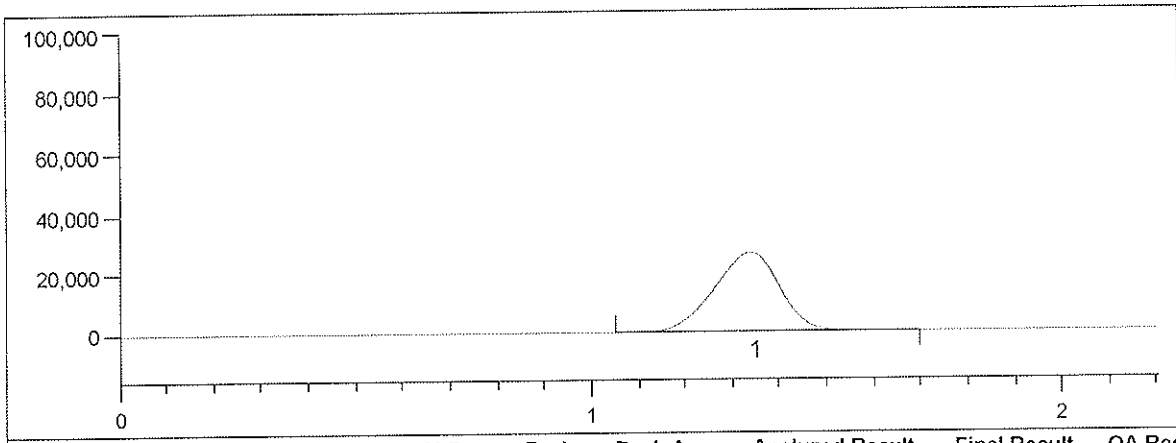


Date: 10/16/08
Time: 10:55 AM

Peak	rt	Area
1	1.38	9,253

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
26	MBA	MB-3		1	9,253	-2.49	-0.0995	-0.0995	< 1	accept

Notes:



Date: 10/16/08
Time: 10:58 AM

Peak	rt	Area
1	1.36	2,641,663

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
27	OPR	OPR-2		1	2,641,663	267	5.35	107	70-130	accept

Notes:

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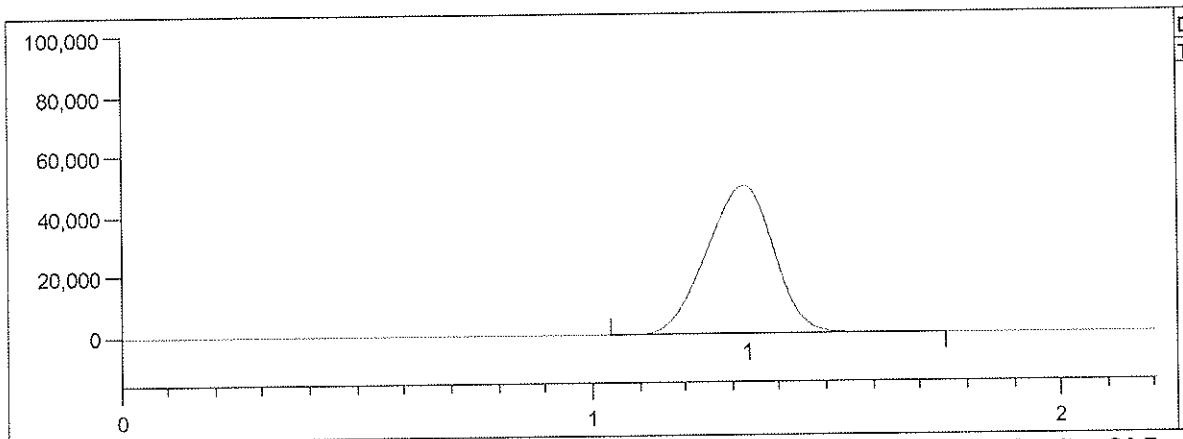
Batch Number: KP0713663
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 10/16/08
Analyst Name: Dena

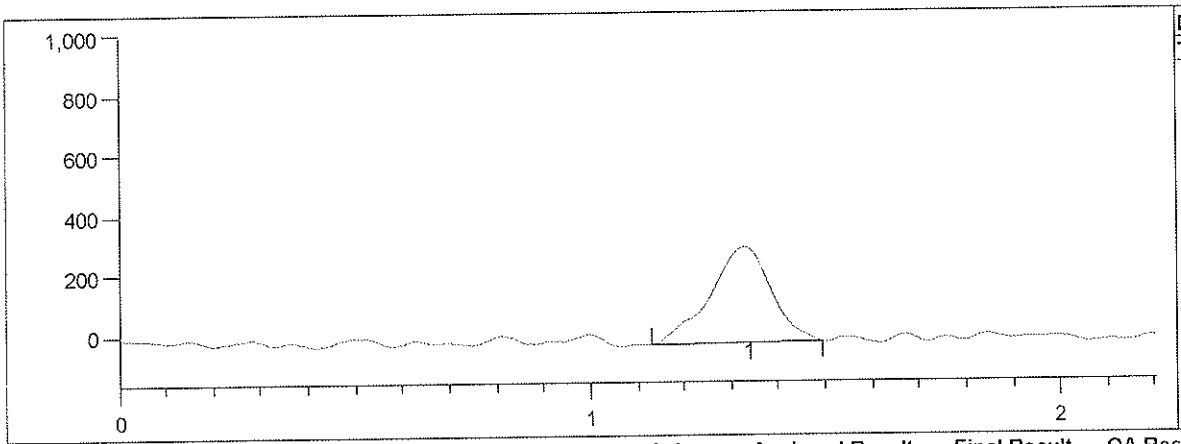


Date: 10/16/08
Time: 11:03 AM

Peak	rt	Area
1	1.35	5,039,294

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
28	QCS	VER-3		1	5,039,294	517	5.17	103	77-123	accept

Notes:



Date: 10/16/08
Time: 11:08 AM

Peak	rt	Area
1	1.35	29,860

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
29	CB	BB (VER)		1	29,860	3.06		3.06	< 50	accept

Notes:

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Columbia Analytical Services

- Cover Page -
INORGANIC ANALYSIS DATA PACKAGE

Client: GeoEngineers, Inc.
Project Name: Port of Anacortes Dakota Creek Industries
Project No.: 5147 006 04

Service Request: K0808300

Sample Name:	Lab Code:
SMA3-2	K0808300-003
SMA3-2D	K0808300-003D
SMA3-2S	K0808300-003S
Method Blank	K0808300-MB

Comments:

Approved By: _____ **Date:** 10/17/08

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	GeoEngineers, Inc.	**Service Request:**	K0808300
Project No.:	5147 006 04	**Date Collected:**	8/28/08
Project Name:	Port of Anacortes Dakota Creek I	**Date Received:**	8/29/08
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: SMA3-2 **Lab Code:** K0808300-003

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	6020	0.98	0.39	10.0	10/10/08	10/14/08	2.11		
Cadmium	6020	0.039	0.018	10.0	10/10/08	10/14/08	0.078		
Chromium	6020	0.39	0.39	10.0	10/10/08	10/14/08	51.1		*
Copper	6020	0.20	0.18	10.0	10/10/08	10/14/08	23.6		
Lead	6020	0.10	0.10	10.0	10/10/08	10/14/08	4.21		*
Silver	6020	0.02	0.02	5.0	10/10/08	10/13/08	0.07		
Zinc	6020	0.98	0.98	10.0	10/10/08	10/14/08	42.0		

% Solids: 73.2

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: GeoEngineers, Inc.
Service Request: K0808300
Project No.: 5147 006 04
Date Collected:
Project Name: Port of Anacortes Dakota Creek I
Date Received:
Matrix: SOIL
Units: mg/Kg
Basis: DRY

Sample Name: Method Blank
Lab Code: K0808300-MB

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	6020	0.50	0.20	5.0	10/10/08	10/14/08	0.20	U	
Cadmium	6020	0.020	0.009	5.0	10/10/08	10/14/08	0.009	U	
Chromium	6020	0.20	0.20	5.0	10/10/08	10/14/08	0.20	U	*
Copper	6020	0.10	0.09	5.0	10/10/08	10/14/08	0.09	U	
Lead	6020	0.05	0.05	5.0	10/10/08	10/14/08	0.05	U	*
Silver	6020	0.02	0.02	5.0	10/10/08	10/13/08	0.02	U	
Zinc	6020	0.50	0.50	5.0	10/10/08	10/14/08	0.50	U	

% Solids: 100.0

Comments:

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: GeoEngineers, Inc. **Service Request:** K0808300

Project No.: 5147 006 04

Project Name: Port of Anacortes Dakota Creek I

ICV Source: Inorganic Ventures CCV Source: CAS MIXED

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Arsenic	25.0	24.8	99	25.0	25.2	101	24.6	98	6020
Cadmium	12.5	12.2	98	25.0	25.1	100	25.2	101	6020
Chromium	10.0	9.9	99	25.0	25.2	101	25.0	100	6020
Copper	12.5	12.3	98	25.0	24.4	98	23.9	96	6020
Lead	25.0	25.4	102	25.0	24.6	98	24.8	99	6020
Silver	12.5	13.1	105	25.0	24.8	99	24.6	98	6020
Zinc	25.0	24.4	98	25.0	25.0	100	24.8	99	6020

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: GeoEngineers, Inc. **Service Request:** K0808300

Project No.: 5147 006 04

Project Name: Port of Anacortes Dakota Creek I

ICV Source: Inorganic Ventures CCV Source: CAS MIXED

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Arsenic				25.0	24.2	97	24.0	96	6020
Cadmium				25.0	25.0	100	24.8	99	6020
Chromium				25.0	25.0	100	24.3	97	6020
Copper				25.0	24.7	99	23.5	94	6020
Lead				25.0	25.1	100	25.1	100	6020
Silver				25.0	24.8	99	24.9	100	6020
Zinc				25.0	25.5	102	25.1	100	6020

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: GeoEngineers, Inc. **Service Request:** K0808300

Project No.: 5147 006 04

Project Name: Port of Anacortes Dakota Creek I

ICV Source: Inorganic Ventures CCV Source: CAS MIXED

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Silver				25.0	24.6	98			6020

Metals
- 2b -
CRDL STANDARD FOR AA AND ICP

Client: GeoEngineers, Inc. Service Request: K0808300

Project No.: 5147 006 04

Project Name: Port of Anacortes Dakota Creek I

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP Initial			CRDL Standard for ICP Final	
	True	Found	%R	True	Found	%R	Found	%R
Arsenic				1.00	1.10	110		
Cadmium				0.04	0.045	112		
Chromium				0.4	0.42	105		
Copper				0.2	0.25	125		
Lead				0.10	0.108	108		
Silver				0.040	0.041	102		
Zinc				1.0	1.14	114		

Metals

BLANKS

Client: GeoEngineers, Inc. Service Request: K0808300

Project No.: 5147 006 04

Project Name: Port of Anacortes Dakota Creek I

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Method
Arsenic	0.4	U	0.4	U	0.4	U	0.4	U	6020
Cadmium	0.018	U	0.018	U	0.018	U	0.018	U	6020
Chromium	0.40	U	0.40	U	0.40	U	0.40	U	6020
Copper	0.18	U	0.18	U	0.18	U	0.18	U	6020
Lead	0.10	U	0.10	U	0.10	U	0.10	U	6020
Silver	0.040	U	0.040	U	0.040	U	0.040	U	6020
Zinc	1.00	U	1.00	U	1.00	U	1.00	U	6020

Metals

- 3 -

BLANKS

Client: GeoEngineers, Inc. Service Request: K0808300

Project No.: 5147 006 04

Project Name: Port of Anacortes Dakota Creek I

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Method
Arsenic			0.4	U					6020
Cadmium			0.018	U					6020
Chromium			0.40	U					6020
Copper			0.18	U					6020
Lead			0.10	U					6020
Silver			0.040	U	0.040	U			6020
Zinc			1.00	U					6020

Metals

- 4 -

ICP INTERFERENCE CHECK SAMPLE

Client: GeoEngineers, Inc. Service Request: K0808300

Project No.: 5147 006 04

Project Name: Port of Anacortes Dakota Creek I

ICP ID Number: K-ICP-MS-02 ICS Source: Inorganic Ventures

Concentration Units): ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Arsenic	0.0	25.0	0.0	26.5	106			
Cadmium	0.0	25.0	0.3	26.6	106			
Chromium	0.0	50.0	0.3	53.5	107			
Copper	0.0	50.0	0.4	48.0	96			
Lead	0.0		0.1	0.1				
Silver	0.0	12.5	0.0	13.5	108			
Zinc	0.0	25.0	6.1	28.0	112			

80-120% control criteria is not applicable to interfering elements (Al,Ca,Fe,Mg).

Metals

- 5A -

SPIKE SAMPLE RECOVERY

Client:	GeoEngineers, Inc.	Service Request:	K0808300
Project No.:	5147 006 04	Units:	MG/KG
Project Name:	Port of Anacortes Dakota Creek I	Basis:	DRY
Matrix:	SOIL	% Solids:	73.2

Sample Name: SMA3-2S Lab Code: K0808300-003S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Arsenic	56 - 136	89.7		2.11		96.21	91.0		6020
Cadmium	68 - 136	10.1		0.078		9.62	104.2		6020
Chromium	33 - 180	84.1		51.1		38.48	85.8		6020
Copper	28 - 174	70.3		23.6		48.10	97.1		6020
Lead	31 - 178	97.5		4.21		96.21	97.0		6020
Silver	61 - 133	9.38		0.07		9.69	96.1		6020
Zinc	33 - 161	134		42.0		96.21	95.6		6020

An empty field in the Control Limit column indicates the control limit is not applicable

Metals

- 5B -

POST SPIKE SAMPLE RECOVERY

Client: GeoEngineers, Inc.
Service Request: K0808300
Project No.: 5147 006 04
Units: UG/L
Project Name: Port of Anacortes Dakota Creek I
Basis: DRY
Matrix: WATER

Sample Name: SMA3-2A
Lab Code: K0808300-003A

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Arsenic	75 - 125	45.6		2.2		50.0	87		6020
Cadmium	75 - 125	52.350		0.080		50.0	105		6020
Chromium	75 - 125	97.47		52.36		50.0	90		6020
Copper	75 - 125	64.78		24.19		50.0	81		6020
Lead	75 - 125	55.38		4.32		50.0	102		6020
Silver	75 - 125	9.918		0.150		10.0	98		6020
Zinc	75 - 125	84.68		43.06		50.0	83		6020

Metals

- 6 -

DUPLICATES

Client: GeoEngineers, Inc.
Service Request: K0808300
Project No.: 5147 006 04
Units: MG/KG
Project Name: Port of Anacortes Dakota Creek I
Basis: DRY
Matrix: SOIL
% Solids: 73.2

Sample Name: SMA3-2D
Lab Code: K0808300-003D

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Arsenic		2.11		1.38		41.8		6020
Cadmium		0.078		0.078		0.0		6020
Chromium	20	51.1		34.7		38.2	*	6020
Copper	20	23.6		20.8		12.6		6020
Lead	20	4.21		3.41		21.0	*	6020
Silver		0.07		0.08		13.3		6020
Zinc	20	42.0		35.8		15.9		6020

An empty field in the Control Limit column indicates the control limit is not applicable.

Metals

- 7 -

LABORATORY CONTROL SAMPLE

Client: GeoEngineers, Inc. Service Request: K0808300

Project No.: 5147 006 04

Project Name: Port of Anacortes Dakota Creek I

Aqueous LCS Source: Solid LCS Source: ERA D045540

Analyte	Aqueous (ug/L)			Solid (mg/kg)				
	True	Found	%R	True	Found	C	Limits	%R
Arsenic				146	151		74 126	103.4
Cadmium				92.8	99.3		77 133	107.0
Chromium				172	172		71 137	100.0
Copper				67	67.1		69 144	100.1
Lead				67.5	69.7		75 138	103.3
Silver				93	90.6		78 128	97.4
Zinc				380	409		78 140	107.6

Metals

- 9 -

ICP SERIAL DILUTIONS

Client: GeoEngineers, Inc. Service Request: K0808300

Project No.: 5147 006 04 Units: UG/L

Project Name: Port of Anacortes Dakota Creek I

Sample Name: SMA3-2L Lab Code: K0808300-003L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Arsenic	2.2		2.8	B	27		MS
Cadmium	0.1		0.2	B	100		MS
Chromium	52.4		63.1		20		MS
Copper	24.2		29.3		21		MS
Lead	4.3		4.6		7		MS
Silver	0.2		0.2	U	100.0		MS
Zinc	43.1		54.7		27		MS

Metals

- 10 -

DETECTION LIMITS

Client: GeoEngineers, Inc. Service Request: K0808300

Project No.: 5147 006 04

Project Name: Port of Anacortes Dakota Creek I

ICP/ICP-MS ID #: K-ICP-MS-02

GFAA ID #: AA ID #:

Analyte	Isotope	Back-ground	MRL ug/L	MDL ug/L	M
Arsenic	75		1.0	0.4	MS
Cadmium	111		0.040	0.018	MS
Chromium	52		0.40	0.40	MS
Copper	65		0.20	0.18	MS
Lead	208		0.10	0.10	MS
Silver	109		0.040	0.040	MS
Zinc	66		1.00	1.00	MS

Comments:

Metals
-12-
ICP LINEAR RANGES (QUARTERLY)

Client: GeoEngineers, Inc. **Service Request:** K0808300

Project No.: 5147 006 04

Project Name: Port of Anacortes Dakota Creek I

ICP ID Number: K-ICP-MS-02

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Arsenic	15.000	900	6020
Cadmium	15.000	900	6020
Chromium	15.000	900	6020
Copper	15.000	450	6020
Lead	15.000	900	6020
Silver	15.000	270	6020
Zinc	15.000	900	6020

Comments:

Metals
-13-
PREPARATION LOG

Client: GeoEngineers, Inc. **Service Request:** K0808300

Project No.: 5147 006 04

Project Name: Port of Anacortes Dakota Creek I

Method: MS

Sample ID	Preparation Date	Initial Weight (g)	Final Volume (mL)
K0808300-003	10/10/08	1.40	100.0
K0808300-003D	10/10/08	1.40	100.0
K0808300-003S	10/10/08	1.42	100.0
K0808300-MB	10/10/08	1.00	100.0
LCSS	10/10/08	1.00	100.0

Metals
-13-
PREPARATION LOG

Client: GeoEngineers, Inc. Service Request: K0808300

Project No.: 5147 006 04

Project Name: Port of Anacortes Dakota Creek I

Method: MS

Sample ID	Preparation Date	Initial Weight (g)	Final Volume (mL)
K0808300-003	10/10/08	1.41	100.0
K0808300-003D	10/10/08	1.42	100.0
K0808300-003S	10/10/08	1.41	100.0
K0808300-MB	10/10/08	1.00	100.0
LCSS	10/10/08	1.00	100.0

Metals
- 14 -
ANALYSIS RUN LOG

Client: GeoEngineers, Inc. Service Request: K0808300

Project No.: 5147 006 04

Project Name: Port of Anacortes Dakota Creek I

Instrument ID Number: K-ICP-MS-02 Method: MS

Start Date: 10/13/08 End Date: 10/13/08

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
Cal. Blk	1	19:54																			X					
Cal. Stn	1	19:56																			X					
ICV1	1	19:58																			X					
CCV1	1	20:00																			X					
ICB1	1	20:04																			X					
CCB1	1	20:06																			X					
CRA	1	20:08																			X					
ICS-A1	1	20:11																			X					
ICS-AB1	1	20:13																			X					
ZZZZZZ	5	20:17																								
ZZZZZZ	50	20:19																								
ZZZZZZ	5	20:23																								
ZZZZZZ	5	20:27																								
ZZZZZZ	2	20:30																								
ZZZZZZ	5	20:33																								
ZZZZZZ	25	20:37																								
CCV2	1	20:40																			X					
CCB2	1	20:44																			X					
ZZZZZZ	5	20:46																								
ZZZZZZ	1	20:49																								
ZZZZZZ	1	20:53																								
ZZZZZZ	1	20:56																								
ZZZZZZ	1	21:00																								
ZZZZZZ	1	21:03																								
ZZZZZZ	1	21:07																								
ZZZZZZ	1	21:10																								
ZZZZZZ	1	21:13																								
ZZZZZZ	1	21:17																								
CCV3	1	21:20																			X					
CCB3	1	21:23																			X					
ZZZZZZ	1	21:25																								
ZZZZZZ	1	21:29																								

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
- 14 -
ANALYSIS RUN LOG

Client: GeoEngineers, Inc. **Service Request:** K0808300

Project No.: 5147 006 04

Project Name: Port of Anacortes Dakota Creek I

Instrument ID Number: K-ICP-MS-02 **Method:** MS

Start Date: 10/13/08 **End Date:** 10/13/08

Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1	21:32																										
ZZZZZZ	1	21:35																										
K0808300-MB	5	21:38																			X							
LCSS	50	21:40																			X							
K0808300-003	5	21:44																			X							
K0808300-003D	5	21:47																			X							
K0808300-003L	25	21:50																			X							
K0808300-003A	5	21:53																			X							
CCV4	1	21:57																			X							
CCB4	1	22:00																			X							
K0808300-003S	25	22:02																			X							
ZZZZZZ	1	22:06																										
ZZZZZZ	1	22:08																										
ZZZZZZ	1	22:12																										
ZZZZZZ	1	22:15																										
ZZZZZZ	1	22:18																										
ZZZZZZ	1	22:22																										
ZZZZZZ	1	22:26																										
ZZZZZZ	1	22:29																										
ZZZZZZ	1	22:32																										
CCV5	1	22:34																			X							
CCB5	1	22:38																			X							

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
- 14 -
ANALYSIS RUN LOG

Client: GeoEngineers, Inc. Service Request: K0808300

Project No.: 5147 006 04

Project Name: Port of Anacortes Dakota Creek I

Instrument ID Number: K-ICP-MS-02 Method: MS

Start Date: 10/14/08 End Date: 10/14/08

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
Cal. Blk	1	10:14				X			X		X		X		X										X	
Cal. Stn (MS12-45-I)	1	10:18				X			X		X		X		X										X	
ICV1	1	10:32				X			X		X		X		X										X	
CCV1	1	10:35				X			X		X		X		X										X	
ICB1	1	10:39				X			X		X		X		X										X	
CCB1	1	10:43				X			X		X		X		X										X	
CRA	1	10:46				X			X		X		X		X										X	
ICS-A1	1	10:49				X			X		X		X		X										X	
ICS-AB1	1	10:53				X			X		X		X		X										X	
K0808300-MB	5	10:56				X			X		X		X		X										X	
LCSS	50	10:59				X			X		X		X		X										X	
ZZZZZZ	5	11:03																								
ZZZZZZ	5	11:06																								
ZZZZZZ	25	11:09																								
ZZZZZZ	5	11:13																								
K0808300-003S	25	11:16				X			X		X		X		X										X	
CCV2	1	11:21				X			X		X		X		X										X	
CCB2	1	11:25				X			X		X		X		X										X	
K0808300-003	10	11:29				X			X		X		X		X										X	
K0808300-003A	10	11:32				X			X		X		X		X										X	
K0808300-003L	50	11:35				X			X		X		X		X										X	
K0808300-003D	10	11:39				X			X		X		X		X										X	
ZZZZZZ	5	11:42																								
ZZZZZZ	50	11:45																								
ZZZZZZ	10	11:49																								
ZZZZZZ	10	11:53																								
ZZZZZZ	10	11:56																								
ZZZZZZ	50	12:00																								
CCV3	1	12:03				X			X		X		X		X										X	
CCB3	1	12:06				X			X		X		X		X										X	
ZZZZZZ	25	12:10																								
ZZZZZZ	10	12:14																								

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
- 14 -
ANALYSIS RUN LOG

Client: GeoEngineers, Inc. **Service Request:** K0808300

Project No.: 5147 006 04

Project Name: Port of Anacortes Dakota Creek I

Instrument ID Number: K-ICP-MS-02 **Method:** MS

Start Date: 10/14/08 **End Date:** 10/14/08

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1	12:17																												
ZZZZZZ	1	12:20																												
ZZZZZZ	1	12:24																												
ZZZZZZ	1	12:27																												
ZZZZZZ	1	12:30																												
ZZZZZZ	1	12:34																												
ZZZZZZ	1	12:38																												
ZZZZZZ	1	12:41																												
CCV4	1	12:45				X			X		X		X		X											X				
CCB4	1	12:48				X			X		X		X		X											X				

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Columbia Analytical Services
Metals Digestion Sheet

Service Request Number(s): K0808300
Star Lims Run No.: 75625

Method: CLP 3010A 3020A 3005A 3050B CLP Hot Block Other-____

Analysis for: ICP ICP-MS GFAA Flame AA Other ____

Sample	Initial Weight (g)	Dry	Wet	Initial Volume(ml)	Final Volume (ml)	Matrix
K0808300-Blank	1.02		X		100	10% HNO3
-LCSS	1.01					
-3	1.40					
-30	1.40					
-35	1.42					
MH 10-10-08						

Time Digestion Started: 9:07 am Balance I.D.: 2 Date Balance Checked 10-9-08

Lot # Acids Used: HNO3 G1702F HCl ____ H_2O_2 49139931 HF ____

LCSS (circle appropriate) ERA CLP Soil Lot # D045540 Other: ____

GFAA LCSW = GFLCSW, MET1-64-R, ____ mls. added

ICP LCSW = QCP-CICV-1, MET1-66-G, ____ mls. added
QCP CICV-2, MET1-66-E, ____ mls. added
QCP CICV-3, MET1-66-F, ____ mls. added
SS6, MET1-69-I, ____ mls. Added

TCLP Spike/LCSE
TSS1 MET1-64-P ____ mls. added

SPIKE INFO
SS1-MET1-69-C, 2.00 mls added SS4-MET1-67-P ____ mls added SS7-MET1-69-J ____ mls added
SS5-MET1-69-F, 1.00 mls added 200.8 1000ppb Stock (MS12-31-C) ____ mls added
SS6-MET1-69-I, 1.00 mls added Ag 1000ppb Stock (MS12-30-H) ____ mls added
Additional spikes: ____
Comments: ____

Analyst Matthew Hall Date 10-10-08
Reviewer ____ Date 10/11/08

metdig.xls

Columbia Analytical Services
Metals Digestion Sheet

Service Request Number(s) : K0808300
Star Lims Run No.: 75826

Method : CLP 3010A 3020A 3005A 3050B CLP Hot Block Other- _____

Analysis for : ICP ICP-MS GFAA Flame AA Other _____

Sample	Initial Weight (g)	Dry	Wet	Initial Volume(ml)	Final Volume (ml)	Matrix
K0808300-Blank	1.08		X		10C	10% HNO3, HCl
-LCSS	1.01					
-3	1.41					
-3D	1.42					
-3S	1.41					

MH 10-10-08

Time Digestion Started: 9:07am **Balance I.D.:** 2 **Date Balance Checked** 10-9-08
Lot # Acids Used: HNO3 G17027 **HCl** 48060 **H_2O_2** 48139631 **HF** _____

LCSS (circle appropriate) **ERA CLP Soil Lot # D045540** **Other:** _____

GFAA LCSW = GFLCSW, MET1-64-R, _____ mls. added
ICP LCSW = QCP-CICV-1, MET1-66-G, _____ mls. added
QCP CICV-2, MET1-66-E, _____ mls. added
QCP CICV-3, MET1-66-F, _____ mls. added
SS6, MET1-69-I, _____ mls. Added

TCLP Spike/LCSE
TSS1 MET1-64-P _____ mls. added

SPIKE INFO
SS1-MET1-69-C, 2.00 mls added SS4-MET1-67-P _____ mls added SS7-MET1-69-J _____ mls added
SS5-MET1-69-F, 1.00 mls added 200.8 1000ppb Stock (MS12-31-C) _____ mls added
SS6-MET1-69-I, 1.00 mls added Ag 1000ppb Stock (MS12-30-H) _____ mls added
Additional spikes: _____
Comments: _____

Analyst [signature] **Date** 10-10-08
Reviewer [signature] **Date** 10/11/08

metdig.xls

METALS SPIKE FORM

Service Request # K0808300
Q.C. Sample # 8300-3

Circle type of digest: GFAA (ICP) FAA (ICP-MS) Other:_____ Initials / Date: MH / 10-10-08
Circle type of sample: (Soil) Water Misc. Sludge Oil Other:_____

Solution Name	Element	mLs of 1000ppm Solution	Final Volume	Solution Conc. mg/L	Enter mls Added	
SS1-MET1-69-C	HNO3	50.0	1000ml	-	2.00	Expires:4/1/09
	Al	100**	1000ml	200		
	Ag	100**	1000ml	5		
	Ba	100**	1000ml	200		
	Be	100**	1000ml	5		
	Cd	100**	1000ml	5		
	Co	100**	1000ml	50		
	Cr	100**	1000ml	20		
	Cu	100**	1000ml	25		
	Fe	100**	1000ml	100		
	Pb	100**	1000ml	50		
	Mn	100**	1000ml	50		
	Ni	100**	1000ml	50		
	Sb	50	1000ml	50		
	V	100**	1000ml	50		
	Zn	100**	1000ml	50		
SS4-MET1-67-P	HNO3	25.0	500ml	-		Expires:1/2/09
	As	2.0	500ml	4		
	Cd	2.0	500ml	4		
	Pb	2.0	500ml	4		
	Se	2.0	500ml	4		
	Tl	2.0	500ml	4		
	Cu	2.0	500ml	4		
SS5-MET1-69-F	HNO3	25.0	500ml	-	1.00	Expires:1/2/09
	As	50.0	500ml	100		
	Se	50.0	500ml	100		
	Tl	50.0	500ml	100		
SS6-MET1-69-I	HNO3	25	500ml	-	1.00	Expires: 2/01/09
	B	50	500ml	100		
	Mo	50	500ml	100		
SS7-MET1-69-J	HNO3	10.0	200ml	-		Expires:11/16/08
	K**	20	200ml	1000		
	Na**	20	200ml	1000		
	Mg**	20	200ml	1000		
	Ca**	20	200ml	1000		
GFLCSW (MET1-64-R)	HNO3	10.0	1000ml	-		Expires: 1/1/09
	As, Pb, Se, Tl	5.0	1000ml	2.5		
	Cd	-	-	1.25		
	Cu	2.5	1000ml	2.5		
QCP-CICV-1 (MET1-66-G)	Ca, Mg, Na, K	no dilution	-	2500		Expires:7/1/09
	Al, Ba	no dilution	-	1000		
	Fe	no dilution	-	500		
	Co, Mn, Ni, V, Zn	no dilution	-	250		
	Cu, Ag	no dilution	-	125		
	Cr	no dilution	-	100		
	Be	no dilution	-	25		
QCP-CICV-2 (MET1-66-E)	Sb	no dilution	-	500		Expires: 7/1/09
QCP-CICV-3 (MET1-66-F)	As, Pb, Se, Tl	no dilution	-	500		Expires: 7/1/09
	Cd	no dilution	-	250		

* Denotes volume of mixed stock standard.
** Denotes 10,000 ppm individual stock standards.

Standard	mls of standard	ppm	Logbook #	Exp. Date

Service Request # K0808300 (HNO3 Digest)__
Calibration _____101408A_____
QC in calibration__101408A_____
QC Service Request # K0808300_____
Analytical Batch # 130432_____

ICP-MS Data Review Form

	Yes	No	NA
1. Appropriate standardization completed	X		
2. ICV within 10 % of true value	X		
3. CCV's in control	X		
4. CCB's and/or ICB's below MRL	X		
5. Method blank below MRL	X		
6. LCS in control	X		
7. Spike and duplicate in control	X		
8. All analytes within instrument linear range	X		
9. Adequate rinse out time allowed	X		
10. Internal standards in control	X		
11. Interferences checked	X		
12. Se over MRL			X
13. CRA run	X		
14. ICSA and ICSAB in control	X		
15. Serial dilution run	X		
16. Post spike in control	X		

Comments: Post spike was out of control @1/5.

Primary Review by _____ Date 10/14/08
Secondary Review by _____ Date 10/14/08
R:\icp\misc\data review forms\PQ ExCell review form

Sample List

Num	Label	Type	Weight	Volume	Dilution	Rack	Row	Column	Height
1	Cal. Blk	Blank	0 kg	0 ml	1.00	0	1	1	150
2	Cal. Stn (MS12-45-I)	Fully Quant Standard	0 kg	0 ml	1.00	0	1	2	150
3	ICV1 (MS12-45-A)	Unknown	0 kg	0 ml	1.00	0	1	3	150
4	CCV1(MS12-45-I)	Unknown	0 kg	0 ml	1.00	0	1	2	150
5	ICB1	Unknown	0 kg	0 ml	1.00	0	1	1	150
6	CCB1	Unknown	0 kg	0 ml	1.00	0	1	1	150
7	SOIL CRA (MS12-22-H)	Unknown	0 kg	0 ml	1.00	0	1	4	150
8	ICSA (MS12-45-E)	Unknown	0 kg	0 ml	1.00	0	1	5	150
9	ICSAB (MS12-45-F)	Unknown	0 kg	0 ml	1.00	0	1	6	150
10	K0808300-MB 1/5	Unknown	0 kg	0 ml	1.00	1	1	1	150
11	LCSS K0808300 1/50	Unknown	0 kg	0 ml	1.00	1	1	2	150
12	K0808300-003 1/5	Unknown	0 kg	0 ml	1.00	1	1	3	150
13	K0808300-003 1/5D	Unknown	0 kg	0 ml	1.00	1	1	4	150
14	K0808300-003 1/25L	Unknown	0 kg	0 ml	1.00	1	1	5	150
15	K0808300-003 1/5	Unknown	0 kg	0 ml	1.00	1	1	6	150
16	+50Δ K0808300-003 1/25S	Unknown	0 kg	0 ml	1.00	1	1	7	150
17	CCV2	Unknown	0 kg	0 ml	1.00	0	1	2	150
18	CCB2	Unknown	0 kg	0 ml	1.00	0	1	1	150
19	K0808300-003 1/10	Unknown	0 kg	0 ml	1.00	1	1	3	150
20	K0808300-003 1/10	Unknown	0 kg	0 ml	1.00	1	1	6	150
21	+50Δ K0808300-003 1/50L	Unknown	0 kg	0 ml	1.00	1	1	5	150
22	K0808300-003 1/10D	Unknown	0 kg	0 ml	1.00	1	1	4	150
23	K0809634-MB 1/5	Unknown	0 kg	0 ml	1.00	1	1	8	150
24	LCSS K0809634 1/50	Unknown	0 kg	0 ml	1.00	1	1	9	150
25	K0809634-001 1/10	Unknown	0 kg	0 ml	1.00	1	1	10	150
26	K0809634-001 1/10	Unknown	0 kg	0 ml	1.00	1	2	1	150
27	+50Δ K0809634-001 1/10D	Unknown	0 kg	0 ml	1.00	1	1	11	150
28	K0809634-001 1/50L	Unknown	0 kg	0 ml	1.00	1	1	12	150
29	CCV3	Unknown	0 kg	0 ml	1.00	0	1	2	150
30	CCB3	Unknown	0 kg	0 ml	1.00	0	1	1	150
31	K0809634-001 1/25S	Unknown	0 kg	0 ml	1.00	1	2	2	150
32	K0809634-002 1/10	Unknown	0 kg	0 ml	1.00	1	2	3	150
33	K0809184-MB 1/5	Unknown	0 kg	0 ml	1.00	1	2	4	150
34	LCSS K0809184 1/50	Unknown	0 kg	0 ml	1.00	1	2	5	150
35	K0809184-004 1/5	Unknown	0 kg	0 ml	1.00	1	2	6	150
36	K0809184-004 1/5D	Unknown	0 kg	0 ml	1.00	1	2	7	150
37	K0809184-004 1/25S	Unknown	0 kg	0 ml	1.00	1	2	8	150
38	K0809184-004 1/25L	Unknown	0 kg	0 ml	1.00	1	2	9	150
39	K0809184-004 1/5	Unknown	0 kg	0 ml	1.00	1	2	10	150
40	+50Δ K0809184-001 1/5	Unknown	0 kg	0 ml	1.00	1	2	11	150
41	CCV4	Unknown	0 kg	0 ml	1.00	0	1	2	150
42	CCB4	Unknown	0 kg	0 ml	1.00	0	1	1	150
43	K0809184-002 1/5	Unknown	0 kg	0 ml	1.00	1	2	12	150
44	K0809184-003 1/5	Unknown	0 kg	0 ml	1.00	1	3	1	150
45	K0809184-005 1/5	Unknown	0 kg	0 ml	1.00	1	3	2	150
46	K0808965-001 1/5	Unknown	0 kg	0 ml	1.00	1	3	3	150
47	K0808965-001 1/5D	Unknown	0 kg	0 ml	1.00	1	3	4	150
48	K0808965-002 1/5	Unknown	0 kg	0 ml	1.00	1	3	5	150
49	K0808965-002 1/25S	Unknown	0 kg	0 ml	1.00	1	3	6	150

50	K0808965-003 1/5	Unknown	0 kg	0 ml	1.00	1	3	7	150
51	K0808965-004 1/5	Unknown	0 kg	0 ml	1.00	1	3	8	150
52	K0808965-005 1/5	Unknown	0 kg	0 ml	1.00	1	3	9	150
53	CCV5	Unknown	0 kg	0 ml	1.00	0	1	2	150
54	CCB5	Unknown	0 kg	0 ml	1.00	0	1	1	150
55	K0808965-006 1/5	Unknown	0 kg	0 ml	1.00	1	3	10	150
56	K0808965-007 1/5	Unknown	0 kg	0 ml	1.00	1	3	11	150
57	K0808965-008 1/5	Unknown	0 kg	0 ml	1.00	1	3	12	150
58	CCV6	Unknown	0 kg	0 ml	1.00	0	1	2	150
59	CCB6	Unknown	0 kg	0 ml	1.00	0	1	1	150

Instrument Setup - Configurations

Configuration Name - acqmet11
Description - PQExcell CCT Sim Default
Date - 19:27:02 10/13/08
Maximum Uptake Time - 0
Maximum Washout Time - 0
S-Option Pump Running - No
Plasma Screen Forward - No
Makeup Gas On - No
Use CCT - No
Use Accessory Gas - No

Setting	Value
Extraction	-550.00
Lens1	6.50
Lens2	-18.50
Lens3	8.00
Pole Bias	5.00
Sampling Depth	345.00
Horizontal	-50.00
Vertical	20.00
Cool	13.00
Auxiliary	1.00
Nebuliser	0.76
Forward power	1,350.00
HT1 Voltage	1,900.00
HT2 Voltage	2,600.00
D1	-33.00
Focus	12.00

Configuration Name - acqmet11
Description - PQExcell CCT Sim Default
Date - 19:27:02 10/13/08
Maximum Uptake Time - 0
Maximum Washout Time - 0
S-Option Pump Running - No
Plasma Screen Forward - No
Makeup Gas On - No
Use CCT - No
Use Accessory Gas - No

Setting	Value
Extraction	-550.00
Lens1	6.50
Lens2	-18.50
Lens3	8.00
Pole Bias	5.00
Sampling Depth	345.00
Horizontal	-50.00
Vertical	20.00
Cool	13.00
Auxiliary	1.00

ExCell Mass Calibration

Date: 10/14/2008

Mass	Mass DAC	Peak Width (AMU)	Error (AMU)	Include
6.015	1332	0.718	-0.046	TRUE
7.016	1592	0.718	-0.022	TRUE
23.985	5911	0.666	0.034	TRUE
26.982	6672	0.717	0.037	TRUE
45.953	11489	0.717	0.042	TRUE
51.94	12997	0.819	-0.006	TRUE
53.949	13510	0.768	0.005	TRUE
55.935	14011	0.819	-0.007	TRUE
56.935	14271	0.819	0.016	TRUE
57.934	14518	0.819	-0.011	TRUE
58.933	14778	0.819	0.014	TRUE
59.931	15025	0.819	-0.011	TRUE
62.93	15792	0.819	0.01	TRUE
63.929	16039	0.819	-0.017	TRUE
75.92	19087	0.87	-0.011	TRUE
114.904	28993	0.92	-0.031	TRUE
131.905	33328	0.868	0.006	TRUE
135.906	34342	0.868	-0.011	TRUE
136.906	34596	0.919	-0.013	TRUE
137.906	34856	0.919	0.008	TRUE
139.905	35363	0.919	0.001	TRUE
141.908	35870	0.919	-0.01	TRUE
202.972	51431	0.918	0.003	TRUE
204.972	51938	0.918	-0.008	TRUE
205.974	52198	0.918	0.009	TRUE
206.976	52458	0.918	0.027	TRUE
207.977	52705	0.918	-0.005	TRUE
208.98	52965	0.918	0.011	TRUE
238.051	60375	0.815	-0.016	TRUE

Excluded In Calib | Excluded In Results | Peak Run Excluded | Multi Element | Semi Quant | Internal Standard | Standard Addition

Uncorrected ICPS Per Mass

S-Calibration Has Edited Standard
F-Interference Correction Failed
E-Calibration Edited
T-Tripped
I-Invalid Calibration
P-Pulse Counting
V-Valley Integration Failed
M-Result Over Max

Run	Label	TimeStamp	5Bkg	7Li	9Be	59Co	115In	208Pb
1	Stability 10/14/08	10/14/2008 9:22:39 A	(P)0.333	(P)16476.666	(P)3283.044	(P)33622.535	(P)53257.091	(P)23661.750
2	Stability 10/14/08	10/14/2008 9:23:41 A	(P)0.500	(P)17362.551	(P)3470.755	(P)34002.259	(P)52733.160	(P)23090.148
3	Stability 10/14/08	10/14/2008 9:24:44 A	(P)0.167	(P)17203.521	(P)3410.740	(P)34602.364	(P)53632.660	(P)23074.621
4	Stability 10/14/08	10/14/2008 9:25:46 A	(P)0.667	(P)16729.793	(P)3453.084	(P)35126.978	(P)53458.682	(P)22968.451
5	Stability 10/14/08	10/14/2008 9:26:48 A	(P)0.667	(P)16345.014	(P)3434.413	(P)34940.352	(P)53491.314	(P)23084.303
	Mean of Stability 10/	10/14/2008 9:22:39 A	(P)0.467	(P)16823.509	(P)3410.407	(P)34458.898	(P)53314.581	(P)23175.855
	SD of Stability 10/14/0		(P)0.217	(P)445.257	(P)74.601	(P)633.785	(P)351.614	(P)276.173
	%RSD of Stability 10		(P)46.566	(P)2.647	(P)2.187	(P)1.839	(P)0.660	(P)1.192

Run	Label	TimeStamp	209Bi	220Bkg	238U
1	Stability 10/14/08	10/14/2008 9:22:39 A	(P)33193.186	(P)0.167	(P)35627.552
2	Stability 10/14/08	10/14/2008 9:23:41 A	(P)32644.924	(P)0.167	(P)35228.567
3	Stability 10/14/08	10/14/2008 9:24:44 A	(P)33069.068	(P)0.000	(P)35772.271
4	Stability 10/14/08	10/14/2008 9:25:46 A	(P)33156.768	(P)0.167	(P)35774.267
5	Stability 10/14/08	10/14/2008 9:26:48 A	(P)33431.741	(P)0.167	(P)35467.837
	Mean of Stability 10/	10/14/2008 9:22:39 A	(P)33099.137	(P)0.133	(P)35574.099
	SD of Stability 10/14/0		(P)287.231	(P)0.075	(P)230.695
	%RSD of Stability 10		(P)0.868	(P)55.902	(P)0.648

Instrument ID: K-ICP-MS-02
Experiment: 10-14-08A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Greg Jasper
STARLIMS #130432

Sample Name:		Cal. Blk			Mean	SD	%RSD
TimeStamp		10/14/08 10:14					
Arsenic	75	-0.0399	-0.0439	0.0838	**0**	0.0726	0
Cadmium	111	0	0.0011	-0.0011	**0**	0.0011	0
Cadmium	114	0.0013	-0.0014	0.0001	**0**	0.0013	0
Chromium	52	0.0112	-0.0124	0.0012	**0**	0.0118	0
Chromium	53	0.0019	-0.007	0.005	**0**	0.0062	0
Copper	63	-0.0002	-0.007	0.0072	**0**	0.0071	0
Copper	65	-0.0021	-0.0001	0.0021	**0**	0.0021	0
Lead	206	-0.003	-0.0003	0.0032	**0**	0.0031	0
Lead	207	-0.0007	-0.0001	0.0008	**0**	0.0008	0
Lead	208	-0.0016	0.0009	0.0007	**0**	0.0014	0
Molybdenum	95	0.0102	-0.0074	-0.0028	**0**	0.0091	0
Molybdenum	97	0.0054	0.0075	-0.0128	**0**	0.0112	0
Molybdenum	98	0.0105	0.0001	-0.0106	**0**	0.0106	0
Nickel	60	0.0057	0.0057	-0.0114	**0**	0.0099	0
Nickel	62	-0.0778	0.026	0.0518	**0**	0.0686	0
Selenium	77	0.0722	-0.0064	-0.0657	**0**	0.0692	0
Selenium	78	-0.129	0.0345	0.0945	**0**	0.1157	0
Selenium	82	-0.0966	-0.1669	0.2635	**0**	0.2309	0
Zinc	66	-0.0104	0.0136	-0.0032	**0**	0.0124	0
Zinc	67	-0.0208	0.0233	-0.0025	**0**	0.0221	0
Zinc	68	-0.007	-0.0021	0.0091	**0**	0.0083	0

Internal Standard Factors:

Scandium	45	0.991	1.002	1.007	**0.991**	n/a	n/a
Gallium	71	1.008	0.995	0.997	**1.008**	n/a	n/a
Rhodium	103	1.005	1.008	0.988	**1.005**	n/a	n/a
Indium	115	1.003	0.994	1.002	**1.003**	n/a	n/a
Lutetium	175	0.998	1	1.001	**0.998**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 10-14-08A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Greg Jasper
STARLIMS #130432

Sample Name:		Cal. Stn (MS12-45-I)			Mean	SD	%RSD
TimeStamp		10/14/08 10:18					
Arsenic	75	25.1	25.09	24.82	**25**	0.1593	0.6373
Cadmium	111	25.42	24.67	24.9	**25**	0.3843	1.537
Cadmium	114	25.13	25.19	24.67	**25**	0.2846	1.138
Chromium	52	24.68	25.21	25.1	**25**	0.281	1.124
Chromium	53	24.79	24.95	25.26	**25**	0.241	0.964
Copper	63	25.15	24.8	25.04	**25**	0.1771	0.7083
Copper	65	25.1	25.11	24.79	**25**	0.1821	0.7284
Lead	206	25.37	24.56	25.07	**25**	0.4123	1.649
Lead	207	25	25.54	24.46	**25**	0.5397	2.159
Lead	208	25.06	25	24.94	**25**	0.0607	0.243
Molybdenum	95	24.66	25.03	25.32	**25**	0.3292	1.317
Molybdenum	97	24.91	24.76	25.34	**25**	0.3017	1.207
Molybdenum	98	24.62	25.04	25.34	**25**	0.3574	1.43
Nickel	60	24.77	25.1	25.13	**25**	0.1972	0.789
Nickel	62	24.81	25.34	24.85	**25**	0.2966	1.186
Selenium	77	25.63	25.28	24.09	**25**	0.8064	3.226
Selenium	78	25.35	25.14	24.51	**25**	0.4347	1.739
Selenium	82	25.18	24.99	24.83	**25**	0.1774	0.7097
Zinc	66	25.09	24.94	24.97	**25**	0.0805	0.322
Zinc	67	24.65	25.18	25.17	**25**	0.3036	1.214
Zinc	68	25.11	24.86	25.02	**25**	0.1262	0.5048

Internal Standard Factors:							
Scandium	45	0.979	1.003	1.012	**0.979**	n/a	n/a
Gallium	71	1.008	1.012	1.006	**1.008**	n/a	n/a
Rhodium	103	1.008	1.016	1.033	**1.008**	n/a	n/a
Indium	115	1.019	1.004	0.988	**1.019**	n/a	n/a
Lutetium	175	0.994	0.995	0.992	**0.994**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 10-14-08A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Greg Jasper
STARLIMS #130432

Sample Name:		ICV1 (MS12-45-A)			Mean	SD	%RSD
TimeStamp		10/14/08 10:32					
Arsenic	75	24.93	24.8	24.54	**24.76**	0.197	0.7957
Cadmium	111	12.11	12.45	12.09	**12.22**	0.2016	1.65
Cadmium	114	12.66	12.84	12.86	**12.79**	0.1072	0.8384
Chromium	52	9.756	9.972	9.88	**9.87**	0.1085	1.099
Chromium	53	10.18	10.48	10.21	**10.29**	0.1651	1.605
Copper	63	11.96	12.35	12.3	**12.2**	0.2127	1.743
Copper	65	12.06	12.38	12.31	**12.25**	0.168	1.371
Lead	206	26.23	25.54	25.48	**25.75**	0.4185	1.625
Lead	207	25.34	25.05	24.61	**25**	0.3688	1.475
Lead	208	25.88	25.22	25.17	**25.42**	0.3934	1.547
Molybdenum	95	25.5	26.13	26.05	**25.9**	0.3412	1.318
Molybdenum	97	25.77	25.83	25.28	**25.62**	0.3013	1.176
Molybdenum	98	25.42	25.68	25.75	**25.61**	0.1709	0.6671
Nickel	60	24.58	25.3	24.89	**24.92**	0.3622	1.453
Nickel	62	24.69	25.45	25.45	**25.2**	0.4376	1.737
Selenium	77	25.28	25.69	26.16	**25.71**	0.4389	1.707
Selenium	78	26.39	26.68	26.02	**26.36**	0.3286	1.246
Selenium	82	25.86	25.35	25.34	**25.51**	0.2969	1.164
Zinc	66	24.18	24.63	24.5	**24.44**	0.232	0.9495
Zinc	67	28.37	28.84	28.52	**28.58**	0.2406	0.8417
Zinc	68	27.33	27.89	27.45	**27.56**	0.294	1.067

Internal Standard Factors:

Scandium	45	1.033	1.053	1.047	**1.033**	n/a	n/a
Gallium	71	1.065	1.065	1.049	**1.065**	n/a	n/a
Rhodium	103	1.072	1.074	1.042	**1.072**	n/a	n/a
Indium	115	1.056	1.037	1.004	**1.056**	n/a	n/a
Lutetium	175	1.092	1.041	1.027	**1.092**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 10-14-08A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Greg Jasper
STARLIMS #130432

Sample Name:		CCV1(MS12-45-I)			Mean	SD	%RSD
TimeStamp		10/14/08 10:35					
Arsenic	75	25.09	25.33	25.3	**25.24**	0.1335	0.529
Cadmium	111	24.78	25.01	25.46	**25.08**	0.3463	1.381
Cadmium	114	25.16	25.05	25.09	**25.1**	0.054	0.215
Chromium	52	25.1	25.68	24.7	**25.16**	0.4932	1.96
Chromium	53	25.17	25.64	24.92	**25.24**	0.3654	1.447
Copper	63	24.28	24.7	24.28	**24.42**	0.2442	0.9999
Copper	65	24.36	24.49	24.33	**24.4**	0.0841	0.3448
Lead	206	24.32	24.64	24.52	**24.49**	0.1644	0.671
Lead	207	24.6	24.81	24.04	**24.48**	0.3995	1.632
Lead	208	24.62	24.69	24.5	**24.61**	0.0949	0.3855
Molybdenum	95	26.05	26.07	25.48	**25.86**	0.3341	1.292
Molybdenum	97	25.54	26.26	25.74	**25.85**	0.3704	1.433
Molybdenum	98	25.54	26.06	25.81	**25.8**	0.2622	1.016
Nickel	60	24.85	25.29	24.83	**24.99**	0.2566	1.027
Nickel	62	24.55	25.05	24.69	**24.76**	0.256	1.034
Selenium	77	24.26	25.14	24.14	**24.51**	0.5488	2.239
Selenium	78	24.86	24.82	25.16	**24.95**	0.1833	0.7346
Selenium	82	24.91	25.64	25.35	**25.3**	0.3647	1.441
Zinc	66	24.74	25.3	24.91	**24.98**	0.2868	1.148
Zinc	67	25.45	24.71	25.14	**25.1**	0.3693	1.471
Zinc	68	24.83	25.15	24.71	**24.9**	0.2253	0.9048

Internal Standard Factors:

Scandium	45	1.044	1.074	1.065	**1.044**	n/a	n/a
Gallium	71	1.005	1.029	1.026	**1.005**	n/a	n/a
Rhodium	103	0.989	1.017	1.001	**0.989**	n/a	n/a
Indium	115	0.961	0.956	0.973	**0.961**	n/a	n/a
Lutetium	175	0.957	0.968	0.951	**0.957**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 10-14-08A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Greg Jasper
STARLIMS #130432

Sample Name:		ICB1			Mean	SD	%RSD
TimeStamp		10/14/08 10:39					
Arsenic	75	0.0788	0.0757	0.0108	**0.0551**	0.0384	69.67
Cadmium	111	0.0058	0.0048	0.0101	**0.0069**	0.0028	40.84
Cadmium	114	0.0057	0.006	0.0085	**0.0067**	0.0016	23.42
Chromium	52	-0.0546	-0.0514	0.0065	**-0.0331**	0.0344	103.8
Chromium	53	-0.0016	0.0243	0.0235	**0.0154**	0.0147	95.91
Copper	63	0.003	0.0098	0.0042	**0.0057**	0.0037	64.46
Copper	65	0.0044	-0.0171	0.003	**-0.0032**	0.012	372.9
Lead	206	0.0003	0.0045	0.0067	**0.0039**	0.0033	84.73
Lead	207	0.0042	0.006	0.0116	**0.0073**	0.0039	53.01
Lead	208	0.0034	0.0049	0.0099	**0.0061**	0.0034	56.17
Molybdenum	95	0.0943	0.0516	0.0416	**0.0625**	0.028	44.86
Molybdenum	97	0.0952	0.0571	0.0382	**0.0635**	0.0291	45.79
Molybdenum	98	0.0924	0.0511	0.0341	**0.0592**	0.03	50.68
Nickel	60	0.0288	0.0115	0.0561	**0.0321**	0.0225	70
Nickel	62	0.0433	-0.0286	0.0652	**0.0267**	0.0491	184.2
Selenium	77	-0.2428	-0.0049	0.0596	**-0.0627**	0.1592	254
Selenium	78	-0.1183	-0.3812	0.1478	**-0.1172**	0.2645	225.6
Selenium	82	0.0654	0.2809	0.066	**0.1374**	0.1242	90.41
Zinc	66	0.0113	0.0244	0.02	**0.0186**	0.0067	35.89
Zinc	67	0.0019	-0.0089	-0.0222	**-0.0097**	0.0121	124.1
Zinc	68	0.0159	0.0451	0.0268	**0.0293**	0.0148	50.43

Internal Standard Factors:

Scandium	45	1.047	1.068	1.096	**1.047**	n/a	n/a
Gallium	71	0.999	1.006	1.012	**0.999**	n/a	n/a
Rhodium	103	0.997	1.008	1.007	**0.997**	n/a	n/a
Indium	115	0.959	0.97	0.97	**0.959**	n/a	n/a
Lutetium	175	0.968	0.972	0.969	**0.968**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 10-14-08A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Greg Jasper
STARLIMS #130432

Sample Name:		CCB1			Mean	SD	%RSD
TimeStamp		10/14/08 10:43					
Arsenic	75	-0.0818	0.004	0.0629	**-0.005**	0.0728	1464
Cadmium	111	0.0015	0.0033	0.0063	**0.0037**	0.0024	65.1
Cadmium	114	-0.0004	0.0007	-0.0022	**-0.0006**	0.0014	230.9
Chromium	52	-0.0466	-0.0231	-0.0278	**-0.0325**	0.0124	38.29
Chromium	53	-0.0231	-0.0094	-0.0299	**-0.0208**	0.0104	50.3
Copper	63	0.0004	-0.0015	0.0033	**0.0008**	0.0024	317.9
Copper	65	-0.0096	-0.0077	-0.0049	**-0.0074**	0.0024	32.24
Lead	206	0.0001	0.0023	0.0001	**0.0008**	0.0013	151.4
Lead	207	0.0008	-0.0014	0.0005	**-0.0001**	0.0012	2303
Lead	208	-0.0012	0.0005	-0.0003	**-0.0003**	0.0009	274.8
Molybdenum	95	-0.0255	-0.0234	-0.0284	**-0.0258**	0.0025	9.722
Molybdenum	97	-0.0113	-0.0139	-0.0322	**-0.0191**	0.0114	59.55
Molybdenum	98	-0.0162	-0.0203	-0.0314	**-0.0226**	0.0079	34.78
Nickel	60	0.007	0.0024	0.0233	**0.0109**	0.011	101.3
Nickel	62	0.0525	-0.0727	-0.0048	**-0.0083**	0.0627	753.1
Selenium	77	0.0676	-0.0848	-0.1461	**-0.0544**	0.11	202.1
Selenium	78	0.1384	-0.1513	-0.1021	**-0.0384**	0.155	404.2
Selenium	82	-0.2361	-0.058	0.1136	**-0.0602**	0.1749	290.5
Zinc	66	-0.0181	-0.0016	0.0078	**-0.004**	0.0131	331.4
Zinc	67	-0.0104	-0.0382	0.0084	**-0.0134**	0.0235	175.4
Zinc	68	0.0023	0.0061	0.0142	**0.0075**	0.0061	81.23

Internal Standard Factors:

Scandium	45	1.048	1.074	1.07	**1.048**	n/a	n/a
Gallium	71	0.994	1.005	1.012	**0.994**	n/a	n/a
Rhodium	103	0.988	0.997	0.999	**0.988**	n/a	n/a
Indium	115	0.948	0.947	0.974	**0.948**	n/a	n/a
Lutetium	175	0.959	0.958	0.962	**0.959**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 10-14-08A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Greg Jasper
STARLIMS #130432

Sample Name:		SOIL CRA (MS12-22-H)			Mean	SD	%RSD
TimeStamp		10/14/08 10:46					
Arsenic	75	1.093	1.07	1.124	**1.096**	0.0273	2.489
Cadmium	111	0.0418	0.0424	0.052	**0.0454**	0.0057	12.62
Cadmium	114	0.0417	0.048	0.042	**0.0439**	0.0035	8.02
Chromium	52	0.4001	0.4204	0.4407	**0.4204**	0.0203	4.823
Chromium	53	0.3552	0.4613	0.452	**0.4228**	0.0587	13.89
Copper	63	0.2419	0.2522	0.2444	**0.2462**	0.0054	2.191
Copper	65	0.2336	0.2574	0.2617	**0.2509**	0.0152	6.038
Lead	206	0.1066	0.1075	0.1099	**0.108**	0.0017	1.607
Lead	207	0.1009	0.1083	0.1095	**0.1062**	0.0047	4.42
Lead	208	0.1053	0.1094	0.1093	**0.108**	0.0023	2.174
Molybdenum	95	0.078	0.059	0.0573	**0.0648**	0.0115	17.75
Molybdenum	97	0.0642	0.0721	0.0643	**0.0668**	0.0046	6.815
Molybdenum	98	0.0676	0.0709	0.071	**0.0698**	0.0019	2.769
Nickel	60	0.4793	0.4571	0.4272	**0.4545**	0.0261	5.752
Nickel	62	0.3689	0.5069	0.4684	**0.4481**	0.0712	15.89
Selenium	77	1.828	1.949	1.872	**1.883**	0.0614	3.262
Selenium	78	2.03	1.927	2.015	**1.991**	0.0556	2.79
Selenium	82	2.031	2.105	2.077	**2.071**	0.0376	1.814
Zinc	66	1.091	1.149	1.177	**1.139**	0.0437	3.839
Zinc	67	1.125	0.9734	1.124	**1.074**	0.0872	8.118
Zinc	68	1.094	1.079	1.105	**1.093**	0.0129	1.176

Internal Standard Factors:

Scandium	45	1.048	1.08	1.093	**1.048**	n/a	n/a
Gallium	71	1.019	1.044	1.04	**1.019**	n/a	n/a
Rhodium	103	1.014	1.019	1.013	**1.014**	n/a	n/a
Indium	115	0.963	0.979	0.972	**0.963**	n/a	n/a
Lutetium	175	0.959	0.984	0.964	**0.959**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 10-14-08A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Greg Jasper
STARLIMS #130432

Sample Name:		ICSA (MS12-45-E)			Mean	SD	%RSD
TimeStamp		10/14/08 10:49					
Arsenic	75	-0.0235	0.021	0.0921	**0.0299**	0.0583	195.4
Cadmium	111	0.2673	0.2623	0.251	**0.2602**	0.0083	3.202
Cadmium	114	0.1735	0.1744	0.1819	**0.1766**	0.0046	2.621
Chromium	52	0.2185	0.28	0.2635	**0.254**	0.0318	12.53
Chromium	53	4.431	4.298	4.247	**4.326**	0.0952	2.201
Copper	63	0.6955	0.7468	0.7479	**0.73**	0.0299	4.101
Copper	65	0.2936	0.4123	0.4102	**0.372**	0.0679	18.27
Lead	206	0.0905	0.0902	0.0969	**0.0925**	0.0038	4.098
Lead	207	0.0926	0.078	0.0819	**0.0842**	0.0075	8.963
Lead	208	0.092	0.0851	0.0862	**0.0878**	0.0037	4.21
Molybdenum	95	231.8	236.5	237.3	**235.2**	2.961	1.259
Molybdenum	97	234.7	238.5	241.2	**238.1**	3.234	1.358
Molybdenum	98	229	235.3	234.3	**232.8**	3.395	1.458
Nickel	60	1.33	1.418	1.377	**1.375**	0.044	3.199
Nickel	62	1.094	1.135	1.174	**1.134**	0.0402	3.542
Selenium	77	1.504	1.399	1.485	**1.463**	0.0562	3.842
Selenium	78	-0.0259	0.2517	0.1709	**0.1322**	0.1428	108
Selenium	82	0.0836	0.0788	0.2505	**0.1376**	0.0978	71.02
Zinc	66	6.003	6.057	6.099	**6.053**	0.0482	0.7957
Zinc	67	6.94	6.911	7.227	**7.026**	0.1748	2.488
Zinc	68	5.728	5.783	5.76	**5.757**	0.0277	0.4802

Internal Standard Factors:

Scandium	45	1.267	1.371	1.421	**1.267**	n/a	n/a
Gallium	71	1.306	1.334	1.346	**1.306**	n/a	n/a
Rhodium	103	1.241	1.275	1.309	**1.241**	n/a	n/a
Indium	115	1.137	1.166	1.186	**1.137**	n/a	n/a
Lutetium	175	1.089	1.09	1.089	**1.089**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 10-14-08A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Greg Jasper
STARLIMS #130432

Sample Name:		ICSAB (MS12-45-F)			Mean	SD	%RSD
TimeStamp		10/14/08 10:53					
Arsenic	75	26.68	26.3	26.41	**26.46**	0.197	0.7442
Cadmium	111	26.08	26.67	26.98	**26.57**	0.4567	1.719
Cadmium	114	26.06	25.98	26.61	**26.22**	0.3422	1.305
Chromium	52	53.41	53	54	**53.47**	0.5025	0.9397
Chromium	53	57.66	56.64	58.52	**57.61**	0.9437	1.638
Copper	63	49.01	48.3	47.88	**48.4**	0.5737	1.186
Copper	65	48.4	47.73	47.91	**48.01**	0.3447	0.7179
Lead	206	0.1404	0.1299	0.1303	**0.1336**	0.0059	4.422
Lead	207	0.1251	0.1305	0.1337	**0.1298**	0.0044	3.372
Lead	208	0.1342	0.1344	0.1347	**0.1345**	0.0003	0.1955
Molybdenum	95	230.6	236.7	235	**234.1**	3.173	1.356
Molybdenum	97	234.3	238.1	236.5	**236.3**	1.885	0.7977
Molybdenum	98	231.6	233.8	232.6	**232.7**	1.114	0.4787
Nickel	60	53.17	53.59	53.36	**53.38**	0.2118	0.3968
Nickel	62	52.93	51.51	52.24	**52.23**	0.7111	1.361
Selenium	77	27.12	28	27.68	**27.6**	0.4424	1.603
Selenium	78	26.44	26.44	27.32	**26.74**	0.5084	1.901
Selenium	82	26.62	26.72	26	**26.45**	0.3872	1.464
Zinc	66	27.92	27.94	28.12	**27.99**	0.112	0.4002
Zinc	67	28.33	29.01	28.64	**28.66**	0.3406	1.188
Zinc	68	26.82	26.92	26.53	**26.76**	0.2041	0.7628

Internal Standard Factors:

Scandium	45	1.493	1.546	1.608	**1.493**	n/a	n/a
Gallium	71	1.405	1.448	1.498	**1.405**	n/a	n/a
Rhodium	103	1.372	1.425	1.463	**1.372**	n/a	n/a
Indium	115	1.235	1.258	1.308	**1.235**	n/a	n/a
Lutetium	175	1.139	1.154	1.17	**1.139**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 10-14-08A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Greg Jasper
STARLIMS #130432

Sample Name:		K0808300-MB 1/5			Mean	SD	%RSD
TimeStamp		10/14/08 10:56					
Arsenic	75	0.1154	0.0318	0.1138	**0.087**	0.0478	54.99
Cadmium	111	0.0198	0.0138	0.0127	**0.0154**	0.0038	24.61
Cadmium	114	0.1562	0.1519	0.1488	**0.1523**	0.0037	2.438
Chromium	52	0.0578	0.0586	0.0974	**0.0713**	0.0227	31.8
Chromium	53	0.2264	0.1681	0.1334	**0.1759**	0.047	26.72
Copper	63	0.0376	0.0182	0.02	**0.0253**	0.0107	42.49
Copper	65	0.0303	0.0083	0.0236	**0.0207**	0.0113	54.5
Lead	206	0.0153	0.0215	0.0185	**0.0184**	0.0031	16.83
Lead	207	0.0171	0.0237	0.0137	**0.0181**	0.0051	28.11
Lead	208	0.0167	0.0219	0.017	**0.0185**	0.0029	15.61
Molybdenum	95	1.354	0.6818	0.4296	**0.8217**	0.4778	58.14
Molybdenum	97	1.424	0.6457	0.4503	**0.8401**	0.5153	61.33
Molybdenum	98	1.364	0.6683	0.4315	**0.8211**	0.4844	59
Nickel	60	0.0557	0.0169	0.0473	**0.0399**	0.0204	51.15
Nickel	62	0.0917	0.0195	0.0526	**0.0546**	0.0361	66.15
Selenium	77	-0.0865	-0.0457	-0.1763	**-0.1029**	0.0668	64.97
Selenium	78	0.0391	-0.0204	-0.0612	**-0.0141**	0.0504	356.1
Selenium	82	0.2143	0.0059	0.2161	**0.1455**	0.1208	83.07
Zinc	66	0.4761	0.3985	0.4165	**0.4304**	0.0406	9.439
Zinc	67	0.4086	0.3813	0.3726	**0.3875**	0.0188	4.846
Zinc	68	0.4397	0.4426	0.4395	**0.4406**	0.0017	0.3896

Internal Standard Factors:

Scandium	45	1.262	1.269	1.304	**1.262**	n/a	n/a
Gallium	71	1.195	1.198	1.208	**1.195**	n/a	n/a
Rhodium	103	1.169	1.201	1.181	**1.169**	n/a	n/a
Indium	115	1.11	1.14	1.13	**1.11**	n/a	n/a
Lutetium	175	1.048	1.07	1.051	**1.048**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 10-14-08A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Greg Jasper
STARLIMS #130432

Sample Name:		LCSS K0808300 1/50			Mean	SD	%RSD
TimeStamp		10/14/08 10:59					
Arsenic	75	30.04	30.11	30.36	**30.17**	0.167	0.5536
Cadmium	111	19.76	19.95	19.83	**19.85**	0.0955	0.4814
Cadmium	114	19.93	20.08	20.28	**20.1**	0.1772	0.8818
Chromium	52	33.59	33.93	35.38	**34.3**	0.9481	2.764
Chromium	53	34.4	34.4	35.7	**34.83**	0.7482	2.148
Copper	63	12.89	13.16	13.51	**13.18**	0.3117	2.364
Copper	65	13.11	13.26	13.85	**13.41**	0.3902	2.91
Lead	206	13.57	13.93	13.79	**13.76**	0.1859	1.351
Lead	207	13.58	13.87	13.78	**13.74**	0.1503	1.094
Lead	208	13.65	14.19	13.97	**13.93**	0.2722	1.953
Molybdenum	95	5.522	5.649	5.679	**5.617**	0.0833	1.483
Molybdenum	97	5.371	5.716	5.67	**5.585**	0.1875	3.356
Molybdenum	98	5.381	5.607	5.667	**5.552**	0.1507	2.714
Nickel	60	16.94	16.51	17.31	**16.92**	0.4024	2.379
Nickel	62	16.37	16.56	17.43	**16.79**	0.5638	3.358
Selenium	77	17.37	17.58	17.25	**17.4**	0.1655	0.9512
Selenium	78	16.9	17.25	17.62	**17.25**	0.3563	2.065
Selenium	82	18.34	17.6	17.62	**17.86**	0.4214	2.36
Zinc	66	80.92	80.85	83.69	**81.82**	1.621	1.981
Zinc	67	77.63	79.58	81.2	**79.47**	1.784	2.245
Zinc	68	79.91	81.24	82.42	**81.19**	1.256	1.547

Internal Standard Factors:

Scandium	45	1.238	1.266	1.301	**1.238**	n/a	n/a
Gallium	71	1.154	1.151	1.176	**1.154**	n/a	n/a
Rhodium	103	1.159	1.171	1.16	**1.159**	n/a	n/a
Indium	115	1.074	1.089	1.095	**1.074**	n/a	n/a
Lutetium	175	1.008	1.05	1.037	**1.008**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 10-14-08A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Greg Jasper
STARLIMS #130432

Sample Name:		K0808300-003 1/5			Mean	SD	%RSD
TimeStamp		10/14/08 11:03					
Arsenic	75	3.656	3.578	3.731	**3.655**	0.0766	2.094
Cadmium	111	0.1656	0.1556	0.1659	**0.1623**	0.0059	3.614
Cadmium	114	0.1852	0.1898	0.1782	**0.1844**	0.0058	3.146
Chromium	52	88.31	89.45	90.73	**89.5**	1.212	1.355
Chromium	53	93.01	92.24	91.84	**92.37**	0.5947	0.6439
Copper	63	38	39.14	39.44	**38.86**	0.7593	1.954
Copper	65	38.39	39	41.32	**39.57**	1.545	3.906
Lead	206	8.203	8.352	8.499	**8.351**	0.1481	1.773
Lead	207	8.225	8.401	8.217	**8.281**	0.1042	1.258
Lead	208	8.269	8.389	8.337	**8.332**	0.0605	0.7264
Molybdenum	95	0.4744	0.3876	0.3615	**0.4079**	0.0591	14.49
Molybdenum	97	0.495	0.4364	0.373	**0.4348**	0.061	14.04
Molybdenum	98	0.4938	0.4108	0.333	**0.4125**	0.0804	19.5
Nickel	60	157	153.7	159	**156.6**	2.702	1.726
Nickel	62	161.5	164.8	162.9	**163**	1.654	1.015
Selenium	77	0.8788	1.038	1.166	**1.028**	0.1441	14.02
Selenium	78	-1.777	-1.595	-1.875	**-1.749**	0.1421	8.129
Selenium	82	0.4372	0.3869	0.6872	**0.5038**	0.1608	31.93
Zinc	66	66.98	68.37	70.85	**68.73**	1.962	2.854
Zinc	67	69.63	69.33	72.62	**70.53**	1.817	2.577
Zinc	68	67.11	68.88	70.05	**68.68**	1.477	2.151

10/14/08
Se
1/10
Post Spike & Serial dilution out of control

Internal Standard Factors:

Scandium	45	1.056	1.134	1.208	**1.056**	n/a	n/a
Gallium	71	1.098	1.161	1.269	**1.098**	n/a	n/a
Rhodium	103	1.535	1.632	1.735	**1.535**	n/a	n/a
Indium	115	1.351	1.433	1.518	**1.351**	n/a	n/a
Lutetium	175	1.172	1.198	1.219	**1.172**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 10-14-08A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Greg Jasper
STARLIMS #130432

Sample Name:		K0808300-003 1/5D			Mean	SD	%RSD
TimeStamp		10/14/08 11:06					
Arsenic	75	2.153	2.249	2.344	**2.249**	0.0956	4.251
Cadmium	111	0.1618	0.1775	0.1475	**0.1623**	0.015	9.231
Cadmium	114	0.1851	0.1866	0.1947	**0.1888**	0.0052	2.736
Chromium	52	56.96	60.86	60.95	**59.59**	2.28	3.827
Chromium	53	59.06	62.11	62.69	**61.29**	1.951	3.183
Copper	63	33.59	33.92	34.91	**34.14**	0.6842	2.004
Copper	65	33.66	34.71	34.6	**34.32**	0.5755	1.677
Lead	206	6.558	6.91	6.878	**6.782**	0.1945	2.867
Lead	207	6.579	6.927	6.88	**6.795**	0.189	2.782
Lead	208	6.62	6.955	6.875	**6.817**	0.175	2.568
Molybdenum	95	0.3225	0.3099	0.3099	**0.3141**	0.0073	2.313
Molybdenum	97	0.3609	0.3442	0.3696	**0.3582**	0.0129	3.609
Molybdenum	98	0.2939	0.3173	0.3094	**0.3068**	0.0119	3.878
Nickel	60	136.6	139.4	144.4	**140.1**	3.978	2.838
Nickel	62	138.5	140.2	143.5	**140.7**	2.554	1.815
Selenium	77	0.9417	0.976	0.5995	**0.8391**	0.2082	24.81
Selenium	78	-2.1	-1.937	-1.947	**-1.995**	0.0914	4.583
Selenium	82	0.2279	0.3442	0.3401	**0.3041**	0.066	21.71
Zinc	66	56.5	57.46	58.93	**57.63**	1.224	2.124
Zinc	67	57.06	59.03	61.48	**59.19**	2.212	3.737
Zinc	68	56.45	57.69	57.39	**57.18**	0.6459	1.13

10/14/08

Internal Standard Factors:

Scandium	45	1.273	1.398	1.461	**1.273**	n/a	n/a
Gallium	71	1.34	1.408	1.476	**1.34**	n/a	n/a
Rhodium	103	1.773	1.896	1.927	**1.773**	n/a	n/a
Indium	115	1.555	1.633	1.687	**1.555**	n/a	n/a
Lutetium	175	1.234	1.293	1.309	**1.234**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 10-14-08A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Greg Jasper
STARLIMS #130432

Sample Name:		K0808300-003 1/25L			Mean	SD	%RSD
TimeStamp		10/14/08 11:09					
Arsenic	75	0.9915	1.068	1.051	**1.037**	0.0402	3.881
Cadmium	111	0.0352	0.0398	0.0382	**0.0377**	0.0023	6.174
Cadmium	114	0.0331	0.0509	0.0374	**0.0405**	0.0093	22.9
Chromium	52	23.92	24.54	25.37	**24.61**	0.726	2.95
Chromium	53	23.71	24.85	25.65	**24.74**	0.9737	3.936
Copper	63	10.76	11.01	11.06	**10.94**	0.1637	1.496
Copper	65	10.89	10.8	10.96	**10.88**	0.0791	0.7271
Lead	206	1.819	1.832	1.885	**1.845**	0.0351	1.904
Lead	207	1.778	1.776	1.827	**1.794**	0.029	1.619
Lead	208	1.803	1.794	1.85	**1.816**	0.0301	1.657
Molybdenum	95	0.039	0.0261	0.0257	**0.0303**	0.0076	24.96
Molybdenum	97	0.034	0.0327	0.0264	**0.031**	0.0041	13.21
Molybdenum	98	0.0278	0.033	0.0317	**0.0308**	0.0027	8.805
Nickel	60	42.78	45.54	43.36	**43.89**	1.453	3.31
Nickel	62	44.2	43.64	45.84	**44.56**	1.145	2.569
Selenium	77	0.2369	0.3379	0.0256	**0.2001**	0.1594	79.63
Selenium	78	-1.073	-1.144	-1.158	**-1.125**	0.0456	4.053
Selenium	82	0.1101	0.3858	0.2779	**0.258**	0.1389	53.87
Zinc	66	21.01	20.92	21.19	**21.04**	0.1391	0.6608
Zinc	67	20.41	21.58	21.75	**21.25**	0.7334	3.452
Zinc	68	20.21	21.3	20.85	**20.79**	0.5501	2.647

10/14/08

Internal Standard Factors:

Scandium	45	1.578	1.633	1.655	**1.578**	n/a	n/a
Gallium	71	1.493	1.547	1.516	**1.493**	n/a	n/a
Rhodium	103	1.59	1.589	1.574	**1.59**	n/a	n/a
Indium	115	1.436	1.426	1.435	**1.436**	n/a	n/a
Lutetium	175	1.171	1.167	1.183	**1.171**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 10-14-08A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Greg Jasper
STARLIMS #130432

Sample Name:		K0808300-003 1/5 +50A			Mean	SD	%RSD
TimeStamp		10/14/08 11:13					
Arsenic	75	39.39	38.1	39.24	**38.91**	0.706	1.815
Cadmium	111	51.29	49.02	48.44	**49.59**	1.503	3.031
Cadmium	114	50.89	48.68	49.15	**49.57**	1.163	2.345
Chromium	52	126.4	123.1	119.1	**122.9**	3.619	2.946
Chromium	53	128.2	127.2	126.9	**127.4**	0.6646	0.5215
Copper	63	72.67	67.64	68.97	**69.76**	2.605	3.734
Copper	65	72.97	68.71	68.35	**70.01**	2.569	3.669
Lead	206	58.94	57.67	57.95	**58.19**	0.664	1.141
Lead	207	59.94	57.85	57.71	**58.5**	1.251	2.138
Lead	208	59.73	57.63	58.12	**58.49**	1.096	1.873
Molybdenum	95	52.58	51.29	52.32	**52.06**	0.6857	1.317
Molybdenum	97	54.44	53.08	53.29	**53.6**	0.7294	1.361
Molybdenum	98	54.69	52.95	53.45	**53.7**	0.8961	1.669
Nickel	60	192.3	197.2	197.1	**195.6**	2.793	1.428
Nickel	62	202.2	200.1	196.1	**199.5**	3.083	1.546
Selenium	77	38.12	38.19	37.53	**37.95**	0.3612	0.9517
Selenium	78	37.24	37.66	36.07	**36.99**	0.8224	2.223
Selenium	82	42.16	41.45	41.61	**41.74**	0.3724	0.8922
Zinc	66	98.64	100.7	101.4	**100.2**	1.427	1.424
Zinc	67	102.8	104.4	104.5	**103.9**	0.9176	0.8831
Zinc	68	101.1	99.85	100.8	**100.6**	0.6269	0.6234

10/14/08

Internal Standard Factors:

Scandium	45	1.32	1.395	1.474	**1.32**	n/a	n/a
Gallium	71	1.397	1.49	1.528	**1.397**	n/a	n/a
Rhodium	103	1.998	2.062	2.163	**1.998**	n/a	n/a
Indium	115	1.747	1.795	1.865	**1.747**	n/a	n/a
Lutetium	175	1.355	1.359	1.4	**1.355**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 10-14-08A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Greg Jasper
STARLIMS #130432

Sample Name:		K0808300-003 1/25S			Mean	SD	%RSD
TimeStamp		10/14/08 11:16					
Arsenic	75	37.58	37.17	37.1	**37.28**	0.2624	0.7038
Cadmium	111	4.25	4.127	4.188	**4.188**	0.0613	1.464
Cadmium	114	4.223	4.093	4.14	**4.152**	0.0659	1.587
Chromium	52	34.88	35.31	34.66	**34.95**	0.332	0.9499
Chromium	53	35.67	34.62	34.71	**35**	0.5842	1.669
Copper	63	29.4	29.04	29.67	**29.37**	0.3164	1.077
Copper	65	29.96	28.65	29.12	**29.24**	0.6627	2.266
Lead	206	41.44	40.53	41.04	**41**	0.4553	1.11
Lead	207	41.23	40.29	41.13	**40.88**	0.5181	1.267
Lead	208	40.91	40.09	40.61	**40.54**	0.4127	1.018
Molybdenum	95	37.42	37.51	37.24	**37.39**	0.1369	0.3662
Molybdenum	97	37.48	38.31	37.93	**37.91**	0.4112	1.085
Molybdenum	98	37.69	38	37.44	**37.71**	0.2803	0.7431
Nickel	60	76.87	74.26	75.04	**75.39**	1.34	1.777
Nickel	62	76.31	77.81	76.45	**76.86**	0.8291	1.079
Selenium	77	37.78	38.62	36.71	**37.7**	0.9553	2.534
Selenium	78	38.7	38.36	38.04	**38.37**	0.3318	0.8648
Selenium	82	40.44	40.57	38.91	**39.97**	0.9252	2.315
Zinc	66	56.02	55.78	54.99	**55.6**	0.5377	0.9672
Zinc	67	62.11	61.5	60.67	**61.43**	0.7254	1.181
Zinc	68	61.53	58.59	58.91	**59.67**	1.613	2.704

Internal Standard Factors:

Scandium	45	1.8	1.795	1.787	**1.8**	n/a	n/a
Gallium	71	1.684	1.684	1.638	**1.684**	n/a	n/a
Rhodium	103	1.754	1.748	1.717	**1.754**	n/a	n/a
Indium	115	1.572	1.545	1.53	**1.572**	n/a	n/a
Lutetium	175	1.229	1.212	1.226	**1.229**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 10-14-08A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Greg Jasper
STARLIMS #130432

Sample Name:		CCV2			Mean	SD	%RSD
TimeStamp		10/14/08 11:21					
Arsenic	75	24.24	24.78	24.81	**24.61**	0.3209	1.304
Cadmium	111	24.71	25.51	25.24	**25.16**	0.4058	1.613
Cadmium	114	24.85	25.66	25.52	**25.34**	0.4345	1.715
Chromium	52	24.61	25.36	25.13	**25.03**	0.3817	1.525
Chromium	53	24.26	25.45	25.37	**25.03**	0.6645	2.655
Copper	63	22.67	23.63	24.44	**23.58**	0.8894	3.772
Copper	65	23.35	24.2	24.25	**23.94**	0.5047	2.108
Lead	206	24.49	24.9	24.01	**24.47**	0.4449	1.818
Lead	207	24.66	25.26	24.33	**24.75**	0.4706	1.902
Lead	208	24.72	25.13	24.43	**24.76**	0.3504	1.415
Molybdenum	95	25.15	26.13	25.54	**25.6**	0.4939	1.929
Molybdenum	97	25.7	25.59	25.82	**25.71**	0.1148	0.4468
Molybdenum	98	24.87	25.84	25.45	**25.39**	0.4884	1.924
Nickel	60	23.76	25.34	24.73	**24.61**	0.799	3.246
Nickel	62	23.24	24.48	24.69	**24.14**	0.7821	3.24
Selenium	77	24.07	23.76	23.48	**23.77**	0.2989	1.257
Selenium	78	24.11	24.73	24.97	**24.6**	0.4416	1.795
Selenium	82	24.57	24.05	25.26	**24.62**	0.6071	2.465
Zinc	66	24.38	25.02	25.06	**24.82**	0.382	1.539
Zinc	67	25.57	24.82	25.12	**25.17**	0.377	1.498
Zinc	68	24.38	25.11	25.37	**24.95**	0.5094	2.041

Internal Standard Factors:

Scandium	45	1.5	1.563	1.542	**1.5**	n/a	n/a
Gallium	71	1.403	1.44	1.418	**1.403**	n/a	n/a
Rhodium	103	1.368	1.388	1.365	**1.368**	n/a	n/a
Indium	115	1.248	1.287	1.263	**1.248**	n/a	n/a
Lutetium	175	1.097	1.112	1.07	**1.097**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 10-14-08A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Greg Jasper
STARLIMS #130432

Sample Name:		CCB2			Mean	SD	%RSD
TimeStamp		10/14/08 11:25					
Arsenic	75	0.0116	0.0432	-0.0432	**0.0039**	0.0437	1133
Cadmium	111	0.0057	0.0041	-0.0005	**0.0031**	0.0032	102.4
Cadmium	114	0.0013	0.0003	-0.003	**-0.0005**	0.0023	480
Chromium	52	-0.1091	-0.0837	-0.0891	**-0.094**	0.0134	14.22
Chromium	53	-0.069	-0.0949	-0.057	**-0.0736**	0.0194	26.3
Copper	63	-0.0033	-0.0009	0.0057	**0.0005**	0.0047	925.7
Copper	65	-0.013	-0.014	-0.0041	**-0.0104**	0.0054	52.43
Lead	206	0.0005	0.0032	0.0002	**0.0013**	0.0016	124.9
Lead	207	0.0041	0.0042	0.0006	**0.003**	0.0021	69.91
Lead	208	0	0.0035	0.0013	**0.0016**	0.0017	108.8
Molybdenum	95	0.0746	0.0351	0.0121	**0.0406**	0.0316	77.87
Molybdenum	97	0.0849	0.0449	0.0211	**0.0503**	0.0323	64.14
Molybdenum	98	0.0777	0.0347	0.0209	**0.0444**	0.0296	66.73
Nickel	60	0.0021	0.0236	0.0253	**0.017**	0.0129	76.02
Nickel	62	0.0847	-0.0346	0.0633	**0.0378**	0.0636	168.2
Selenium	77	-0.1014	0.0125	0.1341	**0.015**	0.1178	783.1
Selenium	78	-0.4349	-0.4826	-0.5406	**-0.486**	0.053	10.9
Selenium	82	-0.0402	0.18	-0.0289	**0.037**	0.124	335.5
Zinc	66	0.0524	0.0769	0.1522	**0.0939**	0.052	55.42
Zinc	67	0.0351	0.1172	0.1346	**0.0956**	0.0532	55.59
Zinc	68	0.0603	0.1253	0.1327	**0.1061**	0.0398	37.56

Internal Standard Factors:

Scandium	45	1.285	1.346	1.369	**1.285**	n/a	n/a
Gallium	71	1.221	1.24	1.219	**1.221**	n/a	n/a
Rhodium	103	1.186	1.198	1.193	**1.186**	n/a	n/a
Indium	115	1.117	1.127	1.119	**1.117**	n/a	n/a
Lutetium	175	1.006	1.016	1.012	**1.006**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 10-14-08A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Greg Jasper
STARLIMS #130432

Sample Name:		K0808300-003 1/10			Mean	SD	%RSD
TimeStamp		10/14/08 11:29					
Arsenic	75	2.032	2.25	2.194	**2.159**	0.1133	5.249
Cadmium	111	0.0806	0.0751	0.0836	**0.0798**	0.0043	5.424
Cadmium	114	0.0954	0.0939	0.0962	**0.0951**	0.0012	1.225
Chromium	52	50.28	52.51	54.28	**52.36**	2.006	3.831
Chromium	53	50.34	53.75	55.38	**53.15**	2.568	4.832
Copper	63	22.22	24.84	24.63	**23.89**	1.455	6.088
Copper	65	23.31	24.73	24.53	**24.19**	0.7705	3.185
Lead	206	4.292	4.34	4.423	**4.352**	0.066	1.518
Lead	207	4.218	4.177	4.417	**4.271**	0.1286	3.011
Lead	208	4.246	4.309	4.397	**4.317**	0.0757	1.753
Molybdenum	95	0.1246	0.1174	0.1263	**0.1228**	0.0047	3.826
Molybdenum	97	0.1319	0.1233	0.1113	**0.1222**	0.0103	8.46
Molybdenum	98	0.1176	0.1237	0.1126	**0.118**	0.0056	4.748
Nickel	60	92.19	96.25	97.57	**95.34**	2.803	2.94
Nickel	62	94.24	98.98	100.6	**97.95**	3.312	3.381
Selenium	77	0.4212	0.3737	0.5441	**0.4463**	0.0879	19.7
Selenium	78	-1.592	-1.31	-1.278	**-1.394**	0.1728	12.4
Selenium	82	0.0116	0.2108	0.533	**0.2518**	0.2631	104.5
Zinc	66	41.6	43.53	44.04	**43.06**	1.289	2.994
Zinc	67	43.45	43.86	45.79	**44.37**	1.251	2.82
Zinc	68	41.83	43.52	43.94	**43.1**	1.116	2.589

Internal Standard Factors:

Scandium	45	1.09	1.178	1.239	**1.09**	n/a	n/a
Gallium	71	1.121	1.179	1.21	**1.121**	n/a	n/a
Rhodium	103	1.279	1.351	1.371	**1.279**	n/a	n/a
Indium	115	1.148	1.192	1.241	**1.148**	n/a	n/a
Lutetium	175	1.009	1.013	1.038	**1.009**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 10-14-08A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Greg Jasper
STARLIMS #130432

Sample Name:		K0808300-003 1/10 +50A			Mean	SD	%RSD
TimeStamp		10/14/08 11:32					
Arsenic	75	45.89	45.62	45.22	**45.57**	0.3343	0.7335
Cadmium	111	52.77	52	52.27	**52.35**	0.3911	0.7472
Cadmium	114	52.73	52.09	52.29	**52.37**	0.3301	0.6304
Chromium	52	96.59	98.12	97.71	**97.47**	0.796	0.8166
Chromium	53	97.1	99.42	100.1	**98.86**	1.558	1.576
Copper	63	64.13	62.99	64.24	**63.78**	0.6929	1.086
Copper	65	64.2	64.09	66.05	**64.78**	1.099	1.696
Lead	206	55.58	54.74	54.77	**55.03**	0.475	0.8632
Lead	207	56.31	55.38	55.34	**55.68**	0.5502	0.9883
Lead	208	56.31	54.91	54.92	**55.38**	0.8036	1.451
Molybdenum	95	52.96	52.47	52.95	**52.79**	0.2803	0.531
Molybdenum	97	54.12	53.33	53.75	**53.73**	0.393	0.7314
Molybdenum	98	53.49	52.67	53.66	**53.28**	0.5277	0.9905
Nickel	60	141.5	143	140.5	**141.7**	1.29	0.9106
Nickel	62	147.1	142.4	145.9	**145.1**	2.423	1.67
Selenium	77	49.22	47.16	47.03	**47.8**	1.229	2.571
Selenium	78	49.05	45.33	46.94	**47.11**	1.866	3.961
Selenium	82	52.07	51.56	52.37	**52**	0.4125	0.7933
Zinc	66	86.4	82.48	85.16	**84.68**	2.003	2.365
Zinc	67	88.1	83.96	85.81	**85.96**	2.073	2.412
Zinc	68	86.24	84.55	84.75	**85.18**	0.9199	1.08

Internal Standard Factors:

Scandium	45	1.246	1.353	1.376	**1.246**	n/a	n/a
Gallium	71	1.246	1.249	1.291	**1.246**	n/a	n/a
Rhodium	103	1.449	1.485	1.522	**1.449**	n/a	n/a
Indium	115	1.292	1.323	1.341	**1.292**	n/a	n/a
Lutetium	175	1.062	1.06	1.056	**1.062**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 10-14-08A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Greg Jasper
STARLIMS #130432

Sample Name:		K0808300-003 1/50L			Mean	SD	%RSD
TimeStamp		10/14/08 11:35					
Arsenic	75	0.5188	0.6068	0.5679	**0.5645**	0.0441	7.815
Cadmium	111	0.0303	0.0352	0.0351	**0.0336**	0.0028	8.374
Cadmium	114	0.0274	0.0358	0.0296	**0.0309**	0.0044	14.11
Chromium	52	11.38	13.55	12.89	**12.61**	1.114	8.838
Chromium	53	11.77	13.6	12.94	**12.77**	0.9267	7.255
Copper	63	5.479	6.039	5.987	**5.835**	0.3095	5.304
Copper	65	5.475	6.022	6.1	**5.865**	0.3406	5.808
Lead	206	0.8749	0.9456	0.9423	**0.9209**	0.0399	4.335
Lead	207	0.8622	0.9401	0.9293	**0.9105**	0.0422	4.637
Lead	208	0.8677	0.9511	0.9464	**0.9217**	0.0469	5.084
Molybdenum	95	0.2137	0.1283	0.0778	**0.1399**	0.0687	49.07
Molybdenum	97	0.2232	0.1414	0.0774	**0.1473**	0.0731	49.62
Molybdenum	98	0.2109	0.1297	0.0789	**0.1398**	0.0666	47.61
Nickel	60	21.88	24.15	23.84	**23.29**	1.232	5.292
Nickel	62	21.82	24.72	24.25	**23.59**	1.559	6.609
Selenium	77	0.1468	-0.0272	0.2062	**0.1086**	0.1213	111.7
Selenium	78	-1.035	-0.9619	-1.227	**-1.075**	0.1371	12.75
Selenium	82	0.1666	0.1774	0.2799	**0.208**	0.0625	30.06
Zinc	66	10.35	11.39	11.09	**10.94**	0.5373	4.911
Zinc	67	10.62	11.6	11.08	**11.1**	0.4941	4.451
Zinc	68	10.1	11.26	11.23	**10.86**	0.658	6.057

Internal Standard Factors:

Scandium	45	1.362	1.491	1.443	**1.362**	n/a	n/a
Gallium	71	1.202	1.303	1.287	**1.202**	n/a	n/a
Rhodium	103	1.227	1.304	1.296	**1.227**	n/a	n/a
Indium	115	1.12	1.193	1.17	**1.12**	n/a	n/a
Lutetium	175	0.938	0.996	0.993	**0.938**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 10-14-08A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Greg Jasper
STARLIMS #130432

Sample Name:		K0808300-003 1/10D			Mean	SD	%RSD
TimeStamp		10/14/08 11:39					
Arsenic	75	1.439	1.399	1.406	**1.415**	0.0216	1.527
Cadmium	111	0.0684	0.0767	0.095	**0.0801**	0.0136	16.97
Cadmium	114	0.0994	0.103	0.1028	**0.1018**	0.002	1.987
Chromium	52	34.54	35.68	36.61	**35.61**	1.034	2.904
Chromium	53	34.72	35.86	37.68	**36.09**	1.49	4.13
Copper	63	20.46	21.34	21.03	**20.94**	0.4449	2.124
Copper	65	20.73	21.42	21.88	**21.34**	0.5835	2.734
Lead	206	3.478	3.455	3.517	**3.483**	0.0313	0.8976
Lead	207	3.429	3.506	3.502	**3.479**	0.0432	1.243
Lead	208	3.474	3.491	3.523	**3.496**	0.0248	0.7086
Molybdenum	95	0.1636	0.1472	0.1472	**0.1527**	0.0095	6.217
Molybdenum	97	0.1775	0.1612	0.1615	**0.1667**	0.0094	5.61
Molybdenum	98	0.1588	0.1569	0.1477	**0.1545**	0.006	3.851
Nickel	60	84.33	85.1	87.38	**85.61**	1.586	1.853
Nickel	62	86.31	84.61	86.56	**85.83**	1.06	1.235
Selenium	77	0.3786	0.1146	0.1913	**0.2282**	0.1358	59.5
Selenium	78	-1.206	-1.416	-1.094	**-1.239**	0.1634	13.19
Selenium	82	0.4817	0.3498	0.2269	**0.3528**	0.1275	36.13
Zinc	66	36.29	36.78	36.95	**36.67**	0.3469	0.9458
Zinc	67	37.23	36.79	37.13	**37.05**	0.2311	0.6239
Zinc	68	35.99	36.16	36.04	**36.06**	0.0909	0.2521

Internal Standard Factors:

Scandium	45	1.283	1.334	1.417	**1.283**	n/a	n/a
Gallium	71	1.234	1.268	1.279	**1.234**	n/a	n/a
Rhodium	103	1.395	1.434	1.464	**1.395**	n/a	n/a
Indium	115	1.255	1.289	1.303	**1.255**	n/a	n/a
Lutetium	175	1.048	1.058	1.069	**1.048**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 10-14-08A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Greg Jasper
STARLIMS #130432

Sample Name:		K0809634-MB 1/5			Mean	SD	%RSD
TimeStamp		10/14/08 11:42					
Arsenic	75	0.082	0.0615	0.0447	**0.0627**	0.0187	29.82
Cadmium	111	0.0132	0.0112	0.0095	**0.0113**	0.0018	16.27
Cadmium	114	0.138	0.1587	0.1508	**0.1492**	0.0105	7.017
Chromium	52	0.0093	0.0731	0.026	**0.0362**	0.0331	91.48
Chromium	53	0.0003	0.0003	0.0039	**0.0015**	0.0021	137.1
Copper	63	0.0274	0.0105	0.0269	**0.0216**	0.0096	44.63
Copper	65	0.0108	0.0129	0.008	**0.0105**	0.0025	23.31
Lead	206	0.0211	0.0154	0.0223	**0.0196**	0.0037	18.76
Lead	207	0.0207	0.0197	0.0213	**0.0206**	0.0008	3.831
Lead	208	0.021	0.0198	0.0184	**0.0197**	0.0013	6.741
Molybdenum	95	-0.005	-0.0016	-0.0108	**-0.0058**	0.0046	79.97
Molybdenum	97	0.0099	-0.0006	-0.0053	**0.0013**	0.0078	587.6
Molybdenum	98	-0.0021	-0.0064	-0.0102	**-0.0062**	0.0041	64.92
Nickel	60	0.0595	0.064	0.0844	**0.0693**	0.0133	19.19
Nickel	62	0.128	0.0952	0.0524	**0.0919**	0.0379	41.27
Selenium	77	-0.1662	-0.1306	-0.268	**-0.1883**	0.0713	37.89
Selenium	78	-1.025	-0.8802	-0.51	**-0.8049**	0.2654	32.97
Selenium	82	0.0853	0.076	-0.1419	**0.0065**	0.1286	1985
Zinc	66	0.4129	0.4207	0.4087	**0.4141**	0.0061	1.47
Zinc	67	0.3839	0.3647	0.5106	**0.4197**	0.0792	18.88
Zinc	68	0.4252	0.4378	0.4168	**0.4266**	0.0106	2.472

Internal Standard Factors:

Scandium	45	1.34	1.375	1.394	**1.34**	n/a	n/a
Gallium	71	1.202	1.258	1.251	**1.202**	n/a	n/a
Rhodium	103	1.182	1.211	1.219	**1.182**	n/a	n/a
Indium	115	1.1	1.131	1.123	**1.1**	n/a	n/a
Lutetium	175	0.961	0.981	0.987	**0.961**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 10-14-08A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Greg Jasper
STARLIMS #130432

Sample Name:		LCSS K0809634 1/50			Mean	SD	%RSD
TimeStamp		10/14/08 11:45					
Arsenic	75	32.65	32.13	32.53	**32.44**	0.2708	0.8349
Cadmium	111	22.71	22.48	22.44	**22.54**	0.1444	0.6403
Cadmium	114	22.92	22.84	22.47	**22.74**	0.238	1.046
Chromium	52	38.24	38.1	38.73	**38.36**	0.3321	0.8657
Chromium	53	38.84	38.08	38.49	**38.47**	0.3777	0.9818
Copper	63	14.92	14.7	15.18	**14.93**	0.2409	1.613
Copper	65	14.85	15.05	14.6	**14.83**	0.2248	1.516
Lead	206	15.37	15.58	15.18	**15.38**	0.2	1.301
Lead	207	15.8	15.51	15.24	**15.52**	0.2808	1.81
Lead	208	15.88	15.77	15.28	**15.64**	0.3189	2.038
Molybdenum	95	5.986	6.174	6.095	**6.085**	0.0941	1.546
Molybdenum	97	5.965	6.183	6.116	**6.088**	0.1116	1.833
Molybdenum	98	5.82	6.088	5.996	**5.968**	0.1362	2.282
Nickel	60	18.93	18.83	18.38	**18.71**	0.2908	1.554
Nickel	62	18.56	18.41	18.51	**18.49**	0.0797	0.4309
Selenium	77	18.78	17.39	17.14	**17.77**	0.8874	4.994
Selenium	78	17.11	17.55	17.48	**17.38**	0.2395	1.378
Selenium	82	18.04	17.79	18.37	**18.07**	0.2887	1.598
Zinc	66	93.46	92.77	91.92	**92.72**	0.7722	0.8329
Zinc	67	88.72	91.32	89.22	**89.75**	1.377	1.535
Zinc	68	92.67	91.83	90.82	**91.78**	0.9284	1.012

Internal Standard Factors:

Scandium	45	1.338	1.349	1.359	**1.338**	n/a	n/a
Gallium	71	1.196	1.217	1.204	**1.196**	n/a	n/a
Rhodium	103	1.181	1.211	1.185	**1.181**	n/a	n/a
Indium	115	1.09	1.102	1.089	**1.09**	n/a	n/a
Lutetium	175	0.97	0.973	0.956	**0.97**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 10-14-08A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Greg Jasper
STARLIMS #130432

Sample Name:		K0809634-001 1/10			Mean	SD	%RSD
TimeStamp		10/14/08 11:49					
Arsenic	75	4.192	4.203	4.069	**4.155**	0.0744	1.791
Cadmium	111	0.0419	0.06	0.0513	**0.051**	0.009	17.72
Cadmium	114	0.0723	0.0874	0.0719	**0.0772**	0.0089	11.48
Chromium	52	23.8	25.7	24.67	**24.72**	0.9496	3.841
Chromium	53	24.23	26.07	25.07	**25.12**	0.9211	3.667
Copper	63	25.37	25.82	25.54	**25.58**	0.2269	0.8872
Copper	65	25.02	26.2	26.44	**25.89**	0.7582	2.928
Lead	206	3.839	3.954	3.887	**3.893**	0.0577	1.483
Lead	207	3.656	3.828	3.859	**3.781**	0.1095	2.897
Lead	208	3.783	3.905	3.873	**3.854**	0.0633	1.643
Molybdenum	95	0.2538	0.2162	0.1901	**0.22**	0.032	14.56
Molybdenum	97	0.2855	0.2434	0.208	**0.2456**	0.0388	15.8
Molybdenum	98	0.2586	0.2162	0.1981	**0.2243**	0.0311	13.85
Nickel	60	39.22	41.89	40.1	**40.4**	1.36	3.365
Nickel	62	42.12	43.44	42.97	**42.84**	0.667	1.557
Selenium	77	0.5078	0.7423	0.6244	**0.6248**	0.1172	18.76
Selenium	78	-1.513	-1.487	-1.362	**-1.454**	0.0803	5.525
Selenium	82	0.3723	0.3532	0.0934	**0.273**	0.1558	57.07
Zinc	66	40.11	42.39	41.86	**41.45**	1.197	2.888
Zinc	67	42.25	45.08	43.3	**43.54**	1.43	3.284
Zinc	68	40.64	43.03	41.96	**41.88**	1.194	2.851

Internal Standard Factors:

Scandium	45	1.113	1.183	1.18	**1.113**	n/a	n/a
Gallium	71	1.111	1.16	1.169	**1.111**	n/a	n/a
Rhodium	103	1.279	1.341	1.373	**1.279**	n/a	n/a
Indium	115	1.172	1.226	1.238	**1.172**	n/a	n/a
Lutetium	175	1.028	1.045	1.054	**1.028**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 10-14-08A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Greg Jasper
STARLIMS #130432

Sample Name:		K0809634-001 1/10 +50A			Mean	SD	%RSD
TimeStamp		10/14/08 11:53					
Arsenic	75	51.03	52.53	52.95	**52.17**	1.008	1.932
Cadmium	111	53.15	57.77	56.99	**55.97**	2.473	4.419
Cadmium	114	53.72	57.02	56.44	**55.73**	1.76	3.158
Chromium	52	67.18	69.96	71.42	**69.52**	2.15	3.093
Chromium	53	67.38	71.13	71.29	**69.93**	2.211	3.162
Copper	63	68.43	70.96	71.19	**70.19**	1.533	2.185
Copper	65	68.4	71.88	71.99	**70.76**	2.038	2.88
Lead	206	58.12	60.38	58.84	**59.12**	1.152	1.949
Lead	207	59.05	60.67	59.25	**59.66**	0.8839	1.482
Lead	208	58.7	60.07	59.73	**59.5**	0.7112	1.195
Molybdenum	95	54.76	57.59	57.6	**56.65**	1.635	2.887
Molybdenum	97	54.97	58.8	58.72	**57.49**	2.186	3.803
Molybdenum	98	55.34	57.52	58.1	**56.99**	1.455	2.553
Nickel	60	82.9	84.35	89.88	**85.71**	3.683	4.297
Nickel	62	85.23	87.78	92.23	**88.41**	3.542	4.006
Selenium	77	51.66	52.08	53.2	**52.31**	0.7955	1.521
Selenium	78	51.35	53.48	53.61	**52.81**	1.271	2.406
Selenium	82	53.25	56.1	56.79	**55.38**	1.878	3.391
Zinc	66	82.84	84.94	86.59	**84.79**	1.882	2.22
Zinc	67	83.79	85.54	89.41	**86.24**	2.876	3.335
Zinc	68	84.05	85.83	86.89	**85.59**	1.435	1.677

Internal Standard Factors:

Scandium	45	1.15	1.179	1.234	**1.15**	n/a	n/a
Gallium	71	1.191	1.208	1.237	**1.191**	n/a	n/a
Rhodium	103	1.379	1.435	1.443	**1.379**	n/a	n/a
Indium	115	1.246	1.302	1.3	**1.246**	n/a	n/a
Lutetium	175	1.11	1.093	1.093	**1.11**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 10-14-08A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Greg Jasper
STARLIMS #130432

Sample Name:		K0809634-001 1/10D			Mean	SD	%RSD
TimeStamp		10/14/08 11:56					
Arsenic	75	3.967	4.053	4.006	**4.009**	0.0432	1.078
Cadmium	111	0.0765	0.0668	0.0656	**0.0696**	0.006	8.623
Cadmium	114	0.087	0.0892	0.0762	**0.0841**	0.0069	8.26
Chromium	52	25.28	26.14	26.24	**25.89**	0.5272	2.036
Chromium	53	25.41	26.31	26.84	**26.18**	0.7212	2.754
Copper	63	26.22	26.44	26.12	**26.26**	0.1609	0.6126
Copper	65	26.49	26.26	25.92	**26.22**	0.2873	1.095
Lead	206	3.881	3.96	3.974	**3.938**	0.0498	1.266
Lead	207	3.875	3.855	3.826	**3.852**	0.0248	0.6428
Lead	208	3.878	3.924	3.933	**3.911**	0.0295	0.7532
Molybdenum	95	0.4785	0.3276	0.2461	**0.3507**	0.1179	33.62
Molybdenum	97	0.4378	0.323	0.2916	**0.3508**	0.077	21.95
Molybdenum	98	0.4698	0.3061	0.2535	**0.3432**	0.1128	32.87
Nickel	60	39.57	39.87	41.4	**40.28**	0.9809	2.435
Nickel	62	42.57	42.7	45.03	**43.43**	1.383	3.184
Selenium	77	0.6663	0.5146	0.6938	**0.6249**	0.0965	15.44
Selenium	78	-1.502	-1.609	-1.704	**-1.605**	0.101	6.294
Selenium	82	0.203	0.6473	0.4617	**0.4373**	0.2232	51.03
Zinc	66	42.33	42.13	42.02	**42.16**	0.1567	0.3716
Zinc	67	44.25	43.77	45.05	**44.35**	0.6489	1.463
Zinc	68	41.2	41.54	42.46	**41.73**	0.6552	1.57

Internal Standard Factors:

Scandium	45	1.18	1.233	1.273	**1.18**	n/a	n/a
Gallium	71	1.199	1.214	1.252	**1.199**	n/a	n/a
Rhodium	103	1.39	1.435	1.456	**1.39**	n/a	n/a
Indium	115	1.295	1.333	1.331	**1.295**	n/a	n/a
Lutetium	175	1.086	1.096	1.102	**1.086**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 10-14-08A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Greg Jasper
STARLIMS #130432

Sample Name:		K0809634-001 1/50L			Mean	SD	%RSD
TimeStamp		10/14/08 12:00					
Arsenic	75	1.091	1.059	1.026	**1.058**	0.0325	3.066
Cadmium	111	0.0089	0.0104	0.0109	**0.0101**	0.001	10.33
Cadmium	114	0.0105	0.0194	0.0159	**0.0153**	0.0045	29.52
Chromium	52	5.605	6.067	6.265	**5.979**	0.3384	5.661
Chromium	53	5.758	6.048	6.305	**6.037**	0.2735	4.531
Copper	63	5.933	6.356	6.478	**6.256**	0.2862	4.575
Copper	65	6.057	6.663	6.435	**6.385**	0.306	4.792
Lead	206	0.751	0.8039	0.8247	**0.7932**	0.038	4.792
Lead	207	0.733	0.797	0.7984	**0.7761**	0.0374	4.819
Lead	208	0.7563	0.8024	0.818	**0.7922**	0.0321	4.051
Molybdenum	95	0.0192	0.0177	0.0048	**0.0139**	0.0079	57.13
Molybdenum	97	0.0217	0.0249	0.0112	**0.0192**	0.0072	37.24
Molybdenum	98	0.0114	0.0184	0.0089	**0.0129**	0.0049	38.03
Nickel	60	9.566	10.06	10.43	**10.02**	0.4317	4.31
Nickel	62	9.756	10.21	10.88	**10.28**	0.5644	5.489
Selenium	77	-0.3084	0.0633	0.1088	**-0.0454**	0.2288	503.8
Selenium	78	-1.249	-1.029	-0.9257	**-1.068**	0.1651	15.46
Selenium	82	0.2032	0.0715	0.1503	**0.1417**	0.0663	46.77
Zinc	66	10.29	10.8	10.71	**10.6**	0.273	2.577
Zinc	67	10.86	10.82	10.97	**10.88**	0.079	0.7257
Zinc	68	10.09	10.77	10.8	**10.55**	0.404	3.829

Internal Standard Factors:

Scandium	45	1.311	1.36	1.405	**1.311**	n/a	n/a
Gallium	71	1.216	1.276	1.274	**1.216**	n/a	n/a
Rhodium	103	1.242	1.288	1.288	**1.242**	n/a	n/a
Indium	115	1.138	1.194	1.198	**1.138**	n/a	n/a
Lutetium	175	0.97	1.033	1.038	**0.97**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 10-14-08A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Greg Jasper
STARLIMS #130432

Sample Name:		CCV3			Mean	SD	%RSD
TimeStamp		10/14/08 12:03					
Arsenic	75	23.78	24.32	24.41	**24.17**	0.3395	1.405
Cadmium	111	24.9	25.04	24.98	**24.97**	0.0728	0.2915
Cadmium	114	24.74	25.6	25.61	**25.32**	0.5027	1.986
Chromium	52	24.49	25.58	25.04	**25.04**	0.5435	2.171
Chromium	53	24.39	25.53	24.93	**24.95**	0.5701	2.285
Copper	63	23.86	24.46	24.76	**24.36**	0.4551	1.869
Copper	65	24.35	24.97	24.67	**24.66**	0.3097	1.256
Lead	206	24.27	24.97	25.04	**24.76**	0.4282	1.73
Lead	207	24.6	25.24	25.32	**25.05**	0.3946	1.575
Lead	208	24.45	25.5	25.31	**25.08**	0.557	2.221
Molybdenum	95	24.28	25.21	25.23	**24.91**	0.546	2.192
Molybdenum	97	24.21	24.79	25.61	**24.87**	0.7041	2.831
Molybdenum	98	24.53	25.08	25.2	**24.94**	0.3575	1.434
Nickel	60	23.57	25.39	25.09	**24.69**	0.9739	3.945
Nickel	62	24.69	25.23	25.55	**25.16**	0.4334	1.723
Selenium	77	24.11	25.39	24.64	**24.71**	0.6442	2.607
Selenium	78	22.81	24.04	24.57	**23.81**	0.9057	3.804
Selenium	82	24.22	24.94	24.58	**24.58**	0.3631	1.477
Zinc	66	24.57	26.08	25.74	**25.46**	0.7908	3.106
Zinc	67	23.83	25.91	24.88	**24.87**	1.039	4.178
Zinc	68	24.47	25.2	25.05	**24.91**	0.3851	1.546

Internal Standard Factors:

Scandium	45	1.319	1.383	1.331	**1.319**	n/a	n/a
Gallium	71	1.233	1.269	1.255	**1.233**	n/a	n/a
Rhodium	103	1.219	1.226	1.213	**1.219**	n/a	n/a
Indium	115	1.128	1.147	1.132	**1.128**	n/a	n/a
Lutetium	175	0.989	1.016	1.009	**0.989**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 10-14-08A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Greg Jasper
STARLIMS #130432

Sample Name:		CCB3			Mean	SD	%RSD
TimeStamp		10/14/08 12:06					
Arsenic	75	0.0685	0.0677	-0.0072	**0.043**	0.0435	101.1
Cadmium	111	0.0088	0.0132	0.0135	**0.0118**	0.0026	22.07
Cadmium	114	0.0051	0.0033	0.0069	**0.0051**	0.0018	35.01
Chromium	52	-0.058	-0.0491	-0.0124	**-0.0398**	0.0242	60.59
Chromium	53	-0.063	-0.0736	-0.0754	**-0.0707**	0.0067	9.502
Copper	63	0.0015	0.0135	0.0246	**0.0132**	0.0115	87.25
Copper	65	0.0013	-0.0079	0.0087	**0.0007**	0.0083	1157
Lead	206	0.0052	0.0043	0.0092	**0.0062**	0.0026	41.79
Lead	207	0.0025	0.0119	0.0021	**0.0055**	0.0056	101.4
Lead	208	0.0051	0.0059	0.0069	**0.006**	0.0009	15.01
Molybdenum	95	0.0999	0.0392	0.0203	**0.0531**	0.0416	78.31
Molybdenum	97	0.1005	0.045	0.0252	**0.0569**	0.039	68.56
Molybdenum	98	0.1073	0.03	0.0116	**0.0496**	0.0508	102.3
Nickel	60	-0.0065	0.0387	0.0513	**0.0278**	0.0304	109.1
Nickel	62	0.0653	-0.019	0.0485	**0.0316**	0.0446	141.1
Selenium	77	-0.1094	-0.1123	-0.0551	**-0.0923**	0.0322	34.91
Selenium	78	-0.6767	-0.5958	-0.6149	**-0.6291**	0.0423	6.722
Selenium	82	0.1447	0.1177	-0.0827	**0.0599**	0.1242	207.5
Zinc	66	0.1382	0.1347	0.1261	**0.133**	0.0062	4.664
Zinc	67	0.1194	0.1221	0.0481	**0.0965**	0.0419	43.44
Zinc	68	0.1215	0.1434	0.1186	**0.1278**	0.0136	10.63

Internal Standard Factors:

Scandium	45	1.262	1.289	1.336	**1.262**	n/a	n/a
Gallium	71	1.177	1.19	1.187	**1.177**	n/a	n/a
Rhodium	103	1.148	1.141	1.148	**1.148**	n/a	n/a
Indium	115	1.076	1.08	1.108	**1.076**	n/a	n/a
Lutetium	175	0.974	0.989	0.974	**0.974**	n/a	n/a

Service Request # K0808300 (HCL Digest)__
Calibration _____111308B_____
QC in calibration__111308B_____
QC Service Request # K0808300_____
Analytical Batch # 130382_____

ICP-MS Data Review Form

	Yes	No	NA
1. Appropriate standardization completed	X		
2. ICV within 10 % of true value	X		
3. CCV's in control	X		
4. CCB's and/or ICB's below MRL	X		
5. Method blank below MRL	X		
6. LCS in control	X		
7. Spike and duplicate in control	X		
8. All analytes within instrument linear range	X		
9. Adequate rinse out time allowed	X		
10. Internal standards in control	X		
11. Interferences checked	X		
12. Se over MRL			X
13. CRA run	X		
14. ICSA and ICSAB in control	X		
15. Serial dilution run	X		
16. Post spike in control	X		

Comments: Report Ag-109.

Primary Review by _____ Date 10/14/06
Secondary Review by _____ Date 10/14/06
R:\icp\misc\data review forms\PQ ExCell review form

Sample List

Num	Label	Type	Weight	Volume	Dilution	Rack	Row	Column	Height
1	Cal. Blk	Blank	0 kg	0 ml	1.00	0	1	1	150
2	Cal. Stn	Fully Quant Standard	0 kg	0 ml	1.00	0	1	2	150
3	ICV1	Unknown	0 kg	0 ml	1.00	0	1	3	150
4	CCV1	Unknown	0 kg	0 ml	1.00	0	1	2	150
5	ICB1	Unknown	0 kg	0 ml	1.00	0	1	1	150
6	CCB1	Unknown	0 kg	0 ml	1.00	0	1	1	150
7	SOIL CRA	Unknown	0 kg	0 ml	1.00	0	1	4	150
8	ICSA	Unknown	0 kg	0 ml	1.00	0	1	5	150
9	ICSAB	Unknown	0 kg	0 ml	1.00	0	1	6	150
10	K0809634-MB 1/5	Unknown	0 kg	0 ml	1.00	1	1	1	150
11	LCSS K0809634 1/50	Unknown	0 kg	0 ml	1.00	1	1	2	150
12	K0809634-001 1/5	Unknown	0 kg	0 ml	1.00	1	1	3	150
13	K0809634-001 1/5D	Unknown	0 kg	0 ml	1.00	1	1	4	150
14	K0809634-001 1/25L	Unknown	0 kg	0 ml	1.00	1	1	5	150
15	K0809634-001 1/5	Unknown	0 kg	0 ml	1.00	1	1	6	150
16	±50Δ K0809634-001 1/25S	Unknown	0 kg	0 ml	1.00	1	1	7	150
17	CCV2	Unknown	0 kg	0 ml	1.00	0	1	2	150
18	CCB2	Unknown	0 kg	0 ml	1.00	0	1	1	150
19	K0809634-002 1/5	Unknown	0 kg	0 ml	1.00	1	1	8	150
20	K0809086-001 1/5	Unknown	0 kg	0 ml	1.00	1	1	9	150
21	K0809086-002 1/5	Unknown	0 kg	0 ml	1.00	1	1	10	150
22	K0809086-003 1/5	Unknown	0 kg	0 ml	1.00	1	1	11	150
23	K0809086-004 1/5	Unknown	0 kg	0 ml	1.00	1	1	12	150
24	K0809086-005 1/5	Unknown	0 kg	0 ml	1.00	1	2	1	150
25	K0809086-005 1/5D	Unknown	0 kg	0 ml	1.00	1	2	2	150
26	K0809086-005 1/25S	Unknown	0 kg	0 ml	1.00	1	2	3	150
27	K0809086-008 1/5	Unknown	0 kg	0 ml	1.00	1	2	4	150
28	K0809086-010 1/5	Unknown	0 kg	0 ml	1.00	1	2	5	150
29	CCV3	Unknown	0 kg	0 ml	1.00	0	1	2	150
30	CCB3	Unknown	0 kg	0 ml	1.00	0	1	1	150
31	K0809086-011 1/5	Unknown	0 kg	0 ml	1.00	1	2	6	150
32	K0809086-014 1/5	Unknown	0 kg	0 ml	1.00	1	2	7	150
33	K0809086-015 1/5	Unknown	0 kg	0 ml	1.00	1	2	8	150
34	K0809086-016 1/5	Unknown	0 kg	0 ml	1.00	1	2	9	150
35	K0808300-MB 1/5	Unknown	0 kg	0 ml	1.00	1	2	10	150
36	LCSS K0808300 1/50	Unknown	0 kg	0 ml	1.00	1	2	11	150
37	K0808300-003 1/5	Unknown	0 kg	0 ml	1.00	1	2	12	150
38	K0808300-003 1/5D	Unknown	0 kg	0 ml	1.00	1	3	1	150
39	K0808300-003 1/25L	Unknown	0 kg	0 ml	1.00	1	3	2	150
40	K0808300-003 1/5	Unknown	0 kg	0 ml	1.00	1	3	3	150
41	±50Δ CCV4	Unknown	0 kg	0 ml	1.00	0	1	2	150
42	CCB4	Unknown	0 kg	0 ml	1.00	0	1	1	150
43	K0808300-003 1/25S	Unknown	0 kg	0 ml	1.00	1	3	4	150
44	K0809094-MB 1/5	Unknown	0 kg	0 ml	1.00	1	3	5	150
45	LCSW K0809094 1/100	Unknown	0 kg	0 ml	1.00	1	3	6	150
46	K0809094-008 1/5	Unknown	0 kg	0 ml	1.00	1	3	7	150
47	K0809094-008 1/5D	Unknown	0 kg	0 ml	1.00	1	3	8	150
48	K0809094-008 1/5S	Unknown	0 kg	0 ml	1.00	1	3	9	150
49	K0809094-001 1/5	Unknown	0 kg	0 ml	1.00	1	3	10	150

50	K0809094-002 1/5	Unknown	0 kg	0 ml	1.00	1	3	11	150
51	K0809094-003 1/5	Unknown	0 kg	0 ml	1.00	1	3	12	150
52	K0809094-004 1/5	Unknown	0 kg	0 ml	1.00	1	4	1	150
53	CCV5	Unknown	0 kg	0 ml	1.00	0	1	2	150
54	CCB5	Unknown	0 kg	0 ml	1.00	0	1	1	150
55	K0809094-005 1/5	Unknown	0 kg	0 ml	1.00	1	4	2	150
56	K0809094-006 1/5	Unknown	0 kg	0 ml	1.00	1	4	3	150
57	K0809094-007 1/5	Unknown	0 kg	0 ml	1.00	1	4	4	150
58	K0809184-MB 1/5	Unknown	0 kg	0 ml	1.00	1	4	5	150
59	LCSS K0809184 1/50	Unknown	0 kg	0 ml	1.00	1	4	6	150
60	K0809184-004 1/5	Unknown	0 kg	0 ml	1.00	1	4	7	150
61	K0809184-004 1/5D	Unknown	0 kg	0 ml	1.00	1	4	8	150
62	K0809184-004 1/25L	Unknown	0 kg	0 ml	1.00	1	4	9	150
63	K0809184-004 1/5	Unknown	0 kg	0 ml	1.00	1	4	10	150
64	K0809184-004 1/25S	Unknown	0 kg	0 ml	1.00	1	4	11	150
65	CCV6	Unknown	0 kg	0 ml	1.00	0	1	2	150
66	CCB6	Unknown	0 kg	0 ml	1.00	0	1	1	150
67	K0809184-001 1/5	Unknown	0 kg	0 ml	1.00	1	4	12	150
68	K0809184-002 1/5	Unknown	0 kg	0 ml	1.00	1	5	1	150
69	K0809184-003 1/5	Unknown	0 kg	0 ml	1.00	1	5	2	150
70	K0809184-005 1/5	Unknown	0 kg	0 ml	1.00	1	5	3	150
71	K0808965-001 1/5	Unknown	0 kg	0 ml	1.00	1	5	4	150
72	K0808965-001 1/5D	Unknown	0 kg	0 ml	1.00	1	5	5	150
73	K0808965-002 1/5	Unknown	0 kg	0 ml	1.00	1	5	6	150
74	K0808965-002 1/25S5	Unknown	0 kg	0 ml	1.00	1	5	7	150
75	K0808965-003 1/5	Unknown	0 kg	0 ml	1.00	1	5	8	150
76	K0808965-004 1/5	Unknown	0 kg	0 ml	1.00	1	5	9	150
77	CCV7	Unknown	0 kg	0 ml	1.00	0	1	2	150
78	CCB7	Unknown	0 kg	0 ml	1.00	0	1	1	150
79	K0808965-005 1/5	Unknown	0 kg	0 ml	1.00	1	5	10	150
80	K0808965-006 1/5	Unknown	0 kg	0 ml	1.00	1	5	11	150
81	K0808965-007 1/5	Unknown	0 kg	0 ml	1.00	1	5	12	150
82	K0808965-008 1/5	Unknown	0 kg	0 ml	1.00	2	1	1	150
83	CCV8	Unknown	0 kg	0 ml	1.00	0	1	2	150
84	CCB8	Unknown	0 kg	0 ml	1.00	0	1	1	150

Instrument Setup - Configurations

Configuration Name - acqmet11
Description - PQExcell CCT Sim Default
Date - 19:27:02 10/13/08
Maximum Uptake Time - 0
Maximum Washout Time - 0
S-Option Pump Running - No
Plasma Screen Forward - No
Makeup Gas On - No
Use CCT - No
Use Accessory Gas - No

Setting	Value
Extraction	-550.00
Lens1	6.50
Lens2	-18.50
Lens3	8.00
Pole Bias	5.00
Sampling Depth	345.00
Horizontal	-50.00
Vertical	20.00
Cool	13.00
Auxiliary	1.00
Nebuliser	0.76
Forward power	1,350.00
HT1 Voltage	1,900.00
HT2 Voltage	2,600.00
D1	-33.00
Focus	12.00

Configuration Name - acqmet11
Description - PQExcell CCT Sim Default
Date - 19:27:02 10/13/08
Maximum Uptake Time - 0
Maximum Washout Time - 0
S-Option Pump Running - No
Plasma Screen Forward - No
Makeup Gas On - No
Use CCT - No
Use Accessory Gas - No

Setting	Value
Extraction	-550.00
Lens1	6.50
Lens2	-18.50
Lens3	8.00
Pole Bias	5.00
Sampling Depth	345.00
Horizontal	-50.00
Vertical	20.00
Cool	13.00
Auxiliary	1.00

ExCell Mass Calibration

Date: 10/13/2008

Mass	Mass DAC	Peak Width (AMU)	Error (AMU)	Include
6.015	1324	0.718	-0.061	TRUE
7.016	1584	0.718	-0.037	TRUE
23.985	5915	0.666	0.065	TRUE
26.982	6663	0.717	0.017	TRUE
43.956	10977	0.768	0.038	TRUE
45.953	11484	0.563	0.037	TRUE
51.94	12992	0.768	-0.011	TRUE
53.949	13506	0.819	0.004	TRUE
55.935	14013	0.819	0.015	TRUE
56.935	14266	0.768	0.011	TRUE
57.934	14520	0.819	0.012	TRUE
58.933	14767	0.819	-0.015	TRUE
59.931	15020	0.768	-0.016	TRUE
63.929	16034	0.768	-0.022	TRUE
75.92	19089	0.87	0.011	TRUE
114.904	28993	0.92	-0.016	TRUE
128.905	32555	0.817	-0.016	TRUE
135.906	34336	0.919	-0.019	TRUE
136.906	34596	0.919	0.003	TRUE
137.906	34849	0.868	-0.003	TRUE
139.905	35356	0.868	-0.011	TRUE
141.908	35863	0.868	-0.022	TRUE
202.972	51424	0.867	-0.003	TRUE
204.972	51944	0.867	0.037	TRUE
205.974	52191	0.867	0.003	TRUE
206.976	52451	0.867	0.022	TRUE
207.977	52698	0.867	-0.01	TRUE
208.98	52958	0.867	0.005	TRUE
238.051	60368	0.866	-0.017	TRUE

Excluded In Calib | Excluded In Results | Peak Run Excluded | Multi Element | Semi Quant | Internal Standard | Standard Addition

Uncorrected ICPS Per Mass

S-Calibration Has Edited Standard
F-Interference Correction Failed
E-Calibration Edited
T-Tripped
I-Invalid Calibration
P-Pulse Counting
V-Valley Integration Failed
M-Result Over Max

Run	Label	TimeStamp	5Bkg	7Li	9Be	59Co	115In	208Pb
1	Stability 10/13/08	10/13/2008 7:47:24 A	(P)0.500	(P)8908.946	(P)1704.268	(P)23306.998	(P)49668.362	(P)21709.151
2	Stability 10/13/08	10/13/2008 7:48:27 A	(P)0.833	(P)8818.389	(P)1699.768	(P)22929.057	(P)49065.450	(P)21454.766
3	Stability 10/13/08	10/13/2008 7:49:29 A	(P)0.333	(P)8460.507	(P)1633.093	(P)23133.048	(P)49967.233	(P)22387.361
4	Stability 10/13/08	10/13/2008 7:50:31 A	(P)0.167	(P)8020.252	(P)1586.421	(P)22202.574	(P)48980.492	(P)22219.099
5	Stability 10/13/08	10/13/2008 7:51:33 A	(P)0.167	(P)8961.978	(P)1727.104	(P)21794.948	(P)46788.834	(P)20550.271
	Mean of Stability 10/	10/13/2008 7:47:24 A	(P)0.400	(P)8634.014	(P)1670.131	(P)22673.325	(P)48894.074	(P)21664.130
	SD of Stability 10/13/0		(P)0.279	(P)394.953	(P)58.457	(P)646.421	(P)1247.003	(P)727.598
	%RSD of Stability 10		(P)69.722	(P)4.574	(P)3.500	(P)2.851	(P)2.550	(P)3.359

Run	Label	TimeStamp	209Bi	220Bkg	238U
1	Stability 10/13/08	10/13/2008 7:47:24 A	(P)30833.071	(P)0.000	(P)35553.705
2	Stability 10/13/08	10/13/2008 7:48:27 A	(P)30376.595	(P)0.000	(P)34597.690
3	Stability 10/13/08	10/13/2008 7:49:29 A	(P)31675.247	(P)0.167	(P)36789.494
4	Stability 10/13/08	10/13/2008 7:50:31 A	(P)31589.055	(P)0.000	(P)36423.219
5	Stability 10/13/08	10/13/2008 7:51:33 A	(P)29704.184	(P)0.000	(P)33799.613
	Mean of Stability 10/	10/13/2008 7:47:24 A	(P)30835.631	(P)0.033	(P)35432.744
	SD of Stability 10/13/0		(P)831.188	(P)0.075	(P)1245.078
	%RSD of Stability 10		(P)2.696	(P)223.607	(P)3.514

1317 South 13th Avenue Kelso, Washington 98626 (360) 577-7222 (360) 636-1068 fax

Columbia Analytical Services INC
An Employee - Owned Company

November 13, 2008 Analytical Report for Service Request No: K0810000

Victoria England
GeoEngineers, Inc.
600 Stewart St.
Suite 1700
Seattle, WA 98101

RE: Dakota Creek Conformation Samples/5147-006-04

Dear Victoria:

Enclosed are the results of the samples submitted to our laboratory on October 10, 2008. For your reference, these analyses have been assigned our service request number K0810000.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.caslab.com. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please call if you have any questions. My extension is 3376. You may also contact me via Email at GSalata@caslab.com.

Respectfully submitted,

Columbia Analytical Services, Inc.

Gregory Salata, Ph.D.
Project Chemist

GS/lb

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
U	The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
i	The MRL/MDL has been elevated due to a matrix interference.
X	See case narrative.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
B	The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL has been elevated due to a matrix interference.
X	See case narrative.
*	The duplicate analysis not within control limits. See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results (25% for CLP Pesticides).
U	The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
i	The MRL/MDL has been elevated due to a chromatographic interference.
X	See case narrative.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

Columbia Analytical Services, Inc.
Kelso, WA
State Certifications, Accreditations, and Licenses

Program	Number
Alaska DEC UST	UST-040
Arizona DHS	AZ0339
Arkansas - DEQ	88-0637
California DHS	2286
Colorado DPHE	-
Florida DOH	E87412
Hawaii DOH	-
Idaho DHW	-
Indiana DOH	C-WA-01
Louisiana DEQ	3016
Louisiana DHH	LA050010
Maine DHS	WA0035
Michigan DEQ	9949
Minnesota DOH	053-999-368
Montana DPHHS	CERT0047
Nevada DEP	WA35
New Jersey DEP	WA005
New Mexico ED	-
North Carolina DWQ	605
Oklahoma DEQ	9801
Oregon - DHS	WA200001
South Carolina DHEC	61002
Utah DOH	COLU
Washington DOE	C1203
Wisconsin DNR	998386840
Wyoming (EPA Region 8)	-

Case Narrative

COLUMBIA ANALYTICAL SERVICES, INC.

Client:	GeoEngineers, Inc.	**Service Request No.:**	K0810000
Project:	Dakota Creek Confirmation Samples/5147-006-04	**Date Received:**	10/10/08
Sample Matrix:	Soil		

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier III validation deliverables including summary forms and all of the associated raw data for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

One soil sample was received for analysis at Columbia Analytical Services on 10/10/08. The sample was received in good condition and consistent with the accompanying chain of custody form. The sample was stored in a refrigerator at 4°C upon receipt at the laboratory. At the request of the client, a duplicate analysis was requested under the sample ID DCI 4-1a.

General Chemistry Parameters

No anomalies associated with the analysis of these samples were observed.

Total Metals

No anomalies associated with the analysis of these samples were observed.

PCB Aroclors by EPA Method 8082

Elevated Method Reporting Limits:
The MDL is elevated for several Aroclors in sample Method Blank KWG0811356-4. The chromatogram indicated the presence of non-target background components, which were apparently introduced as laboratory artifacts. The contamination prevented adequate resolution of the target compounds at the MDL. Note the level of background was relatively low compared to the MDL, so the affect on the results was minimal. The results are flagged to indicate the problem.

No other anomalies associated with the analysis of these samples were observed.

Semivolatile Organic Compounds by EPA Method 8270C

No anomalies associated with the analysis of these samples were observed.

Polynuclear Aromatic Hydrocarbons by EPA Method 8270C

Initial Calibration (ICAL) Exceptions:
The primary evaluation criterion was exceeded for Indeno(1,2,3-cd)pyrene and Dibenz(a,h)anthracene in ICAL ID CAL7814. In accordance with CAS standard operating procedures, the alternative evaluation specified in the EPA method was performed using the mean Relative Standard Deviation (RSD) of all analytes in the calibration. The result of the mean RSD calculation was 9.8%. The calibration meets the alternative evaluation criteria. Note that CAS/Kelso policy does not allow the use of averaging if any analyte in the ICAL exceeds 30% RSD.

No other anomalies associated with the analysis of these samples were observed.

Approved by _____ **Date** 11/17/08

Chain of Custody Documentation

K0810000

CHAIN OF CUSTODY RECORD

GEOENGINEERS, INC.
8410 154TH AVENUE N.E.
REDMOND, WASHINGTON 98052
(425) 861-6000

GeoEngineers

DATE 10/9/2008
PAGE 1 OF 1
LAB Columbia Analytical
LAB NO.

PROJECT NAME/LOCATION Dakota Creek Contaminated Sediments
PROJECT NUMBER 5147-006-04
PROJECT MANAGER John Herzog
SAMPLED BY John Herzog

SAMPLE IDENTIFICATION		SAMPLE COLLECTION			# OF	ANALYSIS REQUIRED											NOTES/COMMENTS
LAB	GEOENGINEERS	DATE	TIME	MATRIX	JARS	Semivolatile Organics by GCMS 8270	PCB Aroclors	PAH SIM	Sediment Mngmt Standards (listed below)	TOC							(Preserved, filtered, etc.)
	DCI4-1	10/9/2008	12:00	Sediment	2	X	X	X	X	X							

RELINQUISHED BY	FIRM	RELINQUISHED BY	FIRM	RELINQUISHED BY	FIRM
SIGNATURE	GEO	SIGNATURE		SIGNATURE	
PRINTED NAME JOHN HERZOG		PRINTED NAME		PRINTED NAME	
DATE 10/9/2008 TIME 9:50		DATE TIME		DATE TIME	
RECEIVED BY	**FIRM**	**RECEIVED BY**	**FIRM**	**RECEIVED BY**	**FIRM**
SIGNATURE		SIGNATURE		SIGNATURE	
PRINTED NAME		PRINTED NAME		PRINTED NAME	
DATE TIME		DATE TIME		DATE TIME	

ADDITIONAL COMMENTS: Sediment Mangent Standards Metals: As, Cd, Cr, Cu, Pb, Ag, Zn, Hg

* Rush Turnaround - 2-weeks as discussed with Lab *

Columbia Analytical Services, Inc.
Cooler Receipt and Preservation Form

PC P.D

lient / Project: GeoEngineers Service Request K08 1000

eceived: 10/10/08 Opened: 10/10/08 By: BT

Samples were received via? *US Mail* *Fed Ex* *UPS* *DHL* *GH* *GS* *PDX* *Courier* ~~*Hand Delivered*~~

Samples were received in: (circle) *Cooler* *Box* *Envelope* *Other* _____ *NA*

Were custody seals on coolers? NA Y N If yes, how many and where? _____

If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Is shipper's air-bill filed? If not, record air-bill number: NA Y N

Temperature of cooler(s) upon receipt (°C): 2.2

Temperature Blank (°C): N/A

If applicable, list Chain of Custody Numbers:

Packing material used. *Inserts* *Baggies* ~~*Bubble Wrap*~~ *Gel Packs* *Wet Ice* *Sleeves* *Other* _____

Were custody papers properly filled out (ink, signed, etc.)?	NA	Y	N
Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.*	NA	Y	N
Were all sample labels complete (i.e analysis, preservation, etc.)?	NA	Y	N
Did all sample labels and tags agree with custody papers? *Indicate in the table below*	NA	Y	N
Were appropriate bottles/containers and volumes received for the tests indicated?	NA	~~Y~~	N *
Were the pH-preserved bottles tested* received at the appropriate pH? *Indicate in the table below*	~~NA~~	Y	N
Were VOA vials and 1631 Mercury bottles received without headspace? *Indicate in the table below.*	NA	Y	N
Are CWA Microbiology samples received with >1/2 the 24hr. hold time remaining from collection?	NA	Y	N
Was C12/Res negative?	NA	Y	N

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC
* SMA 4-1	DC1 4-1		
" "	" "		

Sample ID	Bottle Count	Bottle Type	Out of Temp	Head-space	Broken	pH	Reagent	Volume added	Reagent Lot Number	Initials

oes not include all pH preserved sample aliquots received. See sample receiving SOP (SMO-GEN).

dditional Notes, Discrepancies, & Resolutions: _____

Total Solids

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	GeoEngineers, Inc.	**Service Request:**	K0810000
Project:	Dakota Creek Conform/5147-006-04		
Sample Matrix:	Soil		

Total Solids

Prep Method:	NONE	**Units:**	PERCENT
Analysis Method:	160.3M	**Basis:**	Wet
Test Notes:			

Sample Name	Lab Code	Date Collected	Date Received	Date Analyzed	Result	Result Notes
DCI 4-1	K0810000-001	10/09/2008	10/10/2008	10/13/2008	86.7	
DCI 4-1a	K0810000-002	10/09/2008	10/10/2008	10/13/2008	85.7	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	GeoEngineers, Inc.	**Service Request:**	K0810000
Project:	Dakota Creek Conform/5147-006-04	**Date Collected:**	10/09/2008
Sample Matrix:	Soil	**Date Received:**	10/10/2008
		Date Analyzed:	10/13/2008

Duplicate Sample Summary
Total Solids

Prep Method:	NONE	**Units:**	PERCENT
Analysis Method:	160.3M	**Basis:**	Wet
Test Notes:			

Sample Name	Lab Code	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
DCI 4-1	K0810000-001	86.7	86.4	86.6	<1	

COLUMBIA ANALYTICAL SERVICES, INC.

EPA Method 160.3 - Total Solids

130483

Group ID:	KWG0810891				
Analyst:	TNguyen			**Reviewed By:**	
Date Acquired:	10/13/2008 16:46	**Oven TempStart:**	104 DEG C	**Date Reviewed:**	10/15/08
Date Completed:	10/15/2008 09:28	**Oven TempEnd:**	104 DEG C		

#	Lab Code	Client ID	Matrix	Tare	Tare+Wet	Tare+Dry	% Solids	QC Ref Sample	Comments
1	K0809883-001	Wood Chips	SOLID FUEL	31.5070g	40.0560g	39.5765g	94.4		Air dry and grd
2	K0809939-001	T-1151#3 A	SOIL	29.4836g	40.8771g	40.4358g	96.1		
3	K0809939-002	T-1151#3 B	SOIL	34.0255g	45.0658g	44.5336g	95.2		
4	K0809939-003	T-1151#3 C	SOIL	36.3508g	50.7665g	50.1017g	95.4		
5	K0809939-004	T-1151#7 A	SOIL	35.5939g	45.8813g	45.4847g	96.1		
6	K0809939-005	T-1151#7 B	SOIL	33.4052g	44.7520g	44.2150g	95.3		
7	K0809939-006	T-1151#7 C	SOIL	32.4590g	44.1234g	43.5947g	95.5		
8	K0809985-001	SF-13-SE-01	SEDIMENT	1.29g	16.78g	10.96g	62.4		
9	K0809985-002	SF-10-SE-01	SEDIMENT	1.29g	14.97g	9.17g	57.6		
10	K0809985-003	SF-08-SE-01	SEDIMENT	1.28g	18.94g	12.73g	64.8		
11	K0809985-004	SF-06-SE-01	SEDIMENT	1.30g	17.09g	12.55g	71.2		
12	K0809986-001	08-FW-D-SS46-0-2	SOIL	1.29g	12.51g	11.39g	90.0		
13	K0809986-002	08-FW-D-SS45-0-2	SOIL	1.30g	13.27g	11.68g	86.7		
14	K0809986-003	08-FW-D-SS34-0-2	SOIL	1.28g	12.09g	11.01g	90.0		
15	K0809986-004	08-FW-D-SS32-0-2	SOIL	1.29g	11.90g	10.91g	90.7		
16	K0809986-005	08-FW-D-SS31-0-2	SOIL	1.30g	11.70g	10.48g	88.3		
17	K0809986-006	08-FW-D-SS30-0-2	SOIL	1.28g	12.44g	10.25g	80.4		
18	K0809986-007	08-FW-D-SS35-0-2	SOIL	1.29g	10.08g	9.12g	89.1		
19	K0809986-008	08-FW-A-SS15-0-2	SOIL	1.28g	12.38g	11.67g	93.6		
20	K0809986-009	08-FW-A-SS15-0-2B	SOIL	1.29g	14.29g	13.49g	93.8		
21	K0809986-010	08-FW-A-SS14-0-2	SOIL	1.31g	10.91g	9.65g	86.9		
22	K0809986-011	08-FW-A-SS47-0-2	SOIL	1.31g	12.22g	11.18g	90.5		
23	K0809986-012	08-FW-A-SS48-0-2	SOIL	1.31g	14.61g	13.13g	88.9		
24	K0809986-013	08-FW-A-SS33-0-2	SOIL	1.28g	13.25g	11.89g	88.6		
25	K0809986-014	08-FW-A-SS33-0-2B	SOIL	1.29g	11.32g	10.20g	88.8		
26	K0809986-015	08-FW-A-SS12-0-2	SOIL	1.28g	12.10g	11.07g	90.5		

Group ID:	KWG0810891			**Reviewed By:**	
Analyst:	TNguyen				
Date Acquired:	10/13/2008 16:46	**Oven TempStart:**	104 DEG C	**Date Reviewed:**	10/15/08
Date Completed:	10/15/2008 09:28	**Oven TempEnd:**	104 DEG C		

#	Lab Code	Client ID	Matrix	Tare	Tare+Wet	Tare+Dry	% Solids	QC Ref Sample	Comments
27	K0809986-016	08-FW-A-SS11-0-2	SOIL	1.29g	13.27g	11.44g	84.7		
28	K0809986-017	08-FW-A-SS06-0-2	SOIL	1.29g	11.28g	10.34g	90.6		
29	K0809986-018	08-FW-A-SS08-0-2	SOIL	1.30g	12.90g	11.43g	87.3		
30	K0809986-019	08-FW-A-SS07-0-2	SOIL	1.29g	15.40g	14.14g	91.1		
31	K0810000-001	DCI 4-1	SOIL	1.28g	16.86g	14.79g	86.7		
32	K0810000-002	DCI 4-1a	SOIL	1.28g	6.79g	6.00g	85.7		
33	K0810016-005	B08101040-008A	SOIL	1.29g	11.00g	6.19g	50.5		
34	K0810016-006	B08101040-009A	SOIL	1.29g	12.65g	9.48g	72.1		
35	KWG0810891-1	Duplicate Client Sample	SOIL	34.9110g	47.7151g	47.1204g	95.4	K0809939-006	
36	KWG0810891-2	Duplicate Client Sample	SOIL	1.29g	16.48g	14.42g	86.4	K0810000-001	
37	KWG0810891-3	Duplicate Client Sample	SOIL	1.28g	11.60g	10.68g	91.1	K0809986-001	
38	KWG0810891-4	Duplicate Client Sample	SOIL	1.31g	13.31g	12.01g	89.2	K0809986-003	
39	KWG0810891-5	Duplicate Client Sample	SOLID FUEL	34.7309g	44.9524g	44.3698g	94.3	K0809883-001	
40	KWG0810891-6	Duplicate Client Sample	SOIL	1.29g	11.35g	8.59g	72.6	K0810016-006	
41	KWG0810891-7	Duplicate Client Sample	SOLID	1.30g	6.11g	2.35g	21.8	P0803318-009	
42	KWG0810891-8	Duplicate Client Sample	SEDIMENT	1.30g	18.00g	12.81g	68.9	K0809985-004	
43	P0803318-003	1147091	SOLID	1.29g	9.01g	2.85g	20.2		
44	P0803318-009	1147102	SOLID	1.29g	5.85g	2.27g	21.5		

General Chemistry Parameters

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : GeoEngineers, Inc.
Project Name : Dakota Creek Conformation Samples
Project Number : 5147-006-04
Sample Matrix : SOIL

Service Request : K0810000
Date Collected : 10/09/08
Date Received : 10/10/08

Carbon, Total Organic (TOC)

Prep Method : SOP
Analysis Method : PSEP TOC
Test Notes :

Units : Percent
Basis : Dry

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Result	Result Notes
DCI 4-1	K0810000-001	0.05	0.02	1	10/13/2008	10/17/08	0.10	
DCI 4-1a	K0810000-002	0.05	0.02	1	10/14/2008	10/17/08	0.09	
Method Blank	K0810000-MB	0.05	0.02	1	NA	10/17/08	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client :	GeoEngineers, Inc.	**Service Request :**	K0810000
Project Name :	Dakota Creek Conformation Samples	**Date Collected :**	NA
Project Number :	5147-006-04	**Date Received :**	NA
Sample Matrix :	SOIL	**Date Prepared :**	NA
		Date Analyzed :	10/17/08

Matrix Spike/Duplicate Matrix Spike Summary

Sample Name :	Batch QC		Units :	Percent
Lab Code :	K0810009-001MS	K0810009-001DMS	Basis :	Dry
Test Notes :				

Analyte	Prep Method	Analysis Method	MRL	Spike Level MS	Spike Level DMS	Sample Result	Spike Result MS	Spike Result DMS	Spike Recovery MS	Spike Recovery DMS	CAS Acceptance Limits	Relative Percent Difference	Result Notes
Carbon, Total Organic (TOC)	SOP	PSEP TOC	0.05	2.52	1.73	0.30	2.75	1.90	97	92	75-114	5	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client :	GeoEngineers, Inc.	**Service Request :**	K0810000
Project Name :	Dakota Creek Conformation Samples	**Date Collected :**	NA
Project Number :	5147-006-04	**Date Received :**	NA
Sample Matrix :	SOIL	**Date Prepared :**	NA
		Date Analyzed :	10/17/08

Laboratory Control Sample Summary
Inorganic Parameters

Sample Name :	Lab Control Sample	Units :	Percent
Lab Code :	K0810000-LCS	Basis :	Dry
Test Notes :			

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Carbon, Total Organic (TOC)	SOP	PSEP TOC	0.42	0.40	95	74-123	

Report By:MKANALY

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : GeoEngineers, Inc.
Project : Dakota Creek Conformation Samples

Service Request : K0810000
Date Collected : NA
Date Received : NA

Carbon, Total Organic (TOC)
PSEP TOC
Units: Percent

CONTINUING CALIBRATION VERIFICATION (CCV)

	Date Analyzed	True Value	Measured Value	Percent Recovery
CCV1 Result	10/17/2008	20.0	18.6	93
CCV2 Result	10/17/2008	20.0	19.7	99
CCV3 Result	10/17/2008	20.0	18.7	94
CCV4 Result	10/17/2008	20.0	19.1	96

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : GeoEngineers, Inc.
Project : Dakota Creek Conformation Samples

Service Request : K0810000
Date Collected : NA
Date Received : NA

Carbon, Total Organic (TOC)
PSEP TOC
Units: Percent

CONTINUING CALIBRATION BLANK (CCB)

	Date Analyzed	MRL	Blank Value
CCB1 Result	10/17/2008	0.05	ND
CCB2 Result	10/17/2008	0.05	ND
CCB3 Result	10/17/2008	0.05	ND
CCB4 Result	10/17/2008	0.05	ND

Work Request # (Original K10009) K10000 K9392 K9845 K9297 K9348 K

Tier: III III III III III III

Date Analyzed: 10/16/08

Analyst: EJBeatley

Analysis: TOC Soil PSEP/ASTM4129

DATA QUALITY REPORT
INORGANICS

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

1.	Is the method name and number correct and appropriate?	yes/no/NA
2.	Holding times met for all analyses and for all samples?	yes/no/NA
3	Are calculations correct?	yes/no/NA
4.	Is the reporting basis correct? (Dry Weight)	yes/no/NA
5.	All quality control criteria met?	yes/no/NA
a.	Is the calibration curve correlation coefficient ≥ 0.995?	yes/no/NA
b.	MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency?	yes/no/NA
c.	Are ICVs, CCVs, and CCBs all within acceptance limits?	yes/no/NA
d.	Are results for methods blanks all ND?	yes/no/NA
e.	Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.)	yes/no/NA
f.	Are all exceptions explained?	yes/no/NA
6.	Are all service requests that apply attached?	yes/no/NA
7.	Are all samples labelled correctly?	yes/no/NA
8.	Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample)	yes/no/NA
9.	Are detection limits and units reported correctly?	yes/no/NA
10.	Are proper Analysis/Extraction stickers included on report?	yes/no/NA
11.	Is the unused space on the benchsheet crossed out?	yes/no/NA
12.	Was analysis turned in by the due date? (n-2) (If not record SR#)	yes/no/NA

K9297 K10009

COMMENTS:

K10009 = Rush

K10000 = Rush

Final Approved by: SM Date: 10/24/08

DQREPORT

Columbia Analytical Services, Inc.

#130986

Service Request #: K10009 K10000 K9392 K9845 K9297 K9348 Method: ASTM 4129
① ~~9060s~~ PSEP (Combustion/Coulometric)

Analysis For: Total Organic Carbon (TOC) Matrix: Soil / Dry Weight Basis

Sample Number	mg Sample Injected	Sample Reading, µg C	Baseline Reading, µg C	Net µg C	% Carbon	
CCV-1	8.8	1644.8	6.6	1638.2	18.6	
CCB-1	50.0	6.8	6.6	0.2	< 0.05	(<0.03)
LCS-1	53.7	219.2	6.6	212.6	0.40	
MB-1	50.0	5.7	6.6	-0.9	< 0.05	(<0.03)
K10009-1	75.8	231.2	6.6	224.6	0.30	
K10009-1d	57.5	170.6	6.6	164.0	0.29	
K10009-1t	68.3	207.2	6.6	200.6	0.29	
K10009-1ms	38.9	1075.5	6.6	1068.9	2.75	
K10009-1msd	49.8	952.3	6.6	945.7	1.90	
K10009-2	75.4	71.3	6.6	64.7	0.09	
K10009-3	49.8	114.7	6.6	108.1	0.22	
K10000-1	59.8	63.9	6.6	57.3	0.10	
CCV-2	7.5	1487.5	6.6	1480.9	19.7	
CCB-2	50.0	11.5	6.6	4.9	< 0.05	(<0.03)
K10000-2	62.8	61.1	6.6	54.5	0.09	
K9392-2	20.2	6818.4	6.6	6811.8	33.7	
K9392-5	56.1	1367.5	6.6	1360.9	2.43	
K9392-7	16.6	5787.8	6.6	5781.2	34.8	
K9845-1	9.0	1676.3	6.6	1669.7	18.6	
K9845-2	35.2	1009.1	6.6	1002.5	2.85	
K9845-3	9.0	2304.9	6.6	2298.3	25.5	
K9845-4	38.6	1420.2	6.6	1413.6	3.66	
K9845-5	12.0	4527.5	6.6	4520.9	37.7	
K9845-6	11.1	4289.5	6.6	4282.9	38.6	
CCV-3	9.8	1836.6	6.6	1830.0	18.7	
CCB-3	50.0	9.2	6.6	2.6	< 0.05	(<0.03)

Acid Purge Time: 1 minute **Reading Time:** 5 minutes **TOC % =** $\frac{\text{(Net Reading)(µg 0.1)}}{\text{mg Sample Injected}}$

CCV : Urea Baker (lot #A17584) ID#: TOCS/1-10-J TV = 20.0%C

CCV1 = 93 CCV2 = 99 CCV3= 93

LCS: ERA Cat#: 542 Lot#: D006-542 ID#: PO3/2-26-E TV = 0.42%C %REC= 94

P060

Comments : ①

K10009-1ms = 4.9mg x 20% /38.9mg =	2.52	%Rec = 97	X = 0.29	RSD <1
K10009-1msd = 4.3mg x 20% /49.8mg =	1.73	%Rec = 92		
K9297-2ms =3.4mg x 20% /29.5mg =	2.31	%Rec = 111	X = 1.76	RPD = 11
K9297-2msd =5.2mg x 20% /32.0mg =	3.25	%Rec = 102		

① QSS 10/17/08

Analyzed By: [signature]	Date: 10/16/08 Time: 1000
Reveiwed By: [signature]	Date: 10/20/08

Columbia Analytical Services, Inc.

Service Request #: K10009 K10000 K9392 K9845 K9297 K9348 Method: ① ~~9060s~~ ASTM 4129 / PSEP (Combustion/Coulometric)

Analysis For: Total Organic Carbon (TOC) Matrix: Soil / Dry Weight Basis

Sample Number	mg Sample Injected	Sample Reading, µg C	Baseline Reading, µg C	Net µg C	% Carbon
K9845-7	26.4	2464.2	6.6	2457.6	9.31
K9845-8	10.8	3390.5	6.6	3383.9	31.3
K9297-2	36.4	609.7	6.6	603.1	1.66
K9297-2d	37.0	691.4	6.6	684.8	1.85
K9297-2ms	29.5	1252.7	6.6	1246.1	4.22
K9297-2msd	32.0	1593.0	6.6	1586.4	4.96
K9297-4	62.5	110.6	6.6	104.0	0.17
K9348-2	67.0	444.6	6.6	438.0	0.65
K9348-5	70.7	722.7	6.6	716.1	1.01
CCV-4	7.2	1378.8	6.6	1372.2	19.1
CCB-4	50.0	18.9	6.6	12.3	< 0.05 (<0.03)
CCV-5					
CCB-5					

N/A

Acid Purge Time: 1 minute **Reading Time:** 5 minutes **TOC % =** (Net Reading)(µg 0.1) / mg Sample Injected

CCV : Urea Baker (lot #A17584) ID#: TOCS/1-10-J TV = 20.0%C

CCV4= 95

LCS: ERA Cat#: 542 Lot#: ~~D006~~ D060-542 ID#: PO3/2-26-E TV = 0.42%C %REC= 94

Comments :

① GCS 10/17/08

Analyzed By: [signature]	Date: 10/16/08 Time: 1000
Reveiwed By: [signature]	Date: 10/20/08

TOC.XLT

TOC Soil Benchsheet

Sample #	mg Sample	Reading	Date Baked	Baseline
CCV-1	8.8	1644.8		7.5
CCB-1	50.0	6.8		6.5
LCS-1	53.7	219.2		5.8
MB-1	50.0	5.7		Avg
K10009-1	75.8	231.2	10/13/2008	6.6
K10009-1d	57.5	170.6	10/13/2008	
K10009-1t	68.3	207.2	10/13/2008	
K10009-1ms	38.9	1075.5	10/13/2008	
K10009-1msd	49.8	952.3	10/13/2008	
K10009-2	75.4	71.3	10/13/2008	
K10009-3	49.8	114.7	10/13/2008	
K10000-1	59.8	63.9	10/13/2008	
CCV-2	7.5	1487.5		
CCB-2	50.0	11.5		
K10000-2	62.8	61.1	10/14/2008	
K9392-2	20.2	6818.4	9/29/2008	
K9392-5	56.1	1367.5	9/29/2008	
K9392-7	16.6	5787.8	9/29/2008	
K9845-1	9.0	1676.3	10/9/2008	
K9845-2	35.2	1009.1	10/9/2008	
K9845-3	9.0	2304.9	10/9/2008	
K9845-4	38.6	1420.2	10/9/2008	
K9845-5	12.0	4527.5	10/9/2008	
K9845-6	11.1	4289.5	10/9/2008	
CCV-3	9.8	1836.6		
CCB-3	50.0	9.2		
K9845-7	26.4	2464.2	10/9/2008	
K9845-8	10.8	3390.5	10/9/2008	
K9297-2	36.4	609.7	9/25/2008	
K9297-2d	37.0	691.4	9/25/2008	
K9297-2ms	29.5	1252.7	9/25/2008	
K9297-2msd	32.0	1593.0	9/25/2008	
K9297-4	62.5	110.6	9/25/2008	
K9348-2	67.0	444.6	9/25/2008	
K9348-5	70.7	722.7	9/25/2008	
CCV-4	7.2	1378.8		
CCB-4	50.0	18.9		
CCV-5				
CCB-5				
CCV-6				
CCB-6				
CCV-7				
CCB-7				
CCV-8				
CCB-8				

10/16/08 1000

10/20/08

TOC Soil Benchsheet

K10009
K10000
D ~~K9392~~ K9392
K9845
K9297
K9348

Sample #	mg Sample	Reading	Date Baked	Baseline
CCV-1	8.8	1644.8		7.5
CCB-1	50	6.8	NA	6.5
LCS	53.7	219.2		5.8
MB	50	5.7		Avg
K10009 - 1	75.8	231.2	10/13/08	
- 1d	57.5	170.6		
- 1t	68.3	207.2		
- 1ms	38.9	1075.5		
- 1msd	49.8	952.3		
K10009 - 2	75.4	71.3		
- 3	49.8	114.7		
K10000 - 1	59.8	63.9	10/13/08	
CCV-2	7.5	1487.5		
CCB-2	50	11.5		
K10000 - 2	62.8	61.1	10/14/08	
K9392 - 2	20.2	6818.4	9/29/08	
- 5	56.1	1367.5		
- 7	16.6	5787.8		
K9845 - 1	9.0	1676.3	10/9/08	
- 2	35.2	1009.1		
- 3	9.0	(1) ~~2304.9~~ 2304.9		
- 4	38.6	1420.2		
- 5	12.0	4527.5		
- 6	11.1	4289.5		
CCV-3	9.8	1838.6		
CCB-3	50	9.2		
K9845 - 7	26.4	2464.2		
- 8	10.8	3390.5		
K9297 - 2	36.4	609.7	9/25/08	
- 2d (1)	37.0	691.4		
- 2	29.5	1252.7		
- 2 ms/msd	32.0	1593.0		
- 4 (1)	62.5	110.6		
K9348 - 2	67.0	444.6		
- 5	70.7	722.7		
~~K9297 - 2 ms/msd~~	~~32.0~~			
CCV-4	7.2	1378.8		
CCB-4	50	18.9		
CCV-5				
CCB-5				

K10009-1ms
4.9mg x 20%
4.3mg x 20%
K10009-1msd

K9297-2ms
3.4mg x 20%
5.2mg x 20%
K9297-2msd

~~Stet~~ GB 10/6/08
~~5.2mg x 20%~~

GB 10/6/08
~~10/16/08~~ Stet

N/A

GB 10/16/08

GB Beaty 10/16/08 1000

SAH 10/20/08

Metals

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	GeoEngineers, Inc.	**Service Request:**	K0810000
Project:	Dakota Creek Conformation Samples/5147-006-04	**Date Collected:**	10/09/08
Sample Matrix:	Soil	**Date Received:**	10/10/08

Mercury, Total

Prep Method:	METHOD	Units:	ng/g
Analysis Method:	1631E	Basis:	Dry
Test Notes:			

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
DCI 4-1	K0810000-001	1.0	0.2	40	10/15/08	10/16/08	32.0	
DCI 4-1a	K0810000-002	1.0	0.2	40	10/15/08	10/16/08	36.0	
Method Blank 1	K0810000-MB1	1.0	0.2	40	10/15/08	10/16/08	ND	
Method Blank 2	K0810000-MB2	1.0	0.2	40	10/15/08	10/16/08	ND	
Method Blank 3	K0810000-MB3	1.0	0.2	40	10/15/08	10/16/08	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	GeoEngineers, Inc.	**Service Request:**	K0810000
Project:	Dakota Creek Conformation Samples/5147-006-04	**Date Collected:**	10/09/08
Sample Matrix:	Soil	**Date Received:**	10/10/08
		Date Extracted:	10/15/08
		Date Analyzed:	10/16/08

Matrix Spike/Duplicate Matrix Spike Summary
Total Metals

Sample Name:	DCI 4-1a	Units:	ng/g
Lab Code:	K0810000-002S, K0810000-002SD	Basis:	Dry
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Spike Level MS	Spike Level DMS	Sample Result	Spike Result MS	Spike Result DMS	Percent Recovery MS	Percent Recovery DMS	CAS Acceptance Limits	Relative Percent Difference	Result Notes
Mercury	METHOD	1631E	1.0	315	294	36.0	345	327	98	99	70-130	<1	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	GeoEngineers, Inc.	**Service Request:**	K0810000
Project:	Dakota Creek Conformation Samples/5147-006-04	**Date Collected:**	NA
LCS Matrix:	Water	**Date Received:**	NA
		Date Extracted:	NA
		Date Analyzed:	10/16/08

Ongoing Precision and Recovery (OPR) Sample Summary
Total Metals

Sample Name: Ongoing Precision and Recovery (Initial)

Units: ng/g
Basis: NA

Test Notes:

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Mercury	METHOD	1631E	5.00	5.55	111	70-130	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	GeoEngineers, Inc.	**Service Request:**	K0810000
Project:	Dakota Creek Conformation Samples/5147-006-04	**Date Collected:**	NA
LCS Matrix:	Water	**Date Received:**	NA
		Date Extracted:	NA
		Date Analyzed:	10/16/08

Ongoing Precision and Recovery (OPR) Sample Summary
Total Metals

Sample Name: Ongoing Precision and Recovery (Final)

Units: ng/g
Basis: NA

Test Notes:

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Mercury	METHOD	1631E	5.00	5.35	107	70-130	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	GeoEngineers, Inc.	**Service Request:**	K0810000
Project:	Dakota Creek Conformation Samples/5147-006-04	**Date Collected:**	NA
LCS Matrix:	Soil	**Date Received:**	NA
		Date Extracted:	10/15/08
		Date Analyzed:	10/16/08

Quality Control Sample (QCS) Summary
Total Metals

Sample Name:	Quality Control Sample	Units:	ng/g
Lab Code:		Basis:	Dry
Test Notes:			

Source: MESS-3

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Mercury	METHOD	1631E	91.0	89.8	99	70-130	

Service Request # K0807765, K0808300, K0809679, K0810000
MS/MSD with # K0807765, K0810000
StarLims # 130808

1631 Soil Data Review Form

	Yes	No	NA
1. 20 samples (or less) in batch	X		
2. MS/MSD every 10 samples	X		
3. Current Calibration factor used	X		
4. Calibration data included	X		
5. Method blank below MRL	X		
6. Verification Standards ran	X		
7. Mean of Bubbler Blanks less than 25 pg	X		
8. OPR, QCS in control (70-130%)	X		
9. MS/MSD recovery 70-130%	X		
10. Spike RPD within 30%	X		
11. All samples within the linear range	X		
12. Dilution factors calculated	X		
13. Bench sheet signed	X		
14. Reagent Blank below 20 pg	X		
15. Verification Standards Passed (77-123%)	X		

Comments

Primary Reviewed by _____ Date 10/16/08

Secondary Reviewed by JDB Date 10/14/08

Batch Number: KP0713663
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 10/16/08
Analyst Name: Dena

Run Duration:	2.25	Integration Mode:	Total Hg
Heating Time:	1.75	Integration Type:	Peak Area
Retention Start Time:	.75	Result Units:	µg/Kg
Retention Stop Time:	1.75		
Calibration File:	Curve 10-8-08.brd		

10/16/08

Extr/Prep Batch
KP0713663

Reagents

Name	Lot Number
BrCl	RE2-14-E
SnCl+HCl	RE2-14-I

Standards

Name	Concentration	Lot Number
VER STD	10000ppb	AF1-38-J
OPR STD	40000ppb	AF1-39-B

Comments
PMT: 589 OFFSET: 5,085 NOISE: 356

HgGuru ver 3.0 (c) 2003 Brooks Rand LLC

Batch Number: KP0713663
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 10/16/08
Analyst Name: Dena

Run	Run Type	Name/ID	Method Blank	Peak	Peak Area	Analyzed Result (pg)	Final Result (µg/Kg)	QA Results	Criteria	Notes
1	QCS	VER-1		1	5,191,748	532	5.32	106	77-123	accept
2	MBA	MB-1		1	17,087	-1.68	-0.0674	-0.0674	< 1	accept
3	MBA	MB-2		1	46,263	1.31	0.0523	0.0523	< 1	accept
4	OPR	OPR-1		1	2,738,395	277	5.55	111	70-130	accept
~~5~~	~~IPR~~	~~QCS-1~~ Bubbler Error		~~1~~	~~3,762,813~~	~~382~~	~~7.65~~	~~153~~	~~70-130~~	~~reject~~
6	IPR	MESS-3		1	27,443,646	2,810	89.8	98.7	70-130	accept
7	S	K0807765-001		1	170,873	14.1	0.502		< HS	accept
8	MS	K0807765-001		1	25,128,190	2,570	92.7	102	70-130	accept
9	MSD	K0807765-001		1	20,887,810	2,140	78.7	85.0	70-130	accept
10	CB	BB (VER)		1	57,626	5.91		5.91	< 50	accept
11	IPR	QCS-1		1	2,554,486	259	5.17	103	70-130	accept
12	S	K0807765-002		1	1,734,321	174	6.04		< HS	accept
13	S	K0807765-003		1	2,557,782	259	9.59		< HS	accept
14	S	K0807765-004		1	687,111	67.0	2.47		< HS	accept
15	S	K0807765-005		1	226,400	19.8	0.705		< HS	accept
16	S	K0807765-006		1	564,895	54.5	1.94		< HS	accept
17	S	K0809676-004		1	29,630,990	3,040	837		< HS	accept
18	QCS	VER-2		3	4,508,039	462	4.62	92.5	77-123	accept
19	S	K0808300-003		1	4,126,776	420	16.2		< HS	accept
20	S	K0810000-001		1	6,734,650	687	32.0		< HS	accept
21	S	HG STD CHK		1	34,931,637	3,580	6,980		< HS	accept
22	CB	BB (VER)		1	13,063	1.34		1.34	< 50	accept
23	S	K0810000-002		1	8,161,986	834	36.0		< HS	accept
24	MS	K0810000-002		1	66,778,395	6,850	345	98.2	70-130	accept
25	MSD	K0810000-002		1	67,887,492	6,960	327	99.1	70-130	accept
26	MBA	MB-3		1	9,253	-2.49	-0.0995	-0.0995	< 1	accept
27	OPR	OPR-2		1	2,641,663	267	5.35	107	70-130	accept
28	QCS	VER-3		1	5,039,294	517	5.17	103	77-123	accept
29	CB	BB (VER)		1	29,860	3.06		3.06	< 50	accept

4
10/16/08

HgGuru ver 3.0 (c) 2003 Brooks Rand LLC

Batch Number: KP0713663
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 10/16/08
Analyst Name: Dena

Bias and Precision

Run Type	Name/ID	Final Result	Units	Spike Level	Source Result	% REC	% REC Limit	RPD	RPD Limit	Notes
MS	K0807765-001	92.7	µg/Kg	90	0.502	102	70-130			accept
	K0810000-002	345	µg/Kg	315	36.0	98.2	70-130			accept
MSD	K0807765-001	78.7	µg/Kg	92	0.502	85.0	70-130	16.4	< 30	accept
	K0810000-002	327	µg/Kg	294	36.0	99.1	70-130	5.36	< 30	accept
IPR	~~QCS-1~~	~~7.65~~	~~µg/Kg~~	~~5~~		~~153~~	~~70-130~~			~~reject~~
	MESS-3	89.8	µg/Kg	91		98.7	70-130			accept
	QCS-1	5.17	µg/Kg	5		103	70-130			accept
OPR	OPR-1	5.55	µg/Kg	5		111	70-130			accept
	OPR-2	5.35	µg/Kg	5		107	70-130			accept
QCS	VER-1	5.32	µg/Kg	5		106	77-123			accept
	VER-2	4.62	µg/Kg	5		92.5	77-123			accept
	VER-3	5.17	µg/Kg	5		103	77-123			accept

4 10/16/08

Calibration

QA Sample Type	Name/ID	Analyzed Result	Units	Spike Level	% REC	% REC Limit	RSD	RSD Limit	Notes
Calibration	20	18.6	pg	20	93.0	75-125			accept
	50	53.0	pg	50	106	75-125			accept
	200	186	pg	200	93.0	75-125			accept
	500	510	pg	500	102	75-125			accept
	2000	2,110	pg	2000	106	75-125			accept
	5000	5,240	pg	5000	105	75-125			accept
	15000	14,600	pg	15000	97.3	75-125			accept
Calibration Factor		0.000103	pg/PA				5.82	< 15	accept
Calibration Date		10/8/08							

HgGuru ver 3.0 (c) 2003 Brooks Rand LLC

Batch Number: KP0713663
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 10/16/08
Analyst Name: Dena

Blank Summary

QA Sample Type	Name/ID	Analyzed Result	Units	Criteria	StDev	StDev Limit	Notes
CB	BB (VER)	5.91	pg	< 50			accept
	BB (VER)	1.34	pg	< 50			accept
	BB (VER)	3.06	pg	< 50			accept
Average		3.44	pg	< 25	2.31	< 10	accept
MBA	MB-1	-0.0674	µg/Kg	< 1			accept
	MB-2	0.0523	µg/Kg	< 1			accept
	MB-3	-0.0995	µg/Kg	< 1			accept
Average		-0.0382	µg/Kg		0.0800		

Comments

PMT: 589
OFFSET: 5,085
NOISE: 356

HgGuru ver 3.0 (c) 2003 Brooks Rand LLC

Batch Number: KP0713663
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 10/16/08
Analyst Name: Dena

Run	Name/ID	Final Result (µg/Kg)	Notes
21	HG STD CHK	6,980	accepted
7	K0807765-001	0.502	accepted
12	K0807765-002	6.04	accepted
13	K0807765-003	9.59	accepted
14	K0807765-004	2.47	accepted
15	K0807765-005	0.705	accepted
16	K0807765-006	1.94	accepted
19	K0808300-003	16.2	accepted
17	K0809676-004	837	accepted
20	K0810000-001	32.0	accepted
23	K0810000-002	36.0	accepted

HgGuru ver 3.0 (c) 2003 Brooks Rand LLC

Batch Number: KP0713663
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 10/16/08
Analyst Name: Dena

Run	Run Type	Name/ID	Method Blank	Sample Vol/Wt	Dilution Vol (ml)	Analyzed Vol (ml)	Expected Value	Notes
1	QCS	VER-1		100	100	100	5	
2	MBA	MB-1		400	40	2.5		
3	MBA	MB-2		400	40	2.5		
4	OPR	OPR-1		400	40	5	5	
~~5~~	~~IPR~~	~~QCS-1~~		~~400~~	~~40~~	~~5~~	~~5~~	4/10/16/08
6	IPR	MESS-3		313	40	4	91	
7	S	K0807765-001		449	40	2.5		
8	MS	K0807765-001		444	40	2.5	90	
9	MSD	K0807765-001		435	40	2.5	92	
10	CB	BB (VER)		100	100	100		
11	IPR	QCS-1		400	40	5	5	
12	S	K0807765-002		462	40	2.5		
13	S	K0807765-003		432	40	2.5		
14	S	K0807765-004		435	40	2.5		
15	S	K0807765-005		449	40	2.5		
16	S	K0807765-006		450	40	2.5		
17	S	K0809676-004		58	40	2.5		
18	QCS	VER-2		100	100	100	5	
19	S	K0808300-003		414	40	2.5		
20	S	K0810000-001		344	40	2.5		
21	S	HG STD CHK		41	40	0.5		
22	CB	BB (VER)		100	100	100		
23	S	K0810000-002		370	40	2.5		
24	MS	K0810000-002		317	40	2.5	315	
25	MSD	K0810000-002		340	40	2.5	294	
26	MBA	MB-3		400	40	2.5		
27	OPR	OPR-2		400	40	5	5	
28	QCS	VER-3		100	100	100	5	
29	CB	BB (VER)		100	100	100		

HgGuru ver 3.0 (c) 2003 Brooks Rand LLC

StarLims Number: 76100

Method : 1631EApp. Analysis for : CVAFS

Sample	Matrices	Dry	Wet	Initial Weight (g)	Final Volume (ml)	Matrix
VER-1	Water		x	100ml	100ml	0.5% BrCl
VER-2	Water		x	100ml	100ml	0.5% BrCl
Method Blank		x		0.4000	40	0.02N BrCl
Method Blank		x		0.4000	40	0.02N BrCl
Method Blank		x		0.4000	40	0.02N BrCl
OPR-1		x		0.4000	40	0.02N BrCl
QCS-1		x		0.4000	40	0.02N BrCl
MESS-3				0.313	40	0.02N BrCl
K0807765-001				0.449	40	0.02N BrCl
K0807765-001MS				0.444	40	0.02N BrCl
K0807765-001DMS				0.435	40	0.02N BrCl
K0807765-002				0.4162	40	0.02N BrCl
K0807765-003				0.432	40	0.02N BrCl
K0807765-004				0.435	40	0.02N BrCl
K0807765-005				0.449	40	0.02N BrCl
K0807765-006				0.450	40	0.02N BrCl
K0808300-003				0.414	40	0.02N BrCl
K0809679-004				0.416	40	0.02N BrCl
K0810000-001				0.397	40	0.02N BrCl
K0810000-002				0.432	40	0.02N BrCl
K0810000-002MS				0.370	40	0.02N BrCl
K0810000-002DMS				0.397	40	0.02N BrCl
HG STD				0.0410	40	0.02N BrCl
OPR-2				0.4000	40	0.02N BrCl
VER-3	Water		x	100ml	100ml	0.5% BrCl

BrCl = RE2-14-E

AF1 - 39-B *(40ppm)* **OPR: 0.05ml** **QCS: 0.2ml (10ppm)** AF1-39-A

1st **MS / DMS:** 1.0ml **Balance ID:** 21 B

2nd **MS / DMS:** 0.1ml (AF1-35-K)

Comments:

Time Digestion Started:

Analyst [signature] **Date** 10/15/08

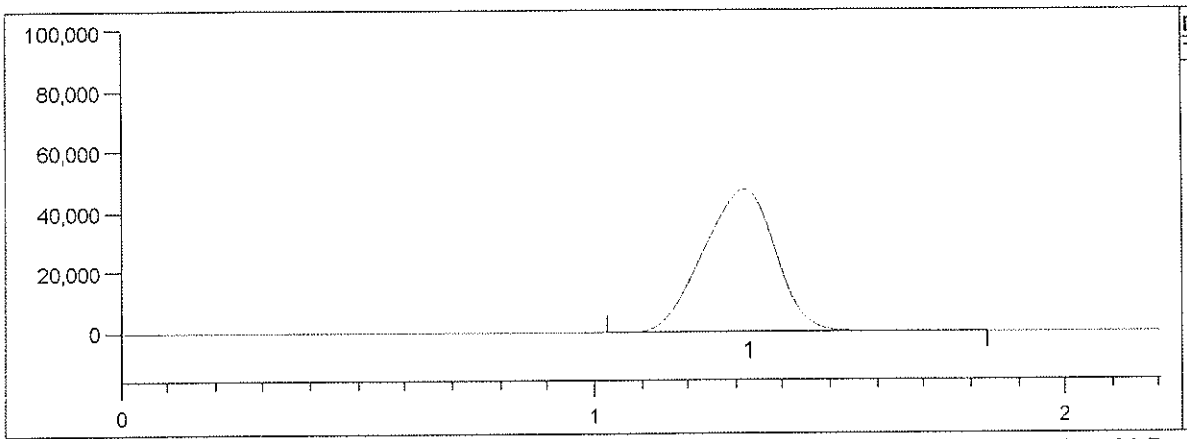
1631Dig.XLS
6/17/2004

Sample ID	Wet Weight (g)	Precent Solids (%)	Dry Weight (g)
K0809679-004	0.416	14.0	0.058
K081000-001	0.397	86.7	0.344
K081000-002	0.432	85.7	0.370
K081000-002MS	0.370	85.7	0.317
K081000-002DMS	0.397	85.7	0.340

Batch Number: KP0713663
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 10/16/08
Analyst Name: Dena

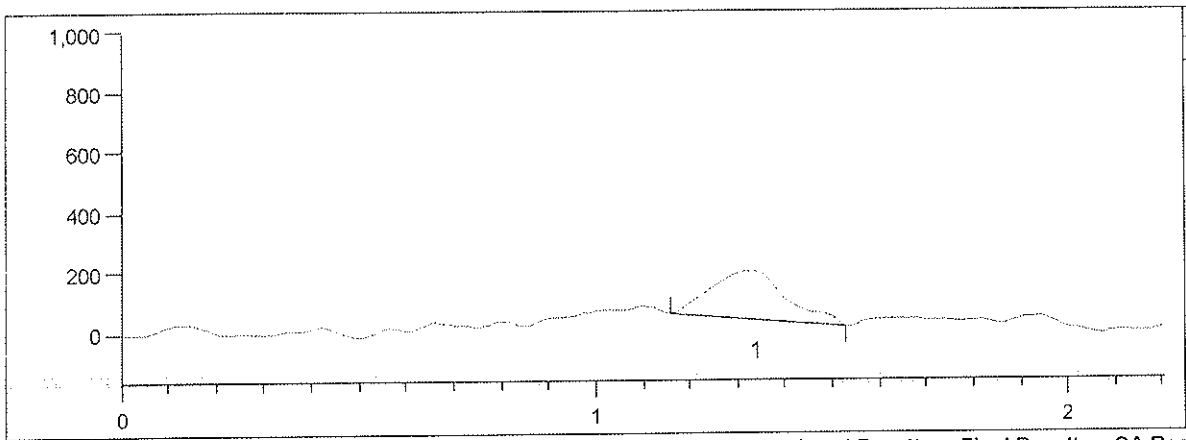


Date: 10/16/08
Time: 8:24 AM

Peak	rt	Area
1	1.34	5,191,748

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
1	QCS	VER-1		1	5,191,748	532	5.32	106	77-123	accept

Notes:

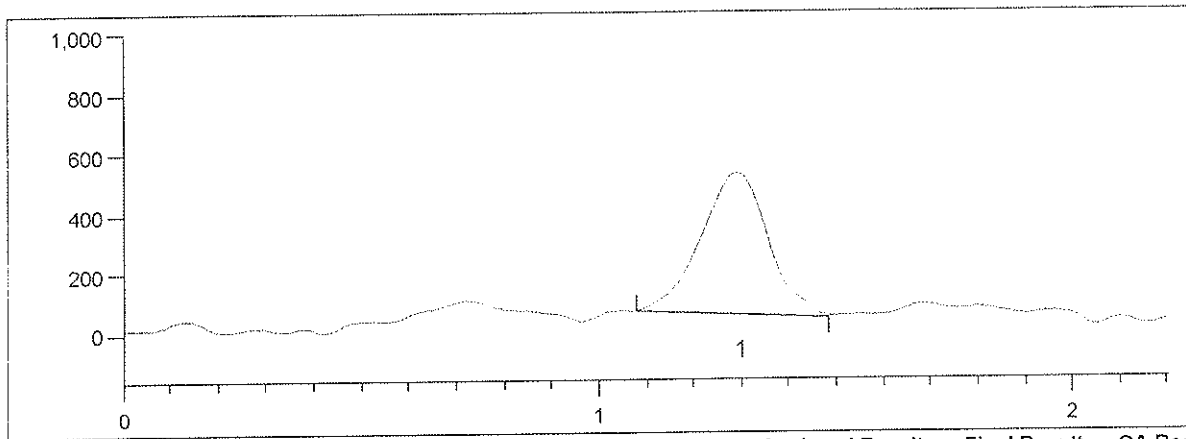


Date: 10/16/08
Time: 8:27 AM

Peak	rt	Area
1	1.35	17,087

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
2	MBA	MB-1		1	17,087	-1.68	-0.0674	-0.0674	< 1	accept

Notes:



Date: 10/16/08
Time: 8:30 AM

Peak	rt	Area
1	1.32	46,263

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
3	MBA	MB-2		1	46,263	1.31	0.0523	0.0523	< 1	accept

Notes:

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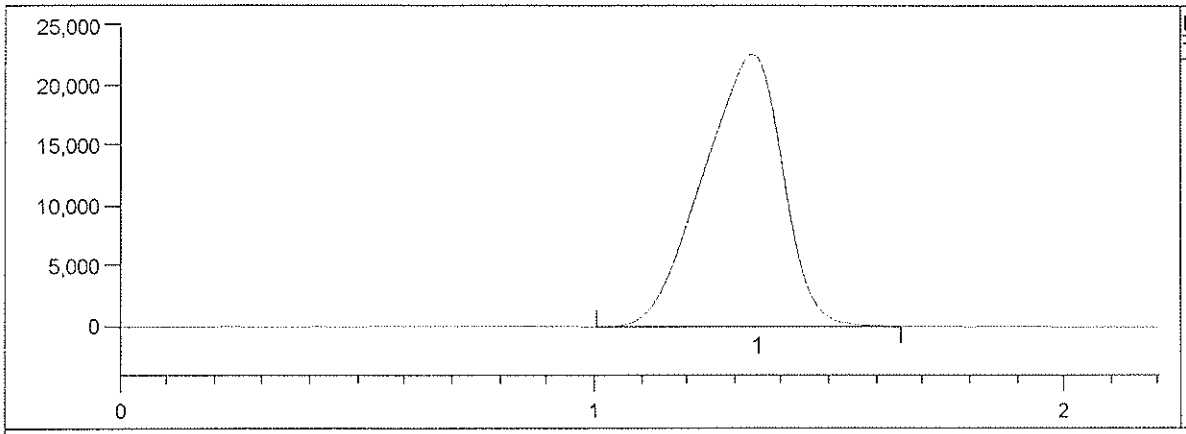
Batch Number: KP0713663
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 10/16/08
Analyst Name: Dena

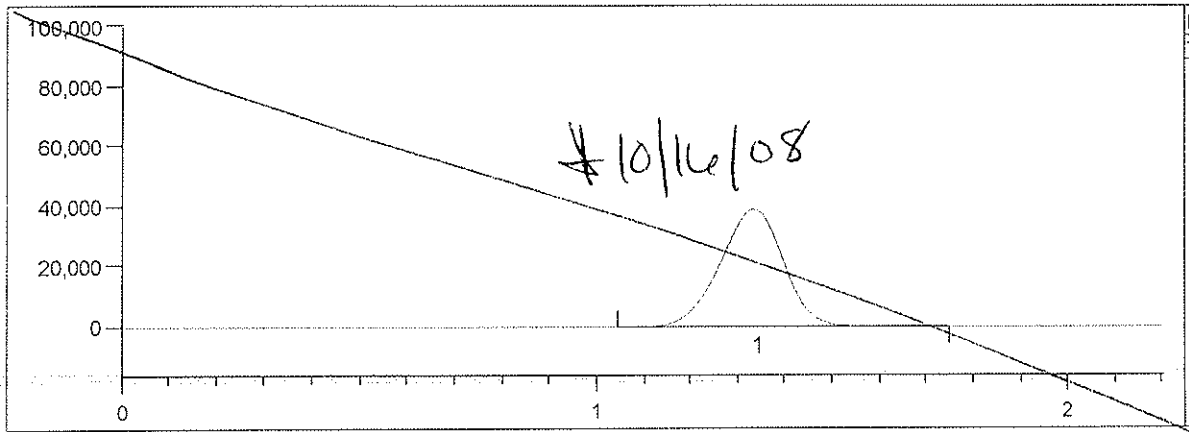


Date: 10/16/08
Time: 8:33 AM

Peak	rt	Area
1	1.36	2,738,395

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
4	OPR	OPR-1		1	2,738,395	277	5.55	111	70-130	accept

Notes:



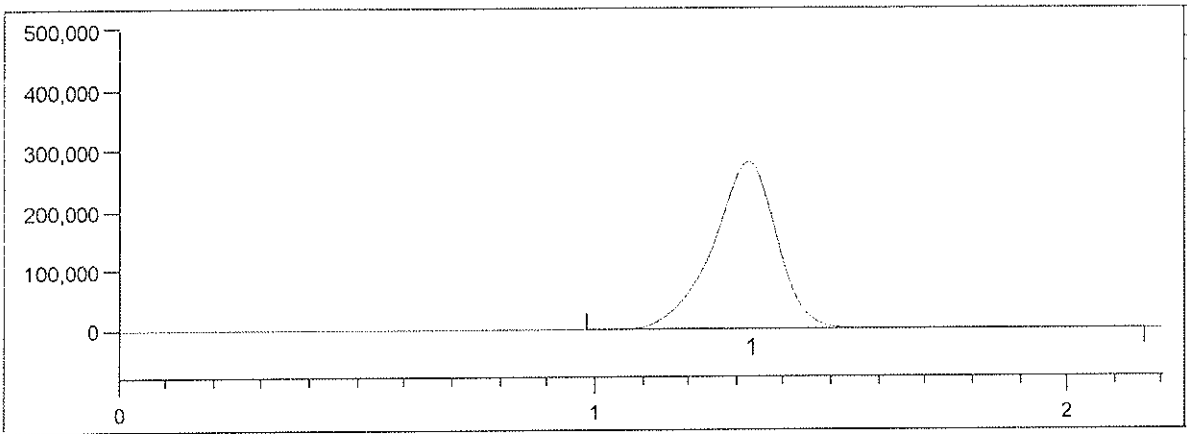
#10/16/08

Date: 10/16/08
Time: 8:36 AM

Peak	rt	Area
1	1.36	3,762,813

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
5	IPR	QCS-1		1	3,762,813	382	7.65	153	70-130	reject

Notes:



Date: 10/16/08
Time: 8:39 AM

Peak	rt	Area
1	1.35	27,443,646

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
6	IPR	MESS-3		1	27,443,646	2,810	89.8	98.7	70-130	accept

Notes:

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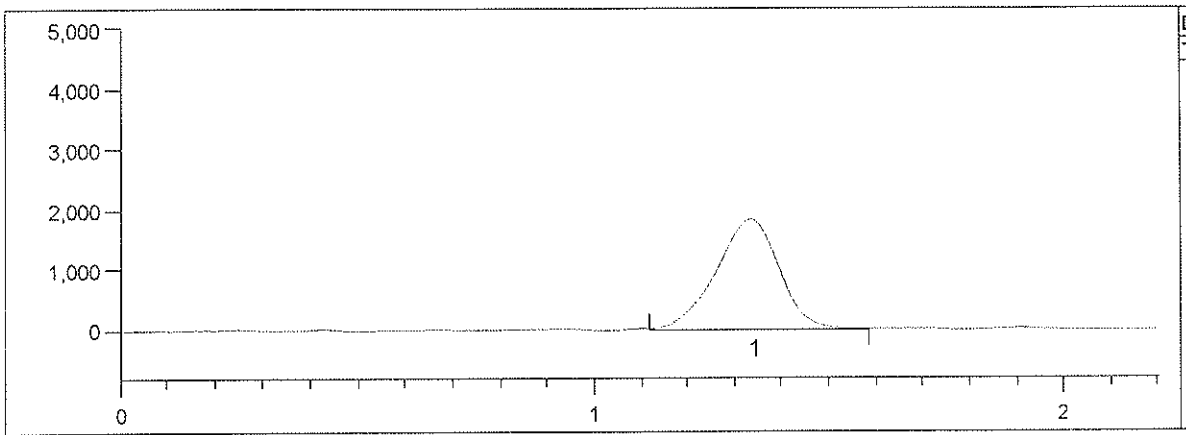
Batch Number: KP0713663
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 10/16/08
Analyst Name: Dena

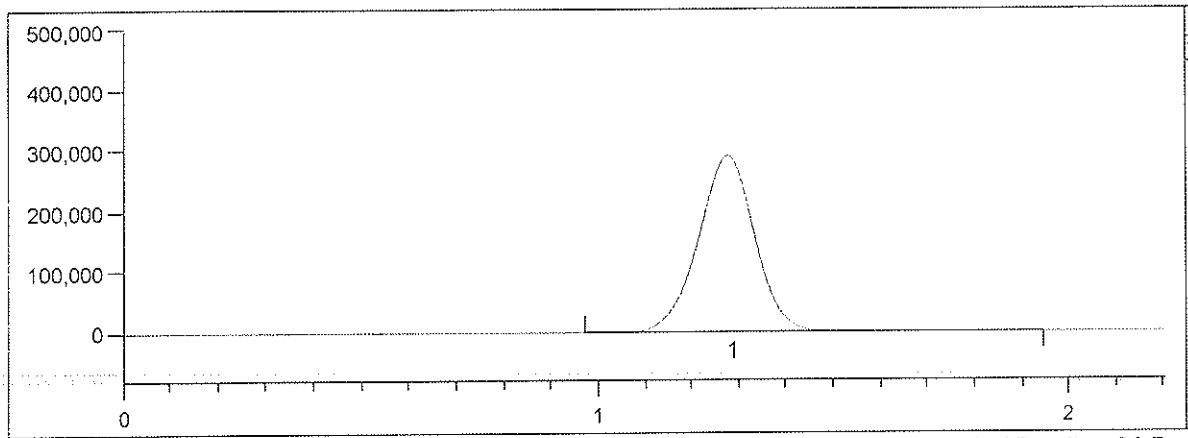


Date: 10/16/08
Time: 8:42 AM

Peak	rt	Area
1	1.36	170,873

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
7	S	K0807765-001		1	170,873	14.1	0.502		< HS	accept

Notes:

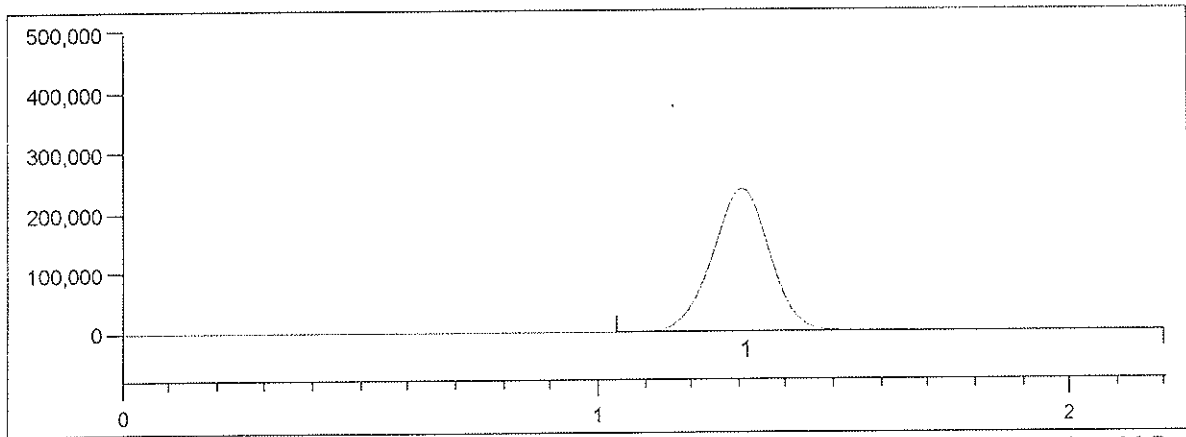


Date: 10/16/08
Time: 8:44 AM

Peak	rt	Area
1	1.30	25,128,190

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
8	MS	K0807765-001		1	25,128,190	2,570	92.7	102	70-130	accept

Notes.



Date: 10/16/08
Time: 8:48 AM

Peak	rt	Area
1	1.33	20,887,810

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
9	MSD	K0807765-001		1	20,887,810	2,140	78.7	85.0	70-130	accept

Notes:

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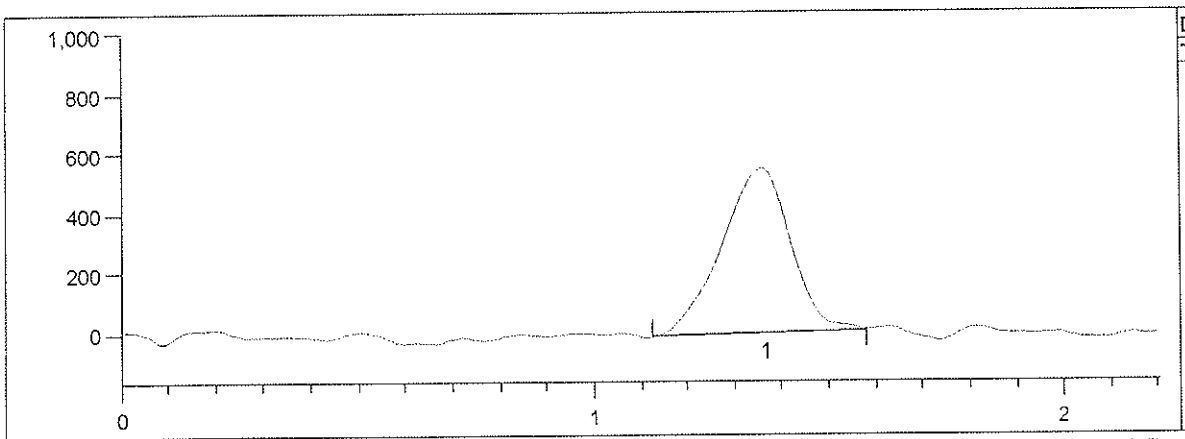
Batch Number: KP0713663
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 10/16/08
Analyst Name: Dena

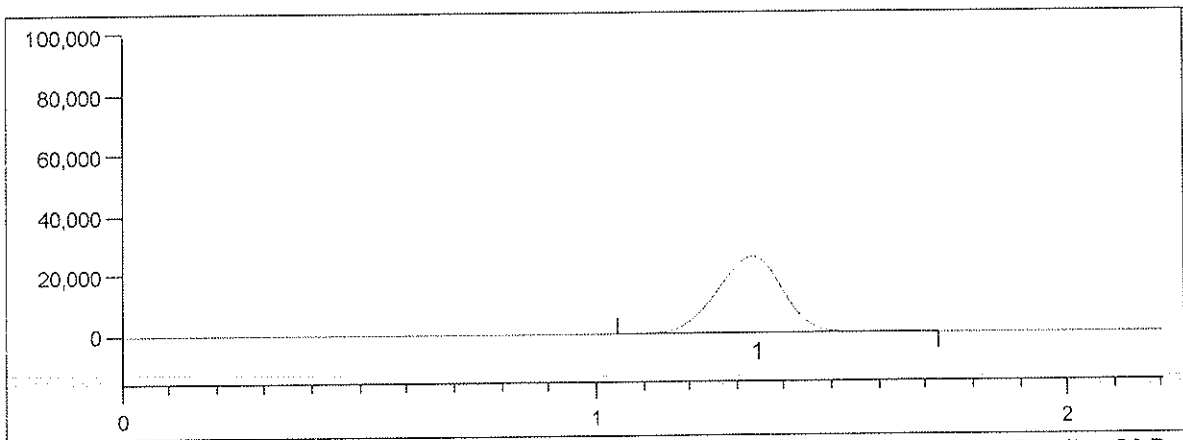


Date: 10/16/08
Time: 9:22 AM

Peak	rt	Area
1	1.38	57,626

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
10	CB	BB (VER)		1	57,626	5.91		5.91	< 50	accept

Notes:

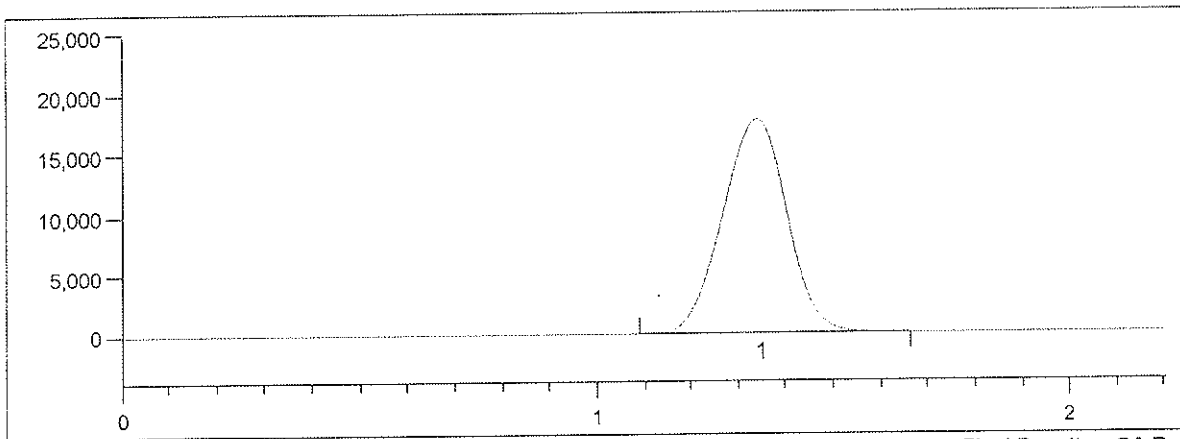


Date: 10/16/08
Time: 9:25 AM

Peak	rt	Area
1	1.36	2,554,486

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
11	IPR	QCS-1		1	2,554,486	259	5.17	103	70-130	accept

Notes:



Date: 10/16/08
Time: 9:28 AM

Peak	rt	Area
1	1.36	1,734,321

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
12	S	K0807765-002		1	1,734,321	174	6.04		< HS	accept

Notes:

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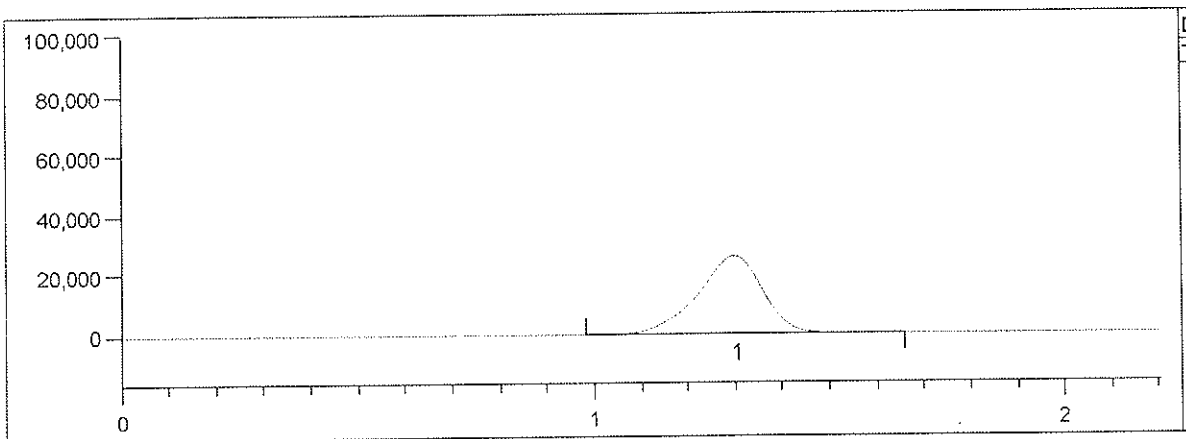
Batch Number: KP0713663
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 10/16/08
Analyst Name: Dena

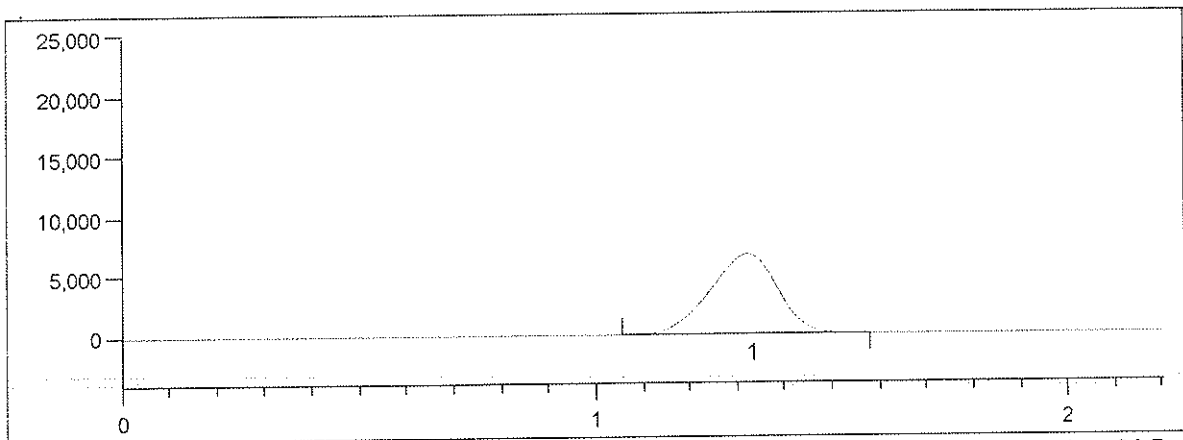


Date: 10/16/08
Time: 9:31 AM

Peak	rt	Area
1	1.32	2,557,782

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
13	S	K0807765-003		1	2,557,782	259	9.59		< HS	accept

Notes:

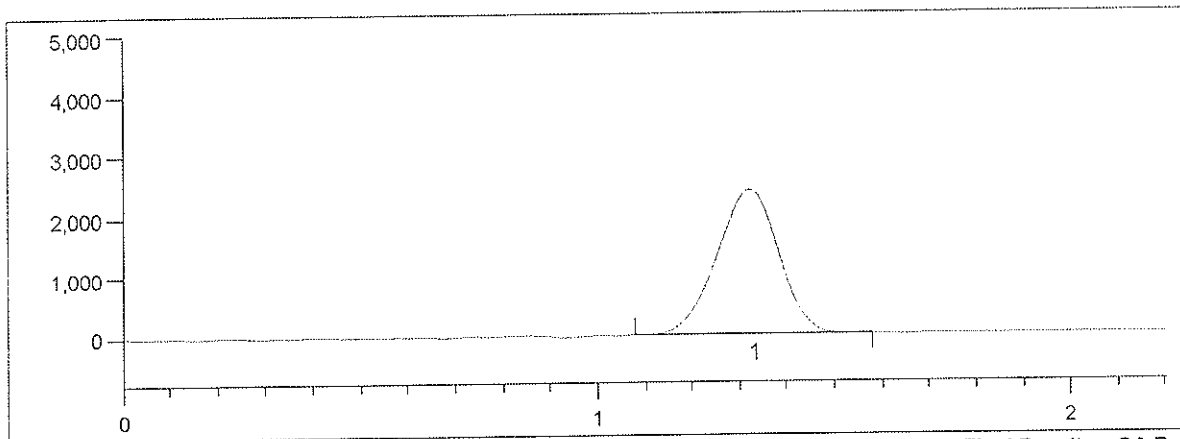


Date: 10/16/08
Time: 9:34 AM

Peak	rt	Area
1	1.35	687,111

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
14	S	K0807765-004		1	687,111	67.0	2.47		< HS	accept

Notes:



Date: 10/16/08
Time: 9:39 AM

Peak	rt	Area
1	1.35	226,400

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
15	S	K0807765-005		1	226,400	19.8	0.705		< HS	accept

Notes:

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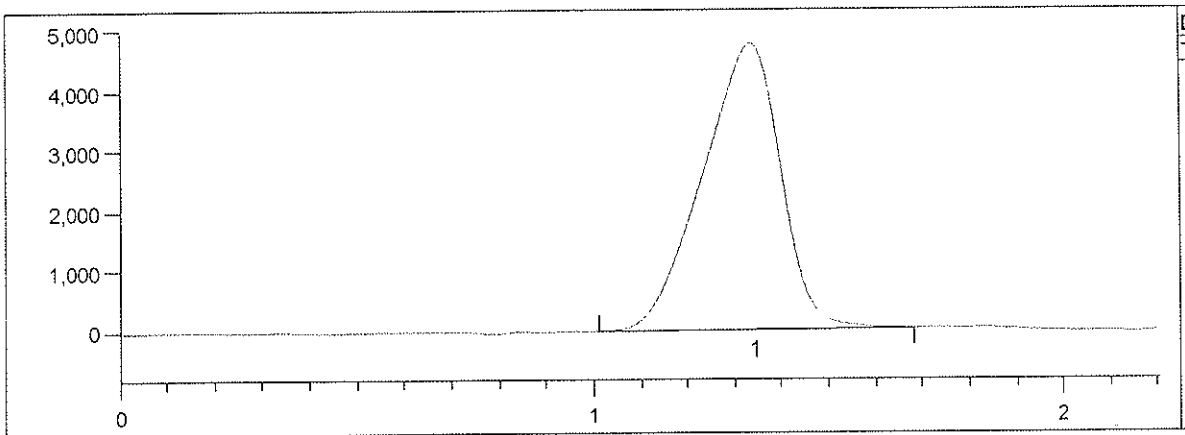
Batch Number: KP0713663
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 10/16/08
Analyst Name: Dena

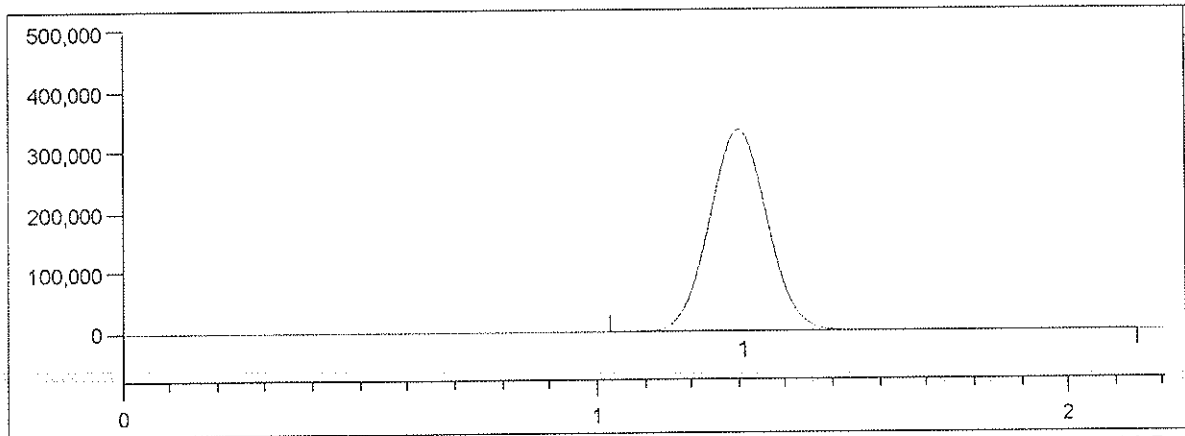


Date: 10/16/08
Time: 9:42 AM

Peak	rt	Area
1	1.36	564,895

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
16	S	K0807765-006		1	564,895	54.5	1.94		< HS	accept

Notes:

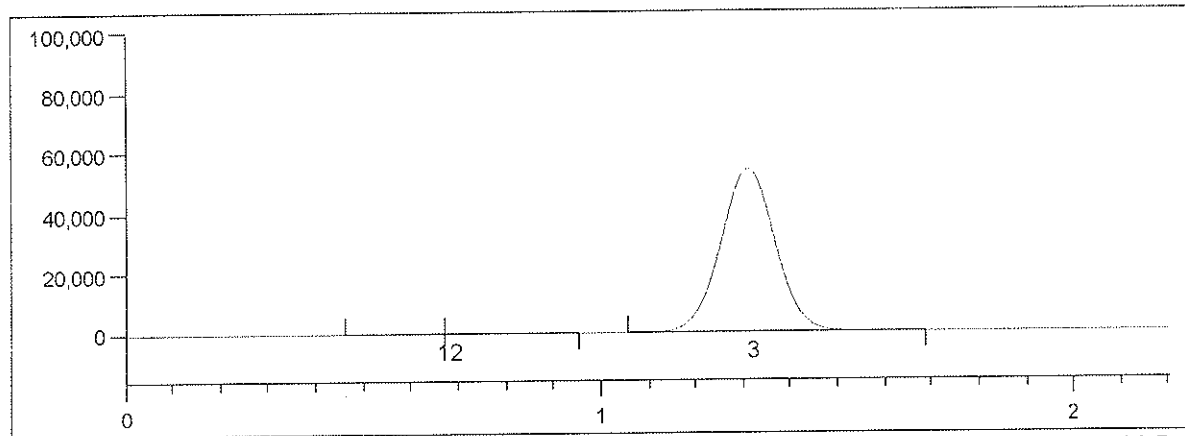


Date: 10/16/08
Time: 9:45 AM

Peak	rt	Area
1	1.32	29,630,990

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
17	S	K0809676-004		1	29,630,990	3,040	837		< HS	accept

Notes:



Date: 10/16/08
Time: 9:48 AM

Peak	rt	Area
1	0.67	26,986
2	0.70	31,205
3	1.34	4,508,039

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
18	QCS	VER-2		3	4,508,039	462	4.62	92.5	77-123	accept

Notes:

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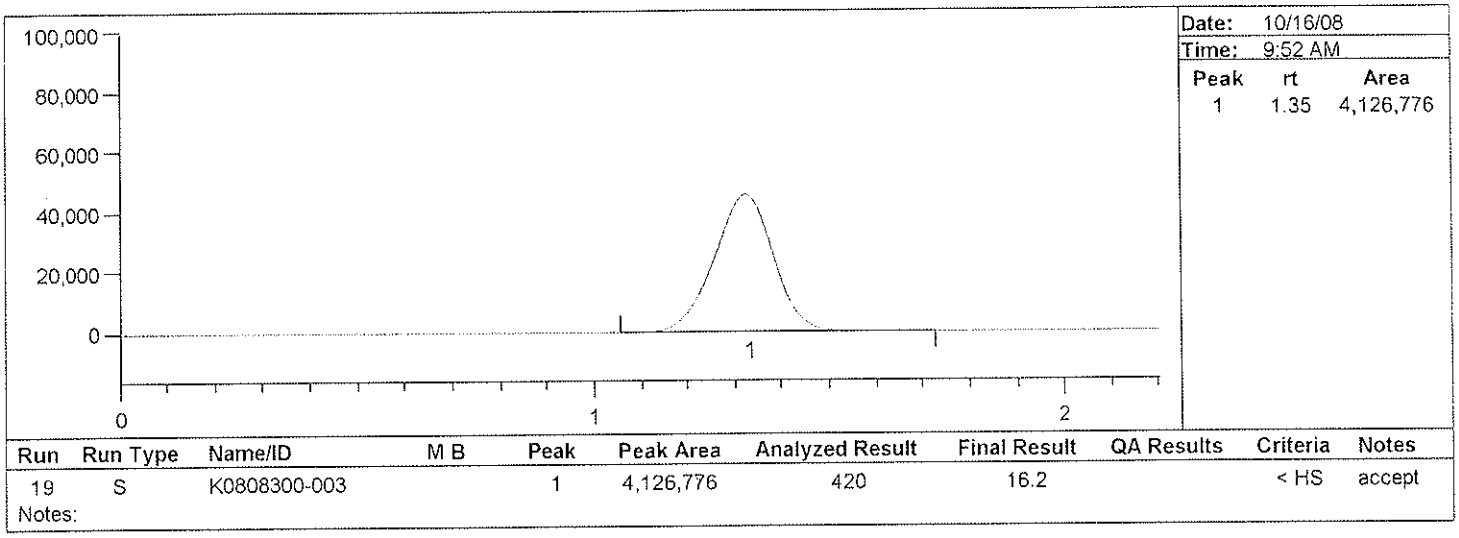
Batch Number: KP0713663
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 10/16/08
Analyst Name: Dena

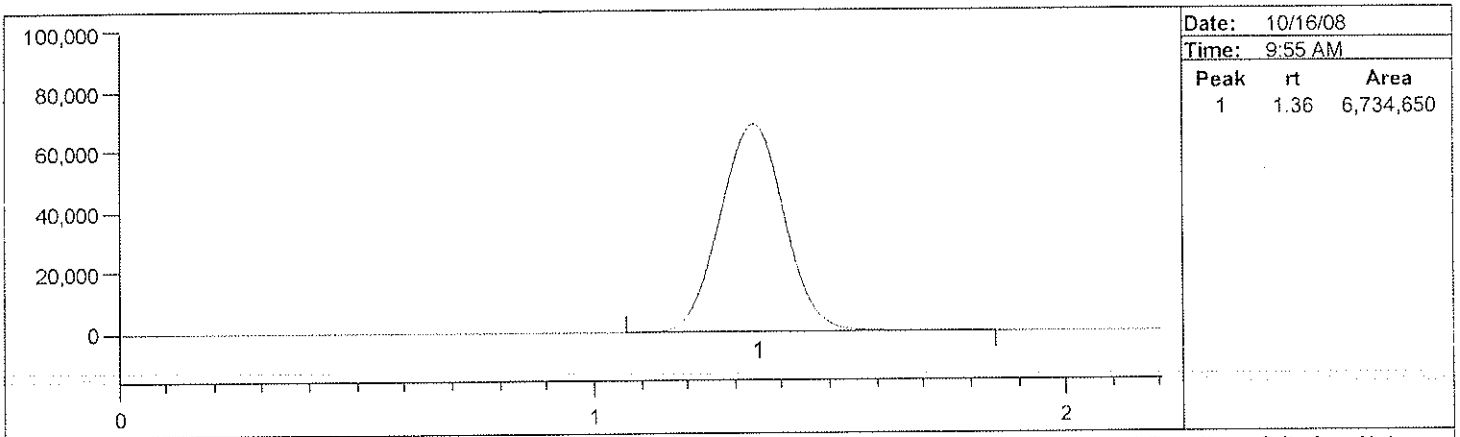


Date: 10/16/08
Time: 9:52 AM

Peak	rt	Area
1	1.35	4,126,776

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
19	S	K0808300-003		1	4,126,776	420	16.2		< HS	accept

Notes:

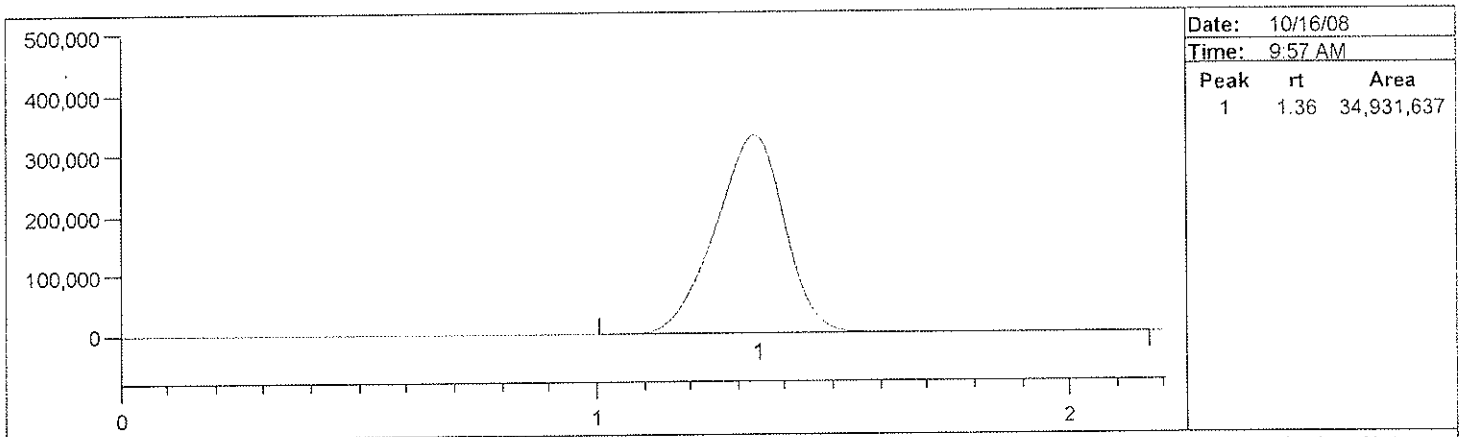


Date: 10/16/08
Time: 9:55 AM

Peak	rt	Area
1	1.36	6,734,650

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
20	S	K0810000-001		1	6,734,650	687	32.0		< HS	accept

Notes:



Date: 10/16/08
Time: 9:57 AM

Peak	rt	Area
1	1.36	34,931,637

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
21	S	HG STD CHK		1	34,931,637	3,580	6,980		< HS	accept

Notes:

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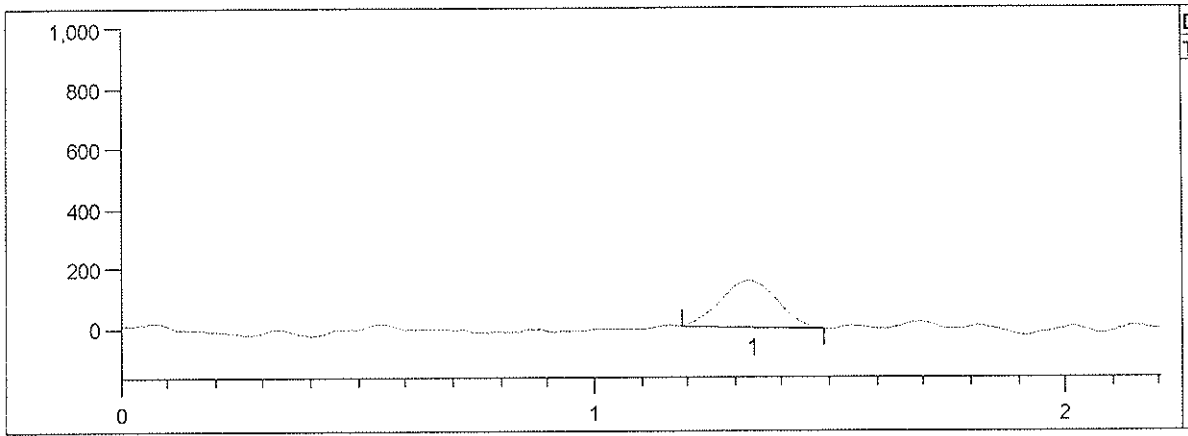
Batch Number: KP0713663
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 10/16/08
Analyst Name: Dena

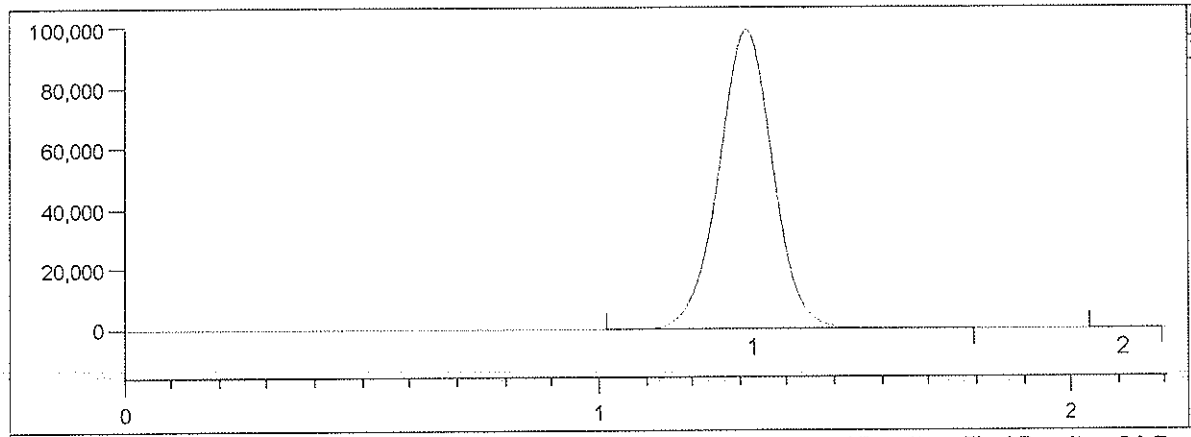


Date: 10/16/08
Time: 10:14 AM

Peak	rt	Area
1	1.35	13,063

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
22	CB	BB (VER)		1	13,063	1.34		1.34	< 50	accept

Notes:

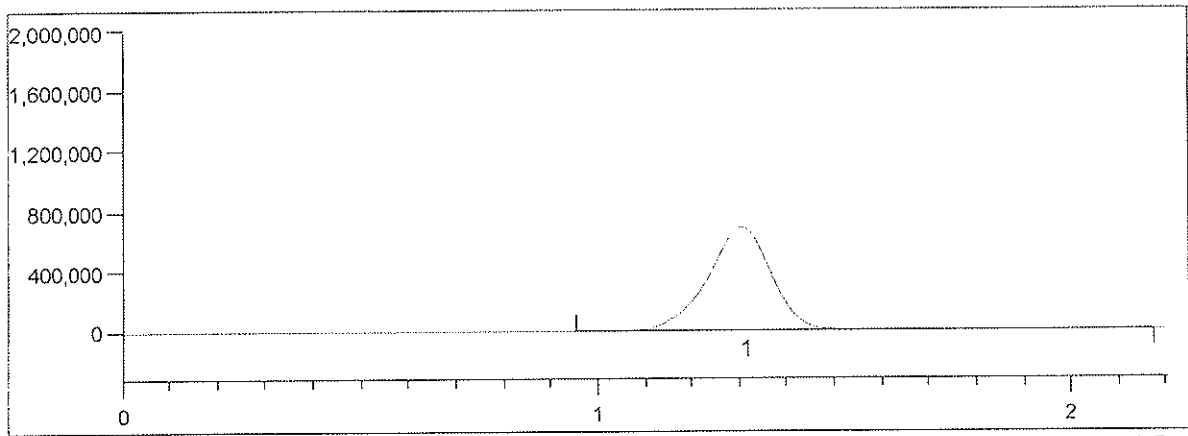


Date: 10/16/08
Time: 10:46 AM

Peak	rt	Area
1	1.34	8,161,986
2	2.14	2,079

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
23	S	K0810000-002		1	8,161,986	834	36.0		< HS	accept

Notes:



Date: 10/16/08
Time: 10:50 AM

Peak	rt	Area
1	1.33	66,778,395

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
24	MS	K0810000-002		1	66,778,395	6,850	345	98.2	70-130	accept

Notes:

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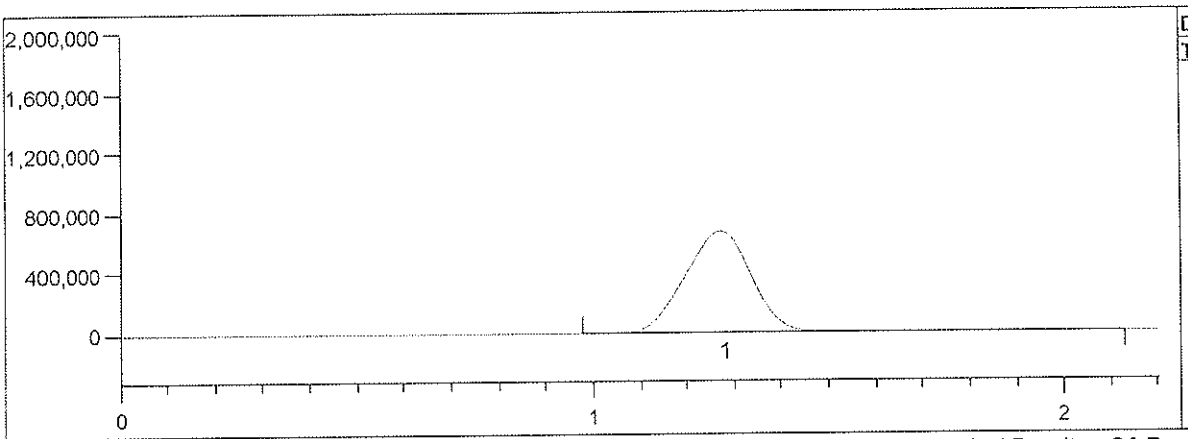
Batch Number: KP0713663
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 10/16/08
Analyst Name: Dena

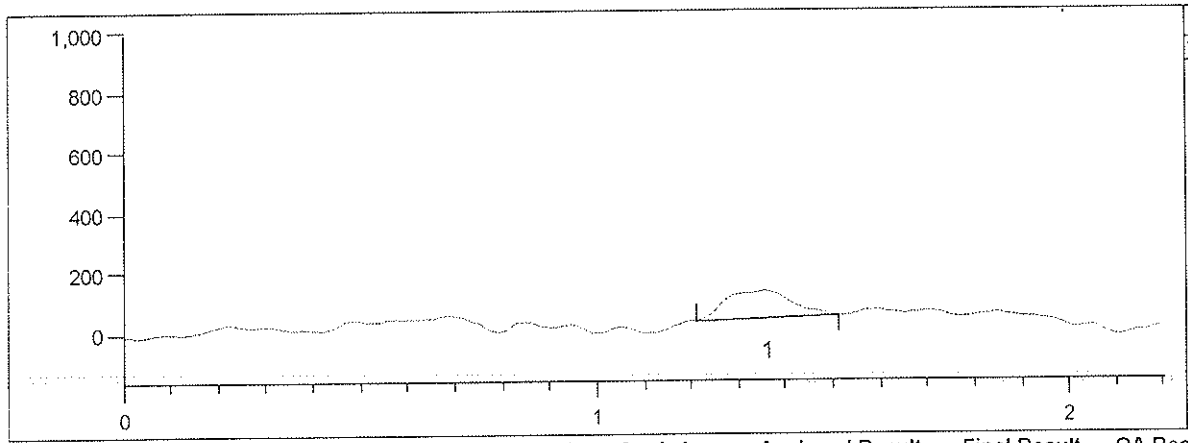


Date: 10/16/08
Time: 10:53 AM

Peak	rt	Area
1	1.30	67,887,492

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
25	MSD	K0810000-002		1	67,887,492	6,960	327	99.1	70-130	accept

Notes:

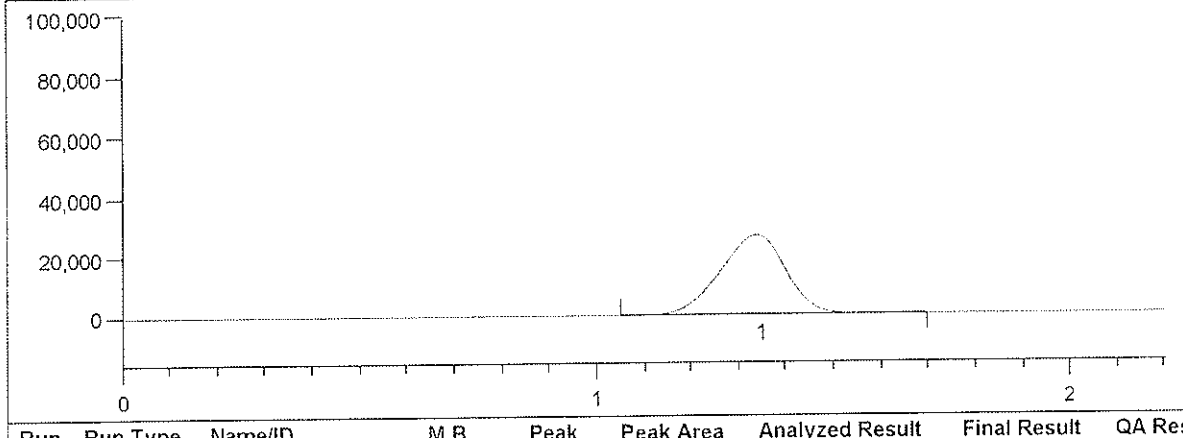


Date: 10/16/08
Time: 10:55 AM

Peak	rt	Area
1	1.38	9,253

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
26	MBA	MB-3		1	9,253	-2.49	-0.0995	-0.0995	< 1	accept

Notes:



Date: 10/16/08
Time: 10:58 AM

Peak	rt	Area
1	1.36	2,641,663

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
27	OPR	OPR-2		1	2,641,663	267	5.35	107	70-130	accept

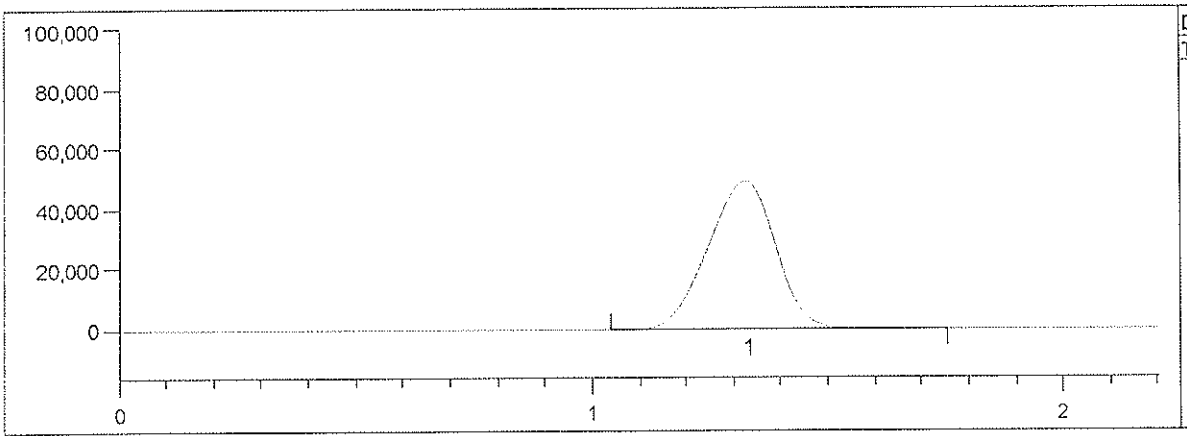
Notes:

HgGuru ver 3.0 (c) 2003 Brooks Rand LLC

Batch Number: KP0713663
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 10/16/08
Analyst Name: Dena

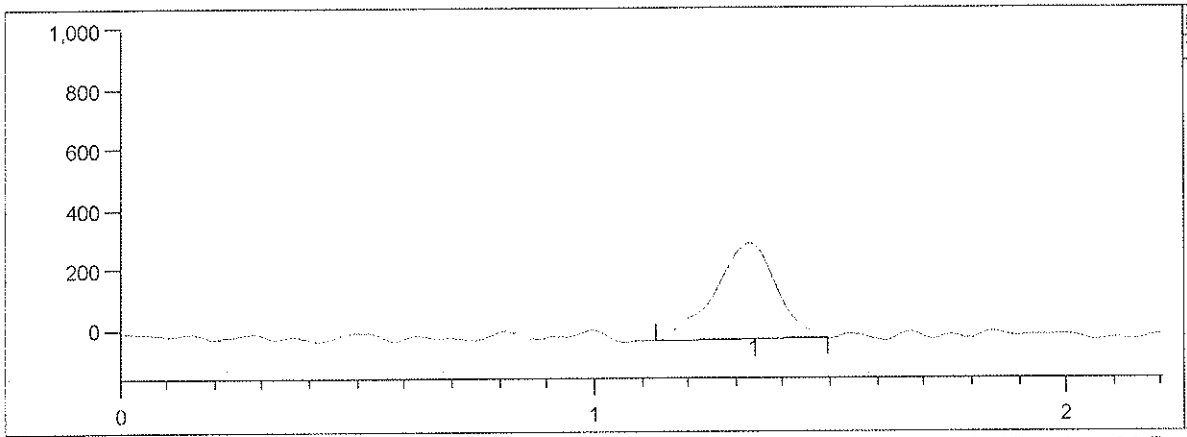


Date: 10/16/08
Time: 11:03 AM

Peak	rt	Area
1	1.35	5,039,294

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
28	QCS	VER-3		1	5,039,294	517	5.17	103	77-123	accept

Notes:



Date: 10/16/08
Time: 11:08 AM

Peak	rt	Area
1	1.35	29,860

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
29	CB	BB (VER)		1	29,860	3.06		3.06	< 50	accept

Notes:

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Columbia Analytical Services

- Cover Page -
INORGANIC ANALYSIS DATA PACKAGE

Client: GeoEngineers, Inc.
Project Name: Dakota Creek Confirmation Samples
Project No.: 5147-006-04

Service Request: K0810000

Sample Name:	Lab Code:
DCI 4-1	K0810000-001
DCI 4-1D	K0810000-001D
DCI 4-1S	K0810000-001S
DCI 4-1a	K0810000-002
Method Blank	K0810000-MB

Comments:

Approved By: _____ **Date:** 10/24/08

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: GeoEngineers, Inc.
Service Request: K0810000
Project No.: 5147-006-04
Date Collected: 10/9/08
Project Name: Dakota Creek Confirmation Sample
Date Received: 10/10/08
Matrix: SOIL
Units: mg/Kg
Basis: DRY

Sample Name: DCI 4-1
Lab Code: K0810000-001

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	6020	0.58	0.23	5.0	10/16/08	10/22/08	3.89		*
Cadmium	6020	0.023	0.010	5.0	10/16/08	10/22/08	0.077		
Chromium	6020	1.15	1.15	25.0	10/16/08	10/22/08	244		*
Copper	6020	0.58	0.52	25.0	10/16/08	10/22/08	27.8		
Lead	6020	0.06	0.06	5.0	10/16/08	10/23/08	2.45		
Silver	6020	0.02	0.02	5.0	10/16/08	10/21/08	0.07		
Zinc	6020	2.9	2.9	25.0	10/16/08	10/22/08	43.7		

% Solids: 86.7

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	GeoEngineers, Inc.	**Service Request:**	K0810000
Project No.:	5147-006-04	**Date Collected:**	10/9/08
Project Name:	Dakota Creek Confirmation Sample	**Date Received:**	10/10/08
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: DCI 4-1a **Lab Code:** K0810000-002

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	6020	0.57	0.23	5.0	10/16/08	10/22/08	2.98		*
Cadmium	6020	0.023	0.010	5.0	10/16/08	10/22/08	0.071		
Chromium	6020	1.14	1.14	25.0	10/16/08	10/22/08	96.9		*
Copper	6020	0.57	0.52	25.0	10/16/08	10/22/08	25.7		
Lead	6020	0.06	0.06	5.0	10/16/08	10/23/08	3.00		
Silver	6020	0.02	0.02	5.0	10/16/08	10/21/08	0.06		
Zinc	6020	2.9	2.9	25.0	10/16/08	10/22/08	44.2		

% Solids: 85.7

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: GeoEngineers, Inc.
Service Request: K0810000
Project No.: 5147-006-04
Date Collected:
Project Name: Dakota Creek Confirmation Sample
Date Received:
Matrix: SOIL
Units: mg/Kg
Basis: DRY

Sample Name: Method Blank
Lab Code: K0810000-MB

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	6020	0.50	0.20	5.0	10/16/08	10/22/08	0.20	U	*
Cadmium	6020	0.020	0.009	5.0	10/16/08	10/22/08	0.009	U	
Chromium	6020	0.20	0.20	5.0	10/16/08	10/22/08	0.20	U	*
Copper	6020	0.10	0.09	5.0	10/16/08	10/22/08	0.09	U	
Lead	6020	0.05	0.05	5.0	10/16/08	10/23/08	0.05	U	
Silver	6020	0.02	0.02	5.0	10/16/08	10/21/08	0.02	U	
Zinc	6020	0.50	0.50	5.0	10/16/08	10/22/08	0.50	U	

% Solids: 100.0

Comments:

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: GeoEngineers, Inc. **Service Request:** K0810000

Project No.: 5147-006-04

Project Name: Dakota Creek Confirmation Sample

ICV Source: Inorganic Ventures CCV Source: CAS MIXED

Concentration Units: ug/L

	Initial Calibration			Continuing Calibration					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Method
Arsenic	25.0	24.9	100	25.0	24.9	100	23.2	93	6020
Cadmium	12.5	12.4	99	25.0	24.9	100	25.0	100	6020
Chromium	10.0	10.0	100	25.0	24.8	99	25.0	100	6020
Copper	12.5	12.5	100	25.0	24.7	99	22.8	91	6020
Lead	25.0	24.6	98	25.0	24.5	98	24.4	98	6020
Silver	12.5	13.0	104	25.0	25.3	101	25.4	102	6020
Zinc	25.0	24.2	97	25.0	24.7	99	23.5	94	6020

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: GeoEngineers, Inc. **Service Request:** K0810000

Project No.: 5147-006-04

Project Name: Dakota Creek Confirmation Sample

ICV Source: Inorganic Ventures CCV Source: CAS MIXED

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Arsenic				25.0	23.0	92	23.8	95	6020
Cadmium				25.0	24.9	100	25.5	102	6020
Chromium				25.0	25.1	100	26.0	104	6020
Copper				25.0	22.7	91	24.4	98	6020
Lead				25.0	24.7	99	25.7	103	6020
Silver				25.0	23.4	94	25.2	101	6020
Zinc				25.0	23.6	94	24.7	99	6020

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: GeoEngineers, Inc. Service Request: K0810000

Project No.: 5147-006-04

Project Name: Dakota Creek Confirmation Sample

ICV Source: Inorganic Ventures CCV Source: CAS MIXED

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Silver				25.0	24.9	100	25.7	103	6020

Metals
- 2b -
CRDL STANDARD FOR AA AND ICP

Client: GeoEngineers, Inc. Service Request: K0810000

Project No.: 5147-006-04

Project Name: Dakota Creek Confirmation Sample

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
				Initial			Final	
	True	Found	%R	True	Found	%R	Found	%R
Arsenic				1.00	1.04	104		
Cadmium				0.04	0.039	98		
Chromium				0.4	0.39	98		
Copper				0.2	0.19	95		
Lead				0.10	0.116	116		
Silver				0.040	0.046	115		
Zinc				1.0	1.17	117		

Metals

BLANKS

Client: GeoEngineers, Inc. Service Request: K0810000

Project No.: 5147-006-04

Project Name: Dakota Creek Confirmation Sample

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Method
Arsenic	0.4	U	0.4	U	0.4	U	0.4	U	6020
Cadmium	0.018	U	0.018	U	0.018	U	0.018	U	6020
Chromium	0.40	U	0.40	U	0.40	U	0.40	U	6020
Copper	0.18	U	0.18	U	0.18	U	0.18	U	6020
Lead	0.10	U	0.10	U	0.10	U	0.10	U	6020
Silver	0.040	U	0.040	U	0.040	U	0.040	U	6020
Zinc	1.00	U	1.00	U	1.00	U	1.00	U	6020

Metals

- 3 -

BLANKS

Client: GeoEngineers, Inc. Service Request: K0810000

Project No.: 5147-006-04

Project Name: Dakota Creek Confirmation Sample

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Method
Arsenic			0.4	U					6020
Cadmium			0.018	U					6020
Chromium			0.40	U					6020
Copper			0.18	U					6020
Lead			0.10	U					6020
Silver			0.040	U	0.040	U	0.040	U	6020
Zinc			1.00	U					6020

Metals

- 4 -

ICP INTERFERENCE CHECK SAMPLE

Client: GeoEngineers, Inc. Service Request: K0810000

Project No.: 5147-006-04

Project Name: Dakota Creek Confirmation Sample

ICP ID Number: K-ICP-MS-02 ICS Source: Inorganic Ventures

Concentration Units): ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Arsenic	0.0	25.0	0.1	24.3	97			
Cadmium	0.0	25.0	0.2	25.5	102			
Chromium	0.0	50.0	0.2	50.8	102			
Copper	0.0	50.0	0.3	46.0	92			
Lead	0.0		0.1	0.1				
Silver	0.0	12.5	0.0	12.4	99			
Zinc	0.0	25.0	6.3	26.2	105			

80-120% control criteria is not applicable to interfering elements (Al,Ca,Fe,Mg).

Metals

- 5A -

SPIKE SAMPLE RECOVERY

Client:	GeoEngineers, Inc.	Service Request:	K0810000
Project No.:	5147-006-04	Units:	MG/KG
Project Name:	Dakota Creek Confirmation Sample	Basis:	DRY
Matrix:	SOIL	% Solids:	86.7

Sample Name: DCI 4-1S

Lab Code: K0810000-001S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Arsenic	56 - 136	111		3.89		114.20	93.8		6020
Cadmium	68 - 136	11.9		0.077		11.42	103.5		6020
Chromium		141		244		45.68	-74.4		6020
Copper	28 - 174	73.5		27.8		57.10	80		6020
Lead	31 - 178	113		2.45		114.20	96.8		6020
Silver	61 - 133	11.3		0.07		11.53	97.4		6020
Zinc	33 - 161	152		43.7		114.20	95		6020

An empty field in the Control Limit column indicates the control limit is not applicable

Metals

- 5B -

POST SPIKE SAMPLE RECOVERY

Client: GeoEngineers, Inc.
Service Request: K0810000

Project No.: 5147-006-04
Units: UG/L

Project Name: Dakota Creek Confirmation Sample
Basis: DRY

Matrix: WATER

Sample Name: DCI 4-1A
Lab Code: K0810000-001A

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Arsenic	75 - 125	49.6		6.8		50.0	86		6020
Cadmium	75 - 125	48.570		0.134		50.0	97		6020
Chromium	75 - 125	129.90		84.65		50.0	90		6020
Copper	75 - 125	56.21		9.64		50.0	93		6020
Lead	75 - 125	50.87		4.25		50.0	93		6020
Silver	75 - 125	9.563		0.116		10.0	94		6020
Zinc	75 - 125	58.41		15.17		50.0	86		6020

Metals

- 6 -

DUPLICATES

Client:	GeoEngineers, Inc.	Service Request:	K0810000
Project No.:	5147-006-04	Units:	MG/KG
Project Name:	Dakota Creek Confirmation Sample	Basis:	DRY
Matrix:	SOIL	% Solids:	86.7

Sample Name: DCI 4-1D Lab Code: K0810000-001D

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Arsenic	20	3.89		3.09		22.9	*	6020
Cadmium		0.077		0.066		15.4		6020
Chromium	20	244		124		65.2	*	6020
Copper	20	27.8		26.0		6.7		6020
Lead	20	2.45		2.91		17.2		6020
Silver		0.07		0.07		0.0		6020
Zinc	20	43.7		48.7		10.8		6020

An empty field in the Control Limit column indicates the control limit is not applicable.

Metals

- 7 -

LABORATORY CONTROL SAMPLE

Client: GeoEngineers, Inc. Service Request: K0810000

Project No.: 5147-006-04

Project Name: Dakota Creek Confirmation Sample

Aqueous LCS Source: Solid LCS Source: ERA D045540

Analyte	Aqueous (ug/L)			Solid (mg/kg)				
	True	Found	%R	True	Found	C	Limits	%R
Arsenic				146	148		74 126	101.4
Cadmium				92.8	101		77 133	108.8
Chromium				172	176		71 137	102.3
Copper				67	69.2		69 144	103.3
Lead				67.5	67.6		75 138	100.1
Silver				93	94.8		78 128	101.9
Zinc				380	417		78 140	109.7

Metals

- 9 -

ICP SERIAL DILUTIONS

Client: GeoEngineers, Inc. Service Request: K0810000

Project No.: 5147-006-04 Units: UG/L

Project Name: Dakota Creek Confirmation Sample

Sample Name: DCI 4-1L Lab Code: K0810000-001L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Arsenic	6.8		7.6		12		MS
Cadmium	0.1		0.1	B	0		MS
Chromium	84.7		92.2		9		MS
Copper	9.6		9.4		2		MS
Lead	4.2		4.5		7		MS
Silver	0.1		0.2	U	100.0		MS
Zinc	15.2		14.8		3		MS

Metals

- 10 -

DETECTION LIMITS

Client: GeoEngineers, Inc. Service Request: K0810000

Project No.: 5147-006-04

Project Name: Dakota Creek Confirmation Sample

ICP/ICP-MS ID #: K-ICP-MS-02

GFAA ID #: AA ID #:

Analyte	Isotope	Back-ground	MRL ug/L	MDL ug/L	M
Arsenic	75		1.0	0.4	MS
Cadmium	111		0.040	0.018	MS
Chromium	52		0.40	0.40	MS
Copper	65		0.20	0.18	MS
Lead	208		0.10	0.10	MS
Silver	109		0.040	0.040	MS
Zinc	66		1.00	1.00	MS

Comments:

Metals
-12-
ICP LINEAR RANGES (QUARTERLY)

Client: GeoEngineers, Inc. Service Request: K0810000

Project No.: 5147-006-04

Project Name: Dakota Creek Confirmation Sample

ICP ID Number: K-ICP-MS-02

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Arsenic	15.000	900	6020
Cadmium	15.000	900	6020
Chromium	15.000	900	6020
Copper	15.000	450	6020
Lead	15.000	900	6020
Silver	15.000	270	6020
Zinc	15.000	900	6020

Comments:

Metals
-13-
PREPARATION LOG

Client: GeoEngineers, Inc. Service Request: K0810000

Project No.: 5147-006-04

Project Name: Dakota Creek Confirmation Sample

Method: MS

Sample ID	Preparation Date	Initial Weight (g)	Final Volume (mL)
K0810000-001	10/16/08	1.00	100.0
K0810000-001D	10/16/08	1.00	100.0
K0810000-001S	10/16/08	1.01	100.0
K0810000-002	10/16/08	1.02	100.0
K0810000-MB	10/16/08	1.00	100.0
LCSS	10/16/08	1.01	100.0

Metals
-13-
PREPARATION LOG

Client: GeoEngineers, Inc. **Service Request:** K0810000

Project No.: 5147-006-04

Project Name: Dakota Creek Confirmation Sample

Method: MS

Sample ID	Preparation Date	Initial Weight (g)	Final Volume (mL)
K0810000-001	10/16/08	1.02	100.0
K0810000-001D	10/16/08	1.01	100.0
K0810000-001S	10/16/08	1.00	100.0
K0810000-002	10/16/08	1.00	100.0
K0810000-MB	10/16/08	1.00	100.0
LCSS	10/16/08	1.01	100.0

Metals
- 14 -
ANALYSIS RUN LOG

Client: GeoEngineers, Inc. Service Request: K0810000

Project No.: 5147-006-04

Project Name: Dakota Creek Confirmation Sample

Instrument ID Number: K-ICP-MS-02 Method: MS

Start Date: 10/21/08 End Date: 10/21/08

Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
Cal. Blk	1	18:05																			X					
Cal. Stn	1	18:07																			X					
ICV1	1	18:11																			X					
CCV1	1	18:15																			X					
ICB1	1	18:19																			X					
CCB1	1	18:21																			X					
CRA	1	18:23																			X					
ICS-A1	1	18:26																			X					
ICS-AB1	1	18:29																			X					
ZZZZZZ	1	18:32																								
ZZZZZZ	1	18:34																								
ZZZZZZ	1	18:38																								
ZZZZZZ	5	18:41																								
ZZZZZZ	1	18:44																								
ZZZZZZ	1	18:47																								
ZZZZZZ	1	18:50																								
CCV2	1	18:53																			X					
CCB2	1	18:57																			X					
ZZZZZZ	1	18:59																								
ZZZZZZ	1	19:01																								
ZZZZZZ	1	19:05																								
ZZZZZZ	1	19:08																								
ZZZZZZ	1	19:12																								
ZZZZZZ	1	19:15																								
ZZZZZZ	1	19:18																								
ZZZZZZ	1	19:21																								
ZZZZZZ	1	19:23																								
ZZZZZZ	1	19:27																								
CCV3	1	19:30																			X					
CCB3	1	19:34																			X					
ZZZZZZ	1	19:36																								
ZZZZZZ	1	19:39																								

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
- 14 -
ANALYSIS RUN LOG

Client: GeoEngineers, Inc. Service Request: K0810000

Project No.: 5147-006-04

Project Name: Dakota Creek Confirmation Sample

Instrument ID Number: K-ICP-MS-02 Method: MS

Start Date: 10/21/08 End Date: 10/21/08

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1	19:43																									
ZZZZZZ	1	19:46																									
ZZZZZZ	1	19:49																									
ZZZZZZ	1	19:52																									
ZZZZZZ	1	19:55																									
ZZZZZZ	1	19:58																									
ZZZZZZ	1	20:01																									
ZZZZZZ	1	20:05																									
CCV4	1	20:08																				X					
CCB4	1	20:12																				X					
ZZZZZZ	1	20:13																									
ZZZZZZ	1	20:17																									
ZZZZZZ	1	20:20																									
ZZZZZZ	1	20:23																									
ZZZZZZ	1	20:26																									
ZZZZZZ	1	20:29																									
ZZZZZZ	1	20:32																									
K0810000-MB	5	20:36																				X					
LCSS	50	20:38																				X					
K0810000-001	5	20:41																				X					
CCV5	1	20:44																				X					
CCB5	1	20:48																				X					
K0810000-001D	5	20:50																				X					
K0810000-001L	25	20:53																				X					
K0810000-001A	5	20:55																				X					
K0810000-001S	25	20:59																				X					
K0810000-002	5	21:02																				X					
ZZZZZZ	1	21:05																									
ZZZZZZ	1	21:07																									
ZZZZZZ	1	21:10																									
ZZZZZZ	1	21:13																									
ZZZZZZ	1	21:16																									

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
- 14 -
ANALYSIS RUN LOG

Client: GeoEngineers, Inc. **Service Request:** K0810000

Project No.: 5147-006-04

Project Name: Dakota Creek Confirmation Sample

Instrument ID Number: K-ICP-MS-02 **Method:** MS

Start Date: 10/21/08 **End Date:** 10/21/08

Sample No.	D/F	Time	% R	Analytes																									
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CCV6	1	21:19																			X					
CCB6	1	21:23																			X					

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
- 14 -
ANALYSIS RUN LOG

Client: GeoEngineers, Inc. Service Request: K0810000

Project No.: 5147-006-04

Project Name: Dakota Creek Confirmation Sample

Instrument ID Number: K-ICP-MS-02 Method: MS

Start Date: 10/22/08 End Date: 10/22/08

Sample No.	D/F	Time	% R	Analytes																												
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN					
Cal. Blk	1	11:21				X			X		X		X												X							
Cal. Stn	1	11:25				X			X		X		X												X							
ICV1	1	11:28				X			X		X		X												X							
CCV1	1	11:35				X			X		X		X												X							
ICB1	1	11:42				X			X		X		X												X							
CCB1	1	11:45				X			X		X		X												X							
CRA	1	11:48				X			X		X		X												X							
ICS-A1	1	11:52				X			X		X		X												X							
ICS-AB1	1	12:00				X			X		X		X												X							
K0810000-MB	5	12:07				X			X		X		X												X							
LCSS	50	12:14				X			X		X		X												X							
K0810000-001	5	12:21				X			X																							
K0810000-001D	5	12:25				X			X																							
K0810000-001L	25	12:29				X			X																							
K0810000-001A	5	12:32				X			X																							
K0810000-001S	25	12:40				X			X		X		X												X							
CCV2	1	12:47				X			X		X		X												X							
CCB2	1	12:54				X			X		X		X												X							
K0810000-002	5	12:57				X			X																							
CCV3	1	13:01				X			X		X		X												X							
CCB3	1	13:08				X			X		X		X												X							
K0810000-001	25	13:41									X		X												X							
K0810000-001D	25	13:44									X		X												X							
K0810000-001L	125	13:48									X		X												X							
K0810000-001A	25	13:51									X		X												X							
K0810000-002	25	13:58									X		X												X							
CCV4	1	14:01				X			X		X		X												X							
CCB4	1	14:08				X			X		X		X												X							

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
- 14 -
ANALYSIS RUN LOG

Client: GeoEngineers, Inc. Service Request: K0810000

Project No.: 5147-006-04

Project Name: Dakota Creek Confirmation Sample

Instrument ID Number: K-ICP-MS-02 Method: MS

Start Date: 10/23/08 End Date: 10/23/08

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN			
Cal. Blk	1	17:41													X															
Cal. Stn	1	17:43													X															
ICV1	1	17:46													X															
CCV1	1	17:53													X															
ICB1	1	17:56													X															
CCB1	1	17:58													X															
CRA	1	18:00													X															
ICS-A1	1	18:02													X															
ICS-AB1	1	18:05													X															
ZZZZZZ	1	18:08																												
ZZZZZZ	1	18:16																												
ZZZZZZ	1	18:20																												
ZZZZZZ	1	18:23																												
ZZZZZZ	1	18:25																												
ZZZZZZ	1	18:28																												
ZZZZZZ	1	18:31																												
CCV2	1	18:35													X															
CCB2	1	18:38													X															
ZZZZZZ	1	18:40																												
ZZZZZZ	1	18:43																												
ZZZZZZ	1	18:46																												
K0810000-MB	5	18:49													X															
LCSS	50	18:51													X															
K0810000-001	5	18:54													X															
K0810000-001D	5	18:57													X															
K0810000-001L	25	19:00													X															
K0810000-001A	5	19:03													X															
K0810000-001S	25	19:06													X															
CCV3	1	19:10													X															
CCB3	1	19:13													X															
K0810000-002	5	19:15													X															
CCV4	1	19:18													X															

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
- 14 -
ANALYSIS RUN LOG

Client: GeoEngineers, Inc. Service Request: K0810000

Project No.: 5147-006-04

Project Name: Dakota Creek Confirmation Sample

Instrument ID Number: K-ICP-MS-02 Method: MS

Start Date: 10/23/08 End Date: 10/23/08

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CCB4	1	19:21													X												

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Columbia Analytical Services
Metals Digestion Sheet

Extr/Prep Batch
KP0713491

Service Request Number(s): K0810000

Star Lims Run No.:

Method: CLP 3010A 3020A 3005A (3050B) CLP Hot Block Other-

Analysis for: (ICP) ICP-MS GFAA Flame AA Other

Sample	Initial Weight (g)	Dry	Wet	Initial Volume(ml)	Final Volume (ml)	Matrix
K0810000-Blank	1.01		X		100	16% HNO3, HCl
-LCSS	1.01					
-1	1.02					
-10	1.01					
-15	1.00					
-2	1.00					

MH 10-16-08

Time Digestion Started: 2:00pm **Balance I.D.:** 2 **Date Balance Checked** 10-16-08

Lot # Acids Used: HNO3 G-20046 **HCl** 48026 **H_2O_2** 48139831 **HF**

LCSS (circle appropriate) (ERA CLP Soil Lot # D045540) **Other:**

GFAA LCSW = GFLCSW, MET1-64-R, _____ mls. added

ICP LCSW = QCP-CICV-1, MET1-66-G, _____ mls. added
QCP CICV-2, MET1-66-E, _____ mls. added
QCP CICV-3, MET1-66-F, _____ mls. added
SS6, MET1-69-I, _____ mls. Added

TCLP Spike/LCSE
TSS1 MET1-64-P _____ mls. added

SPIKE INFO

SS1-MET1-69-C, 1.00 mls added SS4-MET1-67-P _____ mls added SS7-MET1-69-J _____ mls added
SS5-MET1-69-F, 1.00 mls added 200.8 1000ppb Stock (MS12-31-C) _____ mls added
SS6-MET1-69-I, 1.00 mls added Ag 1000ppb Stock (MS12-30-H) _____ mls added

Additional spikes:

Comments:

Analyst _____ **Date** 10-16-08

Reviewer _____ **Date** 10/20/08

metdig.xls

METALS SPIKE FORM

Service Request # K0810000

Q.C. Sample # 10000 -1

Circle type of digest: GFAA (ICP) FAA (ICP-MS) Other: _____ Initials / Date: MH 10-16-08

Circle type of sample: (Soil) Water Misc. Sludge Oil Other: _____

Solution Name	Element	mLs of 1000ppm Solution	Final Volume	Solution Conc. mg/L	Enter mls Added	
SS1-MET1-69-C	HNO3	50.0	1000ml	-	2.00	Expires:4/1/09
	Al	100**	1000ml	200		
	Ag	100**	1000ml	5		
	Ba	100**	1000ml	200		
	Be	100**	1000ml	5		
	Cd	100**	1000ml	5		
	Co	100**	1000ml	50		
	Cr	100**	1000ml	20		
	Cu	100**	1000ml	25		
	Fe	100**	1000ml	100		
	Pb	100**	1000ml	50		
	Mn	100**	1000ml	50		
	Ni	100**	1000ml	50		
	Sb	50	1000ml	50		
	V	100**	1000ml	50		
	Zn	100**	1000ml	50		
SS4-MET1-67-P	HNO3	25.0	500ml	-		Expires:1/2/09
	As	2.0	500ml	4		
	Cd	2.0	500ml	4		
	Pb	2.0	500ml	4		
	Se	2.0	500ml	4		
	Tl	2.0	500ml	4		
	Cu	2.0	500ml	4		
SS5-MET1-69-F	HNO3	25.0	500ml	-	1.00	Expires:1/2/09
	As	50.0	500ml	100		
	Se	50.0	500ml	100		
	Tl	50.0	500ml	100		
SS6-MET1-69-I	HNO3	25	500ml	-	1.00	Expires: 2/01/09
	B	50	500ml	100		
	Mo	50	500ml	100		
SS7-MET1-69-J	HNO3	10.0	200ml	-		Expires:11/16/08
	K**	20	200ml	1000		
	Na**	20	200ml	1000		
	Mg**	20	200ml	1000		
	Ca**	20	200ml	1000		
GFLCSW (MET1-64-R)	HNO3	10.0	1000ml	-		Expires: 1/1/09
	As, Pb, Se, Tl	5.0	1000ml	2.5		
	Cd	-	-	1.25		
	Cu	2.5	1000ml	2.5		
QCP-CICV-1 (MET1-66-G)	Ca, Mg, Na, K	no dilution	-	2500		Expires:7/1/09
	Al, Ba	no dilution	-	1000		
	Fe	no dilution	-	500		
	Co, Mn, Ni, V, Zn	no dilution	-	250		
	Cu, Ag	no dilution	-	125		
	Cr	no dilution	-	100		
	Be	no dilution	-	25		
QCP-CICV-2 (MET1-66-E)	Sb	no dilution	-	500		Expires: 7/1/09
QCP-CICV-3 (MET1-66-F)	As, Pb, Se, Tl	no dilution	-	500		Expires: 7/1/09
	Cd	no dilution	-	250		

* Denotes volume of mixed stock standard.

** Denotes 10,000 ppm individual stock standards.

Standard	mls of standard	ppm	Logbook #	Exp. Date

Columbia Analytical Services
Metals Digestion Sheet

Service Request Number(s): K0810000
Star Lims Run No.: 76206

Method: CLP 3010A 3020A
3005A (3050B) CLP Hot Block Other-____

Analysis for: ICP (ICP-MS) GFAA
Flame AA Other ____

Sample	Initial Weight (g)	Dry	Wet	Initial Volume(ml)	Final Volume (ml)	Matrix
K0810000-Blank	1.05		X		100	10% HNO3
-LCSS	1.01					
-1	1.00					
-10	1.00					
-15	1.01					
-2	1.07					
MH	10-16-08					

Time Digestion Started: 2:00pm **Balance I.D.:** 2 **Date Balance Checked** 10-16-08

Lot # Acids Used: HNO3 G210411 **HCl** _____ **H_2O_2** 481398 1 **HF** _____

LCSS (circle appropriate) ~~ERA CLP Soil Lot # D045540~~ **Other:** _____

GFAA LCSW = GFLCSW, MET1-64-R, _____ mls. added
ICP LCSW = QCP-CICV-1, MET1-66-G, _____ mls. added
QCP CICV-2, MET1-66-E, _____ mls. added
QCP CICV-3, MET1-66-F, _____ mls. added
SS6, MET1-69-I, _____ mls. Added

TCLP Spike/LCSE
TSS1 MET1-64-P _____ mls. added

SPIKE INFO
SS1-MET1-69-C, 2.00 mls added SS4-MET1-67-P _____ mls added SS7-MET1-69-J _____ mls added
SS5-MET1-69-F, 1.00 mls added 200.8 1000ppb Stock (MS12-31-C) _____ mls added
SS6-MET1-69-I, 1.00 mls added Ag 1000ppb Stock (MS12-30-H) _____ mls added
Additional spikes: _____
Comments: _____

Analyst [signature] **Date** 10-16-08
Reviewer [signature] **Date** 10/20/08

metdig.xls

Service Request # __K0810000____HNO3_____
Calibration __102208AMS02_____
QC in calibration_102208AMS02_____
QC Service Request # __K0810000_____
StarLIMS# __131436_____

ICP-MS Data Review Form

	Yes	No	NA
1. Appropriate standardization completed	X		
2. ICV within 10 % of true value	X		
3. CCV's in control	X		
4. CCB's and/or ICB's below MRL	X		
5. Method blank below MRL	X		
6. LCS in control	X		
7. Spike and duplicate in control	X		
8. All analytes within instrument linear range	X		
9. Adequate rinse out time allowed	X		
10. Internal standards in control	X		
11. Interferences checked	X		
12. Se over MRL		X	
13. CRA run	X		
14. ICSA and ICSAB in control	X		
15. Serial dilution run	X		
16. Post spike in control	X		

Comments: Dup=As-23%, Cr-65%. Needs Pb run.

Primary Review by JDB Date 10/22/08
Secondary Review by SmA Date 10/24/08
R:\icp\misc\data review forms\PQ ExCell review form

Instrument Setup - Sample Configuration

Sample	Configuration	Date

Instrument Setup - Configurations

Configuration Name -
Description -
Date -
Maximum Uptake Time -
Maximum Washout Time -
S-Option Pump Running -
Plasma Screen Forward -
Makeup Gas On -
Use CCT -
Use Accessory Gas -

Setting	Value

Sample List

Num	Label	Type	Weight	Volume	Dilution	Rack	Row	Column	Height
1	Cal. Blk	Blank	0 kg	0 ml	1.00	0	1	1	150
2	Cal. Stn	Fully Quant Standard	0 kg	0 ml	1.00	0	1	2	150
3	ICV1 (MS12-45-A)	QC Sample	0 kg	0 ml	1.00	0	1	3	150
4	CCV1 (MS12-47-F)	QC Sample	0 kg	0 ml	1.00	0	1	2	150
5	ICB1	QC Sample	0 kg	0 ml	1.00	0	1	1	150
6	CCB1	QC Sample	0 kg	0 ml	1.00	0	1	1	150
7	CRA (MS12-22-H)	QC Sample	0 kg	0 ml	1.00	0	1	4	150
8	ICSA (MS12-46-H)	Unknown	0 kg	0 ml	1.00	0	1	5	150
9	ICSAB (MS12-46-I)	Unknown	0 kg	0 ml	1.00	0	1	6	150
10	K0810000-MB 1/5	QC Sample	0 kg	0 ml	1.00	1	1	1	150
11	LCSS K0810000 1/50	QC Sample	0 kg	0 ml	1.00	1	1	2	150
12	K0810000-001 1/5	Unknown	0 kg	0 ml	1.00	1	1	3	150
13	K0810000-001 1/5D	QC Sample	0 kg	0 ml	1.00	1	1	4	150
14	K0810000-001 1/5L1/5I	QC Sample	0 kg	0 ml	1.00	1	1	5	150
15	K0810000-001 1/5A	QC Sample	0 kg	0 ml	1.00	1	1	6	150
16	K0810000-001 1/25S	Unknown	0 kg	0 ml	1.00	1	1	7	150
17	CCV2	QC Sample	0 kg	0 ml	1.00	0	1	2	150
18	CCB2	QC Sample	0 kg	0 ml	1.00	0	1	1	150
19	K0810000-002 1/5	Unknown	0 kg	0 ml	1.00	1	1	8	150
20	CCV3	QC Sample	0 kg	0 ml	1.00	0	1	2	150
21	CCB3	QC Sample	0 kg	0 ml	1.00	0	1	1	150

Instrument ID: K-ICP-MS-02
Experiment: 102208A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS # 131436

Sample Name:		Cal. Blk			Mean	SD	%RSD
TimeStamp		10/22/08 11:21					
Arsenic	75	0.024	-0.0302	0.0062	**0**	0.0276	0
Cadmium	111	0.0001	0.0005	-0.0005	**0**	0.0005	0
Cadmium	114	0.0003	-0.0002	-0.0001	**0**	0.0002	0
Chromium	52	0.0037	0.01	-0.0137	**0**	0.0123	0
Chromium	53	0.1148	-0.05	-0.0649	**0**	0.0997	0
Copper	63	0.0025	0.0037	-0.0062	**0**	0.0054	0
Copper	65	-0.0052	0.0056	-0.0004	**0**	0.0054	0
Molybdenum	95	-0.0009	0.0007	0.0002	**0**	0.0008	0
Molybdenum	97	0.001	0.0008	-0.0018	**0**	0.0016	0
Molybdenum	98	0.0004	-0.0001	-0.0003	**0**	0.0004	0
Selenium	77	0.0204	0.1349	-0.1554	**0**	0.1462	0
Selenium	78	-0.1435	0.0713	0.0722	**0**	0.1243	0
Selenium	82	0.0502	-0.0136	-0.0366	**0**	0.045	0
Zinc	66	-0.0024	0.0072	-0.0048	**0**	0.0064	0
Zinc	67	0.001	0.0225	-0.0235	**0**	0.023	0
Zinc	68	-0.0081	0.0208	-0.0127	**0**	0.0182	0

Internal Standard Factors:

Scandium	45	1.033	1.007	0.963	**1.033**	n/a	n/a
Rhodium	103	1.056	0.998	0.951	**1.056**	n/a	n/a
Indium	115	1.07	0.996	0.942	**1.07**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102208A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS # 131436

Sample Name:		Cal. Stn			Mean	SD	%RSD
TimeStamp		10/22/08 11:25					
Arsenic	75	25.56	24.93	24.51	**25**	0.5291	2.116
Cadmium	111	25.1	25	24.9	**25**	0.0983	0.3931
Cadmium	114	25.35	24.96	24.7	**25**	0.3277	1.311
Chromium	52	25.35	24.91	24.75	**25**	0.3106	1.242
Chromium	53	25.21	24.91	24.88	**25**	0.1854	0.7418
Copper	63	25.55	24.61	24.85	**25**	0.4883	1.953
Copper	65	25.56	24.75	24.69	**25**	0.4867	1.947
Molybdenum	95	25	24.75	25.25	**25**	0.2508	1.003
Molybdenum	97	24.71	24.9	25.39	**25**	0.3493	1.397
Molybdenum	98	24.46	25.03	25.51	**25**	0.5226	2.09
Selenium	77	24.52	24.31	26.17	**25**	1.014	4.057
Selenium	78	25.2	24.79	25.01	**25**	0.2022	0.8088
Selenium	82	25.48	24.82	24.7	**25**	0.4171	1.668
Zinc	66	25.5	24.51	24.99	**25**	0.4979	1.992
Zinc	67	25.15	24.98	24.87	**25**	0.139	0.5561
Zinc	68	25.26	24.77	24.97	**25**	0.2458	0.9833

Internal Standard Factors:

Scandium	45	1.02	0.991	0.978	**1.02**	n/a	n/a
Rhodium	103	0.996	0.95	0.942	**0.996**	n/a	n/a
Indium	115	1.012	0.963	0.925	**1.012**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102208A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS # 131436

Sample Name:		**ICV1 (MS12-45-A)**			**Mean**	**SD**	**%RSD**
TimeStamp		**10/22/08 11:28**					
Arsenic	75	25.81	24.35	24.58	**24.92**	0.7834	3.144
Cadmium	111	12.76	12.14	12.27	**12.39**	0.3243	2.618
Cadmium	114	12.57	12.18	12.11	**12.29**	0.2469	2.009
Chromium	52	10.39	9.586	9.98	**9.985**	0.402	4.026
Chromium	53	10.72	9.869	10.01	**10.2**	0.4554	4.466
Copper	63	13	12.15	12.04	**12.39**	0.5282	4.262
Copper	65	12.95	12.3	12.14	**12.47**	0.43	3.45
Molybdenum	95	26.34	25.96	26.1	**26.13**	0.192	0.7349
Molybdenum	97	26.5	25.78	25.68	**25.99**	0.4481	1.724
Molybdenum	98	26.19	25.66	25.81	**25.88**	0.2722	1.052
Selenium	77	26.16	26.57	25.36	**26.03**	0.6146	2.361
Selenium	78	27.04	24.88	24.97	**25.63**	1.223	4.77
Selenium	82	27.33	26.57	26	**26.64**	0.6688	2.511
Zinc	66	25.07	23.84	23.57	**24.16**	0.7977	3.302
Zinc	67	29.17	28.04	27.3	**28.17**	0.9452	3.355
Zinc	68	28.59	26.52	26.74	**27.28**	1.139	4.173

Internal Standard Factors:

Scandium	45	1.059	1.003	1.005	**1.059**	n/a	n/a
Rhodium	103	1.024	0.966	0.938	**1.024**	n/a	n/a
Indium	115	1.012	0.948	0.921	**1.012**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102208A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS # 131436

Sample Name: / TimeStamp		CCV1 (MS12-47-F) 10/22/08 11:35			Mean	SD	%RSD
Arsenic	75	24.83	24.92	24.8	**24.85**	0.0608	0.2445
Cadmium	111	24.37	25.08	25.16	**24.87**	0.4339	1.745
Cadmium	114	24.34	25.26	24.93	**24.85**	0.4669	1.879
Chromium	52	24.28	24.84	25.26	**24.79**	0.4932	1.99
Chromium	53	24.28	25.45	25.15	**24.96**	0.6045	2.422
Copper	63	24.51	24.95	24.82	**24.76**	0.2267	0.9154
Copper	65	24.64	24.73	24.79	**24.72**	0.074	0.2994
Molybdenum	95	24.04	25.47	25.72	**25.07**	0.9048	3.608
Molybdenum	97	24.25	25.12	25.5	**24.96**	0.6383	2.557
Molybdenum	98	23.89	25.31	25.4	**24.87**	0.8459	3.401
Selenium	77	23.69	24.82	26.15	**24.89**	1.231	4.946
Selenium	78	23.9	25.33	24.72	**24.65**	0.7174	2.911
Selenium	82	25.36	25.29	25.57	**25.41**	0.147	0.5784
Zinc	66	24.54	24.7	24.89	**24.71**	0.1742	0.7051
Zinc	67	24.26	25.23	24.51	**24.66**	0.5036	2.042
Zinc	68	24.43	24.44	24.92	**24.59**	0.283	1.151

Internal Standard Factors:

Scandium	45	1.012	1.031	1.015	**1.012**	n/a	n/a
Rhodium	103	1.006	0.972	0.95	**1.006**	n/a	n/a
Indium	115	1.009	0.969	0.936	**1.009**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102208A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS # 131436

Sample Name:		ICB1			Mean	SD	%RSD
TimeStamp		10/22/08 11:42					
Arsenic	75	0.1059	0.0152	-0.0102	**0.037**	0.0611	165.1
Cadmium	111	0.002	0.0032	0.0026	**0.0026**	0.0006	23.53
Cadmium	114	0.0015	0.0027	0.0024	**0.0022**	0.0006	29.35
Chromium	52	-0.0022	-0.0076	-0.0128	**-0.0075**	0.0053	70.24
Chromium	53	0.0667	-0.0034	-0.0982	**-0.0116**	0.0828	711.7
Copper	63	-0.0129	-0.0107	-0.0127	**-0.0121**	0.0012	10.26
Copper	65	-0.0117	-0.0087	-0.0138	**-0.0114**	0.0026	22.57
Molybdenum	95	0.0687	0.0651	0.064	**0.0659**	0.0025	3.746
Molybdenum	97	0.0764	0.0808	0.0566	**0.0712**	0.0129	18.12
Molybdenum	98	0.0813	0.0697	0.0607	**0.0706**	0.0103	14.64
Selenium	77	-0.1265	-0.1779	0.0192	**-0.0951**	0.1023	107.6
Selenium	78	-0.0529	-0.3051	-0.3164	**-0.2248**	0.149	66.27
Selenium	82	0.3573	-0.0474	0.0671	**0.1257**	0.2086	166
Zinc	66	-0.0447	-0.0505	-0.0575	**-0.0509**	0.0064	12.56
Zinc	67	-0.0849	-0.0897	-0.0445	**-0.073**	0.0248	34
Zinc	68	-0.0455	-0.0478	-0.0601	**-0.0511**	0.0078	15.27

Internal Standard Factors:

Scandium	45	1.03	1.036	1.012	**1.03**	n/a	n/a
Rhodium	103	1.027	0.981	0.956	**1.027**	n/a	n/a
Indium	115	1.03	0.968	0.942	**1.03**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102208A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS # 131436

Sample Name:		CCB1			Mean	SD	%RSD
TimeStamp		10/22/08 11:45					
Arsenic	75	0.0235	-0.0046	0.2012	**0.0733**	0.1116	152.2
Cadmium	111	0.001	0.0004	0.0004	**0.0006**	0.0003	54.86
Cadmium	114	0.0013	0.001	0.0021	**0.0014**	0.0006	40.06
Chromium	52	-0.0125	0.0002	-0.0016	**-0.0046**	0.0069	149.1
Chromium	53	0.0122	-0.0181	-0.0417	**-0.0159**	0.027	170.5
Copper	63	-0.0097	-0.0113	-0.0159	**-0.0123**	0.0032	26.19
Copper	65	-0.0118	-0.0069	-0.0065	**-0.0084**	0.003	35.04
Molybdenum	95	0.0459	0.0445	0.0409	**0.0438**	0.0026	5.875
Molybdenum	97	0.048	0.0416	0.0393	**0.0429**	0.0045	10.5
Molybdenum	98	0.0427	0.0432	0.0457	**0.0439**	0.0016	3.588
Selenium	77	-0.3118	-0.1213	-0.4064	**-0.2798**	0.1452	51.89
Selenium	78	-0.0133	-0.0746	-0.3645	**-0.1508**	0.1876	124.4
Selenium	82	-0.1125	-0.0332	0.5707	**0.1417**	0.3737	263.7
Zinc	66	-0.0417	-0.0528	-0.0564	**-0.0503**	0.0077	15.22
Zinc	67	-0.034	-0.1032	-0.0814	**-0.0729**	0.0354	48.54
Zinc	68	-0.0475	-0.0501	-0.0456	**-0.0477**	0.0023	4.767

Internal Standard Factors:

Scandium	45	1.04	1.054	1.035	**1.04**	n/a	n/a
Rhodium	103	1.023	0.98	0.963	**1.023**	n/a	n/a
Indium	115	1.023	0.972	0.945	**1.023**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102208A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS # 131436

Sample Name:		CRA (MS12-22-H)			Mean	SD	%RSD
TimeStamp		10/22/08 11:48					
Arsenic	75	0.9443	1.122	1.048	**1.038**	0.0891	8.583
Cadmium	111	0.0386	0.0429	0.0353	**0.039**	0.0038	9.825
Cadmium	114	0.0417	0.0398	0.049	**0.0435**	0.0049	11.22
Chromium	52	0.374	0.4118	0.3913	**0.3924**	0.0189	4.823
Chromium	53	0.3497	0.2296	0.2423	**0.2739**	0.066	24.09
Copper	63	0.1968	0.1842	0.1778	**0.1863**	0.0096	5.181
Copper	65	0.1865	0.1998	0.1886	**0.1916**	0.0071	3.72
Molybdenum	95	0.125	0.1323	0.1208	**0.126**	0.0058	4.615
Molybdenum	97	0.1242	0.1311	0.1377	**0.131**	0.0067	5.142
Molybdenum	98	0.1299	0.1339	0.1335	**0.1324**	0.0022	1.67
Selenium	77	2.205	1.963	1.92	**2.029**	0.1534	7.561
Selenium	78	1.895	1.952	2.132	**1.993**	0.1241	6.226
Selenium	82	2.099	2.478	2.21	**2.262**	0.1949	8.613
Zinc	66	1.214	1.196	1.09	**1.167**	0.0669	5.736
Zinc	67	1.043	1.079	1.007	**1.043**	0.0362	3.473
Zinc	68	1.143	1.142	1.107	**1.131**	0.0204	1.804

Internal Standard Factors:

Scandium	45	1.031	1.044	1.047	**1.031**	n/a	n/a
Rhodium	103	1.01	0.976	0.957	**1.01**	n/a	n/a
Indium	115	0.998	0.968	0.949	**0.998**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102208A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS # 131436

Sample Name:		ICSA (MS12-46-H)			Mean	SD	%RSD
TimeStamp		10/22/08 11:52					
Arsenic	75	0.025	0.0638	0.1096	**0.0661**	0.0424	64.08
Cadmium	111	0.2084	0.2378	0.2389	**0.2284**	0.0173	7.575
Cadmium	114	0.1492	0.156	0.1563	**0.1539**	0.004	2.615
Chromium	52	0.1433	0.2177	0.2197	**0.1936**	0.0435	22.49
Chromium	53	1.516	1.474	1.496	**1.495**	0.0211	1.41
Copper	63	0.5006	0.4913	0.5005	**0.4975**	0.0053	1.065
Copper	65	0.308	0.3169	0.3151	**0.3134**	0.0047	1.502
Molybdenum	95	203.9	216.6	217.5	**212.7**	7.619	3.583
Molybdenum	97	207.6	221.2	220.6	**216.5**	7.703	3.558
Molybdenum	98	205.5	216.4	216.4	**212.8**	6.265	2.945
Selenium	77	0.8052	0.678	0.724	**0.7357**	0.0644	8.754
Selenium	78	-0.4436	-0.0515	-0.2245	**-0.2398**	0.1965	81.93
Selenium	82	0.0298	0.1058	0.2938	**0.1431**	0.1359	94.95
Zinc	66	6.368	6.205	6.223	**6.266**	0.0891	1.422
Zinc	67	6.265	6.381	6.577	**6.408**	0.1579	2.464
Zinc	68	5.979	5.989	6.102	**6.023**	0.0686	1.139

Internal Standard Factors:

Scandium	45	1.216	1.277	1.244	**1.216**	n/a	n/a
Rhodium	103	1.171	1.144	1.125	**1.171**	n/a	n/a
Indium	115	1.11	1.071	1.052	**1.11**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102208A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS # 131436

Sample Name:		ICSAB (MS12-46-I)			Mean	SD	%RSD
TimeStamp		10/22/08 12:00					
Arsenic	75	24.46	24.3	24.24	**24.33**	0.1155	0.4745
Cadmium	111	25.45	25.56	25.58	**25.53**	0.0692	0.2711
Cadmium	114	25.22	25.28	25.18	**25.23**	0.0469	0.1859
Chromium	52	49.95	51.68	50.78	**50.8**	0.8624	1.698
Chromium	53	50.24	52.91	51.84	**51.66**	1.345	2.603
Copper	63	46.88	46.13	45.24	**46.08**	0.8196	1.779
Copper	65	46.81	45.59	45.5	**45.96**	0.7299	1.588
Molybdenum	95	214.2	220.7	222.9	**219.3**	4.537	2.069
Molybdenum	97	216.4	220	225.3	**220.6**	4.482	2.032
Molybdenum	98	216.9	217.6	220.8	**218.4**	2.066	0.9456
Selenium	77	26.61	25.78	27.13	**26.51**	0.6822	2.574
Selenium	78	25.4	25.34	25	**25.25**	0.2125	0.8418
Selenium	82	25.58	25.11	26.01	**25.57**	0.4471	1.749
Zinc	66	26.48	26.18	26.05	**26.24**	0.2219	0.8458
Zinc	67	26.79	25.53	25.82	**26.05**	0.6581	2.527
Zinc	68	24.99	24.83	24.91	**24.91**	0.0773	0.3102

Internal Standard Factors:

Scandium	45	1.334	1.368	1.351	**1.334**	n/a	n/a
Rhodium	103	1.258	1.21	1.199	**1.258**	n/a	n/a
Indium	115	1.186	1.142	1.104	**1.186**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102208A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS # 131436

Sample Name:		K0810000-MB 1/5			Mean	SD	%RSD
TimeStamp		10/22/08 12:07					
Arsenic	75	0.0435	0.0302	0.066	**0.0465**	0.0181	38.95
Cadmium	111	0.0026	0.0035	0.002	**0.0027**	0.0008	29.18
Cadmium	114	0.1627	0.1656	0.1726	**0.167**	0.0051	3.049
Chromium	52	0.166	0.1645	0.158	**0.1628**	0.0042	2.608
Chromium	53	-0.5337	-0.6553	-0.6473	**-0.6121**	0.068	11.11
Copper	63	0.0437	0.0415	0.0332	**0.0395**	0.0056	14.07
Copper	65	0.044	0.0443	0.0433	**0.0438**	0.0005	1.209
Molybdenum	95	0.5464	0.4427	0.4106	**0.4666**	0.071	15.21
Molybdenum	97	0.534	0.4749	0.4279	**0.479**	0.0532	11.1
Molybdenum	98	0.5442	0.4638	0.4133	**0.4738**	0.066	13.93
Selenium	77	-0.1227	-0.2878	-0.3528	**-0.2544**	0.1186	46.62
Selenium	78	-0.1807	-0.3232	-0.1876	**-0.2305**	0.0804	34.86
Selenium	82	0.1688	0.0186	0.0429	**0.0768**	0.0806	105
Zinc	66	0.7949	0.8707	0.7961	**0.8206**	0.0434	5.293
Zinc	67	0.6597	0.6676	0.6608	**0.6627**	0.0043	0.6448
Zinc	68	0.7759	0.7785	0.8248	**0.7931**	0.0275	3.468

Internal Standard Factors:

Scandium	45	1.159	1.184	1.158	**1.159**	n/a	n/a
Rhodium	103	1.098	1.071	1.045	**1.098**	n/a	n/a
Indium	115	1.063	1.037	1.011	**1.063**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102208A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS # 131436

Sample Name:		LCSS K0810000 1/50			Mean	SD	%RSD
TimeStamp		10/22/08 12:14					
Arsenic	75	29.69	30.3	29.89	**29.96**	0.3136	1.047
Cadmium	111	20.01	20.77	20.68	**20.49**	0.4112	2.007
Cadmium	114	20.08	20.93	20.92	**20.65**	0.4878	2.363
Chromium	52	35.15	35.52	36.01	**35.56**	0.4312	1.213
Chromium	53	34.21	34.38	35.56	**34.72**	0.7382	2.126
Copper	63	13.86	13.94	13.89	**13.89**	0.0446	0.3213
Copper	65	14.05	13.8	14.06	**13.97**	0.1501	1.075
Molybdenum	95	5.153	5.538	5.632	**5.441**	0.2538	4.664
Molybdenum	97	5.294	5.618	5.66	**5.524**	0.2001	3.622
Molybdenum	98	5.197	5.551	5.703	**5.484**	0.2594	4.731
Selenium	77	16.83	16.76	16.43	**16.68**	0.213	1.277
Selenium	78	16.11	16.22	16.64	**16.32**	0.2796	1.713
Selenium	82	17.13	17.43	17.16	**17.24**	0.1647	0.9556
Zinc	66	84.64	84.56	83.7	**84.3**	0.519	0.6157
Zinc	67	82.05	82.78	81.78	**82.2**	0.5154	0.627
Zinc	68	84.31	84.49	84.5	**84.43**	0.1091	0.1292

Internal Standard Factors:

Scandium	45	1.17	1.173	1.166	**1.17**	n/a	n/a
Rhodium	103	1.09	1.068	1.043	**1.09**	n/a	n/a
Indium	115	1.06	1.042	1.012	**1.06**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102208A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS # 131436

Sample Name:		K0810000-001 1/5			Mean	SD	%RSD
TimeStamp		10/22/08 12:21					
Arsenic	75	6.669	6.686	6.898	**6.751**	0.1276	1.89
Cadmium	111	0.1347	0.1363	0.1307	**0.1339**	0.0029	2.149
Cadmium	114	0.2001	0.1927	0.2073	**0.2**	0.0073	3.657
Chromium	52	295.2	310.7	302.3	**302.7**	7.753	2.561
Chromium	53	308.1	320.4	327	**318.5**	9.581	3.008
Copper	63	42.09	40.98	41.48	**41.52**	0.5558	1.339
Copper	65	41.65	42.54	41.2	**41.8**	0.6838	1.636
Molybdenum	95	0.2742	0.3019	0.282	**0.2861**	0.0143	4.993
Molybdenum	97	0.3028	0.2676	0.2698	**0.28**	0.0198	7.054
Molybdenum	98	0.3332	0.3132	0.3303	**0.3255**	0.0108	3.325
Selenium	77	0.741	0.8257	0.4561	**0.6743**	0.1936	28.71
Selenium	78	-0.4381	-0.4758	-0.3817	**-0.4319**	0.0474	10.96
Selenium	82	0.1347	-0.0178	0.4639	**0.1936**	0.2462	127.2
Zinc	66	68.61	69.02	68.64	**68.76**	0.2257	0.3283
Zinc	67	68.45	68.23	68.8	**68.49**	0.2905	0.4242
Zinc	68	66.58	68.07	67.56	**67.4**	0.7534	1.118

SB 10/22/08

Internal Standard Factors:

Scandium	45	0.897	0.947	0.955	**0.897**	n/a	n/a
Rhodium	103	1.237	1.23	1.225	**1.237**	n/a	n/a
Indium	115	1.14	1.114	1.108	**1.14**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102208A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS # 131436

Sample Name:		K0810000-001 1/5D			Mean	SD	%RSD
TimeStamp		10/22/08 12:25					
Arsenic	75	5.656	5.323	5.093	**5.357**	0.2834	5.29
Cadmium	111	0.1198	0.1122	0.1121	**0.1147**	0.0044	3.831
Cadmium	114	0.1865	0.1742	0.1582	**0.173**	0.0142	8.206
Chromium	52	164.3	159.2	152.9	**158.8**	5.72	3.601
Chromium	53	166.1	163.7	156	**161.9**	5.28	3.261
Copper	63	42.36	39.32	36.23	**39.3**	3.067	7.805
Copper	65	42.38	39.76	37.3	**39.81**	2.538	6.375
Molybdenum	95	0.3158	0.2831	0.2663	**0.2884**	0.0252	8.729
Molybdenum	97	0.2935	0.2964	0.2498	**0.2799**	0.0261	9.326
Molybdenum	98	0.3192	0.3025	0.2969	**0.3062**	0.0116	3.788
Selenium	77	0.7959	0.9527	0.5371	**0.7619**	0.2099	27.55
Selenium	78	-0.4876	-0.8068	-1.092	**-0.7954**	0.3023	38.01
Selenium	82	0.6979	0.4348	0.4797	**0.5375**	0.1407	26.18
Zinc	66	82.25	78.93	73.67	**78.28**	4.324	5.523
Zinc	67	82.36	78.31	72.4	**77.69**	5.011	6.45
Zinc	68	81.76	77.85	72.64	**77.42**	4.574	5.908

Internal Standard Factors:

Scandium	45	0.993	1.017	1.026	**0.993**	n/a	n/a
Rhodium	103	1.327	1.282	1.248	**1.327**	n/a	n/a
Indium	115	1.21	1.15	1.131	**1.21**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102208A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS # 131436

Sample Name:		**K0810000-001 1/5+1/5L**			**Mean**	**SD**	**%RSD**
TimeStamp		**10/22/08 12:29**					
Arsenic	75	1.575	1.415	1.581	**1.524**	0.0943	6.189
Cadmium	111	0.0301	0.0271	0.0224	**0.0265**	0.0039	14.58
Cadmium	114	0.0369	0.0351	0.0415	**0.0379**	0.0033	8.768
Chromium	52	78.6	80.76	82.39	**80.58**	1.898	2.356
Chromium	53	77.89	80.03	80.61	**79.51**	1.432	1.801
Copper	63	8.28	8.216	8.193	**8.23**	0.0451	0.5484
Copper	65	8.534	8.177	8.07	**8.26**	0.2431	2.943
Molybdenum	95	0.0889	0.079	0.0831	**0.0837**	0.0049	5.897
Molybdenum	97	0.0697	0.0888	0.0767	**0.0784**	0.0097	12.34
Molybdenum	98	0.0811	0.0981	0.0813	**0.0868**	0.0098	11.27
Selenium	77	-0.3237	-0.2201	-0.1988	**-0.2475**	0.0668	26.99
Selenium	78	-0.9068	-0.957	-1.036	**-0.9666**	0.0652	6.744
Selenium	82	0.2378	-0.0145	0.5392	**0.2542**	0.2772	109.1
Zinc	66	14.71	14.97	14.76	**14.81**	0.1386	0.9356
Zinc	67	14.46	14.95	14.01	**14.47**	0.4692	3.242
Zinc	68	14.63	14.49	14.45	**14.52**	0.0952	0.6554

VB 10/23/08

Internal Standard Factors:

Scandium	45	1.227	1.267	1.265	**1.227**	n/a	n/a
Rhodium	103	1.198	1.195	1.167	**1.198**	n/a	n/a
Indium	115	1.115	1.1	1.088	**1.115**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102208A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS # 131436

Sample Name:		K0810000-001 1/5A			Mean	SD	%RSD
TimeStamp		10/22/08 12:32					
Arsenic	75	50.05	50.6	48.13	**49.59**	1.293	2.607
Cadmium	111	48.23	48.64	48.84	**48.57**	0.3116	0.6415
Cadmium	114	47.05	47.38	47.64	**47.36**	0.2963	0.6257
Chromium	52	340.3	335.7	351.7	**342.5**	8.224	2.401
Chromium	53	352	344.2	362.7	**353**	9.268	2.626
Copper	63	82.54	80.99	80.62	**81.38**	1.018	1.251
Copper	65	83.13	79.72	81.13	**81.33**	1.71	2.103
Molybdenum	95	49.89	50.5	50.25	**50.21**	0.3039	0.6052
Molybdenum	97	51.16	51.27	51.25	**51.23**	0.06	0.1172
Molybdenum	98	51.12	51.89	51.51	**51.51**	0.3827	0.7429
Selenium	77	46.45	45.81	46.75	**46.34**	0.4808	1.038
Selenium	78	45.73	45.51	44.77	**45.34**	0.5032	1.11
Selenium	82	48.48	49.98	47.97	**48.81**	1.047	2.145
Zinc	66	110	109.3	106.8	**108.7**	1.713	1.576
Zinc	67	108	105	104.8	**105.9**	1.794	1.694
Zinc	68	106.4	106.3	105.1	**105.9**	0.7234	0.6829

SJS 10/24/08

Internal Standard Factors:

Scandium	45	1.102	1.113	1.179	**1.102**	n/a	n/a
Rhodium	103	1.419	1.393	1.385	**1.419**	n/a	n/a
Indium	115	1.255	1.22	1.227	**1.255**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102208A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS # 131436

Sample Name:		K0810000-001 1/25S			Mean	SD	%RSD
TimeStamp		10/22/08 12:40					
Arsenic	75	39.04	38.73	38.37	**38.71**	0.3369	0.8704
Cadmium	111	4.124	4.211	4.179	**4.171**	0.0437	1.047
Cadmium	114	4.153	4.198	4.157	**4.169**	0.0251	0.6011
Chromium	52	47.66	50.3	49.97	**49.31**	1.44	2.92
Chromium	53	47.8	48.83	48.3	**48.31**	0.5143	1.065
Copper	63	25.65	25.36	25.29	**25.43**	0.1916	0.7533
Copper	65	26.04	25.25	25.94	**25.75**	0.4291	1.667
Molybdenum	95	36.63	38.34	38.66	**37.88**	1.092	2.884
Molybdenum	97	36.85	37.92	38.94	**37.9**	1.04	2.745
Molybdenum	98	36.74	37.95	38.69	**37.8**	0.9829	2.6
Selenium	77	38.85	39.28	40.17	**39.43**	0.6733	1.708
Selenium	78	38.51	38.5	39.08	**38.69**	0.3303	0.8537
Selenium	82	41.37	41.4	41.02	**41.27**	0.211	0.5113
Zinc	66	53.95	53.13	53.04	**53.37**	0.4978	0.9326
Zinc	67	58.42	57.97	57.8	**58.06**	0.3214	0.5535
Zinc	68	56.37	55.83	55.96	**56.05**	0.281	0.5013

Internal Standard Factors:

Scandium	45	1.286	1.357	1.332	**1.286**	n/a	n/a
Rhodium	103	1.231	1.214	1.204	**1.231**	n/a	n/a
Indium	115	1.157	1.134	1.112	**1.157**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102208A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS # 131436

Sample Name:		CCV2			Mean	SD	%RSD
TimeStamp		10/22/08 12:47					
Arsenic	75	23.79	23.12	22.71	**23.21**	0.5442	2.345
Cadmium	111	24.7	25.07	25.28	**25.01**	0.2939	1.175
Cadmium	114	24.35	24.76	24.92	**24.68**	0.291	1.179
Chromium	52	24.62	25.48	24.89	**25**	0.4367	1.747
Chromium	53	23.81	24.53	23.63	**23.99**	0.4786	1.995
Copper	63	22.97	22.48	22.14	**22.53**	0.4175	1.853
Copper	65	23.05	22.75	22.65	**22.82**	0.2115	0.927
Molybdenum	95	24.43	25.12	25.19	**24.92**	0.4179	1.677
Molybdenum	97	24.62	25.34	25.79	**25.25**	0.5887	2.332
Molybdenum	98	24.65	25.16	25.37	**25.06**	0.3708	1.48
Selenium	77	22.4	23.71	23.54	**23.21**	0.7083	3.051
Selenium	78	23.49	23.21	22.62	**23.1**	0.4448	1.925
Selenium	82	23.66	24.22	23.33	**23.74**	0.4502	1.897
Zinc	66	23.39	23.45	23.54	**23.46**	0.0779	0.3322
Zinc	67	22.93	23.43	23.59	**23.32**	0.3438	1.474
Zinc	68	23.48	23.38	23.18	**23.35**	0.1518	0.6503

Internal Standard Factors:

Scandium	45	1.258	1.282	1.253	**1.258**	n/a	n/a
Rhodium	103	1.144	1.119	1.088	**1.144**	n/a	n/a
Indium	115	1.088	1.06	1.03	**1.088**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102208A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS # 131436

Sample Name:		CCB2			Mean	SD	%RSD
TimeStamp		10/22/08 12:54					
Arsenic	75	0.013	-0.0386	-0.0265	**-0.0174**	0.027	155.5
Cadmium	111	0.0017	0.0031	0.0035	**0.0028**	0.001	34.88
Cadmium	114	0.0025	0.0048	0.0046	**0.004**	0.0013	31.61
Chromium	52	0.0045	0.0181	0.0218	**0.0148**	0.0091	61.68
Chromium	53	-0.8002	-0.8587	-0.8395	**-0.8328**	0.0298	3.583
Copper	63	-0.007	-0.0083	-0.0089	**-0.0081**	0.001	12.27
Copper	65	-0.0095	-0.0192	-0.0066	**-0.0118**	0.0066	56.28
Molybdenum	95	0.0935	0.0919	0.0894	**0.0916**	0.0021	2.258
Molybdenum	97	0.1063	0.0991	0.0771	**0.0942**	0.0152	16.17
Molybdenum	98	0.1062	0.0997	0.0788	**0.0949**	0.0143	15.11
Selenium	77	-0.2933	-0.4018	-0.2459	**-0.3137**	0.0799	25.47
Selenium	78	-0.2727	-0.6843	-0.6375	**-0.5315**	0.2253	42.39
Selenium	82	-0.0361	-0.2672	-0.0941	**-0.1324**	0.1202	90.77
Zinc	66	-0.0393	-0.048	-0.0454	**-0.0442**	0.0045	10.15
Zinc	67	-0.155	-0.0784	-0.157	**-0.1301**	0.0448	34.45
Zinc	68	-0.041	-0.0567	-0.0315	**-0.0431**	0.0127	29.5

Internal Standard Factors:

Scandium	45	1.248	1.244	1.247	**1.248**	n/a	n/a
Rhodium	103	1.151	1.113	1.093	**1.151**	n/a	n/a
Indium	115	1.094	1.053	1.027	**1.094**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102208A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS # 131436

Sample Name:		**K0810000-002 1/5**			**Mean**	**SD**	**%RSD**
TimeStamp		**10/22/08 12:57**					
Arsenic	75	5.392	5.067	5.181	**5.213**	0.1648	3.162
Cadmium	111	0.1206	0.1272	0.1234	**0.1237**	0.0034	2.708
Cadmium	114	0.1768	0.1845	0.1917	**0.1843**	0.0075	4.05
Chromium	52	126.2	129.1	129.7	**128.3**	1.887	1.47
Chromium	53	127.8	129.3	130.7	**129.2**	1.466	1.134
Copper	63	39.19	38.27	38.2	**38.56**	0.5534	1.435
Copper	65	40.2	39.2	39.22	**39.54**	0.5738	1.451
Molybdenum	95	0.3187	0.3179	0.3113	**0.316**	0.0041	1.283
Molybdenum	97	0.3092	0.3188	0.3075	**0.3118**	0.0061	1.95
Molybdenum	98	0.3445	0.3264	0.3151	**0.3287**	0.0148	4.51
Selenium	77	0.7848	0.7555	0.6104	**0.7169**	0.0934	13.02
Selenium	78	-0.8164	-0.9453	-0.9506	**-0.9041**	0.076	8.402
Selenium	82	0.6675	0.1006	0.1204	**0.2962**	0.3217	108.6
Zinc	66	71.67	71.91	72.15	**71.91**	0.2419	0.3364
Zinc	67	71.68	71.76	71.75	**71.73**	0.0437	0.061
Zinc	68	71.09	70.23	70.17	**70.5**	0.5168	0.733

EMA 10/23/08

EMA 10/24/08

Internal Standard Factors:

Scandium	45	1.098	1.128	1.158	**1.098**	n/a	n/a
Rhodium	103	1.345	1.361	1.372	**1.345**	n/a	n/a
Indium	115	1.222	1.207	1.225	**1.222**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102208A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS # 131436

Sample Name:		CCV3			Mean	SD	%RSD
TimeStamp		10/22/08 13:01					
Arsenic	75	22.99	22.77	23.18	**22.98**	0.2032	0.8842
Cadmium	111	24.91	24.92	24.89	**24.91**	0.0167	0.0671
Cadmium	114	24.82	24.69	25.15	**24.88**	0.236	0.9482
Chromium	52	25.45	25.02	24.74	**25.07**	0.3542	1.413
Chromium	53	24.1	24.22	24.01	**24.11**	0.11	0.4563
Copper	63	22.4	22.44	22.85	**22.56**	0.2529	1.121
Copper	65	22.36	22.87	22.77	**22.67**	0.267	1.178
Molybdenum	95	24.55	25.33	25.2	**25.03**	0.4151	1.659
Molybdenum	97	24.71	25.29	25.6	**25.2**	0.4513	1.791
Molybdenum	98	24.41	25.4	25.36	**25.06**	0.5585	2.229
Selenium	77	24.52	24.39	23.04	**23.98**	0.8205	3.421
Selenium	78	22.74	22.9	23.01	**22.89**	0.1359	0.5939
Selenium	82	24.12	24.45	23.92	**24.16**	0.2637	1.091
Zinc	66	23.29	23.72	23.75	**23.58**	0.2571	1.09
Zinc	67	22.96	23.64	23.23	**23.28**	0.3412	1.466
Zinc	68	22.96	23.69	23.32	**23.32**	0.364	1.561

Internal Standard Factors:

Scandium	45	1.336	1.328	1.306	**1.336**	n/a	n/a
Rhodium	103	1.162	1.148	1.127	**1.162**	n/a	n/a
Indium	115	1.105	1.06	1.05	**1.105**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102208A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS # 131436

Sample Name:		CCB3			Mean	SD	%RSD
TimeStamp		10/22/08 13:08					
Arsenic	75	0.047	0.0559	0.0326	**0.0452**	0.0117	25.94
Cadmium	111	0.0044	0.0047	0.0056	**0.0049**	0.0006	12.62
Cadmium	114	0.0039	0.0027	0.0051	**0.0039**	0.0012	31.38
Chromium	52	-0.0061	0.0211	-0.0089	**0.002**	0.0166	822
Chromium	53	-0.825	-0.8785	-0.8983	**-0.8673**	0.0379	4.369
Copper	63	-0.0084	-0.016	-0.0117	**-0.012**	0.0038	31.59
Copper	65	-0.0066	-0.0089	-0.0083	**-0.0079**	0.0012	15.42
Molybdenum	95	0.0747	0.0697	0.0581	**0.0675**	0.0085	12.61
Molybdenum	97	0.0814	0.0686	0.076	**0.0753**	0.0065	8.563
Molybdenum	98	0.0825	0.069	0.0665	**0.0727**	0.0086	11.85
Selenium	77	-0.1332	-0.345	-0.4174	**-0.2985**	0.1477	49.47
Selenium	78	-0.4822	-0.6262	-0.8111	**-0.6398**	0.1649	25.77
Selenium	82	0.3096	0.1958	0.0085	**0.1713**	0.152	88.77
Zinc	66	-0.0381	-0.0467	-0.0479	**-0.0442**	0.0053	12.06
Zinc	67	-0.1528	-0.1318	-0.1658	**-0.1502**	0.0171	11.42
Zinc	68	-0.0213	-0.0509	-0.0606	**-0.0443**	0.0205	46.27

Internal Standard Factors:

Scandium	45	1.282	1.273	1.287	**1.282**	n/a	n/a
Rhodium	103	1.164	1.129	1.107	**1.164**	n/a	n/a
Indium	115	1.106	1.066	1.036	**1.106**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102208A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS # 131436

Sample Name:		K0810000-001 1/25			Mean	SD	%RSD
TimeStamp		10/22/08 13:41					
Arsenic	75	1.54	1.578	1.5	**1.539**	0.0388	2.523
Cadmium	111	0.027	0.0263	0.0291	**0.0275**	0.0015	5.386
Cadmium	114	0.047	0.034	0.0414	**0.0408**	0.0065	16
Chromium	52	84.63	84.99	84.34	**84.65**	0.3242	0.383
Chromium	53	84.59	85.04	85.38	**85**	0.3981	0.4683
Copper	63	10.11	9.663	9.424	**9.732**	0.3466	3.561
Copper	65	9.896	9.645	9.376	**9.639**	0.2601	2.698
Molybdenum	95	0.2124	0.1403	0.1143	**0.1557**	0.0508	32.65
Molybdenum	97	0.2221	0.1402	0.1133	**0.1585**	0.0567	35.75
Molybdenum	98	0.2235	0.1594	0.125	**0.1693**	0.05	29.52
Selenium	77	-0.1665	-0.0791	-0.211	**-0.1522**	0.0671	44.09
Selenium	78	-0.491	-0.5588	-0.798	**-0.6159**	0.1613	26.18
Selenium	82	-0.1244	0.147	0.0544	**0.0257**	0.138	537.8
Zinc	66	15.54	15.24	14.74	**15.17**	0.4055	2.673
Zinc	67	14.8	15.15	14.54	**14.83**	0.3041	2.05
Zinc	68	15.27	15.04	14.7	**15**	0.2832	1.888

Internal Standard Factors:

Scandium	45	1.264	1.222	1.177	**1.264**	n/a	n/a
Rhodium	103	1.413	1.297	1.219	**1.413**	n/a	n/a
Indium	115	1.394	1.259	1.18	**1.394**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102208A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS # 131436

Sample Name:		K0810000-001 1/25D			Mean	SD	%RSD
TimeStamp		10/22/08 13:44					
Arsenic	75	1.157	1.232	1.119	**1.169**	0.0576	4.925
Cadmium	111	0.0208	0.0205	0.022	**0.0211**	0.0008	3.895
Cadmium	114	0.0359	0.0383	0.0374	**0.0372**	0.0012	3.319
Chromium	52	42.19	43.24	43.43	**42.95**	0.6673	1.554
Chromium	53	41.93	42.9	42.43	**42.42**	0.4845	1.142
Copper	63	9.152	9.149	9.031	**9.111**	0.0692	0.7591
Copper	65	8.976	9.096	8.954	**9.009**	0.0761	0.8451
Molybdenum	95	0.0895	0.0985	0.0771	**0.0884**	0.0107	12.15
Molybdenum	97	0.0792	0.0849	0.0797	**0.0812**	0.0031	3.865
Molybdenum	98	0.1032	0.0921	0.0827	**0.0927**	0.0102	11.05
Selenium	77	-0.0443	0.0111	0.0128	**-0.0068**	0.0325	477.9
Selenium	78	-0.6336	-0.744	-0.4606	**-0.6127**	0.1428	23.31
Selenium	82	0.2063	0.3869	0.0049	**0.1994**	0.1911	95.84
Zinc	66	16.69	17.16	16.8	**16.88**	0.2483	1.471
Zinc	67	17.07	16.44	16.82	**16.78**	0.315	1.878
Zinc	68	16.74	16.97	16.85	**16.85**	0.1137	0.6745

Internal Standard Factors:

Scandium	45	1.165	1.162	1.149	**1.165**	n/a	n/a
Rhodium	103	1.23	1.203	1.162	**1.23**	n/a	n/a
Indium	115	1.188	1.131	1.104	**1.188**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102208A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS # 131436

Sample Name:		K0810000-001 1/25+1/5L			Mean	SD	%RSD
TimeStamp		10/22/08 13:48					
Arsenic	75	0.2605	0.239	0.3527	**0.284**	0.0604	21.26
Cadmium	111	0.0048	0.0061	0.008	**0.0063**	0.0016	25.29
Cadmium	114	0.011	0.0092	0.0072	**0.0091**	0.0019	20.86
Chromium	52	18.45	18.51	18.35	**18.44**	0.0802	0.4348
Chromium	53	16.94	17.29	17.52	**17.25**	0.2957	1.714
Copper	63	1.927	1.873	1.857	**1.886**	0.0368	1.951
Copper	65	1.904	1.863	1.875	**1.881**	0.0214	1.139
Molybdenum	95	0.0331	0.0382	0.032	**0.0344**	0.0033	9.589
Molybdenum	97	0.0338	0.0305	0.0338	**0.0327**	0.0019	5.875
Molybdenum	98	0.0363	0.0382	0.0414	**0.0386**	0.0026	6.728
Selenium	77	-0.1446	-0.2343	-0.399	**-0.2593**	0.129	49.76
Selenium	78	-0.1618	-0.6115	-0.5774	**-0.4503**	0.2504	55.6
Selenium	82	-0.0014	-0.1178	0.1672	**0.016**	0.1433	895.6
Zinc	66	2.982	2.956	2.968	**2.969**	0.0127	0.4281
Zinc	67	2.807	3.121	2.872	**2.933**	0.1655	5.644
Zinc	68	3.003	2.878	2.932	**2.938**	0.0624	2.124

Internal Standard Factors:

Scandium	45	1.161	1.163	1.152	**1.161**	n/a	n/a
Rhodium	103	1.13	1.094	1.076	**1.13**	n/a	n/a
Indium	115	1.093	1.051	1.031	**1.093**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102208A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS # 131436

Sample Name:		K0810000-001 1/25A			Mean	SD	%RSD
TimeStamp		10/22/08 13:51					
Arsenic	75	46.59	47.25	46.55	**46.8**	0.3949	0.8438
Cadmium	111	46.69	48.54	48.96	**48.06**	1.206	2.51
Cadmium	114	47.11	48.31	47.99	**47.8**	0.6201	1.297
Chromium	52	127.3	132.2	130.3	**129.9**	2.47	1.901
Chromium	53	127.9	133.2	132.4	**131.1**	2.87	2.188
Copper	63	56.53	56.29	55.22	**56.01**	0.6998	1.249
Copper	65	56.1	57.04	55.49	**56.21**	0.7818	1.391
Molybdenum	95	49.25	50.9	50.91	**50.35**	0.9548	1.896
Molybdenum	97	49.8	51.52	51.09	**50.8**	0.8979	1.768
Molybdenum	98	49.75	51.24	51.57	**50.85**	0.9709	1.909
Selenium	77	48.48	48.36	49.05	**48.63**	0.3654	0.7514
Selenium	78	47.83	49.09	48.41	**48.44**	0.6308	1.302
Selenium	82	50.1	51.26	50.95	**50.77**	0.5971	1.176
Zinc	66	57.91	59.16	58.16	**58.41**	0.6628	1.135
Zinc	67	57.57	58.23	57.95	**57.92**	0.3285	0.5671
Zinc	68	58.21	58.9	57.59	**58.23**	0.655	1.125

Internal Standard Factors:

Scandium	45	1.117	1.157	1.137	**1.117**	n/a	n/a
Rhodium	103	1.15	1.148	1.129	**1.15**	n/a	n/a
Indium	115	1.092	1.086	1.072	**1.092**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102208A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS # 131436

Sample Name:		K0810000-002 1/25			Mean	SD	%RSD
TimeStamp		10/22/08 13:58					
Arsenic	75	1.2	1.213	1.136	**1.183**	0.0415	3.508
Cadmium	111	0.0275	0.0291	0.0316	**0.0294**	0.002	6.913
Cadmium	114	0.0389	0.0403	0.0353	**0.0381**	0.0026	6.805
Chromium	52	33.76	33.72	34.2	**33.89**	0.2641	0.7791
Chromium	53	32.92	32.38	33.03	**32.77**	0.3494	1.066
Copper	63	9.137	8.852	8.995	**8.995**	0.1425	1.585
Copper	65	9.112	8.94	8.853	**8.969**	0.1319	1.47
Molybdenum	95	0.1431	0.1169	0.1281	**0.1294**	0.0131	10.14
Molybdenum	97	0.1414	0.1382	0.1225	**0.134**	0.0101	7.543
Molybdenum	98	0.1466	0.1372	0.126	**0.1366**	0.0103	7.561
Selenium	77	-0.0021	-0.0562	-0.21	**-0.0894**	0.1079	120.6
Selenium	78	-0.5289	-0.626	-0.6819	**-0.6122**	0.0774	12.64
Selenium	82	0.3895	0.487	-0.0753	**0.2671**	0.3005	112.5
Zinc	66	15.81	15.18	15.4	**15.46**	0.3189	2.062
Zinc	67	15.08	15.14	15.21	**15.14**	0.0652	0.4306
Zinc	68	14.93	14.99	15.28	**15.06**	0.1867	1.239

Internal Standard Factors:

Scandium	45	1.147	1.153	1.128	**1.147**	n/a	n/a
Rhodium	103	1.18	1.14	1.131	**1.18**	n/a	n/a
Indium	115	1.135	1.093	1.06	**1.135**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102208A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS # 131436

Sample Name:		CCV4			Mean	SD	%RSD
TimeStamp		10/22/08 14:01					
Arsenic	75	24.01	23.66	23.76	**23.81**	0.1794	0.7533
Cadmium	111	25.4	25.56	25.49	**25.48**	0.0792	0.3107
Cadmium	114	25.2	25.21	25.57	**25.33**	0.2111	0.8335
Chromium	52	25.78	25.88	26.23	**25.96**	0.2336	0.8999
Chromium	53	25.03	25.32	25.44	**25.26**	0.213	0.843
Copper	63	24.64	24.37	23.9	**24.3**	0.3778	1.554
Copper	65	24.53	24.27	24.31	**24.37**	0.1414	0.5803
Molybdenum	95	24.84	25.24	25.56	**25.21**	0.3593	1.425
Molybdenum	97	24.94	25.25	25.36	**25.18**	0.2221	0.8817
Molybdenum	98	24.99	25.38	25.92	**25.43**	0.4712	1.853
Selenium	77	25.71	24.48	24.74	**24.98**	0.6497	2.601
Selenium	78	24.74	24	23.82	**24.18**	0.4905	2.028
Selenium	82	25.64	24.32	25.52	**25.16**	0.7287	2.896
Zinc	66	24.66	24.62	24.8	**24.69**	0.0938	0.3799
Zinc	67	24.3	24.24	24.61	**24.38**	0.1945	0.7976
Zinc	68	24.51	24.62	24.58	**24.57**	0.0587	0.2388

Internal Standard Factors:

Scandium	45	1.182	1.197	1.199	**1.182**	n/a	n/a
Rhodium	103	1.101	1.085	1.068	**1.101**	n/a	n/a
Indium	115	1.073	1.034	1.019	**1.073**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102208A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS # 131436

Sample Name:		CCB4			Mean	SD	%RSD
TimeStamp		10/22/08 14:08					
Arsenic	75	-0.0098	-0.0296	0.0485	**0.003**	0.0406	1335
Cadmium	111	0.0026	0.0045	0.0039	**0.0037**	0.001	26.61
Cadmium	114	0.0018	0.0046	0.0022	**0.0029**	0.0015	53.51
Chromium	52	0.0133	0.0435	0.0238	**0.0269**	0.0153	57.06
Chromium	53	-0.9873	-1.066	-1.136	**-1.063**	0.0742	6.984
Copper	63	-0.0109	-0.0099	-0.0158	**-0.0122**	0.0032	26.09
Copper	65	-0.0103	-0.009	-0.0141	**-0.0111**	0.0026	23.6
Molybdenum	95	0.0743	0.0639	0.0579	**0.0653**	0.0083	12.69
Molybdenum	97	0.0611	0.0673	0.0589	**0.0624**	0.0044	7.046
Molybdenum	98	0.0664	0.062	0.0595	**0.0626**	0.0035	5.571
Selenium	77	-0.3438	-0.4763	-0.5147	**-0.4449**	0.0897	20.16
Selenium	78	-0.6133	-0.5599	-0.7797	**-0.651**	0.1146	17.61
Selenium	82	-0.1173	-0.2462	0.0583	**-0.1017**	0.1529	150.2
Zinc	66	-0.0298	-0.0472	-0.0434	**-0.0401**	0.0091	22.71
Zinc	67	-0.2162	-0.2293	-0.1646	**-0.2034**	0.0342	16.83
Zinc	68	-0.0333	-0.0517	-0.0675	**-0.0509**	0.0171	33.68

Internal Standard Factors:

Scandium	45	1.134	1.16	1.155	**1.134**	n/a	n/a
Rhodium	103	1.091	1.072	1.048	**1.091**	n/a	n/a
Indium	115	1.055	1.03	1.001	**1.055**	n/a	n/a

Service Request # _K0810000____Run__Pb____
Calibration __102308BMS02_____
QC in calibration__102308BMS02_____
QC Service Request # __K0810000_____
Analytical Batch # ____KA0630299_____

ICP-MS Data Review Form

	Yes	No	NA
1. Appropriate standardization completed	__X__	____	____
2. ICV within 10 % of true value	__X__	____	____
3. CCV's in control	__X__	____	____
4. CCB's and/or ICB's below MRL	__X__	____	____
5. Method blank below MRL	__X__	____	____
6. LCS in control	__X__	____	____
7. Spike and duplicate in control	__X__	____	____
8. All analytes within instrument linear range	__X__	____	____
9. Adequate rinse out time allowed	__X__	____	____
10. Internal standards in control	__X__	____	____
11. Interferences checked	__X__	____	____
12. Se over MRL	____	_X__	____
13. CRA run	__X_	____	____
14. ICSA and ICSAB in control	__X__	____	____
15. Serial dilution run	__X__	____	____
16. Post spike in control	__X__	____	____

Comments:

Primary Review by JDB Date 10/24/08
Secondary Review by EMA Date 10/24/08
R:\icp\misc\data review forms\PQ ExCell review form

ExCell Mass Calibration **Date: 10/23/2008**

Mass	Mass DAC	Peak Width (AMU)	Error (AMU)	Include
7.016	1586	0.718	0.065	TRUE
23.985	5913	0.666	-0.028	TRUE
26.982	6674	0.717	-0.032	TRUE
45.953	11472	0.717	0.031	TRUE
50.944	12752	0.768	-0.021	TRUE
51.94	12999	0.871	0.003	TRUE
53.949	13513	0.819	-0.013	TRUE
55.935	14020	0.819	-0.024	TRUE
56.935	14273	0.768	-0.02	TRUE
57.934	14527	0.819	-0.022	TRUE
58.933	14774	0.819	0.004	TRUE
75.92	19083	0.87	0.025	TRUE
114.904	28995	0.92	0.011	TRUE
137.906	34845	0.92	0.018	TRUE
139.905	35352	0.919	0.025	TRUE
202.972	51426	0.867	-0.012	TRUE
204.972	51933	0.867	-0.001	TRUE
205.974	52187	0.918	0.005	TRUE
206.976	52447	0.918	-0.013	TRUE
207.977	52700	0.867	-0.005	TRUE
208.98	52954	0.918	0.003	TRUE
238.051	60370	0.866	0.002	TRUE

Excluded In Calib | Excluded In Results | Peak Run Excluded | Multi Element | Semi Quant | Internal Standard | Standard Addition

Uncorrected ICPS Per Mass

S-Calibration Has Edited Standard
F-Interference Correction Failed
E-Calibration Edited
T-Tripped
I-Invalid Calibration
P-Pulse Counting
V-Valley Integration Failed
M-Result Over Max

Run	Label	TimeStamp	5Bkg	7Li	9Be	59Co	115In	208Pb
1	Stability 10/23/08	10/23/2008 9:16:49 A	(P)0.000	(P)7247.171	(P)1226.219	(P)21510.683	(P)41937.136	(P)22254.321
2	Stability 10/23/08	10/23/2008 9:17:51 A	(P)0.500	(P)7598.187	(P)1224.386	(P)21914.796	(P)42830.277	(P)21927.316
3	Stability 10/23/08	10/23/2008 9:18:53 A	(P)0.000	(P)7758.106	(P)1312.227	(P)22191.558	(P)43081.203	(P)21985.405
4	Stability 10/23/08	10/23/2008 9:19:55 A	(P)0.000	(P)7618.531	(P)1299.559	(P)22092.236	(P)43428.915	(P)21913.962
5	Stability 10/23/08	10/23/2008 9:20:57 A	(P)0.333	(P)7660.720	(P)1281.724	(P)22485.182	(P)43075.679	(P)21807.299
	Mean of Stability 10/	10/23/2008 9:16:49 A	(P)0.167	(P)7576.543	(P)1268.823	(P)22038.891	(P)42870.642	(P)21977.660
	SD of Stability 10/23/0		(P)0.236	(P)194.144	(P)41.185	(P)360.462	(P)563.717	(P)167.493
	%RSD of Stability 10		(P)141.421	(P)2.562	(P)3.246	(P)1.636	(P)1.315	(P)0.762

Run	Label	TimeStamp	209Bi	220Bkg	238U
1	Stability 10/23/08	10/23/2008 9:16:49 A	(P)33256.332	(P)0.000	(P)40534.948
2	Stability 10/23/08	10/23/2008 9:17:51 A	(P)32780.734	(P)0.167	(P)39638.609
3	Stability 10/23/08	10/23/2008 9:18:53 A	(P)32610.345	(P)0.333	(P)39039.131
4	Stability 10/23/08	10/23/2008 9:19:55 A	(P)32583.116	(P)0.000	(P)39519.113
5	Stability 10/23/08	10/23/2008 9:20:57 A	(P)32377.984	(P)0.167	(P)39078.910
	Mean of Stability 10/	10/23/2008 9:16:49 A	(P)32721.702	(P)0.133	(P)39562.142
	SD of Stability 10/23/0		(P)331.309	(P)0.139	(P)604.381
	%RSD of Stability 10		(P)1.013	(P)104.583	(P)1.528

Instrument ID: K-ICP-MS-02
Experiment: 102308B
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #KA0630299

Sample Name:		Cal. Blk			Mean	SD	%RSD
TimeStamp		10/23/08 17:41					
Lead	206	-0.0005	-0.0004	0.0009	**0**	0.0008	0
Lead	207	-0.0002	-0.0008	0.001	**0**	0.0009	0
Lead	208	-0.0001	-0.0003	0.0004	**0**	0.0003	0

Internal Standard Factors:

Lutetium	175	1.062	0.936	1.01	**1.062**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102308B
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #KA0630299

Sample Name:		Cal. Stn			Mean	SD	%RSD
TimeStamp		10/23/08 17:43					
Lead	206	24.24	24.83	25.92	**25**	0.8513	3.405
Lead	207	24.02	24.71	26.26	**25**	1.149	4.594
Lead	208	24.16	24.74	26.1	**25**	0.9987	3.995

Internal Standard Factors:

Lutetium	175	1.049	1.028	1.056	**1.049** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 102308B
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #KA0630299

Sample Name: TimeStamp		ICV1 (MS12-48-B) 10/23/08 17:46			Mean	SD	%RSD
Lead	206	23.52	25.13	26.97	**25.21**	1.725	6.844
Lead	207	22.77	24.35	25.61	**24.24**	1.426	5.884
Lead	208	23.06	24.55	26.07	**24.56**	1.508	6.138

Internal Standard Factors:

Lutetium	175	1.034	1.042	1.061	**1.034** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 102308B
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #KA0630299

Sample Name:		CCV1 (MS12-48-A)			Mean	SD	%RSD
TimeStamp		10/23/08 17:53					
Lead	206	22.95	24.38	25.71	**24.34**	1.38	5.668
Lead	207	23.32	24.42	25.88	**24.54**	1.284	5.234
Lead	208	23.3	24.43	25.82	**24.52**	1.263	5.151

Internal Standard Factors:

Lutetium	175	1.059	1.051	1.071	**1.059** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 102308B
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #KA0630299

Sample Name:		ICB1			Mean	SD	%RSD
TimeStamp		10/23/08 17:56					
Lead	206	0.0031	0.0022	0.0015	**0.0023**	0.0008	34.96
Lead	207	0.0029	0.005	0.0024	**0.0034**	0.0014	40.05
Lead	208	0.0033	0.0028	0.0029	**0.003**	0.0003	8.621

Internal Standard Factors:

Lutetium	175	1.128	1.123	1.102	**1.128** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 102308B
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #KA0630299

Sample Name:		CCB1			Mean	SD	%RSD
TimeStamp		10/23/08 17:58					
Lead	206	0.0008	0.0013	0.0029	**0.0017**	0.0011	66.64
Lead	207	0.003	0.0026	0.001	**0.0022**	0.0011	49.66
Lead	208	0.0022	0.0022	0.0026	**0.0023**	0.0002	8.497

Internal Standard Factors:

Lutetium	175	1.054	1.055	1.077	**1.054** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 102308B
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #KA0630299

Sample Name: TimeStamp		CRA (MS12-22-H) 10/23/08 18:00			Mean	SD	%RSD
Lead	206	0.1044	0.1168	0.1257	**0.1156**	0.0107	9.278
Lead	207	0.1059	0.1113	0.1269	**0.1147**	0.011	9.548
Lead	208	0.1081	0.1161	0.1251	**0.1164**	0.0085	7.31

Internal Standard Factors:

Lutetium	175	1.048	1.057	1.068	**1.048** n/a	n/a	

Instrument ID: K-ICP-MS-02
Experiment: 102308B
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #KA0630299

Sample Name:		ICSA (MS12-46-H)			Mean	SD	%RSD
TimeStamp		10/23/08 18:02					
Lead	206	0.0825	0.0982	0.1024	**0.0944**	0.0105	11.11
Lead	207	0.0874	0.1085	0.1033	**0.0997**	0.011	11.05
Lead	208	0.086	0.0994	0.1051	**0.0969**	0.0098	10.12

Internal Standard Factors:

Lutetium	175	1.097	1.113	1.142	**1.097** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 102308B
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #KA0630299

Sample Name: TimeStamp		ICSAB (MS12-46-I) 10/23/08 18:05			Mean	SD	%RSD
Lead	206	0.0957	0.0913	0.0996	**0.0955**	0.0042	4.367
Lead	207	0.0886	0.0879	0.0908	**0.0891**	0.0015	1.66
Lead	208	0.0924	0.0909	0.0949	**0.0927**	0.002	2.209

Internal Standard Factors:

Lutetium	175	1.207	1.106	1.117	**1.207** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 102308B
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #KA0630299

Sample Name:		K0808903-MB RD 1/5			Mean	SD	%RSD
TimeStamp		10/23/08 18:08					
Lead	206	0.0112	0.015	0.0093	**0.0118**	0.0029	24.63
Lead	207	0.0094	0.0164	0.0108	**0.0122**	0.0037	30.64
Lead	208	0.0117	0.0142	0.0102	**0.012**	0.002	16.93

Internal Standard Factors:

Lutetium	175	1.249	1.254	1.178	**1.249** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 102308B
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #KA0630299

Sample Name: / TimeStamp		LCSW K0808903 RD 1/10 10/23/08 18:16			Mean	SD	%RSD
Lead	206	48.75	52.4	51.21	**50.79**	1.863	3.668
Lead	207	49.16	52.05	51.42	**50.88**	1.521	2.99
Lead	208	47.92	51.28	51.21	**50.14**	1.921	3.832

Internal Standard Factors:

Lutetium	175	1.048	1.054	1.044	**1.048**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102308B
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #KA0630299

Sample Name:		K0808903-001 RD 1/5			Mean	SD	%RSD
TimeStamp		10/23/08 18:20					
Lead	206	2.857	3.01	3.126	**2.998**	0.1352	4.51
Lead	207	2.794	2.928	3.091	**2.938**	0.149	5.073
Lead	208	2.801	2.942	3.101	**2.948**	0.15	5.089

Internal Standard Factors:

Lutetium	175	1.131	1.134	1.165	**1.131** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 102308B
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #KA0630299

Sample Name:		K0808903-001L RD 1/5+1/5			Mean	SD	%RSD
TimeStamp		10/23/08 18:23					
Lead	206	0.5687	0.5358	0.5774	**0.5606**	0.022	3.921
Lead	207	0.564	0.5308	0.5599	**0.5516**	0.0181	3.282
Lead	208	0.5582	0.5389	0.5672	**0.5548**	0.0144	2.599

Internal Standard Factors:

Lutetium	175	1.086	1.044	1.076	**1.086**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102308B
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #KA0630299

Sample Name:		K0808903-001A RD 1/5			Mean	SD	%RSD
TimeStamp		10/23/08 18:25					
Lead	206	52.24	54.23	51.6	**52.69**	1.373	2.605
Lead	207	52.46	53.77	52.11	**52.78**	0.8767	1.661
Lead	208	52.09	54.26	51.95	**52.77**	1.295	2.454

Internal Standard Factors:

Lutetium	175	1.158	1.151	1.106	**1.158**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102308B
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #KA0630299

Sample Name:		K0808903-002 RD 1/5			Mean	SD	%RSD
TimeStamp		10/23/08 18:28					
Lead	206	3.343	3.366	3.196	**3.302**	0.0924	2.799
Lead	207	3.271	3.318	3.252	**3.28**	0.0336	1.025
Lead	208	3.304	3.352	3.224	**3.293**	0.0651	1.977

Internal Standard Factors:

Lutetium	175	1.207	1.175	1.148	**1.207**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102308B
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #KA0630299

Sample Name:		K0808903-004 RD 1/5			Mean	SD	%RSD
TimeStamp		10/23/08 18:31					
Lead	206	81.66	87.1	91.09	**86.62**	4.731	5.462
Lead	207	81.92	89.03	91.77	**87.57**	5.083	5.805
Lead	208	80.66	87.57	90.25	**86.16**	4.948	5.743

Internal Standard Factors:							
Lutetium	175	1.09	1.066	1.061	**1.09** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 102308B
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #KA0630299

Sample Name:		CCV2			Mean	SD	%RSD
TimeStamp		10/23/08 18:35					
Lead	206	23.98	23.71	25.35	**24.34**	0.8794	3.612
Lead	207	23.69	24.14	25.27	**24.37**	0.8156	3.347
Lead	208	23.95	23.9	25.38	**24.41**	0.8366	3.427

Internal Standard Factors:

Lutetium	175	1.086	1.057	1.086	**1.086**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102308B
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #KA0630299

Sample Name:		CCB2			Mean	SD	%RSD
TimeStamp		10/23/08 18:38					
Lead	206	0.005	0.0035	0.0082	**0.0055**	0.0024	43.05
Lead	207	0.0058	0.0044	0.0048	**0.005**	0.0007	14.17
Lead	208	0.0059	0.0044	0.0057	**0.0053**	0.0008	15.64

Internal Standard Factors:

Lutetium	175	1.063	1.094	1.104	**1.063** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 102308B
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #KA0630299

Sample Name:		K0808903-004S RD 1/25			Mean	SD	%RSD
TimeStamp		10/23/08 18:40					
Lead	206	41.86	43.48	43.8	**43.04**	1.041	2.419
Lead	207	42.5	42.96	43.48	**42.98**	0.4949	1.151
Lead	208	42.05	42.52	43.07	**42.55**	0.511	1.201

Internal Standard Factors:

Lutetium	175	1.134	1.1	1.089	**1.134** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 102308B
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #KA0630299

Sample Name:		K0808903-004SD RD 1/25			Mean	SD	%RSD
TimeStamp		10/23/08 18:43					
Lead	206	43.25	45.15	48.28	**45.56**	2.537	5.568
Lead	207	43.26	45.33	48.4	**45.66**	2.585	5.66
Lead	208	42.85	44.65	47.59	**45.03**	2.389	5.305

Internal Standard Factors:

Lutetium	175	1.08	1.079	1.103	**1.08** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 102308B
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #KA0630299

Sample Name: / TimeStamp		K0808903-007 RD 1/5 10/23/08 18:46			Mean	SD	%RSD
Lead	206	5.124	4.769	5.102	**4.998**	0.199	3.981
Lead	207	5.097	4.762	5.14	**5**	0.2066	4.133
Lead	208	5.099	4.736	5.15	**4.995**	0.226	4.524

Internal Standard Factors:

Lutetium	175	1.118	1.037	1.087	**1.118** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 102308B
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #KA0630299

Sample Name:		K0810000-MB 1/5			Mean	SD	%RSD
TimeStamp		10/23/08 18:49					
Lead	206	0.0093	0.0115	0.0105	**0.0104**	0.0011	10.26
Lead	207	0.0117	0.0124	0.0134	**0.0125**	0.0009	6.966
Lead	208	0.0114	0.0107	0.0107	**0.0109**	0.0004	3.97

Internal Standard Factors:

Lutetium	175	1.137	1.151	1.163	**1.137** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 102308B
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #KA0630299

Sample Name: / TimeStamp		LCSS K0810000 1/50 10/23/08 18:51			Mean	SD	%RSD
Lead	206	14.29	12.54	14.18	**13.67**	0.9781	7.155
Lead	207	13.95	12.54	14.17	**13.55**	0.8862	6.538
Lead	208	14.14	12.59	14.22	**13.65**	0.9209	6.747

Internal Standard Factors:

Lutetium	175	1.107	1.018	1.084	**1.107** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 102308B
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #KA0630299

Sample Name: / TimeStamp		K0810000-001 1/5 10/23/08 18:54			Mean	SD	%RSD
Lead	206	4.037	4.402	4.529	**4.323**	0.2554	5.909
Lead	207	3.945	4.185	4.378	**4.17**	0.217	5.205
Lead	208	3.972	4.313	4.46	**4.248**	0.2507	5.902

Internal Standard Factors:

Lutetium	175	1.127	1.132	1.151	**1.127** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 102308B
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #KA0630299

Sample Name: / TimeStamp		K0810000-001D 1/5 10/23/08 18:57			Mean	SD	%RSD
Lead	206	4.662	5.222	5.487	**5.124**	0.4212	8.22
Lead	207	4.637	5.08	5.232	**4.983**	0.3089	6.199
Lead	208	4.664	5.154	5.326	**5.048**	0.3433	6.801

Internal Standard Factors:

Lutetium	175	1.093	1.115	1.138	**1.093** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 102308B
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #KA0630299

Sample Name:		K0810000-001L 1/5+1/5			Mean	SD	%RSD
TimeStamp		10/23/08 19:00					
Lead	206	0.8542	0.9067	0.9077	**0.8895**	0.0306	3.436
Lead	207	0.8647	0.8901	0.8892	**0.8813**	0.0144	1.637
Lead	208	0.865	0.8973	0.9163	**0.8929**	0.0259	2.903

Internal Standard Factors:

Lutetium	175	1.179	1.12	1.171	**1.179** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 102308B
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #KA0630299

Sample Name:		K0810000-001A 1/5			Mean	SD	%RSD
TimeStamp		10/23/08 19:03					
Lead	206	47.91	52.07	52.61	**50.86**	2.574	5.061
Lead	207	46.93	52.6	52.05	**50.53**	3.128	6.19
Lead	208	47.66	52.35	52.59	**50.87**	2.78	5.466

Internal Standard Factors:

Lutetium	175	1.091	1.111	1.107	**1.091**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102308B
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #KA0630299

Sample Name:		K0810000-001S 1/25			Mean	SD	%RSD
TimeStamp		10/23/08 19:06					
Lead	206	38.63	38.37	43.1	**40.03**	2.66	6.645
Lead	207	38.67	38.25	43.54	**40.15**	2.942	7.328
Lead	208	38.3	37.5	42.54	**39.45**	2.709	6.868

Internal Standard Factors:

Lutetium	175	1.062	1.018	1.095	**1.062** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 102308B
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #KA0630299

Sample Name:		CCV3			Mean	SD	%RSD
TimeStamp		10/23/08 19:10					
Lead	206	21.9	25.13	26.36	**24.47**	2.302	9.408
Lead	207	22.34	24.45	27.39	**24.73**	2.54	10.27
Lead	208	22.45	24.81	26.86	**24.71**	2.206	8.928

Internal Standard Factors:

Lutetium	175	1.016	1.058	1.11	**1.016** n/a	n/a	

Instrument ID: K-ICP-MS-02
Experiment: 102308B
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #KA0630299

Sample Name:		CCB3			Mean	SD	%RSD
TimeStamp		10/23/08 19:13					
Lead	206	0.0028	0.0047	0.0046	**0.004**	0.0011	27.23
Lead	207	0.0026	0.0039	0.0051	**0.0039**	0.0012	31.96
Lead	208	0.0035	0.0041	0.0045	**0.004**	0.0005	12.07

Internal Standard Factors:

Lutetium	175	1.054	1.074	1.116	**1.054** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 102308B
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #KA0630299

Sample Name: / TimeStamp		K0810000-002 1/5 10/23/08 19:15			Mean	SD	%RSD
Lead	206	5.239	5.442	5.406	**5.362**	0.1082	2.018
Lead	207	4.986	5.268	5.372	**5.209**	0.2	3.84
Lead	208	5.083	5.319	5.318	**5.24**	0.136	2.595

Internal Standard Factors:

Lutetium	175	1.133	1.129	1.119	**1.133** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 102308B
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #KA0630299

Sample Name:		CCV4			Mean	SD	%RSD
TimeStamp		10/23/08 19:18					
Lead	206	24.84	25.8	26.4	**25.68**	0.7868	3.064
Lead	207	25.18	25.55	26.02	**25.58**	0.4207	1.645
Lead	208	24.92	25.84	26.36	**25.71**	0.729	2.835

Internal Standard Factors:

Lutetium	175	1.086	1.08	1.096	**1.086**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102308B
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #KA0630299

Sample Name:		CCB4			Mean	SD	%RSD
TimeStamp		10/23/08 19:21					
Lead	206	0.001	0.0012	0.0031	**0.0018**	0.0012	65.61
Lead	207	0.0025	0.0026	0.0035	**0.0029**	0.0006	19.83
Lead	208	0.0021	0.0022	0.0036	**0.0026**	0.0008	31.24

Internal Standard Factors:

Lutetium	175	1.063	1.076	1.108	**1.063**	n/a	n/a

Service Request # __K0810000____HCl_____
Calibration _102108AMS02_____
QC in calibration__102108AMS02_____
QC Service Request # __K0810000_____
Analytical Batch # ___131341_____

ICP-MS Data Review Form

	Yes	No	NA
1. Appropriate standardization completed	__X__	____	____
2. ICV within 10 % of true value	__X__	____	____
3. CCV's in control	__X__	____	____
4. CCB's and/or ICB's below MRL	__X__	____	____
5. Method blank below MRL	__X__	____	____
6. LCS in control	__X__	____	____
7. Spike and duplicate in control	__X__	____	____
8. All analytes within instrument linear range	__X__	____	____
9. Adequate rinse out time allowed	__X__	____	____
10. Internal standards in control	__X__	____	____
11. Interferences checked	__X__	____	____
12. Se over MRL	____	_X__	____
13. CRA run	__X_	____	____
14. ICSA and ICSAB in control	__X__	____	____
15. Serial dilution run	__X__	____	____
16. Post spike in control	__X__	____	____

Comments: Report Ag 109

Primary Review by JDB Date 10/22/08
Secondary Review by [signature] Date 10/24/08
R:\icp\misc\data review forms\PQ ExCell review form

ExCell Mass Calibration

Date: 10/21/2008

Mass	Mass DAC	Peak Width (AMU)	Error (AMU)	Include
23.985	5917	0.666	0.036	TRUE
26.982	6671	0.769	0.012	TRUE
45.953	11472	0.563	-0.037	TRUE
51.94	13000	0.819	-0.004	TRUE
53.949	13513	0.768	0.009	TRUE
54.938	13760	0.768	-0.007	TRUE
55.935	14014	0.819	-0.004	TRUE
56.935	14274	0.819	0.02	TRUE
57.934	14521	0.819	-0.006	TRUE
58.933	14768	0.819	-0.032	TRUE
75.92	19090	0.87	0	TRUE
114.904	28994	0.92	-0.018	TRUE
137.906	34850	0.868	-0.004	TRUE
139.905	35364	0.919	0.016	TRUE
141.908	35871	0.919	0.005	TRUE
202.972	51432	0.918	0.016	TRUE
204.972	51939	0.816	0.004	TRUE
205.974	52192	0.866	-0.007	TRUE
206.976	52452	0.866	0.011	TRUE
207.977	52706	0.917	0.006	TRUE
208.98	52966	0.917	0.022	TRUE
238.051	60369	0.866	-0.039	TRUE

Excluded In Calib | Excluded In Results | Peak Run Excluded | Multi Element | Semi Quant | Internal Standard | Standard Addition

Uncorrected ICPS Per Mass

S-Calibration Has Edited Standard
F-Interference Correction Failed
E-Calibration Edited
T-Tripped
I-Invalid Calibration
P-Pulse Counting
V-Valley Integration Failed
M-Result Over Max

Run	Label	TimeStamp	5Bkg	7Li	9Be	59Co	115In	208Pb
1	Stability 10/21/08	10/21/2008 4:41:14 F	(P)0.167	(P)6836.636	(P)1293.059	(P)25468.351	(P)46689.171	(P)23560.079
2	Stability 10/21/08	10/21/2008 4:42:16 F	(P)0.500	(P)7002.216	(P)1285.391	(P)25274.339	(P)46246.737	(P)23081.799
3	Stability 10/21/08	10/21/2008 4:43:18 F	(P)0.000	(P)7003.884	(P)1274.057	(P)25512.095	(P)46267.305	(P)23255.413
4	Stability 10/21/08	10/21/2008 4:44:21 F	(P)0.000	(P)7092.927	(P)1294.392	(P)25323.091	(P)46517.948	(P)23434.206
5	Stability 10/21/08	10/21/2008 4:45:23 F	(P)0.667	(P)7044.904	(P)1301.893	(P)25574.039	(P)46877.793	(P)23459.414
	Mean of Stability 10/	10/21/2008 4:41:14 F	(P)0.267	(P)6996.113	(P)1289.758	(P)25430.383	(P)46519.791	(P)23358.182
	SD of Stability 10/21/0		(P)0.303	(P)96.546	(P)10.550	(P)127.099	(P)271.646	(P)189.564
	%RSD of Stability 10		(P)113.537	(P)1.380	(P)0.818	(P)0.500	(P)0.584	(P)0.812

Run	Label	TimeStamp	209Bi	220Bkg	238U
1	Stability 10/21/08	10/21/2008 4:41:14 F	(P)33985.879	(P)0.000	(P)39458.793
2	Stability 10/21/08	10/21/2008 4:42:16 F	(P)33648.247	(P)0.000	(P)38600.958
3	Stability 10/21/08	10/21/2008 4:43:18 F	(P)33480.521	(P)0.000	(P)38744.856
4	Stability 10/21/08	10/21/2008 4:44:21 F	(P)33358.737	(P)0.000	(P)38868.507
5	Stability 10/21/08	10/21/2008 4:45:23 F	(P)33738.128	(P)0.000	(P)39261.248
	Mean of Stability 10/	10/21/2008 4:41:14 F	(P)33642.302	(P)0.000	(P)38986.872
	SD of Stability 10/21/0		(P)241.788	(P)0.000	(P)360.383
	%RSD of Stability 10		(P)0.719	(P)0.000	(P)0.924

Sample List

Num	Label	Type	Weight	Volume	Dilution	Rack	Row	Column	Height
1	Cal. Blk	Blank	0 kg	0 ml	1.00	0	1	1	150
2	Cal. Stn	Fully Quant Standard	0 kg	0 ml	1.00	0	1	2	150
3	ICV1	QC Sample	0 kg	0 ml	1.00	0	1	3	150
4	CCV1	QC Sample	0 kg	0 ml	1.00	0	1	2	150
5	ICB1	QC Sample	0 kg	0 ml	1.00	0	1	1	150
6	CCB1	QC Sample	0 kg	0 ml	1.00	0	1	1	150
7	CRA (MS12-20-E)	QC Sample	0 kg	0 ml	1.00	0	1	4	150
8	ICSA	Unknown	0 kg	0 ml	1.00	0	1	5	150
9	ICSAB	Unknown	0 kg	0 ml	1.00	0	1	6	150
10	K0808615-MB 1/5	QC Sample	0 kg	0 ml	1.00	1	1	1	150
11	LCSS K0808615 1/50	QC Sample	0 kg	0 ml	1.00	1	1	2	150
12	K0808615-001 1/5	Unknown	0 kg	0 ml	1.00	1	1	3	150
13	K0808615-001 1/5 1/5]	QC Sample	0 kg	0 ml	1.00	1	1	4	150
14	K0808615-001 1/5A	QC Sample	0 kg	0 ml	1.00	1	1	5	150
15	K0808615-002 1/5	Unknown	0 kg	0 ml	1.00	1	1	6	150
16	K0808615-003 1/5	Unknown	0 kg	0 ml	1.00	1	1	7	150
17	CCV2	QC Sample	0 kg	0 ml	1.00	0	1	2	150
18	CCB2	QC Sample	0 kg	0 ml	1.00	0	1	1	150
19	K0808615-003 1/5D	QC Sample	0 kg	0 ml	1.00	1	1	8	150
20	K0808615-003 1/25S	Unknown	0 kg	0 ml	1.00	1	1	9	150
21	K0808615-004 1/5	Unknown	0 kg	0 ml	1.00	1	1	10	150
22	K0808615-010 1/5	Unknown	0 kg	0 ml	1.00	1	1	11	150
23	K0808615-011 1/5	Unknown	0 kg	0 ml	1.00	1	1	12	150
24	K0808615-012 1/5	Unknown	0 kg	0 ml	1.00	1	2	1	150
25	K0808615-013 1/5	Unknown	0 kg	0 ml	1.00	1	2	2	150
26	K0808753-MB 1/5	QC Sample	0 kg	0 ml	1.00	1	2	3	150
27	LCSS K0808753 1/50	QC Sample	0 kg	0 ml	1.00	1	2	4	150
28	K0808753-004 1/5	Unknown	0 kg	0 ml	1.00	1	2	5	150
29	CCV3	QC Sample	0 kg	0 ml	1.00	0	1	2	150
30	CCB3	QC Sample	0 kg	0 ml	1.00	0	1	1	150
31	K0808753-004 1/5 1/5]	QC Sample	0 kg	0 ml	1.00	1	2	6	150
32	K0808753-004 1/5A	QC Sample	0 kg	0 ml	1.00	1	2	7	150
33	K0808753-005 1/5	Unknown	0 kg	0 ml	1.00	1	2	8	150
34	K0808753-006 1/5	Unknown	0 kg	0 ml	1.00	1	2	9	150
35	K0808753-007 1/5	Unknown	0 kg	0 ml	1.00	1	2	10	150
36	K0808753-011 1/5	Unknown	0 kg	0 ml	1.00	1	2	11	150
37	K0808753-011 1/5D	QC Sample	0 kg	0 ml	1.00	1	2	12	150
38	K0808753-011 1/25S	Unknown	0 kg	0 ml	1.00	1	3	1	150
39	K0808753-013 1/5	Unknown	0 kg	0 ml	1.00	1	3	2	150
40	K0808753-015 1/5	Unknown	0 kg	0 ml	1.00	1	3	3	150
41	CCV4	QC Sample	0 kg	0 ml	1.00	0	1	2	150
42	CCB4	QC Sample	0 kg	0 ml	1.00	0	1	1	150
43	K0808753-016 1/5	Unknown	0 kg	0 ml	1.00	1	3	4	150
44	K0808753-017 1/5	Unknown	0 kg	0 ml	1.00	1	3	5	150
45	K0808753-017 1/5D	QC Sample	0 kg	0 ml	1.00	1	3	6	150
46	K0808753-017 1/25S	Unknown	0 kg	0 ml	1.00	1	3	7	150
47	K0808753-019 1/5	Unknown	0 kg	0 ml	1.00	1	3	8	150
48	K0808753-020 1/5	Unknown	0 kg	0 ml	1.00	1	3	9	150
49	K0808753-021 1/5	Unknown	0 kg	0 ml	1.00	1	3	10	150

50	K081000-MB 1/5	QC Sample	0 kg	0 ml	1.00	1	3	11	150
51	LCSS K0810000 1/50	Unknown	0 kg	0 ml	1.00	1	3	12	150
52	K0810000-001 1/5	Unknown	0 kg	0 ml	1.00	1	4	1	150
53	CCV5	QC Sample	0 kg	0 ml	1.00	0	1	2	150
54	CCB5	QC Sample	0 kg	0 ml	1.00	0	1	1	150
55	K0810000-001 1/5D	QC Sample	0 kg	0 ml	1.00	1	4	2	150
56	K0810000-001 1/5L	QC Sample	0 kg	0 ml	1.00	1	4	3	150
57	K0810000-001 1/5A	QC Sample	0 kg	0 ml	1.00	1	4	4	150
58	K0810000-001 1/25S	Unknown	0 kg	0 ml	1.00	1	4	5	150
59	K0810000-002 1/5	Unknown	0 kg	0 ml	1.00	1	4	6	150
60	K0809278-MB 1/5	QC Sample	0 kg	0 ml	1.00	1	4	7	150
61	LCSS K0809278 1/50	QC Sample	0 kg	0 ml	1.00	1	4	8	150
62	K0809278-001 1/5	Unknown	0 kg	0 ml	1.00	1	4	9	150
63	K0809278-001 1/5D	QC Sample	0 kg	0 ml	1.00	1	4	10	150
64	K0809278-001 1/5L1/5I	QC Sample	0 kg	0 ml	1.00	1	4	11	150
65	CCV6	QC Sample	0 kg	0 ml	1.00	0	1	2	150
66	CCB6	QC Sample	0 kg	0 ml	1.00	0	1	1	150
67	K0809278-001 1/5A	QC Sample	0 kg	0 ml	1.00	1	4	12	150
68	K0809278-001 1/25S	Unknown	0 kg	0 ml	1.00	1	5	1	150
69	K0809278-002 1/5	Unknown	0 kg	0 ml	1.00	1	5	2	150
70	K0809278-004 1/5	Unknown	0 kg	0 ml	1.00	1	5	3	150
71	K0809278-005 1/5	Unknown	0 kg	0 ml	1.00	1	5	4	150
72	K0809278-006 1/5	Unknown	0 kg	0 ml	1.00	1	5	5	150
73	K0809278-007 1/5	Unknown	0 kg	0 ml	1.00	1	5	6	150
74	K0809278-008 1/5	Unknown	0 kg	0 ml	1.00	1	5	7	150
75	K0809278-009 1/5	Unknown	0 kg	0 ml	1.00	1	5	8	150
76	K0809278-011 1/5	Unknown	0 kg	0 ml	1.00	1	5	9	150
77	CCV7	QC Sample	0 kg	0 ml	1.00	0	1	2	150
78	CCB7	QC Sample	0 kg	0 ml	1.00	0	1	1	150
79	K0809278-013 1/5	Unknown	0 kg	0 ml	1.00	1	5	10	150
80	K0809278-014 1/5	Unknown	0 kg	0 ml	1.00	1	5	11	150
81	K0809278-015 1/5	Unknown	0 kg	0 ml	1.00	1	5	12	150
82	K0809278-016 1/5	Unknown	0 kg	0 ml	1.00	2	1	1	150
83	K0809316-001 1/5	Unknown	0 kg	0 ml	1.00	2	1	2	150
84	K0809316-002 1/5	Unknown	0 kg	0 ml	1.00	2	1	3	150
85	K0809316-004 1/5	Unknown	0 kg	0 ml	1.00	2	1	4	150
86	K0809316-005 1/5	Unknown	0 kg	0 ml	1.00	2	1	5	150
87	K0808877-MB 1/5	QC Sample	0 kg	0 ml	1.00	2	1	6	150
88	LCSW K0808877 1/100	Unknown	0 kg	0 ml	1.00	2	1	7	150
89	CCV8	QC Sample	0 kg	0 ml	1.00	0	1	2	150
90	CCB8	QC Sample	0 kg	0 ml	1.00	0	1	1	150
91	K0808877-001 1/5	Unknown	0 kg	0 ml	1.00	2	1	8	150
92	K0808877-001 1/5L1/5I	QC Sample	0 kg	0 ml	1.00	2	1	9	150
93	K0808877-001 1/5A	QC Sample	0 kg	0 ml	1.00	2	1	10	150
94	K0808877-002 1/5	Unknown	0 kg	0 ml	1.00	2	1	11	150
95	K0808877-003 1/5	Unknown	0 kg	0 ml	1.00	2	1	12	150
96	K0808877-004 1/5	Unknown	0 kg	0 ml	1.00	2	2	1	150
97	K0808877-005 1/5	Unknown	0 kg	0 ml	1.00	2	2	2	150
98	K0808877-006 1/5	Unknown	0 kg	0 ml	1.00	2	2	3	150
99	K0808877-007 1/5	Unknown	0 kg	0 ml	1.00	2	2	4	150
100	K0808877-008 1/5	Unknown	0 kg	0 ml	1.00	2	2	5	150
101	CCV9	QC Sample	0 kg	0 ml	1.00	0	1	2	150

102	CCB9	QC Sample	0 kg	0 ml	1.00	0	1	1	150
103	K0808877-009 1/5	Unknown	0 kg	0 ml	1.00	2	2	6	150
104	K0808877-010 1/5	Unknown	0 kg	0 ml	1.00	2	2	7	150
105	K0808877-011 1/5	Unknown	0 kg	0 ml	1.00	2	2	8	150
106	K0808877-011 1/25S	Unknown	0 kg	0 ml	1.00	2	2	9	150
107	K0808877-011 1/25SD	QC Sample	0 kg	0 ml	1.00	2	2	10	150
108	K0809064-MB 1/5	QC Sample	0 kg	0 ml	1.00	2	2	11	150
109	LCSW K0809064 1/100	Unknown	0 kg	0 ml	1.00	2	2	12	150
110	K0809064-001 1/5	Unknown	0 kg	0 ml	1.00	2	3	1	150
111	K0809064-001 1/5A1/5I	QC Sample	0 kg	0 ml	1.00	2	3	2	150
112	K0809064-001 1/5A	QC Sample	0 kg	0 ml	1.00	2	3	3	150
113	CCV10	QC Sample	0 kg	0 ml	1.00	0	1	2	150
114	CCB10	QC Sample	0 kg	0 ml	1.00	0	1	1	150
115	K0809064-002 1/5	Unknown	0 kg	0 ml	1.00	2	3	4	150
116	K0809064-003 1/5	Unknown	0 kg	0 ml	1.00	2	3	5	150
117	K0809064-006 1/5	Unknown	0 kg	0 ml	1.00	2	3	6	150
118	K0809064-007 1/5	Unknown	0 kg	0 ml	1.00	2	3	7	150
119	K0809064-008 1/5	Unknown	0 kg	0 ml	1.00	2	3	8	150
120	K0809064-009 1/5	Unknown	0 kg	0 ml	1.00	2	3	9	150
121	K0809064-010 1/5	Unknown	0 kg	0 ml	1.00	2	3	10	150
122	K0809064-011 1/5	Unknown	0 kg	0 ml	1.00	2	3	11	150
123	K0809064-012 1/5	Unknown	0 kg	0 ml	1.00	2	3	12	150
124	K0809064-013 1/5	Unknown	0 kg	0 ml	1.00	2	4	1	150
125	CCV11	QC Sample	0 kg	0 ml	1.00	0	1	2	150
126	CCB11	QC Sample	0 kg	0 ml	1.00	0	1	1	150
127	K0809064-014 1/5	Unknown	0 kg	0 ml	1.00	2	4	2	150
128	K0809064-015 1/5	Unknown	0 kg	0 ml	1.00	2	4	3	150
129	K0809064-015 1/25S	Unknown	0 kg	0 ml	1.00	2	4	4	150
130	K0809064-015 1/25SD	QC Sample	0 kg	0 ml	1.00	2	4	5	150
131	K0809064-016 1/5	Unknown	0 kg	0 ml	1.00	2	4	6	150
132	K0809064-017 1/5	Unknown	0 kg	0 ml	1.00	2	4	7	150
133	K0809064-018 1/5	Unknown	0 kg	0 ml	1.00	2	4	8	150
134	CCV12	QC Sample	0 kg	0 ml	1.00	0	1	2	150
135	CCB12	QC Sample	0 kg	0 ml	1.00	0	1	1	150

Instrument ID: K-ICP-MS-02
Experiment: 102108A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #131341

Sample Name:		Cal. Blk			Mean	SD	%RSD
TimeStamp		10/21/08 18:05					
Antimony	121	-0.003	0.001	0.0021	**0**	0.0027	0
Antimony	123	0.0043	0.0014	-0.0056	**0**	0.0051	0
Silver	107	0.0003	-0.0005	0.0002	**0**	0.0004	0
Silver	109	0.0003	-0.0001	-0.0001	**0**	0.0002	0

Internal Standard Factors:

Rhodium	103	0.993	1	1.007	**0.993**	n/a	n/a
Indium	115	0.995	1	1.006	**0.995**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102108A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #131341

Sample Name:		Cal. Stn			Mean	SD	%RSD
TimeStamp		10/21/08 18:07					
Antimony	121	24.79	25.1	25.11	**25**	0.1821	0.7283
Antimony	123	24.27	24.95	25.78	**25**	0.7581	3.032
Silver	107	24.47	25.26	25.27	**25**	0.4564	1.826
Silver	109	24.57	25.13	25.31	**25**	0.3848	1.539

Internal Standard Factors:

Rhodium	103	0.976	0.986	0.983	**0.976**	n/a	n/a
Indium	115	0.975	0.985	0.993	**0.975**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102108A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #131341

Sample Name:		ICV1 (MS12-47-A)			Mean	SD	%RSD
TimeStamp		10/21/08 18:11					
Antimony	121	23.85	26.06	26.31	**25.41**	1.355	5.333
Antimony	123	23.93	25.88	26.55	**25.45**	1.362	5.35
Silver	107	12.35	13.26	13.44	**13.02**	0.5872	4.51
Silver	109	12.34	13.17	13.4	**12.97**	0.5592	4.312

Internal Standard Factors:							
Rhodium	103	0.931	0.963	0.973	**0.931**	n/a	n/a
Indium	115	0.93	0.966	0.977	**0.93**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102108A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #131341

Sample Name: / TimeStamp		CCV1 (MS12-47-E) 10/21/08 18:15			Mean	SD	%RSD
Antimony	121	24.49	25.38	25.46	**25.11**	0.5396	2.149
Antimony	123	24.83	26.05	25.57	**25.48**	0.6109	2.397
Silver	107	24.87	25.77	25.64	**25.43**	0.4852	1.908
Silver	109	24.81	25.68	25.52	**25.34**	0.4632	1.828

Internal Standard Factors:

Rhodium	103	0.993	1.008	1.002	**0.993**	n/a	n/a
Indium	115	0.988	1.008	1.004	**0.988**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102108A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #131341

Sample Name:		ICB1			Mean	SD	%RSD
TimeStamp		10/21/08 18:19					
Antimony	121	0.0175	0.005	0.0088	**0.0105**	0.0064	61.49
Antimony	123	0.0093	0.0083	0.006	**0.0079**	0.0017	20.99
Silver	107	0.0045	0.0049	0.0033	**0.0042**	0.0009	20.57
Silver	109	0.0052	0.0051	0.0042	**0.0048**	0.0006	11.54

Internal Standard Factors:

Rhodium	103	1.005	1.024	1.017	**1.005** n/a		n/a
Indium	115	1.005	1.02	1.028	**1.005** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 102108A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #131341

Sample Name:		CCB1			Mean	SD	%RSD
TimeStamp		10/21/08 18:21					
Antimony	121	-0.0062	0.0069	-0.0003	**0.0002**	0.0066	4093
Antimony	123	0.0036	0.0016	0.0018	**0.0023**	0.0011	46.45
Silver	107	0.0025	0.0029	0.0011	**0.0022**	0.001	44.19
Silver	109	0.0027	0.0037	0.0029	**0.0031**	0.0006	17.99

Internal Standard Factors:

Rhodium	103	0.996	1.011	1.016	**0.996**	n/a	n/a
Indium	115	1.001	1.014	1.008	**1.001**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102108A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #131341

Sample Name: / TimeStamp		CRA (MS12-20-E) 10/21/08 18:23			Mean	SD	%RSD
Antimony	121	0.1274	0.119	0.1236	**0.1233**	0.0042	3.445
Antimony	123	0.1008	0.1169	0.1161	**0.1113**	0.009	8.123
Silver	107	0.0432	0.0478	0.0516	**0.0475**	0.0042	8.898
Silver	109	0.0457	0.0466	0.0453	**0.0458**	0.0007	1.453

Internal Standard Factors:

Rhodium	103	0.991	0.998	1.008	**0.991**	n/a	n/a
Indium	115	0.969	1.002	1.008	**0.969**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102108A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #131341

Sample Name: / TimeStamp		ICSA (MS12-47-C) 10/21/08 18:26			Mean	SD	%RSD
Antimony	121	0.0343	0.0346	0.025	**0.0313**	0.0055	17.42
Antimony	123	0.0352	0.0313	0.012	**0.0262**	0.0124	47.38
Silver	107	0.0128	0.0147	0.0135	**0.0137**	0.001	7.095
Silver	109	0.0118	0.0131	0.0132	**0.0127**	0.0008	6.164

Internal Standard Factors:

Rhodium	103	1.101	1.118	1.121	**1.101**	n/a	n/a
Indium	115	1.078	1.093	1.09	**1.078**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102108A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #131341

Sample Name:		ICSAB (MS12-47-D)			Mean	SD	%RSD
TimeStamp		10/21/08 18:29					
Antimony	121	0.0439	0.0288	0.0203	**0.031**	0.012	38.67
Antimony	123	0.0298	0.0178	0.0273	**0.025**	0.0063	25.3
Silver	107	12.6	12.15	12.53	**12.43**	0.2428	1.954
Silver	109	12.51	12.04	12.51	**12.35**	0.2727	2.208

Internal Standard Factors:

Rhodium	103	1.135	1.1	1.121	**1.135**	n/a	n/a
Indium	115	1.103	1.069	1.081	**1.103**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102108A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #131341

Sample Name:		K0808615-MB 1/5			Mean	SD	%RSD
TimeStamp		10/21/08 18:32					
Antimony	121	-0.0088	-0.0153	-0.0163	**-0.0135**	0.0041	30.06
Antimony	123	-0.01	-0.0179	-0.0112	**-0.013**	0.0043	32.7
Silver	107	0.0073	0.0062	0.0079	**0.0071**	0.0009	12.23
Silver	109	0.0047	0.0063	0.0076	**0.0062**	0.0014	23.4

Internal Standard Factors:

Rhodium	103	1.018	1.034	1.038	**1.018**	n/a	n/a
Indium	115	1.028	1.034	1.041	**1.028**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102108A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #131341

Sample Name: / TimeStamp		LCSS K0808615 1/50 10/21/08 18:34			Mean	SD	%RSD
Antimony	121	15.62	15.79	16.03	**15.81**	0.205	1.296
Antimony	123	15.76	15.83	15.93	**15.84**	0.0813	0.5133
Silver	107	19.07	19.72	19.6	**19.46**	0.346	1.778
Silver	109	19.12	19.52	19.46	**19.37**	0.216	1.115

Internal Standard Factors:

Rhodium	103	1.007	1.022	1.018	**1.007** n/a		n/a
Indium	115	1.009	1.017	1.01	**1.009** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 102108A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #131341

Sample Name: TimeStamp		K0808615-001 1/5 10/21/08 18:38			Mean	SD	%RSD
Antimony	121	0.2368	0.2605	0.2625	**0.2533**	0.0143	5.632
Antimony	123	0.2668	0.2645	0.2673	**0.2662**	0.0015	0.5732
Silver	107	0.4079	0.4079	0.4209	**0.4122**	0.0075	1.811
Silver	109	0.4012	0.401	0.4109	**0.4044**	0.0056	1.394

Internal Standard Factors:

Rhodium	103	1.031	1.019	1.031	**1.031** n/a		n/a
Indium	115	1.008	0.995	1.011	**1.008** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 102108A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #131341

Sample Name:		K0808615-001 1/5+1/5L			Mean	SD	%RSD
TimeStamp		10/21/08 18:41					
Antimony	121	0.0855	0.0578	0.0508	**0.0647**	0.0184	28.36
Antimony	123	0.075	0.052	0.0636	**0.0635**	0.0115	18.1
Silver	107	0.0961	0.0848	0.0843	**0.0884**	0.0067	7.529
Silver	109	0.0961	0.0765	0.0849	**0.0858**	0.0098	11.45

Internal Standard Factors:

Rhodium	103	1.103	0.995	1.009	**1.103**	n/a	n/a
Indium	115	1.096	0.989	1.01	**1.096**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102108A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #131341

Sample Name:		K0808615-001 1/5A			Mean	SD	%RSD
TimeStamp		10/21/08 18:44					
Antimony	121	45.3	45.45	46.39	**45.71**	0.5868	1.284
Antimony	123	45.53	45.37	46.08	**45.66**	0.3736	0.8183
Silver	107	9.996	10.05	10.19	**10.08**	0.101	1.002
Silver	109	9.902	10.01	10.16	**10.03**	0.1317	1.313

Internal Standard Factors:

Rhodium	103	1.028	1.036	1.041	**1.028**	n/a	n/a
Indium	115	1.034	1.018	1.016	**1.034**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102108A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #131341

Sample Name:		K0808615-002 1/5			Mean	SD	%RSD
TimeStamp		10/21/08 18:47					
Antimony	121	0.1363	0.1477	0.1536	**0.1459**	0.0088	6.008
Antimony	123	0.1364	0.1554	0.1343	**0.142**	0.0116	8.165
Silver	107	0.139	0.1387	0.1456	**0.1411**	0.0039	2.747
Silver	109	0.1203	0.1356	0.1324	**0.1294**	0.0081	6.229

Internal Standard Factors:							
Rhodium	103	0.999	1.013	1.015	**0.999**	n/a	n/a
Indium	115	0.992	1.015	1.016	**0.992**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102108A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #131341

Sample Name: / TimeStamp		K0808615-003 1/5 10/21/08 18:50			Mean	SD	%RSD
Antimony	121	0.1045	0.121	0.1203	**0.1153**	0.0093	8.094
Antimony	123	0.1177	0.1104	0.1099	**0.1127**	0.0044	3.889
Silver	107	0.0399	0.0423	0.0433	**0.0418**	0.0017	4.148
Silver	109	0.0274	0.0298	0.0327	**0.03**	0.0027	8.981

Internal Standard Factors:

Rhodium	103	1.019	1.032	1.032	**1.019**	n/a	n/a
Indium	115	1.01	1.022	1.023	**1.01**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102108A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #131341

Sample Name:		CCV2			Mean	SD	%RSD
TimeStamp		10/21/08 18:53					
Antimony	121	24.52	25.22	25.59	**25.11**	0.5441	2.167
Antimony	123	24.65	25.22	25.38	**25.08**	0.3816	1.521
Silver	107	25.12	25.59	25.5	**25.4**	0.2509	0.9877
Silver	109	25.24	25.66	25.37	**25.42**	0.2135	0.8397

Internal Standard Factors:

Rhodium	103	1.005	1.015	1.002	**1.005**	n/a	n/a
Indium	115	1.004	1.009	1.004	**1.004**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102108A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #131341

Sample Name:		CCB2			Mean	SD	%RSD
TimeStamp		10/21/08 18:57					
Antimony	121	0.0009	-0.0015	0.002	**0.0004**	0.0018	397.8
Antimony	123	-0.0032	-0.0082	-0.0116	**-0.0077**	0.0042	55.24
Silver	107	0.0046	0.0046	0.0047	**0.0046**	0	0.2333
Silver	109	0.0042	0.0041	0.0053	**0.0045**	0.0007	15.1

Internal Standard Factors:

Rhodium	103	1.019	1.018	1.025	**1.019**	n/a	n/a
Indium	115	1.025	1.026	1.021	**1.025**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102108A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #131341

Sample Name:		K0808615-003 1/5D			Mean	SD	%RSD
TimeStamp		10/21/08 18:59					
Antimony	121	0.1181	0.1186	0.1267	**0.1211**	0.0048	3.987
Antimony	123	0.1095	0.1226	0.1099	**0.114**	0.0075	6.549
Silver	107	0.0391	0.0446	0.0411	**0.0416**	0.0028	6.685
Silver	109	0.0232	0.0252	0.0277	**0.0253**	0.0022	8.865

Internal Standard Factors:

Rhodium	103	1.03	1.047	1.034	**1.03**	n/a	n/a
Indium	115	1.022	1.038	1.038	**1.022**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102108A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #131341

Sample Name:		K0808615-003 1/25S			Mean	SD	%RSD
TimeStamp		10/21/08 19:01					
Antimony	121	30.09	29.96	30.44	**30.17**	0.2466	0.8174
Antimony	123	30.31	30.78	31.04	**30.71**	0.3686	1.2
Silver	107	3.944	4.031	4.038	**4.005**	0.0523	1.306
Silver	109	3.934	3.984	3.964	**3.96**	0.0252	0.6359

Internal Standard Factors:

Rhodium	103	0.991	0.996	1	**0.991**	n/a	n/a
Indium	115	0.996	1.001	1	**0.996**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102108A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #131341

Sample Name: / TimeStamp		K0808615-004 1/5 10/21/08 19:05			Mean	SD	%RSD
Antimony	121	7.689	7.923	7.982	**7.864**	0.155	1.971
Antimony	123	7.625	7.858	8.027	**7.837**	0.2022	2.58
Silver	107	0.5898	0.604	0.6102	**0.6013**	0.0105	1.738
Silver	109	0.5637	0.5887	0.5873	**0.5799**	0.0141	2.422

Internal Standard Factors:

Rhodium	103	1.044	1.055	1.058	**1.044**	n/a	n/a
Indium	115	1.006	1.015	1.02	**1.006**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102108A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #131341

Sample Name: / TimeStamp		K0808615-010 1/5 10/21/08 19:08			Mean	SD	%RSD
Antimony	121	3.095	3.113	3.166	**3.125**	0.0365	1.17
Antimony	123	3.112	3.165	3.131	**3.136**	0.0267	0.8524
Silver	107	18.75	19.34	19.22	**19.1**	0.3129	1.638
Silver	109	18.35	18.67	18.68	**18.57**	0.1911	1.029

Internal Standard Factors:

Rhodium	103	1.087	1.113	1.089	**1.087**	n/a	n/a
Indium	115	0.933	0.932	0.919	**0.933**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102108A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #131341

Sample Name:		K0808615-011 1/5			Mean	SD	%RSD
TimeStamp		10/21/08 19:12					
Antimony	121	0.4719	0.5224	0.4798	**0.4914**	0.0272	5.534
Antimony	123	0.4874	0.4918	0.5079	**0.4957**	0.0108	2.184
Silver	107	0.093	0.0957	0.0987	**0.0958**	0.0029	3.006
Silver	109	0.0849	0.0899	0.0825	**0.0858**	0.0038	4.387

Internal Standard Factors:

Rhodium	103	1.013	1.024	1.021	**1.013**	n/a	n/a
Indium	115	0.958	0.976	0.963	**0.958**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102108A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #131341

Sample Name: / TimeStamp		K0808615-012 1/5 10/21/08 19:15			Mean	SD	%RSD
Antimony	121	0.9302	0.8984	0.9188	**0.9158**	0.0161	1.759
Antimony	123	0.945	0.8848	0.9297	**0.9198**	0.0313	3.403
Silver	107	5.591	5.493	5.532	**5.539**	0.0492	0.889
Silver	109	5.38	5.328	5.442	**5.384**	0.0571	1.061

Internal Standard Factors:

Rhodium	103	1.072	1.044	1.057	**1.072**	n/a	n/a
Indium	115	0.99	0.986	0.984	**0.99**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102108A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #131341

Sample Name: / TimeStamp		K0808615-013 1/5 10/21/08 19:18			Mean	SD	%RSD
Antimony	121	0.7802	0.7156	0.7626	**0.7528**	0.0334	4.44
Antimony	123	0.8022	0.6974	0.7968	**0.7655**	0.059	7.711
Silver	107	5.514	5.023	5.312	**5.283**	0.2469	4.674
Silver	109	5.401	4.952	5.284	**5.213**	0.2331	4.472

Internal Standard Factors:

Rhodium	103	1.041	0.987	1.022	**1.041**	n/a	n/a
Indium	115	0.989	0.943	0.966	**0.989**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102108A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #131341

Sample Name:		K0808753-MB 1/5			Mean	SD	%RSD
TimeStamp		10/21/08 19:21					
Antimony	121	0.0742	0.0661	0.0585	**0.0663**	0.0078	11.78
Antimony	123	0.0589	0.0494	0.0514	**0.0532**	0.005	9.37
Silver	107	0.0084	0.0085	0.0082	**0.0084**	0.0001	1.648
Silver	109	0.0096	0.0113	0.0079	**0.0096**	0.0017	17.3

Internal Standard Factors:

Rhodium	103	1.039	0.992	0.99	**1.039**	n/a	n/a
Indium	115	1.03	0.984	0.991	**1.03**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102108A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #131341

Sample Name: / TimeStamp		LCSS K0808753 1/50 10/21/08 19:23			Mean	SD	%RSD
Antimony	121	17.18	17.69	17.66	**17.51**	0.2859	1.633
Antimony	123	17.36	17.93	17.94	**17.74**	0.3288	1.853
Silver	107	20.07	20.27	20.34	**20.23**	0.1395	0.6897
Silver	109	20.12	20.15	20.17	**20.15**	0.0218	0.1084

Internal Standard Factors:

Rhodium	103	0.997	0.992	0.99	**0.997**	n/a	n/a
Indium	115	0.991	0.991	0.996	**0.991**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102108A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #131341

Sample Name: TimeStamp		K0808753-004 1/5 10/21/08 19:27			Mean	SD	%RSD
Antimony	121	0.8331	0.7891	0.7733	**0.7985**	0.031	3.877
Antimony	123	0.8629	0.794	0.8083	**0.8217**	0.0363	4.419
Silver	107	3.706	3.463	3.455	**3.541**	0.1426	4.026
Silver	109	3.644	3.435	3.471	**3.517**	0.1114	3.169

Internal Standard Factors:

Rhodium	103	1.086	1.034	1.029	**1.086** n/a		n/a
Indium	115	1.03	0.982	0.984	**1.03** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 102108A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #131341

Sample Name:		CCV3			Mean	SD	%RSD
TimeStamp		10/21/08 19:30					
Antimony	121	23.57	21.41	23.46	**22.81**	1.216	5.328
Antimony	123	23.32	21.36	24.02	**22.9**	1.378	6.019
Silver	107	24.09	22.07	24.16	**23.44**	1.19	5.078
Silver	109	23.9	21.98	24.27	**23.38**	1.225	5.239

Internal Standard Factors:

Rhodium	103	0.96	0.905	0.947	**0.96** n/a		n/a
Indium	115	0.958	0.914	0.954	**0.958** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 102108A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #131341

Sample Name:		CCB3			Mean	SD	%RSD
TimeStamp		10/21/08 19:34					
Antimony	121	-0.0015	-0.0011	-0.0016	**-0.0014**	0.0003	18.33
Antimony	123	-0.005	-0.0029	-0.0083	**-0.0054**	0.0027	49.97
Silver	107	0.0058	0.0053	0.0042	**0.0051**	0.0008	15.54
Silver	109	0.0044	0.0054	0.0051	**0.005**	0.0006	11.18

Internal Standard Factors:

Rhodium	103	1.001	0.999	0.999	**1.001** n/a		n/a
Indium	115	1.002	0.997	1	**1.002** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 102108A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #131341

Sample Name: / TimeStamp		K0808753-004 1/5+1/5L 10/21/08 19:36			Mean	SD	%RSD
Antimony	121	0.1426	0.1544	0.1571	**0.1514**	0.0077	5.062
Antimony	123	0.1586	0.1506	0.1408	**0.15**	0.0089	5.953
Silver	107	0.633	0.657	0.6622	**0.6507**	0.0156	2.392
Silver	109	0.6494	0.6597	0.6678	**0.659**	0.0092	1.398

Internal Standard Factors:

Rhodium	103	0.992	0.995	1	**0.992**	n/a	n/a
Indium	115	0.999	1.003	1.004	**0.999**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102108A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #131341

Sample Name: / TimeStamp		K0808753-004 1/5A 10/21/08 19:39			Mean	SD	%RSD
Antimony	121	44.6	46.9	45.58	**45.69**	1.157	2.533
Antimony	123	44.36	46.81	46.13	**45.77**	1.268	2.771
Silver	107	12.98	13.25	12.94	**13.06**	0.1672	1.281
Silver	109	12.86	13	13.01	**12.95**	0.0829	0.6396

Internal Standard Factors:

Rhodium	103	1.029	1.041	1.032	**1.029** n/a		n/a
Indium	115	0.988	1.001	0.976	**0.988** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 102108A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #131341

Sample Name: TimeStamp		K0808753-005 1/5 10/21/08 19:43			Mean	SD	%RSD
Antimony	121	0.6321	0.6557	0.6409	**0.6429**	0.0119	1.855
Antimony	123	0.6514	0.6646	0.6729	**0.663**	0.0108	1.632
Silver	107	1.61	1.648	1.653	**1.637**	0.0237	1.447
Silver	109	1.589	1.63	1.602	**1.607**	0.021	1.308

Internal Standard Factors:

Rhodium	103	1.008	1.011	1.007	**1.008**	n/a	n/a
Indium	115	0.988	0.991	0.996	**0.988**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102108A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #131341

Sample Name:		K0808753-006 1/5			Mean	SD	%RSD
TimeStamp		10/21/08 19:46					
Antimony	121	0.6379	0.6412	0.6472	**0.6421**	0.0047	0.7364
Antimony	123	0.6429	0.6089	0.6375	**0.6298**	0.0183	2.903
Silver	107	0.7878	0.7654	0.8002	**0.7845**	0.0176	2.247
Silver	109	0.7628	0.7585	0.7853	**0.7689**	0.0144	1.87

Internal Standard Factors:

Rhodium	103	1.009	0.996	1.004	**1.009**	n/a	n/a
Indium	115	0.99	0.978	0.987	**0.99**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102108A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #131341

Sample Name: / TimeStamp		K0808753-007 1/5 10/21/08 19:49			Mean	SD	%RSD
Antimony	121	0.2117	0.206	0.1989	**0.2056**	0.0065	3.141
Antimony	123	0.2087	0.213	0.2236	**0.2151**	0.0077	3.572
Silver	107	0.5051	0.491	0.5087	**0.5016**	0.0093	1.859
Silver	109	0.4866	0.4935	0.4858	**0.4887**	0.0042	0.8677

Internal Standard Factors:

Rhodium	103	1.016	1.029	1.019	**1.016**	n/a	n/a
Indium	115	0.999	1.008	1.008	**0.999**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102108A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #131341

Sample Name:		K0808753-011 1/5			Mean	SD	%RSD
TimeStamp		10/21/08 19:52					
Antimony	121	1.62	1.567	1.594	**1.594**	0.0267	1.677
Antimony	123	1.576	1.575	1.584	**1.578**	0.0052	0.3313
Silver	107	0.9099	0.8993	0.9491	**0.9194**	0.0262	2.854
Silver	109	0.9149	0.9062	0.9192	**0.9134**	0.0066	0.7234

Internal Standard Factors:

Rhodium	103	1.004	0.989	1.005	**1.004**	n/a	n/a
Indium	115	0.99	0.975	0.982	**0.99**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102108A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #131341

Sample Name: / TimeStamp		K0808753-011 1/5D 10/21/08 19:55			Mean	SD	%RSD
Antimony	121	0.48	0.4952	0.4945	**0.4899**	0.0086	1.755
Antimony	123	0.467	0.4832	0.6486	**0.533**	0.1005	18.86
Silver	107	0.8085	0.825	0.8126	**0.8153**	0.0086	1.055
Silver	109	0.7785	0.8012	0.8119	**0.7972**	0.017	2.136

Internal Standard Factors:

Rhodium	103	1.01	0.993	1.005	**1.01**	n/a	n/a
Indium	115	0.989	0.991	0.99	**0.989**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102108A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #131341

Sample Name: / TimeStamp		K0808753-011 1/25S 10/21/08 19:58			Mean	SD	%RSD
Antimony	121	30.31	38.62	36.63	**35.19**	4.337	12.33
Antimony	123	30.08	38.27	36.82	**35.06**	4.371	12.47
Silver	107	3.771	4.721	4.484	**4.325**	0.4947	11.44
Silver	109	3.76	4.709	4.47	**4.313**	0.4937	11.45

Internal Standard Factors:

Rhodium	103	0.93	1.052	1.03	**0.93**	n/a	n/a
Indium	115	0.933	1.05	1.024	**0.933**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102108A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #131341

Sample Name: / TimeStamp		K0808753-013 1/5 10/21/08 20:01			Mean	SD	%RSD
Antimony	121	0.4427	0.4589	0.4687	**0.4568**	0.0132	2.88
Antimony	123	0.4455	0.4624	0.4845	**0.4641**	0.0196	4.218
Silver	107	0.8729	0.8886	0.8968	**0.8861**	0.0122	1.372
Silver	109	0.8597	0.8846	0.8995	**0.8813**	0.0201	2.284

Internal Standard Factors:

Rhodium	103	0.988	1.003	0.996	**0.988**	n/a	n/a
Indium	115	0.964	0.988	0.98	**0.964**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102108A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #131341

Sample Name: / TimeStamp		K0808753-015 1/5 10/21/08 20:05			Mean	SD	%RSD
Antimony	121	1.405	1.411	1.372	**1.396**	0.0209	1.497
Antimony	123	1.364	1.409	1.421	**1.398**	0.0299	2.14
Silver	107	2.451	2.461	2.442	**2.451**	0.0098	0.4004
Silver	109	2.403	2.439	2.436	**2.426**	0.0197	0.811

Internal Standard Factors:

Rhodium	103	1.012	1.02	1.009	**1.012**	n/a	n/a
Indium	115	0.986	0.984	0.983	**0.986**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102108A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #131341

Sample Name:		CCV4			Mean	SD	%RSD
TimeStamp		10/21/08 20:08					
Antimony	121	24.61	24.91	24.77	**24.76**	0.1525	0.616
Antimony	123	24.89	24.94	24.91	**24.91**	0.0215	0.0863
Silver	107	25.07	25.29	24.99	**25.12**	0.1513	0.6025
Silver	109	25.21	25.22	25.02	**25.15**	0.1116	0.4439

Internal Standard Factors:

Rhodium	103	0.974	0.974	0.963	**0.974**	n/a	n/a
Indium	115	0.971	0.963	0.962	**0.971**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102108A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #131341

Sample Name:		CCB4			Mean	SD	%RSD
TimeStamp		10/21/08 20:12					
Antimony	121	0.0019	-0.0078	-0.0013	**-0.0024**	0.0049	207.3
Antimony	123	-0.0053	-0.005	0.0019	**-0.0028**	0.0041	145.2
Silver	107	0.0041	0.0044	0.0032	**0.0039**	0.0006	15.64
Silver	109	0.0035	0.0051	0.004	**0.0042**	0.0008	19.34

Internal Standard Factors:

Rhodium	103	0.977	0.99	0.998	**0.977**	n/a	n/a
Indium	115	0.989	0.986	0.994	**0.989**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102108A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #131341

Sample Name: / TimeStamp		K0808753-016 1/5 10/21/08 20:13			Mean	SD	%RSD
Antimony	121	2.502	2.588	2.595	**2.562**	0.0517	2.018
Antimony	123	2.473	2.525	2.505	**2.501**	0.0264	1.057
Silver	107	2.815	2.904	2.891	**2.87**	0.048	1.674
Silver	109	2.78	2.887	2.871	**2.846**	0.0578	2.032

Internal Standard Factors:

Rhodium	103	1.023	1.034	1.03	**1.023**	n/a	n/a
Indium	115	0.983	1.006	0.988	**0.983**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102108A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #131341

Sample Name: / TimeStamp		K0808753-017 1/5 10/21/08 20:17			Mean	SD	%RSD
Antimony	121	0.5161	0.5432	0.5311	**0.5301**	0.0136	2.564
Antimony	123	0.5355	0.5255	0.5318	**0.5309**	0.0051	0.9517
Silver	107	1.282	1.302	1.33	**1.305**	0.0241	1.847
Silver	109	1.312	1.322	1.298	**1.311**	0.0119	0.9103

Internal Standard Factors:

Rhodium	103	0.995	1.004	1.008	**0.995**	n/a	n/a
Indium	115	0.987	0.979	0.981	**0.987**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102108A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #131341

Sample Name:		K0808753-017 1/5D			Mean	SD	%RSD
TimeStamp		10/21/08 20:20					
Antimony	121	1.468	1.389	1.397	**1.418**	0.0437	3.082
Antimony	123	1.425	1.361	1.419	**1.402**	0.0357	2.544
Silver	107	1.463	1.44	1.467	**1.457**	0.0148	1.015
Silver	109	1.456	1.42	1.437	**1.437**	0.018	1.254

Internal Standard Factors:

Rhodium	103	1.03	0.996	0.999	**1.03**	n/a	n/a
Indium	115	0.997	0.966	0.976	**0.997**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102108A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #131341

Sample Name:		K0808753-017 1/25S			Mean	SD	%RSD
TimeStamp		10/21/08 20:23					
Antimony	121	30.05	28.52	29.36	**29.31**	0.7653	2.611
Antimony	123	30.74	28.84	28.63	**29.4**	1.159	3.943
Silver	107	4.206	4.067	4.114	**4.129**	0.0704	1.705
Silver	109	4.25	4.019	4.037	**4.102**	0.1284	3.131

Internal Standard Factors:

Rhodium	103	1	0.972	0.972	**1**	n/a	n/a
Indium	115	1.001	0.958	0.966	**1.001**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102108A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #131341

Sample Name:		K0808753-019 1/5			Mean	SD	%RSD
TimeStamp		10/21/08 20:26					
Antimony	121	0.4988	0.4899	0.5113	**0.5**	0.0108	2.154
Antimony	123	0.5096	0.5282	0.5052	**0.5143**	0.0122	2.379
Silver	107	0.6918	0.7068	0.7098	**0.7028**	0.0096	1.368
Silver	109	0.661	0.678	0.6843	**0.6744**	0.0121	1.788

Internal Standard Factors:

Rhodium	103	1.009	1.009	1.005	**1.009**	n/a	n/a
Indium	115	0.974	0.991	0.994	**0.974**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102108A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #131341

Sample Name:		K0808753-020 1/5			Mean	SD	%RSD
TimeStamp		10/21/08 20:29					
Antimony	121	0.6983	0.7623	0.8046	**0.7551**	0.0535	7.087
Antimony	123	0.6869	0.7563	0.7925	**0.7452**	0.0536	7.196
Silver	107	0.8881	0.9516	0.9995	**0.9464**	0.0559	5.906
Silver	109	0.8758	0.9573	0.9908	**0.9413**	0.0591	6.283

Internal Standard Factors:

Rhodium	103	0.915	0.946	0.975	**0.915**	n/a	n/a
Indium	115	0.9	0.934	0.965	**0.9**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102108A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #131341

Sample Name: / TimeStamp		K0808753-021 1/5 10/21/08 20:32			Mean	SD	%RSD
Antimony	121	1.241	1.188	1.224	**1.217**	0.0269	2.208
Antimony	123	1.256	1.201	1.232	**1.23**	0.0273	2.219
Silver	107	3.351	3.354	3.396	**3.367**	0.0249	0.74
Silver	109	3.361	3.293	3.329	**3.328**	0.0338	1.015

Internal Standard Factors:

Rhodium	103	1.057	1.038	1.04	**1.057**	n/a	n/a
Indium	115	1.003	0.974	0.983	**1.003**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102108A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #131341

Sample Name:		K081000-MB 1/5			Mean	SD	%RSD
TimeStamp		10/21/08 20:36					
Antimony	121	-0.01	-0.0071	-0.0107	**-0.0093**	0.0019	20.38
Antimony	123	-0.0122	-0.0173	-0.0132	**-0.0142**	0.0027	18.98
Silver	107	0.0037	0.0054	0.0039	**0.0044**	0.0009	20.83
Silver	109	0.0048	0.0049	0.0038	**0.0045**	0.0006	13.9

Internal Standard Factors:

Rhodium	103	0.986	0.994	0.985	**0.986**	n/a	n/a
Indium	115	0.978	0.987	0.988	**0.978**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102108A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #131341

Sample Name: / TimeStamp		LCSS K0810000 1/50 10/21/08 20:38			Mean	SD	%RSD
Antimony	121	21.73	21.95	22.26	**21.98**	0.2637	1.2
Antimony	123	21.62	22.28	22.66	**22.19**	0.5255	2.368
Silver	107	19.04	19.36	19.12	**19.18**	0.1633	0.8518
Silver	109	18.96	19.29	19.18	**19.14**	0.1704	0.8904

Internal Standard Factors:

Rhodium	103	0.992	0.993	0.989	**0.992**	n/a	n/a
Indium	115	0.986	0.993	0.996	**0.986**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102108A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #131341

Sample Name: / TimeStamp		K0810000-001 1/5 10/21/08 20:41			Mean	SD	%RSD
Antimony	121	0.1836	0.1746	0.1766	**0.1783**	0.0047	2.65
Antimony	123	0.195	0.1772	0.1662	**0.1795**	0.0145	8.103
Silver	107	0.1294	0.133	0.1284	**0.1303**	0.0024	1.831
Silver	109	0.1146	0.1148	0.1195	**0.1163**	0.0027	2.363

Internal Standard Factors:

Rhodium	103	1.072	1.054	1.057	**1.072**	n/a	n/a
Indium	115	1.051	1.024	1.026	**1.051**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102108A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #131341

Sample Name:		CCV5			Mean	SD	%RSD
TimeStamp		10/21/08 20:44					
Antimony	121	24.34	24.39	25.14	**24.62**	0.4496	1.826
Antimony	123	24.38	24.63	25.18	**24.73**	0.4103	1.659
Silver	107	24.56	24.91	25.49	**24.98**	0.4672	1.87
Silver	109	24.49	24.86	25.42	**24.92**	0.4712	1.891

Internal Standard Factors:

Rhodium	103	0.949	0.948	0.963	**0.949**	n/a	n/a
Indium	115	0.953	0.951	0.962	**0.953**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102108A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #131341

Sample Name:		CCB5			Mean	SD	%RSD
TimeStamp		10/21/08 20:48					
Antimony	121	-0.0062	-0.0025	-0.0056	**-0.0048**	0.002	41.67
Antimony	123	-0.005	-0.0066	-0.0135	**-0.0084**	0.0045	53.84
Silver	107	0.0035	0.0025	0.0054	**0.0038**	0.0015	38.75
Silver	109	0.004	0.0042	0.0041	**0.0041**	0.0001	2.784

Internal Standard Factors:

Rhodium	103	0.937	0.957	0.977	**0.937**	n/a	n/a
Indium	115	0.937	0.961	0.972	**0.937**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102108A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #131341

Sample Name: / TimeStamp		K0810000-001 1/5D 10/21/08 20:50			Mean	SD	%RSD
Antimony	121	0.1888	0.1886	0.1722	**0.1832**	0.0096	5.217
Antimony	123	0.1704	0.1755	0.172	**0.1727**	0.0026	1.516
Silver	107	0.1443	0.1439	0.1499	**0.146**	0.0033	2.288
Silver	109	0.1147	0.1241	0.1259	**0.1215**	0.006	4.93

Internal Standard Factors:

Rhodium	103	1.08	1.074	1.07	**1.08**	n/a	n/a
Indium	115	1.042	1.032	1.029	**1.042**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102108A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #131341

Sample Name:		K0810000-001 1/5L			Mean	SD	%RSD
TimeStamp		10/21/08 20:53					
Antimony	121	0.0272	0.0339	0.0374	**0.0329**	0.0052	15.84
Antimony	123	0.028	0.0292	0.0251	**0.0274**	0.0021	7.68
Silver	107	0.029	0.0305	0.0285	**0.0293**	0.001	3.524
Silver	109	0.0247	0.0225	0.0251	**0.0241**	0.0014	5.634

Internal Standard Factors:

Rhodium	103	1.006	0.993	0.986	**1.006**	n/a	n/a
Indium	115	1.002	0.988	0.985	**1.002**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102108A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #131341

Sample Name:		K0810000-001 1/5A			Mean	SD	%RSD
TimeStamp		10/21/08 20:55					
Antimony	121	45.72	47.59	47.55	**46.95**	1.069	2.278
Antimony	123	45.8	48.15	47.52	**47.16**	1.216	2.579
Silver	107	9.537	9.871	9.672	**9.693**	0.1679	1.732
Silver	109	9.419	9.721	9.549	**9.563**	0.1515	1.584

Internal Standard Factors:

Rhodium	103	1.034	1.057	1.041	**1.034**	n/a	n/a
Indium	115	1.009	1.036	1.019	**1.009**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102108A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #131341

Sample Name: TimeStamp		K0810000-001 1/25S 10/21/08 20:59			Mean	SD	%RSD
Antimony	121	19.58	19.63	19.89	**19.7**	0.1677	0.8513
Antimony	123	19.65	19.75	19.96	**19.79**	0.1578	0.7978
Silver	107	3.941	3.905	3.927	**3.924**	0.0182	0.4625
Silver	109	3.905	3.9	3.903	**3.903**	0.0027	0.0683

Internal Standard Factors:

Rhodium	103	0.982	0.981	0.974	**0.982**	n/a	n/a
Indium	115	0.986	0.978	0.978	**0.986**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102108A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #131341

Sample Name:		K0810000-002 1/5			Mean	SD	%RSD
TimeStamp		10/21/08 21:02					
Antimony	121	0.1849	0.1759	0.1871	**0.1826**	0.0059	3.242
Antimony	123	0.1747	0.1867	0.19	**0.1838**	0.008	4.379
Silver	107	0.1271	0.1263	0.1334	**0.1289**	0.0039	3.04
Silver	109	0.1026	0.1088	0.1063	**0.1059**	0.0031	2.937

Internal Standard Factors:

Rhodium	103	1.057	1.062	1.08	**1.057** n/a		n/a
Indium	115	1.037	1.044	1.055	**1.037** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 102108A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #131341

Sample Name: / TimeStamp		K0809278-MB 1/5 10/21/08 21:05			Mean	SD	%RSD
Antimony	121	-0.0121	-0.0141	-0.0176	**-0.0146**	0.0028	18.97
Antimony	123	-0.0227	-0.018	-0.02	**-0.0202**	0.0023	11.61
Silver	107	0.0035	0.0029	0.0054	**0.0039**	0.0013	33.76
Silver	109	0.0024	0.0039	0.0027	**0.003**	0.0008	27.05

Internal Standard Factors:

Rhodium	103	0.953	0.961	0.972	**0.953**	n/a	n/a
Indium	115	0.962	0.959	0.959	**0.962**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102108A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #131341

Sample Name: / TimeStamp		LCSS K0809278 1/50 10/21/08 21:07			Mean	SD	%RSD
Antimony	121	15.94	16.46	16.23	**16.21**	0.2647	1.633
Antimony	123	16.02	16.54	16.55	**16.37**	0.3007	1.837
Silver	107	19.55	19.94	19.88	**19.79**	0.2063	1.042
Silver	109	19.39	19.98	19.86	**19.74**	0.3099	1.57

Internal Standard Factors:

Rhodium	103	0.983	0.989	0.987	**0.983**	n/a	n/a
Indium	115	0.98	0.988	0.983	**0.98**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102108A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #131341

Sample Name:		K0809278-001 1/5			Mean	SD	%RSD
TimeStamp		10/21/08 21:10					
Antimony	121	0.1859	0.1752	0.1714	**0.1775**	0.0075	4.23
Antimony	123	0.1763	0.1872	0.1708	**0.1781**	0.0083	4.687
Silver	107	0.1152	0.116	0.1163	**0.1158**	0.0006	0.5126
Silver	109	0.1063	0.1046	0.1056	**0.1055**	0.0009	0.838

Internal Standard Factors:

Rhodium	103	1.026	1.032	1.021	**1.026**	n/a	n/a
Indium	115	1.006	1.009	1.008	**1.006**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102108A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #131341

Sample Name:		K0809278-001 1/5D			Mean	SD	%RSD
TimeStamp		10/21/08 21:13					
Antimony	121	0.0633	0.0656	0.0667	**0.0652**	0.0017	2.642
Antimony	123	0.0648	0.0684	0.0699	**0.0677**	0.0026	3.879
Silver	107	0.0581	0.0557	0.0628	**0.0589**	0.0036	6.191
Silver	109	0.047	0.0478	0.0437	**0.0462**	0.0022	4.727

Internal Standard Factors:

Rhodium	103	1.029	1.027	1.025	**1.029** n/a		n/a
Indium	115	1.013	1.021	1.016	**1.013** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 102108A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #131341

Sample Name:		K0809278-001 1/5+1/5L			Mean	SD	%RSD
TimeStamp		10/21/08 21:16					
Antimony	121	0.0328	0.0286	0.0231	**0.0282**	0.0049	17.27
Antimony	123	0.0239	0.0226	0.0157	**0.0207**	0.0044	21.22
Silver	107	0.0237	0.0253	0.0246	**0.0245**	0.0008	3.371
Silver	109	0.0212	0.0196	0.0214	**0.0207**	0.001	4.918

Internal Standard Factors:

Rhodium	103	0.989	0.991	1	**0.989**	n/a	n/a
Indium	115	0.987	0.996	0.995	**0.987**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 102108A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #131341

Sample Name:		CCV6			Mean	SD	%RSD
TimeStamp		10/21/08 21:19					
Antimony	121	25.95	25.04	24.95	**25.31**	0.5545	2.19
Antimony	123	26.78	25.37	25.08	**25.74**	0.9089	3.531
Silver	107	26.44	25.63	25.49	**25.85**	0.5098	1.972
Silver	109	26.48	25.54	25.04	**25.69**	0.7328	2.853

Internal Standard Factors:

Rhodium	103	0.999	0.974	0.958	**0.999** n/a		n/a
Indium	115	1.004	0.969	0.968	**1.004** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 102108A
Units: µg/L (ppb)

Method: EPA 6020A
Analyst: Josh Bailey
STARLIMS #131341

Sample Name:		CCB6			Mean	SD	%RSD
TimeStamp		10/21/08 21:23					
Antimony	121	-0.0036	-0.0019	-0.0099	**-0.0051**	0.0042	82.19
Antimony	123	-0.0215	-0.0168	-0.0148	**-0.0177**	0.0034	19.38
Silver	107	0.004	0.0051	0.0044	**0.0045**	0.0006	12.48
Silver	109	0.0038	0.0028	0.0044	**0.0036**	0.0008	21.86

Internal Standard Factors:

Rhodium	103	0.945	0.958	0.974	**0.945**	n/a	n/a
Indium	115	0.949	0.971	0.97	**0.949**	n/a	n/a

Polychlorinated Biphenyls
PCB's
EPA Method 8082

Organic Analysis:
Polychlorinated Biphenyls (PCBs)

Summary Package

Sample and QC Results

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04
Service Request: K0810000

Cover Page - Organic Analysis Data Package
Polychlorinated Biphenyls (PCBs)

Sample Name	Lab Code	Date Collected	Date Received
DCI 4-1	K0810000-001	10/09/2008	10/10/2008
DCI 4-1a	K0810000-002	10/09/2008	10/10/2008
DCI 4-1MS	KWG0811356-1	10/09/2008	10/10/2008
DCI 4-1DMS	KWG0811356-2	10/09/2008	10/10/2008

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____ Name: Shon Morris

Date: 11/4/08 Title: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	GeoEngineers, Inc.	**Service Request:**	K0810000
Project:	Dakota Creek Confirmation Samples/5147-006-04	**Date Collected:**	10/09/2008
Sample Matrix:	Soil	**Date Received:**	10/10/2008

Polychlorinated Biphenyls (PCBs)

Sample Name:	DCI 4-1	**Units:**	ug/Kg
Lab Code:	K0810000-001	**Basis:**	Dry
Extraction Method:	EPA 3540C	**Level:**	Low
Analysis Method:	8082		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	10	1.3	1	10/23/08	10/29/08	KWG0811356	
Aroclor 1221	ND	U	20	1.3	1	10/23/08	10/29/08	KWG0811356	
Aroclor 1232	ND	U	10	1.3	1	10/23/08	10/29/08	KWG0811356	
Aroclor 1242	ND	U	10	1.3	1	10/23/08	10/29/08	KWG0811356	
Aroclor 1248	ND	U	10	1.3	1	10/23/08	10/29/08	KWG0811356	
Aroclor 1254	ND	U	10	1.3	1	10/23/08	10/29/08	KWG0811356	
Aroclor 1260	ND	U	10	1.3	1	10/23/08	10/29/08	KWG0811356	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	92	38-144	10/29/08	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	GeoEngineers, Inc.	**Service Request:**	K0810000
Project:	Dakota Creek Confirmation Samples/5147-006-04	**Date Collected:**	10/09/2008
Sample Matrix:	Soil	**Date Received:**	10/10/2008

Polychlorinated Biphenyls (PCBs)

Sample Name:	DCI 4-1a	**Units:**	ug/Kg
Lab Code:	K0810000-002	**Basis:**	Dry
Extraction Method:	EPA 3540C	**Level:**	Low
Analysis Method:	8082		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	10	1.3	1	10/23/08	10/29/08	KWG0811356	
Aroclor 1221	ND	U	20	1.3	1	10/23/08	10/29/08	KWG0811356	
Aroclor 1232	ND	U	10	1.3	1	10/23/08	10/29/08	KWG0811356	
Aroclor 1242	ND	U	10	1.3	1	10/23/08	10/29/08	KWG0811356	
Aroclor 1248	ND	U	10	1.3	1	10/23/08	10/29/08	KWG0811356	
Aroclor 1254	ND	U	10	1.3	1	10/23/08	10/29/08	KWG0811356	
Aroclor 1260	ND	U	10	1.3	1	10/23/08	10/29/08	KWG0811356	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	88	38-144	10/29/08	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	GeoEngineers, Inc.	**Service Request:**	K0810000
Project:	Dakota Creek Confirmation Samples/5147-006-04	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA

Polychlorinated Biphenyls (PCBs)

Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	KWG0811356-4	**Basis:**	Dry
Extraction Method:	EPA 3540C	**Level:**	Low
Analysis Method:	8082		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	Ui	26	26	1	10/23/08	10/29/08	KWG0811356	
Aroclor 1221	ND	Ui	27	27	1	10/23/08	10/29/08	KWG0811356	
Aroclor 1232	ND	Ui	35	35	1	10/23/08	10/29/08	KWG0811356	
Aroclor 1242	ND	Ui	21	21	1	10/23/08	10/29/08	KWG0811356	
Aroclor 1248	ND	Ui	8.6	8.6	1	10/23/08	10/29/08	KWG0811356	
Aroclor 1254	ND	U	8.6	1.3	1	10/23/08	10/29/08	KWG0811356	
Aroclor 1260	ND	U	8.6	1.3	1	10/23/08	10/29/08	KWG0811356	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	82	38-144	10/29/08	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: GeoEngineers, Inc. **Service Request:** K0810000
Project: Dakota Creek Confirmation Samples/5147-006-04
Sample Matrix: Soil

Surrogate Recovery Summary
Polychlorinated Biphenyls (PCBs)

Extraction Method: EPA 3540C **Units:** PERCENT
Analysis Method: 8082 **Level:** Low

Sample Name	Lab Code	Sur1
DCI 4-1	K0810000-001	92
DCI 4-1a	K0810000-002	88
Method Blank	KWG0811356-4	82
DCI 4-1MS	KWG0811356-1	84
DCI 4-1DMS	KWG0811356-2	82
Lab Control Sample	KWG0811356-3	83

Surrogate Recovery Control Limits (%)

Sur1 = Decachlorobiphenyl	38-144

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.

Client:	GeoEngineers, Inc.	**Service Request:**	K0810000
Project:	Dakota Creek Confirmation Samples/5147-006-04	**Date Extracted:**	10/23/2008
Sample Matrix:	Soil	**Date Analyzed:**	10/29/2008

Matrix Spike/Duplicate Matrix Spike Summary
Polychlorinated Biphenyls (PCBs)

Sample Name:	DCI 4-1	**Units:**	ug/Kg
Lab Code:	K0810000-001	**Basis:**	Dry
Extraction Method:	EPA 3540C	**Level:**	Low
Analysis Method:	8082	**Extraction Lot:**	KWG0811356

Analyte Name	Sample Result	DCI 4-1MS KWG0811356-1 Matrix Spike			DCI 4-1DMS KWG0811356-2 Duplicate Matrix Spike			%Rec Limits	RPD	RPD Limit
		Result	Expected	%Rec	Result	Expected	%Rec			
Aroclor 1016	ND	194	200	97	193	200	97	24-168	0	40
Aroclor 1260	ND	198	200	99	193	200	97	24-163	2	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04
Sample Matrix: Soil

Service Request: K0810000
Date Extracted: 10/23/2008
Date Analyzed: 10/29/2008

Lab Control Spike Summary
Polychlorinated Biphenyls (PCBs)

Extraction Method: EPA 3540C
Analysis Method: 8082

Units: ug/Kg
Basis: Dry
Level: Low
Extraction Lot: KWG0811356

	Lab Control Sample KWG0811356-3 Lab Control Spike			
Analyte Name	**Result**	**Expected**	**%Rec**	**%Rec Limits**
Aroclor 1016	191	200	96	44-130
Aroclor 1260	189	200	94	52-127

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	GeoEngineers, Inc.	**Service Request:**	K0810000
Project:	Dakota Creek Confirmation Samples/5147-006-04	**Date Extracted:**	10/23/2008
Sample Matrix:	Soil	**Date Analyzed:**	10/29/2008
		Time Analyzed:	13:14

Method Blank Summary
Polychlorinated Biphenyls (PCBs)

Sample Name:	Method Blank	**File ID:**	J:\GC09\DATA\102908.B\1029F006.D
Lab Code:	KWG0811356-4	**Instrument ID:**	GC09.i
Extraction Method:	EPA 3540C	**Level:**	Low
Analysis Method:	8082	**Extraction Lot:**	KWG0811356

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG0811356-3	J:\GC09\DATA\102908.B\1029F007.D	10/29/08	13:40
DCI 4-1	K0810000-001	J:\GC09\DATA\102908.B\1029F008.D	10/29/08	14:06
DCI 4-1MS	KWG0811356-1	J:\GC09\DATA\102908.B\1029F009.D	10/29/08	14:33
DCI 4-1DMS	KWG0811356-2	J:\GC09\DATA\102908.B\1029F010.D	10/29/08	14:59
DCI 4-1a	K0810000-002	J:\GC09\DATA\102908.B\1029F011.D	10/29/08	15:26

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	GeoEngineers, Inc.	**Service Request:**	K0810000
Project:	Dakota Creek Confirmation Samples/5147-006-04	**Date Extracted:**	10/23/2008
Sample Matrix:	Soil	**Date Analyzed:**	10/29/2008
		Time Analyzed:	13:40

Lab Control Sample Summary
Polychlorinated Biphenyls (PCBs)

Sample Name:	Lab Control Sample	**File ID:**	J:\GC09\DATA\102908.B\1029F007.D
Lab Code:	KWG0811356-3	**Instrument ID:**	GC09.i
Extraction Method:	EPA 3540C	**Level:**	Low
Analysis Method:	8082	**Extraction Lot:**	KWG0811356

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG0811356-4	J:\GC09\DATA\102908.B\1029F006.D	10/29/08	13:14
DCI 4-1	K0810000-001	J:\GC09\DATA\102908.B\1029F008.D	10/29/08	14:06
DCI 4-1MS	KWG0811356-1	J:\GC09\DATA\102908.B\1029F009.D	10/29/08	14:33
DCI 4-1DMS	KWG0811356-2	J:\GC09\DATA\102908.B\1029F010.D	10/29/08	14:59
DCI 4-1a	K0810000-002	J:\GC09\DATA\102908.B\1029F011.D	10/29/08	15:26

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04

Service Request: K0810000
Calibration Date: 09/22/2008

Initial Calibration Summary
Polychlorinated Biphenyls (PCBs)

Calibration ID: CAL7795
Instrument ID: GC09.i

Column: DB-35MS

Level ID	File ID
A	\\cash1\acqudata\GC09\data\092208.b\0922F009.D
B	\\cash1\acqudata\GC09\data\092208.b\0922F013.D
C	\\cash1\acqudata\GC09\data\092208.b\0922F017.D
D	\\cash1\acqudata\GC09\data\092208.b\0922F021.D
E	\\cash1\acqudata\GC09\data\092208.b\0922F025.D
F	\\cash1\acqudata\GC09\data\092208.b\0922F029.D
G	\\cash1\acqudata\GC09\data\092208.b\0922F033.D
H	\\cash1\acqudata\GC09\data\092208.b\0922F035.D
I	\\cash1\acqudata\GC09\data\092208.b\0922F036.D
J	\\cash1\acqudata\GC09\data\092208.b\0922F037.D
K	\\cash1\acqudata\GC09\data\092208.b\0922F038.D
L	\\cash1\acqudata\GC09\data\092208.b\0922F039.D
M	\\cash1\acqudata\GC09\data\092208.b\0922F040.D

Analyte Name	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF
Decachlorobiphenyl															
							H	2.5	12100	I	5.0	12200	J	50	10800
	K	100	9790	L	200	8610	M	500	7540						
Aroclor 1016 {1}															
							H	25	239	I	50	261	J	500	245
	K	1000	224	L	2000	197	M	5000	165						
Aroclor 1016 {2}															
							H	25	490	I	50	513	J	500	477
	K	1000	429	L	2000	373	M	5000	313						
Aroclor 1016 {3}															
							H	25	244	I	50	273	J	500	248
	K	1000	222	L	2000	194	M	5000	165						
Aroclor 1016 {4}															
							H	25	346	I	50	370	J	500	323
	K	1000	294	L	2000	258	M	5000	221						
Aroclor 1016 {5}															
							H	25	193	I	50	231	J	500	255
	K	1000	238	L	2000	216	M	5000	190						
Aroclor 1260 {1}															
							H	25	431	I	50	451	J	500	399
	K	1000	363	L	2000	326	M	5000	287						
Aroclor 1260 {2}															
							H	25	762	I	50	786	J	500	755
	K	1000	691	L	2000	642	M	5000	571						

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04

Service Request: K0810000
Calibration Date: 09/22/2008

Initial Calibration Summary
Polychlorinated Biphenyls (PCBs)

Calibration ID: CAL7795
Instrument ID: GC09.i

Column: DB-35MS

Analyte Name	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF
Aroclor 1260 {3}															
							H	25	585	I	50	598	J	500	516
	K	1000	485	L	2000	416	M	5000	364						
Aroclor 1260 {4}															
							H	25	513	I	50	507	J	500	477
	K	1000	444	L	2000	406	M	5000	364						
Aroclor 1260 {5}															
							H	25	1050	I	50	1050	J	500	984
	K	1000	924	L	2000	842	M	5000	762						

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04

Service Request: K0810000
Calibration Date: 09/22/2008

Initial Calibration Summary
Polychlorinated Biphenyls (PCBs)

Calibration ID: CAL7795
Instrument ID: GC09.i

Column: DB-35MS

Analyte Name	Compound Type	Calibration Evaluation				
		Fit Type	Eval.	Eval. Result	Q	Control Criteria
Decachlorobiphenyl	SURR	AverageRF	% RSD	18.4		≤ 20
Aroclor 1016 {1}	MULTI	AverageRF	% RSD	15.9		≤ 20
Aroclor 1016 {2}	MULTI	AverageRF	% RSD	17.8		≤ 20
Aroclor 1016 {3}	MULTI	AverageRF	% RSD	17.5		≤ 20
Aroclor 1016 {4}	MULTI	AverageRF	% RSD	18.5		≤ 20
Aroclor 1016 {5}	MULTI	AverageRF	% RSD	11.7		≤ 20
Aroclor 1260 {1}	MULTI	AverageRF	% RSD	16.7		≤ 20
Aroclor 1260 {2}	MULTI	AverageRF	% RSD	11.8		≤ 20
Aroclor 1260 {3}	MULTI	AverageRF	% RSD	18.6		≤ 20
Aroclor 1260 {4}	MULTI	AverageRF	% RSD	13.1		≤ 20
Aroclor 1260 {5}	MULTI	AverageRF	% RSD	12.5		≤ 20

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04

Service Request: K0810000
Calibration Date: 09/22/2008
Date Analyzed: 09/23/2008

Second Source Calibration Verification
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082

Calibration ID: CAL7795
Units: ng/mL

File ID: \\cash1\acqudata\GC09\data\092208.b\0922F041.D
\\cash1\acqudata\GC09\data\092208.b\0922F042.D
\\cash1\acqudata\GC09\data\092208.b\0922F043.D
\\cash1\acqudata\GC09\data\092208.b\0922F044.D
\\cash1\acqudata\GC09\data\092208.b\0922F045.D
\\cash1\acqudata\GC09\data\092208.b\0922F046.D
\\cash1\acqudata\GC09\data\092208.b\0922F047.D
\\cash1\acqudata\GC09\data\092208.b\0922F048.D
\\cash1\acqudata\GC09\data\092208.b\0922F049.D

Column ID: DB-35MS

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Aroclor 1016 {1}	1000	980	222	218	-2	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	960	433	416	-4	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	960	224	214	-4	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	960	302	289	-4	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	1200	220	264	20	NA	± 100 %	AverageRF
Aroclor 1016	1000	1000	NA	NA	NA	-1	± 15 %	NA
Aroclor 1260 {1}	1000	910	376	344	-9	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	830	701	579	-17	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	1100	494	532	8	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	1000	452	467	3	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	1100	936	995	6	NA	± 100 %	AverageRF
Aroclor 1260	1000	980	NA	NA	NA	2	± 15 %	NA

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04

Service Request: K0810000
Calibration Date: 09/22/2008

Initial Calibration Summary
Polychlorinated Biphenyls (PCBs)

Calibration ID: CAL7795
Instrument ID: GC09.i

Column: DB-XLB

Level ID	File ID
A	\\cash1\acqudata\GC09\data\092208_r.b\0922R009.D
B	\\cash1\acqudata\GC09\data\092208_r.b\0922R013.D
C	\\cash1\acqudata\GC09\data\092208_r.b\0922R017.D
D	\\cash1\acqudata\GC09\data\092208_r.b\0922R021.D
E	\\cash1\acqudata\GC09\data\092208_r.b\0922R025.D
F	\\cash1\acqudata\GC09\data\092208_r.b\0922R029.D
G	\\cash1\acqudata\GC09\data\092208_r.b\0922R033.D
H	\\cash1\acqudata\GC09\data\092208_r.b\0922R035.D
I	\\cash1\acqudata\GC09\data\092208_r.b\0922R036.D
J	\\cash1\acqudata\GC09\data\092208_r.b\0922R037.D
K	\\cash1\acqudata\GC09\data\092208_r.b\0922R038.D
L	\\cash1\acqudata\GC09\data\092208_r.b\0922R039.D
M	\\cash1\acqudata\GC09\data\092208_r.b\0922R040.D

Analyte Name	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF
Decachlorobiphenyl															
							H	2.5	15200	I	5.0	15300	J	50	13300
	K	100	12000	L	200	10500									
Aroclor 1016 {1}															
							H	25	392	I	50	429	J	500	358
	K	1000	339	L	2000	300	M	5000	239						
Aroclor 1016 {2}															
							H	25	763	I	50	828	J	500	699
	K	1000	624	L	2000	546	M	5000	625						
Aroclor 1016 {3}															
							H	25	396	I	50	434	J	500	403
	K	1000	356	L	2000	310	M	5000	263						
Aroclor 1016 {4}															
							H	25	461	I	50	479	J	500	455
	K	1000	412	L	2000	363	M	5000	309						
Aroclor 1016 {5}															
							H	25	416	I	50	408	J	500	412
	K	1000	369	L	2000	324	M	5000	279						
Aroclor 1260 {1}															
							H	25	827	I	50	854	J	500	746
	K	1000	680	L	2000	594	M	5000	516						
Aroclor 1260 {2}															
							H	25	872	I	50	919	J	500	772
	K	1000	707	L	2000	626	M	5000	542						

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04

Service Request: K0810000
Calibration Date: 09/22/2008

Initial Calibration Summary
Polychlorinated Biphenyls (PCBs)

Calibration ID: CAL7795
Instrument ID: GC09.i

Column: DB-XLB

Analyte Name	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF
Aroclor 1260 {3}															
							H	25	969	I	50	1060	J	500	994
	K	1000	924	L	2000	830	M	5000	735						
Aroclor 1260 {4}															
							H	25	509	I	50	583	J	500	536
	K	1000	493	L	2000	440	M	5000	390						
Aroclor 1260 {5}															
							H	25	1190	I	50	1200	J	500	1120
	K	1000	1050	L	2000	946	M	5000	845						

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04

Service Request: K0810000
Calibration Date: 09/22/2008

Initial Calibration Summary
Polychlorinated Biphenyls (PCBs)

Calibration ID: CAL7795
Instrument ID: GC09.i

Column: DB-XLB

Analyte Name	Compound Type	Calibration Evaluation				
		Fit Type	Eval.	Eval. Result	Q	Control Criteria
Decachlorobiphenyl	SURR	AverageRF	% RSD	15.6		≤ 20
Aroclor 1016 {1}	MULTI	AverageRF	% RSD	19.7		≤ 20
Aroclor 1016 {2}	MULTI	AverageRF	% RSD	15.2		≤ 20
Aroclor 1016 {3}	MULTI	AverageRF	% RSD	17.8		≤ 20
Aroclor 1016 {4}	MULTI	AverageRF	% RSD	16.0		≤ 20
Aroclor 1016 {5}	MULTI	AverageRF	% RSD	15.2		≤ 20
Aroclor 1260 {1}	MULTI	AverageRF	% RSD	18.8		≤ 20
Aroclor 1260 {2}	MULTI	AverageRF	% RSD	19.5		≤ 20
Aroclor 1260 {3}	MULTI	AverageRF	% RSD	12.9		≤ 20
Aroclor 1260 {4}	MULTI	AverageRF	% RSD	14.0		≤ 20
Aroclor 1260 {5}	MULTI	AverageRF	% RSD	13.5		≤ 20

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04

Service Request: K0810000
Calibration Date: 09/22/2008
Date Analyzed: 09/23/2008

Second Source Calibration Verification
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082

Calibration ID: CAL7795
Units: ng/mL

File ID: \\cash1\acqudata\GC09\data\092208_r.b\0922R041.D
\\cash1\acqudata\GC09\data\092208_r.b\0922R042.D
\\cash1\acqudata\GC09\data\092208_r.b\0922R043.D
\\cash1\acqudata\GC09\data\092208_r.b\0922R044.D
\\cash1\acqudata\GC09\data\092208_r.b\0922R045.D
\\cash1\acqudata\GC09\data\092208_r.b\0922R046.D
\\cash1\acqudata\GC09\data\092208_r.b\0922R047.D
\\cash1\acqudata\GC09\data\092208_r.b\0922R048.D
\\cash1\acqudata\GC09\data\092208_r.b\0922R049.D

Column ID: DB-XLB

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Aroclor 1016 {1}	1000	970	343	334	-3	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	900	681	614	-10	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	930	360	334	-7	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	980	413	406	-2	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	980	368	361	-2	NA	± 100 %	AverageRF
Aroclor 1016	1000	950	NA	NA	NA	5	± 15 %	NA
Aroclor 1260 {1}	1000	920	703	647	-8	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	930	740	685	-7	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	880	919	809	-12	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	1100	492	550	12	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	1100	1060	1140	8	NA	± 100 %	AverageRF
Aroclor 1260	1000	980	NA	NA	NA	2	± 15 %	NA

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound ‡ CCC Compound

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04

Service Request: K0810000
Date Analyzed: 10/29/2008

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082
CCV Standard ID: PCB5-24D

Calibration Date: 09/22/2008
Calibration ID: CAL7795
Analysis Lot: KWG0811575
Units: ng/mL

File ID: \\CASH1\ACQUDATA\GC09\DATA\102908.B\1029F005.D

Column ID: DB-35MS

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	100	94	10200	9550	-6	NA	± 15 %	AverageRF
Aroclor 1016 {1}	1000	990	222	220	-1	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	980	433	423	-2	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	930	224	209	-7	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	970	302	294	-3	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	1100	220	235	7	NA	± 100 %	AverageRF
Aroclor 1016	1000	990	NA	NA	NA	-1	± 15 %	NA
Aroclor 1260 {1}	1000	940	376	352	-6	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	960	701	674	-4	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	920	494	457	-8	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	960	452	435	-4	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	960	936	903	-4	NA	± 100 %	AverageRF
Aroclor 1260	1000	950	NA	NA	NA	-5	± 15 %	NA

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04

Service Request: K0810000
Date Analyzed: 10/29/2008

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082
CCV Standard ID: PCB5-24D

Calibration Date: 09/22/2008
Calibration ID: CAL7795
Analysis Lot: KWG0811575
Units: ng/mL

File ID: \\CASH1\ACQUDATA\GC09\DATA\102908_R.B\1029R005.D

Column ID: DB-XLB

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	100	99	13300	13100	-1	NA	± 15 %	AverageRF
Aroclor 1016 {1}	1000	1100	343	374	9	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	1000	681	709	4	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	1100	360	401	11	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	1100	413	466	13	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	1100	368	417	13	NA	± 100 %	AverageRF
Aroclor 1016	1000	1100	NA	NA	NA	10	± 15 %	NA
Aroclor 1260 {1}	1000	1100	703	750	7	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	1100	740	786	6	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	1100	919	1010	10	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	1100	492	537	9	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	1100	1060	1150	8	NA	± 100 %	AverageRF
Aroclor 1260	1000	1100	NA	NA	NA	8	± 15 %	NA

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04

Service Request: K0810000
Date Analyzed: 10/29/2008

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082
CCV Standard ID: PCB5-24D

Calibration Date: 09/22/2008
Calibration ID: CAL7795
Analysis Lot: KWG0811575
Units: ng/mL

File ID: \\CASH1\ACQUDATA\GC09\DATA\102908.B\1029F020.D

Column ID: DB-35MS

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	100	89	10200	9080	-11	NA	± 15 %	AverageRF
Aroclor 1016 {1}	1000	970	222	215	-3	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	930	433	404	-7	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	930	224	208	-7	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	920	302	278	-8	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	980	220	216	-2	NA	± 100 %	AverageRF
Aroclor 1016	1000	950	NA	NA	NA	-5	± 15 %	NA
Aroclor 1260 {1}	1000	860	376	324	-14	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	930	701	653	-7	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	860	494	423	-14	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	880	452	396	-12	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	910	936	853	-9	NA	± 100 %	AverageRF
Aroclor 1260	1000	890	NA	NA	NA	-11	± 15 %	NA

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04

Service Request: K0810000
Date Analyzed: 10/29/2008

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082
CCV Standard ID: PCB5-24D

Calibration Date: 09/22/2008
Calibration ID: CAL7795
Analysis Lot: KWG0811575
Units: ng/mL

File ID: \\CASH1\ACQUDATA\GC09\DATA\102908_R.B\1029R020.D

Column ID: DB-XLB

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	100	96	13300	12700	-4	NA	± 15 %	AverageRF
Aroclor 1016 {1}	1000	1000	343	355	4	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	970	681	657	-3	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	1000	360	377	5	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	1100	413	441	7	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	1100	368	394	7	NA	± 100 %	AverageRF
Aroclor 1016	1000	1000	NA	NA	NA	4	± 15 %	NA
Aroclor 1260 {1}	1000	980	703	689	-2	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	1000	740	739	0	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	1100	919	969	5	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	1000	492	505	3	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	1100	1060	1120	6	NA	± 100 %	AverageRF
Aroclor 1260	1000	1000	NA	NA	NA	2	± 15 %	NA

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: GeoEngineers, Inc. **Service Request:** K0810000
Project: Dakota Creek Confirmation Samples/5147-006-04

Analysis Run Log
Polychlorinated Biphenyls (PCBs)

Analysis Method: 8082 **Analysis Lot:** KWG0811575
Instrument ID: GC09.i
Column: DB-35MS

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
1029F004.D	Instrument Blank	KWG0811575-2	10/29/2008	12:21		10/29/2008	12:21
1029F005.D	Continuing Calibration Verification	KWG0811575-1	10/29/2008	12:47		10/29/2008	12:47
1029F006.D	Method Blank	KWG0811356-4	10/29/2008	13:14		10/29/2008	13:14
1029F007.D	Lab Control Sample	KWG0811356-3	10/29/2008	13:40		10/29/2008	13:40
1029F008.D	DCI 4-1	K0810000-001	10/29/2008	14:06		10/29/2008	14:06
1029F009.D	DCI 4-1MS	KWG0811356-1	10/29/2008	14:33		10/29/2008	14:33
1029F010.D	DCI 4-1DMS	KWG0811356-2	10/29/2008	14:59		10/29/2008	14:59
1029F011.D	DCI 4-1a	K0810000-002	10/29/2008	15:26		10/29/2008	15:26
1029F012.D	ZZZZZZ	ZZZZZZ	10/29/2008	15:52		10/29/2008	15:52
1029F013.D	ZZZZZZ	ZZZZZZ	10/29/2008	16:18		10/29/2008	16:18
1029F014.D	ZZZZZZ	ZZZZZZ	10/29/2008	16:45		10/29/2008	16:45
1029F015.D	ZZZZZZ	ZZZZZZ	10/29/2008	17:11		10/29/2008	17:11
1029F017.D	ZZZZZZ	ZZZZZZ	10/29/2008	18:04		10/29/2008	18:04
1029F019.D	Instrument Blank	KWG0811575-4	10/29/2008	18:57		10/29/2008	18:57
1029F020.D	Continuing Calibration Verification	KWG0811575-3	10/29/2008	19:23		10/29/2008	19:23
1029F021.D	Instrument Blank	KWG0811575-6	10/29/2008	19:49		10/29/2008	19:49
1029F022.D	ZZZZZZ	ZZZZZZ	10/29/2008	20:16		10/29/2008	20:16
1029F023.D	ZZZZZZ	ZZZZZZ	10/29/2008	20:42		10/29/2008	20:42
1029F024.D	ZZZZZZ	ZZZZZZ	10/29/2008	21:08		10/29/2008	21:08
1029F025.D	ZZZZZZ	ZZZZZZ	10/29/2008	21:35		10/29/2008	21:35
1029F026.D	ZZZZZZ	ZZZZZZ	10/29/2008	22:01		10/29/2008	22:01
1029F027.D	ZZZZZZ	ZZZZZZ	10/29/2008	22:27		10/29/2008	22:27
1029F028.D	ZZZZZZ	ZZZZZZ	10/29/2008	22:53		10/29/2008	22:53
1029F029.D	ZZZZZZ	ZZZZZZ	10/29/2008	23:20		10/29/2008	23:20
1029F030.D	ZZZZZZ	ZZZZZZ	10/29/2008	23:46		10/29/2008	23:46
1029F031.D	ZZZZZZ	ZZZZZZ	10/30/2008	00:12		10/30/2008	00:12
1029F032.D	Continuing Calibration Verification	KWG0811575-7	10/30/2008	00:39		10/30/2008	00:39
1029F033.D	Instrument Blank	KWG0811575-8	10/30/2008	01:05		10/30/2008	01:05
1029F034.D	ZZZZZZ	ZZZZZZ	10/30/2008	01:31		10/30/2008	01:31
1029F035.D	ZZZZZZ	ZZZZZZ	10/30/2008	01:58		10/30/2008	01:58
1029F036.D	ZZZZZZ	ZZZZZZ	10/30/2008	02:24		10/30/2008	02:24
1029F037.D	ZZZZZZ	ZZZZZZ	10/30/2008	02:50		10/30/2008	02:50
1029F038.D	Continuing Calibration Verification	KWG0811575-9	10/30/2008	03:17		10/30/2008	03:17
1029F039.D	Instrument Blank	KWG0811575-10	10/30/2008	03:43		10/30/2008	03:43

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04
Sample Matrix: Soil

Service Request: K0810000
Date Extracted: 10/23/2008

Extraction Prep Log
Polychlorinated Biphenyls (PCBs)

Extraction Method: EPA 3540C
Analysis Method: 8082

Extraction Lot: KWG0811356
Level: Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
DCI 4-1	K0810000-001	10/09/08	10/10/08	23.08g	4ml	86.7	
DCI 4-1a	K0810000-002	10/09/08	10/10/08	23.34g	4ml	85.7	
Method Blank	KWG0811356-4	NA	NA	23.34g	4ml	NA	
DCI 4-1MS	KWG0811356-1	10/09/08	10/10/08	23.08g	4ml	86.7	
DCI 4-1DMS	KWG0811356-2	10/09/08	10/10/08	23.11g	4ml	86.7	
Lab Control Sample	KWG0811356-3	NA	NA	20.00g	4ml	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Organic Analysis:
Polychlorinated Biphenyls (PCBs)

Validation Package

Organic Analysis:
Polychlorinated Biphenyls (PCBs)

Validation Package

QC Reports

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: GeoEngineers, Inc. **Service Request:** K0810000
Project: Dakota Creek Confirmation Samples/5147-006-04
Sample Matrix: Soil

Surrogate Recovery Summary
Polychlorinated Biphenyls (PCBs)

Extraction Method: EPA 3540C **Units:** PERCENT
Analysis Method: 8082 **Level:** Low

Sample Name	Lab Code	Sur1
DCI 4-1	K0810000-001	92
DCI 4-1a	K0810000-002	88
Method Blank	KWG0811356-4	82
DCI 4-1MS	KWG0811356-1	84
DCI 4-1DMS	KWG0811356-2	82
Lab Control Sample	KWG0811356-3	83

Surrogate Recovery Control Limits (%)

Sur1	Decachlorobiphenyl	38-144

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	GeoEngineers, Inc.	**Service Request:**	K0810000
Project:	Dakota Creek Confirmation Samples/5147-006-04	**Date Extracted:**	10/23/2008
Sample Matrix:	Soil	**Date Analyzed:**	10/29/2008

Matrix Spike/Duplicate Matrix Spike Summary
Polychlorinated Biphenyls (PCBs)

Sample Name:	DCI 4-1	**Units:**	ug/Kg
Lab Code:	K0810000-001	**Basis:**	Dry
Extraction Method:	EPA 3540C	**Level:**	Low
Analysis Method:	8082	**Extraction Lot:**	KWG0811356

Analyte Name	Sample Result	DCI 4-1MS KWG0811356-1 Matrix Spike			DCI 4-1DMS KWG0811356-2 Duplicate Matrix Spike			%Rec Limits	RPD	RPD Limit
		Result	Expected	%Rec	Result	Expected	%Rec			
Aroclor 1016	ND	194	200	97	193	200	97	24-168	0	40
Aroclor 1260	ND	198	200	99	193	200	97	24-163	2	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	GeoEngineers, Inc.	**Service Request:**	K0810000
Project:	Dakota Creek Confirmation Samples/5147-006-04	**Date Extracted:**	10/23/2008
Sample Matrix:	Soil	**Date Analyzed:**	10/29/2008

Lab Control Spike Summary
Polychlorinated Biphenyls (PCBs)

Extraction Method:	EPA 3540C	**Units:**	ug/Kg
Analysis Method:	8082	**Basis:**	Dry
		Level:	Low
		Extraction Lot:	KWG0811356

	Lab Control Sample KWG0811356-3 Lab Control Spike			
Analyte Name	**Result**	**Expected**	**%Rec**	**%Rec Limits**
Aroclor 1016	191	200	96	44-130
Aroclor 1260	189	200	94	52-127

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client:	GeoEngineers, Inc.	**Service Request:**	K0810000
Project:	Dakota Creek Confirmation Samples/5147-006-04	**Date Extracted:**	10/23/2008
Sample Matrix:	Soil	**Date Analyzed:**	10/29/2008
		Time Analyzed:	13:14

Method Blank Summary
Polychlorinated Biphenyls (PCBs)

Sample Name:	Method Blank	**File ID:**	J:\GC09\DATA\102908.B\1029F006.D
Lab Code:	KWG0811356-4	**Instrument ID:**	GC09.i
Extraction Method:	EPA 3540C	**Level:**	Low
Analysis Method:	8082	**Extraction Lot:**	KWG0811356

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG0811356-3	J:\GC09\DATA\102908.B\1029F007.D	10/29/08	13:40
DCI 4-1	K0810000-001	J:\GC09\DATA\102908.B\1029F008.D	10/29/08	14:06
DCI 4-1MS	KWG0811356-1	J:\GC09\DATA\102908.B\1029F009.D	10/29/08	14:33
DCI 4-1DMS	KWG0811356-2	J:\GC09\DATA\102908.B\1029F010.D	10/29/08	14:59
DCI 4-1a	K0810000-002	J:\GC09\DATA\102908.B\1029F011.D	10/29/08	15:26

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	GeoEngineers, Inc.	**Service Request:**	K0810000
Project:	Dakota Creek Confirmation Samples/5147-006-04	**Date Extracted:**	10/23/2008
Sample Matrix:	Soil	**Date Analyzed:**	10/29/2008
		Time Analyzed:	13:40

Lab Control Sample Summary
Polychlorinated Biphenyls (PCBs)

Sample Name:	Lab Control Sample	**File ID:**	J:\GC09\DATA\102908.B\1029F007.D
Lab Code:	KWG0811356-3	**Instrument ID:**	GC09.i
Extraction Method:	EPA 3540C	**Level:**	Low
Analysis Method:	8082	**Extraction Lot:**	KWG0811356

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG0811356-4	J:\GC09\DATA\102908.B\1029F006.D	10/29/08	13:14
DCI 4-1	K0810000-001	J:\GC09\DATA\102908.B\1029F008.D	10/29/08	14:06
DCI 4-1MS	KWG0811356-1	J:\GC09\DATA\102908.B\1029F009.D	10/29/08	14:33
DCI 4-1DMS	KWG0811356-2	J:\GC09\DATA\102908.B\1029F010.D	10/29/08	14:59
DCI 4-1a	K0810000-002	J:\GC09\DATA\102908.B\1029F011.D	10/29/08	15:26

Organic Analysis:
Polychlorinated Biphenyls (PCBs)

Validation Package

Raw Data

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	GeoEngineers, Inc.	**Service Request:**	K0810000
Project:	Dakota Creek Confirmation Samples/5147-006-04	**Date Collected:**	10/09/2008
Sample Matrix:	Soil	**Date Received:**	10/10/2008

Polychlorinated Biphenyls (PCBs)

Sample Name:	DCI 4-1	**Units:**	ug/Kg
Lab Code:	K0810000-001	**Basis:**	Dry
Extraction Method:	EPA 3540C	**Level:**	Low
Analysis Method:	8082		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	10	1.3	1	10/23/08	10/29/08	KWG0811356	
Aroclor 1221	ND	U	20	1.3	1	10/23/08	10/29/08	KWG0811356	
Aroclor 1232	ND	U	10	1.3	1	10/23/08	10/29/08	KWG0811356	
Aroclor 1242	ND	U	10	1.3	1	10/23/08	10/29/08	KWG0811356	
Aroclor 1248	ND	U	10	1.3	1	10/23/08	10/29/08	KWG0811356	
Aroclor 1254	ND	U	10	1.3	1	10/23/08	10/29/08	KWG0811356	
Aroclor 1260	ND	U	10	1.3	1	10/23/08	10/29/08	KWG0811356	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	92	38-144	10/29/08	Acceptable

Comments:

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\102908.B\1029F008.D
Lab ID: K0810000-001
RunType: SMPL
Matrix: SOIL

Date Acquired: 10/29/2008 14:06
Date Quantitated: 10/31/2008 17:14
Batch ID: KWG0811575
Analysis Method: 8082
MethodJoinID: MJ147

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Calibration Verification Ave %D	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Calibration Verification Ave %D (Closing)	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: [signature]

Secondary Review: [signature] 11/3/08

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\102908_R.B\1029R008.D
Lab ID: K0810000-001
RunType: SMPL
Matrix: SOIL

Date Acquired: 10/29/2008 14:06
Date Quantitated: 10/31/2008 17:15
Batch ID: KWG0811575
Analysis Method: 8082
MethodJoinID: MJ147

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Calibration Verification Ave %D	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Calibration Verification Ave %D (Closing)	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: 11/3/08

Quantitation Report

Bottle ID:		**Tier:**	V	**Matrix:**	SOIL
Prod Code:	8082 PCB_LL	**Collect Date:**	10/09/2008	**Receive Date:**	10/10/2008

Analysis Lot:	KWG0811575	**Prep Lot:**	KWG0811356	**Report Group:**	K0810000
Analysis Method:	8082	**Prep Method:**	EPA 3540C		
Prep Ref:	771304	**Prep Date:**	10/23/2008		

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\102908.B\092208_F.M	**Calibration ID:**	CAL7795
Title:	Polychlorinated Biphenyls (PCBs)	**Report List ID:**	LJ2039
MB Ref:	J:\GC09\DATA\102908.B\1029F006.D	**Method ID:**	MJ150
		Quant based on Report List	

Data File #1:	J:\GC09\DATA\102908.B\1029F008.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\102908_r.b\1029R008.D			**Vial:**	5
Acqu Date:	10/29/2008 14:06	**Quant Date:**	10/31/2008 17:14	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K0810000-001				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Decachlorobiphenyl	16.02	17.10	888876	1217775	87.49	91.80			92OK
			%Recovery =		87OK	92OK	**Limits =**	38-144	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/Kg #1	ug/Kg #2	Rpt
Aroclor 1016			0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1016 {1}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1016 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1016 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1016 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1016 {5}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1221			0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1221 {1}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1221 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1221 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1221 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1232			0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1232 {1}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1232 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1232 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1232 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1242			0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1242 {1}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1242 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1242 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC09\DATA\102908.B\1029F008.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\102908_r.b\1029R008.D			**Vial:**	5
Acqu Date:	10/29/2008 14:06	**Quant Date:**	10/31/2008 17:14	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K0810000-001				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds **Final Conc. Units:** ug/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/Kg #1	ug/Kg #2	Rpt
Aroclor 1242 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1242 {5}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1248			0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1248 {1}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1248 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1248 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1248 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1248 {5}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1254			0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1254 {1}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1254 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1254 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1254 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1254 {5}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1260			0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1260 {1}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1260 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1260 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1260 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1260 {5}			0d	0d	0.0000	0.0000	1.3U	1.3U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	23.08 g	**Dilution:**	1.0
Prep Final Vol:	4 ml	**Unit Factor:**	1
Solids:	86.7 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\cash1\acqudata\GC09\data\102908.b\1029F008.D
Report Date: 31-Oct-2008 17:14

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\102908.b\1029F008.D
Sample #2 : \\cash1\acqudata\GC09\data\102908_r.b\1029R008.D
Inj Date : 29-OCT-2008 14:06
Sample Info: K0810000-001 | DCI 4-1
Misc Info : KELSO\SEMIVOA GC\8082-PCB_LL\10000001.H | F=4
Cal Date : 30-OCT-2008 08:55
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\102908.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\102908_r.b\092208_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

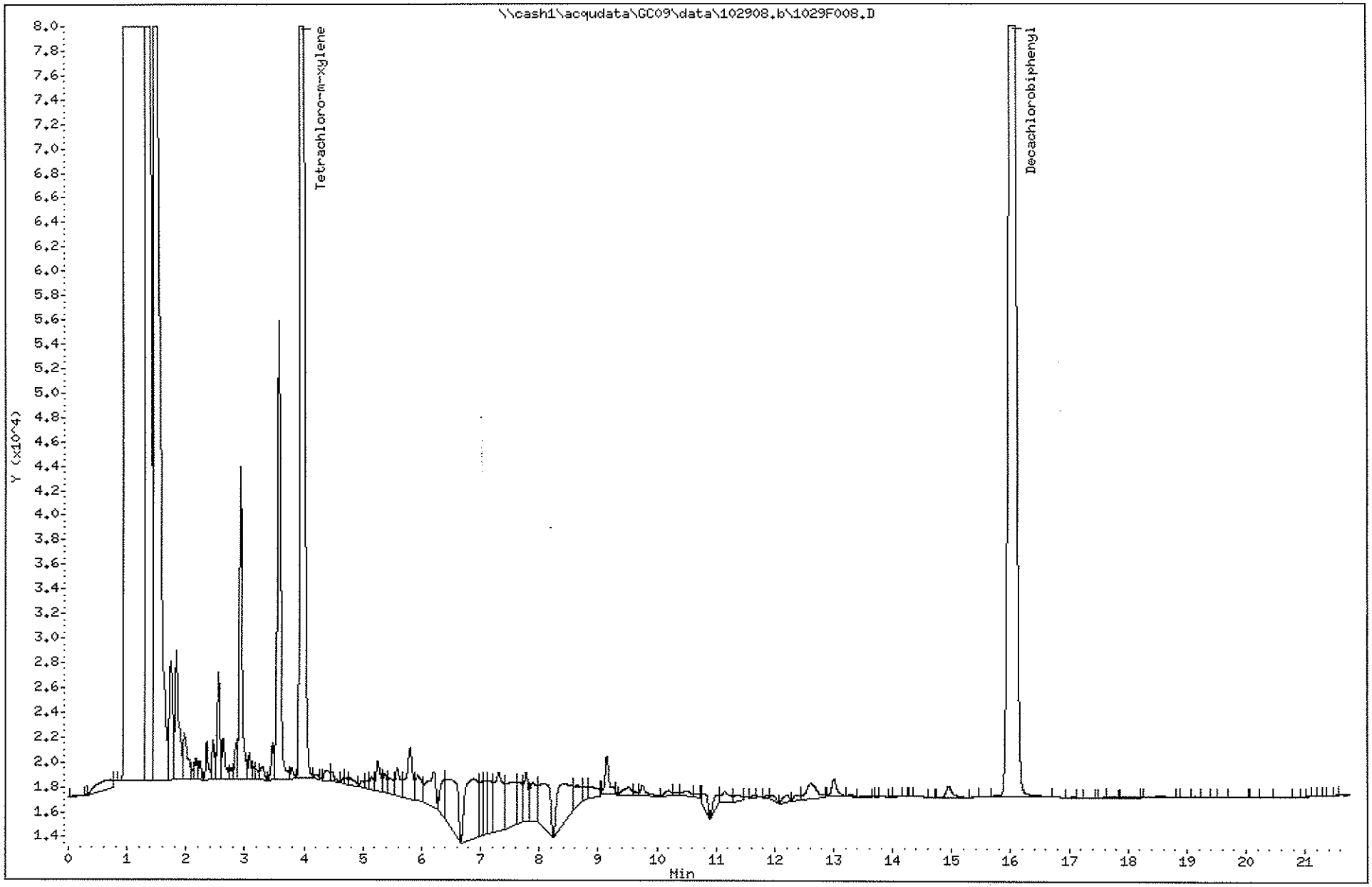
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.947	4.497	828533	1508587	81.4	87.7		100.00(R)
Decachlorobiphenyl	16.017	17.103	888876	1217775	87.5	91.8		100.00(R)

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Data File: \\cash1\acqudata\GC09\data\102908.b\1029F008.D
Date : 29-OCT-2008 14:06
Client ID:
Sample Info: K0810000-001 | DCI 4-1

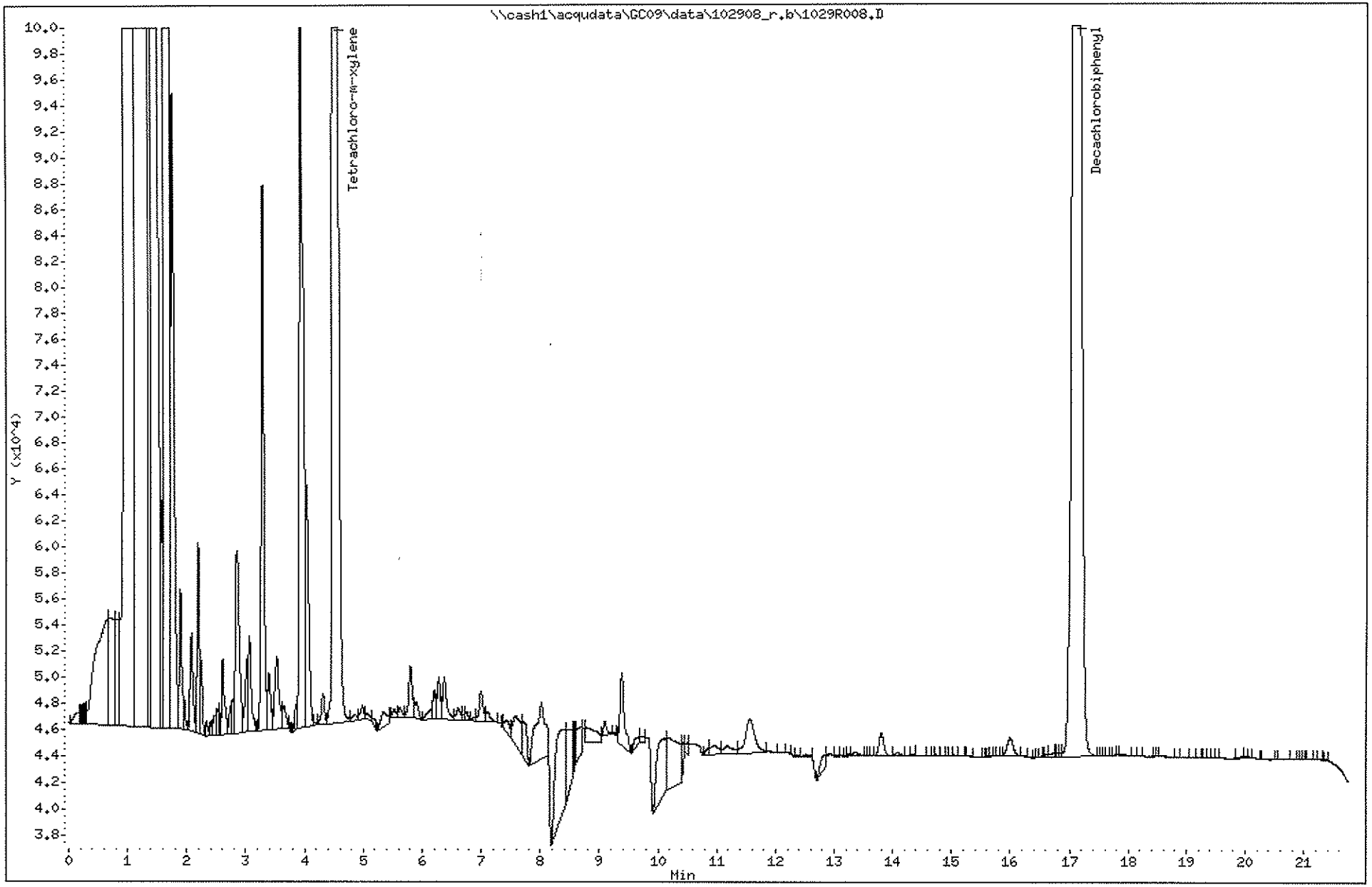
Instrument: GC09.i
Operator: LHarris
Column phase: DB-35MS
Column diameter: 0.53



Data File: \\cash1\acqudata\GC09\data\102908_r.b\1029R008.D
Date : 29-OCT-2008 14:06
Client ID:
Sample Info: K0810000-001 | DCI 4-1

Instrument: GC09.i

Operator: LHarris
Column phase: DB-XLB
Column diameter: 0.53



COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	GeoEngineers, Inc.	**Service Request:**	K0810000
Project:	Dakota Creek Confirmation Samples/5147-006-04	**Date Collected:**	10/09/2008
Sample Matrix:	Soil	**Date Received:**	10/10/2008

Polychlorinated Biphenyls (PCBs)

Sample Name:	DCI 4-1a	**Units:**	ug/Kg
Lab Code:	K0810000-002	**Basis:**	Dry
Extraction Method:	EPA 3540C	**Level:**	Low
Analysis Method:	8082		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	10	1.3	1	10/23/08	10/29/08	KWG0811356	
Aroclor 1221	ND	U	20	1.3	1	10/23/08	10/29/08	KWG0811356	
Aroclor 1232	ND	U	10	1.3	1	10/23/08	10/29/08	KWG0811356	
Aroclor 1242	ND	U	10	1.3	1	10/23/08	10/29/08	KWG0811356	
Aroclor 1248	ND	U	10	1.3	1	10/23/08	10/29/08	KWG0811356	
Aroclor 1254	ND	U	10	1.3	1	10/23/08	10/29/08	KWG0811356	
Aroclor 1260	ND	U	10	1.3	1	10/23/08	10/29/08	KWG0811356	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	88	38-144	10/29/08	Acceptable

Comments:

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\102908.B\1029F011.D
Lab ID: K0810000-002
RunType: SMPL
Matrix: SOIL

Date Acquired: 10/29/2008 15:26
Date Quantitated: 10/31/2008 17:14
Batch ID: KWG0811575
Analysis Method: 8082
MethodJoinID: MJ147

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Calibration Verification Ave %D	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Calibration Verification Ave %D (Closing)	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: 11/3/08

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\102908_R.B\1029R011.D
Lab ID: K0810000-002
RunType: SMPL
Matrix: SOIL

Date Acquired: 10/29/2008 15:26
Date Quantitated: 10/31/2008 17:16
Batch ID: KWG0811575
Analysis Method: 8082
MethodJoinID: MJ147

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Calibration Verification Ave %D	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Calibration Verification Ave %D (Closing)	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 11/3/08

Secondary Review: 11/3/08

Quantitation Report

Bottle ID:		**Tier:**	V	**Matrix:**	SOIL
Prod Code:	8082 PCB_LL	**Collect Date:**	10/09/2008	**Receive Date:**	10/10/2008

Analysis Lot:	KWG0811575	**Prep Lot:**	KWG0811356	**Report Group:**	K0810000
Analysis Method:	8082	**Prep Method:**	EPA 3540C		
Prep Ref:	771305	**Prep Date:**	10/23/2008		

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\102908.B\092208_F.M	**Calibration ID:**	CAL7795
Title:	Polychlorinated Biphenyls (PCBs)	**Report List ID:**	LJ2039
MB Ref:	J:\GC09\DATA\102908.B\1029F006.D	**Method ID:**	MJ150
		Quant based on Report List	

Data File #1:	J:\GC09\DATA\102908.B\1029F011.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\102908_r.b\1029R011.D			**Vial:**	8
Acqu Date:	10/29/2008 15:26	**Quant Date:**	10/31/2008 17:14	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K0810000-002				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Decachlorobiphenyl	16.02 +0.01	17.11 +0.00	856210	1168121	84.27	88.05			88OK
			%Recovery =		84OK	88OK	Limits =	38-144	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/Kg #1	ug/Kg #2	Rpt
Aroclor 1016			0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1016 {1}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1016 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1016 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1016 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1016 {5}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1221			0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1221 {1}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1221 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1221 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1221 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1232			0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1232 {1}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1232 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1232 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1232 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1242			0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1242 {1}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1242 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1242 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC09\DATA\102908.B\1029F011.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\102908_r.b\1029R011.D			**Vial:**	8
Acqu Date:	10/29/2008 15:26	**Quant Date:**	10/31/2008 17:14	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K0810000-002				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds **Final Conc. Units:** ug/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/Kg #1	ug/Kg #2	Rpt
Aroclor 1242 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1242 {5}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1248			0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1248 {1}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1248 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1248 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1248 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1248 {5}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1254			0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1254 {1}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1254 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1254 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1254 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1254 {5}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1260			0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1260 {1}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1260 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1260 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1260 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1260 {5}			0d	0d	0.0000	0.0000	1.3U	1.3U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	23.34 g	**Dilution:**	1.0
Prep Final Vol:	4 ml	**Unit Factor:**	1
Solids:	85.7 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\cash1\acqudata\GC09\data\102908.b\1029F011.D
Report Date: 31-Oct-2008 17:14

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\102908.b\1029F011.D
Sample #2 : \\cash1\acqudata\GC09\data\102908_r.b\1029R011.D
Inj Date : 29-OCT-2008 15:26
Sample Info: K0810000-002 | DCI 4-1a
Misc Info : KELSO\SEMIVOA GC\8082-PCB_LL\10000002.H | F=4
Cal Date : 30-OCT-2008 08:55
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\102908.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\102908_r.b\092208_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

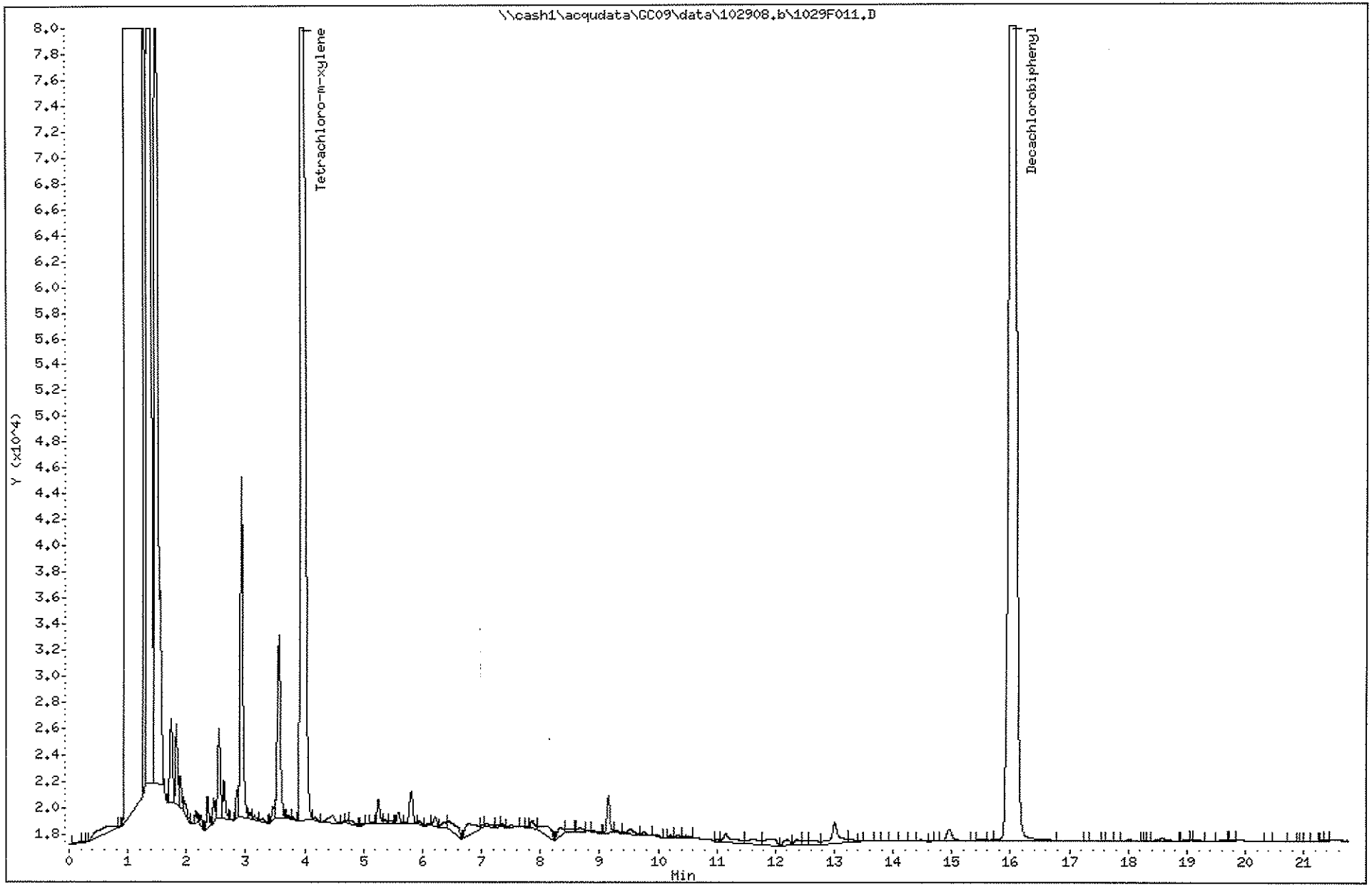
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.947	4.497	801395	1509987	78.7	87.8		100.00(R)
Decachlorobiphenyl	16.023	17.107	856210	1168121	84.3	88.0		100.00(R)

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

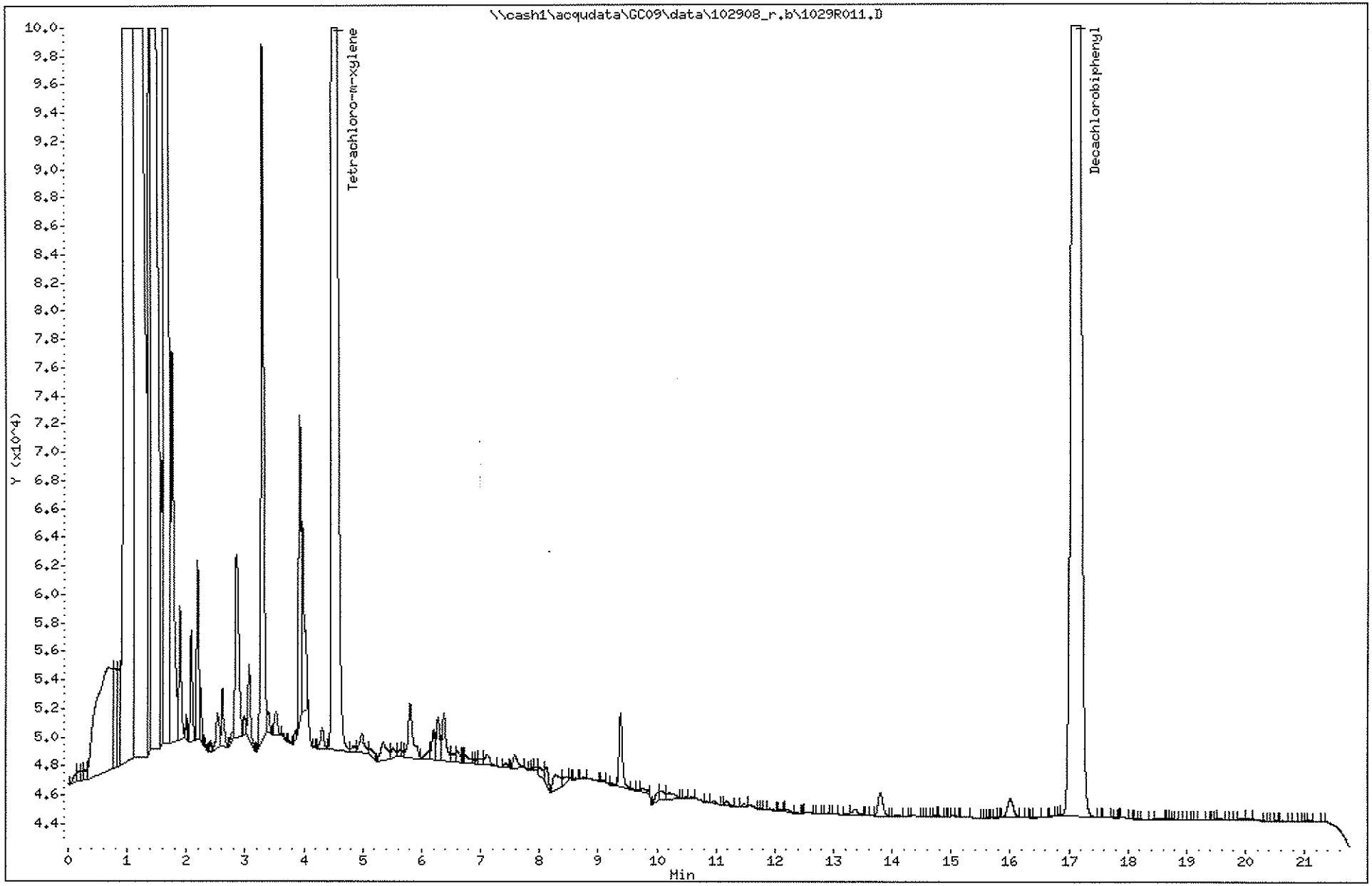
Data File: \\cash1\acqudata\GC09\data\102908.b\1029F011.D
Date : 29-OCT-2008 15:26
Client ID:
Sample Info: K0810000-002 | DCI 4-1a

Instrument: GC09.i
Operator: LHarris
Column phase: DB-35MS
Column diameter: 0.53



Data File: \\cash1\acqudata\GC09\data\102908_r.b\1029R011.D
Date : 29-OCT-2008 15:26
Client ID:
Sample Info: K0810000-002 | DCI 4-1a

Instrument: GC09.i
Operator: LHarris
Column phase: DB-XLB
Column diameter: 0.53



COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	GeoEngineers, Inc.	**Service Request:**	K0810000
Project:	Dakota Creek Confirmation Samples/5147-006-04	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA

Polychlorinated Biphenyls (PCBs)

Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	KWG0811356-4	**Basis:**	Dry
Extraction Method:	EPA 3540C	**Level:**	Low
Analysis Method:	8082		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	Ui	26	26	1	10/23/08	10/29/08	KWG0811356	
Aroclor 1221	ND	Ui	27	27	1	10/23/08	10/29/08	KWG0811356	
Aroclor 1232	ND	Ui	35	35	1	10/23/08	10/29/08	KWG0811356	
Aroclor 1242	ND	Ui	21	21	1	10/23/08	10/29/08	KWG0811356	
Aroclor 1248	ND	Ui	8.6	8.6	1	10/23/08	10/29/08	KWG0811356	
Aroclor 1254	ND	U	8.6	1.3	1	10/23/08	10/29/08	KWG0811356	
Aroclor 1260	ND	U	8.6	1.3	1	10/23/08	10/29/08	KWG0811356	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	82	38-144	10/29/08	Acceptable

Comments:

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\102908.B\1029F006.D
Lab ID: KWG0811356-4
RunType: MB
Matrix: SOIL

Date Acquired: 10/29/2008 13:14
Date Quantitated: 10/31/2008 17:14
Batch ID: KWG0811575
Analysis Method: 8082
MethodJoinID: MJ147

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Calibration Verification Ave %D	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Calibration Verification Ave %D (Closing)	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Analyte Co-elution	Aroclor 1016 {2}	6.2	NA	NA	
	Aroclor 1016 {4}	6.913	NA	NA	
	Aroclor 1232 {2}	5.253	NA	NA	
	Aroclor 1232 {3}	5.977	NA	NA	
	Aroclor 1232 {4}	6.2	NA	NA	
	Aroclor 1242 {1}	5.253	NA	NA	
	Aroclor 1242 {3}	5.977	NA	NA	
	Aroclor 1242 {4}	6.2	NA	NA	
	Aroclor 1248 {2}	6.913	NA	NA	

Primary Review: MWB

Secondary Review: 11/3/08

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\102908_R.B\1029R006.D
Lab ID: KWG0811356-4
RunType: MB
Matrix: SOIL

Date Acquired: 10/29/2008 13:14
Date Quantitated: 10/31/2008 17:15
Batch ID: KWG0811575
Analysis Method: 8082
MethodJoinID: MJ147

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Calibration Verification Ave %D	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Calibration Verification Ave %D (Closing)	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Analyte Co-elution	Aroclor 1016 {2}	6.533	NA	NA	MDL
	Aroclor 1016 {3}	6.907	NA	NA	
	Aroclor 1016 {4}	7.107	NA	NA	
	Aroclor 1016 {5}	7.343	NA	NA	
	Aroclor 1232 {2}	5.523	NA	NA	
	Aroclor 1232 {3}	5.997	NA	NA	
	Aroclor 1232 {4}	6.533	NA	NA	
	Aroclor 1242 {1}	5.523	NA	NA	
	Aroclor 1242 {2}	5.997	NA	NA	
	Aroclor 1242 {3}	6.533	NA	NA	
	Aroclor 1242 {5}	6.907	NA	NA	
	Aroclor 1248 {1}	7.107	NA	NA	
	Aroclor 1248 {2}	7.343	NA	NA	

Primary Review: 11/3/08

Secondary Review: 11/3/08

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8082 PCB_LL	**Collect Date:**		**Receive Date:**	10/28/2008

Analysis Lot:	KWG0811575	**Prep Lot:**	KWG0811356	**Report Group:**	
Analysis Method:	8082	**Prep Method:**	EPA 3540C		
Prep Ref:	771309	**Prep Date:**	10/23/2008		

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\102908.B\092208_F.M	**Calibration ID:**	CAL7795
Title:			
MB Ref:		**Method ID:**	MJ150
		Quant based on Method	

Data File #1:	J:\GC09\DATA\102908.B\1029F006.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\102908_r.b\1029R006.D			**Vial:**	3
Acqu Date:	10/29/2008 13:14	**Quant Date:**	10/31/2008 17:14	**Dilution:**	1.0
Run Type:	MB			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG0811356-4				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Surrogate Compounds

Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	3.95	0.00	4.50		789103m	1496507	77.50	87.03			87OK
					%Recovery =		77OK	87OK	Limits =	22-130	
Decachlorobiphenyl	16.02	+0.00	17.10	0.00	794309	1086880	78.18	81.93			82OK
					%Recovery =		78OK	82OK	Limits =	38-144	

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/Kg #1	ug/Kg #2	Rpt	
Aroclor 1016					0	0	148.76	170.79	25.5	29.3	**29.3**	
Aroclor 1016 {1}	5.72	+0.05	5.66	+0.04	47240m	75891	212.92	221.30	36.5	37.9		
Aroclor 1016 {2}	6.20	c	6.53	-0.02 c	66714m	76349	154.23	112.16	26.4	19.2		
Aroclor 1016 {3}			6.91	-0.04 c	0m	48996	0.0000	136.04	1.3U	23.3		
Aroclor 1016 {4}	6.91	-0.08 c	7.11	+0.07 c	23885m	153905	79.14	372.48	13.6	63.8		RPD
Aroclor 1016 {5}			7.34	+0.03 c	0m	4408	0.0000	11.98	1.3U	2.05J		
Aroclor 1221					0	0	155.51	309.63	27	53	**53**P	
Aroclor 1221 {1}	3.39		3.48		3903m	0	42.62	0.0000	7.30J	1.3U		
Aroclor 1221 {2}	3.85		4.17		10966m	18253	289.71	372.89	49.6	63.9		
Aroclor 1221 {3}	4.39		4.71		32132m	26014	238.04	116.43	40.8	20.0		
Aroclor 1221 {4}	4.61		4.85		4513m	64260	51.68	439.58	8.86J	75.3		RPD
Aroclor 1232					0	0	203.61	272.13	35	47	**47**	
Aroclor 1232 {1}	4.66		4.95		19144m	146501	72.50	353.05	12.4	60.5		RPD
Aroclor 1232 {2}	5.25	c	5.52	c	0m	44615	0.0000	237.54	1.3U	40.7		
Aroclor 1232 {3}	5.98	c	6.00	c	83754m	29807	197.13	111.29	33.8	19.1		
Aroclor 1232 {4}	6.20	c	6.53	c	66714m	76349	341.20	386.66	58.5	66.3		
Aroclor 1242					0	0	198.36	121.36	34	21	**34**P	
Aroclor 1242 {1}	5.25	c	5.52	c	0m	44615	0.0000	130.61	1.3U	22.4		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC09\DATA\102908.B\1029F006.D	**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\102908_r.b\1029R006.D	**Vial:**	3
Acqu Date:	10/29/2008 13:14 **Quant Date:** 10/31/2008 17:14	**Dilution:**	1.0
Run Type:	MB	**Soln Conc. Units:**	ng/mL
Lab ID:	KWG0811356-4		
Signal #1:	DB-35MS **Signal #2:** DB-XLB		

Target Compounds **Final Conc. Units:** ug/Kg Wet Weight

Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/Kg #1	ug/Kg #2	Rpt
Aroclor 1242 {2}	5.59		6.00	c	0m	29807	0.0000	72.61	1.3U	12.4	
Aroclor 1242 {3}	5.98	c	6.53	c	83754m	76349	113.39	107.15	19.4	18.4	
Aroclor 1242 {4}	6.20	c	6.75		66714m	0	195.73	0.0000	33.5	1.3U	
Aroclor 1242 {5}	6.46		6.91	c	80256m	48996	285.97	175.05	49.0	30.0	
Aroclor 1248					0	0	25.04	158.34	4.3J	27	8.6Ui
Aroclor 1248 {1}			7.11	c	0m	153905	0.0000	312.62	1.3U	53.6	
Aroclor 1248 {2}	6.91	c	7.34	c	23885m	4408	63.97	8.98	11.0	1.54J	RPD
Aroclor 1248 {3}			8.12		0m	68949	0.0000	72.00	1.3U	12.3	
Aroclor 1248 {4}	7.63		8.33		170m	88488	0.3750	126.93	1.3U	21.8	
Aroclor 1248 {5}	7.78		8.56		6222m	137865	10.78	271.18	1.85J	46.5	RPD
Aroclor 1254					0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1254 {1}					0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1254 {2}					0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1254 {3}					0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1254 {4}					0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1254 {5}					0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1260					0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1260 {1}					0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1260 {2}					0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1260 {3}					0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1260 {4}					0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1260 {5}					0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1262					0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1262 {1}					0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1262 {2}					0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1262 {3}					0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1262 {4}					0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1262 {5}					0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1268					0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1268 {1}					0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1268 {2}					0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1268 {3}					0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1268 {4}					0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1268 {5}					0d	0d	0.0000	0.0000	1.3U	1.3U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	23.34 g	**Dilution:**	1.0
Prep Final Vol:	4 ml	**Unit Factor:**	1
Solids:	%		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\cash1\acqudata\GC09\data\102908.b\1029F006.D
Report Date: 31-Oct-2008 17:14

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\102908.b\1029F006.D
Sample #2 : \\cash1\acqudata\GC09\data\102908_r.b\1029R006.D
Inj Date : 29-OCT-2008 13:14
Sample Info: KWG0811356-4 | MB | 8082 PCB_LL | SOIL
Misc Info : SEMIVOA GC\W0811356\4-MB.H | F=4 D=1 A=23.34
Cal Date : 30-OCT-2008 08:55
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\102908.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\102908_r.b\092208_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.947	4.497	789103	1496507	77.5	87.0		100.00(RM)
Aroclor 1016	5.723	5.660	47240	75891	213	221	80.00- 120.00	100.00(TM)
	6.200	6.533	66714	76349	154	112	150.40- 225.59	141.22(TM)
	0.000	6.907		48996		136	86.20- 129.30	64.56(TM)
	6.913	7.107	23885	153905	79.1	372	105.73- 158.59	50.56(TM)
	0.000	7.343		4408		12.0	90.22- 135.32	5.81(TM)
			Average of Peak Amounts =		149	171		
Aroclor 1221	3.390	3.483	3903		42.6		80.00- 120.00	100.00(M)
	3.847	4.167	10966	18253	290	373	33.06- 49.60	280.97(M)
	4.393	4.710	32132	26014	238	116	117.90- 176.86	823.24(M)
	4.607	4.850	4513	64260	51.7	440	76.27- 114.41	115.62(M)
			Average of Peak Amounts =		156	310		
Aroclor 1232	4.660	4.947	19144	146501	72.5	353	80.00- 120.00	100.00(M)
	5.253	5.523		44615		238	36.21- 54.31	30.45(M)
	5.977	5.997	83754	29807	197	111	128.72- 193.08	437.48(M)
	6.200	6.533	66714	76349	341	387	59.24- 88.86	348.47(M)
			Average of Peak Amounts =		204	272		
Aroclor 1242	5.253	5.523		44615		131	80.00- 120.00	100.00(M)
	5.593	5.997		29807		72.6	96.13- 144.20	66.81(M)
	5.977	6.533	83754	76349	113	107	151.76- 227.63	31.81(M)
	6.200	6.750	66714		196		70.03- 105.04	25.34(M)
	6.463	6.907	80256	48996	286	175	57.66- 86.49	30.48(M)
			Average of Peak Amounts =		198	121		
Aroclor 1248	0.000	7.107		153905		313	80.00- 120.00	100.00(TM)
	6.913	7.343	23885	4408	64.0	8.98	110.51- 165.76	0.00(TM)
	0.000	8.123		68949		72.0	155.62- 233.43	44.80(TM)
	7.633	8.327	170	88488	0.375	127	134.44- 201.67	0.00(TM)
	7.783	8.563	6222	137865	10.8	271	170.78- 256.17	0.00(TM)

Data File: \\cash1\acqudata\GC09\data\102908.b\1029F006.D
Report Date: 31-Oct-2008 17:14

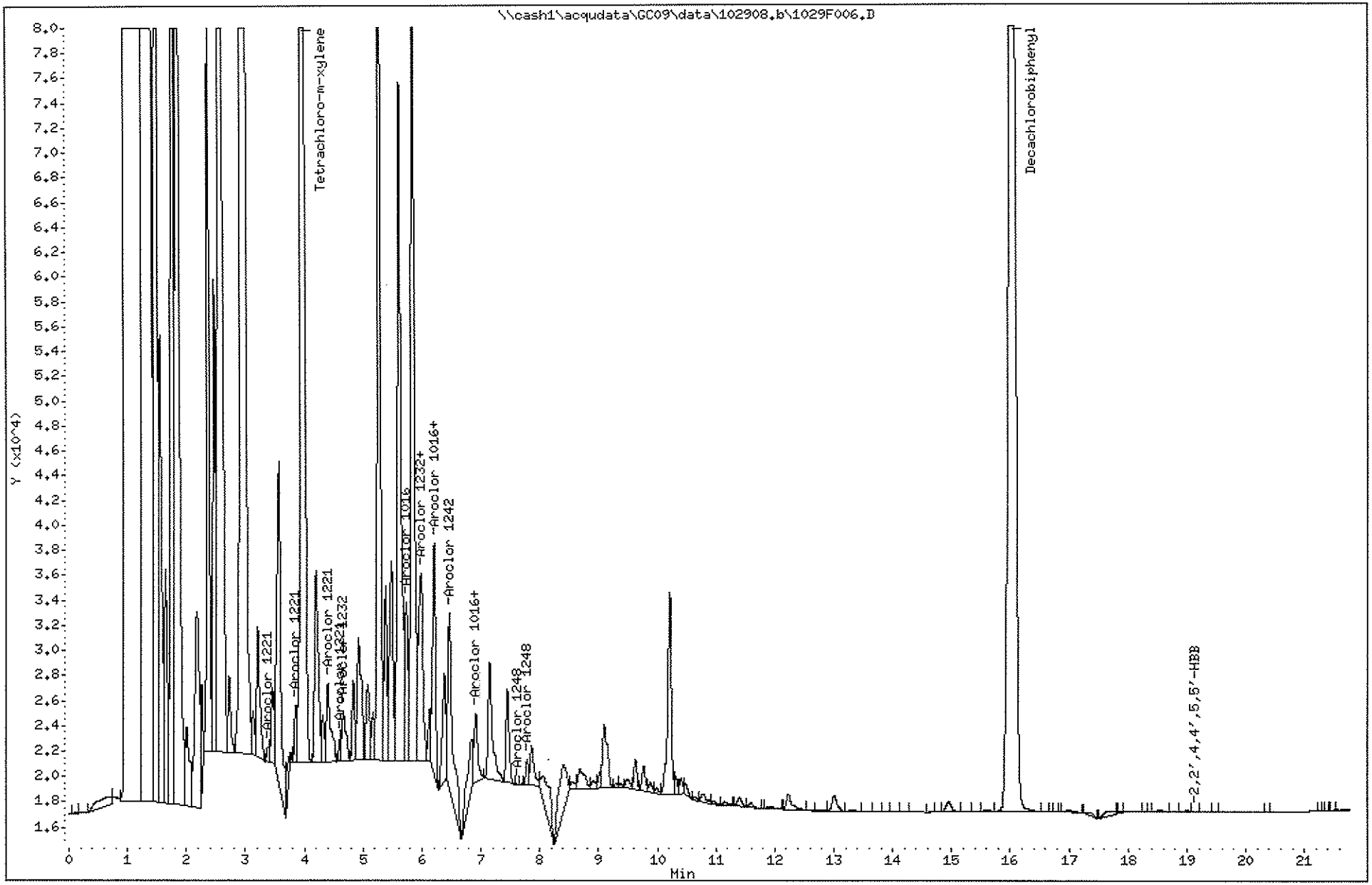
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
			Average of Peak Amounts =		25.0	158		
Decachlorobiphenyl	16.020	17.100	794309	1086880	78.2	81.9		100.00(R)
2,2',4,4',5,5'-HBB	19.147	0.000	240	0	0.000	0.000		100.00

QC Flag Legend

T - Target compound detected outside RT window.
R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Data File: \\cash1\acqudata\GC09\data\102908.b\1029F006.D
Date : 29-OCT-2008 13:14
Client ID:
Sample Info: KWG0811356-4 | MB | 8082 PCB_LL | SOIL

Instrument: GC09.i
Operator: LHarris
Column phase: DB-35MS
Column diameter: 0.53

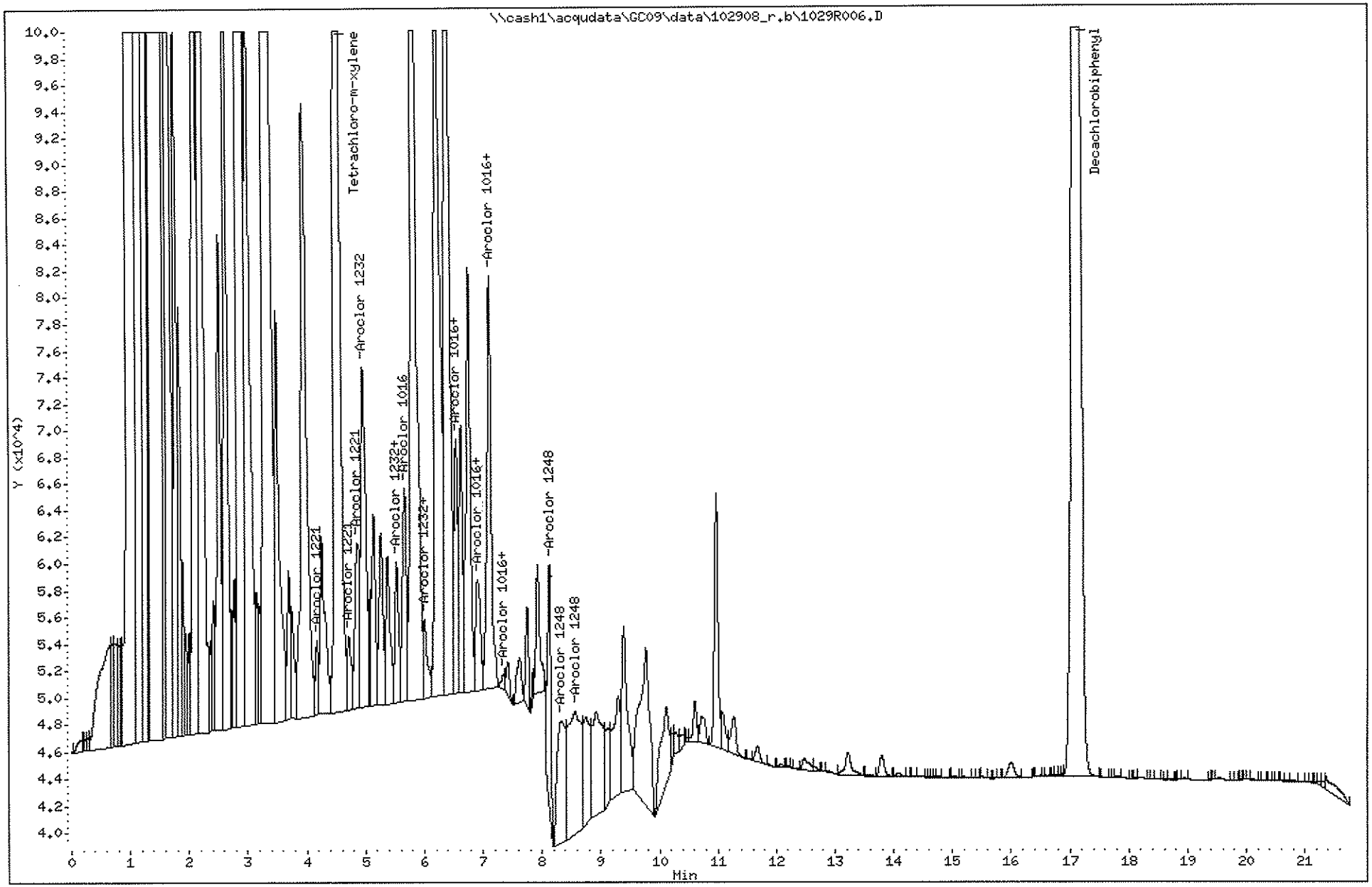


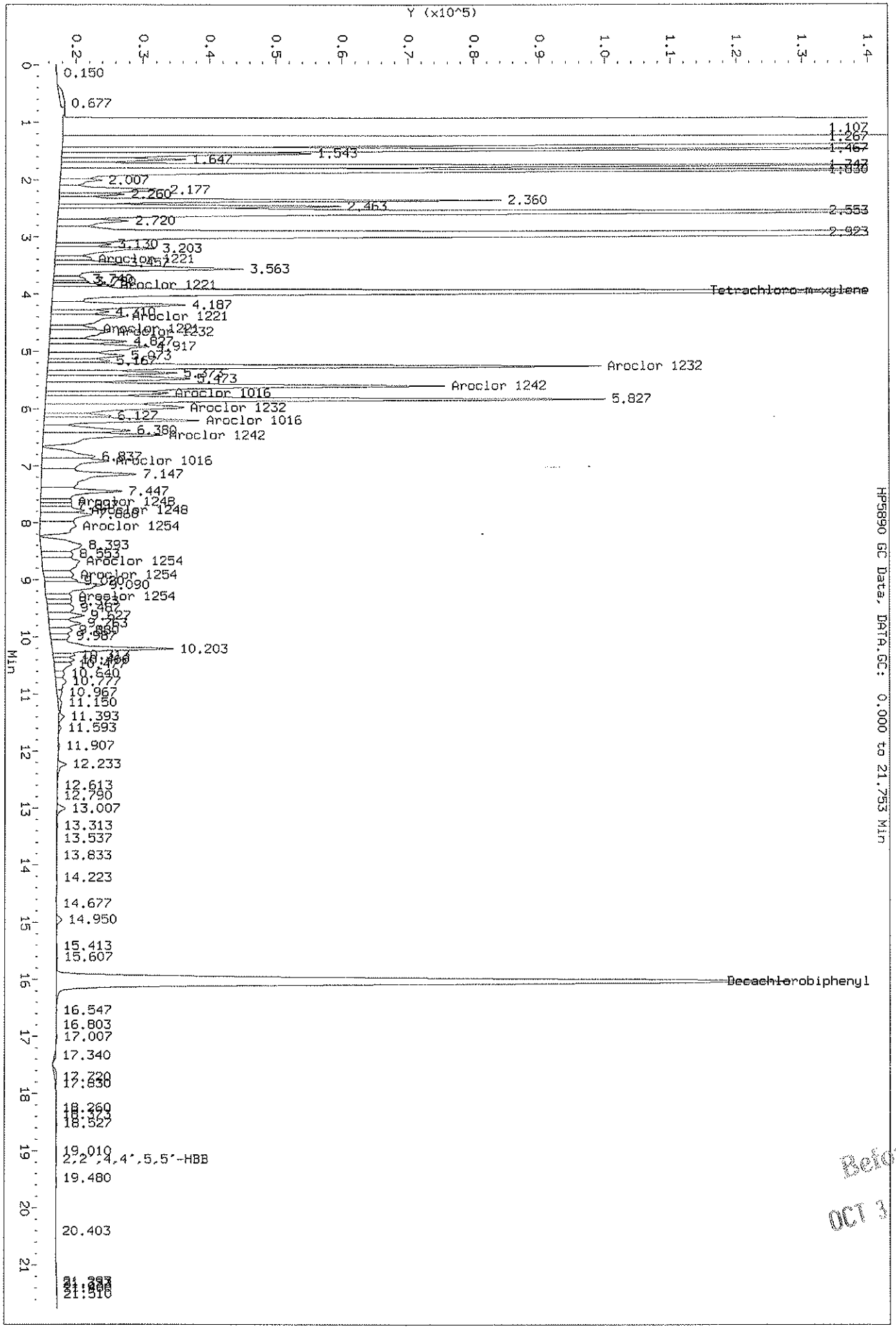
Data File: \\cash1\acqudata\GC09\data\102908_r.b\1029R006.D
Date : 29-OCT-2008 13:14
Client ID:
Sample Info: KWG0811356-4 | MB | 8082 PCB_LL | SOIL

Instrument: GC09.i

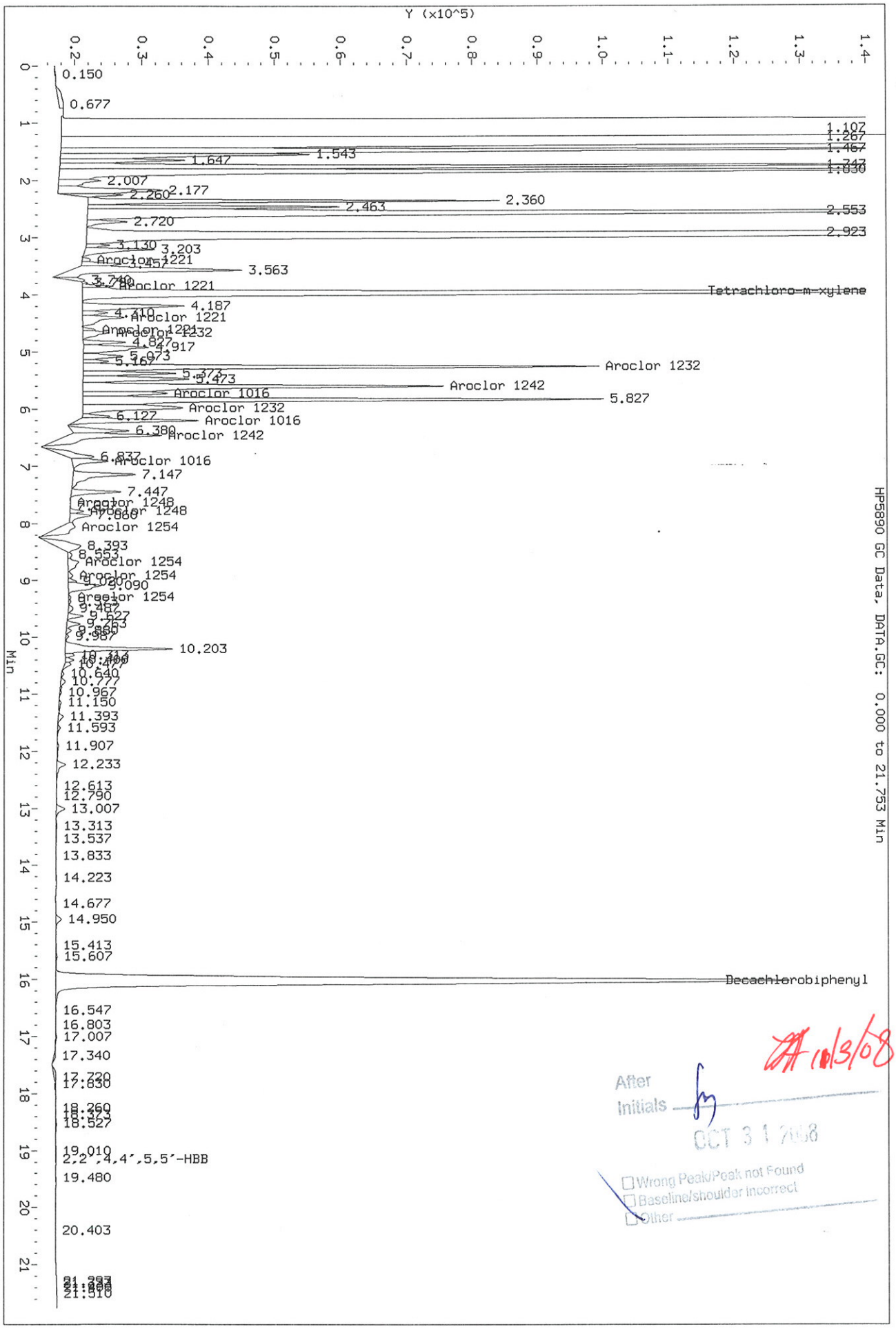
Operator: LHarris
Column diameter: 0.53

Column phase: DB-XLB





Before
OCT 31 2008


Data File: \\cash1\acqudata\GC09\data\102908.b\1029F006.D
Injection Date: 29-OCT-2008 13:14
Instrument: GC09.i
Client Sample ID:
HP5890 GC Data, DATA.GC: 0.000 to 21.753 Min
Y (x10^5)
Min
Tetrachloro-m-xylene
Decachlorobiphenyl
2,2',4,4',5,5'-HBB
Aroclor 1221
Aroclor 1232
Aroclor 1242
Aroclor 1016
Aroclor 1248
Aroclor 1254
After Initials
OCT 3 1 2008
Wrong Peak/Peak not Found
Baseline/shoulder incorrect
Other
10/31/08

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	GeoEngineers, Inc.	**Service Request:**	K0810000
Project:	Dakota Creek Confirmation Samples/5147-006-04	**Date Collected:**	10/09/2008
Sample Matrix:	Soil	**Date Received:**	10/10/2008

Polychlorinated Biphenyls (PCBs)

Sample Name:	DCI 4-1MS	**Units:**	ug/Kg
Lab Code:	KWG0811356-1	**Basis:**	Dry
Extraction Method:	EPA 3540C	**Level:**	Low
Analysis Method:	8082		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	**194**		10	1.3	1	10/23/08	10/29/08	KWG0811356	
Aroclor 1221	ND	U	20	1.3	1	10/23/08	10/29/08	KWG0811356	
Aroclor 1232	ND	U	10	1.3	1	10/23/08	10/29/08	KWG0811356	
Aroclor 1242	ND	U	10	1.3	1	10/23/08	10/29/08	KWG0811356	
Aroclor 1248	ND	U	10	1.3	1	10/23/08	10/29/08	KWG0811356	
Aroclor 1254	ND	U	10	1.3	1	10/23/08	10/29/08	KWG0811356	
Aroclor 1260	**198**		10	1.3	1	10/23/08	10/29/08	KWG0811356	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	84	38-144	10/29/08	Acceptable

Comments:

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\102908.B\1029F009.D
Lab ID: KWG0811356-1 -- K0810000-001MS
RunType: MS
Matrix: SOIL

Date Acquired: 10/29/2008 14:33
Date Quantitated: 10/31/2008 17:14
Batch ID: KWG0811575
Analysis Method: 8082
MethodJoinID: MJ147

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Calibration Verification Ave %D	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Calibration Verification Ave %D (Closing)	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: 11/3/08

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\102908_R.B\1029R009.D
Lab ID: KWG0811356-1 -- K0810000-001MS
RunType: MS
Matrix: SOIL

Date Acquired: 10/29/2008 14:33
Date Quantitated: 10/31/2008 17:16
Batch ID: KWG0811575
Analysis Method: 8082
MethodJoinID: MJ147

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Calibration Verification Ave %D	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Calibration Verification Ave %D (Closing)	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____ 11/5/08

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8082 PCB_LL	**Collect Date:**		**Receive Date:**	10/28/2008

Analysis Lot:	KWG0811575	**Prep Lot:**	KWG0811356	**Report Group:**	
Analysis Method:	8082	**Prep Method:**	EPA 3540C		
Prep Ref:	771306	**Prep Date:**	10/23/2008		

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\102908.B\092208_F.M	**Calibration ID:**	CAL7795
Title:			
MB Ref:	J:\GC09\DATA\102908.B\1029F006.D	**Method ID:**	MJ150
		Quant based on Method	

Data File #1:	J:\GC09\DATA\102908.B\1029F009.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\102908_r.b\1029R009.D			**Vial:**	6
Acqu Date:	10/29/2008 14:33	**Quant Date:**	10/31/2008 17:14	**Dilution:**	1.0
Run Type:	MS			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG0811356-1 -- K0810000-001MS				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	3.95 0.00	4.50	711241	1324897	69.85	77.05			77OK
				%Recovery =	70OK	77OK	Limits =	22-130	
Decachlorobiphenyl	16.02 +0.00	17.10 0.00	807023	1115940	79.43	84.12			84OK
				%Recovery =	79OK	84OK	Limits =	38-144	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/Kg #1	ug/Kg #2	Rpt
Aroclor 1016			0	0	909.14	970.18	182	194	194
Aroclor 1016 {1}	5.68	5.62 0.00	194122m	321693	874.95	938.07	175	188	
Aroclor 1016 {2}	6.20	6.55	355106m	612150	820.93	899.31	164	180	
Aroclor 1016 {3}	6.58	6.94	200216m	351661	892.60	976.38	178	195	
Aroclor 1016 {4}	6.99	7.04	262897m	414621	871.02	1,003	174	201	
Aroclor 1016 {5}	7.27	7.32	239134m	380477	1,086	1,034	217	207	
Aroclor 1221			0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1221 {1}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1221 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1221 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1221 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1232			0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1232 {1}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1232 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1232 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1232 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1242			0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1242 {1}			0d	0d	0.0000	0.0000	1.3U	1.3U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC09\DATA\102908.B\1029F009.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\102908_r.b\1029R009.D			**Vial:**	6
Acqu Date:	10/29/2008 14:33	**Quant Date:**	10/31/2008 17:14	**Dilution:**	1.0
Run Type:	MS			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG0811356-1 -- K0810000-001MS				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds **Final Conc. Units:** ug/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/Kg #1	ug/Kg #2	Rpt
Aroclor 1242 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1242 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1242 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1242 {5}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1248			0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1248 {1}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1248 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1248 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1248 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1248 {5}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1254			0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1254 {1}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1254 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1254 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1254 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1254 {5}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1260			0	0	863.40	988.99	173	198	198
Aroclor 1260 {1}	9.93 +0.00	9.60 0.00	292960m	648522	778.64	922.75	156	184	
Aroclor 1260 {2}	10.24 0.00	10.12	538804m	699655	768.55	945.64	154	189	
Aroclor 1260 {3}	10.31 +0.00	10.71	465892m	811439	942.99	882.99	189	177	
Aroclor 1260 {4}	10.93	10.89	400777m	542371	887.27	1,103	177	220	
Aroclor 1260 {5}	11.39	12.09	879670m	1157164	939.56	1,091	188	218	
Aroclor 1262			0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1262 {1}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1262 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1262 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1262 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1262 {5}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1268			0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1268 {1}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1268 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1268 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1268 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1268 {5}			0d	0d	0.0000	0.0000	1.3U	1.3U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	23.08 g	**Dilution:**	1.0
Prep Final Vol:	4 ml	**Unit Factor:**	1
Solids:	86.7 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Matrix Spike Summary Report

Matrix Spike Information ***ListJoinID :*** LJ2039

Data File:	\\CASH1\ACQUDATA\GC09\DATA\102908_R.B\1029R009.D	**Instrument:**	GC09.i
Lab ID:	KWG0811356-1	**Dilution:**	1.00
Client ID:	Matrix Spike	**Units:**	PERCENT
Prod Code:	8082 PCB_LL	**Acqu Date:**	10/29/2008 14:33
Matrix:	SOIL	**Quant Date:**	10/31/2008 17:16

Duplicate Matrix Spike Information

Data File:	\\CASH1\ACQUDATA\GC09\DATA\102908.B\1029F010.D	**Instrument:**	GC09.i
Lab ID:	KWG0811356-2	**Dilution:**	1.00
Client ID:	Duplicate Matrix Spike	**Units:**	PERCENT
Prod Code:	8082 PCB_LL	**Acqu Date:**	10/29/2008 14:59
Matrix:	SOIL	**Quant Date:**	10/31/2008 17:14

Sample Reference Information

Data File:	\\CASH1\ACQUDATA\GC09\DATA\102908_R.B\1029R008.D	**Instrument:**	GC09.i
Lab ID:	K0810000-001	**Dilution:**	1.00
Client ID:	DCI 4-1	**Units:**	PERCENT
Prod Code:	8082 PCB_LL	**Acqu Date:**	10/29/2008 14:06
Matrix:	SOIL	**Quant Date:**	10/31/2008 17:15

Parameter Name	Sample Result	Matrix Spike			Duplicate Matrix Spike			%Rec Limits	RPD	RPD Limit
		Result	Expected	%Rec	Result	Expected	%Rec			
Decachlorobiphenyl				84			77	38-144		
Aroclor 1016	ND	194	200	97	176	200	88	24-168	10	40
Aroclor 1260	ND	198	200	99	168	200	84	24-163	16	40

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Data File: \\cash1\acqudata\GC09\data\102908.b\1029F009.D
Report Date: 31-Oct-2008 17:14

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\102908.b\1029F009.D
Sample #2 : \\cash1\acqudata\GC09\data\102908_r.b\1029R009.D
Inj Date : 29-OCT-2008 14:33
Sample Info: KWG0811356-1 | K0810000-001MS | 8082 PCB_LL
Misc Info : SEMIVOA GC\W0811356\1-MS.H | F=4 D=1 A=23.08
Cal Date : 30-OCT-2008 08:55
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\102908.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\102908_r.b\092208_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.947	4.497	711241	1324897	69.8	77.0		100.00(R)
Aroclor 1016	5.677	5.617	194122	321693	875	938	80.00- 120.00	100.00(M)
	6.200	6.553	355106	612150	821	899	150.40- 225.59	182.93(M)
	6.583	6.943	200216	351661	893	976	78.08- 117.13	185.83(M)
	6.990	7.040	262897	414621	871	1000	105.73- 158.59	135.43(M)
	7.273	7.317	239134	380477	1090	1030	83.59- 125.39	123.19(M)
			Average of Peak Amounts =		910	969		
Aroclor 1260	9.933	9.600	292960	648522	779	923	80.00- 120.00	100.00(M)
	10.240	10.120	538804	699655	768	946	162.12- 243.18	183.92(M)
	10.310	10.710	465892	811439	943	883	102.09- 153.13	159.03(M)
	10.930	10.887	400777	542371	887	1100	101.44- 152.16	136.80(M)
	11.393	12.093	879670	1157164	940	1090	212.56- 318.85	300.27(M)
			Average of Peak Amounts =		863	988		
Decachlorobiphenyl	16.020	17.100	807023	1115940	79.4	84.1		100.00(R)
2,2',4,4',5,5'-HBB	19.113	0.000	121	0	0.000	0.000		100.00

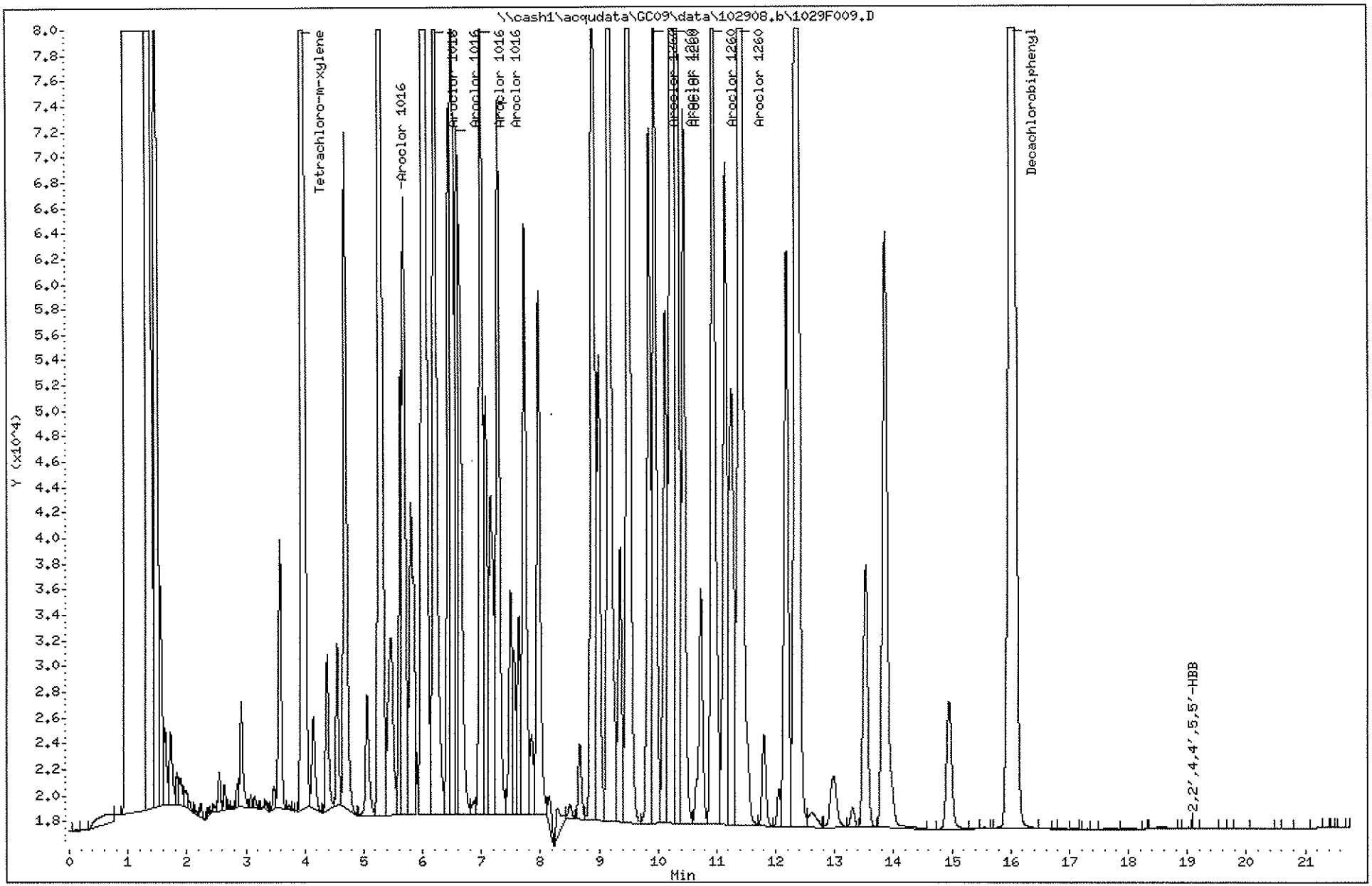
QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Data File: \\cash1\acqudata\GC09\data\102908.b\1029F009.D
Date : 29-OCT-2008 14:33
Client ID:
Sample Info: KWG0811356-1 | K0810000-001MS | 8082 PCB_LL

Instrument: GC09.i

Operator: LHarris
Column phase: DB-35MS
Column diameter: 0.53

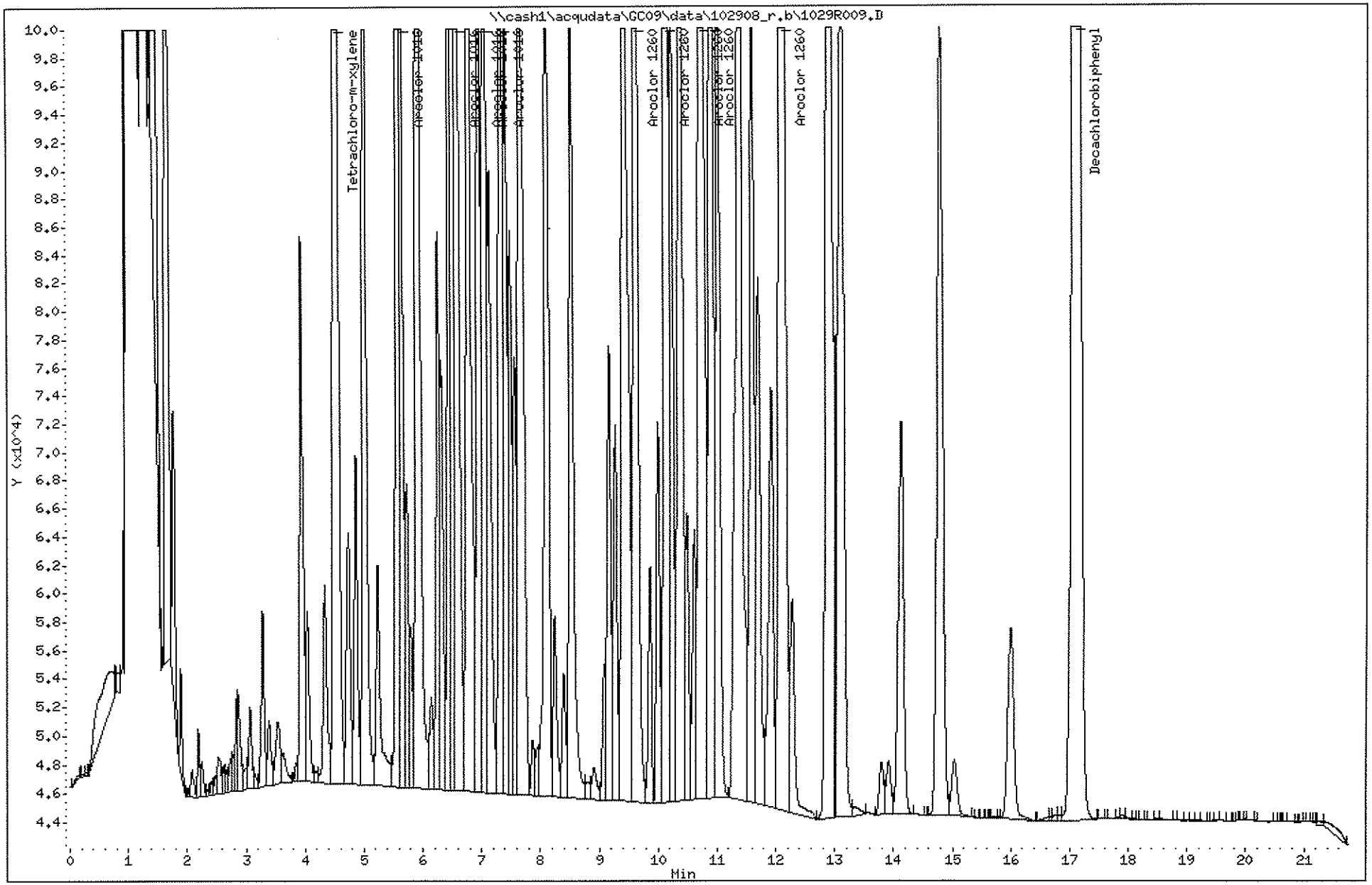


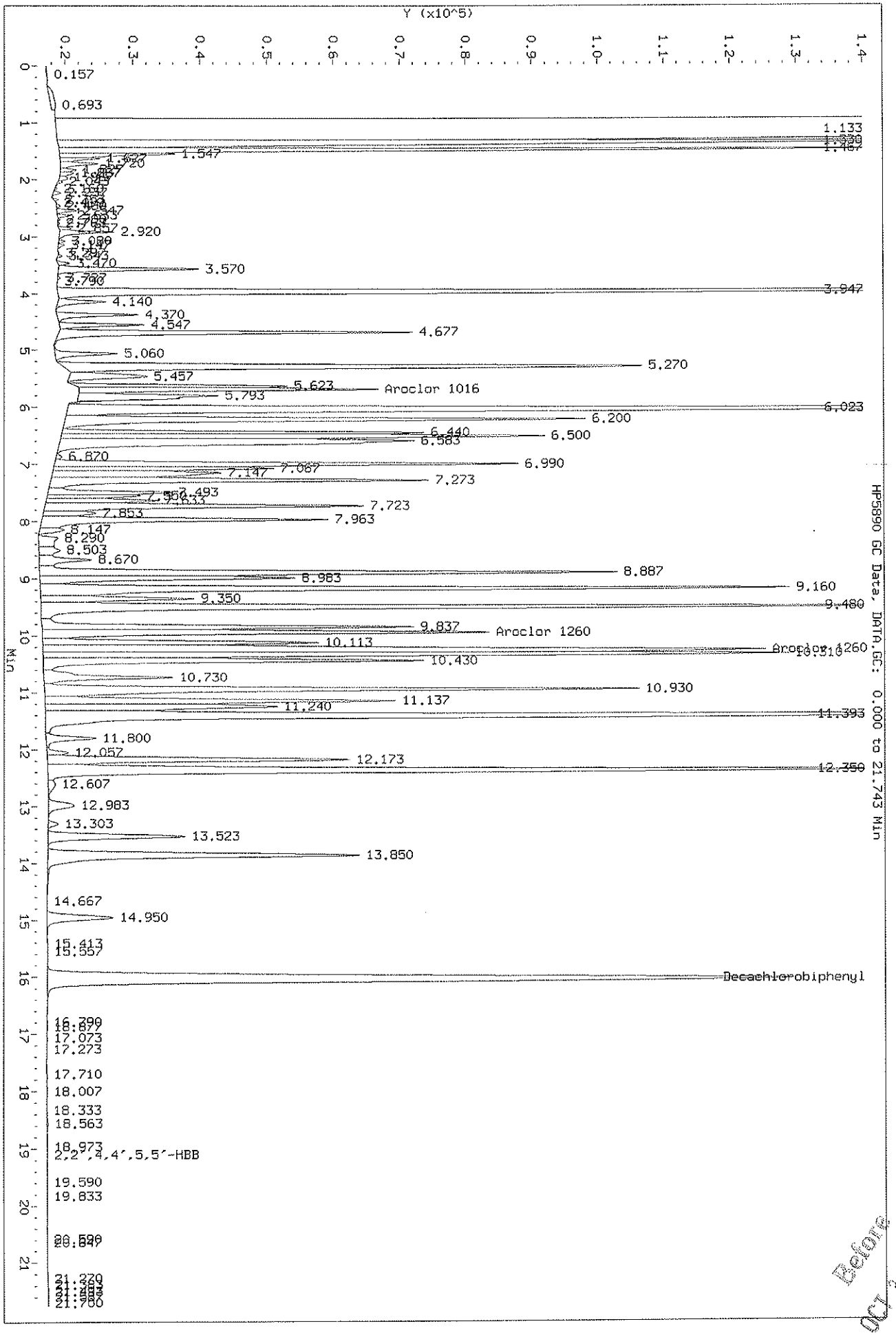
Data File: \\cash1\acqudata\GC09\data\102908_r.b\1029R009.D
Date : 29-OCT-2008 14:33
Client ID:
Sample Info: KWG0811356-1 | K0810000-001MS | 8082 PCB_LL

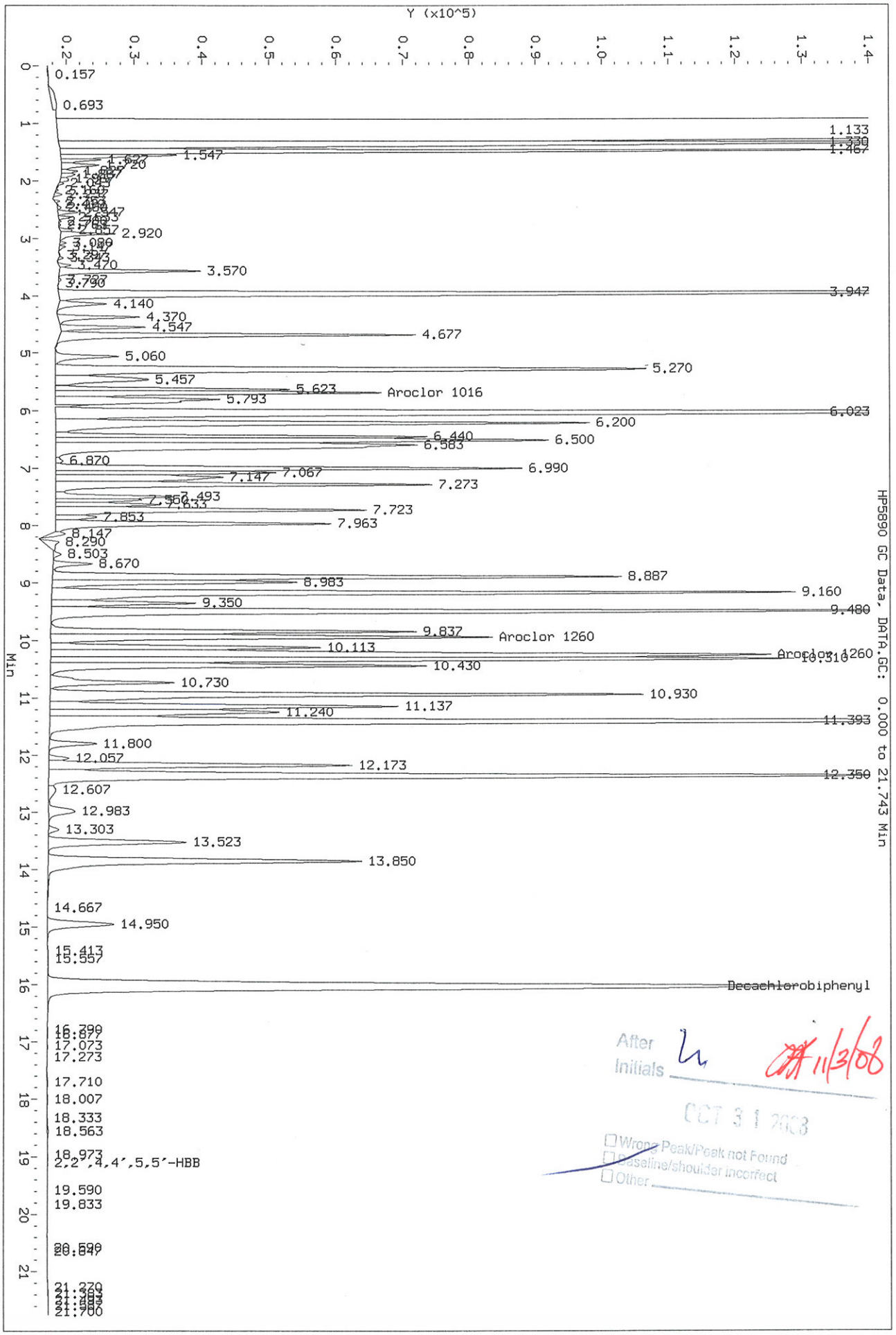
Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-XLB




Y (x10^5)
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
1.4
Min
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
0.157
0.693
1.133
1.547
2.920
3.570
3.947
4.140
4.370
4.547
4.677
5.060
5.270
5.457
5.623
Aroclor 1016
5.793
6.023
6.200
6.440
6.500
6.583
6.870
6.990
7.067
7.147
7.273
7.493
7.723
7.853
7.963
8.147
8.290
8.503
8.670
8.887
8.983
9.160
9.350
9.480
9.837
Aroclor 1260
10.113
10.316
Aroclor 1260
10.430
10.730
10.930
11.137
11.240
11.393
11.800
12.057
12.173
12.350
12.607
12.983
13.303
13.523
13.850
14.667
14.950
15.413
15.557
Decachlorobiphenyl
16.290
16.677
17.073
17.273
17.710
18.007
18.333
18.563
18.973
2,2',4,4',5,5'-HBB
19.590
19.833
20.590
20.849
21.220
21.760
Data File: \\cash1\acqudata\GC09\data\102908.b\1029f009.D
Injection Date: 29-OCT-2008 14:33
Instrument: GC09.1
Client Sample ID:
HP5890 GC Data, DATA.GC: 0.000 to 21.743 Min
Before
OCT 31 2008


Y (x10^5)
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
1.4
Min
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
0.157
0.693
1.133
1.330
1.467
1.547
1.677
1.720
2.920
3.089
3.470
3.570
3.790
3.947
4.140
4.370
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5.270
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5.623
Aroclor 1016
5.793
6.023
6.200
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6.870
6.990
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7.633
7.723
7.853
7.963
8.147
8.290
8.503
8.670
8.887
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9.160
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9.480
9.837
Aroclor 1260
10.113
Aroclor 1260
10.316
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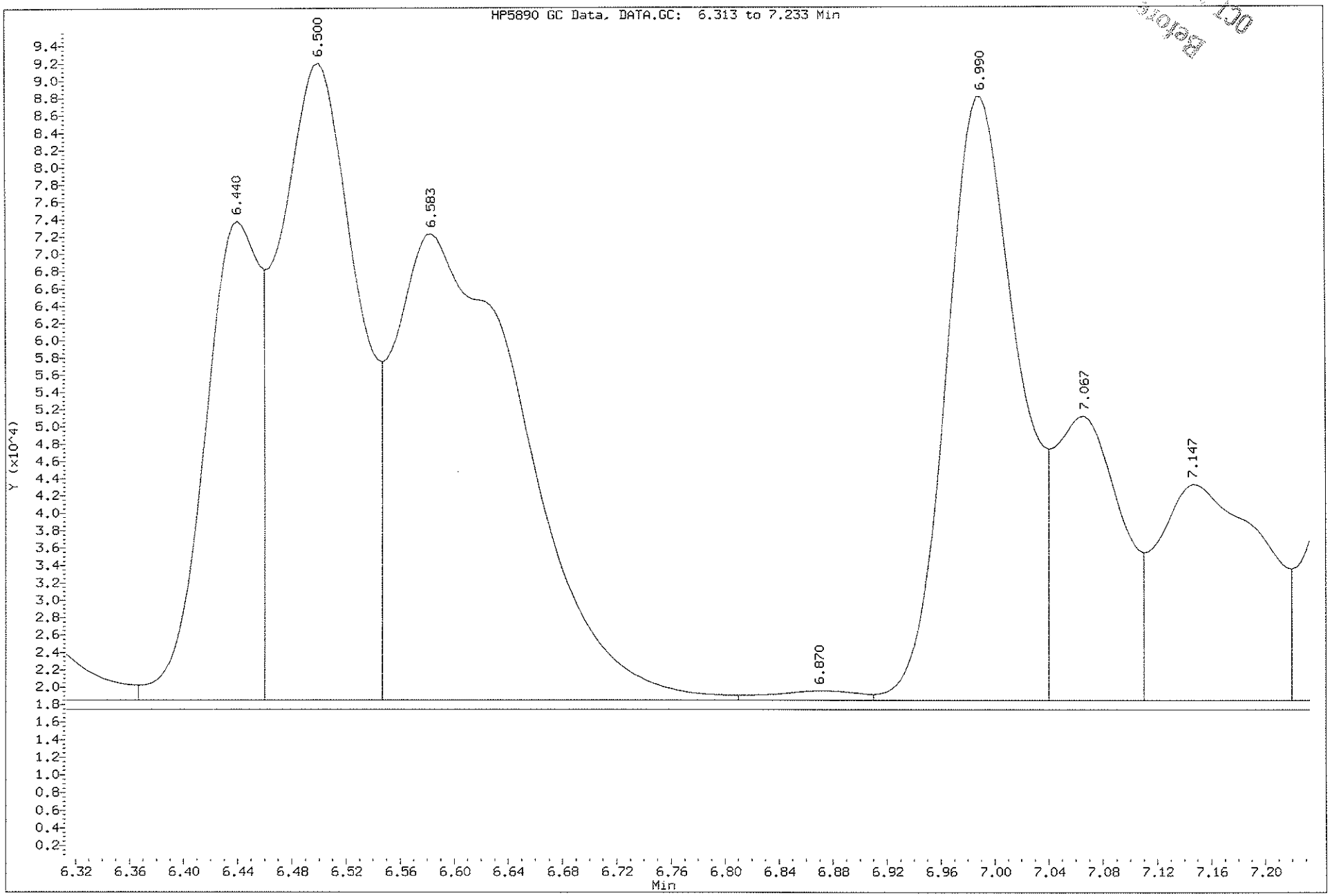
10.930
11.137
11.240
11.393
11.800
12.057
12.173
12.350
12.607
12.983
13.303
13.523
13.850
14.667
14.950
15.413
15.557
Decachlorobiphenyl
16.799
16.877
17.073
17.273
17.710
18.007
18.333
18.563
18.973
2,2',4,4',5,5'-HBB
19.590
19.833
20.590
20.849
21.270
21.700
HP5890 GC Data, DATA.GC: 0.000 to 21.743 Min
Data File: \\cash1\acqudata\GC09\data\102908.b\1029F009.D
Injection Date: 29-OCT-2008 14:33
Instrument: GC09.i
Client Sample ID:
After
Initials
11/3/08
OCT 31 2008
Wrong Peak/Peak not Found
Baseline/shoulder incorrect
Other

Data File: \\cash1\acqudata\GC09\data\102908.b\1029F009.D
Injection Date: 29-OCT-2008 14:33
Instrument: GC09.i
Client Sample ID:



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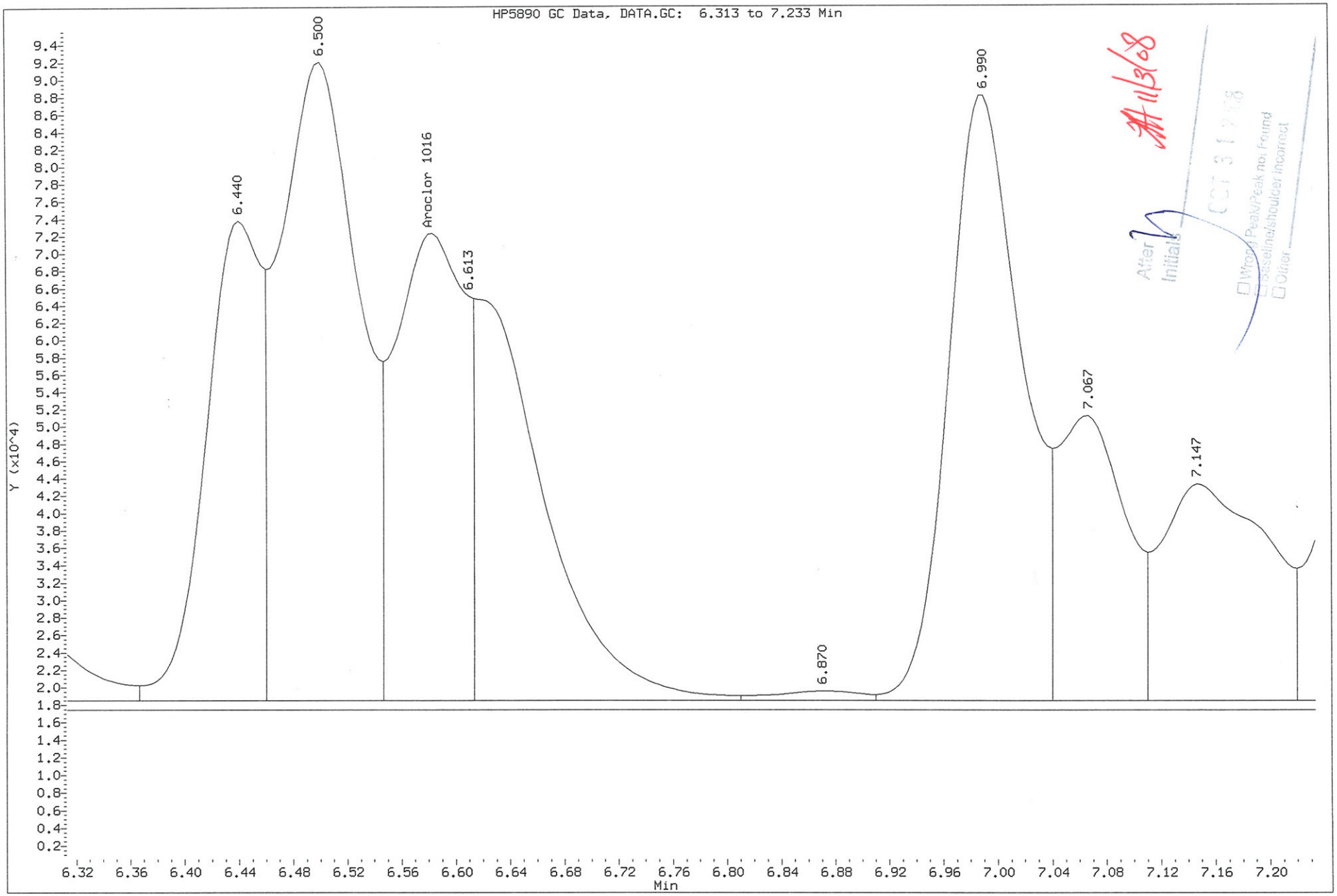
Injection Date: 29-OCT-2008 14:33
Instrument: GC09.i
Client Sample ID:



COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	GeoEngineers, Inc.	**Service Request:**	K0810000
Project:	Dakota Creek Confirmation Samples/5147-006-04	**Date Collected:**	10/09/2008
Sample Matrix:	Soil	**Date Received:**	10/10/2008

Polychlorinated Biphenyls (PCBs)

Sample Name:	DCI 4-1DMS	**Units:**	ug/Kg
Lab Code:	KWG0811356-2	**Basis:**	Dry
Extraction Method:	EPA 3540C	**Level:**	Low
Analysis Method:	8082		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	**193**		10	1.3	1	10/23/08	10/29/08	KWG0811356	
Aroclor 1221	ND	U	20	1.3	1	10/23/08	10/29/08	KWG0811356	
Aroclor 1232	ND	U	10	1.3	1	10/23/08	10/29/08	KWG0811356	
Aroclor 1242	ND	U	10	1.3	1	10/23/08	10/29/08	KWG0811356	
Aroclor 1248	ND	U	10	1.3	1	10/23/08	10/29/08	KWG0811356	
Aroclor 1254	ND	U	10	1.3	1	10/23/08	10/29/08	KWG0811356	
Aroclor 1260	**193**		10	1.3	1	10/23/08	10/29/08	KWG0811356	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	82	38-144	10/29/08	Acceptable

Comments:

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\102908.B\1029F010.D
Lab ID: KWG0811356-2 -- K0810000-001DMS
RunType: DMS
Matrix: SOIL

Date Acquired: 10/29/2008 14:59
Date Quantitated: 10/31/2008 17:14
Batch ID: KWG0811575
Analysis Method: 8082
MethodJoinID: MJ147

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Calibration Verification Ave %D	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Calibration Verification Ave %D (Closing)	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: [signature]

Secondary Review: [signature] 11/3/08

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\102908_R.B\1029R010.D
Lab ID: KWG0811356-2 -- K0810000-001DMS
RunType: DMS
Matrix: SOIL

Date Acquired: 10/29/2008 14:59
Date Quantitated: 10/31/2008 17:16
Batch ID: KWG0811575
Analysis Method: 8082
MethodJoinID: MJ147

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Calibration Verification Ave %D	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Calibration Verification Ave %D (Closing)	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: [signature]

Secondary Review: [signature] 11/3/08

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8082 PCB_LL	**Collect Date:**		**Receive Date:**	10/28/2008

Analysis Lot:	KWG0811575	**Prep Lot:**	KWG0811356	**Report Group:**	
Analysis Method:	8082	**Prep Method:**	EPA 3540C		
Prep Ref:	771307	**Prep Date:**	10/23/2008		

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\102908.B\092208_F.M	**Calibration ID:**	CAL7795
Title:			
MB Ref:	J:\GC09\DATA\102908.B\1029F006.D	**Method ID:**	MJ150
		Quant based on Method	

Data File #1:	J:\GC09\DATA\102908.B\1029F010.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\102908_r.b\1029R010.D			**Vial:**	7
Acqu Date:	10/29/2008 14:59	**Quant Date:**	10/31/2008 17:14	**Dilution:**	1.0
Run Type:	DMS			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG0811356-2 -- K0810000-001DMS				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Surrogate Compounds

Parameter Name	RT #1		RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	3.95	0.00	4.50	767592	1477082	75.39	85.90			86OK
					%Recovery =	75OK	86OK	Limits =	22-130	
Decachlorobiphenyl	16.02	+0.00	17.10	787042	1089583	77.46	82.13			82OK
					%Recovery =	77OK	82OK	Limits =	38-144	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/Kg #1	ug/Kg #2	Rpt
Aroclor 1016			0	0	881.95	966.63	176	193	193
Aroclor 1016 {1}	5.68	5.62	189359m	327060	853.48	953.72	170	190	
Aroclor 1016 {2}	6.20	6.55	351509m	619019	812.62	909.40	162	182	
Aroclor 1016 {3}	6.58	6.94	187118m	346510	834.21	962.08	167	192	
Aroclor 1016 {4}	6.99	7.04	255555m	409777	846.70	991.74	169	198	
Aroclor 1016 {5}	7.27	7.32	233970m	374057	1,063	1,016	212	203	
Aroclor 1221			0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1221 {1}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1221 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1221 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1221 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1232			0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1232 {1}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1232 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1232 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1232 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1242			0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1242 {1}			0d	0d	0.0000	0.0000	1.3U	1.3U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC09\DATA\102908.B\1029F010.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\102908_r.b\1029R010.D			**Vial:**	7
Acqu Date:	10/29/2008 14:59	**Quant Date:**	10/31/2008 17:14	**Dilution:**	1.0
Run Type:	DMS			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG0811356-2 -- K0810000-001DMS				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/Kg #1	ug/Kg #2	Rpt
Aroclor 1242 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1242 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1242 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1242 {5}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1248			0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1248 {1}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1248 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1248 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1248 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1248 {5}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1254			0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1254 {1}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1254 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1254 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1254 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1254 {5}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1260			0	0	841.42	966.06	168	193	193
Aroclor 1260 {1}	9.93 +0.00	9.60	286271m	636598	760.86	905.78	152	181	
Aroclor 1260 {2}	10.24	10.12 +0.00	512641m	678727	731.23	917.36	146	183	
Aroclor 1260 {3}	10.31 +0.00	10.71 +0.00	460625m	795020	932.33	865.12	186	173	
Aroclor 1260 {4}	10.93	10.89 +0.00	396466m	535333	877.72	1,088	175	217	
Aroclor 1260 {5}	11.39	12.09	847266m	1117686	904.95	1,054	181	210	
Aroclor 1262			0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1262 {1}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1262 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1262 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1262 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1262 {5}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1268			0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1268 {1}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1268 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1268 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1268 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1268 {5}			0d	0d	0.0000	0.0000	1.3U	1.3U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	23.11 g	**Dilution:**	1.0
Prep Final Vol:	4 ml	**Unit Factor:**	1
Solids:	86.7 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\cash1\acqudata\GC09\data\102908.b\1029F010.D
Report Date: 31-Oct-2008 17:14

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\102908.b\1029F010.D
Sample #2 : \\cash1\acqudata\GC09\data\102908_r.b\1029R010.D
Inj Date : 29-OCT-2008 14:59
Sample Info: KWG0811356-2 | K0810000-001DMS | 8082 PCB_LL
Misc Info : SEMIVOA GC\W0811356\2-DMS.H | F=4 D=1 A=23.11
Cal Date : 30-OCT-2008 08:55
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\102908.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\102908_r.b\092208_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.947	4.497	767592	1477082	75.4	85.9		100.00(R)
Aroclor 1016	5.677	5.620	189359	327060	853	954	80.00- 120.00	100.00(M)
	6.200	6.553	351509	619019	813	909	150.40- 225.59	185.63(M)
	6.583	6.943	187118	346510	834	962	78.08- 117.13	189.10(M)
	6.990	7.040	255555	409777	847	992	105.73- 158.59	134.96(M)
	7.273	7.317	233970	374057	1060	1020	83.59- 125.39	123.56(M)
			Average of Peak Amounts =		881	967		
Aroclor 1260	9.933	9.603	286271	636598	761	906	80.00- 120.00	100.00(M)
	10.243	10.123	512641	678727	731	917	162.12- 243.18	179.08(M)
	10.310	10.713	460625	795020	932	865	102.09- 153.13	160.91(M)
	10.930	10.890	396466	535333	878	1090	101.44- 152.16	138.49(M)
	11.393	12.093	847266	1117686	905	1050	212.56- 318.85	295.97(M)
			Average of Peak Amounts =		841	966		
Decachlorobiphenyl	16.020	17.103	787042	1089583	77.5	82.1		100.00(R)

QC Flag Legend

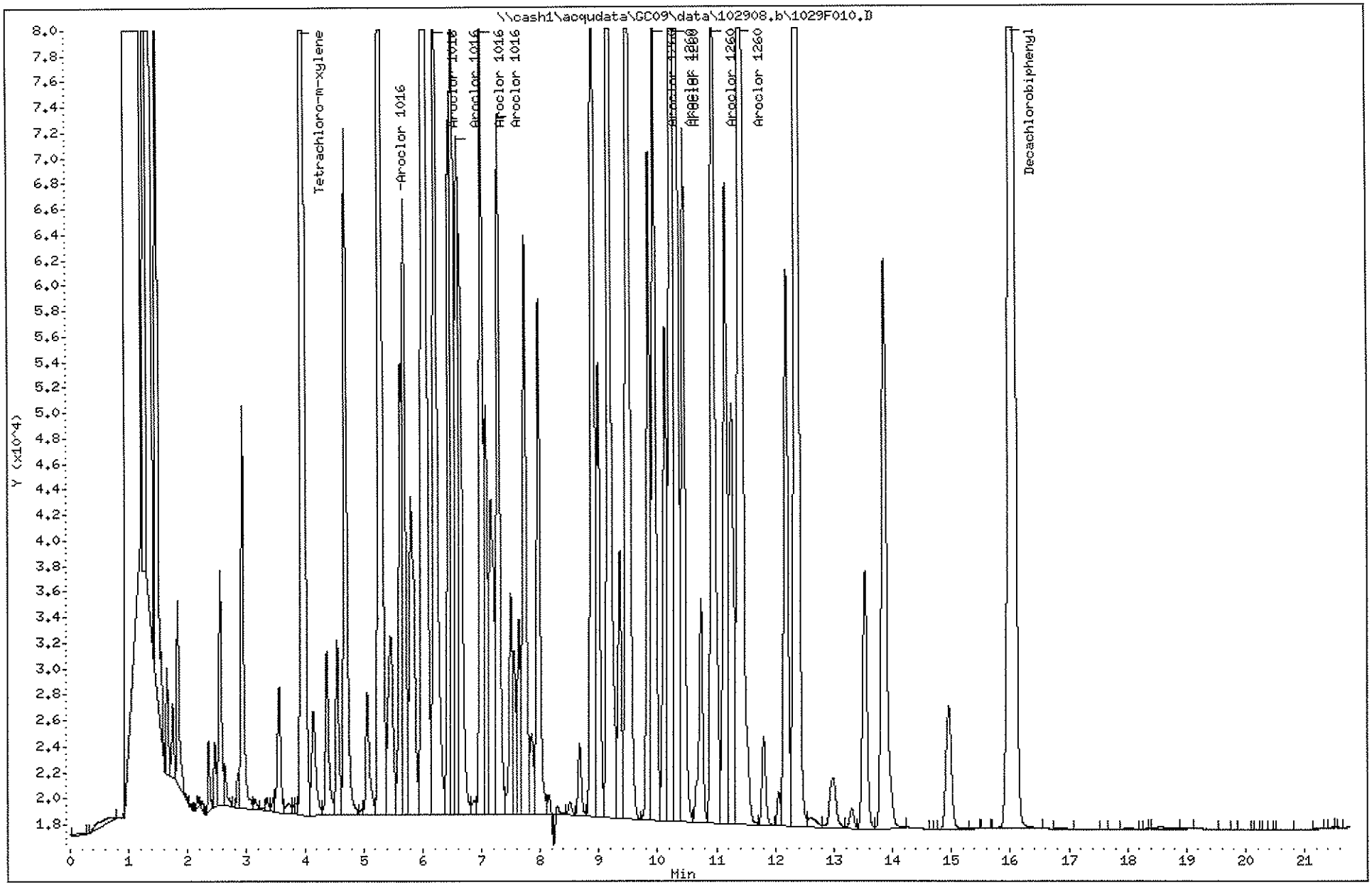
R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Data File: \\cash1\acqudata\GC09\data\102908.b\1029F010.D
Date : 29-OCT-2008 14:59
Client ID:
Sample Info: KWG0811356-2 | K0810000-001DMS | 8082 PCB_LL

Instrument: GC09.i

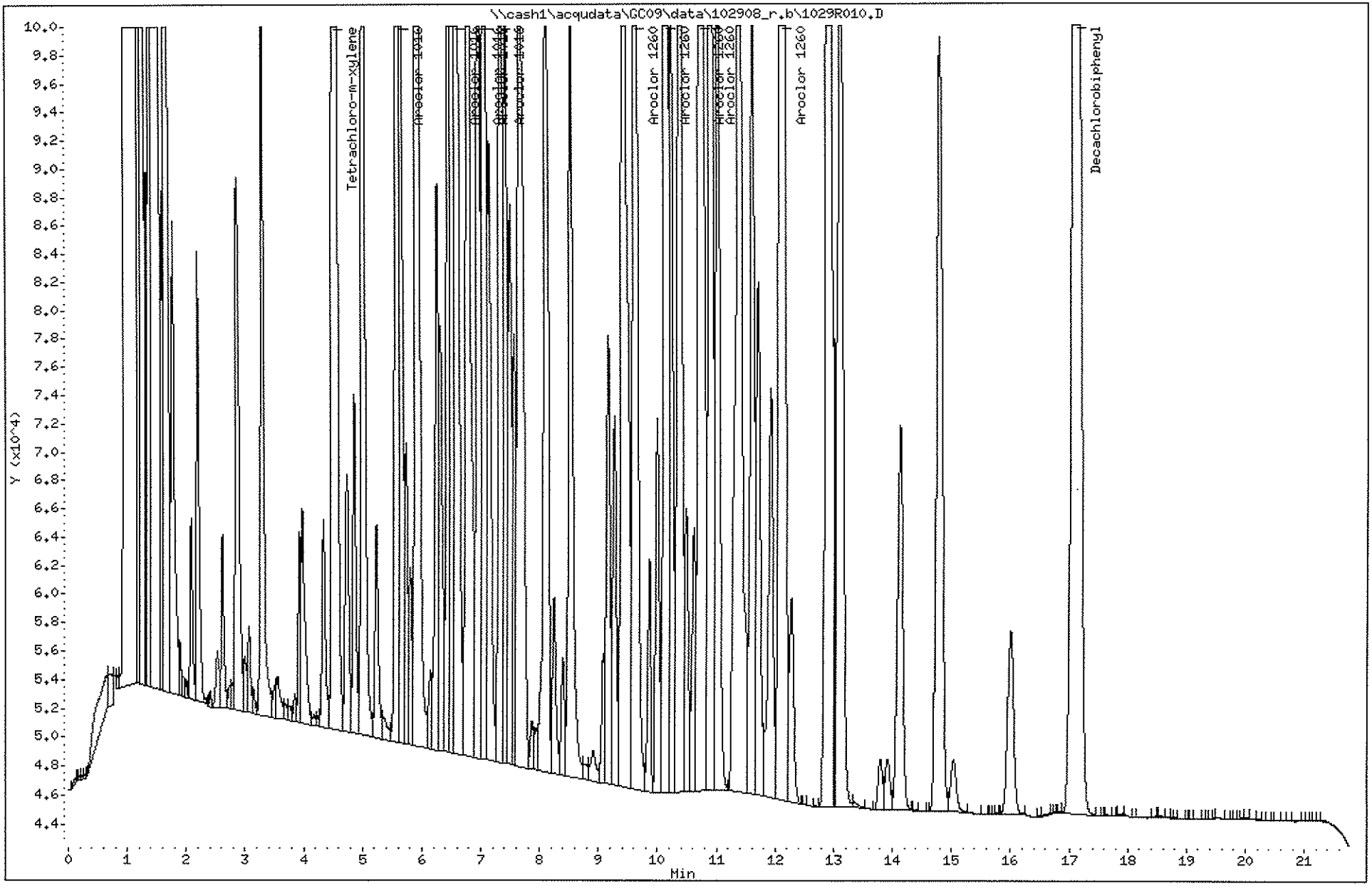
Operator: LHarris
Column diameter: 0.53

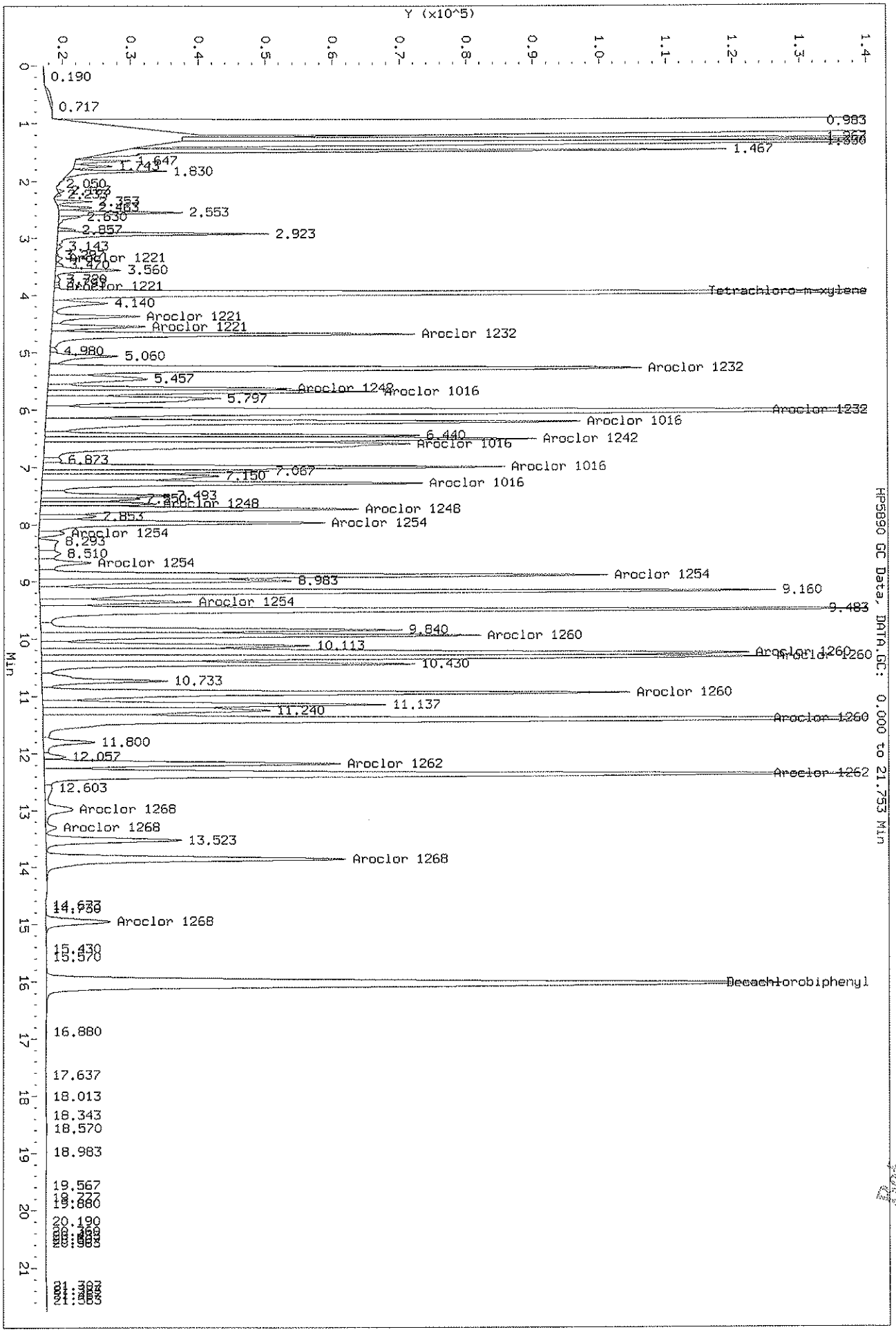
Column phase: DB-35MS



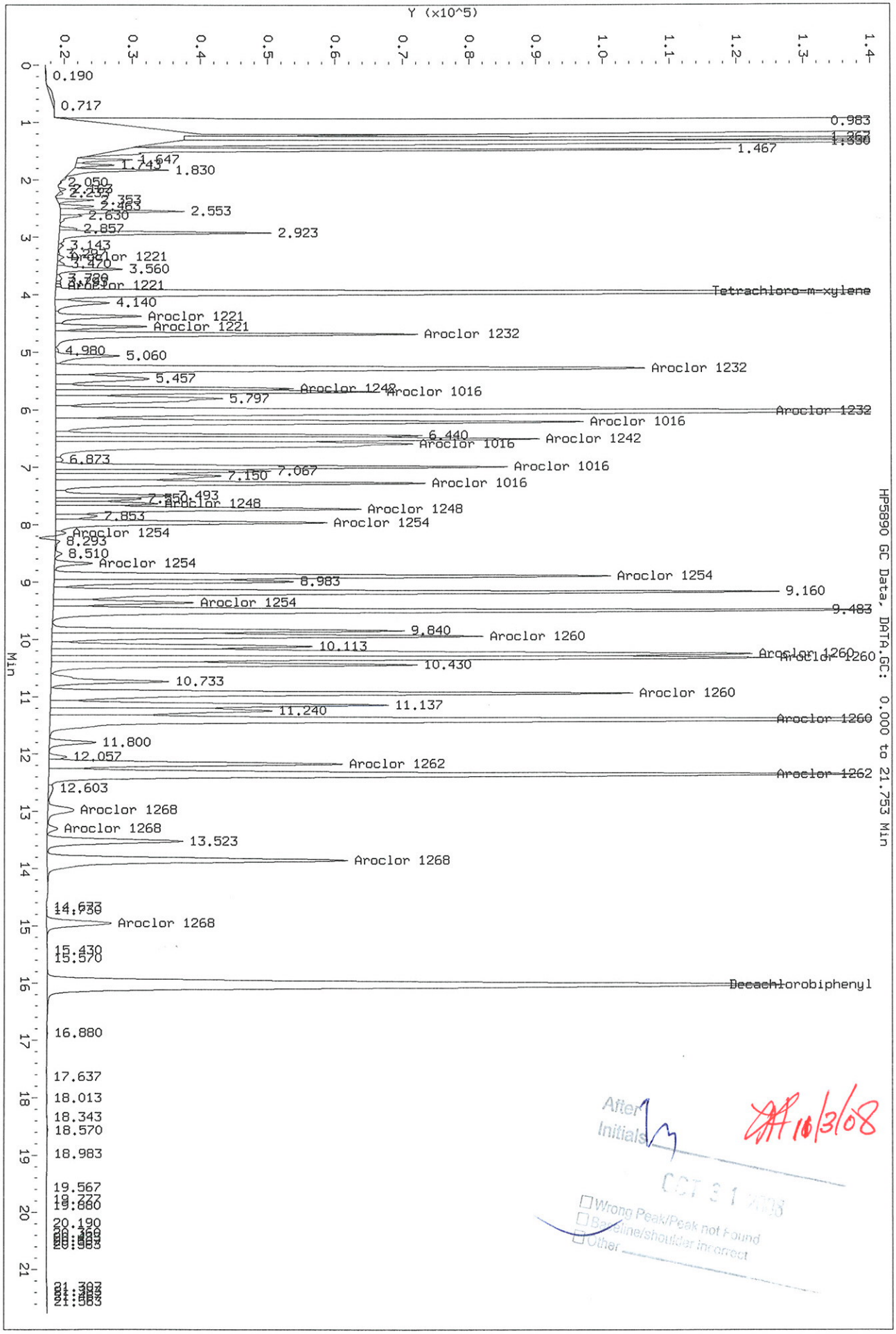
Data File: \\cash1\acqudata\GC09\data\102908_r.b\1029R010.D
Date : 29-OCT-2008 14:59
Client ID:
Sample Info: KWG0811356-2 | K0810000-001DMS | 8082 PCB_LL

Instrument: GC09.i
Operator: LHarris
Column phase: DB-XLB
Column diameter: 0.53





Before
Oct 31 '08



Data File: \\cash1\acqudata\GC09\data\102908.b\1029F010.D
Injection Date: 29-OCT-2008 14:59
Instrument: GC09.i
Client Sample ID:

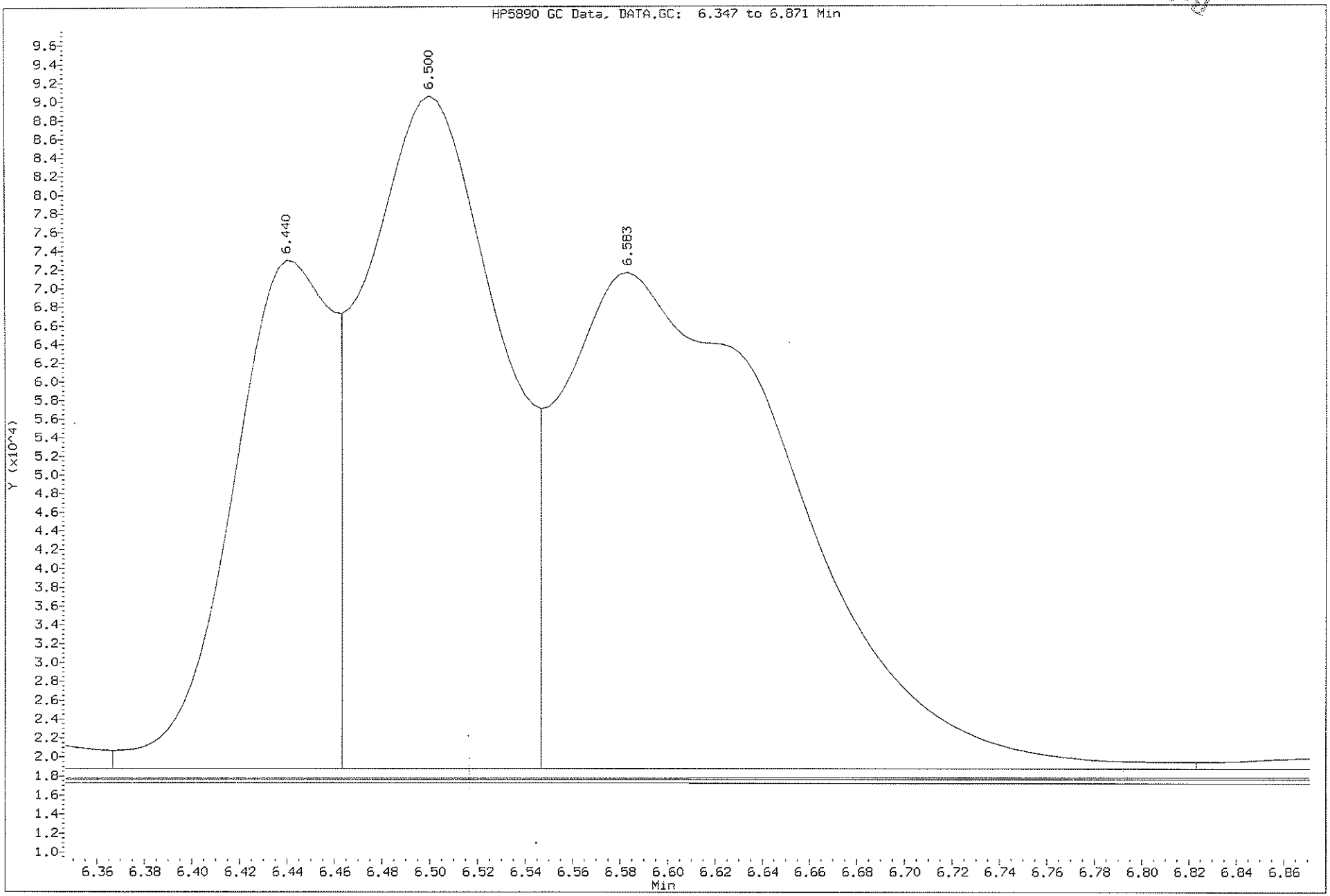
After Initials 10/31/08

OCT 31 2008

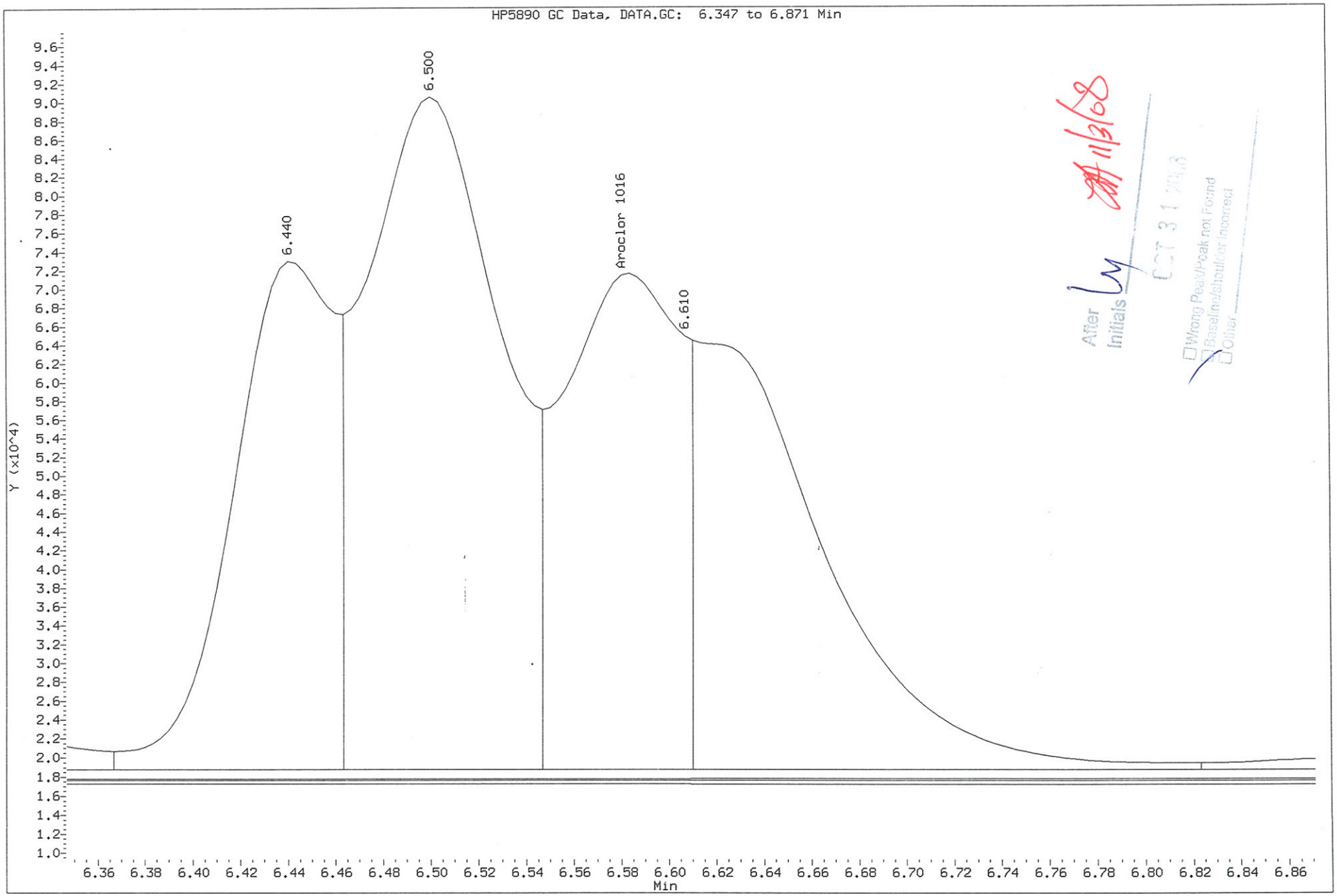
☐ Wrong Peak/Peak not Found
☐ Baseline/shoulder incorrect
☐ Other

Data File: \\cash1\acqudata\GC09\data\102908.b\1029F010.D
Injection Date: 29-OCT-2008 14:59
Instrument: GC09.i
Client Sample ID:

Before
OCT 31 2008



Data File: \\cash1\acqudata\GC09\data\102908.b\1029F010.D
Injection Date: 29-OCT-2008 14:59
Instrument: GC09.i
Client Sample ID:



After Initials
11/3/08
OCT 31 2008
Wrong Peak/Peak not Found
Baseline/shoulder incorrect
Other

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	GeoEngineers, Inc.	**Service Request:**	K0810000
Project:	Dakota Creek Confirmation Samples/5147-006-04	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA

Polychlorinated Biphenyls (PCBs)

Sample Name:	Lab Control Sample	**Units:**	ug/Kg
Lab Code:	KWG0811356-3	**Basis:**	Dry
Extraction Method:	EPA 3540C	**Level:**	Low
Analysis Method:	8082		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	**191**		10	1.3	1	10/23/08	10/29/08	KWG0811356	
Aroclor 1221	ND	U	20	1.3	1	10/23/08	10/29/08	KWG0811356	
Aroclor 1232	ND	U	10	1.3	1	10/23/08	10/29/08	KWG0811356	
Aroclor 1242	ND	U	10	1.3	1	10/23/08	10/29/08	KWG0811356	
Aroclor 1248	ND	U	10	1.3	1	10/23/08	10/29/08	KWG0811356	
Aroclor 1254	ND	U	10	1.3	1	10/23/08	10/29/08	KWG0811356	
Aroclor 1260	**189**		10	1.3	1	10/23/08	10/29/08	KWG0811356	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	83	38-144	10/29/08	Acceptable

Comments:

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\102908.B\1029F007.D
Lab ID: KWG0811356-3
RunType: LCS
Matrix: SOIL

Date Acquired: 10/29/2008 13:40
Date Quantitated: 10/31/2008 17:14
Batch ID: KWG0811575
Analysis Method: 8082
MethodJoinID: MJ147

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Calibration Verification Ave %D	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Calibration Verification Ave %D (Closing)	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: 11/3/08

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\102908_R.B\1029R007.D
Lab ID: KWG0811356-3
RunType: LCS
Matrix: SOIL

Date Acquired: 10/29/2008 13:40
Date Quantitated: 10/31/2008 17:15
Batch ID: KWG0811575
Analysis Method: 8082
MethodJoinID: MJ147

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Calibration Verification Ave %D	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Calibration Verification Ave %D (Closing)	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: 11/3/08

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8082 PCB_LL	**Collect Date:**		**Receive Date:**	10/28/2008

Analysis Lot:	KWG0811575	**Prep Lot:**	KWG0811356	**Report Group:**	
Analysis Method:	8082	**Prep Method:**	EPA 3540C		
Prep Ref:	771308	**Prep Date:**	10/23/2008		

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\102908.B\092208_F.M	**Calibration ID:**	CAL7795
Title:			
MB Ref:	J:\GC09\DATA\102908.B\1029F006.D	**Method ID:**	MJ150
		Quant based on Method	

Data File #1:	J:\GC09\DATA\102908.B\1029F007.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\102908_r.b\1029R007.D			**Vial:**	4
Acqu Date:	10/29/2008 13:40	**Quant Date:**	10/31/2008 17:14	**Dilution:**	1.0
Run Type:	LCS			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG0811356-3				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Surrogate Compounds

Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	3.95	0.00	4.50		729989m	1391014m	71.69	80.89			81OK
					%Recovery =		72OK	81OK	Limits =	22-130	
Decachlorobiphenyl	16.02	+0.00	17.10	0.00	796439	1094548	78.39	82.51			83OK
					%Recovery =		78OK	83OK	Limits =	38-144	

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

Parameter Name	RT #1	RT #2		Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/Kg #1	ug/Kg #2	Rpt
Aroclor 1016				0	0	912.75	956.85	183	191	191
Aroclor 1016 {1}	5.68	5.62		191370m	331457m	862.54	966.55	173	193	
Aroclor 1016 {2}	6.20	6.56	+0.00	336993m	615583m	779.06	904.35	156	181	
Aroclor 1016 {3}	6.58	6.94		227880m	339858m	1,016	943.61	203	189	
Aroclor 1016 {4}	6.99	7.04		259253m	404630m	858.95	979.29	172	196	
Aroclor 1016 {5}	7.27	7.32		230566m	364570m	1,047	990.45	209	198	
Aroclor 1221				0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1221 {1}				0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1221 {2}				0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1221 {3}				0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1221 {4}				0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1232				0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1232 {1}				0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1232 {2}				0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1232 {3}				0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1232 {4}				0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1242				0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1242 {1}				0d	0d	0.0000	0.0000	1.3U	1.3U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC09\DATA\102908.B\1029F007.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\102908_r.b\1029R007.D			**Vial:**	4
Acqu Date:	10/29/2008 13:40	**Quant Date:**	10/31/2008 17:14	**Dilution:**	1.0
Run Type:	LCS			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG0811356-3				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds **Final Conc. Units:** ug/Kg Wet Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/Kg #1	ug/Kg #2	Rpt
Aroclor 1242 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1242 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1242 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1242 {5}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1248			0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1248 {1}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1248 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1248 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1248 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1248 {5}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1254			0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1254 {1}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1254 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1254 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1254 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1254 {5}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1260			0	0	836.85	943.84	167	189	189
Aroclor 1260 {1}	9.93 +0.00	9.60	289945m	607758m	770.62	864.75	154	173	
Aroclor 1260 {2}	10.24	10.12	511677m	668119m	729.86	903.02	146	181	
Aroclor 1260 {3}	10.31 +0.00	10.71 +0.00	450135m	778768m	911.10	847.44	182	169	
Aroclor 1260 {4}	10.93	10.89 +0.00	393442m	527604m	871.03	1,073	174	215	
Aroclor 1260 {5}	11.39	12.09	844170m	1094020m	901.65	1,031	180	206	
Aroclor 1262			0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1262 {1}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1262 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1262 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1262 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1262 {5}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1268			0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1268 {1}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1268 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1268 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1268 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1268 {5}			0d	0d	0.0000	0.0000	1.3U	1.3U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	20.00 g	**Dilution:**	1.0
Prep Final Vol:	4 ml	**Unit Factor:**	1
Solids:	%		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Lab Control Spike Summary Report

Lab Control Spike Information ***ListJoinID :*** LJ2039

Data File:	\\CASH1\ACQUDATA\GC09\DATA\102908_R.B\1029R007.D	**Instrument:**	GC09.i
Lab ID:	KWG0811356-3	**Dilution:**	1
Client ID:	Lab Control Sample	**Units:**	ug/Kg
Prod Code:	8082 PCB_LL	**Acqu Date:**	10/29/2008 13:40
Matrix:	SOIL	**Quant Date:**	10/31/2008 17:15

Parameter Name	Lab Control Spike			%Rec Limits
	Result	Expected	%Rec	
Aroclor 1016	191	200	96	44-130
Aroclor 1260	189	200	94	52-127

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Data File: \\cash1\acqudata\GC09\data\102908.b\1029F007.D
Report Date: 31-Oct-2008 17:14

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\102908.b\1029F007.D
Sample #2 : \\cash1\acqudata\GC09\data\102908_r.b\1029R007.D
Inj Date : 29-OCT-2008 13:40
Sample Info: KWG0811356-3 | LCS | 8082 PCB_LL | SOIL
Misc Info : SEMIVOA GC\W0811356\3-LCS.H | F=4 D=1 A=20.00
Cal Date : 30-OCT-2008 08:55
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\102908.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\102908_r.b\092208_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.947	4.497	729989	1391014	71.7	80.9		100.00(RM)
Aroclor 1016	5.677	5.620	191370	331457	862	966	80.00- 120.00	100.00(M)
	6.200	6.557	336993	615583	779	904	150.40- 225.59	176.10(M)
	6.583	6.943	227880	339858	1020	944	78.08- 117.13	171.15(M)
	6.990	7.040	259253	404630	859	979	105.73- 158.59	135.47(M)
	7.273	7.317	230566	364570	1050	990	83.59- 125.39	120.48(M)
			Average of Peak Amounts =		914	957		
Aroclor 1260	9.933	9.603	289945	607758	771	865	80.00- 120.00	100.00(M)
	10.243	10.120	511677	668119	730	903	162.12- 243.18	176.47(M)
	10.310	10.713	450135	778768	911	847	102.09- 153.13	155.25(M)
	10.930	10.890	393442	527604	871	1070	101.44- 152.16	135.70(M)
	11.393	12.093	844170	1094020	902	1030	212.56- 318.85	291.15(M)
			Average of Peak Amounts =		837	943		
Decachlorobiphenyl	16.020	17.100	796439	1094548	78.4	82.5		100.00(R)

QC Flag Legend

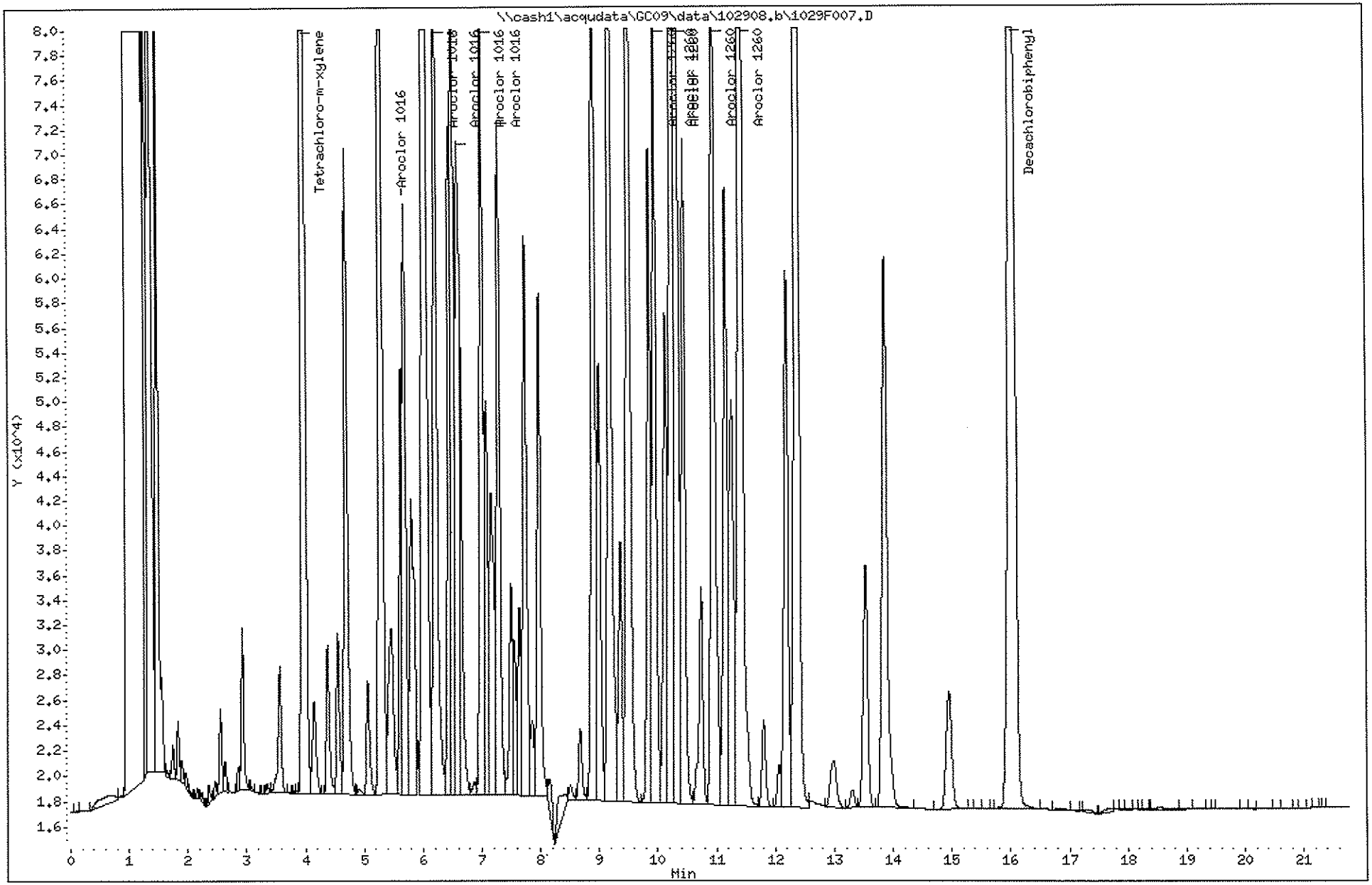
R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Data File: \\cash1\acqudata\GC09\data\102908.b\1029F007.D
Date : 29-OCT-2008 13:40
Client ID:
Sample Info: KWG0811356-3 | LCS | 8082 PCB_LL | SOIL

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-35MS

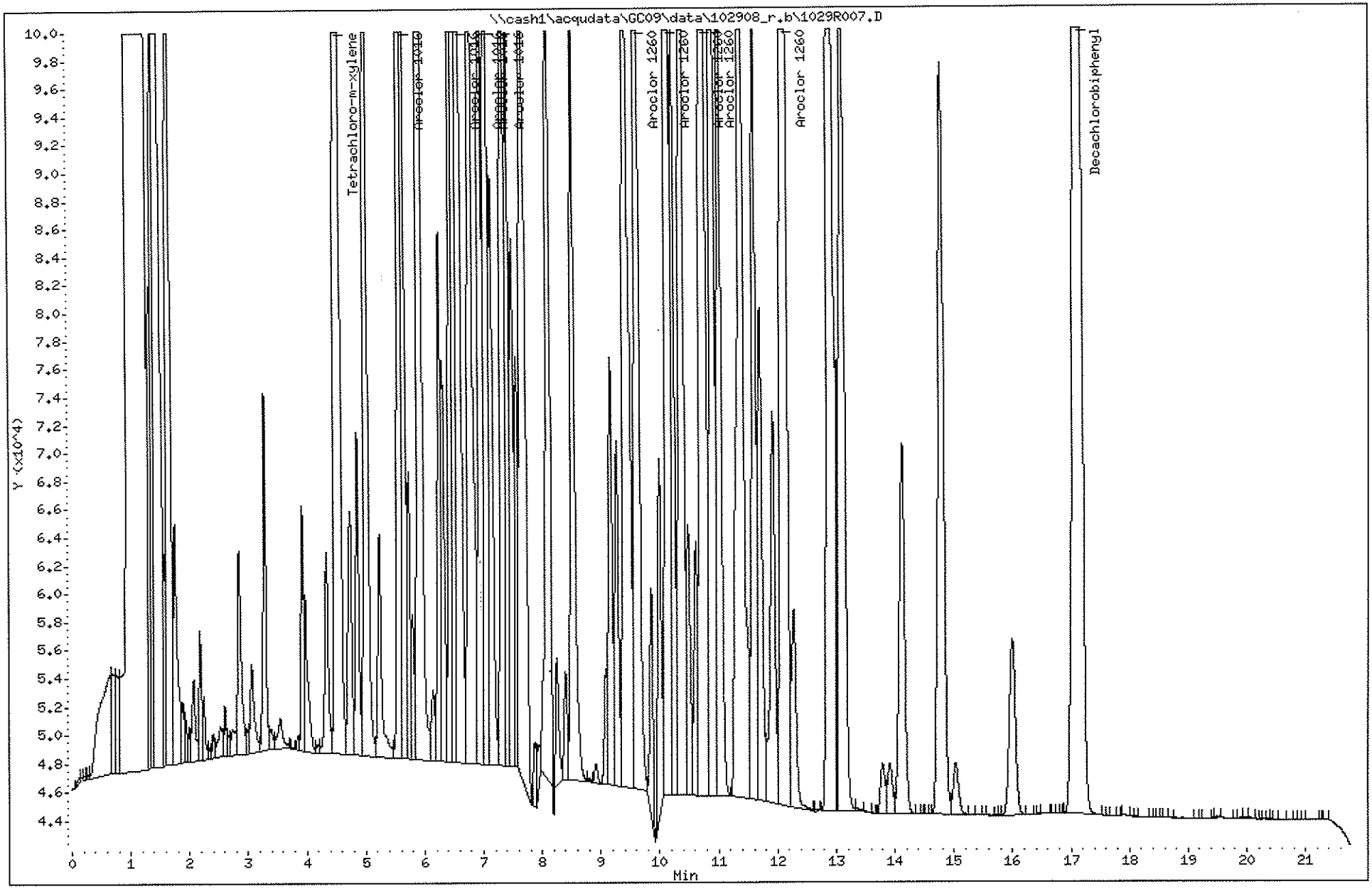


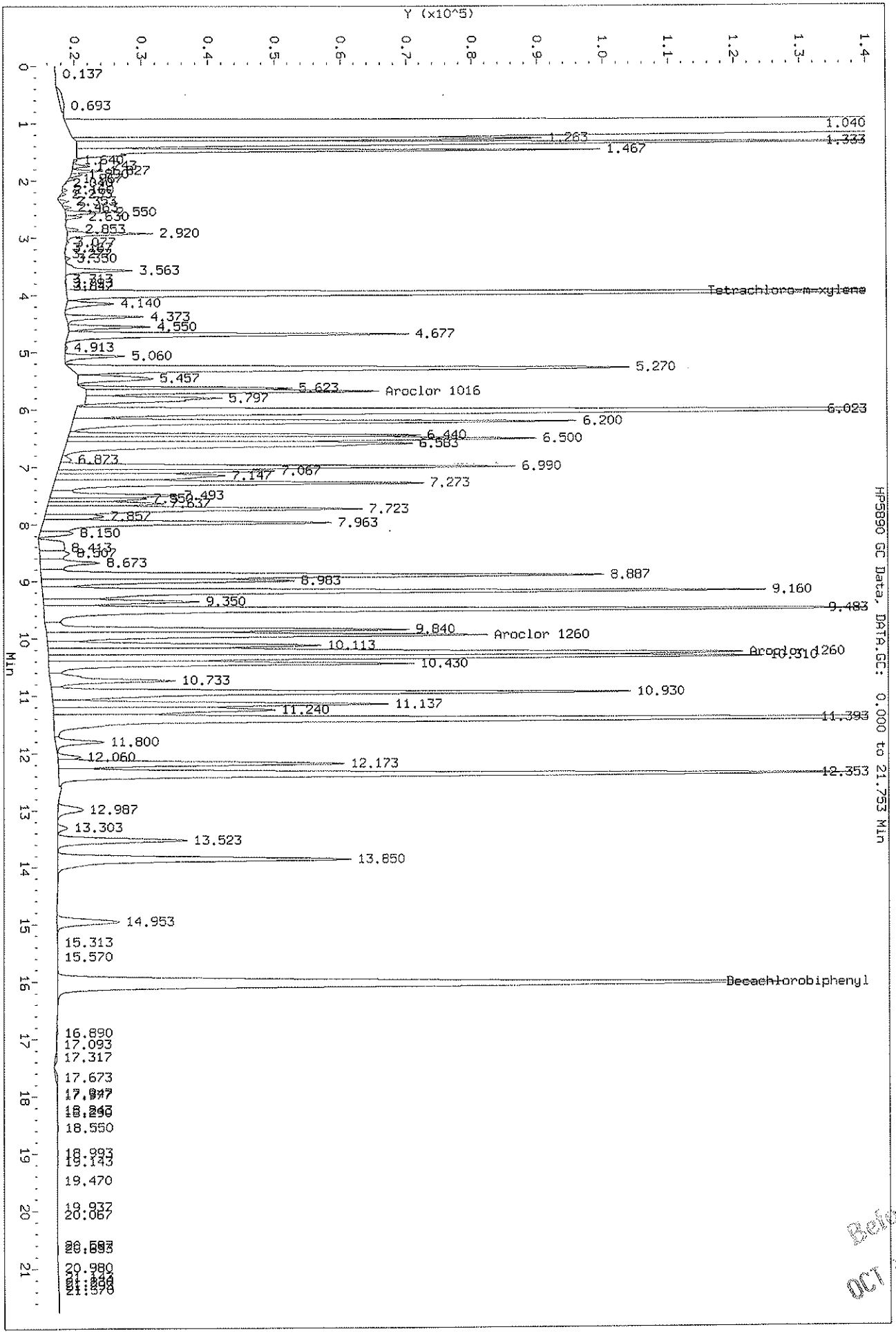
Data File: \\cash1\acqudata\GC09\data\102908_r.b\1029R007.D
Date : 29-OCT-2008 13:40
Client ID:
Sample Info: KWG0811356-3 | LCS | 8082 PCB_LL | SOIL

Instrument: GC09.i

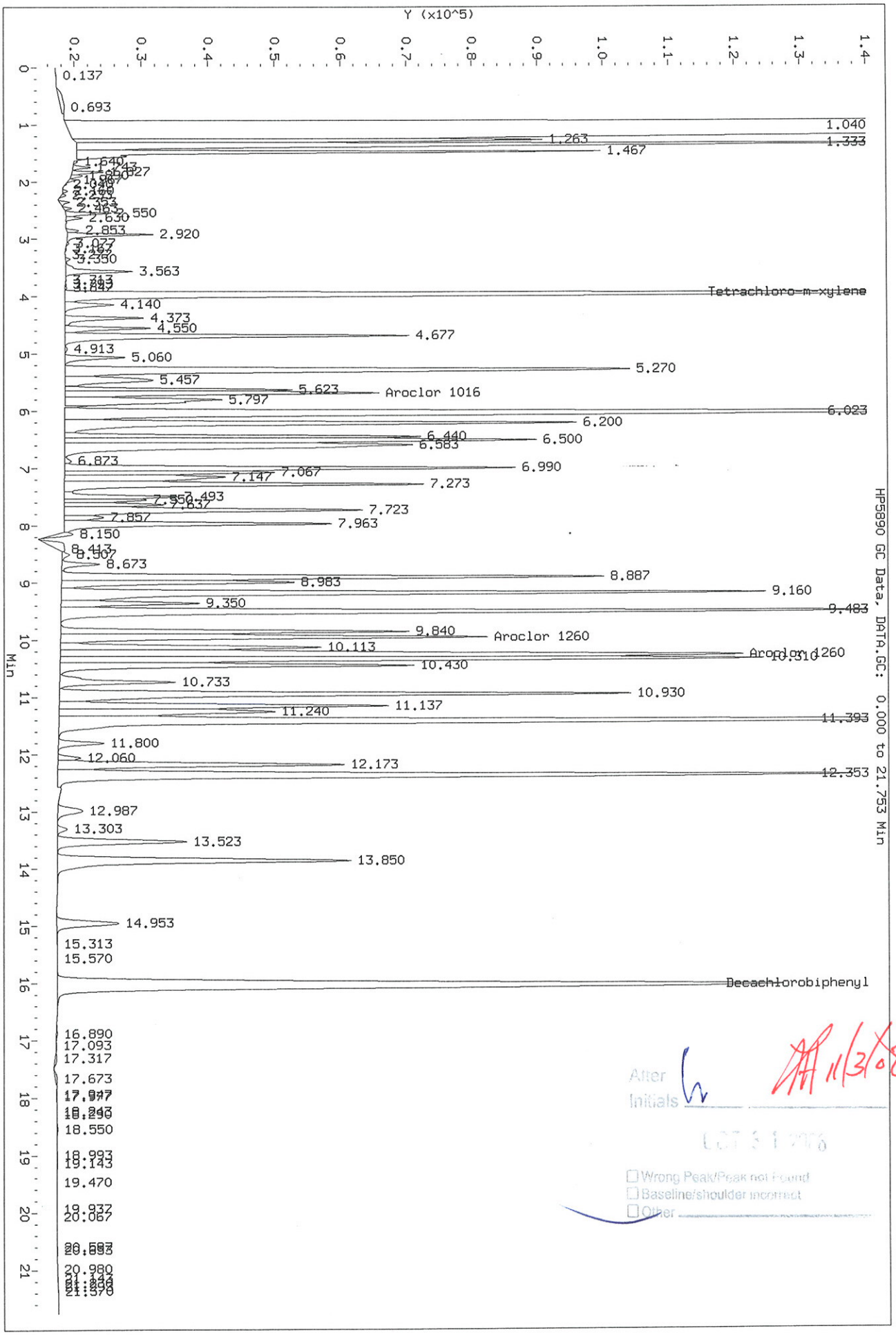
Operator: LHarris
Column diameter: 0.53

Column phase: DB-XLB



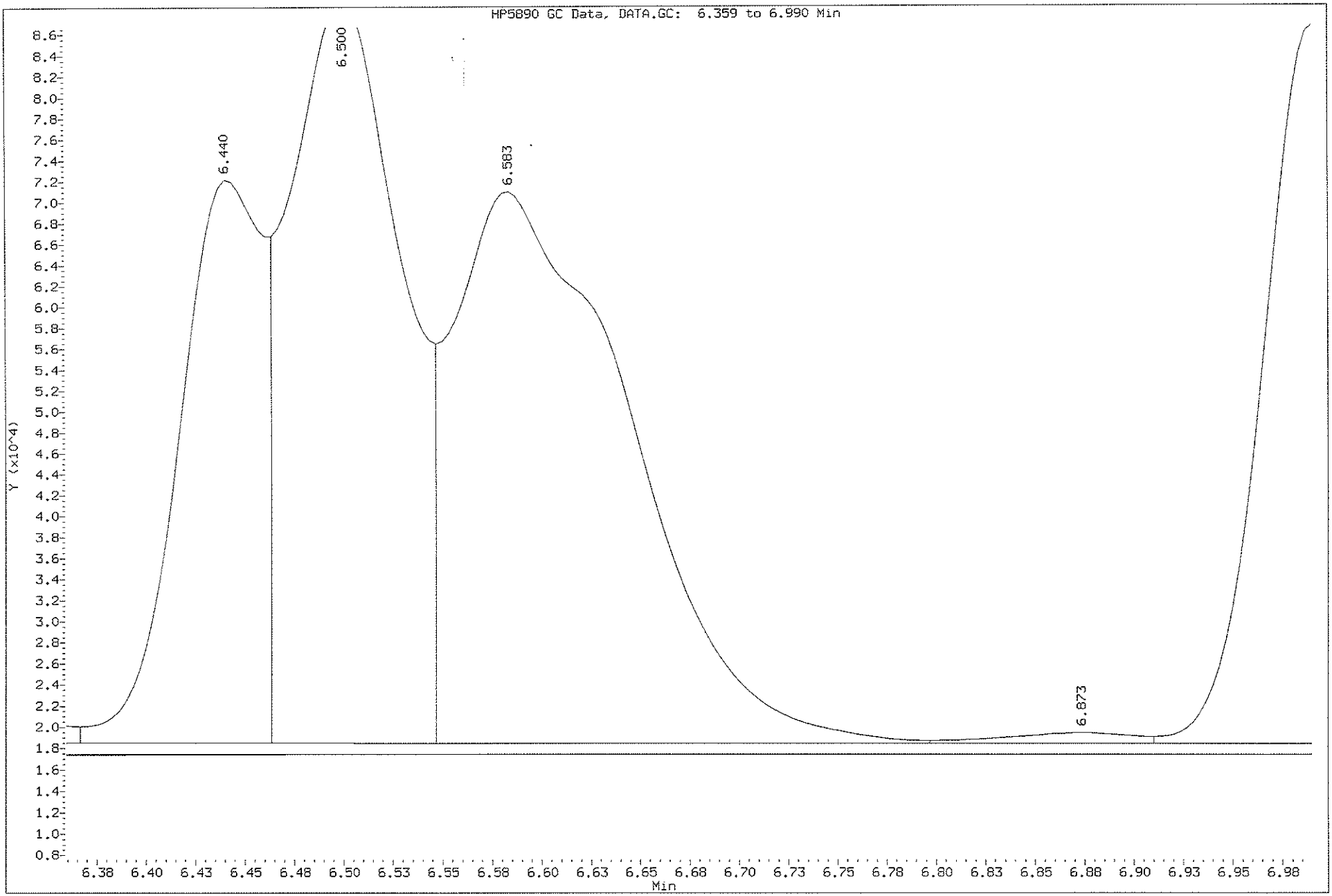


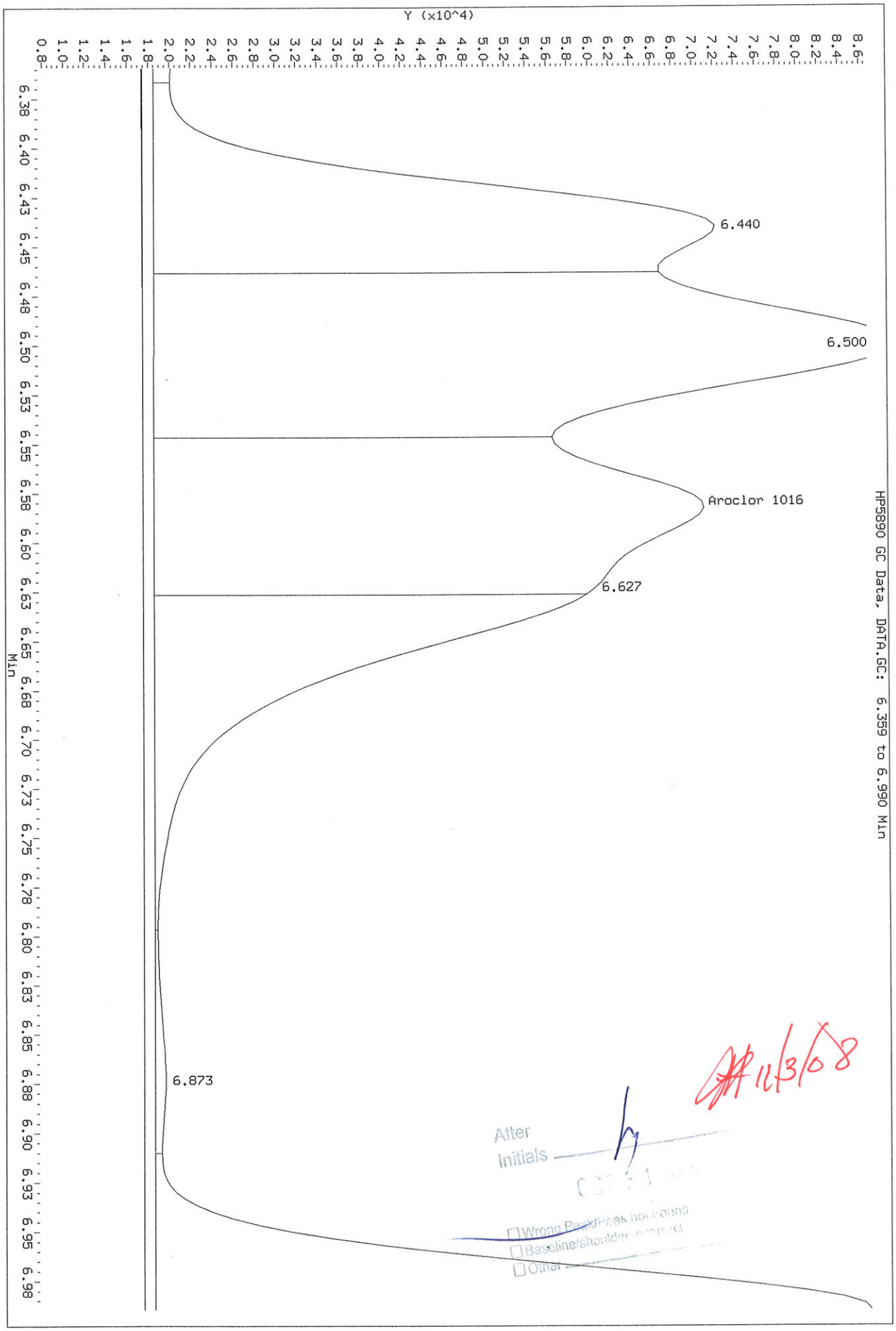
Before
OCT 1 1 2008

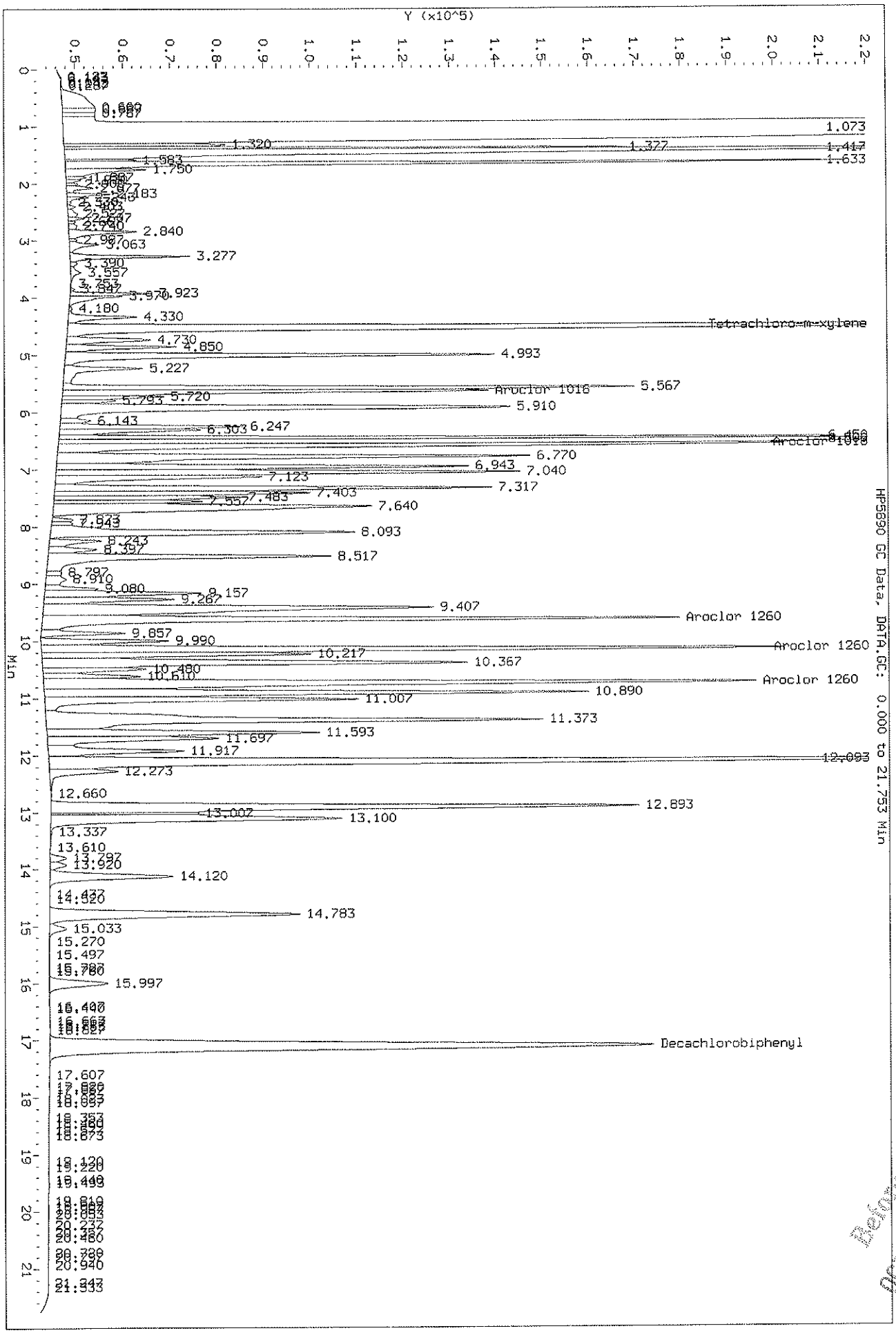

Data File: \\cash1\acqudata\GC09\data\102908.b\1029F007.D
Injection Date: 29-OCT-2008 13:40
Instrument: GC09.i
Client Sample ID:
HP5890 GC Data, DATA.GC: 0.000 to 21.753 Min
Y (x10^5)
Min
0.137
0.693
1.040
1.263
1.333
1.467
1.640
2.550
2.630
2.853
2.920
3.350
3.563
Tetrachloro-m-xylene
4.140
4.373
4.550
4.677
4.913
5.060
5.270
5.457
5.623
Aroclor 1016
5.797
6.023
6.200
6.440
6.500
6.583
6.873
6.990
7.067
7.147
7.273
7.493
7.550
7.637
7.723
7.857
7.963
8.150
8.413
8.507
8.673
8.887
8.983
9.160
9.350
9.483
9.840
Aroclor 1260
10.113
10.310
10.430
10.733
10.930
11.137
11.240
11.393
11.800
12.060
12.173
12.353
12.987
13.303
13.523
13.850
14.953
15.313
15.570
Decachlorobiphenyl
16.890
17.093
17.317
17.673
18.550
18.993
19.143
19.470
19.937
20.067
20.980
After
Initials
11/3/08
OCT 31 2008
Wrong Peak/Peak not Found
Baseline/shoulder incorrect
Other

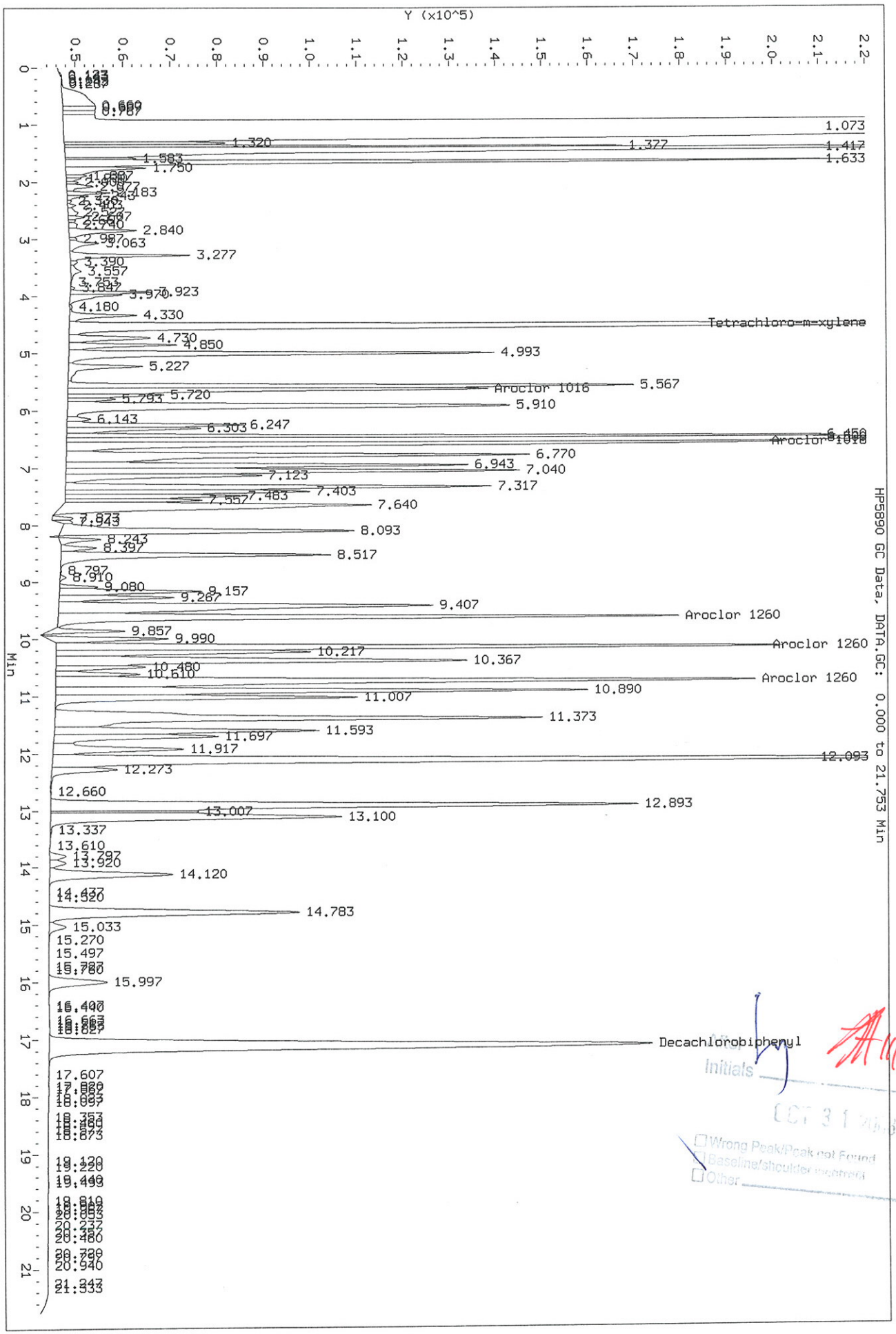
Data File: \\cash1\acqudata\GC09\data\102908.b\1029F007.D
Injection Date: 29-OCT-2008 13:40
Instrument: GC09.i
Client Sample ID:

Before
OCT 31 2008




Data File: \\cash1\acqudata\GC09\data\102908.b\1029F007.D
Injection Date: 29-OCT-2008 13:40
Instrument: GC09.i
Client Sample ID:
HP5890 GC Data, DATA.GC: 6.359 to 6.990 Min
Y (x10^4)
Min
6.440
6.500
Aroclor 1016
6.627
6.873
11/3/08
After
Initials
Wrong Peak/Peak not found
Baseline/shoulder incorrect
Other


Data File: \\cash1\acqudata\GC09\data\102908_r.b\1029R007.D
Injection Date: 29-OCT-2008 13:40
Instrument: GC09.i
Client Sample ID:
Y (x10^5)
Min
HP5890 GC Data, DATA.GC: 0.000 to 21.753 Min
Tetrachloro-m-xylene
Aroclor 1016
Aroclor 1260
Decachlorobiphenyl


Data File: \\cash1\acqudata\GC09\data\102908_r.b\1029R007.D
Injection Date: 29-OCT-2008 13:40
Instrument: GC09.i
Client Sample ID:
HP5890 GC Data, DATA.GC: 0.000 to 21.753 Min
Y (x10^5)
Min
Tetrachloro-m-xylene
Aroclor 1016
Aroclor 1260
Aroclor 1260
Aroclor 1260
Decachlorobiphenyl
Initials
Wrong Peak/Peak not Found
Baseline/shoulder problem
Other

Organic Analysis:
Polychlorinated Biphenyls (PCBs)

Validation Package

Standards Data

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04

Service Request: K0810000
Calibration Date: 09/22/2008

Initial Calibration Summary
Polychlorinated Biphenyls (PCBs)

Calibration ID: CAL7795
Instrument ID: GC09.i

Column: DB-35MS

Level ID	File ID
A	\\cash1\acqudata\GC09\data\092208.b\0922F009.D
B	\\cash1\acqudata\GC09\data\092208.b\0922F013.D
C	\\cash1\acqudata\GC09\data\092208.b\0922F017.D
D	\\cash1\acqudata\GC09\data\092208.b\0922F021.D
E	\\cash1\acqudata\GC09\data\092208.b\0922F025.D
F	\\cash1\acqudata\GC09\data\092208.b\0922F029.D
G	\\cash1\acqudata\GC09\data\092208.b\0922F033.D
H	\\cash1\acqudata\GC09\data\092208.b\0922F035.D
I	\\cash1\acqudata\GC09\data\092208.b\0922F036.D
J	\\cash1\acqudata\GC09\data\092208.b\0922F037.D
K	\\cash1\acqudata\GC09\data\092208.b\0922F038.D
L	\\cash1\acqudata\GC09\data\092208.b\0922F039.D
M	\\cash1\acqudata\GC09\data\092208.b\0922F040.D

Analyte Name	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF
Decachlorobiphenyl															
							H	2.5	12100	I	5.0	12200	J	50	10800
	K	100	9790	L	200	8610	M	500	7540						
Aroclor 1016 {1}															
							H	25	239	I	50	261	J	500	245
	K	1000	224	L	2000	197	M	5000	165						
Aroclor 1016 {2}															
							H	25	490	I	50	513	J	500	477
	K	1000	429	L	2000	373	M	5000	313						
Aroclor 1016 {3}															
							H	25	244	I	50	273	J	500	248
	K	1000	222	L	2000	194	M	5000	165						
Aroclor 1016 {4}															
							H	25	346	I	50	370	J	500	323
	K	1000	294	L	2000	258	M	5000	221						
Aroclor 1016 {5}															
							H	25	193	I	50	231	J	500	255
	K	1000	238	L	2000	216	M	5000	190						
Aroclor 1260 {1}															
							H	25	431	I	50	451	J	500	399
	K	1000	363	L	2000	326	M	5000	287						
Aroclor 1260 {2}															
							H	25	762	I	50	786	J	500	755
	K	1000	691	L	2000	642	M	5000	571						

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04

Service Request: K0810000
Calibration Date: 09/22/2008

Initial Calibration Summary
Polychlorinated Biphenyls (PCBs)

Calibration ID: CAL7795
Instrument ID: GC09.i

Column: DB-35MS

Analyte Name	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF
Aroclor 1260 {3}															
							H	25	585	I	50	598	J	500	516
	K	1000	485	L	2000	416	M	5000	364						
Aroclor 1260 {4}															
							H	25	513	I	50	507	J	500	477
	K	1000	444	L	2000	406	M	5000	364						
Aroclor 1260 {5}															
							H	25	1050	I	50	1050	J	500	984
	K	1000	924	L	2000	842	M	5000	762						

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04

Service Request: K0810000
Calibration Date: 09/22/2008

Initial Calibration Summary
Polychlorinated Biphenyls (PCBs)

Calibration ID: CAL7795
Instrument ID: GC09.i

Column: DB-35MS

Analyte Name	Compound Type	Calibration Evaluation				
		Fit Type	Eval.	Eval. Result	Q	Control Criteria
Decachlorobiphenyl	SURR	AverageRF	% RSD	18.4		≤ 20
Aroclor 1016 {1}	MULTI	AverageRF	% RSD	15.9		≤ 20
Aroclor 1016 {2}	MULTI	AverageRF	% RSD	17.8		≤ 20
Aroclor 1016 {3}	MULTI	AverageRF	% RSD	17.5		≤ 20
Aroclor 1016 {4}	MULTI	AverageRF	% RSD	18.5		≤ 20
Aroclor 1016 {5}	MULTI	AverageRF	% RSD	11.7		≤ 20
Aroclor 1260 {1}	MULTI	AverageRF	% RSD	16.7		≤ 20
Aroclor 1260 {2}	MULTI	AverageRF	% RSD	11.8		≤ 20
Aroclor 1260 {3}	MULTI	AverageRF	% RSD	18.6		≤ 20
Aroclor 1260 {4}	MULTI	AverageRF	% RSD	13.1		≤ 20
Aroclor 1260 {5}	MULTI	AverageRF	% RSD	12.5		≤ 20

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04

Service Request: K0810000
Calibration Date: 09/22/2008
Date Analyzed: 09/23/2008

Second Source Calibration Verification
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082

Calibration ID: CAL7795
Units: ng/mL

File ID: \\cash1\acqudata\GC09\data\092208.b\0922F041.D
\\cash1\acqudata\GC09\data\092208.b\0922F042.D
\\cash1\acqudata\GC09\data\092208.b\0922F043.D
\\cash1\acqudata\GC09\data\092208.b\0922F044.D
\\cash1\acqudata\GC09\data\092208.b\0922F045.D
\\cash1\acqudata\GC09\data\092208.b\0922F046.D
\\cash1\acqudata\GC09\data\092208.b\0922F047.D
\\cash1\acqudata\GC09\data\092208.b\0922F048.D
\\cash1\acqudata\GC09\data\092208.b\0922F049.D

Column ID: DB-35MS

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Aroclor 1016 {1}	1000	980	222	218	-2	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	960	433	416	-4	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	960	224	214	-4	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	960	302	289	-4	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	1200	220	264	20	NA	± 100 %	AverageRF
Aroclor 1016	1000	1000	NA	NA	NA	-1	± 15 %	NA
Aroclor 1260 {1}	1000	910	376	344	-9	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	830	701	579	-17	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	1100	494	532	8	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	1000	452	467	3	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	1100	936	995	6	NA	± 100 %	AverageRF
Aroclor 1260	1000	980	NA	NA	NA	2	± 15 %	NA

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound ‡ CCC Compound

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04

Service Request: K0810000
Calibration Date: 09/22/2008

Initial Calibration Summary
Polychlorinated Biphenyls (PCBs)

Calibration ID: CAL7795
Instrument ID: GC09.i

Column: DB-XLB

Level ID	File ID
A	\\cash1\acqudata\GC09\data\092208_r.b\0922R009.D
B	\\cash1\acqudata\GC09\data\092208_r.b\0922R013.D
C	\\cash1\acqudata\GC09\data\092208_r.b\0922R017.D
D	\\cash1\acqudata\GC09\data\092208_r.b\0922R021.D
E	\\cash1\acqudata\GC09\data\092208_r.b\0922R025.D
F	\\cash1\acqudata\GC09\data\092208_r.b\0922R029.D
G	\\cash1\acqudata\GC09\data\092208_r.b\0922R033.D
H	\\cash1\acqudata\GC09\data\092208_r.b\0922R035.D
I	\\cash1\acqudata\GC09\data\092208_r.b\0922R036.D
J	\\cash1\acqudata\GC09\data\092208_r.b\0922R037.D
K	\\cash1\acqudata\GC09\data\092208_r.b\0922R038.D
L	\\cash1\acqudata\GC09\data\092208_r.b\0922R039.D
M	\\cash1\acqudata\GC09\data\092208_r.b\0922R040.D

Analyte Name	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF
Decachlorobiphenyl															
							H	2.5	15200	I	5.0	15300	J	50	13300
	K	100	12000	L	200	10500									
Aroclor 1016 {1}															
							H	25	392	I	50	429	J	500	358
	K	1000	339	L	2000	300	M	5000	239						
Aroclor 1016 {2}															
							H	25	763	I	50	828	J	500	699
	K	1000	624	L	2000	546	M	5000	625						
Aroclor 1016 {3}															
							H	25	396	I	50	434	J	500	403
	K	1000	356	L	2000	310	M	5000	263						
Aroclor 1016 {4}															
							H	25	461	I	50	479	J	500	455
	K	1000	412	L	2000	363	M	5000	309						
Aroclor 1016 {5}															
							H	25	416	I	50	408	J	500	412
	K	1000	369	L	2000	324	M	5000	279						
Aroclor 1260 {1}															
							H	25	827	I	50	854	J	500	746
	K	1000	680	L	2000	594	M	5000	516						
Aroclor 1260 {2}															
							H	25	872	I	50	919	J	500	772
	K	1000	707	L	2000	626	M	5000	542						

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04

Service Request: K0810000
Calibration Date: 09/22/2008

Initial Calibration Summary
Polychlorinated Biphenyls (PCBs)

Calibration ID: CAL7795
Instrument ID: GC09.i

Column: DB-XLB

Analyte Name	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF
Aroclor 1260 {3}															
							H	25	969	I	50	1060	J	500	994
	K	1000	924	L	2000	830	M	5000	735						
Aroclor 1260 {4}															
							H	25	509	I	50	583	J	500	536
	K	1000	493	L	2000	440	M	5000	390						
Aroclor 1260 {5}															
							H	25	1190	I	50	1200	J	500	1120
	K	1000	1050	L	2000	946	M	5000	845						

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04

Service Request: K0810000
Calibration Date: 09/22/2008

Initial Calibration Summary
Polychlorinated Biphenyls (PCBs)

Calibration ID: CAL7795
Instrument ID: GC09.i

Column: DB-XLB

Analyte Name	Compound Type	Calibration Evaluation				
		Fit Type	Eval.	Eval. Result	Q	Control Criteria
Decachlorobiphenyl	SURR	AverageRF	% RSD	15.6		≤ 20
Aroclor 1016 {1}	MULTI	AverageRF	% RSD	19.7		≤ 20
Aroclor 1016 {2}	MULTI	AverageRF	% RSD	15.2		≤ 20
Aroclor 1016 {3}	MULTI	AverageRF	% RSD	17.8		≤ 20
Aroclor 1016 {4}	MULTI	AverageRF	% RSD	16.0		≤ 20
Aroclor 1016 {5}	MULTI	AverageRF	% RSD	15.2		≤ 20
Aroclor 1260 {1}	MULTI	AverageRF	% RSD	18.8		≤ 20
Aroclor 1260 {2}	MULTI	AverageRF	% RSD	19.5		≤ 20
Aroclor 1260 {3}	MULTI	AverageRF	% RSD	12.9		≤ 20
Aroclor 1260 {4}	MULTI	AverageRF	% RSD	14.0		≤ 20
Aroclor 1260 {5}	MULTI	AverageRF	% RSD	13.5		≤ 20

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04

Service Request: K0810000
Calibration Date: 09/22/2008
Date Analyzed: 09/23/2008

Second Source Calibration Verification
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082

Calibration ID: CAL7795
Units: ng/mL

File ID: \\cash1\acqudata\GC09\data\092208_r.b\0922R041.D
\\cash1\acqudata\GC09\data\092208_r.b\0922R042.D
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\\cash1\acqudata\GC09\data\092208_r.b\0922R045.D
\\cash1\acqudata\GC09\data\092208_r.b\0922R046.D
\\cash1\acqudata\GC09\data\092208_r.b\0922R047.D
\\cash1\acqudata\GC09\data\092208_r.b\0922R048.D
\\cash1\acqudata\GC09\data\092208_r.b\0922R049.D

Column ID: DB-XLB

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Aroclor 1016 {1}	1000	970	343	334	-3	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	900	681	614	-10	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	930	360	334	-7	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	980	413	406	-2	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	980	368	361	-2	NA	± 100 %	AverageRF
Aroclor 1016	1000	950	NA	NA	NA	5	± 15 %	NA
Aroclor 1260 {1}	1000	920	703	647	-8	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	930	740	685	-7	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	880	919	809	-12	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	1100	492	550	12	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	1100	1060	1140	8	NA	± 100 %	AverageRF
Aroclor 1260	1000	980	NA	NA	NA	2	± 15 %	NA

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound ‡ CCC Compound

Sequence Name: D:\GC09\SEQUENCE\092208.S
Comment:
Operator: LHarris
Data Path: D:\GC09\DATA\092208.B\
Pre-Seq Cmd:
Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

8082
10AL 7795

Line	Type	Vial	DataFile	Method	Sample Name
1	DeleteGC				
2	MaskName - ----r---				
3	IB	1	0922F001	PCB1	IB
4	IB	1	0922F002	PCB1	IB
5	IB	1	0922F003	PCB1	IB
6	IB	1	0922F004	PCB1	IB
7	IB	1	0922F005	PCB1	IB
8	IB	2	0922F006	PCB1	KWG0804201-2 | IB | 8082 PCB
9	ICAL	3	0922F007	PCB1	1221 @ 50ppb | PCB5-10I | KWG0804201-
10	ICAL	4	0922F008	PCB1	1221 @ 500ppb | PCB5-10J | KWG0804201
11	ICAL	5	0922F009	PCB1	1221 @ 1000ppb | PCB5-18J | KWG080420
12	ICAL	6	0922F010	PCB1	1221 @ 2000ppb | PCB5-10K | KWG080420
13	ICAL	7	0922F011	PCB1	1232 @ 50ppb | PCB5-10L | KWG0804201-
14	ICAL	8	0922F012	PCB1	1232 @ 500ppb | PCB5-10M | KWG0804201
15	ICAL	9	0922F013	PCB1	1232 @ 1000ppb | PCB5-18K | KWG080420
16	ICAL	10	0922F014	PCB1	1232 @ 2000ppb | PCB5-10N | KWG080420
17	ICAL	11	0922F015	PCB1	1242 @ 50ppb | PCB5-10O | KWG0804201-
18	ICAL	12	0922F016	PCB1	1242 @ 500ppb | PCB5-10P | KWG0804201
19	ICAL	13	0922F017	PCB1	1242 @ 1000ppb | PCB5-18L | KWG080420
20	ICAL	14	0922F018	PCB1	1242 @ 2000ppb | PCB5-10Q | KWG080420
21	ICAL	15	0922F019	PCB1	1248 @ 50ppb | PCB5-11A | KWG0804201-
22	ICAL	16	0922F020	PCB1	1248 @ 500ppb | PCB5-11B | KWG0804201
23	ICAL	17	0922F021	PCB1	1248 @ 1000ppb | PCB5-18M | KWG080420
24	ICAL	18	0922F022	PCB1	1248 @ 2000ppb | PCB5-11C | KWG080420
25	ICAL	19	0922F023	PCB1	1254 @ 50ppb | PCB5-11D | KWG0804201-
26	ICAL	20	0922F024	PCB1	1254 @ 500ppb | PCB5-11E | KWG0804201
27	ICAL	21	0922F025	PCB1	1254 @ 1000ppb | PCB5-18N | KWG080420
28	ICAL	22	0922F026	PCB1	1254 @ 2000ppb | PCB5-11F | KWG080420
29	ICAL	23	0922F027	PCB1	1262 @ 50ppb | PCB5-11G | KWG0804201-
30	ICAL	24	0922F028	PCB1	1262 @ 500ppb | PCB5-11H | KWG0804201
31	ICAL	25	0922F029	PCB1	1262 @ 1000ppb | PCB5-18O | KWG080420
32	ICAL	26	0922F030	PCB1	1262 @ 2000ppb | PCB5-11I | KWG080420
33	ICAL	27	0922F031	PCB1	1268 @ 50ppb | PCB5-11J | KWG0804201-
34	ICAL	28	0922F032	PCB1	1268 @ 500ppb | PCB5-11K | KWG0804201
35	ICAL	29	0922F033	PCB1	1268 @ 1000ppb | PCB5-18P | KWG080420
36	ICAL	30	0922F034	PCB1	1268 @ 2000ppb | PCB5-11L | KWG080420
37	ICAL	31	0922F035	PCB1	1660 @ 25ppb | PCB5-23A | KWG0804201-
38	ICAL	32	0922F036	PCB1	1660 @ 50ppb | PCB5-23B | KWG0804201-
39	ICAL	33	0922F037	PCB1	1660 @ 500ppb | PCB5-23C | KWG0804201
40	ICAL	34	0922F038	PCB1	1660 @ 1000ppb | PCB5-22H | KWG080420
41	ICAL	35	0922F039	PCB1	1660 @ 2000ppb | PCB5-23D | KWG080420
42	ICAL	36	0922F040	PCB1	1660 @ 5000ppb | PCB5-23E | KWG080420
43	ICV	37	0922F041	PCB1	1016 @ 1000ppb | PCB5-19A | KWG080420

+500ppb standard doubled for DCB on rtx column.
MH 9/23/08

Last Modified: Mon Sep 22 14:30:18 2008

Page: 1

Sequence Name: D:\GC09\SEQUENCE\092208.S

Line	Type	Vial	DataFile	Method	Sample Name		
44	ICV	38	0922F042	PCB1	1221 @ 1000ppb	PCB5-19B	KWG080420
45	ICV	39	0922F043	PCB1	1232 @ 1000ppb	PCB5-19C	KWG080420
46	ICV	40	0922F044	PCB1	1242 @ 1000ppb	PCB5-19D	KWG080420
47	ICV	41	0922F045	PCB1	1248 @ 1000ppb	PCB5-19E	KWG080420
48	ICV	42	0922F046	PCB1	1254 @ 1000ppb	PCB5-19F	KWG080420
49	ICV	43	0922F047	PCB1	1260 @ 1000ppb	PCB5-19G	KWG080420
50	ICV	44	0922F048	PCB1	1262 @ 1000ppb	PCB5-19H	KWG080420
51	ICV	45	0922F049	PCB1	1268 @ 1000ppb	PCB5-19I	KWG080420
52	IB	2	0922F050	PCB1	KWG0804201-24	IB	8082 PCB

Last Modified: Mon Sep 22 14:30:18 2008

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F006.D
Report Date: 23-Sep-2008 16:36

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\092208.b\0922F006.D
Sample #2 : \\cash1\acqudata\GC09\data\092208_r.b\0922R006.D
Inj Date : 22-SEP-2008 18:25
Sample Info: KWG0804201-2 | IB | 8082 PCB
Misc Info : SEMIVOA GC\W0804201\2-IB.H
Cal Date : 23-SEP-2008 16:08
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\092208.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\092208_r.b\092208_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio

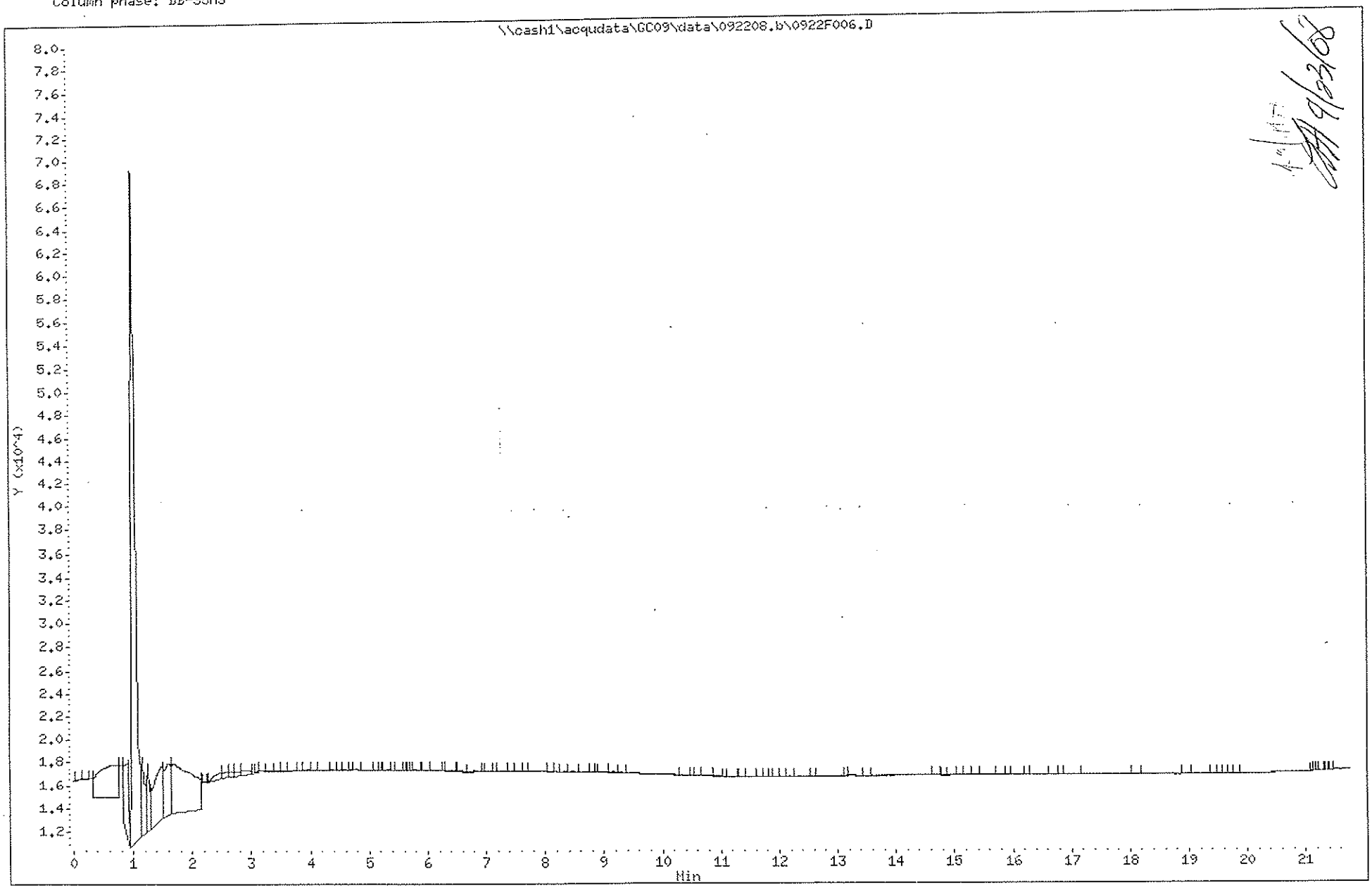
9/23/08

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F006.D
Date : 22-SEP-2008 18:25
Client ID:
Sample Info: KWG0804201-2 | IB | 8082 PCB

Column phase: DB-35MS

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

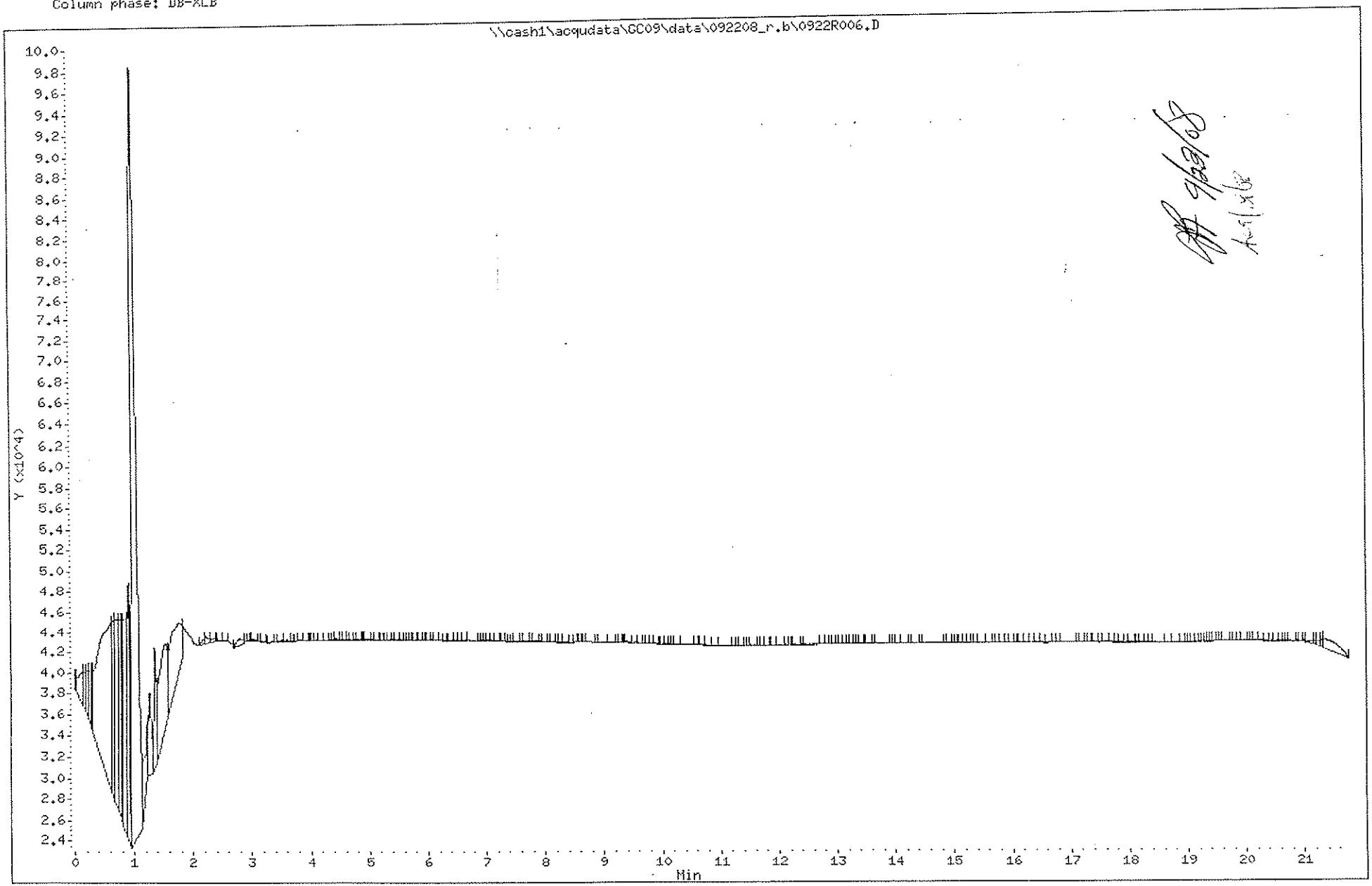


Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R006.D
Date : 22-SEP-2008 18:25
Client ID:
Sample Info: KWG0804201-2 | IB | 8082 PCB

Column phase: DB-XLB

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53



Data File: \\cash1\acqudata\GC09\data\092208.b\0922F009.D
Report Date: 23-Sep-2008 16:36

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\092208.b\0922F009.D
Sample #2 : \\cash1\acqudata\GC09\data\092208_r.b\0922R009.D
Inj Date : 22-SEP-2008 19:44
Sample Info: 1221 @ 1000ppb | PCB5-18J | KWG0804201-3
Misc Info : SEMIVOA GC\W0804201\3-ICAL.H
Cal Date : 23-SEP-2008 15:26
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\092208.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\092208_r.b\092208_r.m
Sub List #1 : AR1221.SUB
Sub List #2 : AR1221.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1221	3.360	3.573	91590	140624	1000	1000	80.00- 120.00	100.00(M)
	3.870	4.197	37855	48950	1000	1000	33.06- 49.60	41.33(M)
	4.387	4.747	134986	223434	1000	1000	117.90- 176.86	147.38(M)
	4.563	4.867	87320	146185	1000	1000	76.27- 114.41	95.34(M)
			Average of Peak Amounts =		1000	1000		

QC Flag Legend

M - Compound response manually integrated.

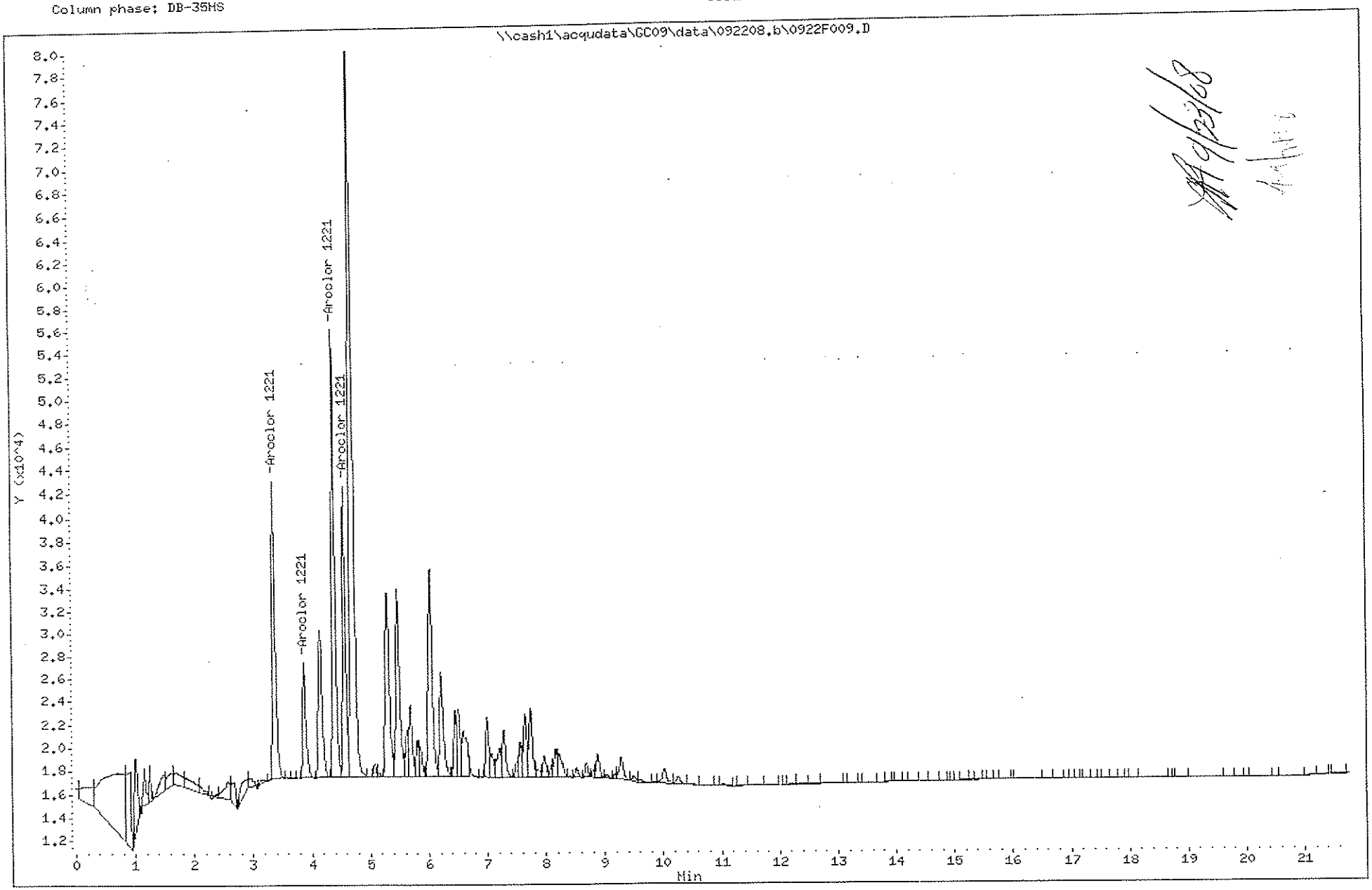
9/23/08

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F009.D
Date : 22-SEP-2008 19:44
Client ID:
Sample Info: 1221 @ 1000ppb | PCB5-18J | KWG0804201-3

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-35MS

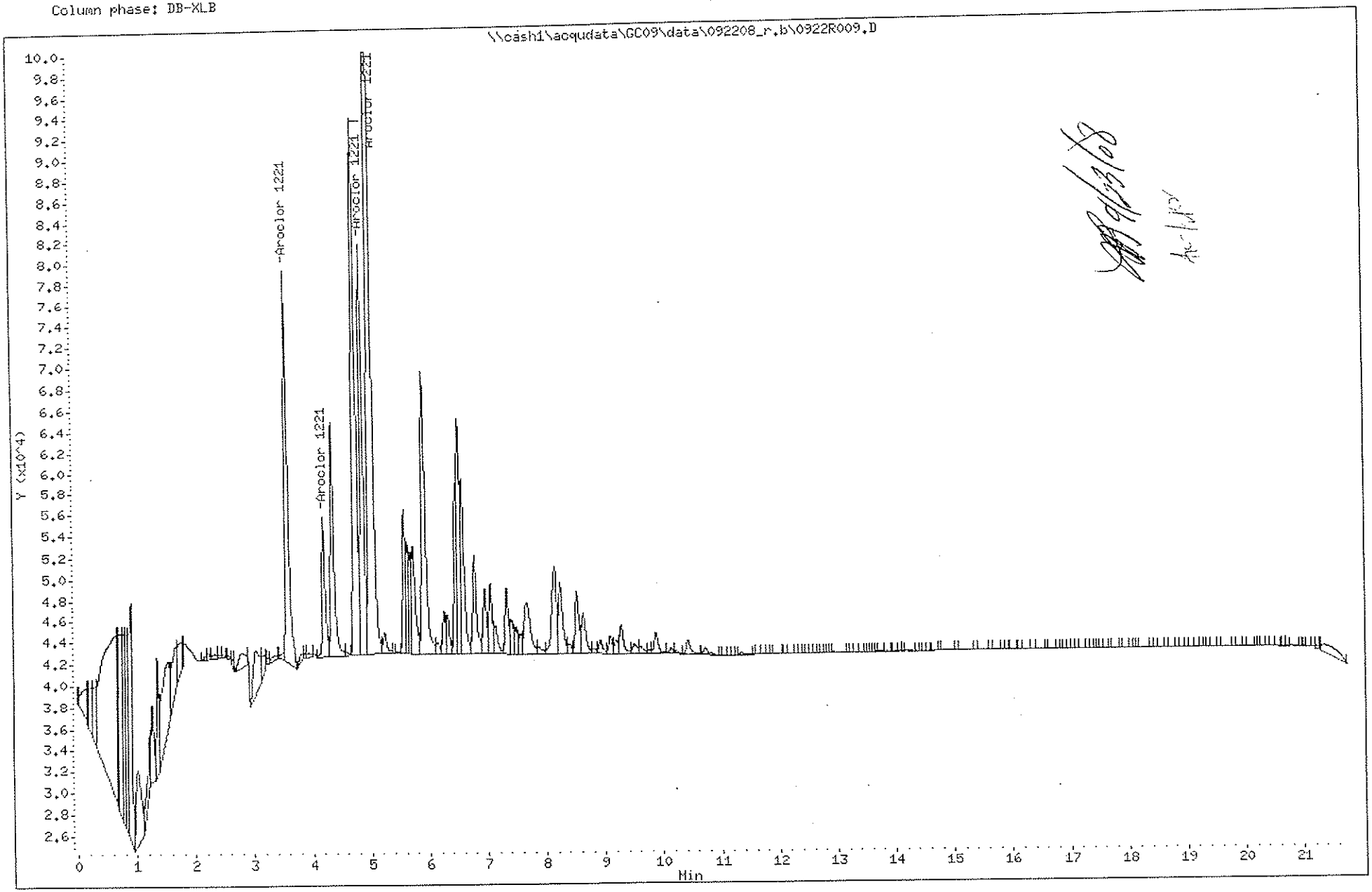


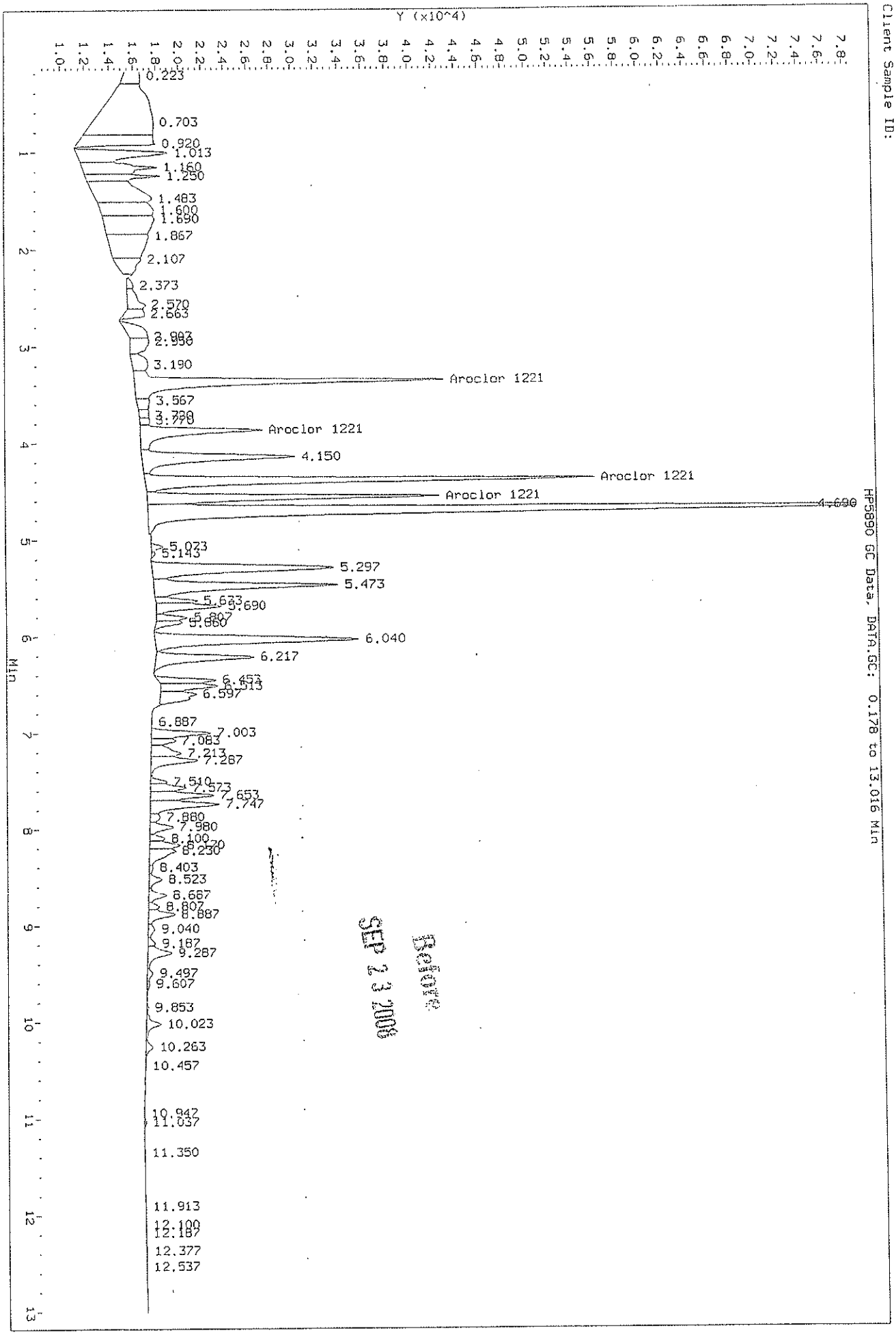
Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R009.D
Date : 22-SEP-2008 19:44
Client ID:
Sample Info: 1221 @ 1000ppb | PCB5-18J | KWG0804201-3

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-XLB




Data File: \\cash1\acqudata\GC09\data\092208.b\0922F009.D
Injection Date: 22-SEP-2008 19:44
Instrument: GC09.i
Client Sample ID:
Y (x10^4)
HP5890 GC Data, DATA.GC: 0.178 to 13.016 Min
Min
0.223
0.703
0.920
1.013
1.160
1.250
1.483
1.600
1.690
1.867
2.107
2.373
2.570
2.663
2.907
2.956
3.190
Aroclor 1221
3.567
3.720
3.770
Aroclor 1221
4.150
Aroclor 1221
Aroclor 1221
4.690
5.023
5.143
5.297
5.473
5.633
5.690
5.807
5.860
6.040
6.217
6.453
6.513
6.597
6.887
7.003
7.083
7.213
7.287
7.510
7.573
7.653
7.747
7.880
7.980
8.100
8.230
8.403
8.523
8.687
8.807
8.887
9.040
9.187
9.287
9.487
9.607
9.853
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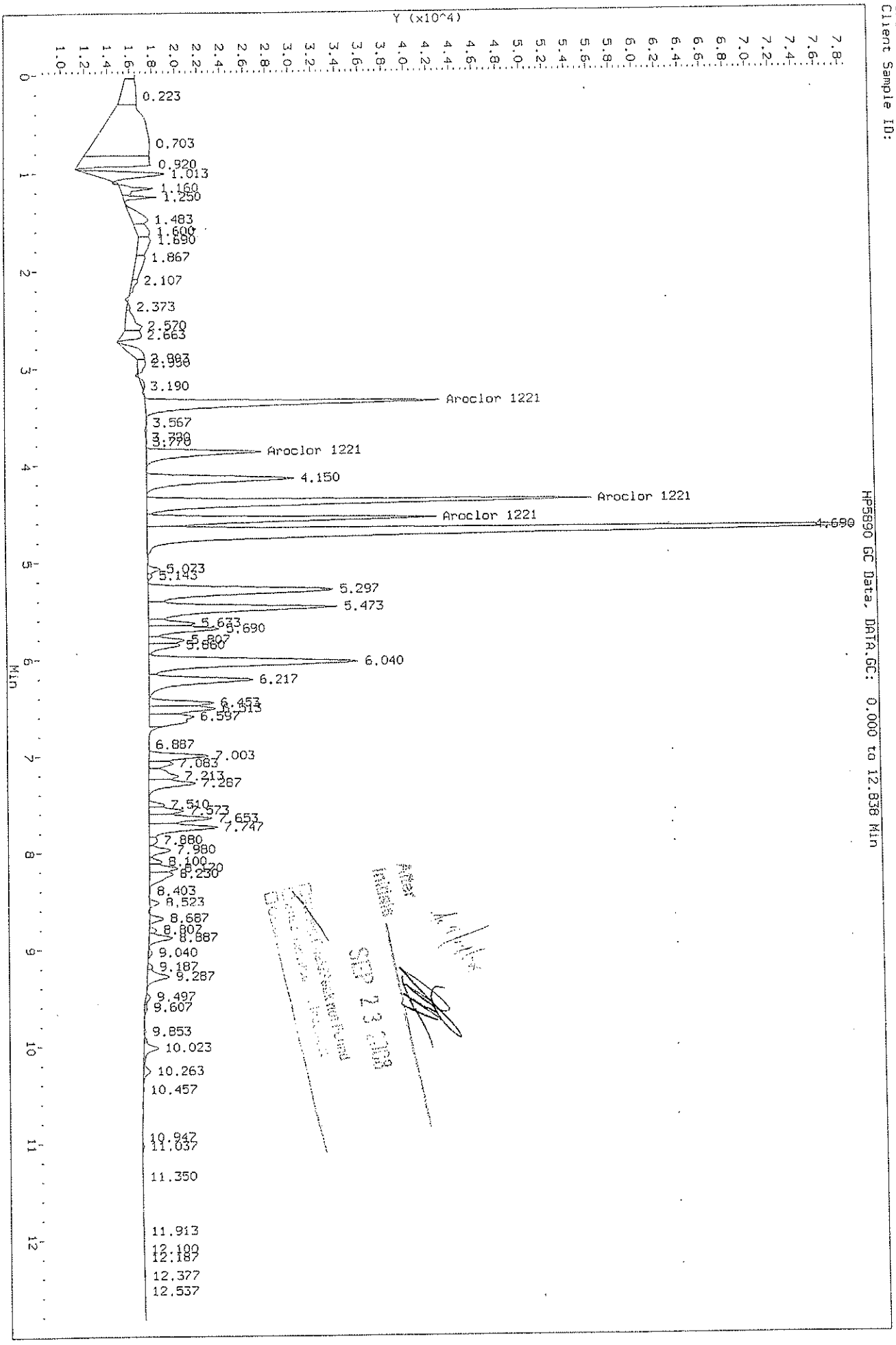
12.100
12.187
12.377
12.537
SEP 23 2008


Data File: \\cash1\acqudata\GC09\data\092208.b\0922F009.D
Injection Date: 22-SEP-2008 19:44
Instrument: GC09.i
Client Sample ID:
Y (x10^4)
Min
0.223
0.703
0.920
1.013
1.160
1.250
1.483
1.600
1.690
1.867
2.107
2.373
2.570
2.663
2.883
2.990
3.190
Aroclor 1221
3.567
3.730
3.770
Aroclor 1221
4.150
Aroclor 1221
Aroclor 1221
4.690
5.023
5.143
5.297
5.473
5.623
5.690
5.807
5.860
6.040
6.217
6.453
6.513
6.597
6.887
7.003
7.063
7.213
7.287
7.510
7.573
7.653
7.747
7.880
7.980
8.100
8.230
8.403
8.523
8.687
8.807
8.887
9.040
9.187
9.287
9.497
9.607
9.853
10.023
10.263
10.457
10.947
11.037
11.350
11.913
12.100
12.187
12.377
12.537
HP5890 GC Data, DATA.GC: 0.000 to 12.838 Min

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F013.D
Report Date: 23-Sep-2008 16:36

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\092208.b\0922F013.D
Sample #2 : \\cash1\acqudata\GC09\data\092208_r.b\0922R013.D
Inj Date : 22-SEP-2008 21:30
Sample Info: 1232 @ 1000ppb | PCB5-18K | KWG0804201-4
Misc Info : SEMIVOA GC\W0804201\4-ICAL.H
Cal Date : 23-SEP-2008 15:26
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\092208.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\092208_r.b\092208_r.m
Sub List #1 : AR1232.SUB
Sub List #2 : AR1232.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1232	4.690	5.007	264058	414955	1000	1000	80.00- 120.00	100.00(M)
	5.287	5.583	226730	187819	1000	1000	68.69- 103.04	85.86(M)
	6.040	5.920	424870	267841	1000	1000	128.72- 193.08	160.90(M)
	6.217	6.470	195528	197459	1000	1000	59.24- 88.86	74.05(M)
			Average of Peak Amounts =		1000	1000		

QC Flag Legend

M - Compound response manually integrated.

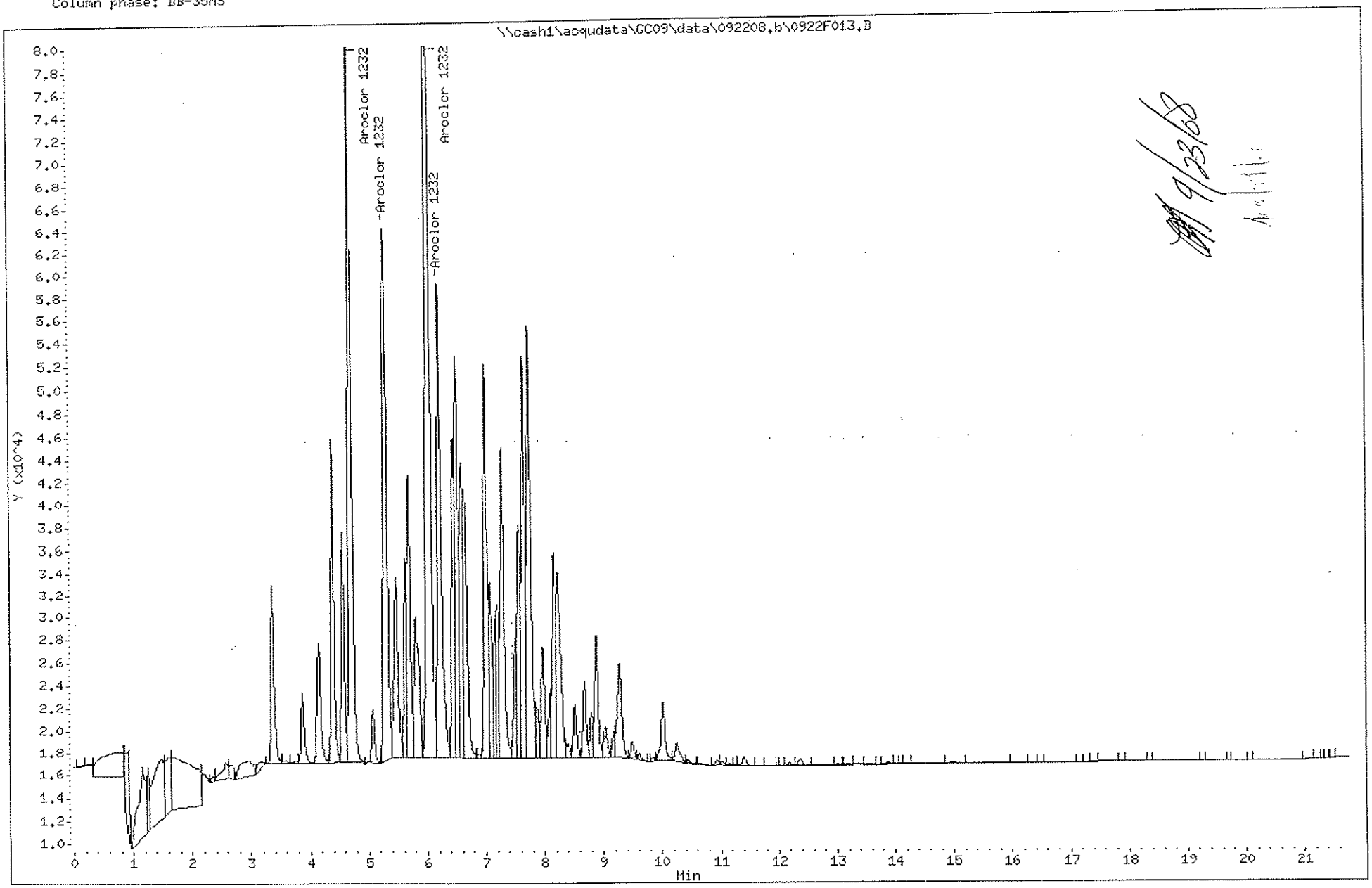
9/23/08

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F013.D
Date : 22-SEP-2008 21:30
Client ID:
Sample Info: 1232 @ 1000ppb | PCB5-18K | KWG0804201-4

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-35MS

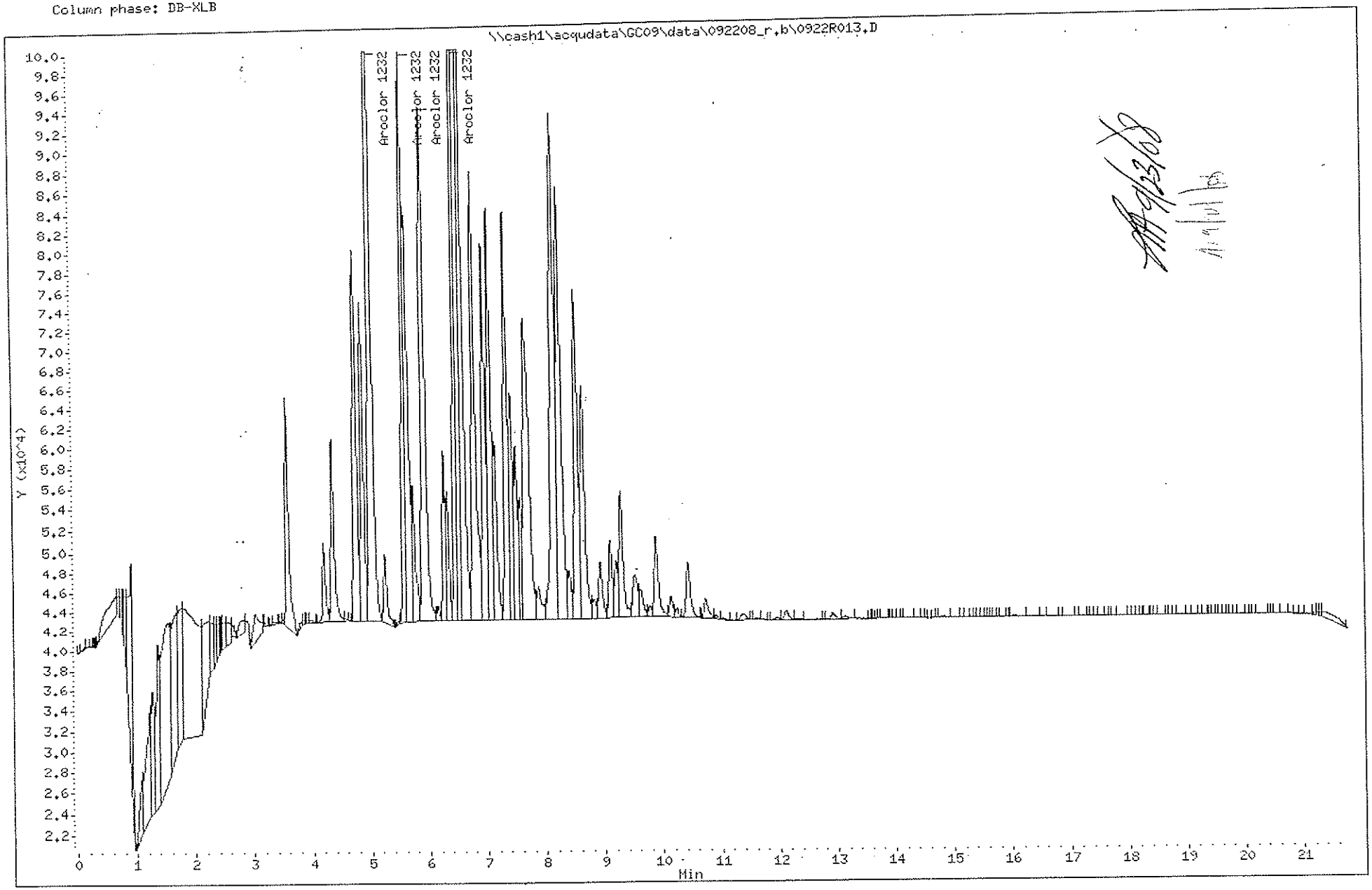


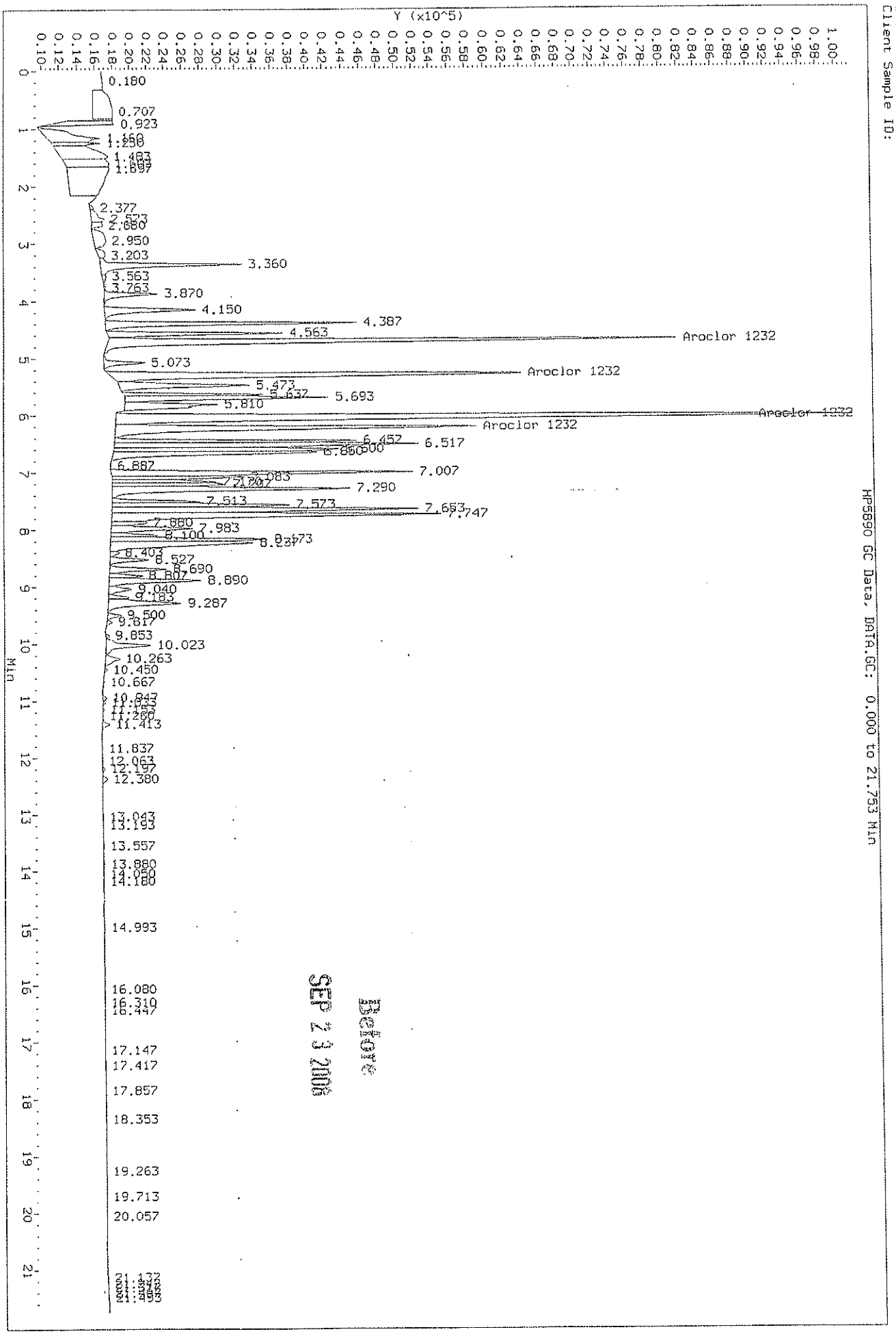
Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R013.D
Date : 22-SEP-2008 21:30
Client ID:
Sample Info: 1232 @ 1000ppb | PCB5-18K | KWG0804201-4

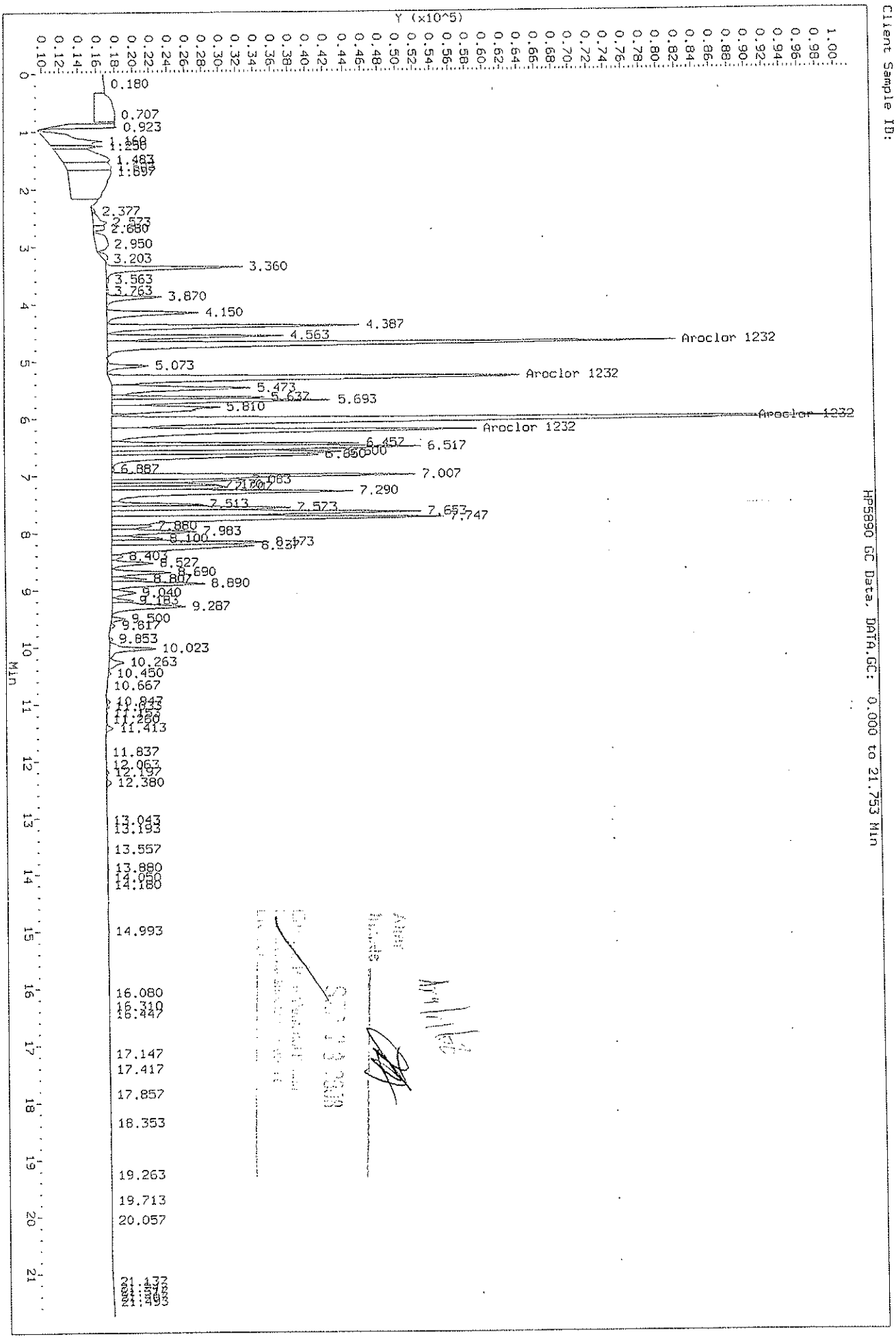
Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-XLB




Data File: \\cash1\acqudata\GC09\data\092208.b\0922F013.D
Injection Date: 22-SEP-2008 21:30
Instrument: GC09.i
Client Sample ID:
HP5890 GC Data, DATA.GC; 0.000 to 21.753 Min
Y (x10^5)
Min
0.180
0.707
0.923
1.483
2.377
2.680
2.950
3.203
3.360
3.563
3.763
3.870
4.150
4.387
4.563
Aroclor 1232
5.073
Aroclor 1232
5.473
5.693
5.810
Aroclor 1232
Aroclor 1232
6.452
6.517
6.887
7.007
7.290
7.513
7.573
7.653
7.747
7.880
7.983
8.100
8.403
8.527
8.690
8.807
8.890
9.040
9.287
9.500
9.617
9.853
10.023
10.263
10.450
10.667
11.413
11.837
12.063
12.197
12.380
13.043
13.193
13.557
13.880
14.050
14.180
14.993
16.080
16.310
16.447
17.147
17.417
17.857
18.353
19.263
19.713
20.057
SEP 23 2008
Reject


Data File: \\cash1\acqudata\GC09\data\092208.b\0922F013.D
Injection Date: 22-SEP-2008 21:30
Instrument: GC09.i
Client Sample ID:
HP5890 GC Data, DATA.GC: 0.000 to 21.753 Min
Y (x10^5)
Min
0.180
0.707
0.923
1.250
1.483
2.377
2.680
2.950
3.203
3.360
3.563
3.763
3.870
4.150
4.387
4.563
Aroclor 1232
5.073
Aroclor 1232
5.473
5.637
5.693
5.810
Aroclor 1232
Aroclor 1232
6.452
6.517
6.887
7.007
7.290
7.513
7.523
7.653
7.747
7.983
8.403
8.527
8.690
8.807
8.890
9.040
9.287
9.500
9.617
9.853
10.023
10.263
10.450
10.667
10.847
11.413
11.837
12.063
12.197
12.380
13.043
13.193
13.557
13.880
14.050
14.180
14.993
16.080
16.310
16.447
17.147
17.417
17.857
18.353
19.263
19.713
20.057

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F017.D
Report Date: 23-Sep-2008 16:36

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\092208.b\0922F017.D
Sample #2 : \\cash1\acqudata\GC09\data\092208_r.b\0922R017.D
Inj Date : 22-SEP-2008 23:15
Sample Info: 1242 @ 1000ppb | PCB5-18L | KWG0804201-5
Misc Info : SEMIVOA GC\W0804201\5-ICAL.H
Cal Date : 23-SEP-2008 15:26
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\092208.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\092208_r.b\092208_r.m
Sub List #1 : AR1242.SUB
Sub List #2 : AR1242.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1242	5.287	5.583	389392	341599	1000	1000	80.00- 120.00	100.00(M)
	5.640	5.927	87570	410490	1000	1000	17.99- 26.99	22.49(M)
	6.040	6.520	738657	712521	1000	1000	151.76- 227.63	189.70(M)
	6.217	6.787	340854	393545	1000	1000	70.03- 105.04	87.54(M)
	6.517	6.963	280645	279899	1000	1000	57.66- 86.49	72.07(M)
			Average of Peak Amounts =		1000	1000		

QC Flag Legend

M - Compound response manually integrated.

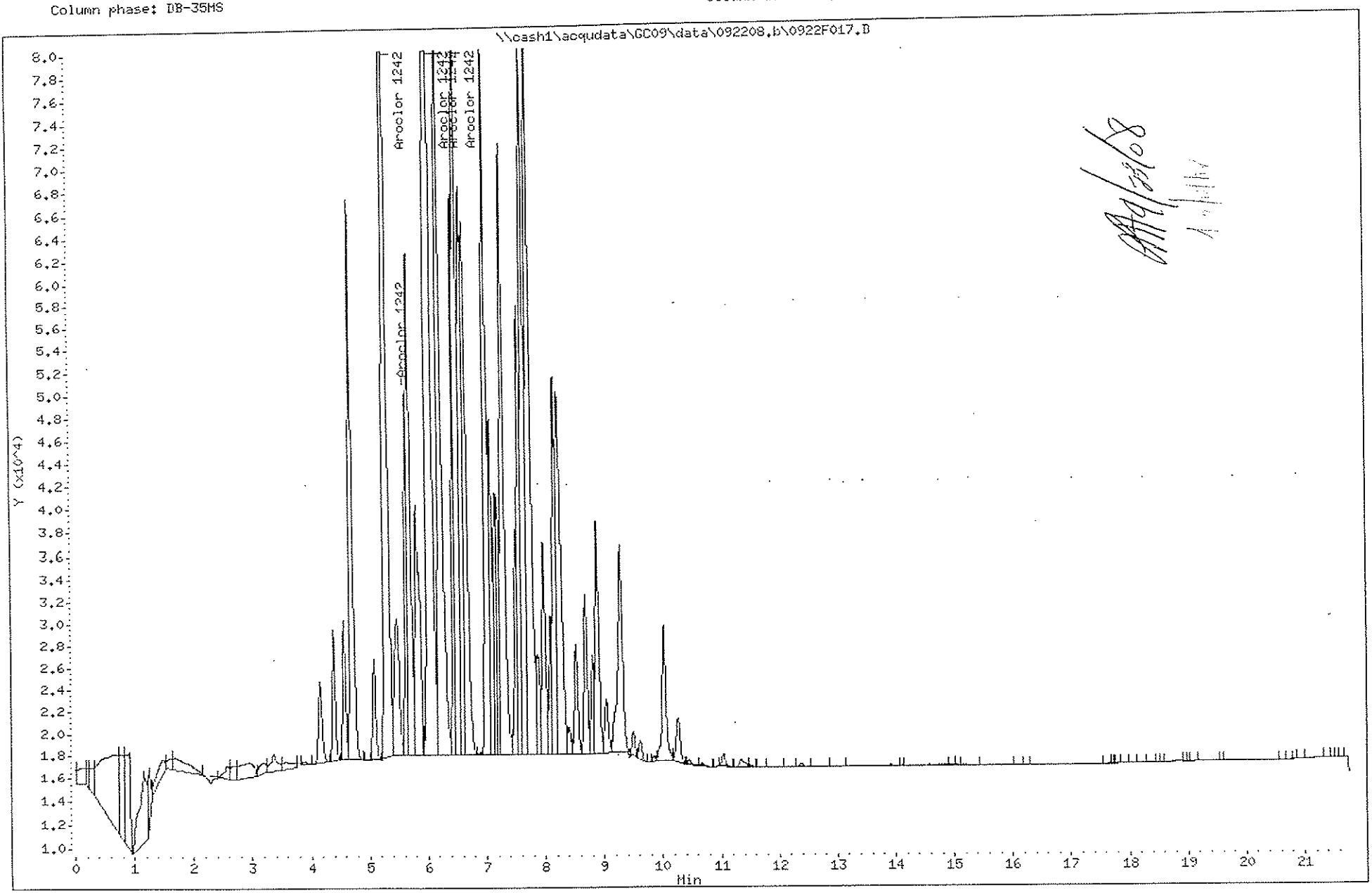
9/23/08

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F017.D
Date : 22-SEP-2008 23:15
Client ID:
Sample Info: 1242 @ 1000ppb | PCB5-18L | KWG0804201-5

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-35MS

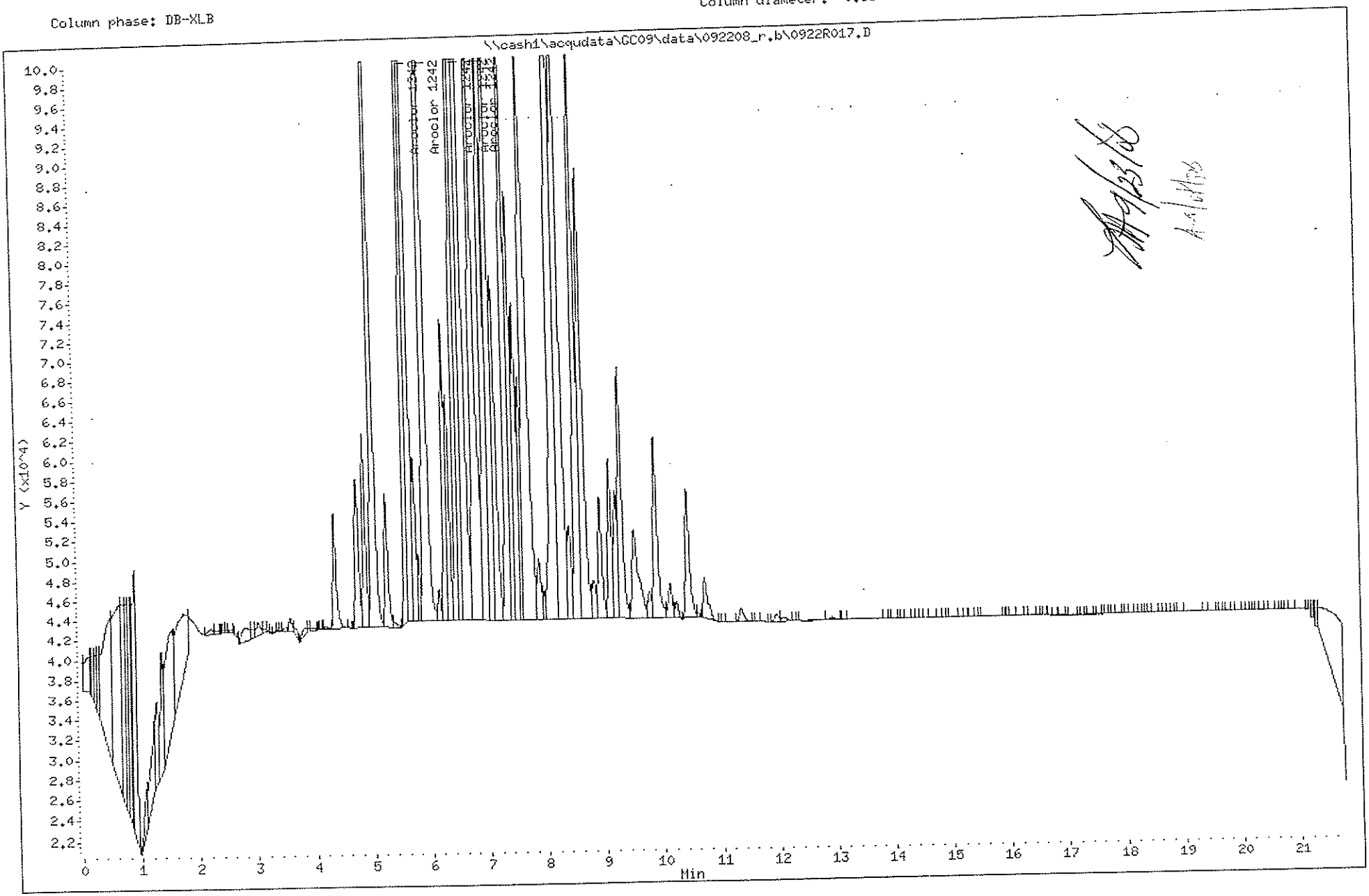


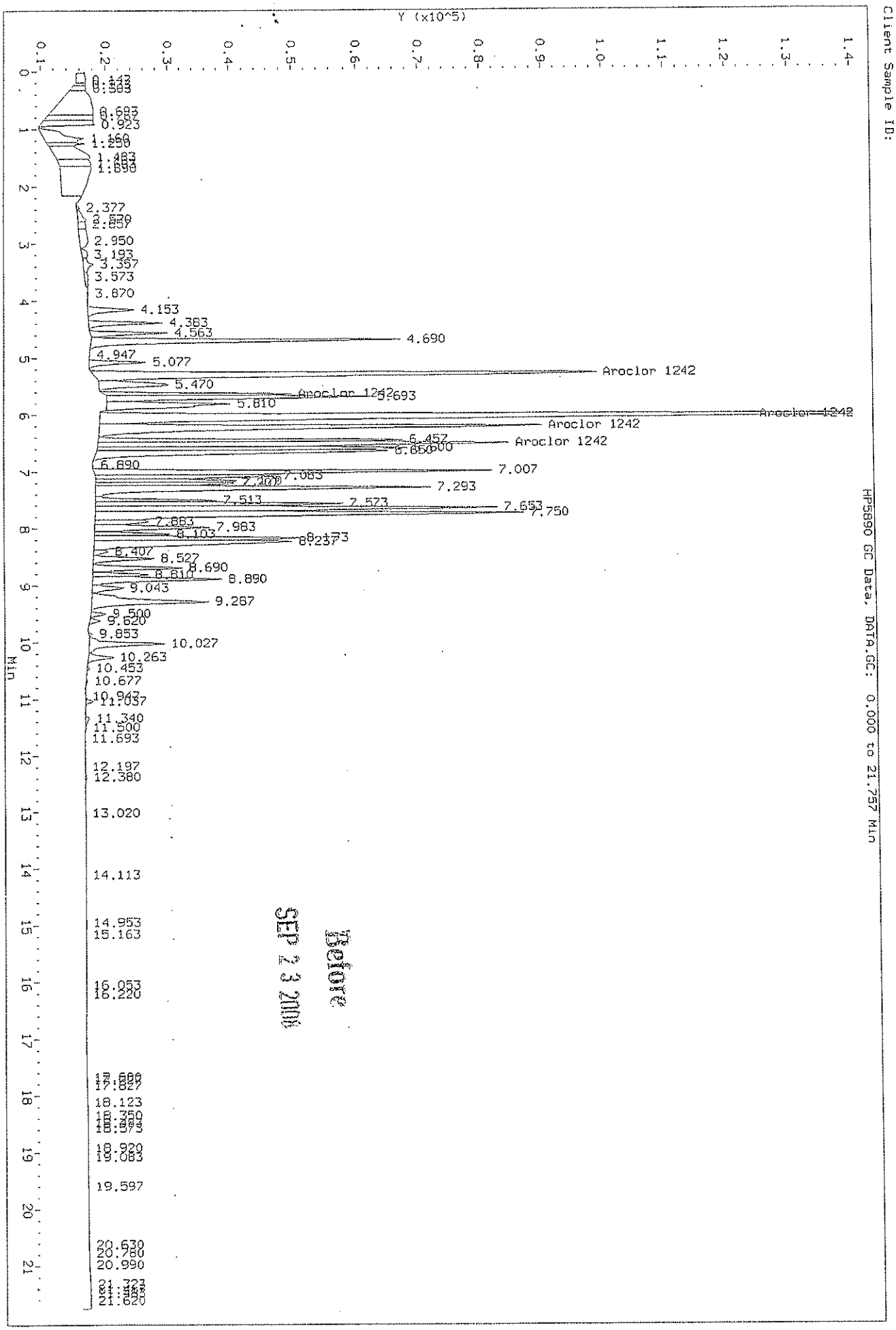
Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R017.D
Date : 22-SEP-2008 23:15
Client ID:
Sample Info: 1242 @ 1000ppb | PCB5-18L | KWG0804201-5

Instrument: GC09.i

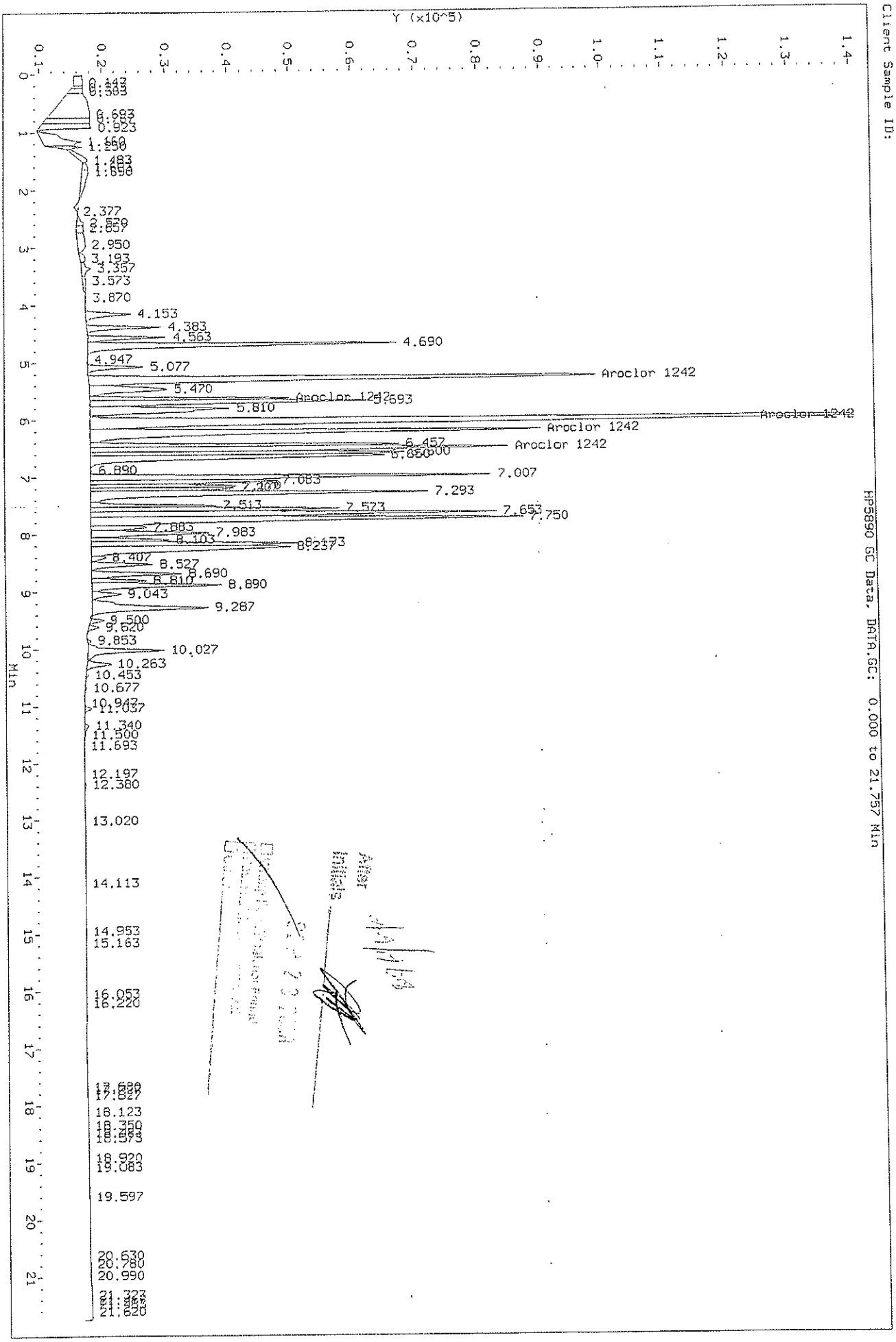
Operator: LHarris
Column diameter: 0.53

Column phase: DB-XLB

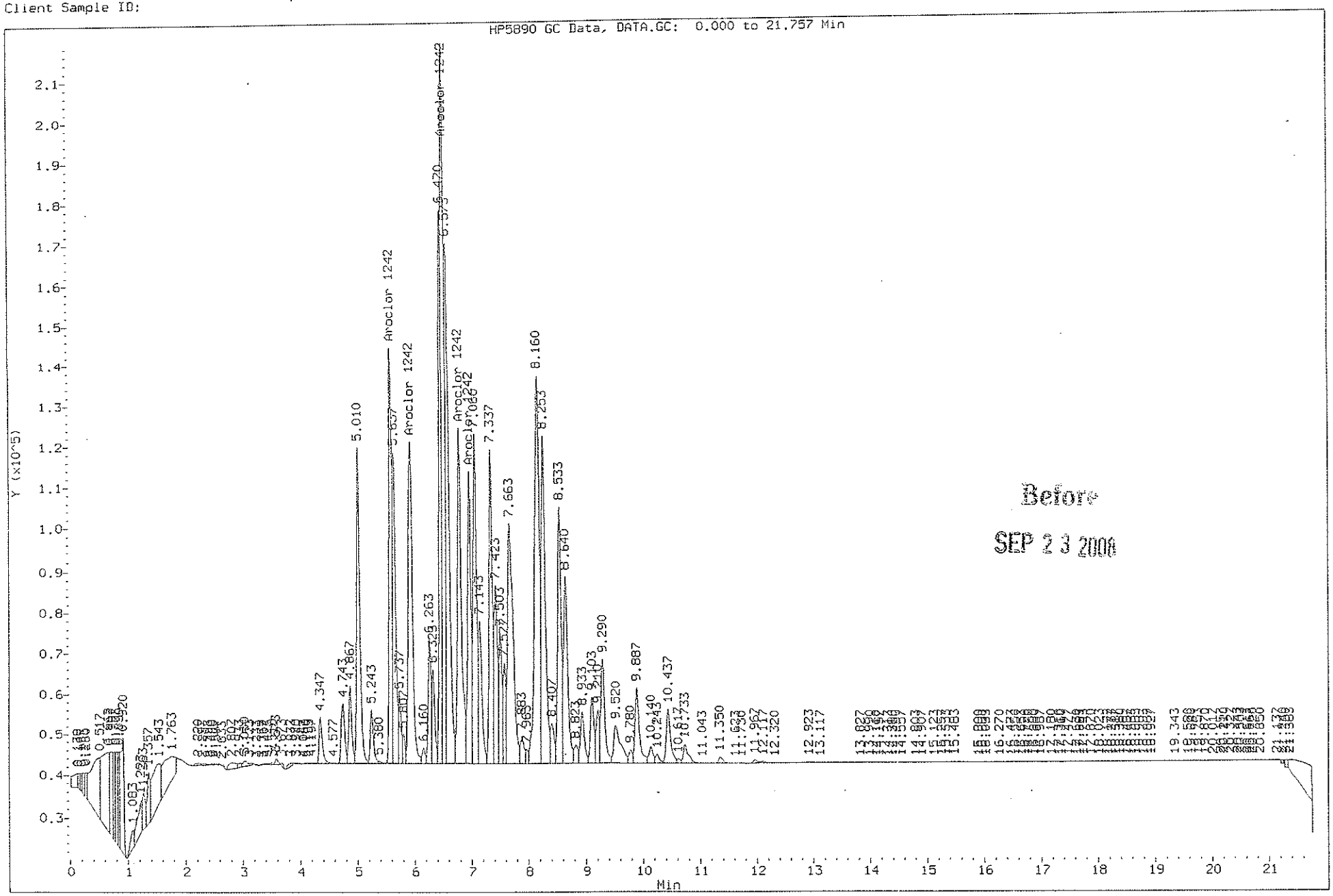


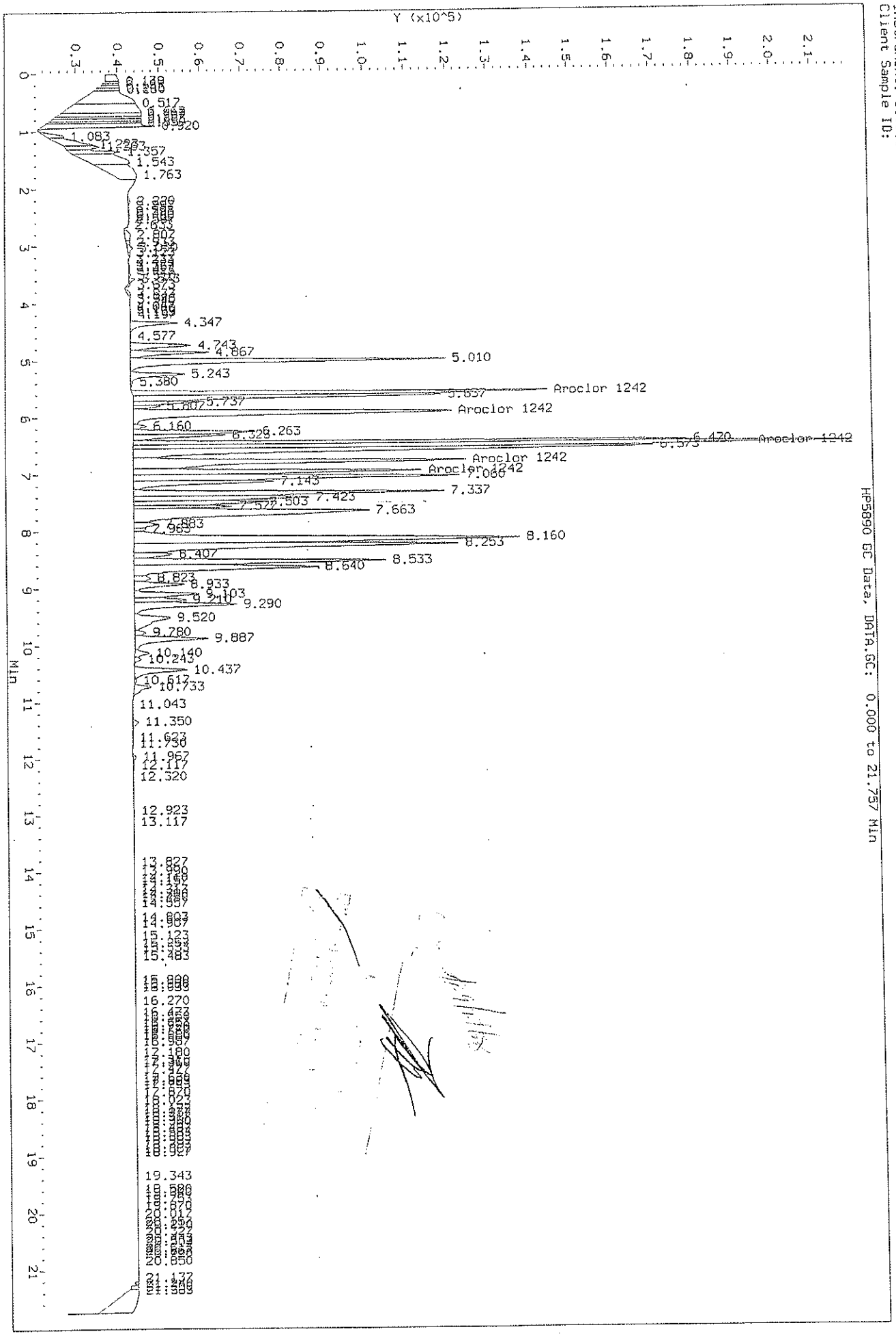


RECEIVED
SEP 23 2008


Data File: \\cash1\acqudata\GC09\data\092208.b\0922F017.D
Injection Date: 22-SEP-2008 23:15
Instrument: GC09.i
Client Sample ID:
HP5890 GC Data, DATA.GC: 0.000 to 21.757 Min
Y (x10^5)
Min
Aroclor 1242
Aroclor 1242
Aroclor 1242
Aroclor 1242
Aroclor 1242
After
Initials

Data File: \\cashi\acqudata\GC09\data\092208_r.b\0922R017.D
Injection Date: 22-SEP-2008 23:15
Instrument: GC09.i
Client Sample ID:




Y (x10^5)
Min
Aroclor 1242
Aroclor 1242
Aroclor 1242
Aroclor 1242
Aroclor 1242
Data File: \\cash1\acgudata\GC09\data\092208_r.b\0922R017.D
Injection Date: 22-SEP-2008 23:15
Instrument: GC09.i
Client Sample ID:
HP5890 GC Data, DATA.GC: 0.000 to 21.757 Min

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F021.D
Report Date: 23-Sep-2008 16:36

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\092208.b\0922F021.D
Sample #2 : \\cash1\acqudata\GC09\data\092208_r.b\0922R021.D
Inj Date : 23-SEP-2008 01:01
Sample Info: 1248 @ 1000ppb | PCB5-18M | KWG0804201-6
Misc Info : SEMIVOA GC\W0804201\6-ICAL.H
Cal Date : 23-SEP-2008 15:26
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\092208.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\092208_r.b\092208_r.m
Sub List #1 : AR1248.SUB
Sub List #2 : AR1248.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1248	6.600	7.060	270306	492303	1000	1000	80.00- 120.00	100.00
	7.007	7.337	373384	490799	1000	1000	110.51- 165.76	138.13
	7.293	8.160	338764	957641	1000	1000	100.26- 150.39	125.33
	7.653	8.253	454266	697169	1000	1000	134.44- 201.67	168.06
	7.750	8.537	577039	508393	1000	1000	170.78- 256.17	213.48
			Average of Peak Amounts =		1000	1000		

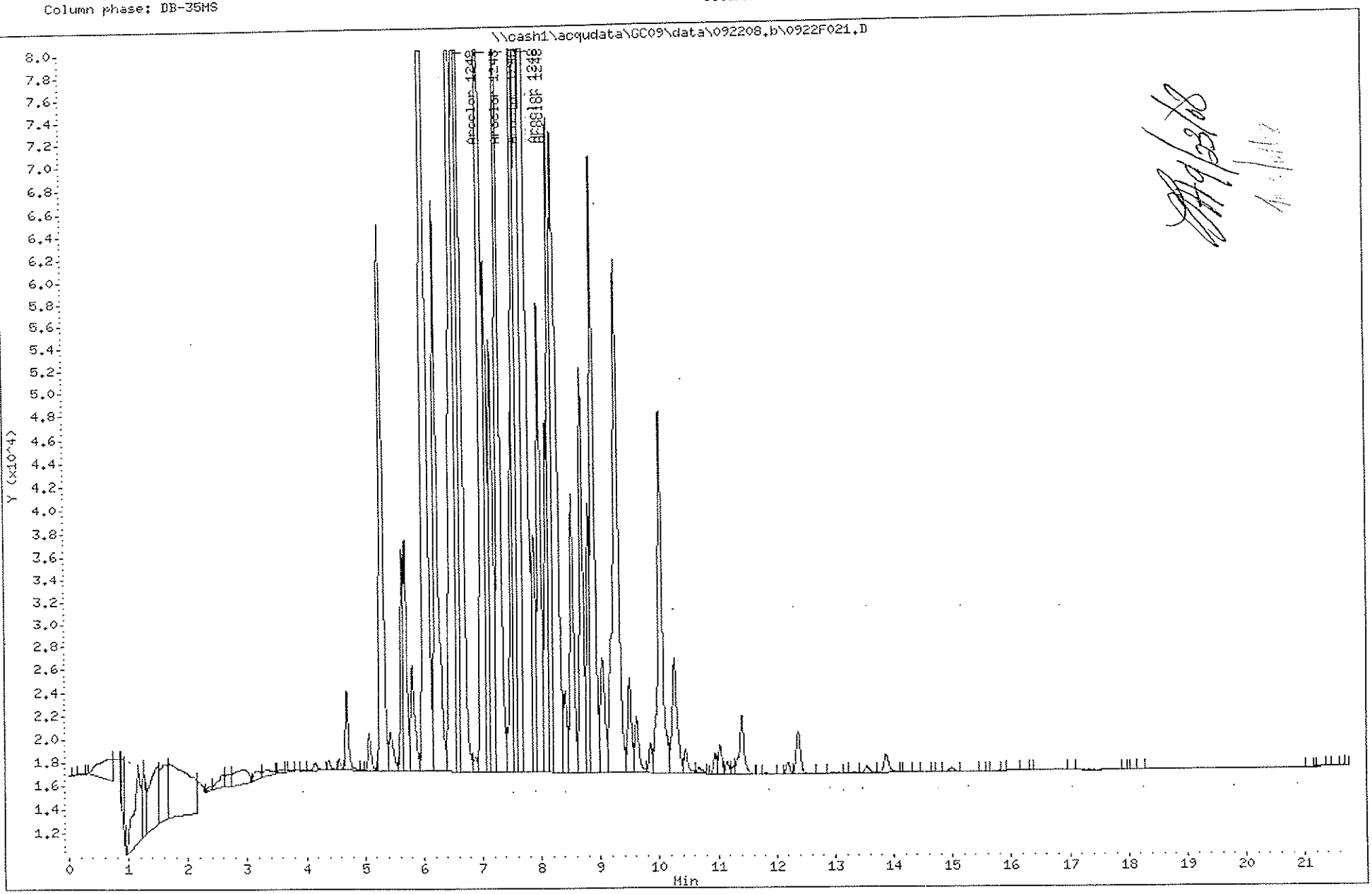
9/23/08

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F021.D
Date : 23-SEP-2008 01:01
Client ID:
Sample Info: 1248 @ 1000ppb | PCB5-18M | KWG0804201-6

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-35MS

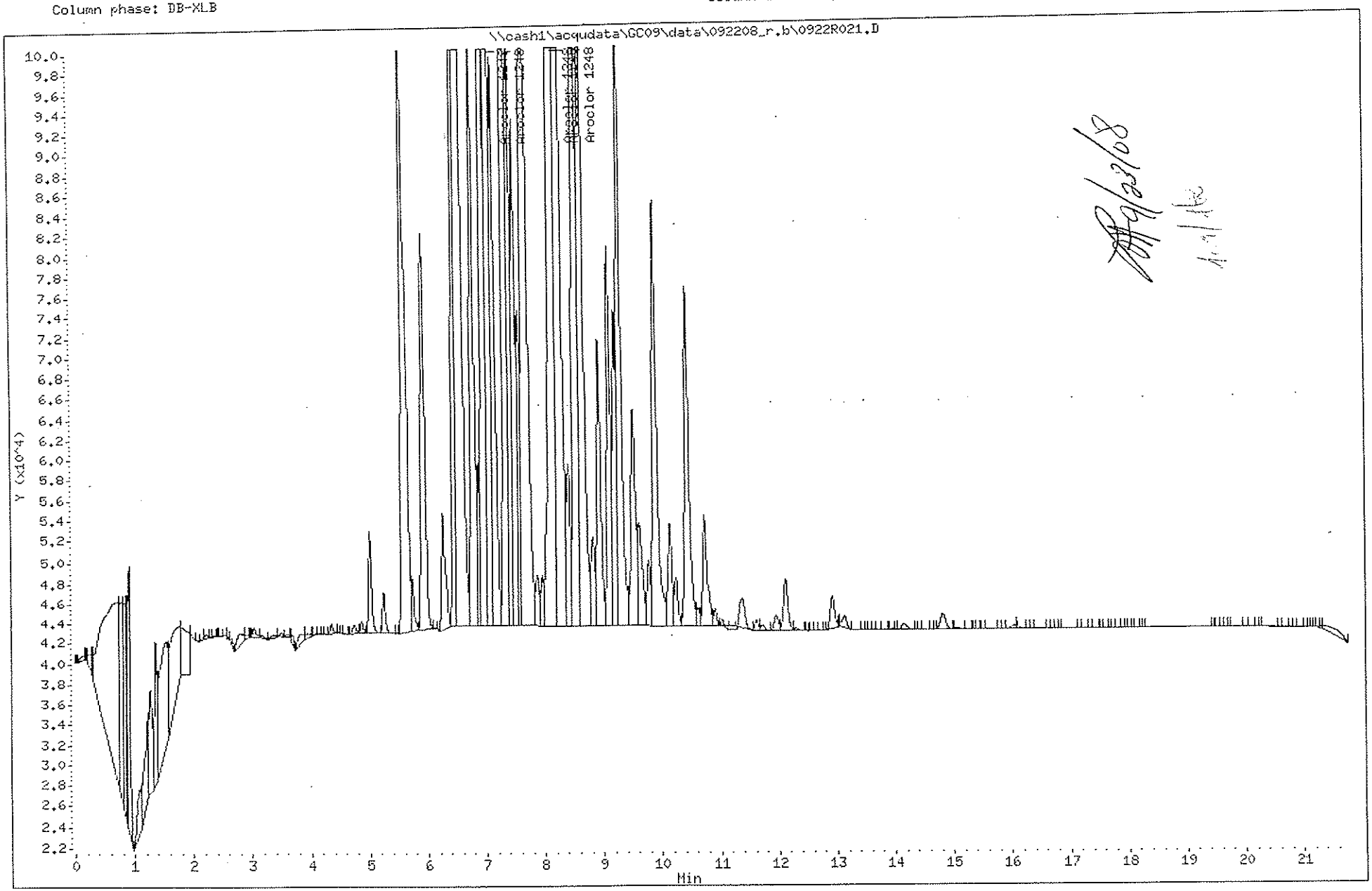


Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R021.D
Date : 23-SEP-2008 01:01
Client ID:
Sample Info: 1248 @ 1000ppb | PCB5-18M | KWG0S04201-6

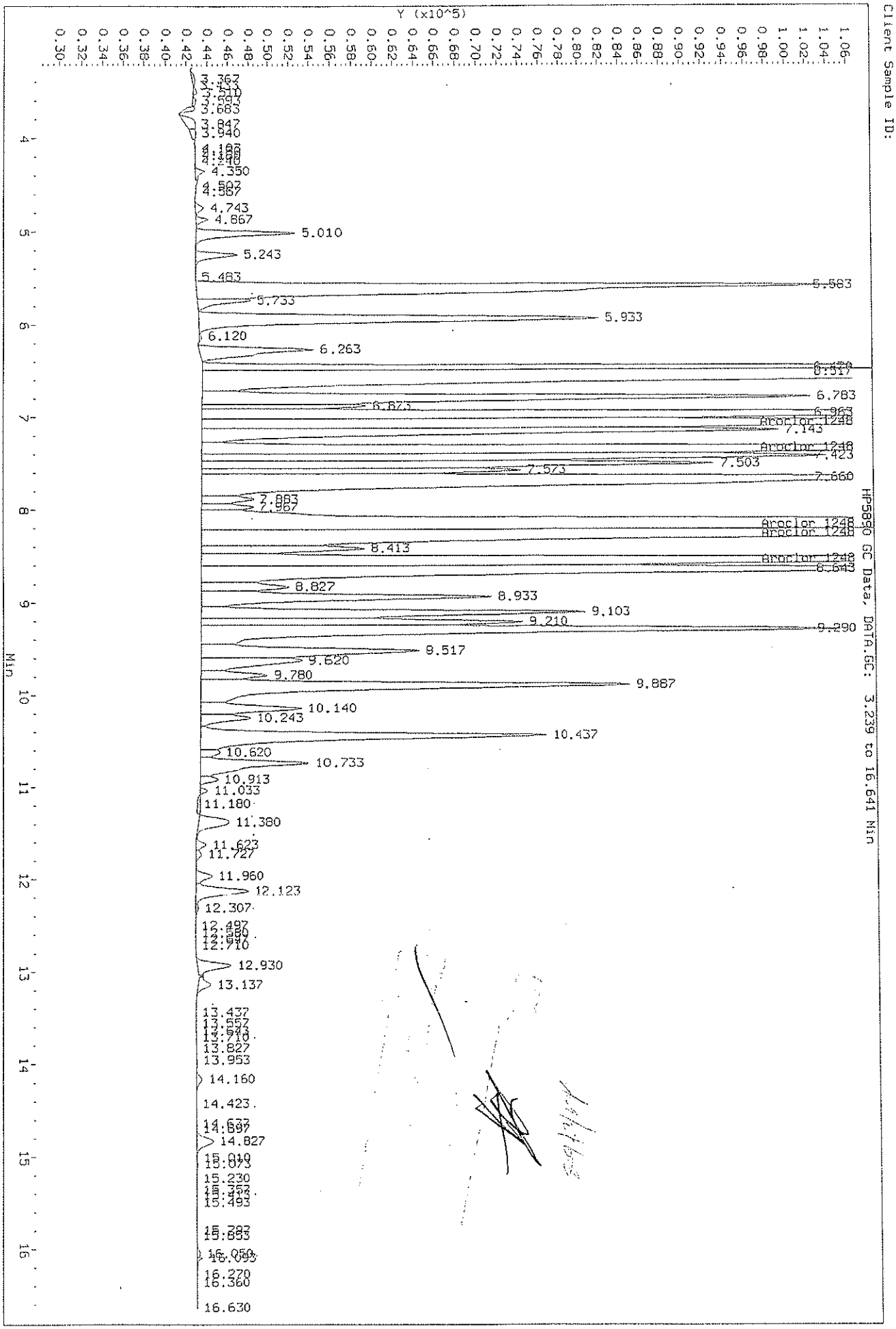
Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-XLB



Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R021.D
Injection Date: 23-SEP-2008 01:01
Instrument: GC09.i
Client Sample ID:
HP5890 GC Data, DATA.GC; 3.239 to 16.641 Min
Min
Y (x10^5)
Aroclor 1248
Aroclor 1248
Aroclor 1248
Aroclor 1248
Aroclor 1248
Aroclor 1248
Received
SEP 23 2008


Data File: \\cash1\acqudata\GC09\data\092208_r.b\09228021.D
Injection Date: 23-SEP-2008 01:01
Instrument: GC09.I
Client Sample ID:
HP5890 GC Data, DATA.GC: 3.239 to 16.641 Min
Y (x10^5)
Min
4.743
4.867
5.010
5.243
5.483
5.583
5.733
5.933
6.120
6.263
6.517
6.783
6.875
Aroclor 1248
7.143
Aroclor 1248
7.423
7.503
7.573
7.660
7.883
7.967
Aroclor 1248
Aroclor 1248
8.413
Aroclor 1248
8.643
8.827
8.933
9.103
9.210
9.290
9.517
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10.733
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11.033
11.180
11.380
11.623
11.727
11.960
12.123
12.307
12.497
12.930
13.137
13.437
13.827
13.953
14.160
14.423
14.827
15.493
16.270
16.360
16.630

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F025.D
Report Date: 23-Sep-2008 16:36

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\092208.b\0922F025.D
Sample #2 : \\cash1\acqudata\GC09\data\092208_r.b\0922R025.D
Inj Date : 23-SEP-2008 02:46
Sample Info: 1254 @ 1000ppb | PCB5-18N | KWG0804201-7
Misc Info : SEMIVOA GC\W0804201\7-ICAL.H
Cal Date : 23-SEP-2008 15:26
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\092208.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\092208_r.b\092208_r.m
Sub List #1 : AR1254.SUB
Sub List #2 : AR1254.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1254	7.980	8.537	512069	803680	1000	1000	80.00- 120.00	100.00(M)
	8.100	8.650	283161	354911	1000	1000	44.24- 66.36	55.30(M)
	8.690	9.100	362117	447367	1000	1000	56.57- 84.86	70.72(M)
	8.890	9.287	739842	829405	1000	1000	115.58- 173.38	167.93(M)
	9.290	9.883	642893	615163	1000	1000	100.44- 150.66	125.55(M)
			Average of Peak Amounts =		1000	1000		

QC Flag Legend

M - Compound response manually integrated.

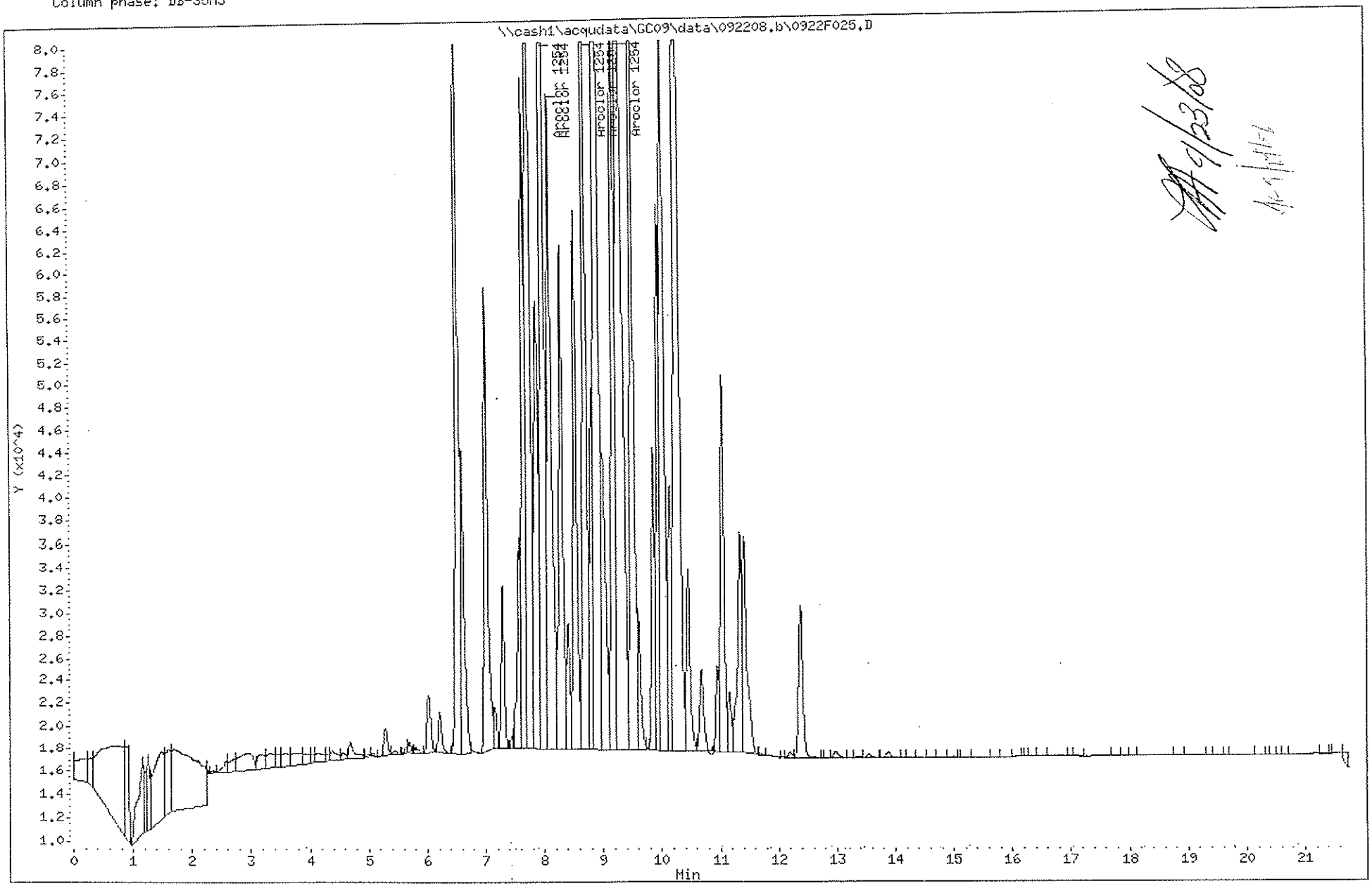
9/23/08

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F025.D
Date : 23-SEP-2008 02:46
Client ID:
Sample Info: 1254 @ 1000ppb | PCB5-18N | KWG0804201-7

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-35MS

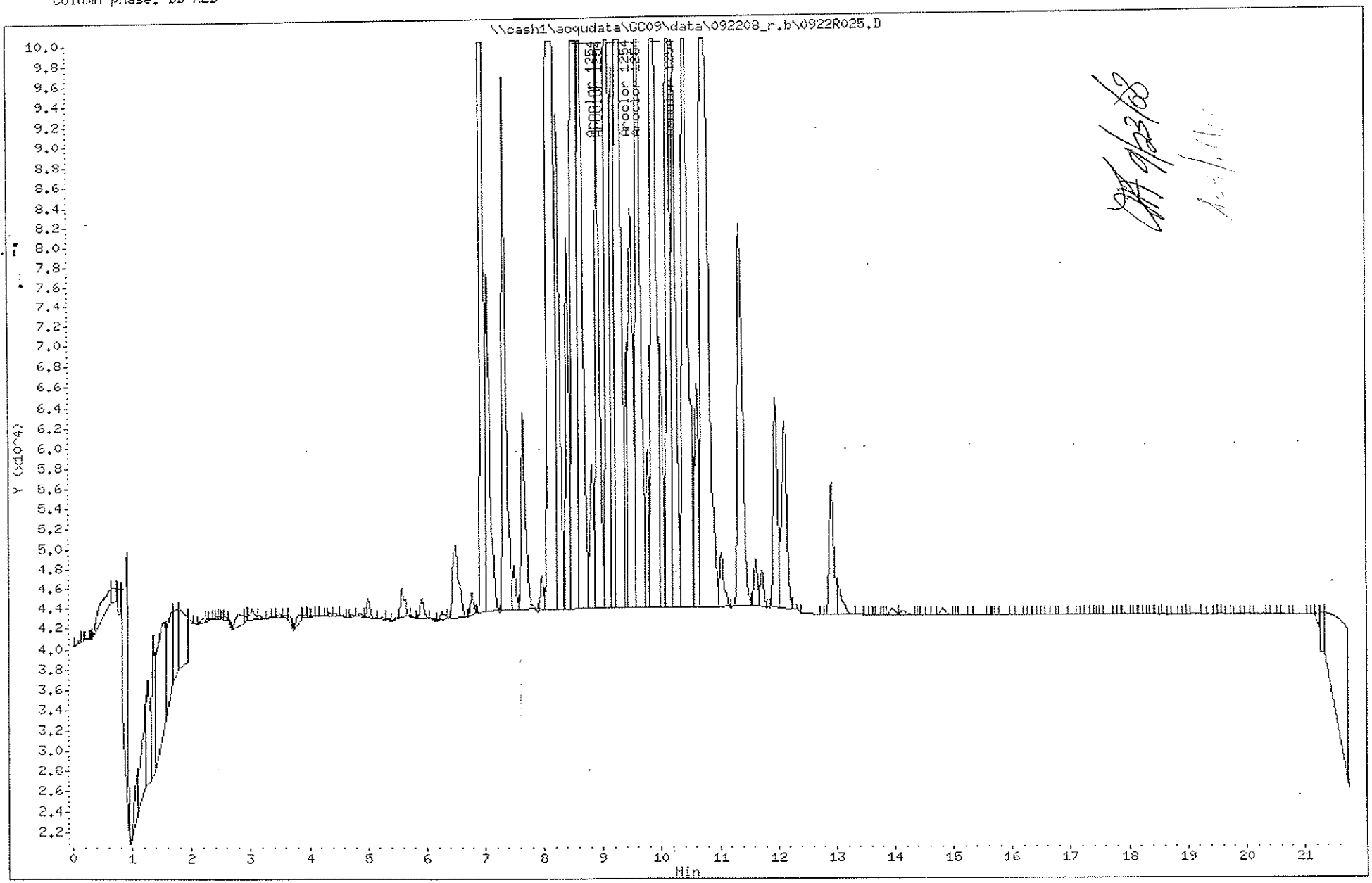


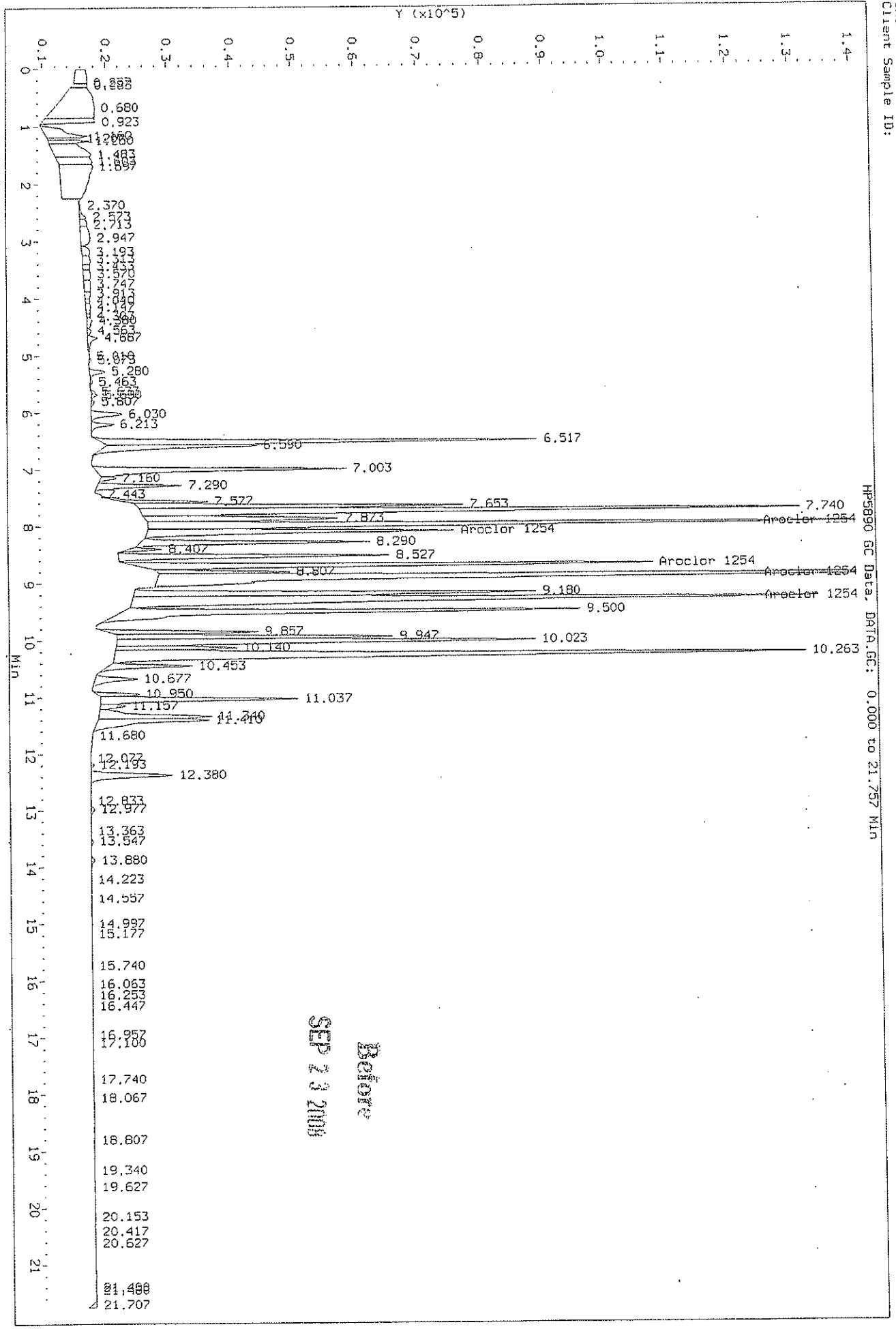
Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R025.D
Date : 23-SEP-2008 02:46
Client ID:
Sample Info: 1254 @ 1000ppb | PCB5-18N | KWG0804201-7

Instrument: GC09.i

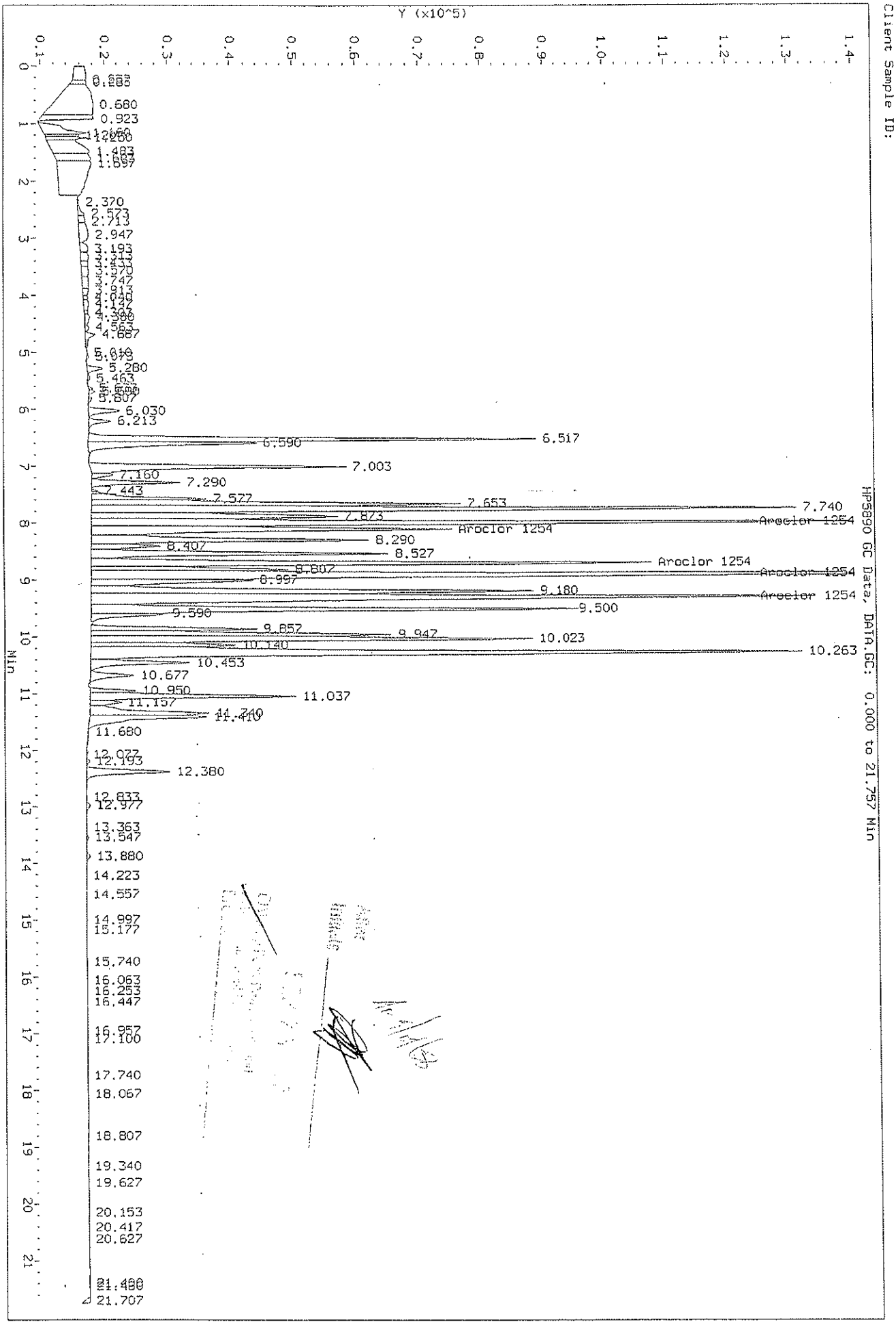
Operator: LHarris
Column diameter: 0.53

Column phase: DB-XLB

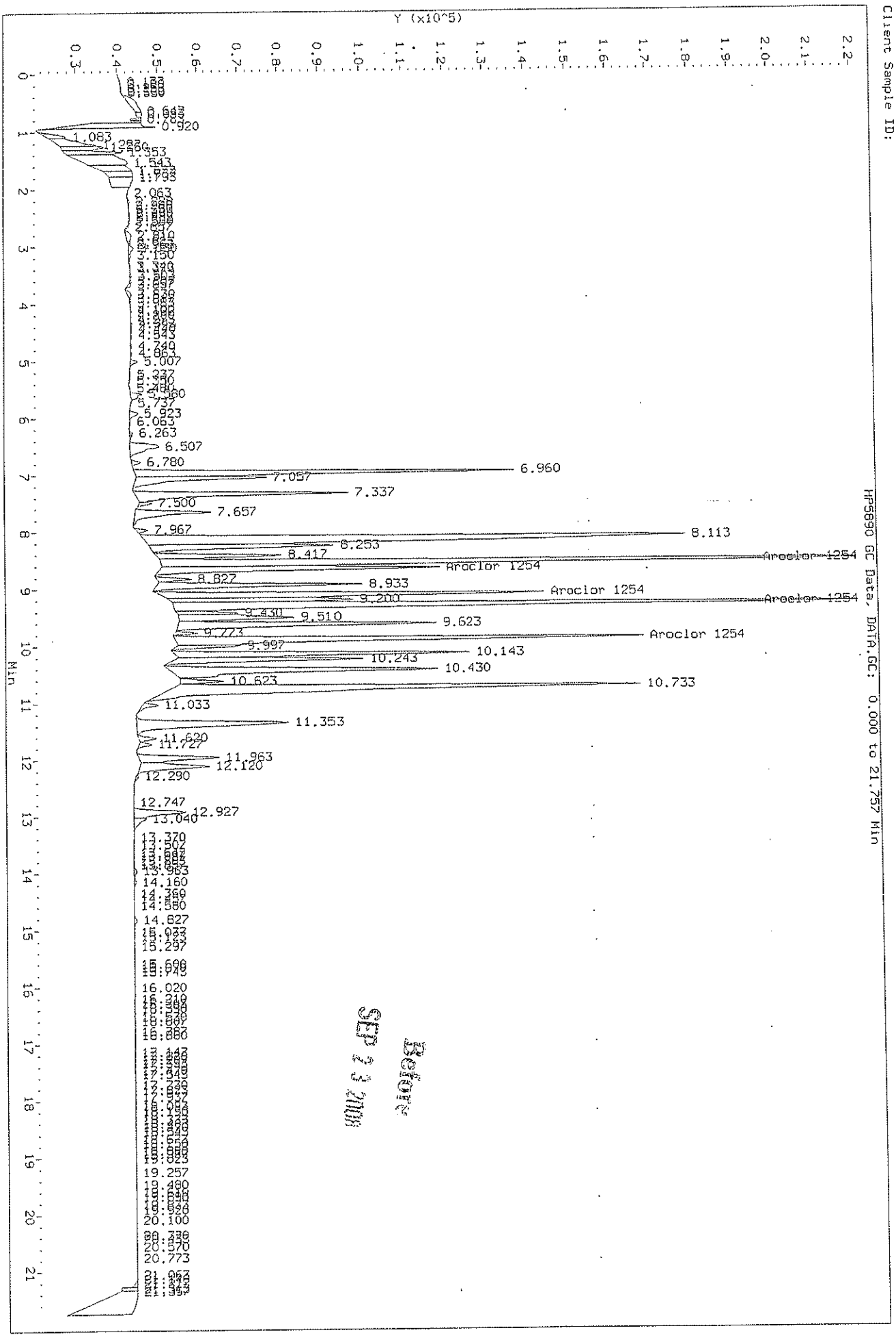


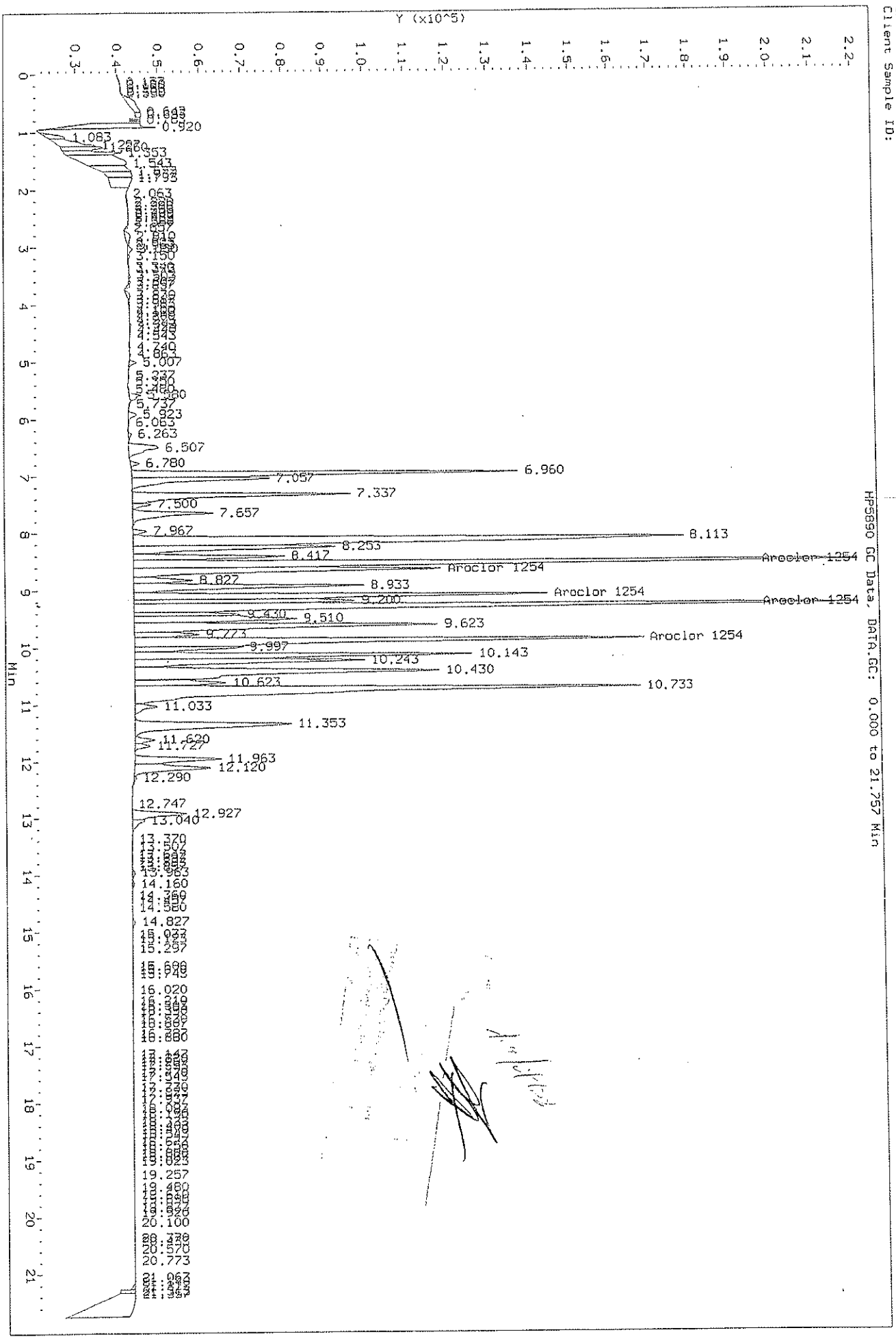

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F025.D
Injection Date: 23-SEP-2008 02:46
Instrument: GC09.i
Client Sample ID:
Y (x10^5)
HP5890 GC Data, DATA.GC: 0.000 to 21.757 Min
Min
0.285
0.680
0.923
1.483
1.809
2.370
2.573
2.713
2.947
3.193
4.563
4.667
5.280
5.463
6.030
6.213
6.517
6.598
7.003
7.160
7.290
7.443
7.572
7.653
7.740
7.873
Aroclor 1254
8.290
8.407
8.527
Aroclor 1254
8.807
Aroclor 1254
9.180
Aroclor 1254
9.500
9.857
9.947
10.023
10.140
10.263
10.453
10.677
10.950
11.037
11.157
11.680
12.072
12.193
12.380
12.833
12.977
13.363
13.547
13.880
14.223
14.557
14.997
15.177
15.740
16.063
16.253
16.447
16.957
17.100
17.740
18.067
18.807
19.340
19.627
20.153
20.417
20.627
21.488
21.707

SEP 23 2008



Data File: \\cash1\acqudata\GC09\data\092208.b\0922F025.D
Injection Date: 23-SEP-2008 02:46
Instrument: GC09.i
Client Sample ID:


Y (x10^5)
Min
HP5890 GC Data, DATA.GC: 0.000 to 21.757 Min
Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R025.D
Injection Date: 23-SEP-2008 02:46
Instrument: GC09.i
Client Sample ID:
Aroclor 1254
Aroclor 1254
Aroclor 1254
Aroclor 1254
Aroclor 1254
6.960
7.337
7.657
8.113
8.253
8.933
9.510
9.623
10.143
10.430
10.733
11.353
11.963
12.120
12.927
SEP 23 2008


Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R025.D
Injection Date: 23-SEP-2008 02:46
Instrument: GC09.1
Client Sample ID:
HP5890 GC Data, DATA.GC: 0.000 to 21.757 Min
Y (x10^5)
Min
6.960
Aroclor 1254
8.113
Aroclor 1254
Aroclor 1254
Aroclor 1254
10.143
10.733

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F029.D
Report Date: 23-Sep-2008 16:36

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\092208.b\0922F029.D
Sample #2 : \\cash1\acqudata\GC09\data\092208_r.b\0922R029.D
Inj Date : 23-SEP-2008 04:31
Sample Info: 1262 @ 1000ppb | PCB5-180 | KWG0804201-8
Misc Info : SEMIVOA GC\W0804201\8-ICAL.H
Cal Date : 23-SEP-2008 15:26
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\092208.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\092208_r.b\092208_r.m
Sub List #1 : AR1262.SUB
Sub List #2 : AR1262.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

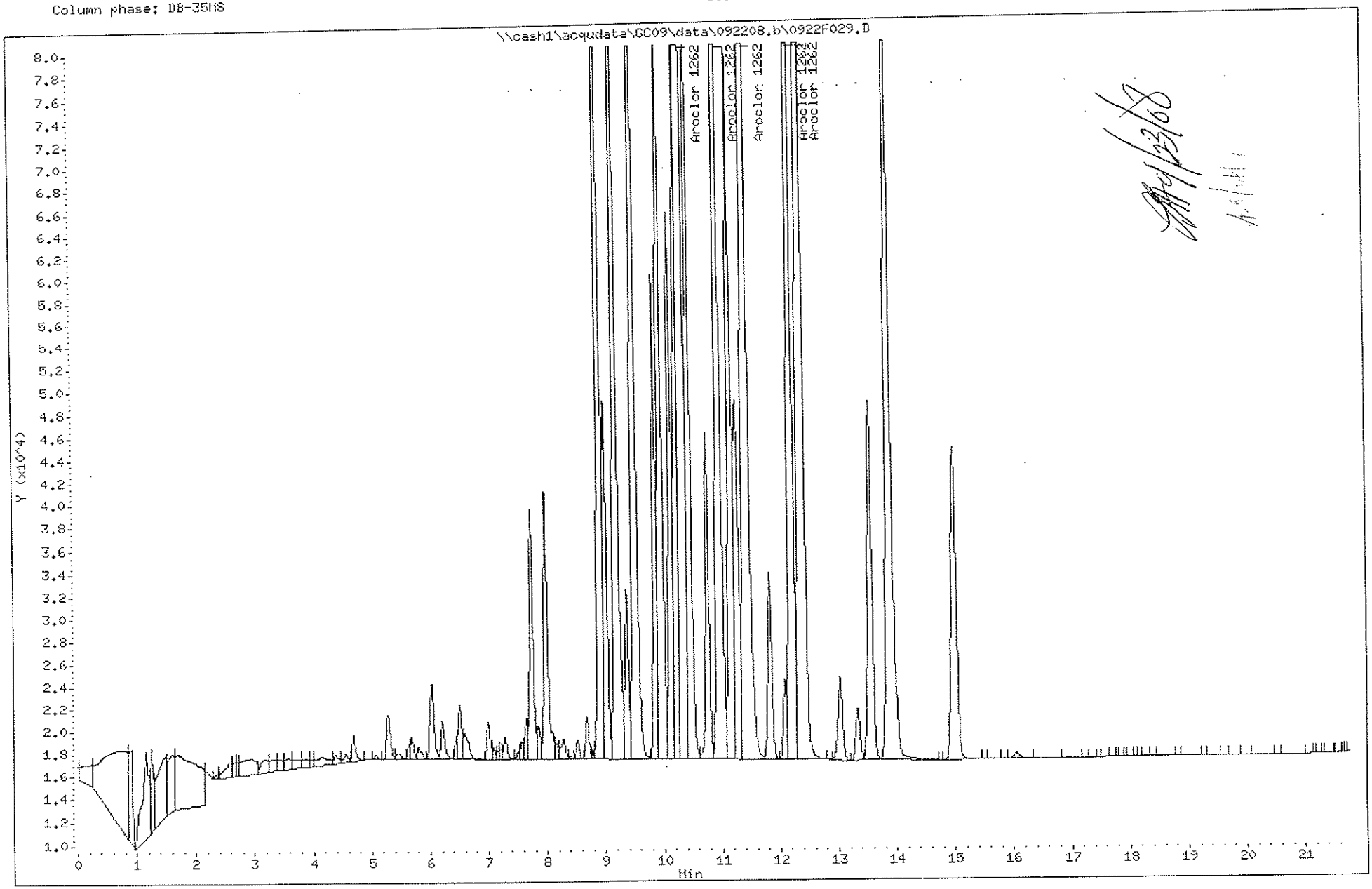
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1262	10.333	10.913	709838	742329	1000	1000	80.00- 120.00	100.00
	10.950	11.400	543548	601978	1000	1000	61.26- 91.89	76.57
	11.413	12.123	1043755	1232912	1000	1000	117.63- 176.45	147.04
	12.197	12.930	468548	929259	1000	1000	52.81- 79.21	66.01
	12.373	13.137	824371	716701	1000	1000	92.91- 139.36	116.14
			Average of Peak Amounts =		1000	1000		

9/23/08

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F029.D
Date : 23-SEP-2008 04:31
Client ID:
Sample Info: 1262 @ 1000ppb | PCB5-180 | KWG0804201-8

Instrument: GC09.i
Operator: LHarris
Column diameter: 0.53

Column phase: DB-35MS

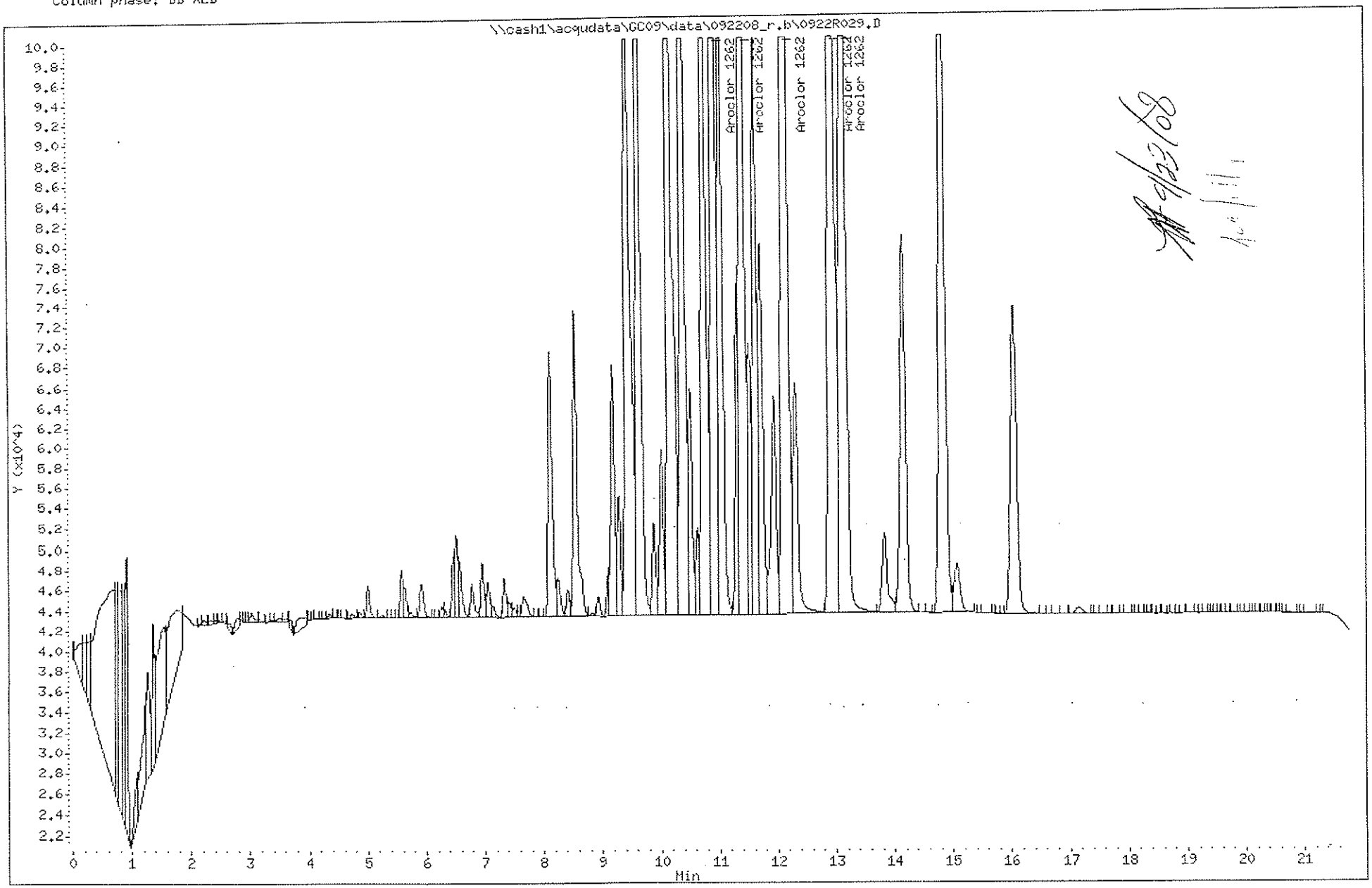


Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R029.D
Date : 23-SEP-2008 04:31
Client ID:
Sample Info: 1262 @ 1000ppb | PCB5-180 | KWG0804201-8

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-XLB



Data File: \\cash1\acqudata\GC09\data\092208.b\0922F033.D
Report Date: 23-Sep-2008 16:36

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\092208.b\0922F033.D
Sample #2 : \\cash1\acqudata\GC09\data\092208_r.b\0922R033.D
Inj Date : 23-SEP-2008 06:16
Sample Info: 1268 @ 1000ppb | PCB5-18P | KWG0804201-9
Misc Info : SEMIVOA GC\W0804201\9-ICAL.H
Cal Date : 23-SEP-2008 15:26
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\092208.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\092208_r.b\092208_r.m
Sub List #1 : AR1268.SUB
Sub List #2 : AR1268.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

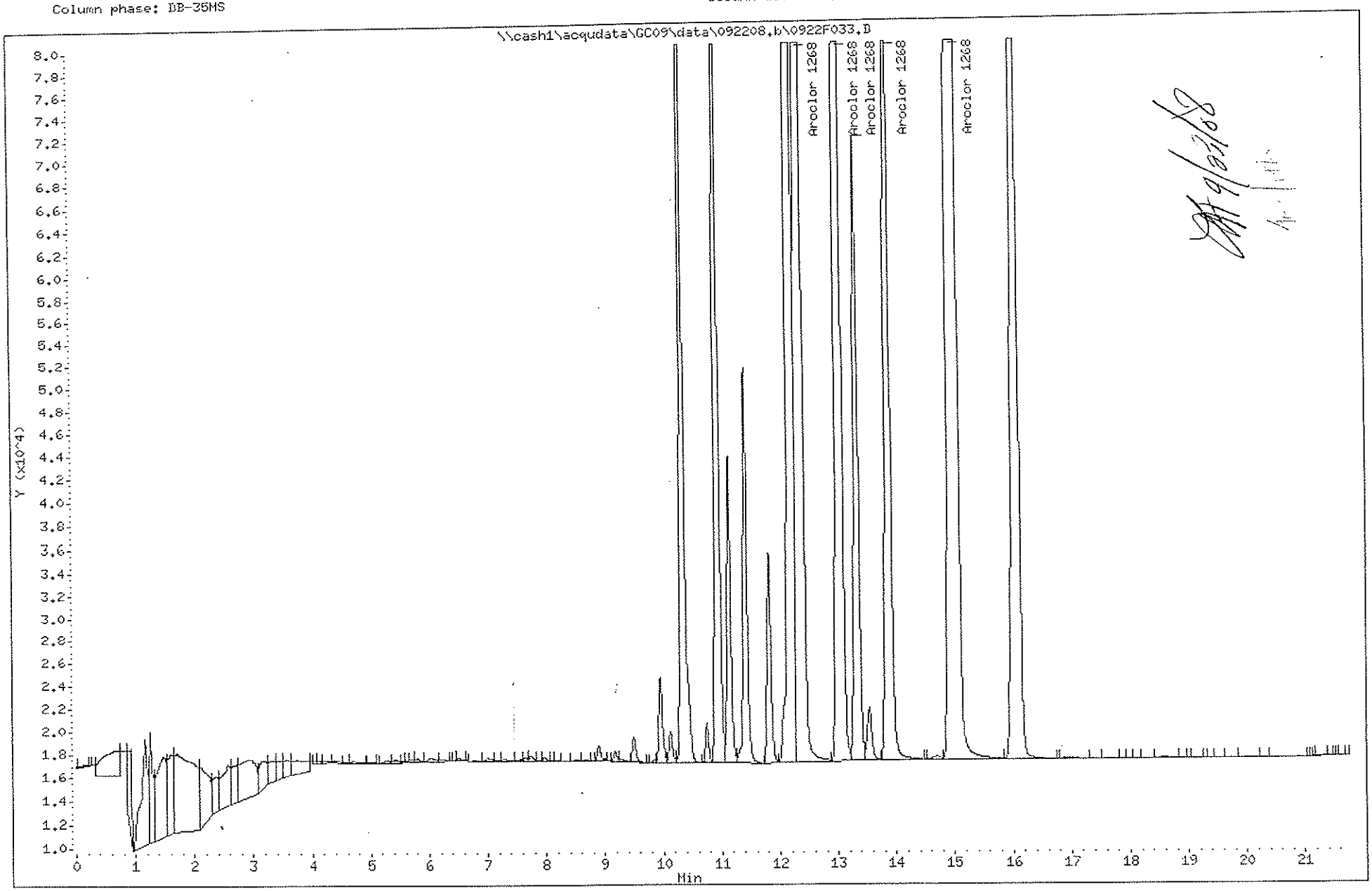
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1268	12.353	13.140	1319004	1617646	1000	1000	80.00- 120.00	100.00
	13.033	13.833	1056441	1308682	1000	1000	64.08- 96.11	80.09
	13.333	14.113	294822	401613	1000	1000	17.88- 26.82	22.35
	13.880	14.823	493071	609460	1000	1000	29.91- 44.86	37.38
	14.987	16.043	2949143	3573579	1000	1000	178.87- 268.31	223.59
			Average of Peak Amounts =		1000	1000		

9/23/08

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F033.D
Date : 23-SEP-2008 06:16
Client ID:
Sample Info: 1268 @ 1000ppb | PCB5-18P | KWG0804201-9

Instrument: GC09.i
Operator: LHarris
Column diameter: 0.53

Column phase: DB-35MS

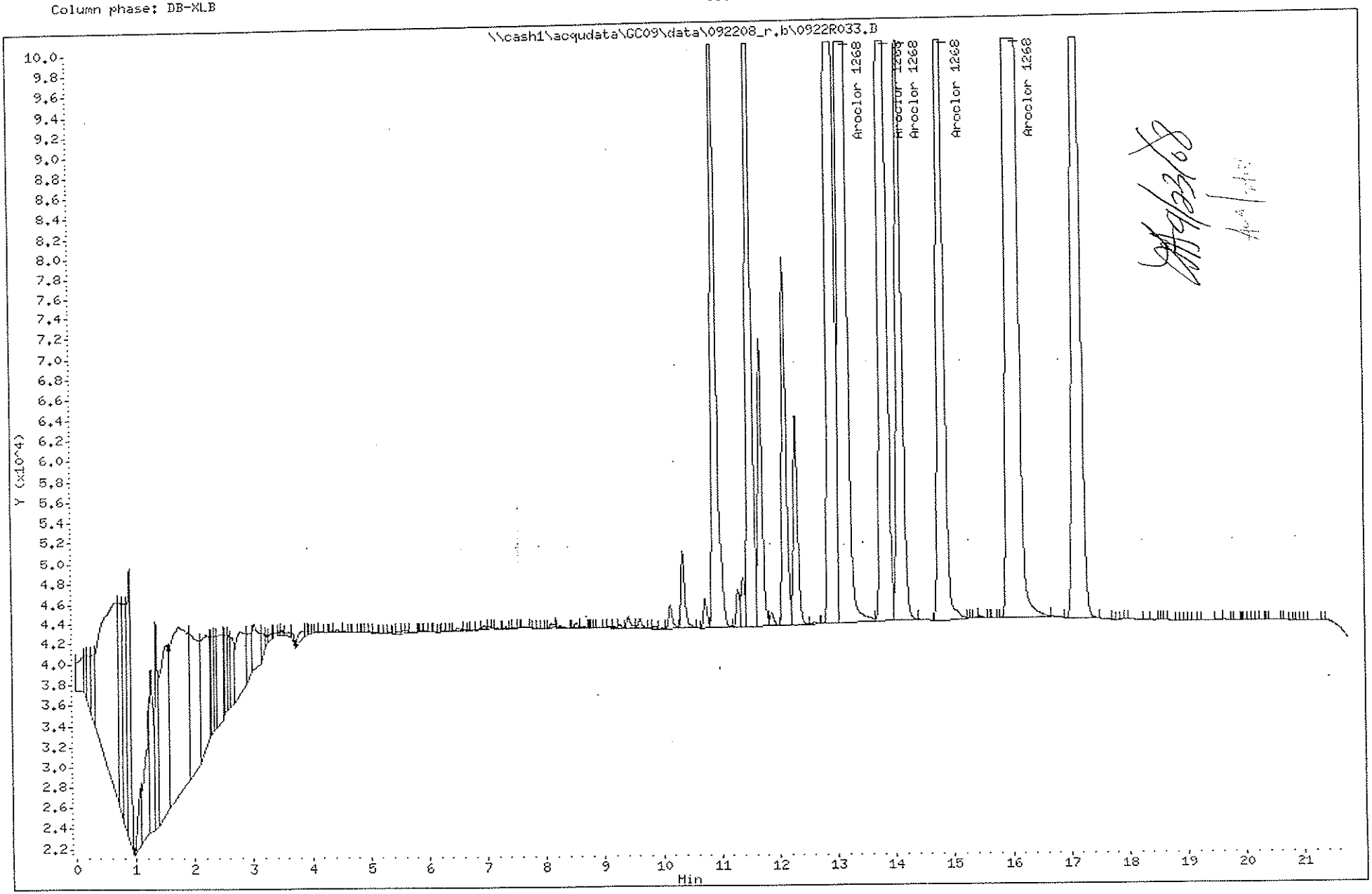


Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R033.D
Date : 23-SEP-2008 06:16
Client ID:
Sample Info: 1268 @ 1000ppb | PCB5-18P | KWG0804201-9

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-XLB



Data File: \\cash1\acqudata\GC09\data\092208.b\0922F035.D
Report Date: 23-Sep-2008 16:37

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\092208.b\0922F035.D
Sample #2 : \\cash1\acqudata\GC09\data\092208_r.b\0922R035.D
Inj Date : 23-SEP-2008 07:09
Sample Info: 1660 @ 25ppb | PCB5-23A | KWG0804201-10
Misc Info : SEMIVOA GC\W0804201\10-ICAL.H
Cal Date : 23-SEP-2008 16:06
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\092208.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\092208_r.b\092208_r.m
Sub List #1 : AR1660.SUB
Sub List #2 : AR1660.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.957	4.510	29470	51548	2.89	3.00		100.00
Aroclor 1016	5.690	5.633	5985	9805	27.0	28.6	80.00- 120.00	100.00
	6.213	6.573	12253	19065	28.3	28.0	151.51- 227.27	204.72
	6.597	6.963	6098	9898	27.2	27.5	79.74- 119.61	101.89
	7.003	7.057	8645	11531	28.6	27.9	106.84- 160.26	144.44
	7.287	7.333	4816	10411	21.9	28.3	91.86- 137.79	80.47
			Average of Peak Amounts =		26.6	28.1		
Aroclor 1260	9.950	9.623	10768	20686	25.0	29.1	80.00- 120.00	100.00
	10.260	10.147	19058	21796	27.6	29.3	159.28- 238.92	176.99
	10.327	10.737	14615	24232	23.1	26.3	101.69- 152.53	135.73
	10.947	10.910	12825	12718	28.4	25.8	101.44- 152.16	119.11
	11.413	12.123	26302	29874	28.1	28.2	212.51- 318.76	244.27
			Average of Peak Amounts =		26.4	27.7		
Decachlorobiphenyl	16.060	17.153	30189	38013	2.97	3.03		100.00(M)

QC Flag Legend

M - Compound response manually integrated.

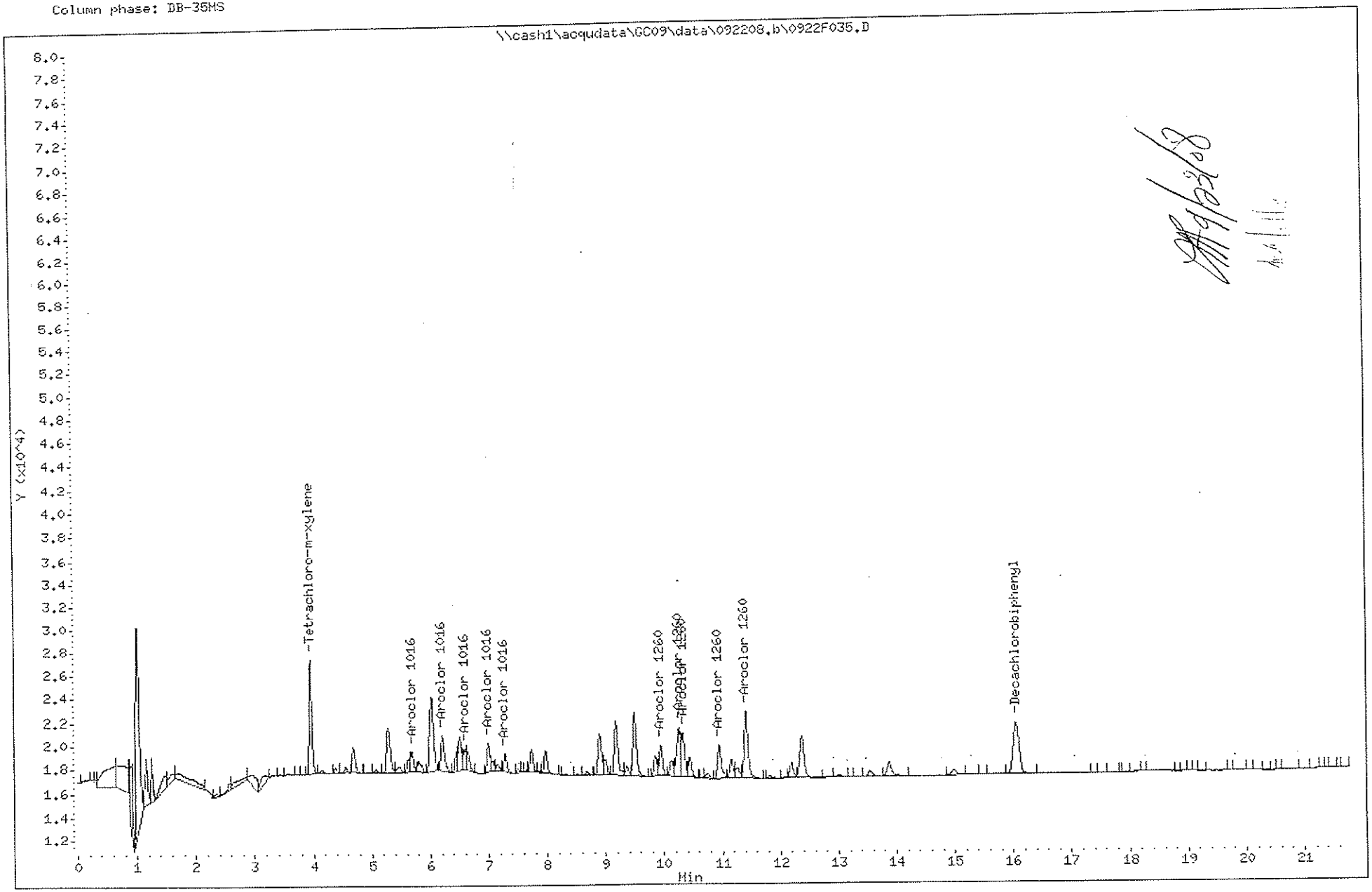
9/23/08

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F035.D
Date : 23-SEP-2008 07:09
Client ID:
Sample Info: 1660 @ 25ppb | PCB5-23A | KWG0804201-10

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-35MS

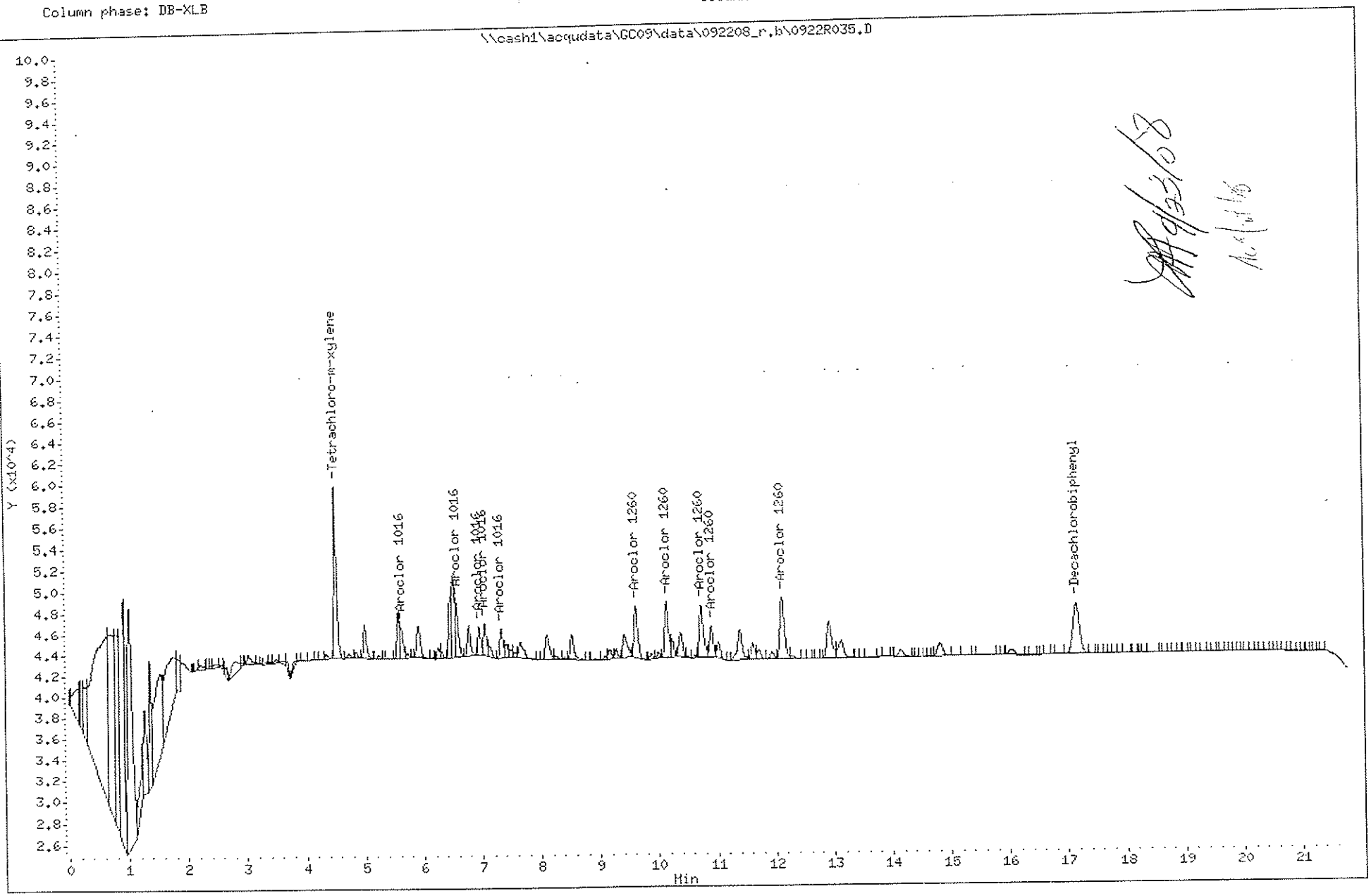


Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R035.D
Date : 23-SEP-2008 07:09
Client ID:
Sample Info: 1660 @ 25ppb | PCB5-23A | KWG0804201-10

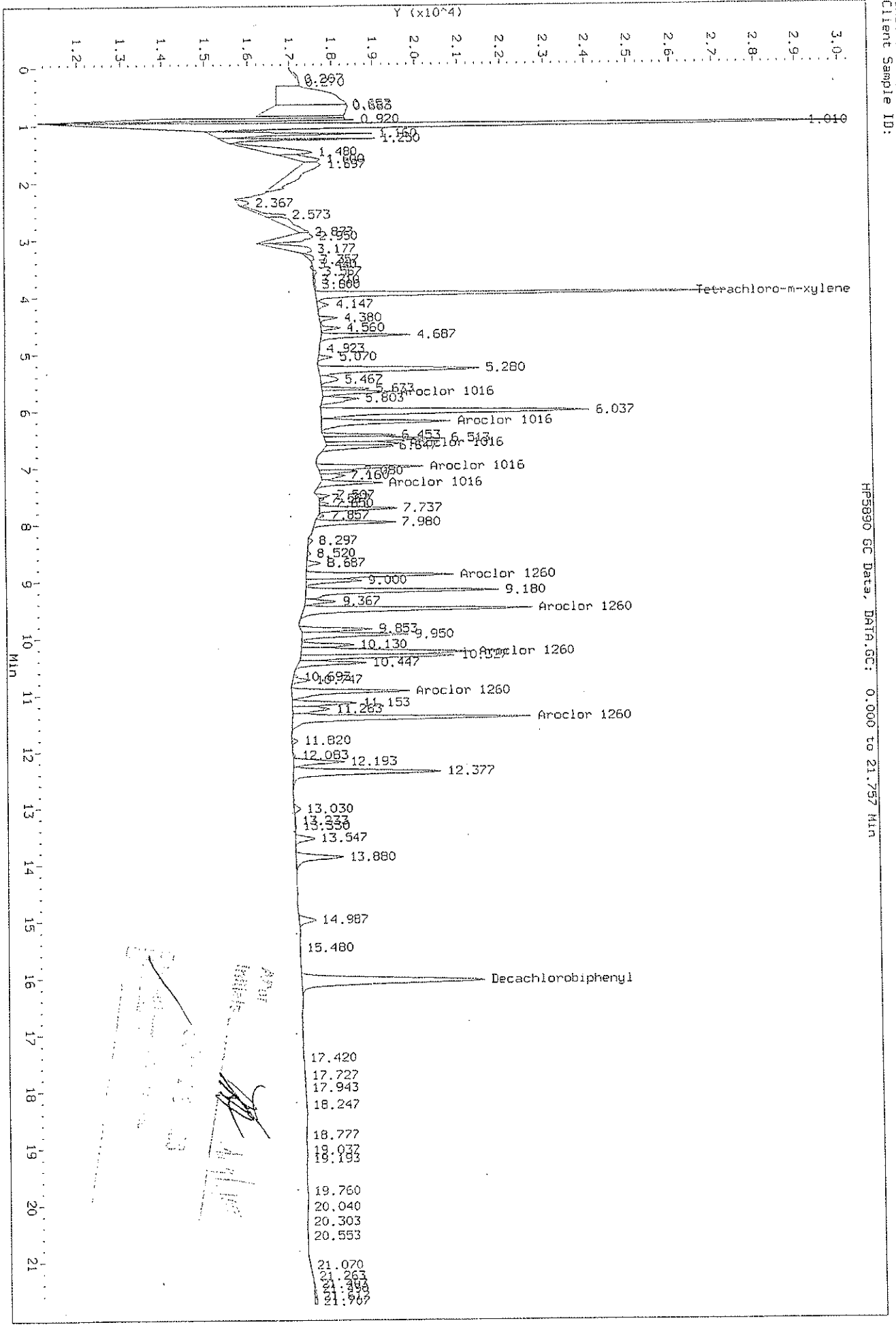
Instrument: GC09.i

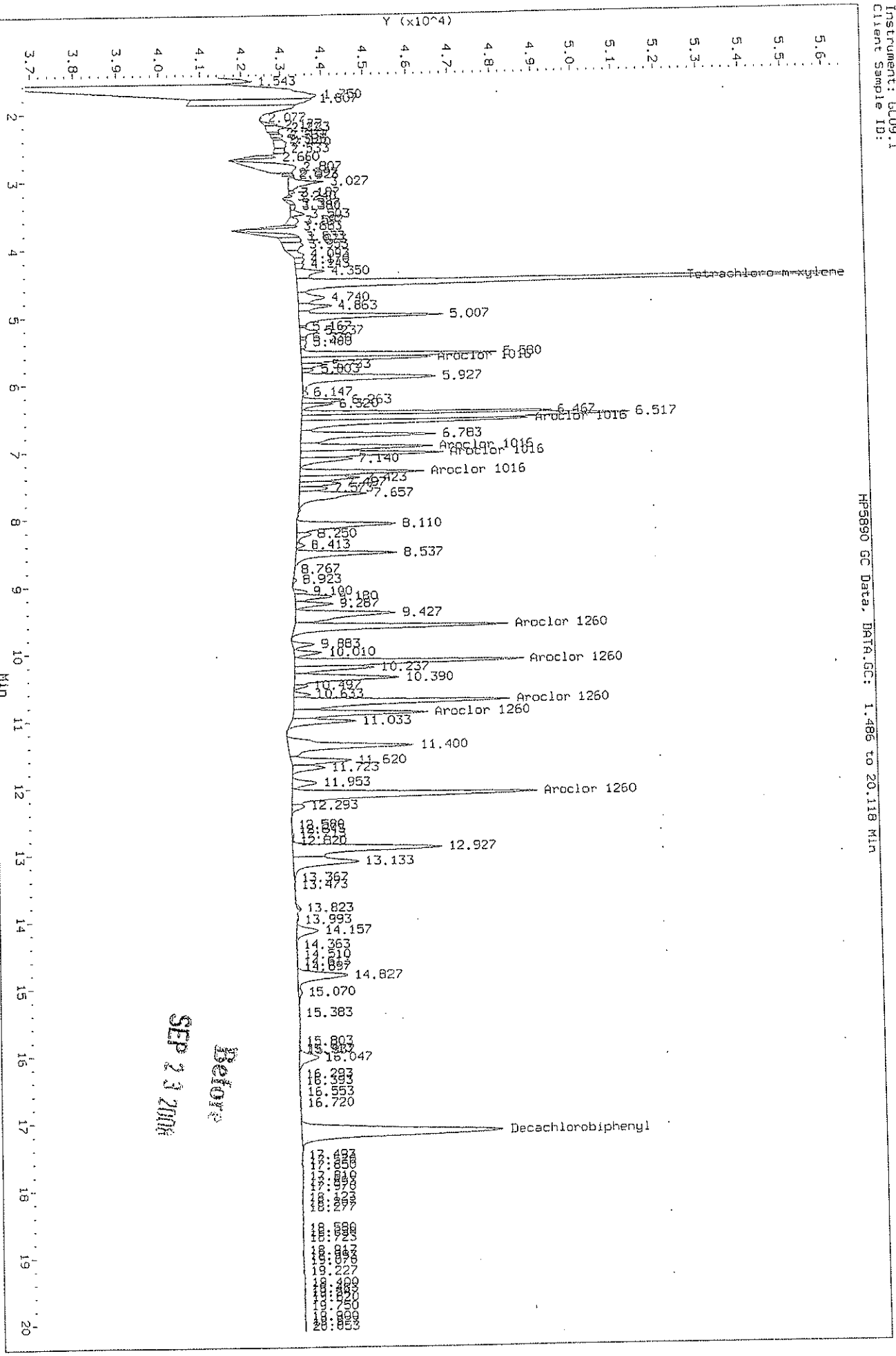
Operator: LHarris
Column diameter: 0.53

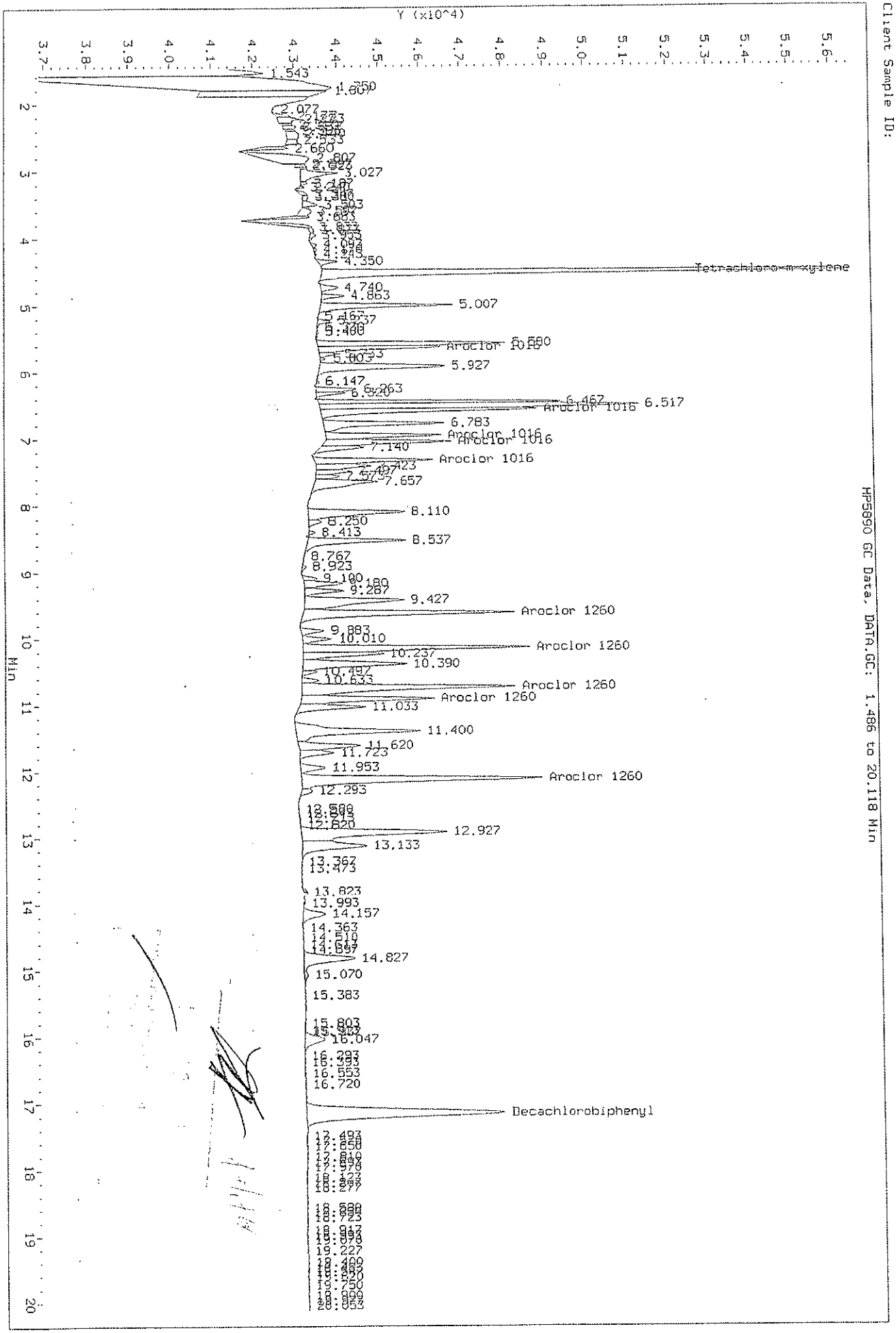
Column phase: DB-XLB



Data File: \\cash1\acqudata\GC09\data\092208.b\0922F035.D
Acq On Date: 23-SEP-2008 07:09
Sample ID:
HP5890 GC Data, DATA.GC: 0.000 to 21.757 Min
Tetrachloro-m-xylene
Aroclor 1016
Aroclor 1260
Decachlorobiphenyl
Min
SEP 23 2008


Y (x10^4)
Min
0.293
0.683
0.920
1.010
1.250
1.480
1.897
2.367
2.573
3.177
3.660
Tetrachloro-m-xylene
4.147
4.380
4.560
4.687
4.923
5.070
5.280
5.467
5.673
5.803
6.037
Aroclor 1016
6.453
6.543
7.160
7.737
7.857
7.980
8.297
8.520
8.687
Aroclor 1260
9.000
9.180
9.367
9.853
9.950
10.130
10.447
10.697
11.153
11.263
11.820
12.083
12.193
12.377
13.030
13.333
13.547
13.880
14.987
15.480
Decachlorobiphenyl
17.420
17.727
17.943
18.247
18.777
19.037
19.193
19.760
20.040
20.303
20.553
21.070
21.263
21.967
Data File: \\cash1\acqudata\GC09\data\092208.b\0922F035.D
Injection Date: 23-SEP-2006 07:09
Instrument: GC09.i
Client Sample ID:
HP5890 GC Data, DATA.GC: 0.000 to 21.757 Min


Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R035.D
Injection Date: 23-SEP-2008 07:09
Instrument: GC09.1
Client Sample ID:
HP5890 GC Data, DATA.GC: 1.486 to 20.118 Min
Y (x10^4)
Min
Tetrachloro-m-xylene
Aroclor 1016
Aroclor 1260
Decachlorobiphenyl
Before
Sep 23 2008


Data File: \\cash1\acqudata\GC09\data\092208_r.b\09220035.D
Injection Date: 23-SEP-2008 07:09
Instrument: GC09.1
Client Sample ID:
HP5890 GC Data, DATA.GC: 1.486 to 20.118 Min
Y (x10^4)
Min
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor 1016
Aroclor 1260
1.543
1.607
2.077
2.660
3.027
4.350
4.740
4.863
5.007
5.927
6.147
6.263
6.467
6.517
6.783
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8.250
8.413
8.537
8.762
8.923
9.100
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9.287
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10.497
10.633
11.033
11.400
11.620
11.723
11.953
12.293
12.820
12.927
13.133
13.362
13.823
13.993
14.157
14.827
15.070
15.383
16.047

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F036.D
Report Date: 23-Sep-2008 16:37

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\092208.b\0922F036.D
Sample #2 : \\cash1\acqudata\GC09\data\092208_r.b\0922R036.D
Inj Date : 23-SEP-2008 07:35
Sample Info: 1660 @ 50ppb | PCB5-23B | KWG0804201-10
Misc Info : SEMIVOA GC\W0804201\10-ICAL.H
Cal Date : 23-SEP-2008 16:06
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\092208.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\092208_r.b\092208_r.m
Sub List #1 : AR1660.SUB
Sub List #2 : AR1660.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.957	4.510	58714	104101	5.77	6.05		100.00
Aroclor 1016	5.690	5.633	13055	21463	58.8	62.6	80.00- 120.00	100.00
	6.213	6.570	25658	41390	59.3	60.8	151.51- 227.27	196.54
	6.597	6.960	13646	21700	60.8	60.2	79.74- 119.61	104.52
	7.003	7.057	18490	23963	61.3	58.0	106.84- 160.26	141.63
	7.287	7.333	11530	20421	52.4	55.5	91.86- 137.79	88.32
			Average of Peak Amounts =		58.5	59.4		
Aroclor 1260	9.950	9.623	22567	42695	55.4	60.7	80.00- 120.00	100.00
	10.260	10.143	39280	45969	58.4	62.1	159.28- 238.92	174.06
	10.327	10.737	29900	53070	49.8	57.8	101.69- 152.53	132.49
	10.947	10.910	25370	29170	56.2	59.3	101.44- 152.16	112.42
	11.413	12.123	52689	60136	56.3	56.7	212.51- 318.76	233.48
			Average of Peak Amounts =		55.2	59.3		
Decachlorobiphenyl	16.057	17.153	60965	76631	6.00	6.10		100.00(M)

QC Flag Legend

M - Compound response manually integrated.

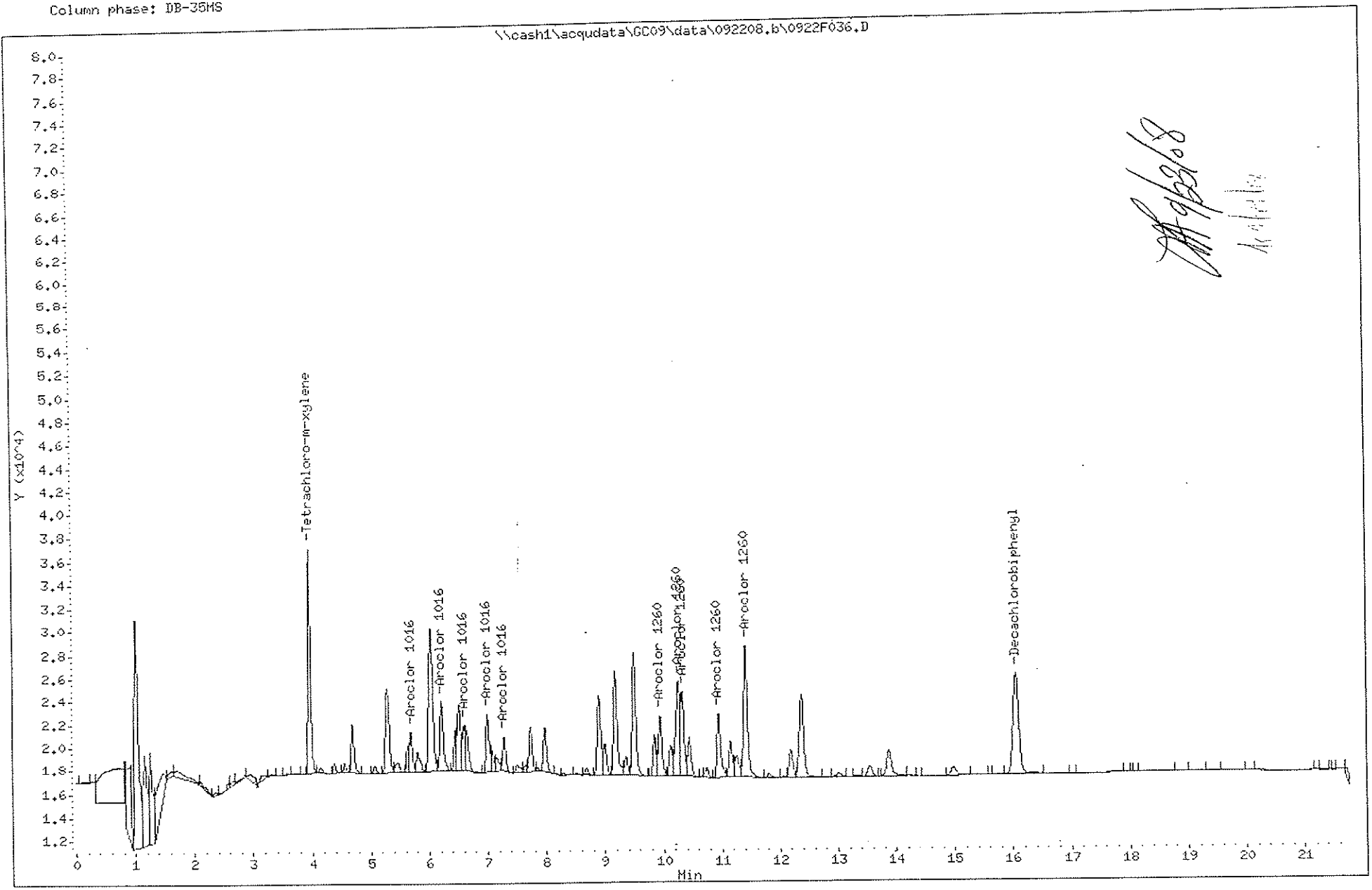
9/23/08

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F036.D
Date : 23-SEP-2008 07:35
Client ID:
Sample Info: 1660 @ 50ppb | PCBS-23B | KWG0804201-10

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

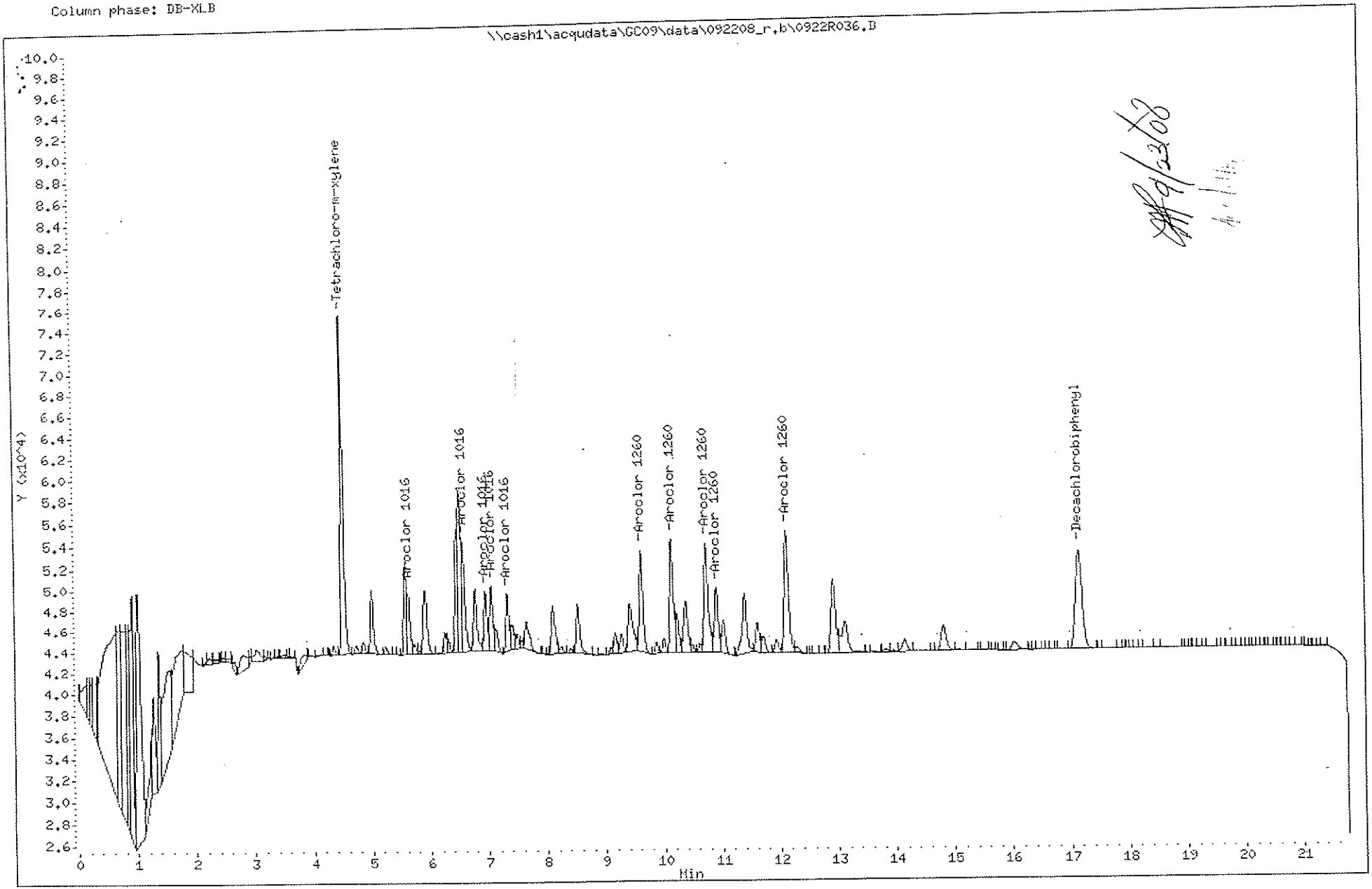
Column phase: DB-35MS



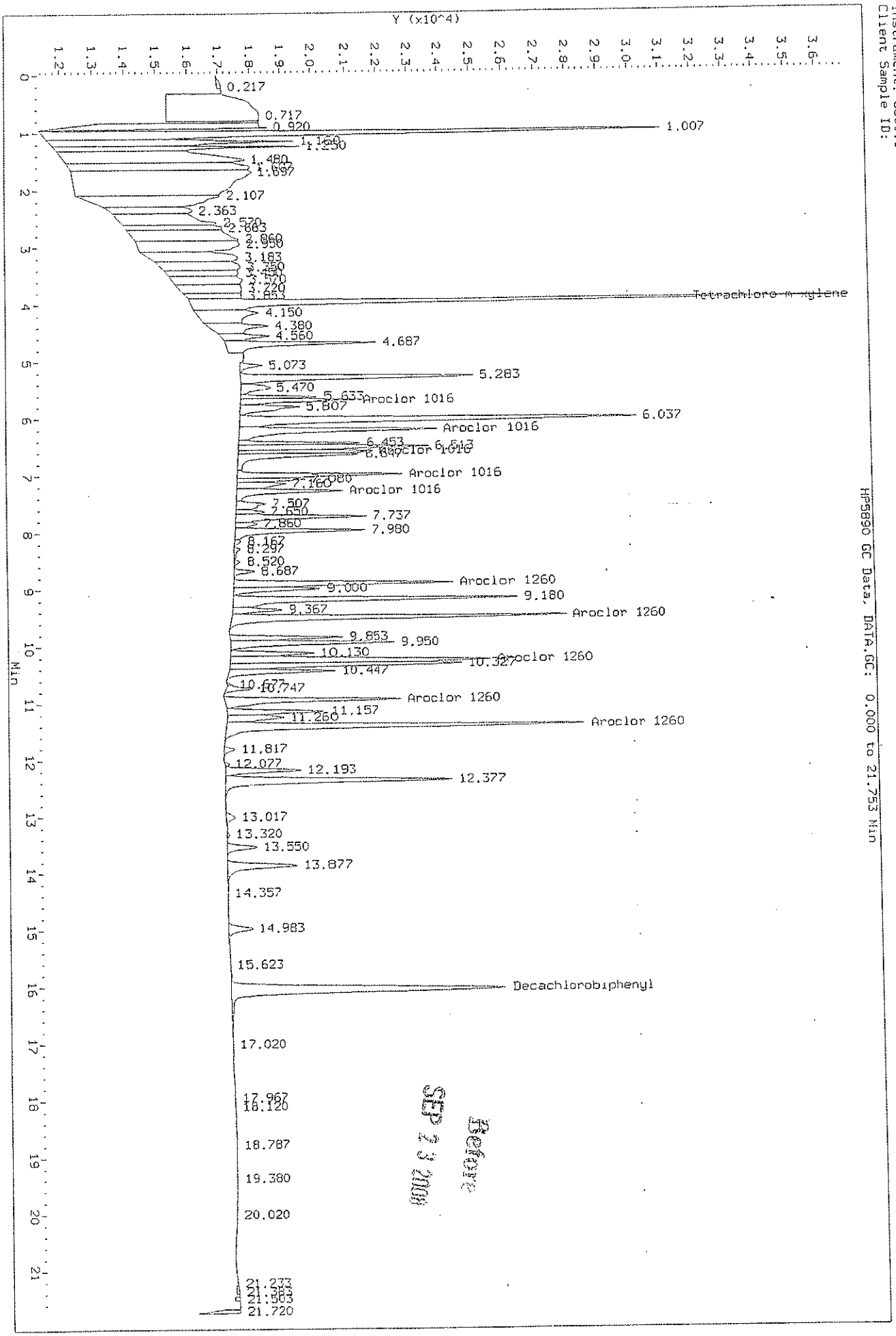
Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R036.D
Date : 23-SEP-2008 07:35
Client ID:
Sample Info: 1660 @ 50ppb | PCB5-23B | KWG0804201-10

Instrument: GC09.i
Operator: LHarris
Column diameter: 0.53

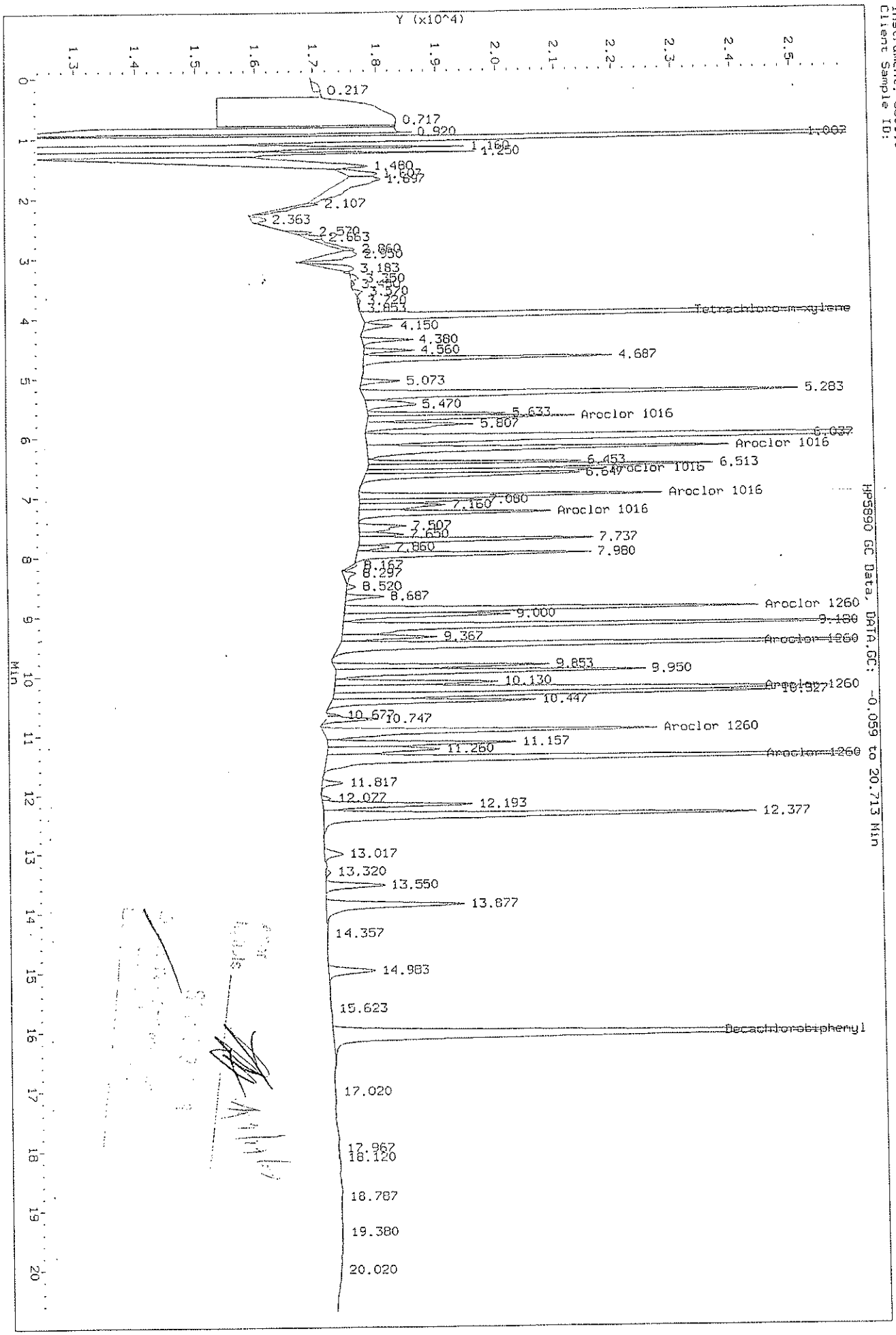
Column phase: DB-XLB



9/23/08



SEP 23 2008
Page 5


Data File: \\cash1\acqudata\GC09\data\092208.b\0922F036.D
Injection Date: 23-SEP-2008 07:35
Instrument: GC09.i
Client Sample ID:
HP5890 GC Data, DATA.GC; -0.059 to 20.713 Min
Y (x10^4)
Min
0.217
0.717
0.920
1.160
1.250
1.480
1.597
2.107
2.363
2.570
2.683
2.860
2.950
3.183
3.350
3.570
3.720
3.853
Tetrachloro-m-xylene
4.150
4.360
4.560
4.687
5.073
5.283
5.470
5.633
Aroclor 1016
5.807
6.037
Aroclor 1016
6.453
6.513
6.647
Aroclor 1016
Aroclor 1016
7.160
7.080
Aroclor 1016
7.507
7.650
7.737
7.860
7.980
8.167
8.297
8.520
8.687
Aroclor 1260
9.000
9.180
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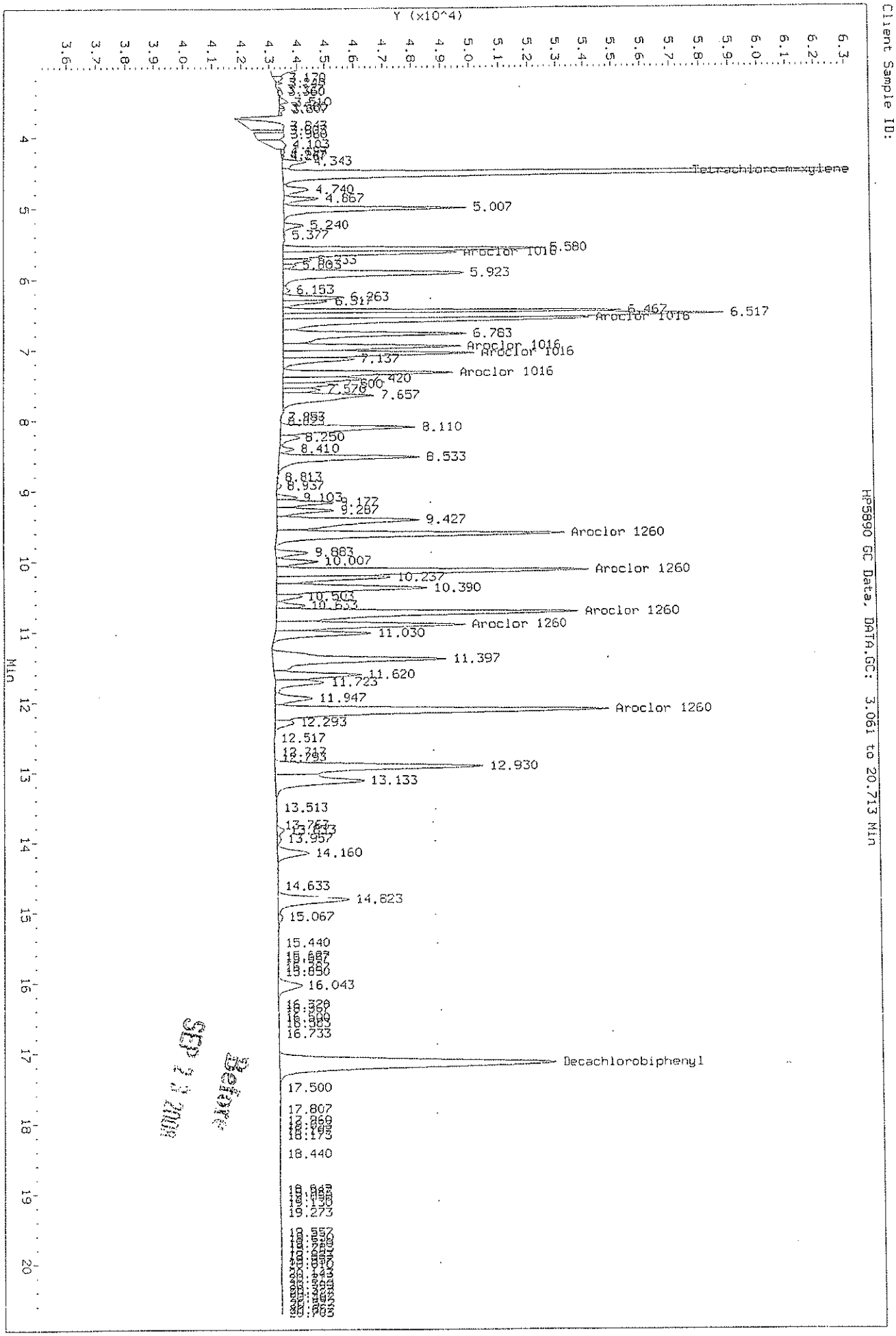
13.877
14.357
14.983
15.623
Decachlorobiphenyl
17.020
17.967
18.120
18.787
19.380
20.020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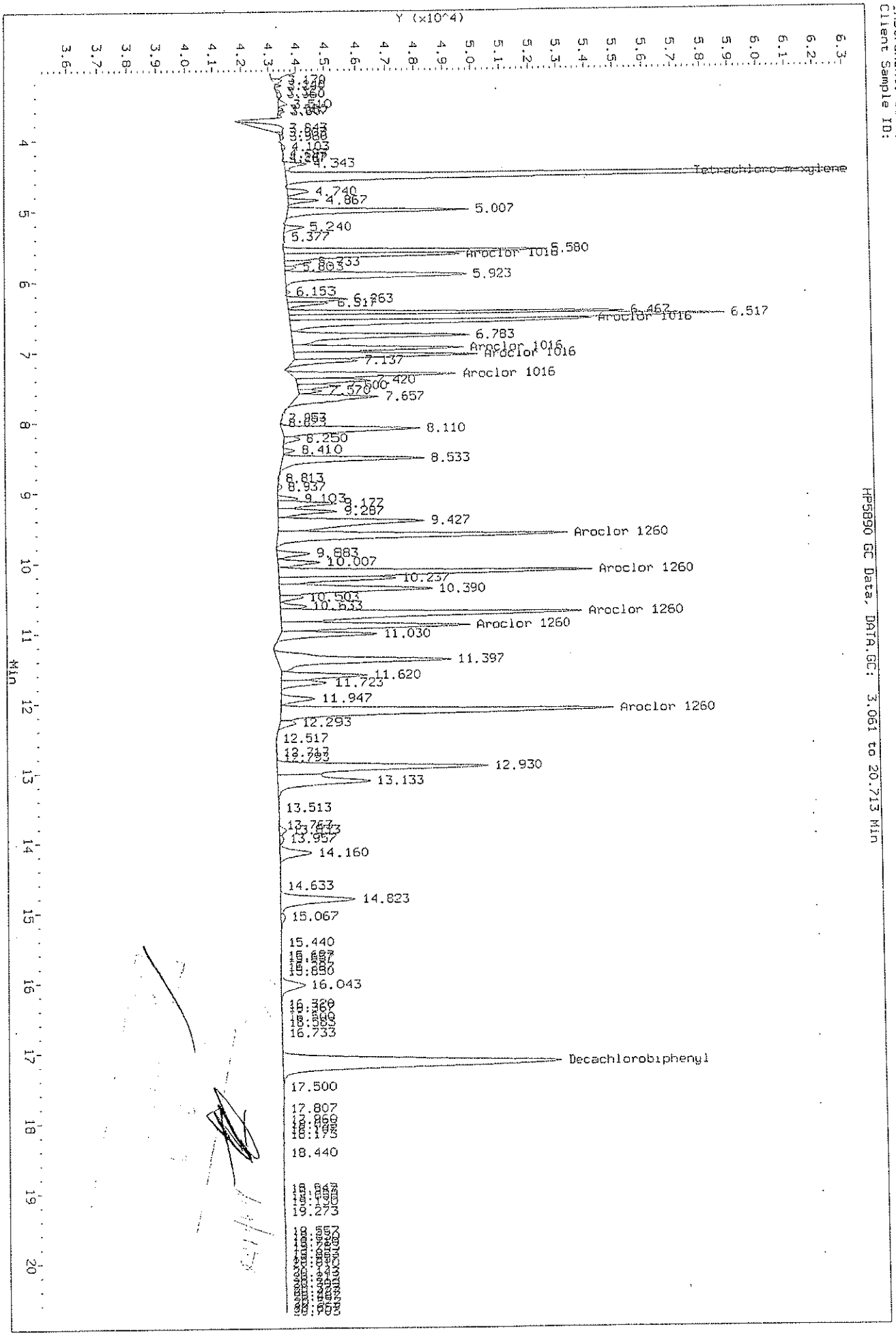
Injection Date: 23-SEP-2008 07:35
Instrument: GC09.1
Client Sample ID:
HP5890 GC Data, DATA.GC: 3.061 to 20.713 Min
Y (x10^4)
Min
Tetrachloro-m-xylene
Aroclor 1016
Aroclor 1260
Decachlorobiphenyl


Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R035.D
Injection Date: 23-SEP-2008 07:35
Instrument: GC09.i
Client Sample ID:
HP5890 GC Data, DATA.GC: 3.061 to 20.713 Min
Y (x10^4)
Min
Tetrachloro-m-xylene
Aroclor 1016
Aroclor 1260
Decachlorobiphenyl

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F037.D
Report Date: 23-Sep-2008 16:37

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\092208.b\0922F037.D
Sample #2 : \\cash1\acqudata\GC09\data\092208_r.b\0922R037.D
Inj Date : 23-SEP-2008 08:01
Sample Info: 1660 @ 500ppb | PCB5-23C | KWG0804201-10
Misc Info : SEMIVOA GC\W0804201\10-ICAL.H
Cal Date : 23-SEP-2008 16:06
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\092208.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\092208_r.b\092208_r.m
Sub List #1 : AR1660.SUB
Sub List #2 : AR1660.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.957	4.510	539759	912633	53.0	44.5		100.00
Aroclor 1016	5.690	5.633	122632	178915	553	451	80.00- 120.00	100.00
	6.213	6.570	238571	349712	552	442	151.51- 227.27	194.54
	6.597	6.960	123821	201479	552	441	79.74- 119.61	100.97
	7.003	7.060	161729	227692	536	453	106.84- 160.26	131.88
	7.290	7.333	127258	205868	578	476	91.86- 137.79	103.77
		Average of Peak Amounts =			554	453		
Aroclor 1260	9.950	9.623	199458	373186	489	442	80.00- 120.00	100.00
	10.260	10.143	377334	386086	562	441	159.28- 238.92	189.18
	10.323	10.733	257923	496779	430	477	101.69- 152.53	129.31
	10.950	10.910	238362	268076	528	474	101.44- 152.16	119.50
	11.413	12.120	492085	561922	526	470	212.51- 318.76	246.71
		Average of Peak Amounts =			507	461		
Decachlorobiphenyl	16.057	17.157	537520	664094	52.9	45.5		100.00

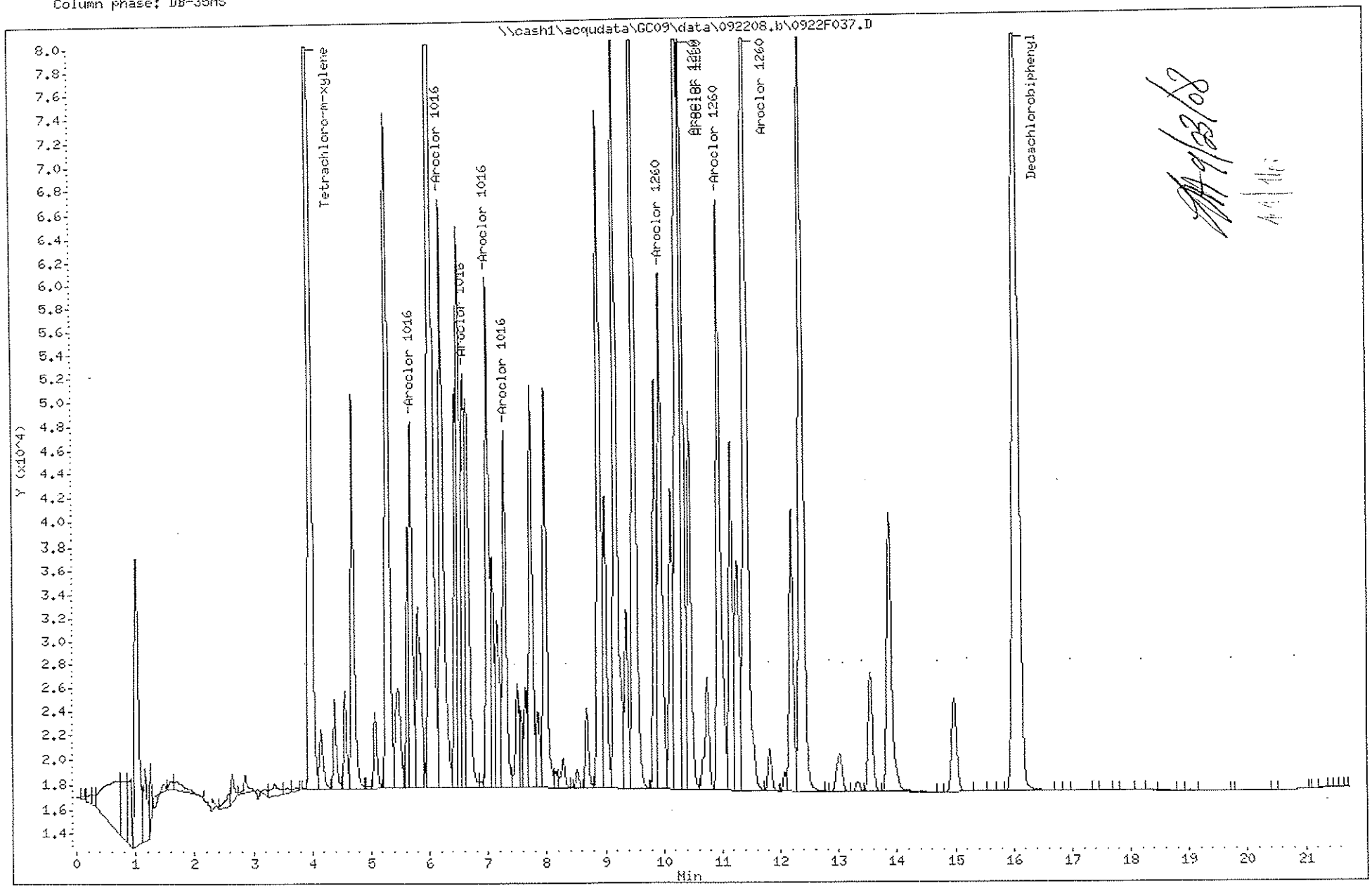
9/23/08

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F037.D
Date : 23-SEP-2008 08:01
Client ID:
Sample Info: 1660 @ 500ppb | PCB5-23C | KWG0804201-10

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-35MS

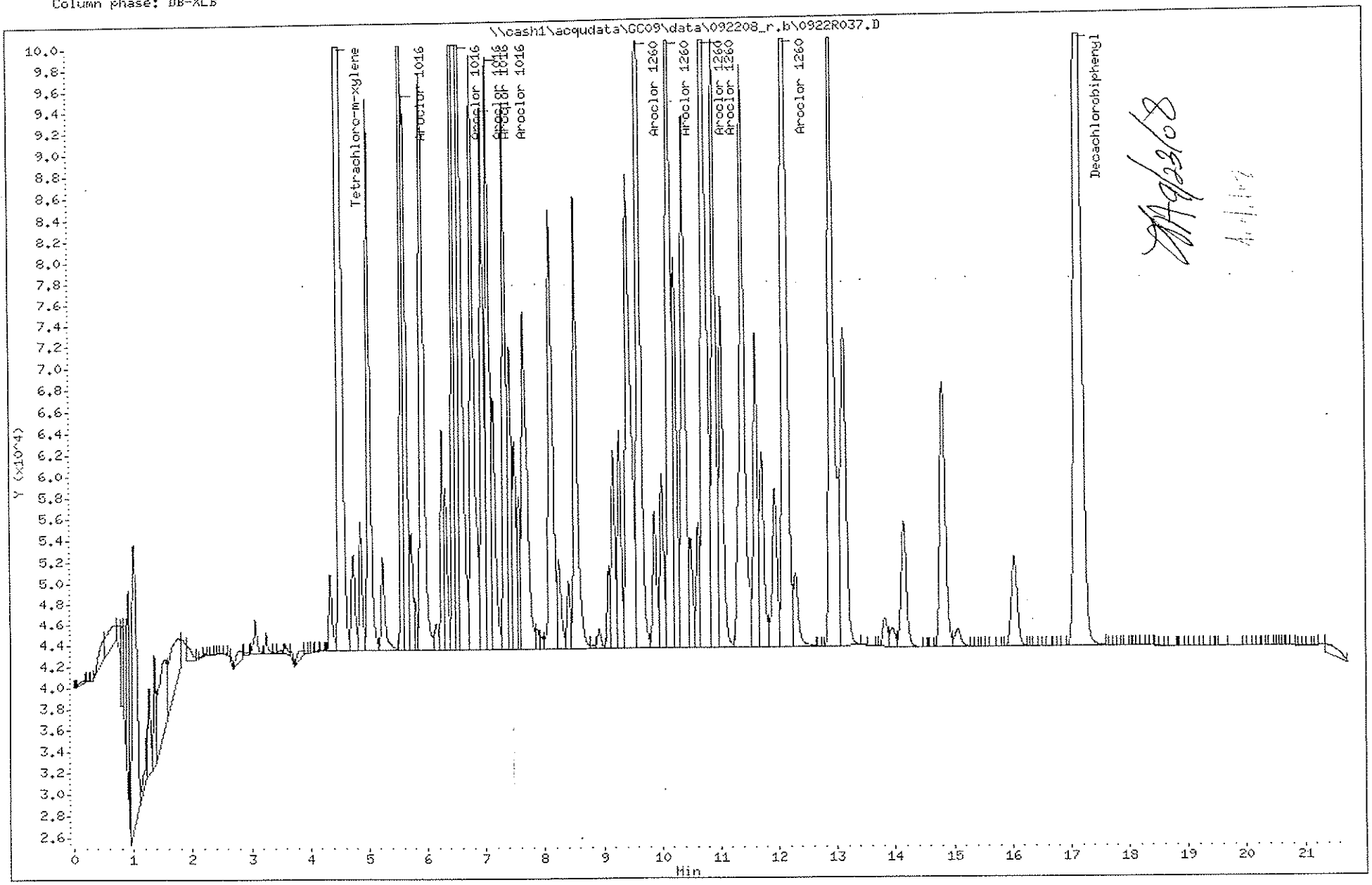


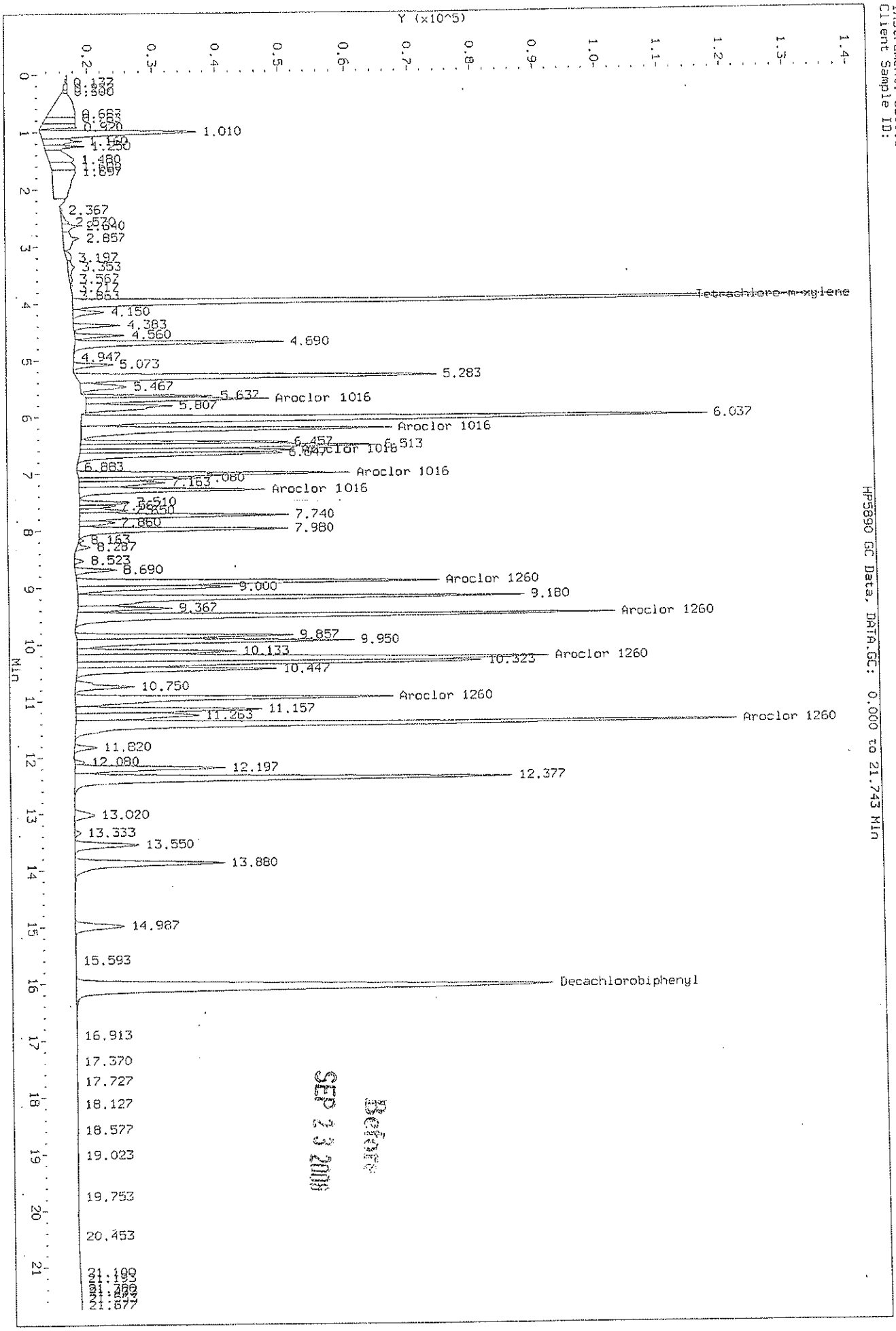
Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R037.D
Date : 23-SEP-2008 08:01
Client ID:
Sample Info: 1660 @ 500ppb | PCB5-23C | KWG0804201-10

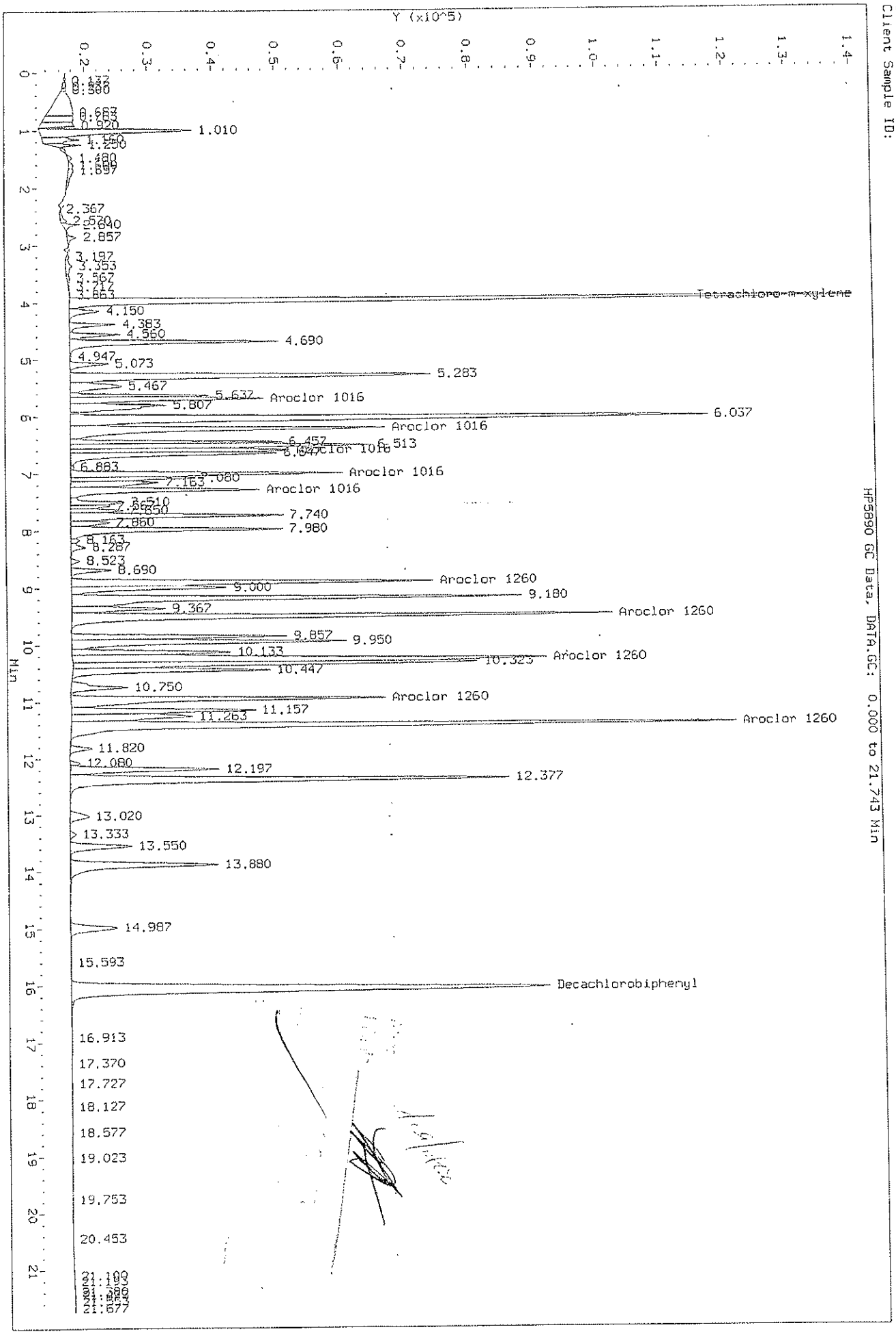
Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-XLB




Data File: \\cash1\acqudata\GC09\data\092208.b\0922F037.D
Injection Date: 23-SEP-2008 08:01
Instrument: GC09.i
Client Sample ID:
HP5890 GC Data, DATA.GC: 0.000 to 21.743 Min
Y (x10^5)
Min
Tetrachloro-m-xylene
Aroclor 1016
Aroclor 1260
Decachlorobiphenyl
SEP 23 2008


Data File: \\cash1\acqudata\GC09\data\092208.b\0922F037.D
Injection Date: 23-SEP-2008 08:01
Instrument: GC09.i
Client Sample ID:
HP5890 GC Data, DATA.GC: 0.000 to 21.743 Min
Y (x10^5)
Min
Tetrachloro-m-xylene
Aroclor 1016
Aroclor 1260
Decachlorobiphenyl

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F038.D
Report Date: 23-Sep-2008 16:37

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\092208.b\0922F038.D
Sample #2 : \\cash1\acqudata\GC09\data\092208_r.b\0922R038.D
Inj Date : 23-SEP-2008 08:28
Sample Info: 1660 @ 1000ppb | PCB5-22H | KWG0804201-10
Misc Info : SEMIVOA GC\W0804201\10-ICAL.H
Cal Date : 23-SEP-2008 16:06
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\092208.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\092208_r.b\092208_r.m
Sub List #1 : AR1660.SUB
Sub List #2 : AR1660.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.957	4.510	998349	1657632	98.0	85.0		100.00
Aroclor 1016	5.690	5.633	223512	339424	1010	888	80.00- 120.00	100.00
	6.213	6.570	428623	623525	991	832	151.51- 227.27	191.77
	6.597	6.960	222326	355610	991	824	79.74- 119.61	99.47
	7.003	7.057	293573	411719	973	859	106.84- 160.26	131.35
	7.290	7.333	237769	368918	1080	885	91.86- 137.79	106.38
			Average of Peak Amounts =		1010	858		
Aroclor 1260	9.950	9.623	363363	679963	920	846	80.00- 120.00	100.00
	10.260	10.143	690953	707317	1020	849	159.28- 238.92	190.15
	10.323	10.733	485291	924097	857	913	101.69- 152.53	133.56
	10.947	10.910	443789	492871	982	900	101.44- 152.16	122.13
	11.413	12.120	923644	1052243	986	907	212.51- 318.76	254.19
			Average of Peak Amounts =		953	883		
Decachlorobiphenyl	16.057	17.153	979213	1202113	96.4	86.1		100.00

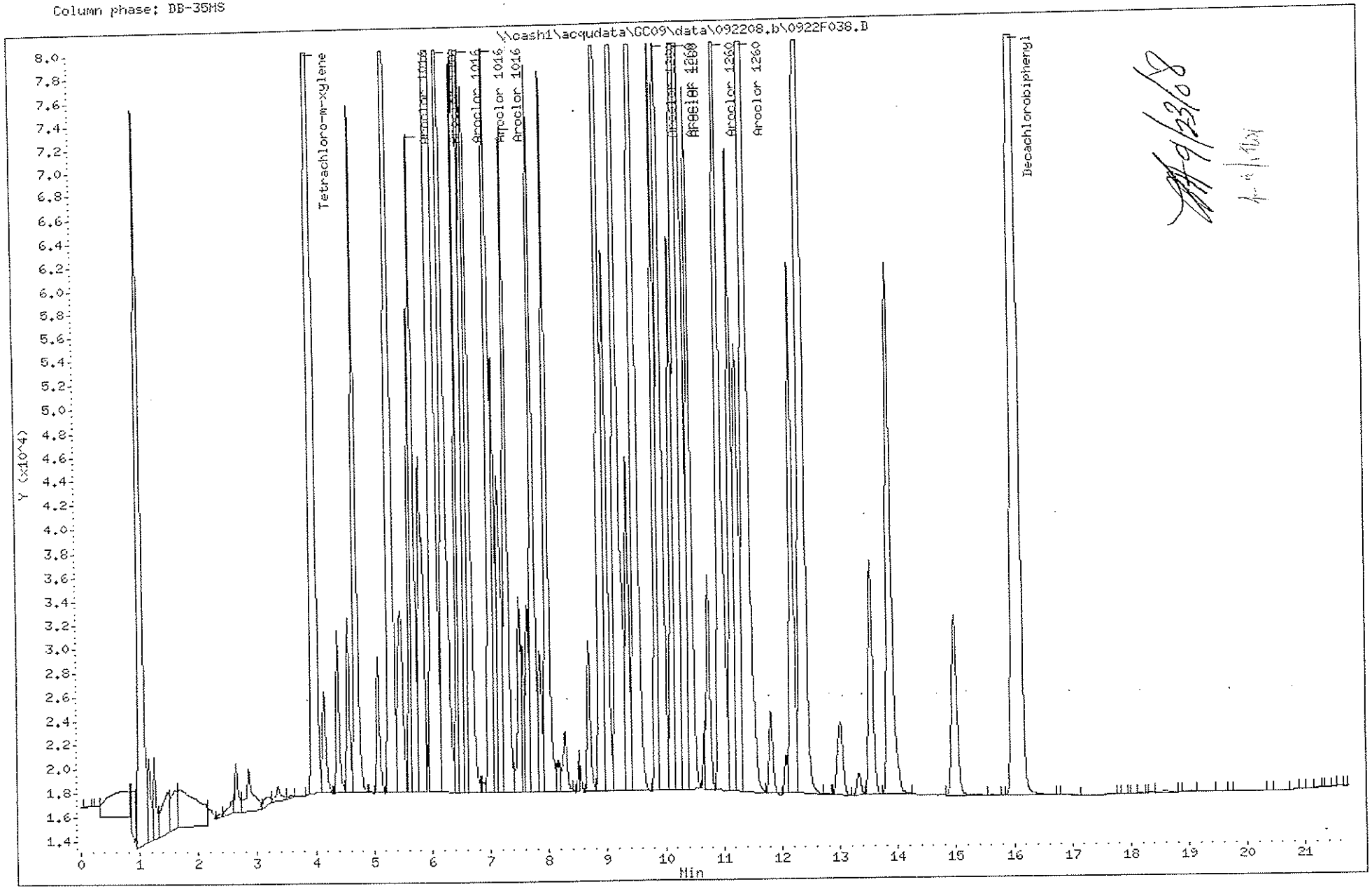
9/23/08

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F038.D
Date : 23-SEP-2008 08:28
Client ID:
Sample Info: 1660 @ 1000ppb | PCB5-22H | KWG0804201-10

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-35MS

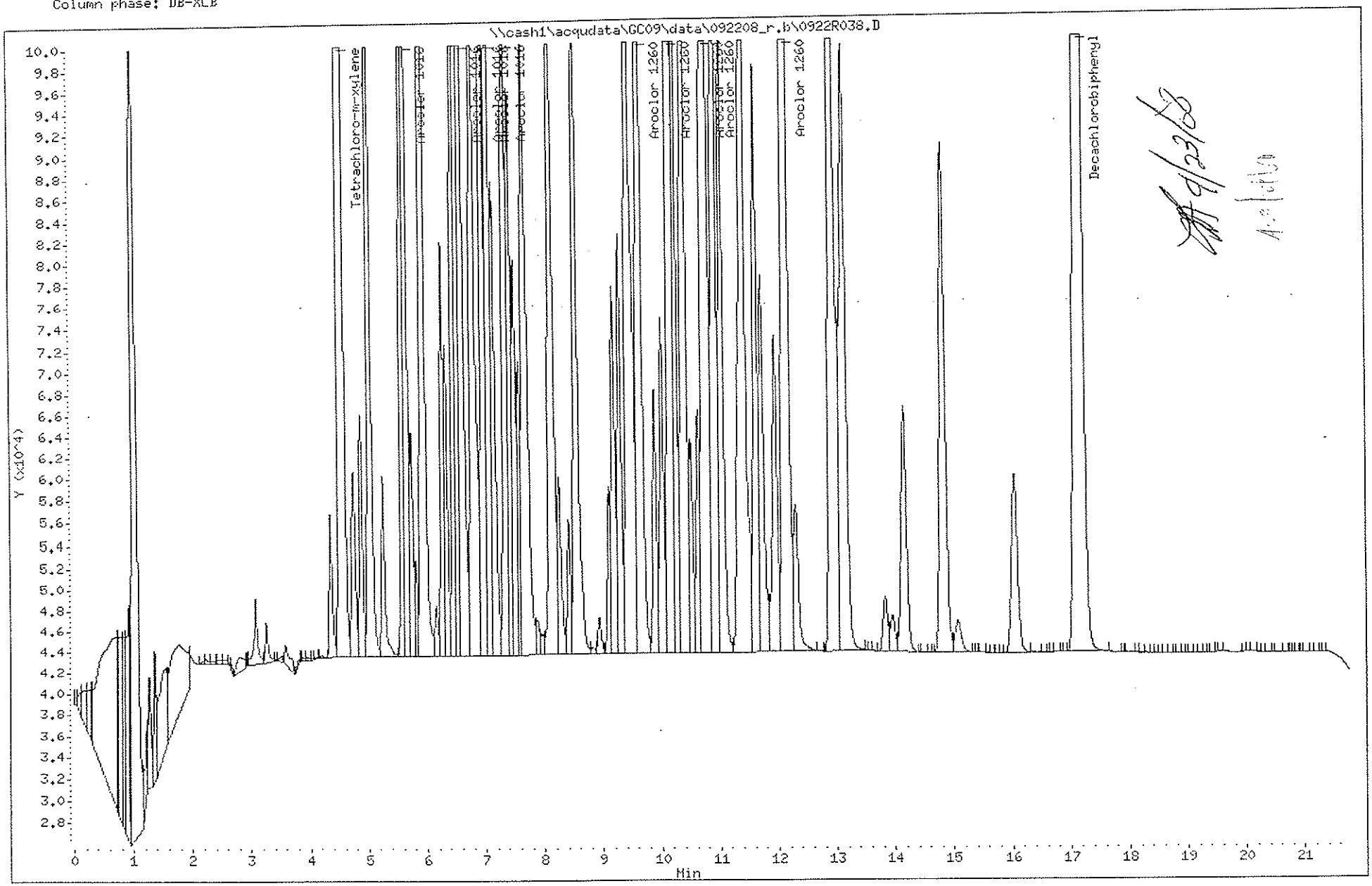


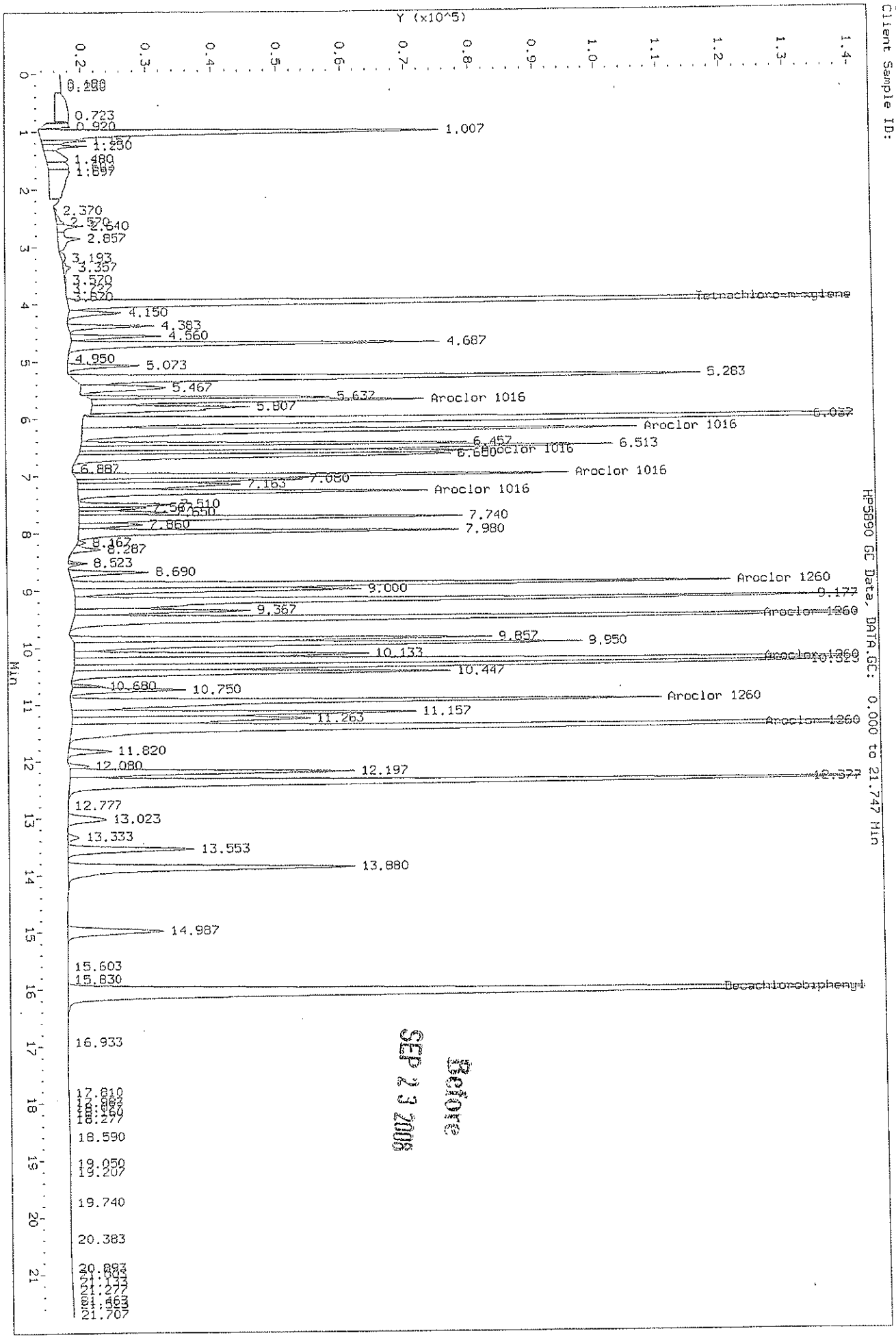
Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R038.D
Date : 23-SEP-2008 08:28
Client ID:
Sample Info: 1660 @ 1000ppb | PCB5-22H | KWG0804201-10

Instrument: GC09.i

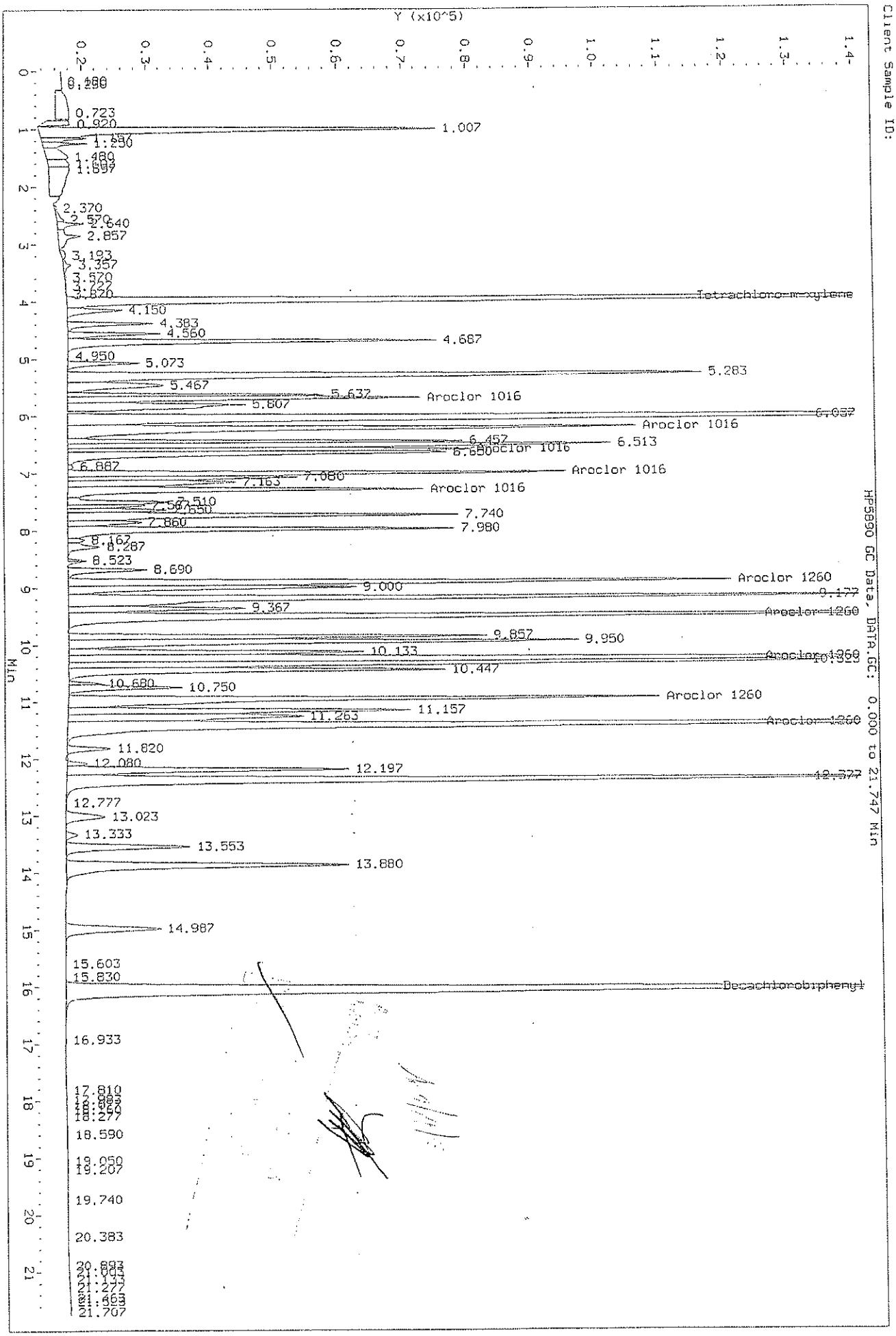
Operator: LHarris
Column diameter: 0.53

Column phase: DB-XLB




Data File: \\cash1\acqudata\GC09\data\092208.b\0922F038.D
Injection Date: 23-SEP-2008 08:28
Instrument: GC09.i
Client Sample ID:
HP5890 GC Data, DATA.GC: 0.000 to 21.747 Min
Y (x10^5)
Min
0.280
0.723
0.920
1.007
1.250
1.480
1.597
2.370
2.570
2.640
2.857
3.193
3.357
3.570
3.727
3.820
Tetrachloro-m-xylene
4.150
4.383
4.560
4.687
4.950
5.073
5.283
5.467
5.632
Aroclor 1016
5.807
6.052
Aroclor 1016
6.457
6.513
6.580
Aroclor 1016
6.887
Aroclor 1016
7.163
7.080
Aroclor 1016
7.510
7.650
7.740
7.860
7.980
8.162
8.287
8.523
8.690
Aroclor 1260
9.000
9.177
9.367
Aroclor 1260
9.852
9.950
10.133
Aroclor 1260
10.312
10.447
10.680
10.750
Aroclor 1260
11.157
11.263
Aroclor 1260
11.820
12.080
12.197
12.377
12.777
13.023
13.333
13.553
13.880
14.987
15.603
15.830
Decachlorobiphenyl
16.933
17.810
18.277
18.590
19.050
19.207
19.740
20.383
20.883
21.277
21.463
21.707

SEP 2 3 2008


Y (x10^5)
Min
Data File: \\cash1\acqudata\GC09\data\092208.b\0922F038.D
Injection Date: 23-SEP-2008 08:28
Instrument: GC09:1
Client Sample ID:
HP5890 GC Data, DATA.GC: 0.000 to 21.747 Min
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor 1016
Aroclor 1260

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F039.D
Report Date: 23-Sep-2008 16:37

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\092208.b\0922F039.D
Sample #2 : \\cash1\acqudata\GC09\data\092208_r.b\0922R039.D
Inj Date : 23-SEP-2008 08:54
Sample Info: 1660 @ 2000ppb | PCB5-23D | KWG0804201-10
Misc Info : SEMIVOA GC\W0804201\10-ICAL.H
Cal Date : 23-SEP-2008 16:06
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\092208.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\092208_r.b\092208_r.m
Sub List #1 : AR1660.SUB
Sub List #2 : AR1660.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.957	4.510	1788213	2884274	176	168		100.00
Aroclor 1016	5.690	5.633	393185	599143	1770	1850	80.00- 120.00	100.00
	6.213	6.570	746406	1091318	1720	1660	151.51- 227.27	189.84
	6.597	6.960	388449	619406	1730	1750	79.74- 119.61	98.80
	7.003	7.060	515015	725169	1710	1780	106.84- 160.26	130.99
	7.290	7.333	431160	647198	1960	1780	91.86- 137.79	109.66
			Average of Peak Amounts =		1780	1760		
Aroclor 1260	9.950	9.623	652888	1187239	1700	1660	80.00- 120.00	100.00
	10.260	10.143	1284017	1252846	1860	1680	159.28- 238.92	196.67
	10.323	10.733	832348	1660287	1580	1790	101.69- 152.53	127.49
	10.950	10.910	811487	880438	1800	1770	101.44- 152.16	124.29
	11.413	12.120	1684546	1892037	1800	1790	212.51- 318.76	258.01
			Average of Peak Amounts =		1750	1740		
Decachlorobiphenyl	16.057	17.153	1722606	2099406	170	167		100.00

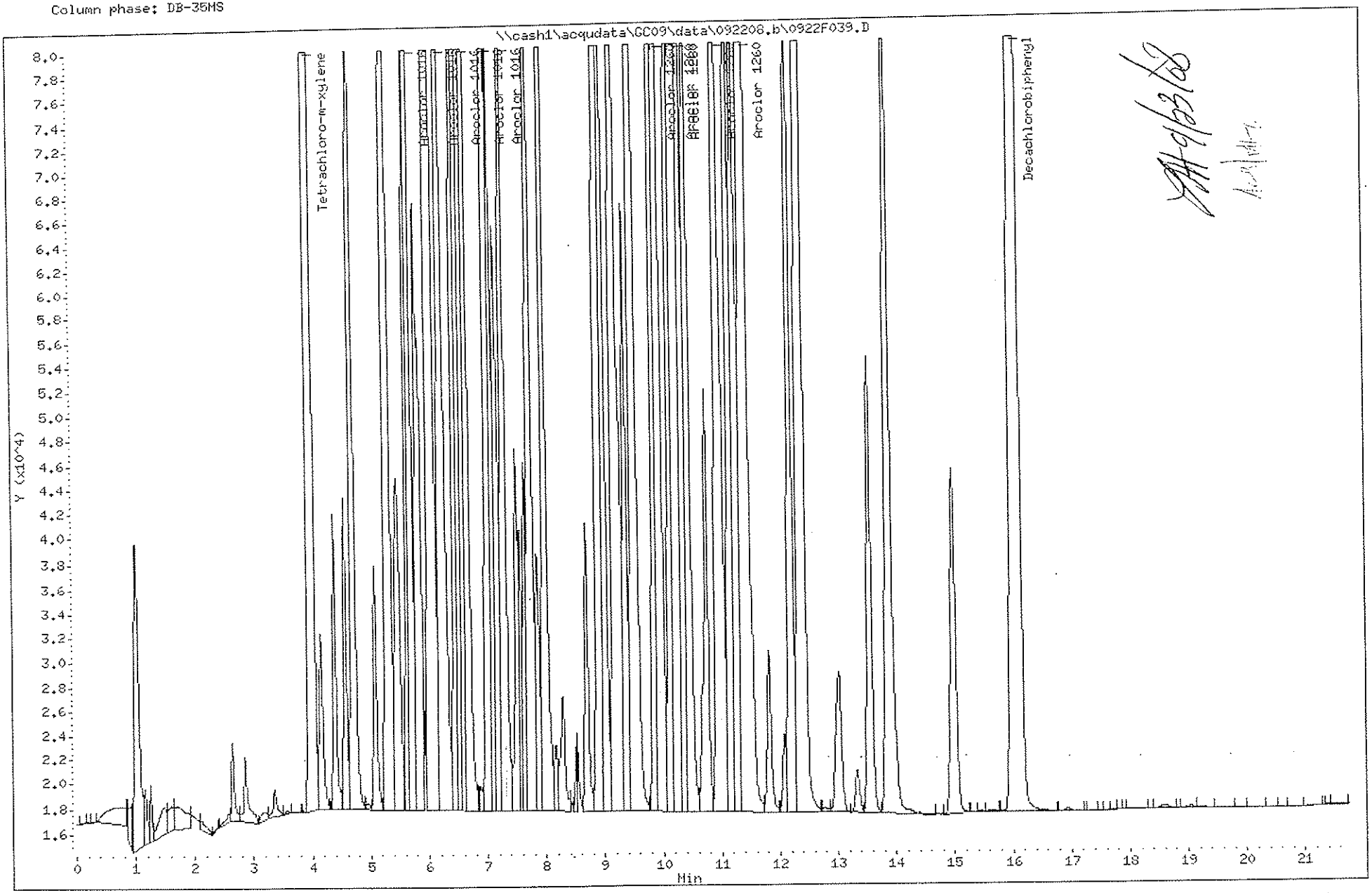
9/23/08

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F039.D
Date : 23-SEP-2008 08:54
Client ID:
Sample Info: 1660 @ 2000ppb | PCB5-23D | KWG0804201-10

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-35MS

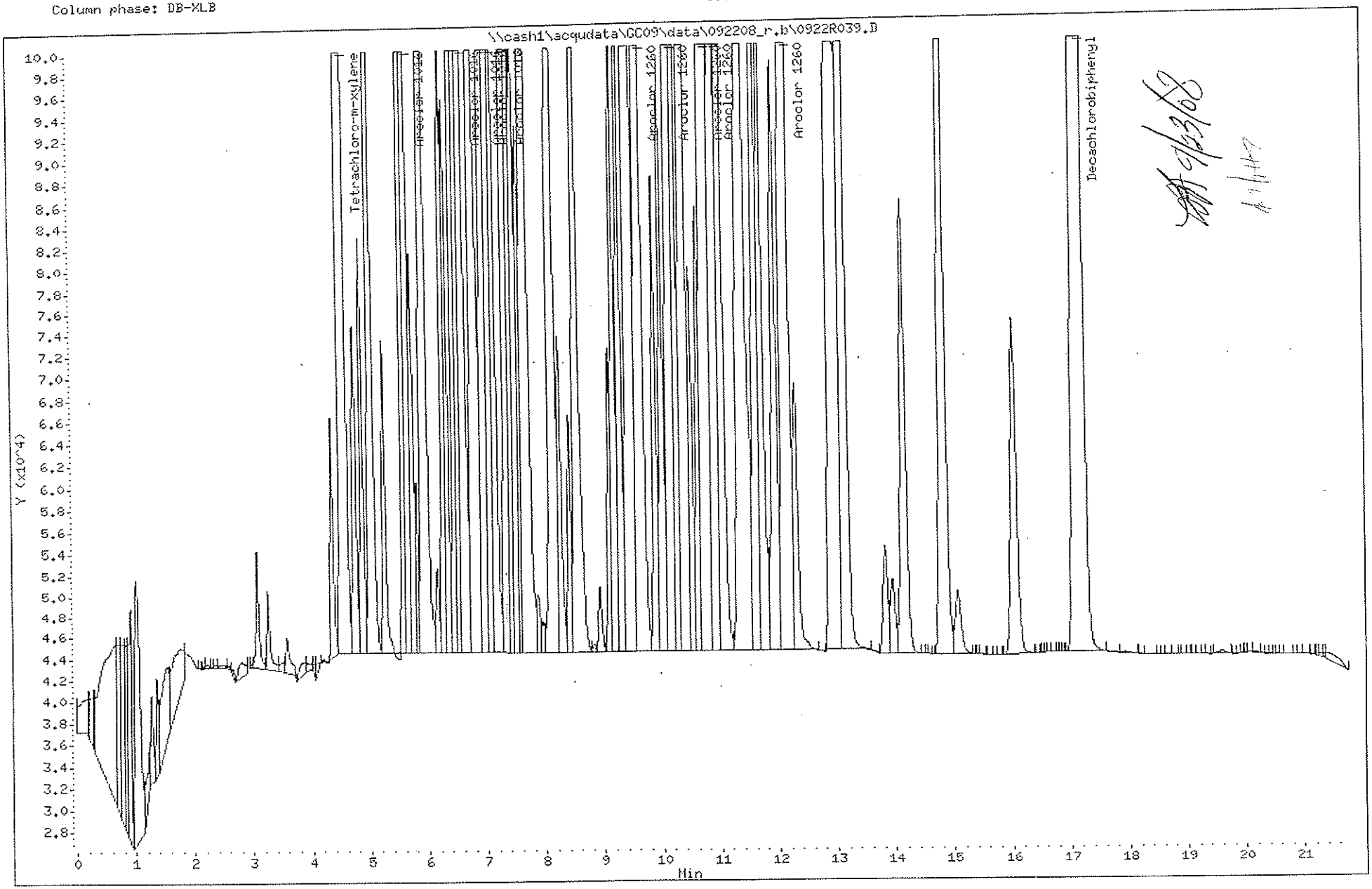


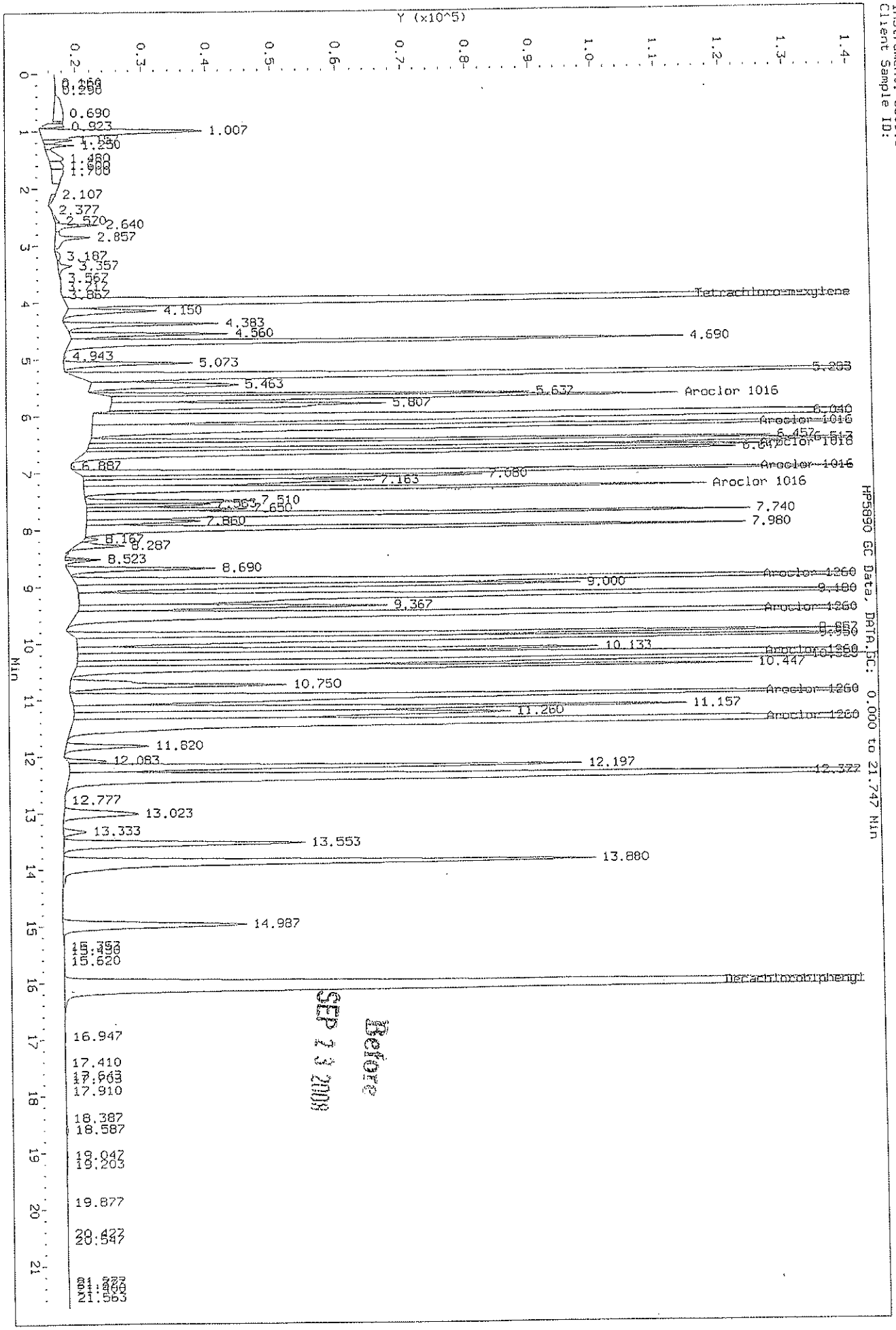
Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R039.D
Date : 23-SEP-2008 08:54
Client ID:
Sample Info: 1660 @ 2000ppb | PCB5-23D | KWG0804201-10

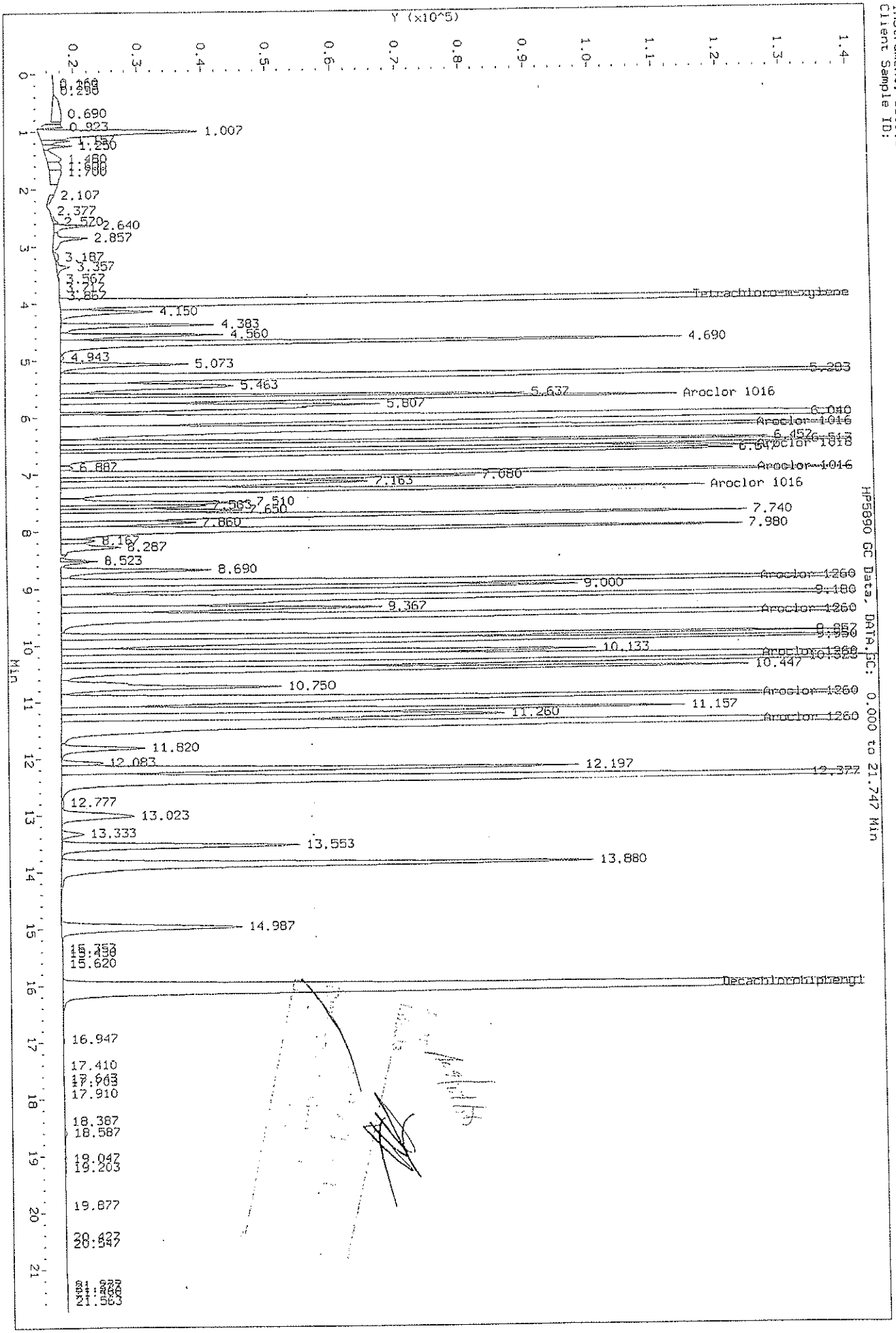
Instrument: GC09.i

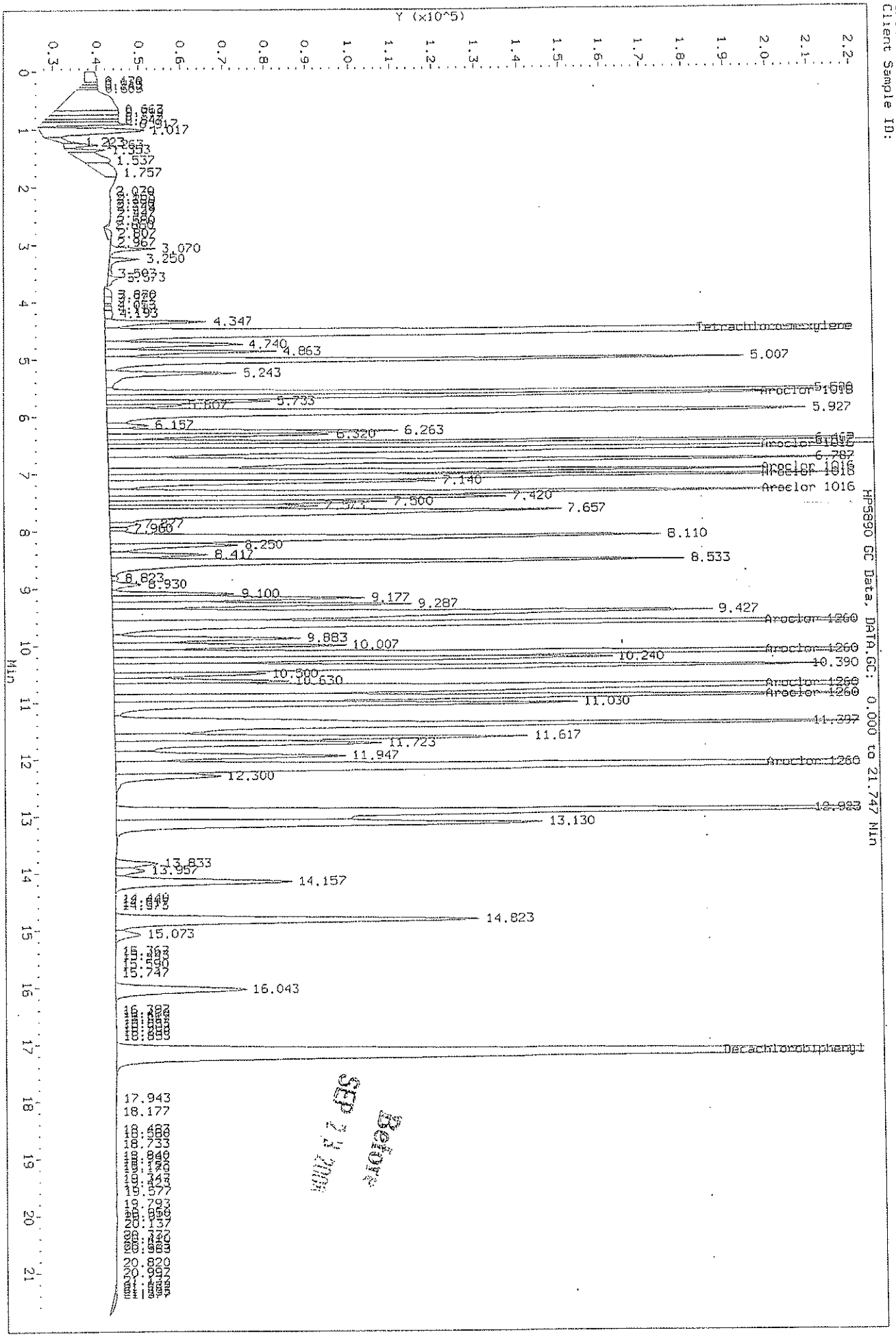
Operator: LHarris
Column diameter: 0.53

Column phase: DB-XLB




Data File: \\cash1\acqudata\GC09\data\092208.b\0922F039.D
Injection Date: 23-SEP-2008 08:54
Instrument: GC09.i
Client Sample ID:
HP5890 GC Data, DATA.SC: 0.000 to 21.747 Min
Y (x10^5)
Min
Tetrachloro-m-xylene
Aroclor 1016
Aroclor 1260
Decachlorobiphenyl
SEP 23 2008
Rejected


Y (x10^5)
Min
Data File: \\cash1\acqudata\GC09\data\092208.b\0922f039.D
Injection Date: 23-SEP-2008 08:54
Instrument: GC09.i
Client Sample ID:
HP5890 GC Data, DATA.SC: 0.000 to 21.747 Min
Tetrachloro-m-xylene
Aroclor 1016
Aroclor 1260
Decachlorobiphenyl


Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R039.D
Injection Date: 23-SEP-2008 08:54
Instrument: GC09.i
Client Sample ID:
Y (x10^5)
Min
HP5890 GC Data, DATA.GC; 0.000 to 21.747 Min
Tetrachloro-m-xylene
Aroclor 1016
Aroclor 1260
Decachlorobiphenyl
4.347
4.740
4.863
5.007
5.243
5.927
6.157
6.263
6.787
7.140
7.420
7.657
8.110
8.533
9.100
9.177
9.287
9.427
9.883
10.007
10.240
10.390
10.630
11.030
11.617
11.723
11.947
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13.130
13.833
13.957
14.157
14.823
15.073
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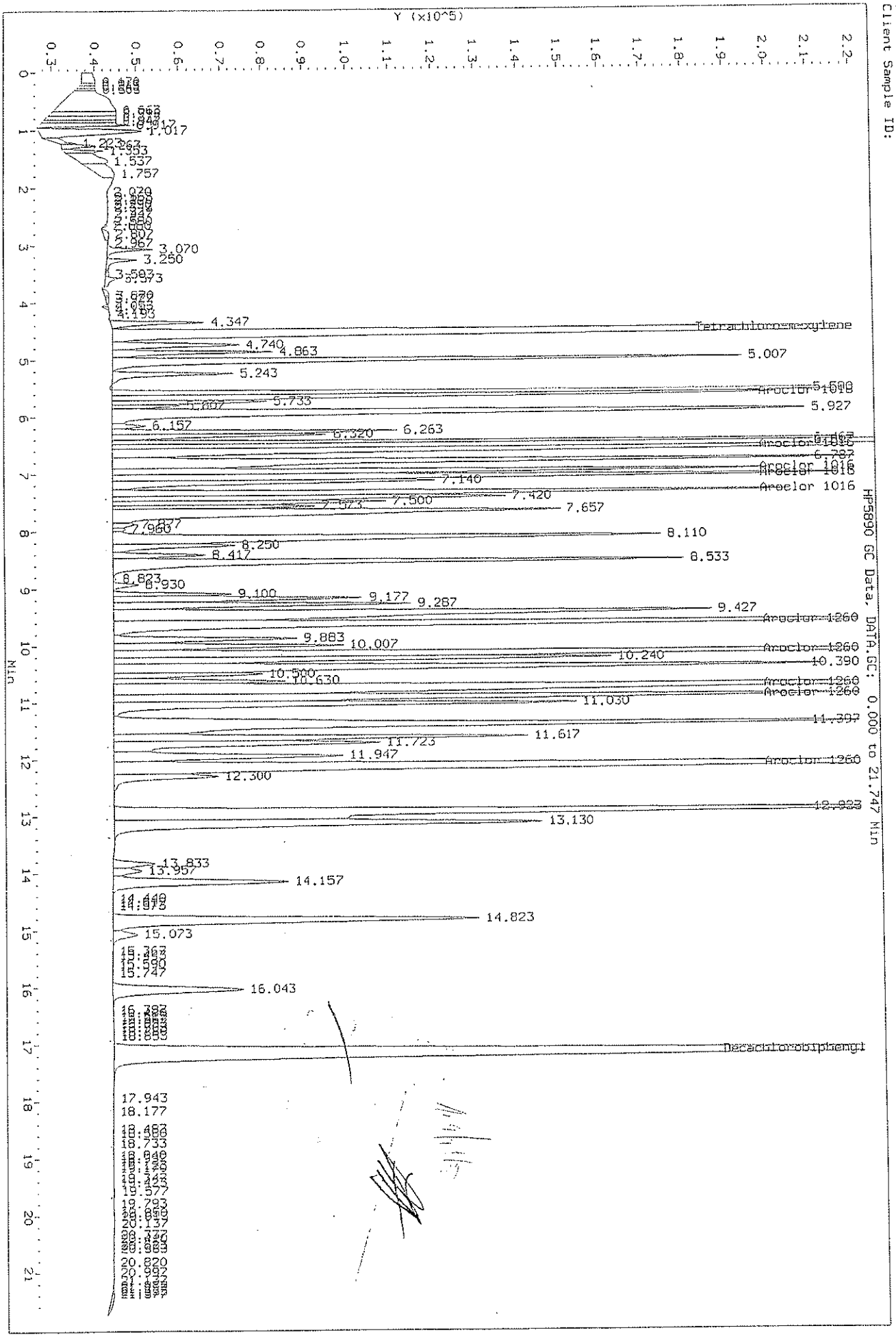
17.943
18.177



Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R039.D
Injection Date: 23-SEP-2008 08:54
Instrument: GC09.i
Client Sample ID:

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F040.D
Report Date: 23-Sep-2008 16:37

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\092208.b\0922F040.D
Sample #2 : \\cash1\acqudata\GC09\data\092208_r.b\0922R040.D
Inj Date : 23-SEP-2008 09:20
Sample Info: 1660 @ 5000ppb | PCB5-23E | KWG0804201-10
Misc Info : SEMIVOA GC\W0804201\10-ICAL.H
Cal Date : 23-SEP-2008 16:06
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\092208.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\092208_r.b\092208_r.m
Sub List #1 : AR1660.SUB
Sub List #2 : AR1660.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.957	4.510	3921719	6244215	385	363		100.00
Aroclor 1016	5.690	5.633	826701	1196481	3730	3490	80.00- 120.00	100.00
	6.213	6.517	1565705	3125725	3620	4590	151.51- 227.27	189.39
	6.597	6.960	824010	1314089	3670	3650	79.74- 119.61	99.67
	7.003	7.057	1104080	1544755	3660	3740	106.84- 160.26	133.55
	7.290	7.333	949272	1396996	4310	3800	91.86- 137.79	114.83
			Average of Peak Amounts =		3800	3850		
Aroclor 1260	9.950	9.620	1433550	2577980	3810	3580	80.00- 120.00	100.00
	10.260	10.140	2854147	2710560	4070	3610	159.28- 238.92	199.10
	10.323	10.733	1822170	3676526	3690	3940	101.69- 152.53	127.11
	10.947	10.910	1817682	1948243	4020	3890	101.44- 152.16	126.80
	11.413	12.120	3807966	4226096	4070	3980	212.51- 318.76	265.63
			Average of Peak Amounts =		3930	3800		
Decachlorobiphenyl	16.057	17.153	3768271	4515017	371	359		100.00

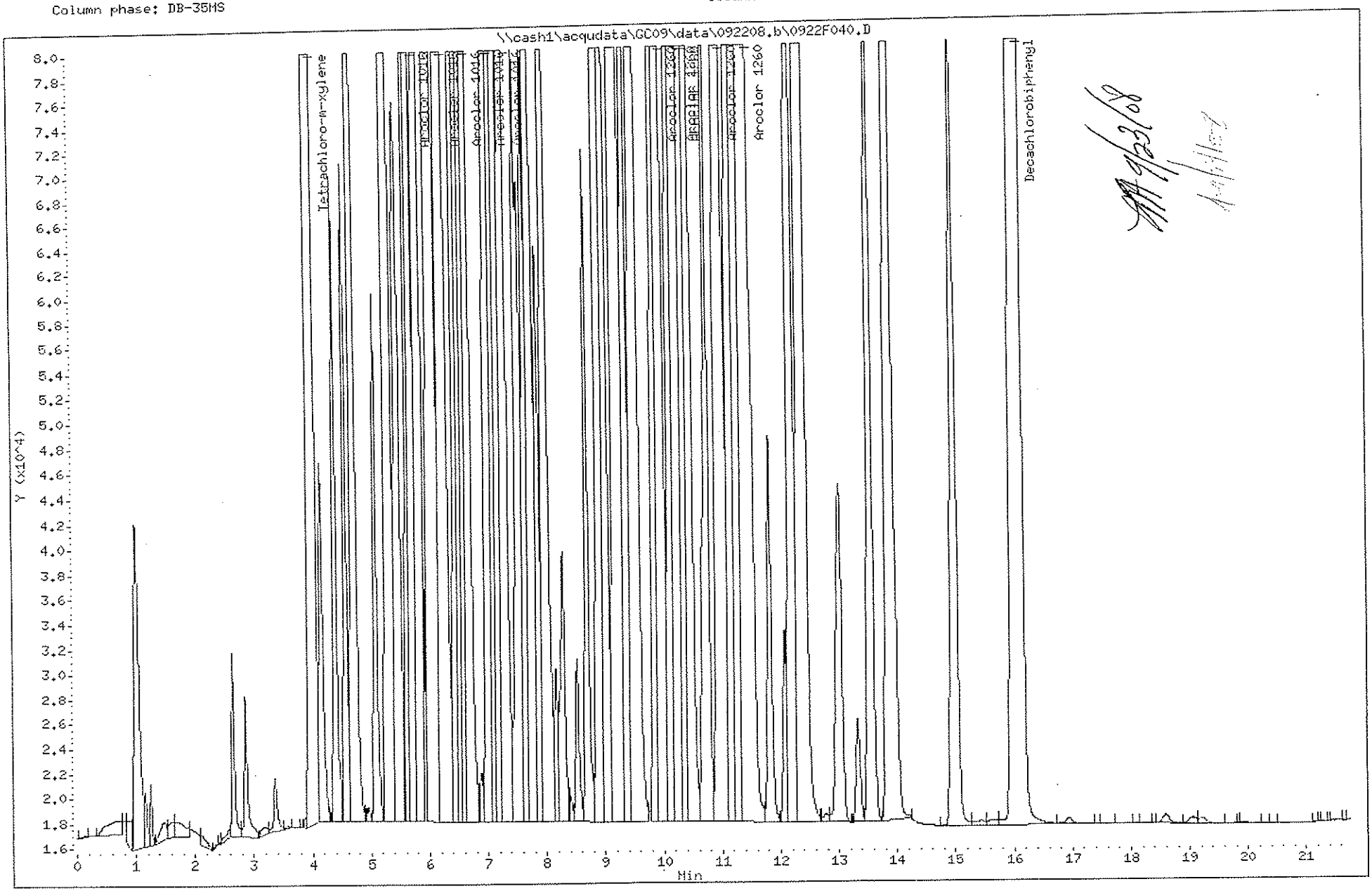
9/22/08

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F040.D
Date : 23-SEP-2008 09:20
Client ID:
Sample Info: 1660 @ 5000ppb | PCB5-23E | KWG0804201-10

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-35MS

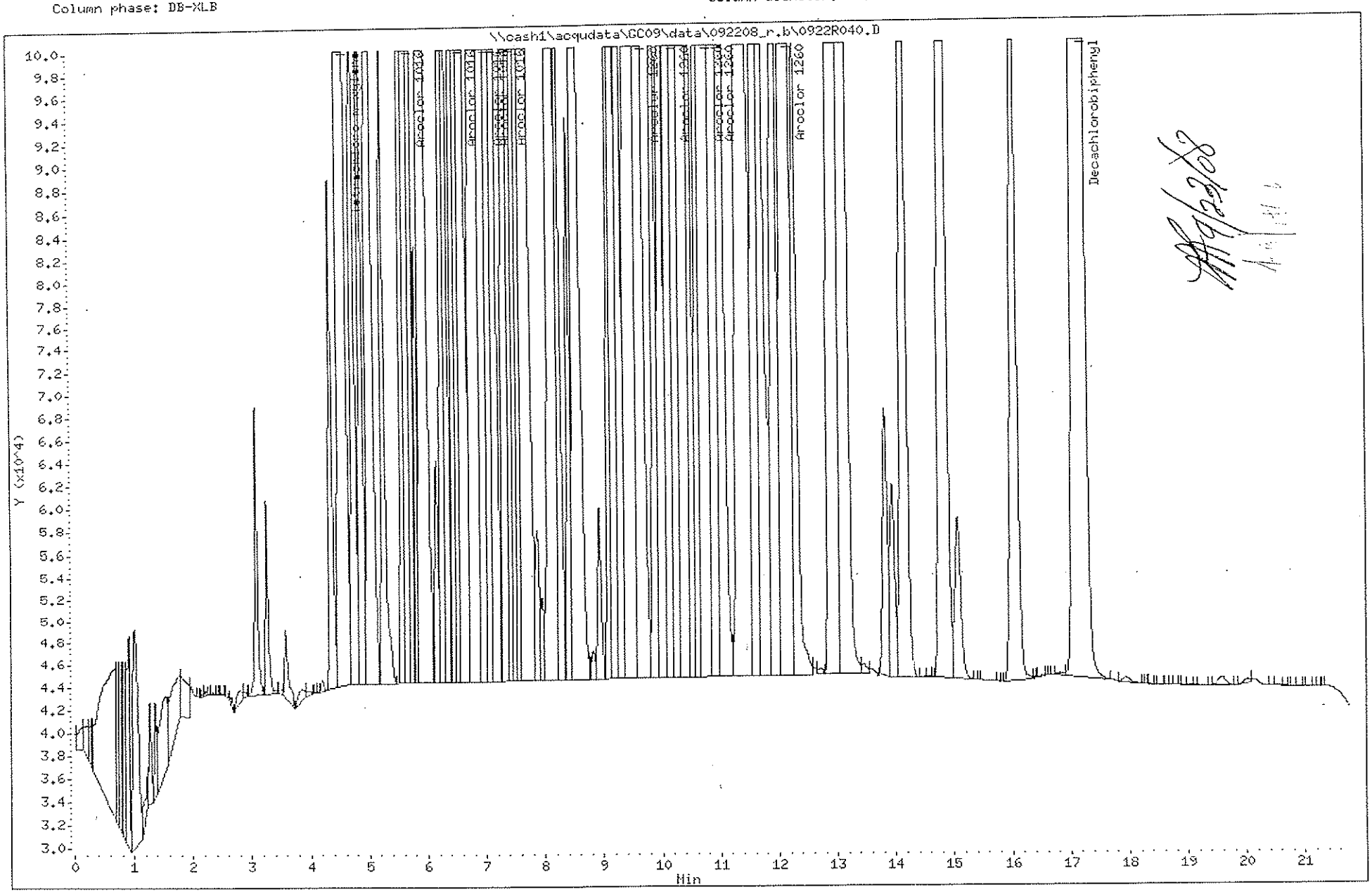


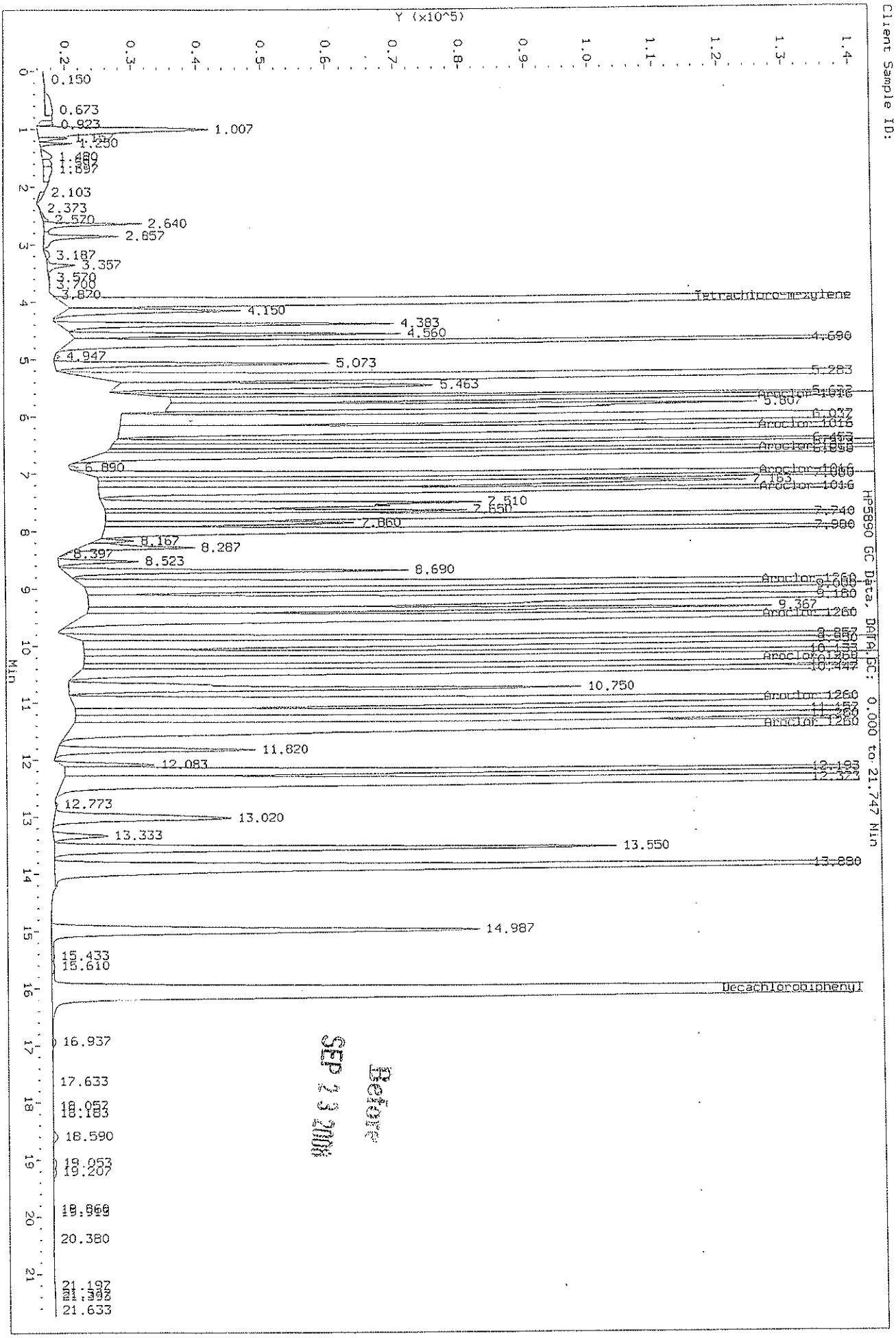
Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R040.B
Date : 23-SEP-2008 09:20
Client ID:
Sample Info: 1660 @ 5000ppb | PCB5-23E | KWG0804201-10

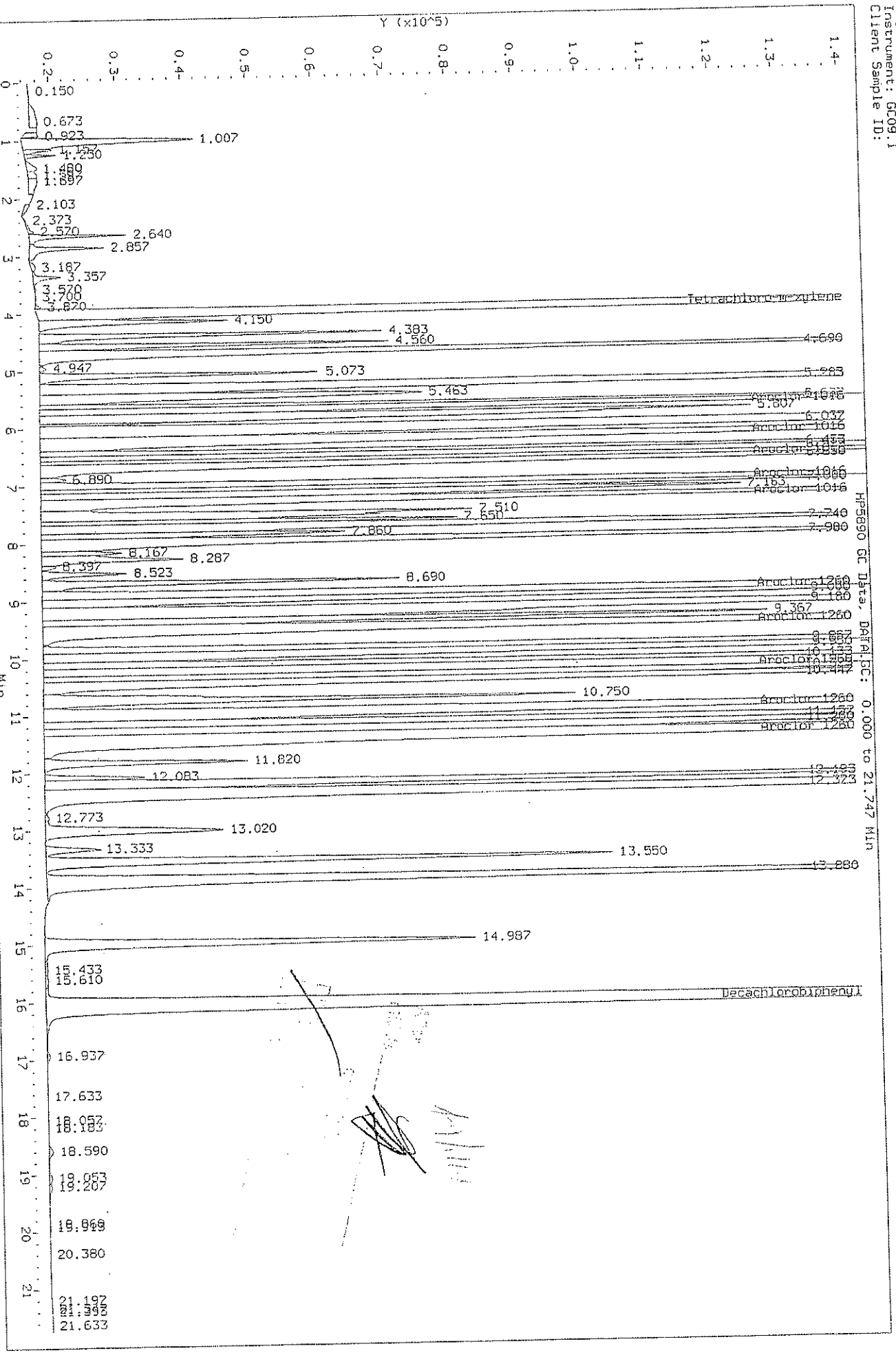
Instrument: GC09.i

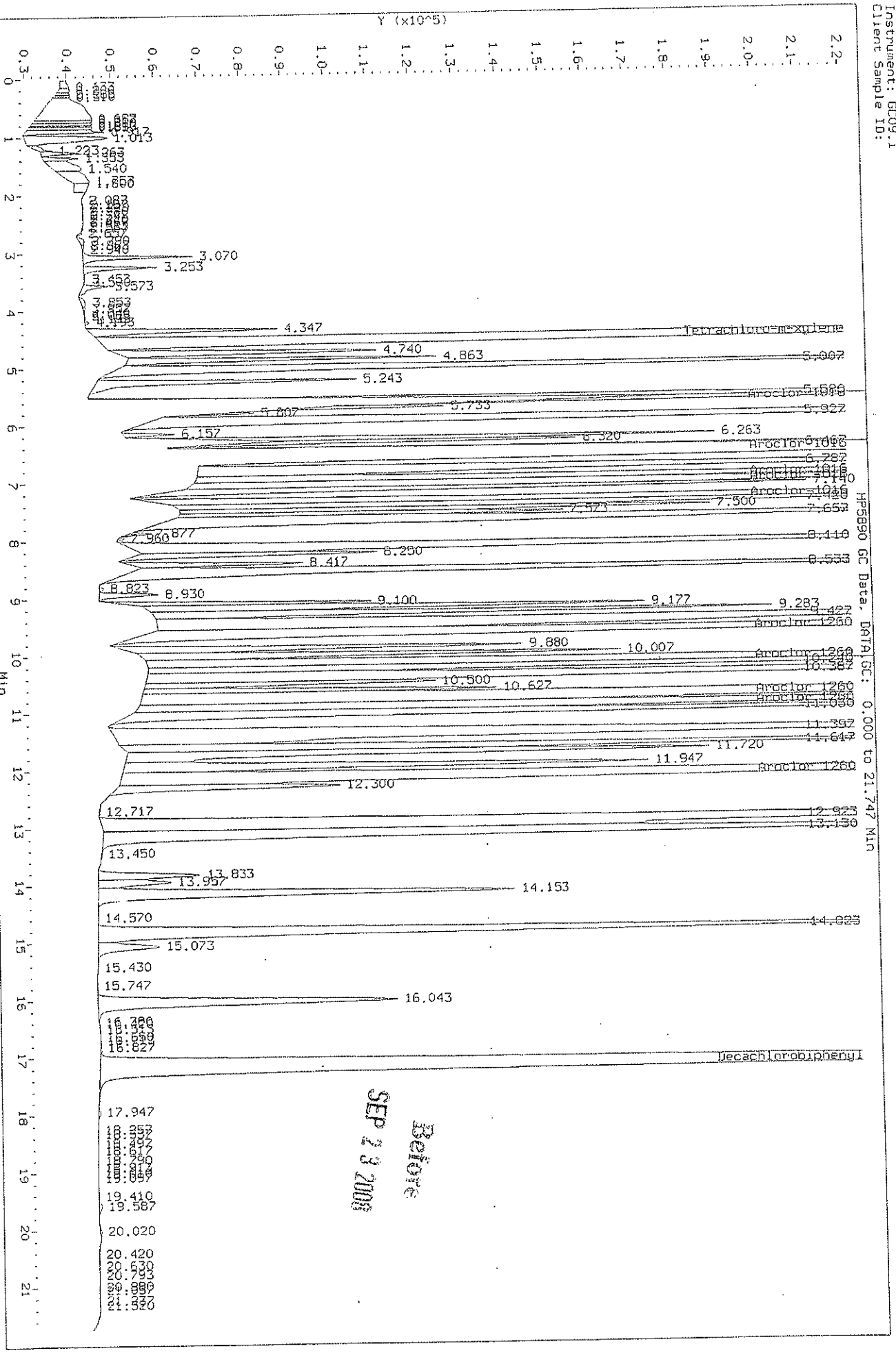
Operator: LHarris
Column diameter: 0.53

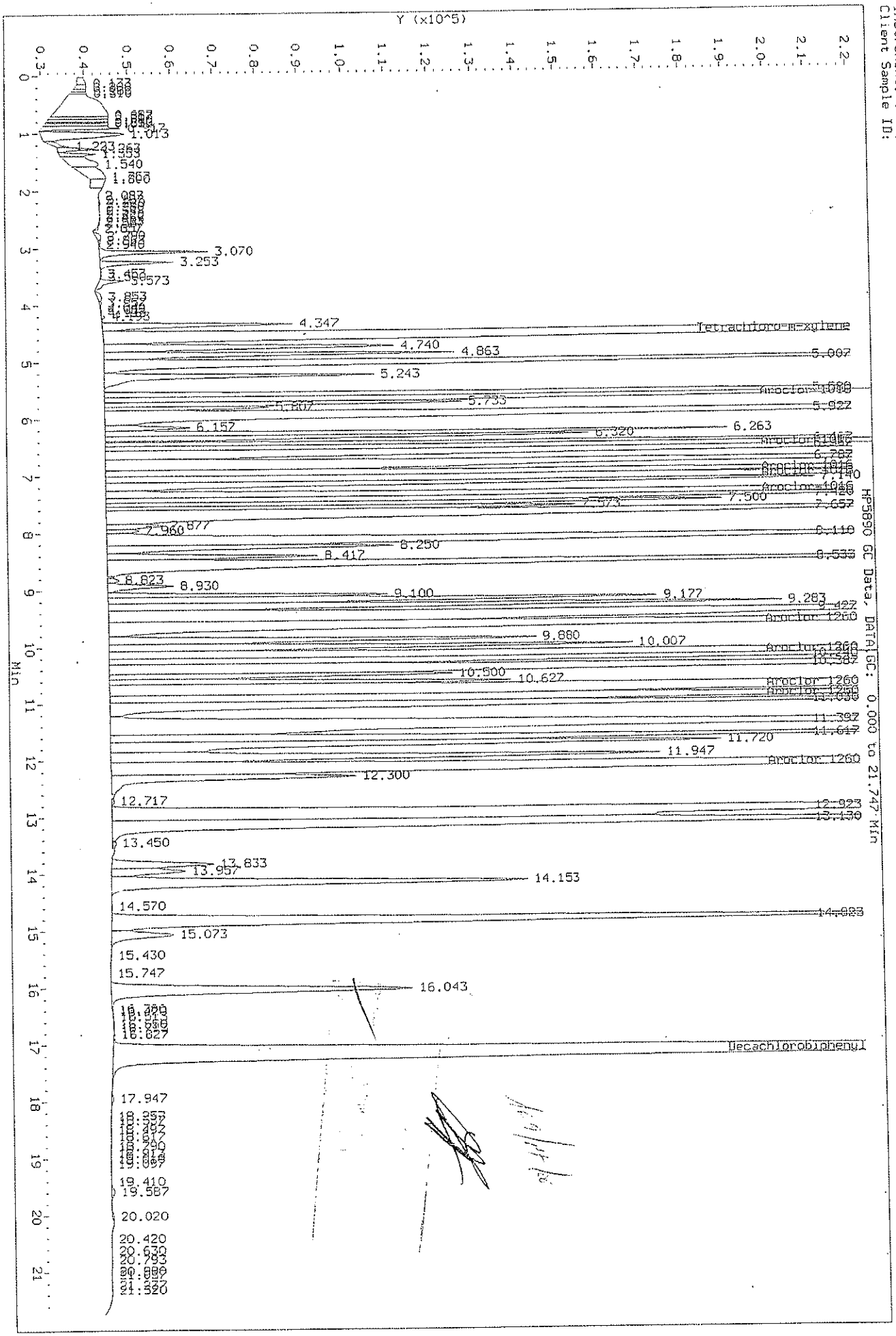
Column phase: DB-XLB




Data File: \\cash1\acqudata\GC09\data\092208.b\0922F040.D
Injection Date: 23-SEP-2008 09:20
Instrument: GC09.i
Client Sample ID:
HP5890 GC Data, DATA.GC: 0.000 to 21.747 Min
Y (x10^5)
Min
Tetrachloro-mexylene
Decachlorobiphenyl
Aroclor 1016
Aroclor 1260
Before
SEP 23 2008


Data File: \\cash1\acqudata\GC09\data\092208.b\0922F040.D
Injection Date: 23-SEP-2008 09:20
Instrument: GC09.i
Client Sample ID:
Y (x10^5)
HP5890 GC Data, DATA.pc: 0.000 to 21.747 Min
Min
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor 1016
Aroclor 1260


Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R040.D
Injection Date: 23-SEP-2008 09:20
Instrument: GC09.i
Client Sample ID:
HP5890 GC Data, DATA,GC: 0.000 to 21.747 Min
Y (x10^5)
Min
Tetrachloro-m-xylene
Aroclor 1016
Aroclor 1260
Decachlorobiphenyl
Before
SEP 23 2008


Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R040.D
Injection Date: 23-SEP-2008 09:20
Instrument: GC09.i
Client Sample ID:
HP5890 GC Data, DATA GC: 0.000 to 21.747 Min
Y (x10^5)
Min
Tetrachloro-m-xylene
Aroclor 1260
Decachlorobiphenyl

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F041.D
Report Date: 23-Sep-2008 16:37

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\092208.b\0922F041.D
Sample #2 : \\cash1\acqudata\GC09\data\092208_r.b\0922R041.D
Inj Date : 23-SEP-2008 09:47
Sample Info: 1016 @ 1000ppb | PCB5-19A | KWG0804201-15
Misc Info : SEMIVOA GC\W0804201\15-ICV.H
Cal Date : 23-SEP-2008 16:08
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\092208.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\092208_r.b\092208_r.m
Sub List #1 : AR1016.sub
Sub List #2 : AR1016.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1016	5.690	5.633	218244	333609	984	973	80.00- 120.00	100.00(M)
	6.213	6.570	416323	614205	962	902	151.51- 227.27	190.76(M)
	6.597	6.960	214312	333965	955	927	79.74- 119.61	98.20(M)
	7.003	7.060	288662	405934	956	982	106.84- 160.26	132.27(M)
	7.290	7.333	263673	361154	1200	981	91.86- 137.79	120.82(M)
			Average of Peak Amounts =		1010	953		

QC Flag Legend

M - Compound response manually integrated.

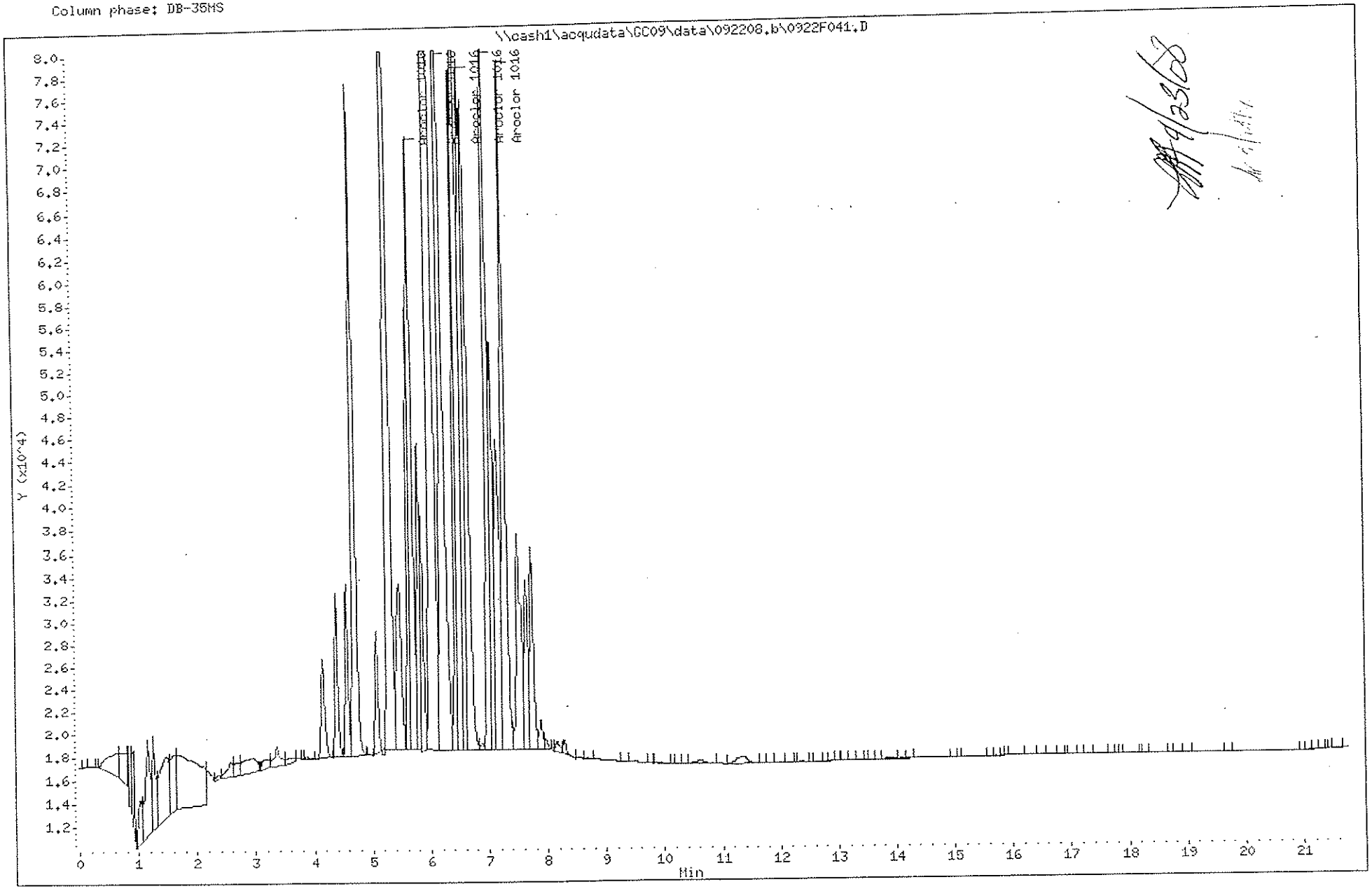
9/23/08

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F041.D
Date : 23-SEP-2008 09:47
Client ID:
Sample Info: 1016 @ 1000ppb | PCB5-19A | KWG0804201-15

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-35MS

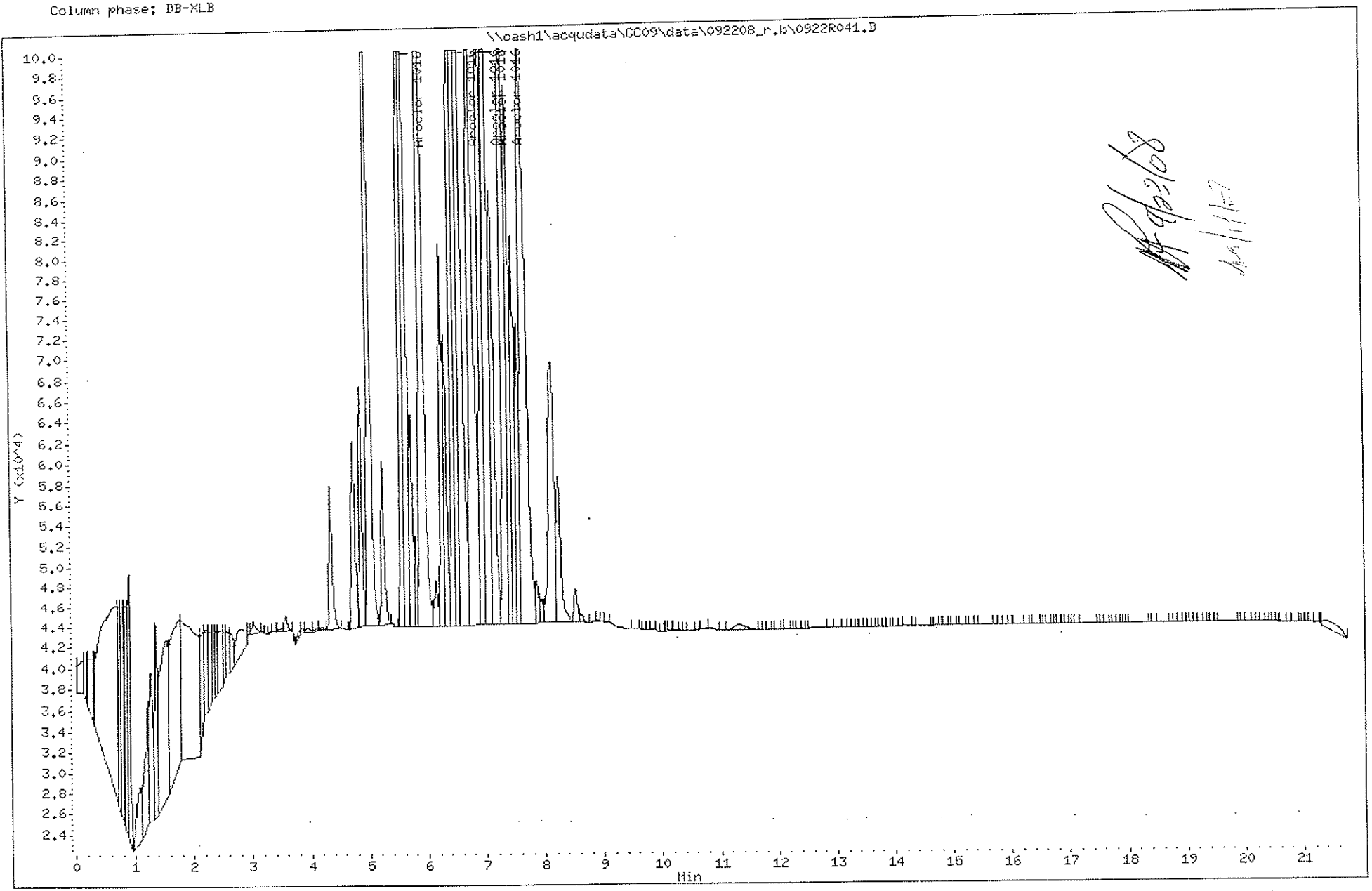


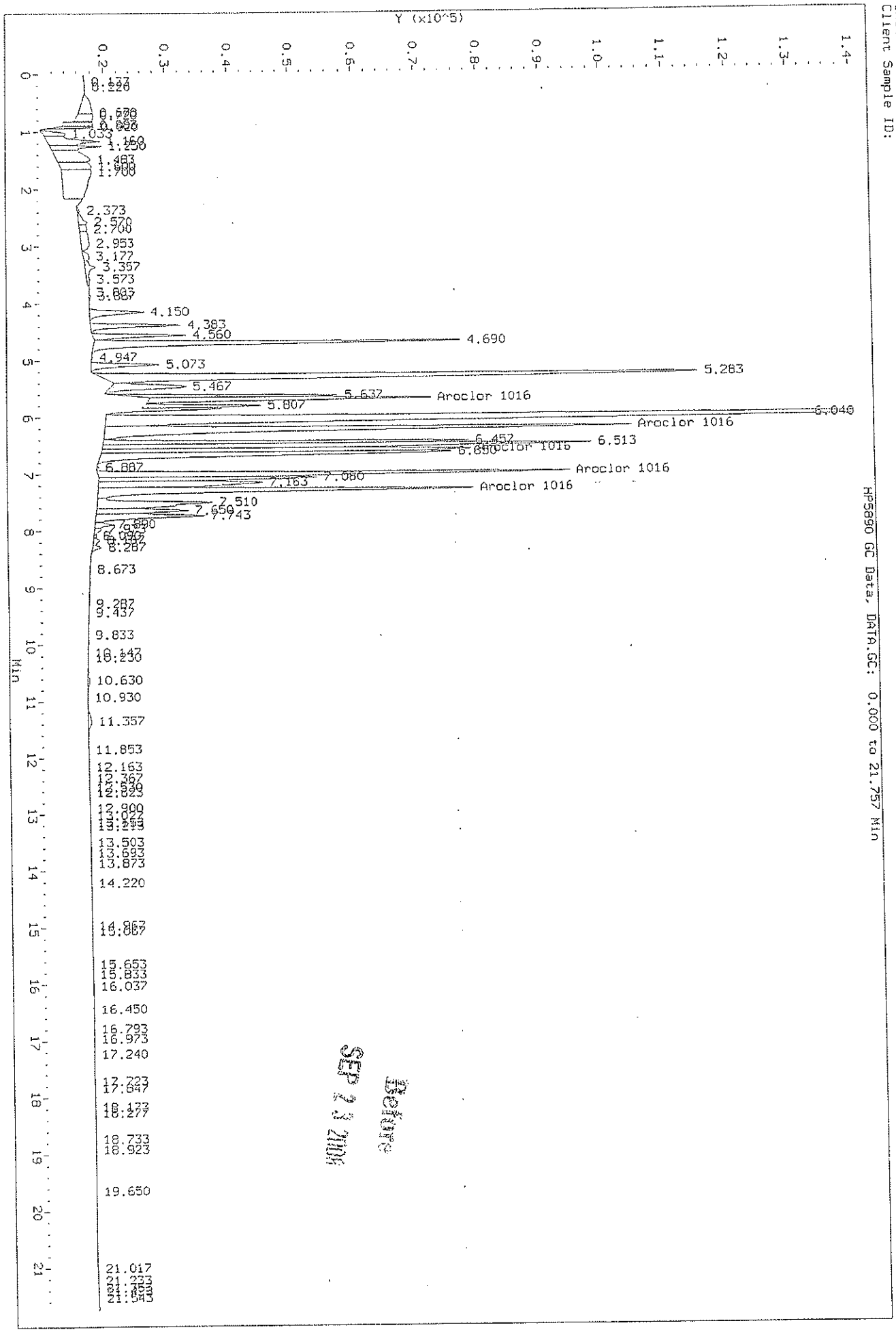
Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R041.D
Date : 23-SEP-2008 09:47
Client ID:
Sample Info: 1016 @ 1000ppb | PCB5-19A | KWG0804201-15

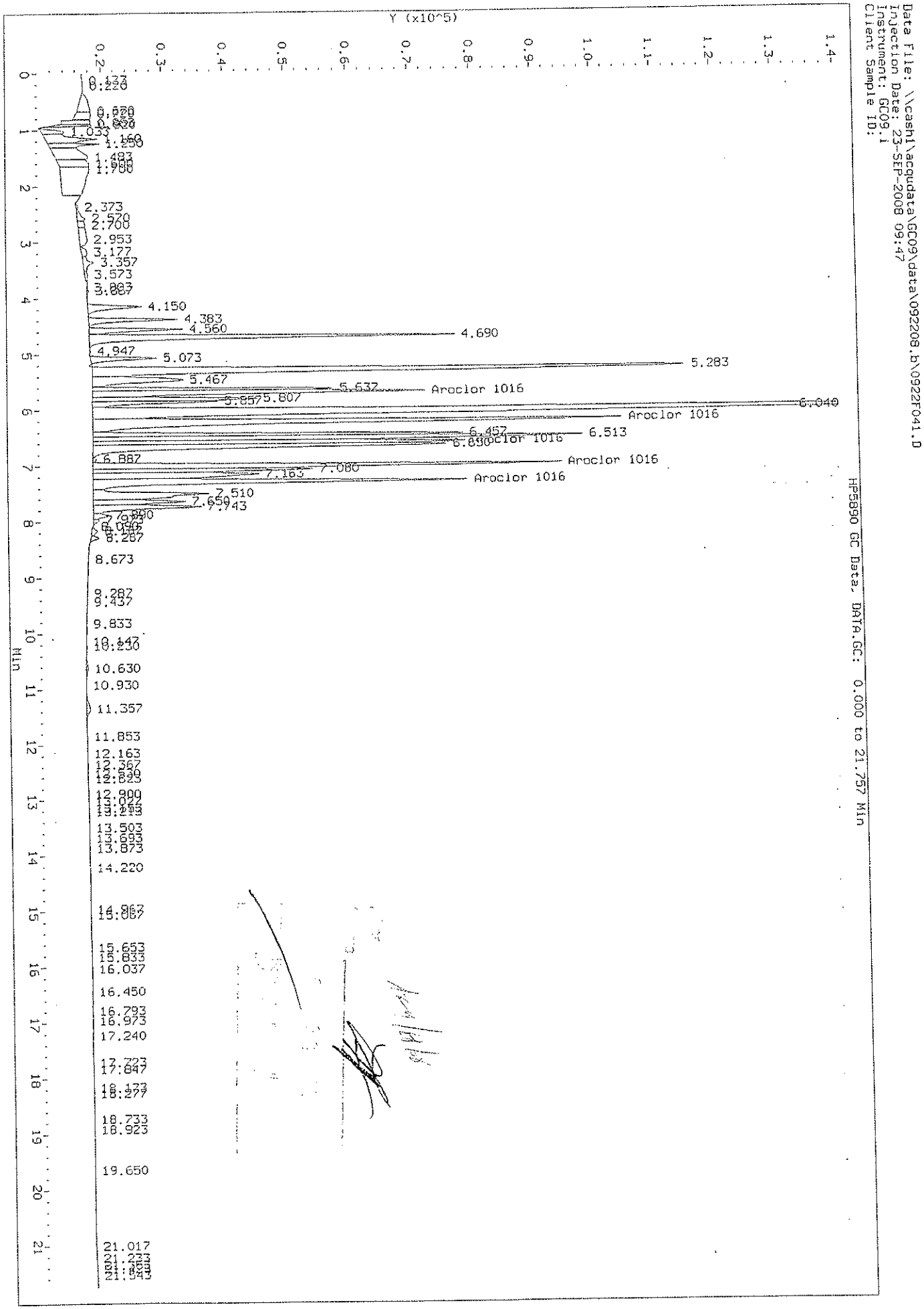
Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-XLB




Data File: \\cash1\acqudata\GC09\data\092208.b\0922F041.D
Injection Date: 23-SEP-2008 09:47
Instrument: GC09.i
Client Sample ID:
HP5890 GC Data, DATA.GC: 0.000 to 21.757 Min
Y (x10^5)
Min
Aroclor 1016
Aroclor 1016
Aroclor 1016
Aroclor 1016
Aroclor 1016
SEP 23 2008


Data File: \\cash1\acqudata\GC09\data\092208.b\0922F041.D
Injection Date: 23-SEP-2008 09:47
Instrument: GC09.I
Client Sample ID:
Y (x10^5)
Min
HP5890 GC Data, DATA.GC: 0.000 to 21.757 Min
Aroclor 1016
Aroclor 1016
Aroclor 1016
Aroclor 1016
4.690
5.283
6.513
6.040

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F042.D
Report Date: 23-Sep-2008 16:37

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\092208.b\0922F042.D
Sample #2 : \\cash1\acqudata\GC09\data\092208_r.b\0922R042.D
Inj Date : 23-SEP-2008 10:13
Sample Info: 1221 @ 1000ppb | PCB5-19B | KWG0804201-16
Misc Info : SEMIVOA GC\W0804201\16-ICV.H
Cal Date : 23-SEP-2008 16:08
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\092208.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\092208_r.b\092208_r.m
Sub List #1 : AR1221.SUB
Sub List #2 : AR1221.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1221	3.357	3.573	90447	142004	988	1010	80.00- 120.00	100.00(M)
	3.870	4.193	35969	46418	950	948	33.06- 49.60	39.77(M)
	4.383	4.747	137481	229593	1020	1030	117.90- 176.86	152.00(M)
	4.560	4.863	91023	152941	1040	1050	76.27- 114.41	100.64(M)
			Average of Peak Amounts =		1000	1010		

QC Flag Legend

M - Compound response manually integrated.

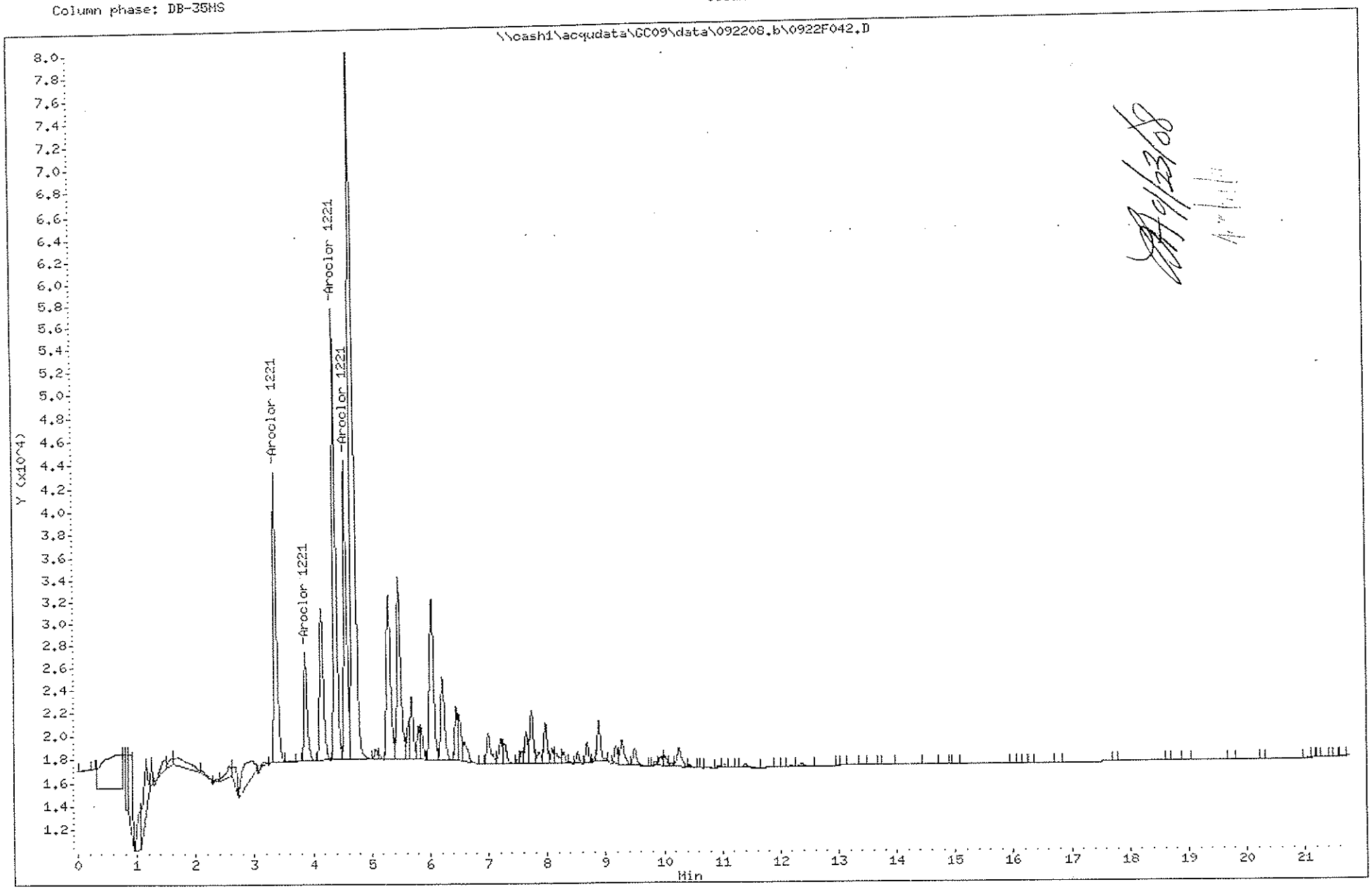
9/23/08

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F042.D
Date : 23-SEP-2008 10:13
Client ID:
Sample Info: 1221 @ 1000ppb | PCB5-19B | KWG0804201-16

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-35MS

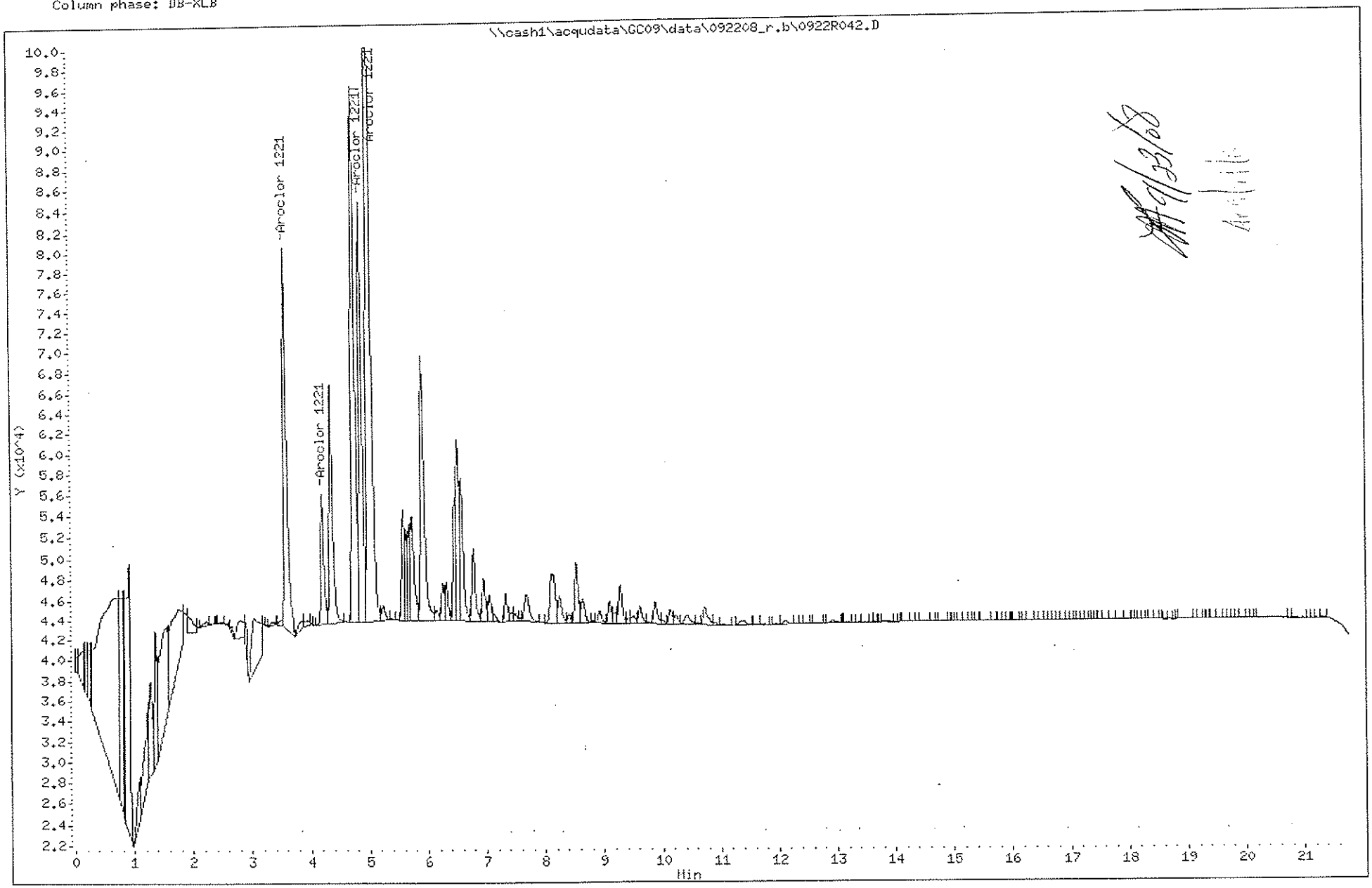


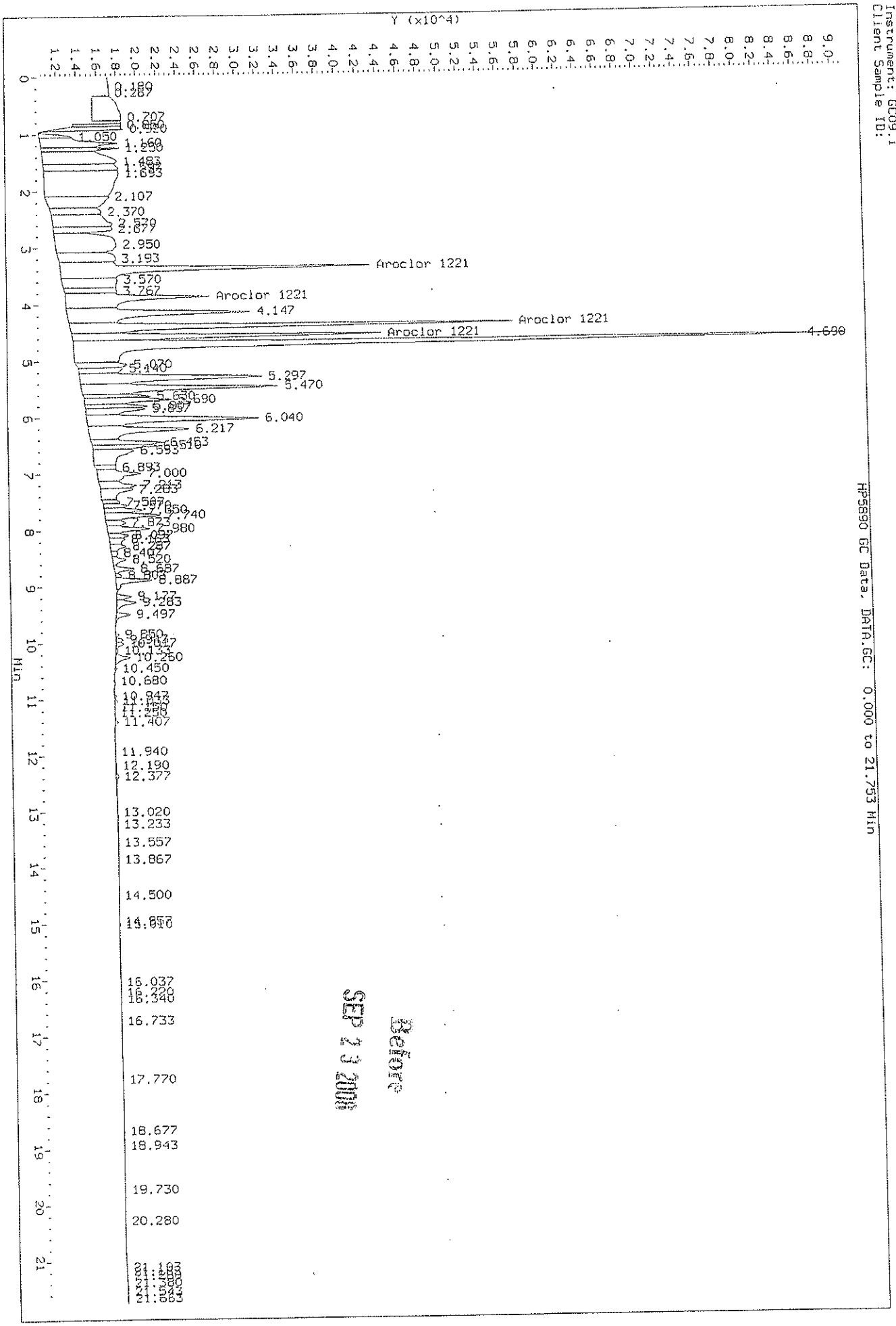
Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R042.D
Date : 23-SEP-2008 10:13
Client ID:
Sample Info: 1221 @ 1000ppb | PCB5-19B | KWG0804201-16

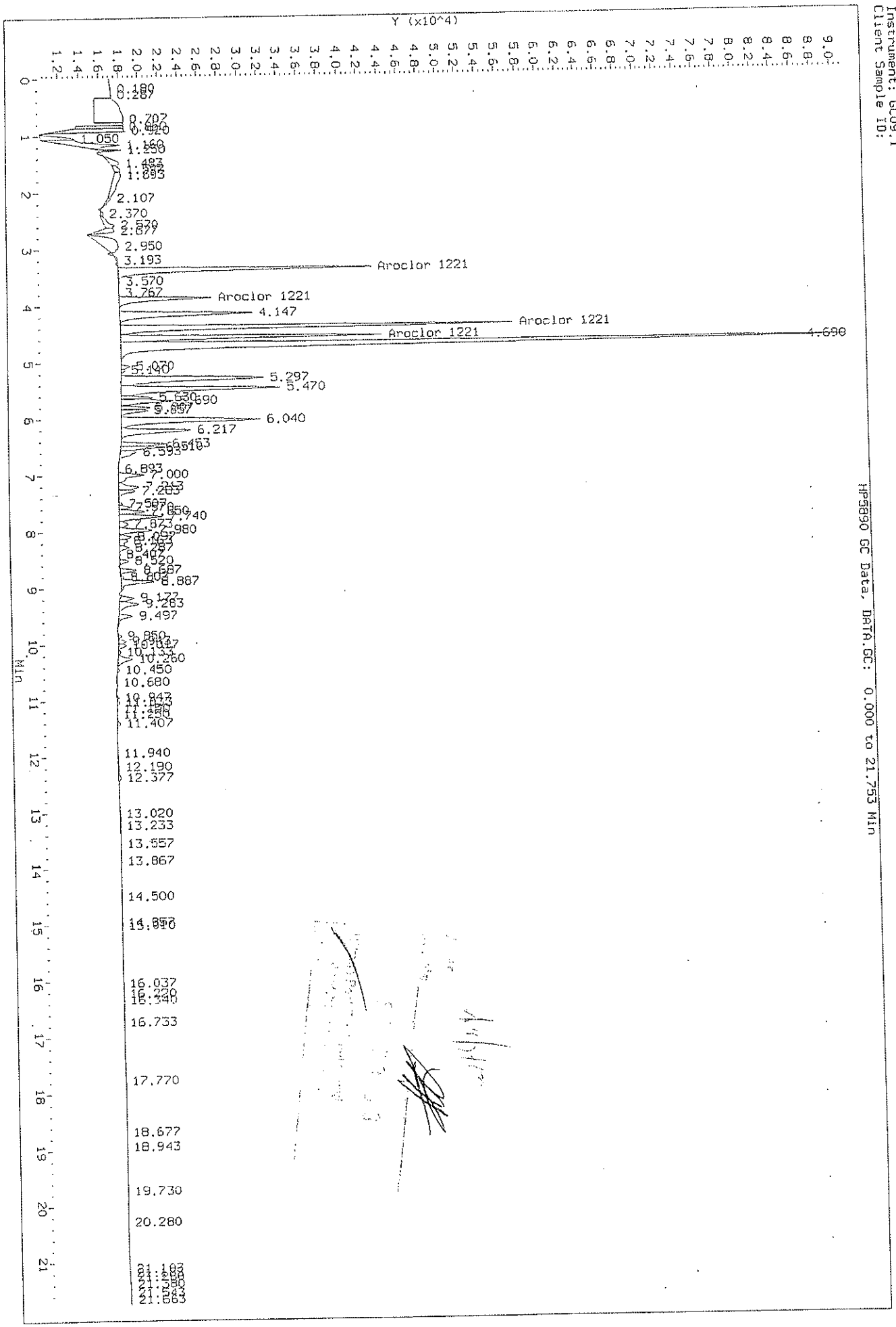
Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-XLB




Data File: \\cesh1\acqudata\GC09\data\092208.b\0922F042.D
Injection Date: 23-SEP-2008 10:13
Instrument: GC09.i
Client Sample ID:
HP5890 GC Data. DATA.GC: 0.000 to 21.753 Min
Y (x10^4)
Min
Aroclor 1221
Aroclor 1221
Aroclor 1221
Aroclor 1221
SEP 23 2008
Page 42


Data File: \\cash1\acqudata\GC09\data\092208.b\0922F042.D
Injection Date: 23-SEP-2008 10:13
Instrument: GC09.i
Client Sample ID:
HP5890 GC Data, DATA.GC: 0.000 to 21.753 Min
Y (x10^4)
Min
Aroclor 1221
Aroclor 1221
Aroclor 1221
Aroclor 1221
1.050
2.107
2.370
2.950
3.193
3.570
3.762
4.147
4.690
5.297
5.470
6.040
6.217
6.893
7.000
7.283
9.497
10.260
10.450
10.680
11.407
11.940
12.190
12.377
13.020
13.233
13.557
13.867
14.500
16.037
16.733
17.770
18.677
18.943
19.730
20.280

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F043.D
Report Date: 23-Sep-2008 16:37

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\092208.b\0922F043.D
Sample #2 : \\cash1\acqudata\GC09\data\092208_r.b\0922R043.D
Inj Date : 23-SEP-2008 10:39
Sample Info: 1232 @ 1000ppb | PCB5-19C | KWG0804201-17
Misc Info : SEMIVOA GC\W0804201\17-ICV.H
Cal Date : 23-SEP-2008 16:08
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\092208.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\092208_r.b\092208_r.m
Sub List #1 : AR1232.SUB
Sub List #2 : AR1232.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1232	4.690	5.007	248942	392102	943	945	80.00- 120.00	100.00(M)
	5.283	5.580	242636	212724	1070	1130	68.69- 103.04	97.47(M)
	6.037	5.920	447568	282590	1050	1060	128.72- 193.08	179.79(M)
	6.213	6.467	206800	208568	1060	1060	59.24- 88.86	83.07(M)
			Average of Peak Amounts =		1030	1050		

QC Flag Legend

M - Compound response manually integrated.

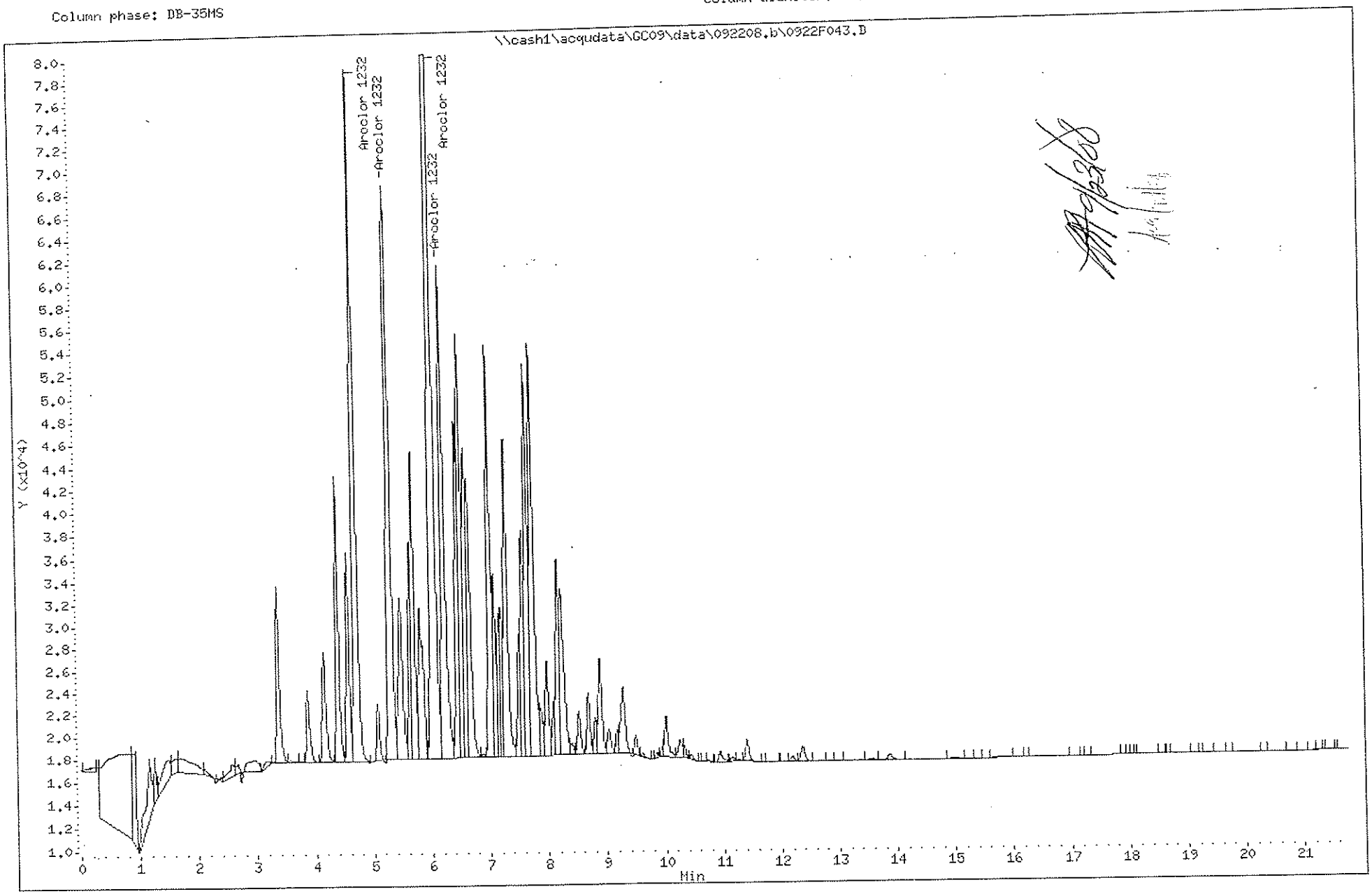
9/23/08

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F043.B
Date : 23-SEP-2008 10:39
Client ID:
Sample Info: 1232 @ 1000ppb | PCB5-19C | KWG0804201-17

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-35MS

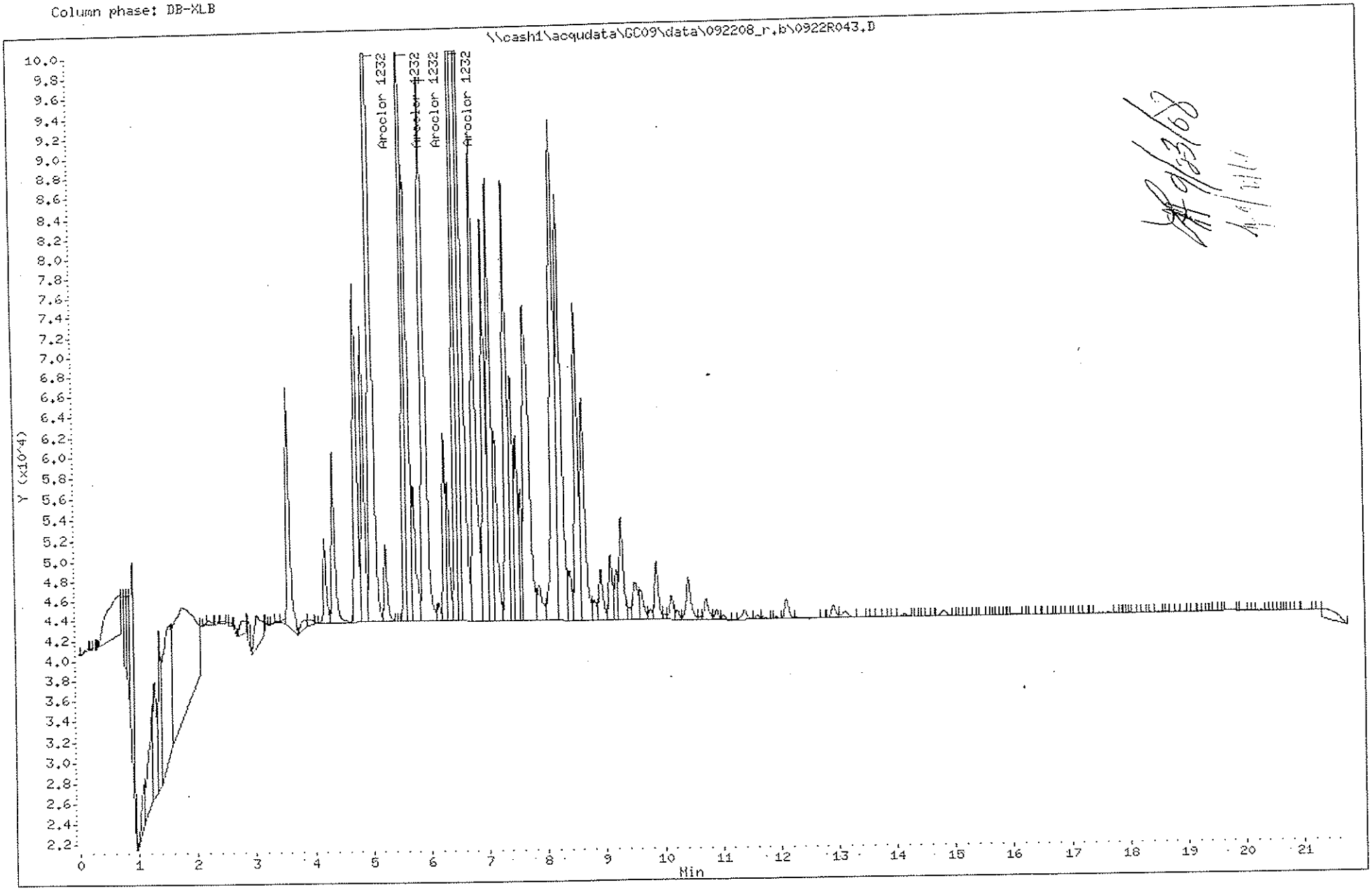


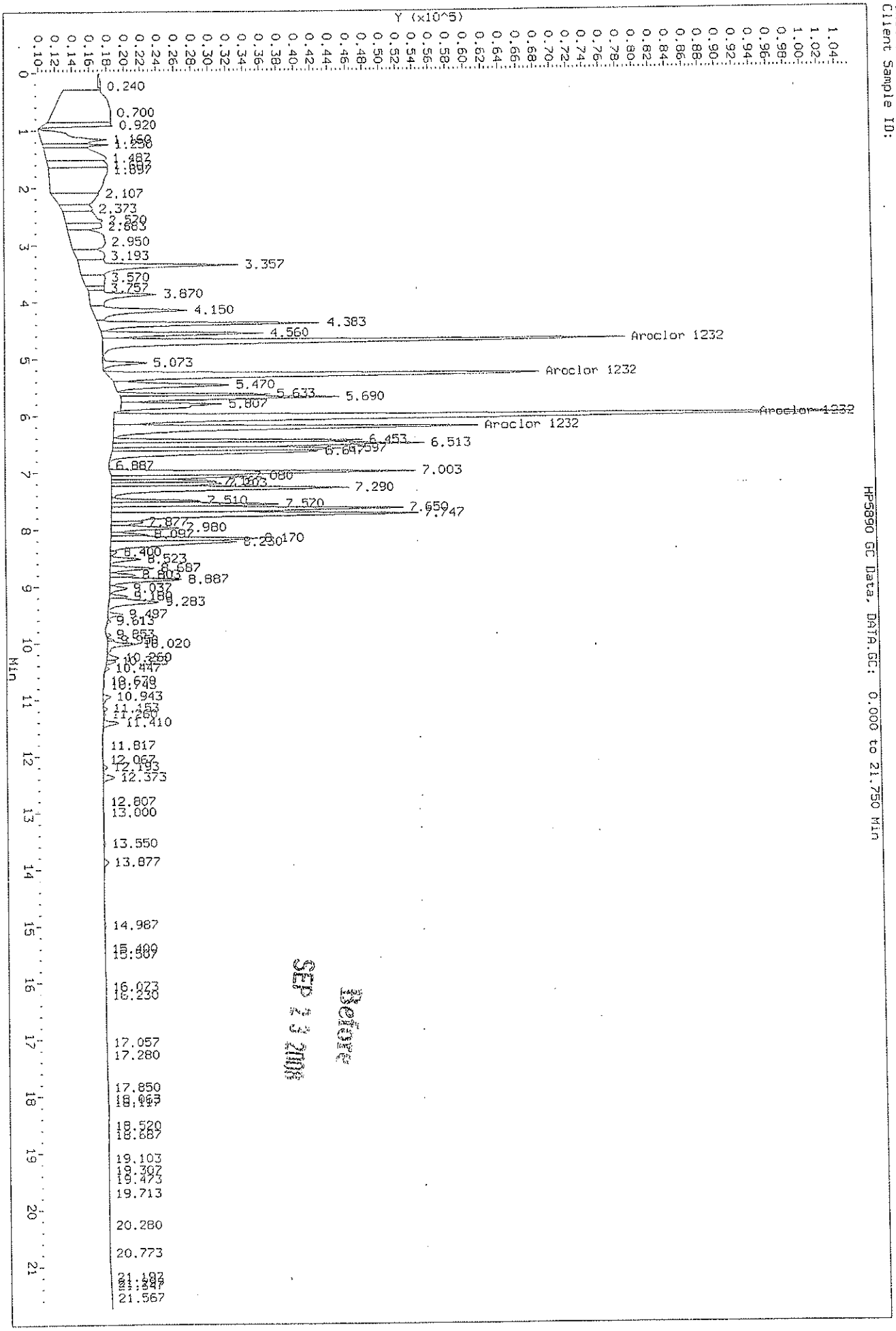
Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R043.D
Date : 23-SEP-2008 10:39
Client ID:
Sample Info: 1232 @ 1000ppb | PCB5-19C | KWG0804201-17

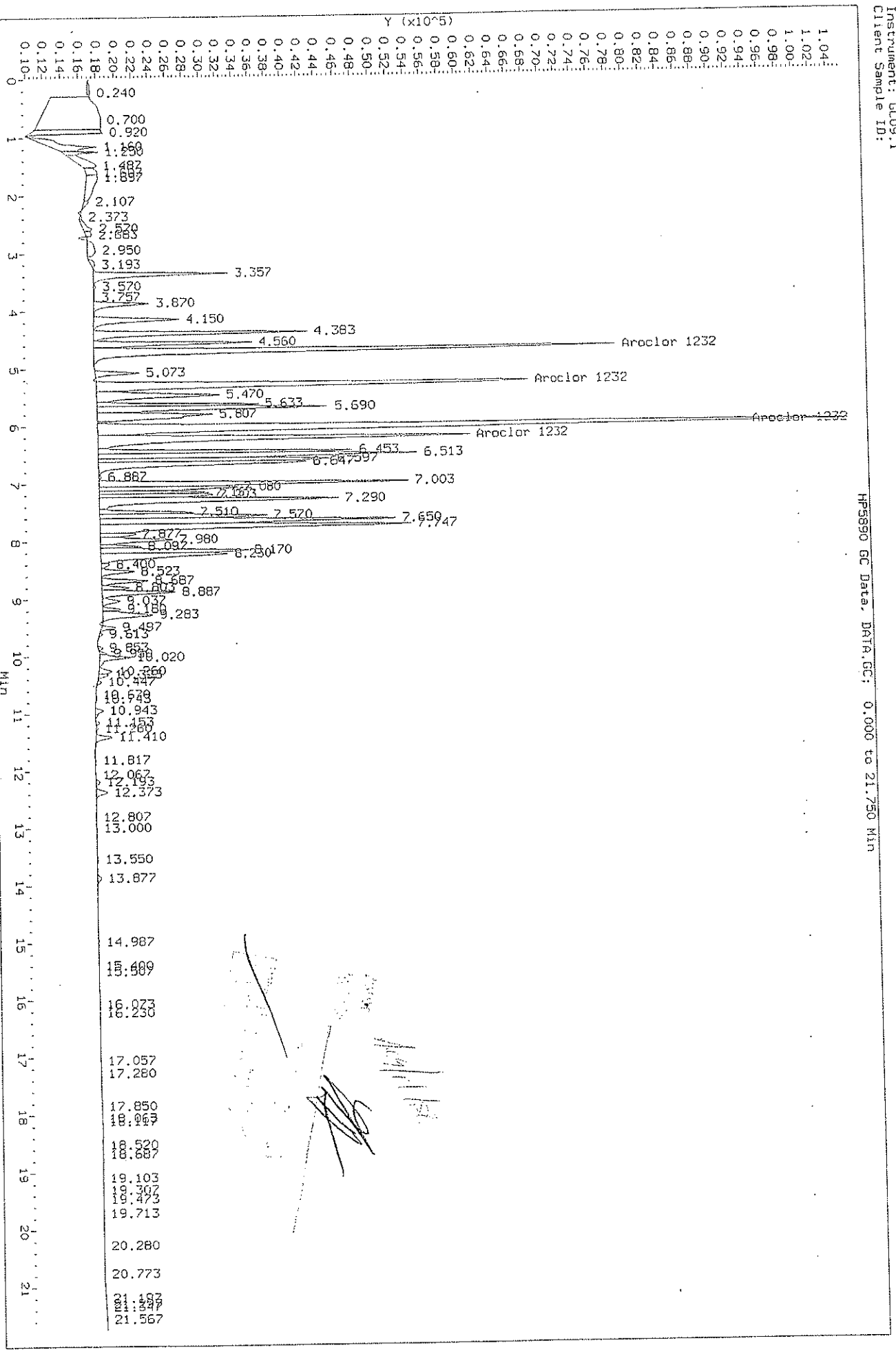
Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-XLB




Data File: \\cash1\acqudata\GC09\data\092208.b\0922F043.D
Injection Date: 23-SEP-2008 10:39
Instrument: GC09.i
Client Sample ID:
HP5890 GC Data, DATA.GC: 0.000 to 21.750 Min
Y (x10^5)
Min
0.240
0.700
0.920
1.482
2.107
2.373
2.950
3.193
3.357
3.570
3.870
4.150
4.383
4.560
Aroclor 1232
5.073
Aroclor 1232
5.470
5.633
5.690
5.807
Aroclor 1232
Aroclor 1232
6.453
6.513
6.887
7.003
7.290
7.510
7.570
7.659
7.747
2.877
2.980
8.097
8.170
8.400
8.523
8.687
8.803
8.887
9.037
9.283
9.497
9.613
10.020
10.260
10.447
10.943
11.410
11.817
12.067
12.373
12.807
13.000
13.550
13.877
14.987
17.057
17.280
17.850
18.520
18.687
19.103
19.307
19.473
19.713
20.280
20.773
21.567
SEP 23 2008
Laserfiche


Data File: \\cashl\acqudata\GC09\data\092208.b\0922F043.D
Injection Date: 23-SEP-2008 10:39
Instrument: GC09.i
Client Sample ID:
HP5890 GC Data, DATA.GC; 0.000 to 21.750 Min
Y (x10^5)
Min
0.240
0.700
0.920
1.482
1.897
2.107
2.373
2.950
3.193
3.357
3.570
3.757
3.870
4.150
4.383
4.560
Aroclor 1232
5.073
Aroclor 1232
5.470
5.633
5.690
5.807
Aroclor 1232
6.453
6.513
6.882
7.003
7.290
7.510
7.570
7.650
7.747
7.877
7.980
8.092
8.170
8.400
8.523
8.687
8.887
9.283
9.497
9.613
10.020
10.447
10.943
11.153
11.410
11.817
12.067
12.193
12.373
12.807
13.000
13.550
13.877
14.987
15.409
15.587
16.073
16.250
17.057
17.280
17.850
18.520
18.687
19.103
19.307
19.473
19.713
20.280
20.773
21.407
21.567

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F044.D
Report Date: 23-Sep-2008 16:37

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\092208.b\0922F044.D
Sample #2 : \\cash1\acqudata\GC09\data\092208_r.b\0922R044.D
Inj Date : 23-SEP-2008 11:05
Sample Info: 1242 @ 1000ppb | PCB5-19D | KWG0804201-18
Misc Info : SEMIVOA GC\W0804201\18-ICV.H
Cal Date : 23-SEP-2008 16:08
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\092208.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\092208_r.b\092208_r.m
Sub List #1 : AR1242.SUB
Sub List #2 : AR1242.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1242	5.283	5.580	397697	354108	1020	1040	80.00- 120.00	100.00(M)
	5.637	5.923	91996	415018	1050	1010	17.99- 26.99	23.13(M)
	6.037	6.517	767153	698105	1040	980	151.76- 227.63	192.90(M)
	6.213	6.783	359557	398983	1050	1010	70.03- 105.04	90.41(M)
	6.513	6.960	300598	307181	1070	1100	57.66- 86.49	75.58(M)
			Average of Peak Amounts =		1050	1030		

QC Flag Legend

M - Compound response manually integrated.

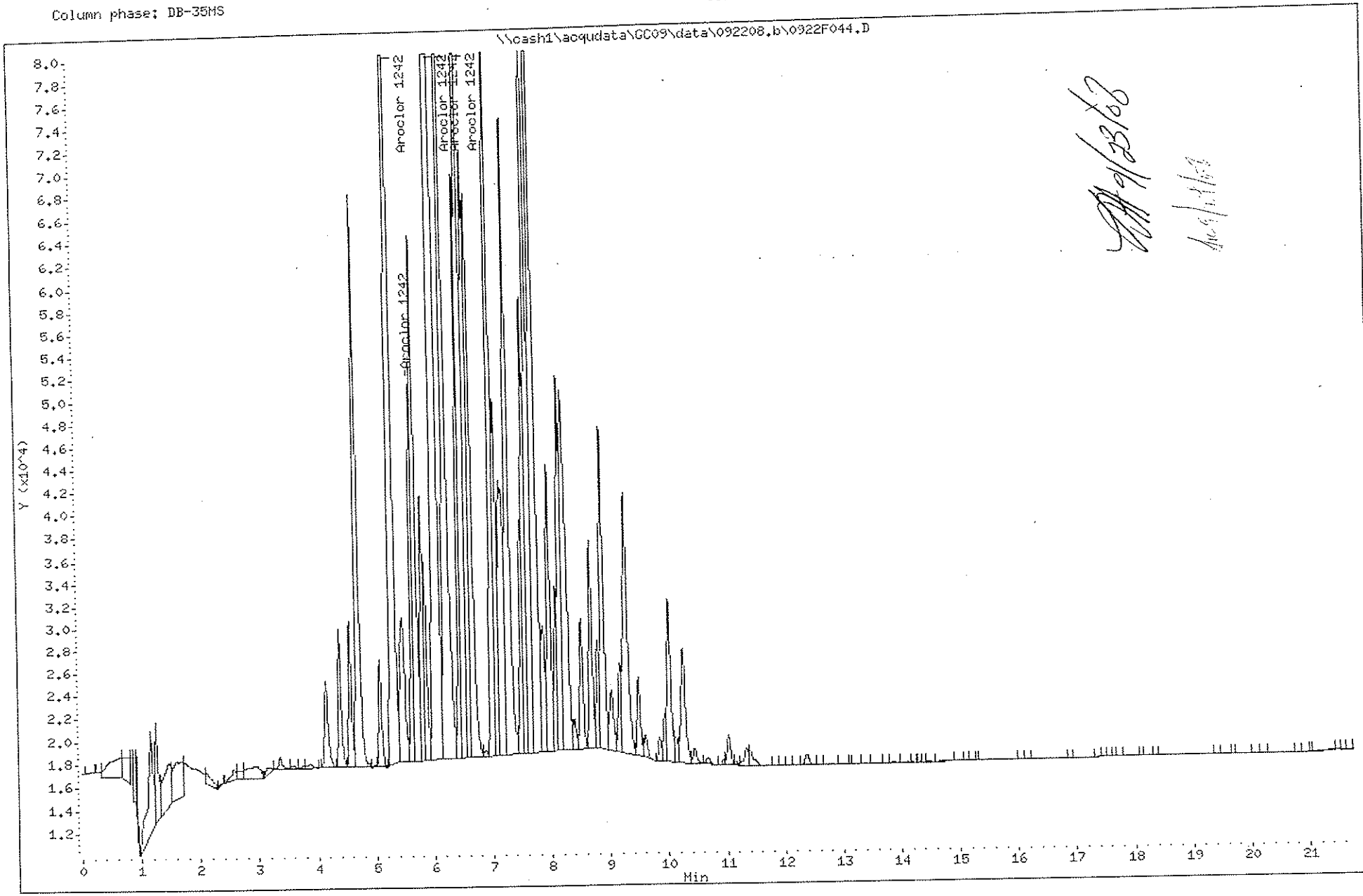
9/23/08

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F044.D
Date : 23-SEP-2008 11:05
Client ID:
Sample Info: 1242 @ 1000ppb | PCB5-19D | KWG0804201-18

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-35MS

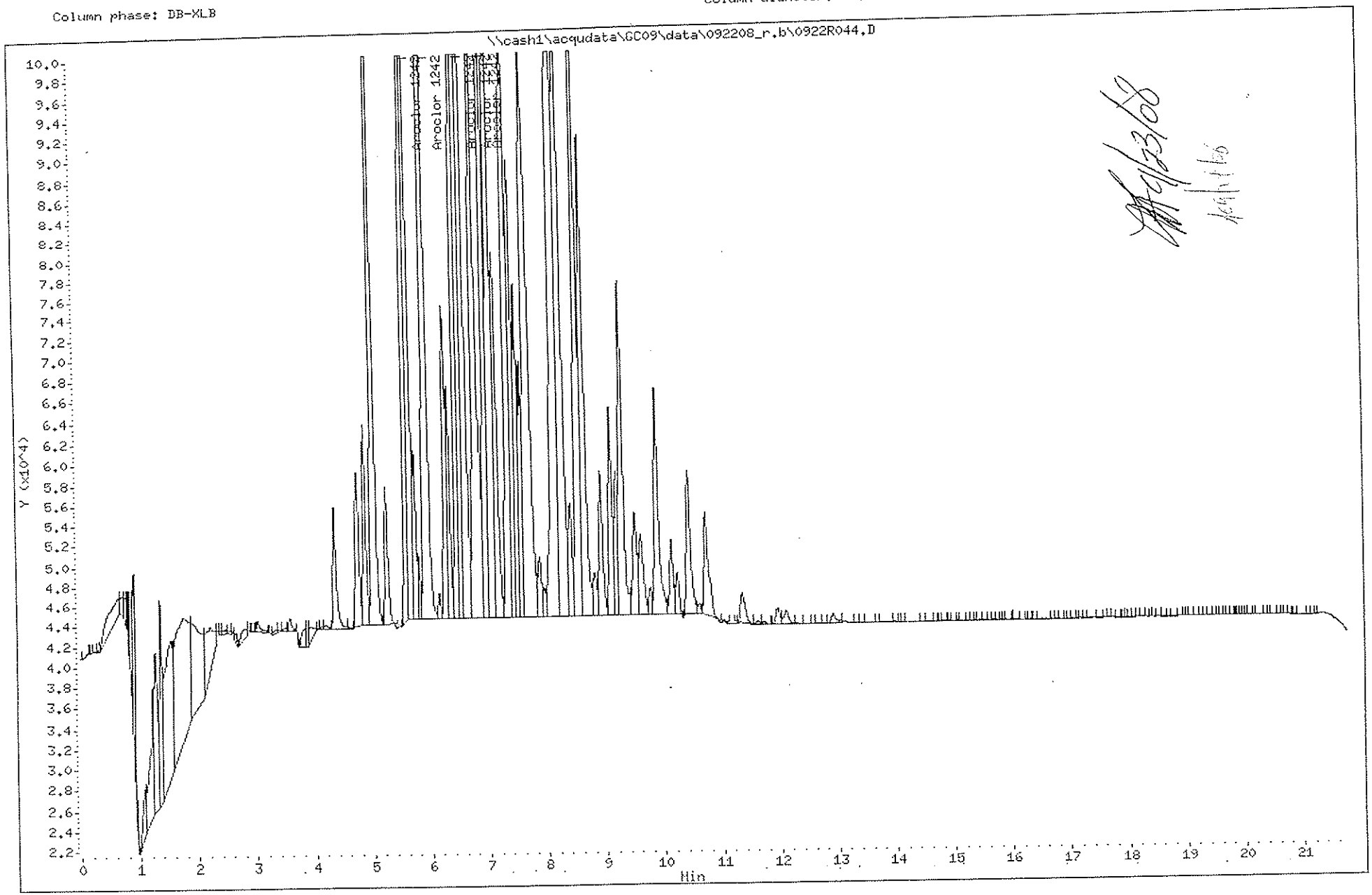


Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R044.D
Date : 23-SEP-2008 11:05
Client ID:
Sample Info: 1242 @ 1000ppb | PCB5-19D | KWG0804201-18

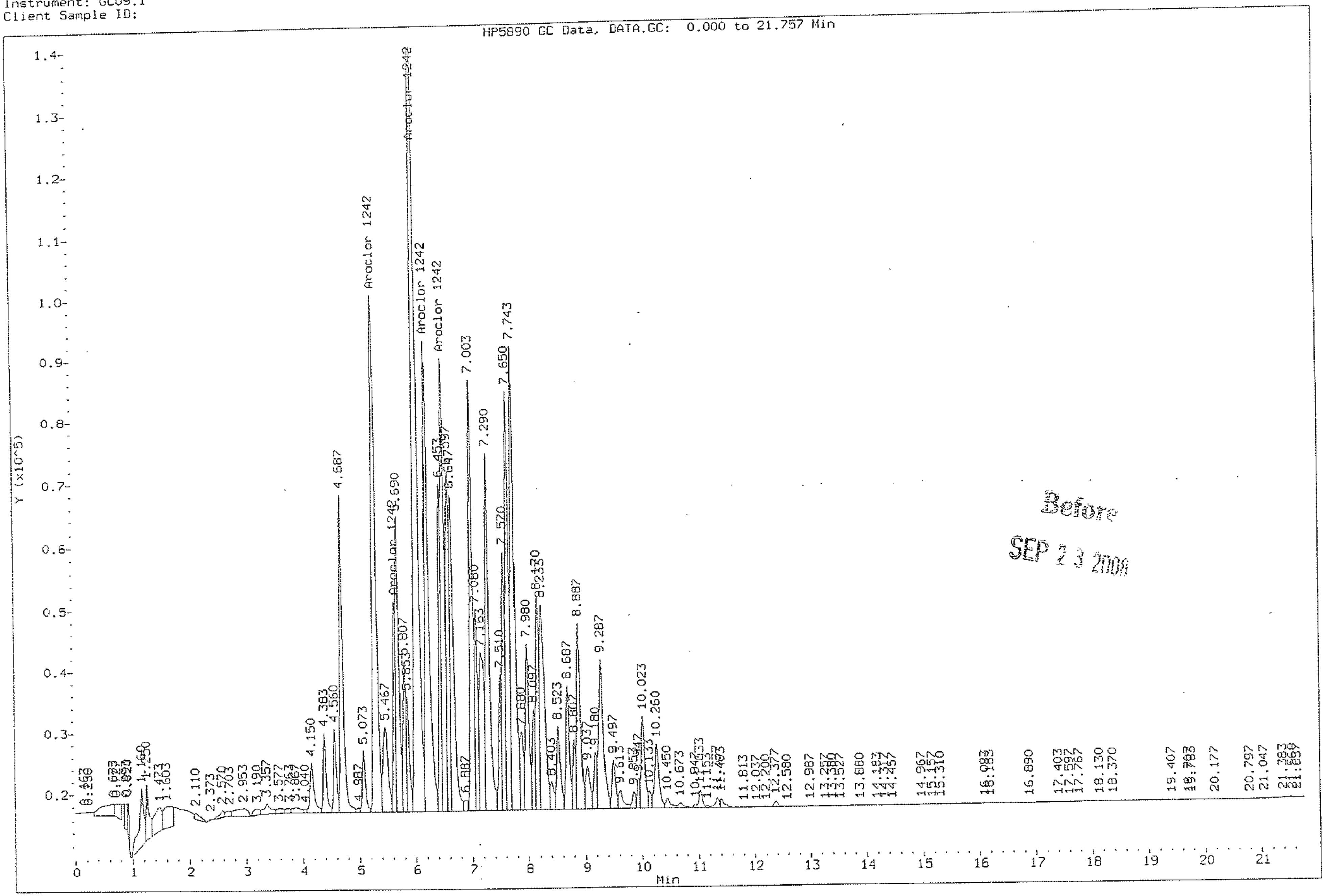
Instrument: GC09.i

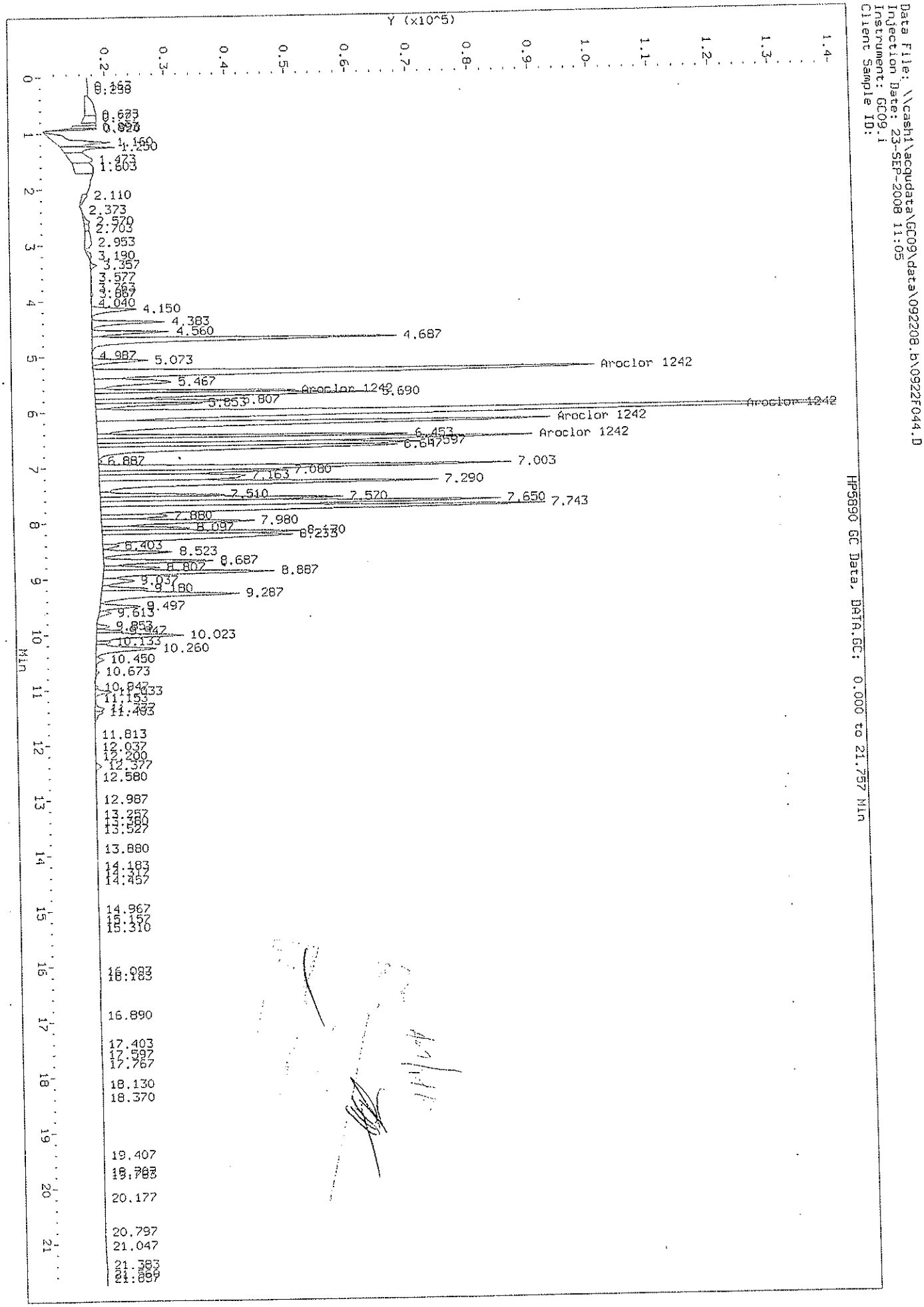
Operator: LHarris
Column diameter: 0.53

Column phase: DB-XLB

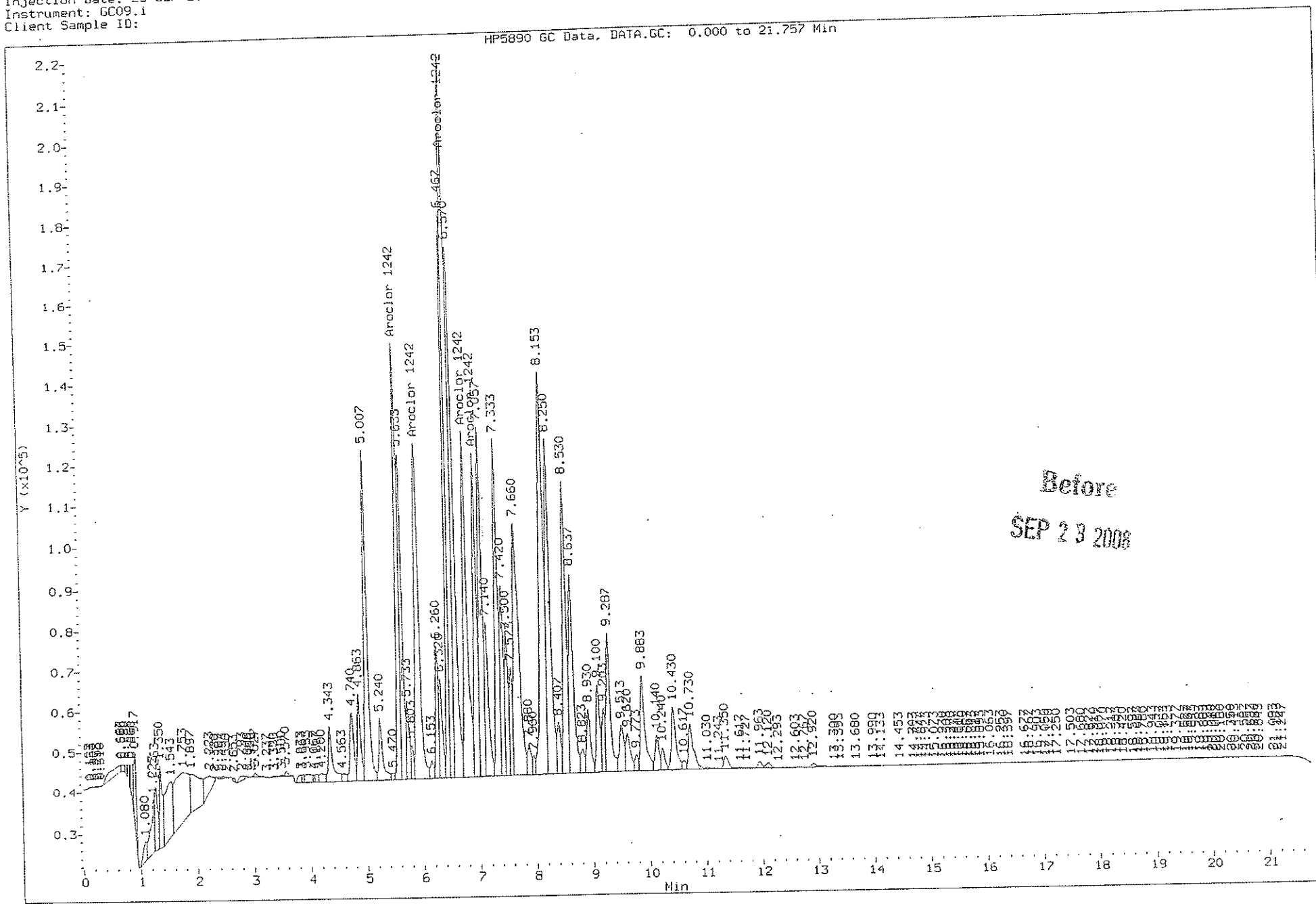


Data File: \\cash1\acqudata\GC09\data\092208.b\0922F044.D
Injection Date: 23-SEP-2008 11:05
Instrument: GC09.i
Client Sample ID:

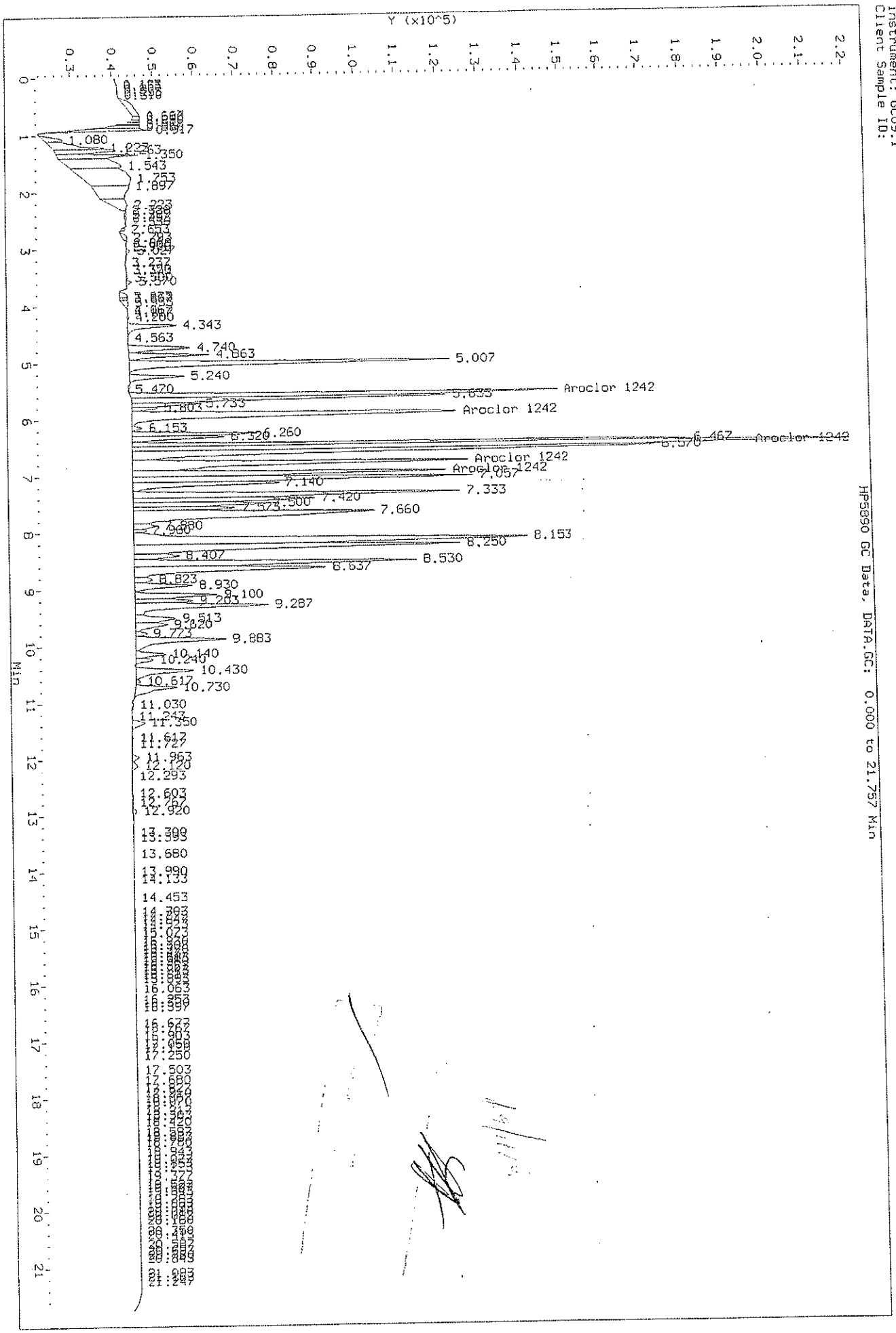



Data File: \\cash1\acqudata\GC09\data\092208.b\0922F044.D
Injection Date: 23-SEP-2008 11:05
Instrument: GC09.i
Client Sample ID:
HP5890 GC Data, DATA.GC: 0.000 to 21.757 Min
Y (x10^5)
Min
Aroclor 1242
Aroclor 1242
Aroclor 1242
Aroclor 1242
Aroclor 1242
Aroclor 1242

Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R044.D
Injection Date: 23-SEP-2008 11:05
Instrument: GC09.i
Client Sample ID:



Before
SEP 23 2008


Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R044.D
Injection Date: 23-SEP-2008 11:05
Instrument: GC09.i
Client Sample ID:
HP5890 GC Data, DATA.GC: 0.000 to 21.757 Min
Y (x10^5)
Min
1.080
1.543
1.897
4.343
4.563
4.740
5.007
5.240
5.420
Aroclor 1242
5.733
Aroclor 1242
6.153
6.260
6.462
Aroclor 1242
Aroclor 1242
7.057
7.140
7.333
7.420
7.660
8.153
8.250
8.407
8.530
8.637
8.823
8.930
9.100
9.287
9.513
9.620
9.772
9.883
10.140
10.240
10.430
10.617
10.730
11.030
11.243
11.350
11.617
11.727
11.963
12.120
12.293
12.603
12.767
12.920
13.300
13.393
13.680
13.990
14.133
14.453

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F045.D
Report Date: 23-Sep-2008 16:37

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\092208.b\0922F045.D
Sample #2 : \\cash1\acqudata\GC09\data\092208_r.b\0922R045.D
Inj Date : 23-SEP-2008 11:32
Sample Info: 1248 @ 1000ppb | PCB5-19E | KWG0804201-19
Misc Info : SEMIVOA GC\W0804201\19-ICV.H
Cal Date : 23-SEP-2008 16:08
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\092208.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\092208_r.b\092208_r.m
Sub List #1 : AR1248.SUB
Sub List #2 : AR1248.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1248	6.597	7.057	268510	468592	993	952	80.00- 120.00	100.00(M)
	7.003	7.333	368584	484574	987	987	110.51- 165.76	137.27(M)
	7.290	8.153	307837	895748	909	935	100.26- 150.39	114.65(M)
	7.650	8.250	438612	612811	966	879	134.44- 201.67	163.35(M)
	7.743	8.533	522311	497777	905	979	170.78- 256.17	194.52(M)
			Average of Peak Amounts =		952	946		

QC Flag Legend

M - Compound response manually integrated.

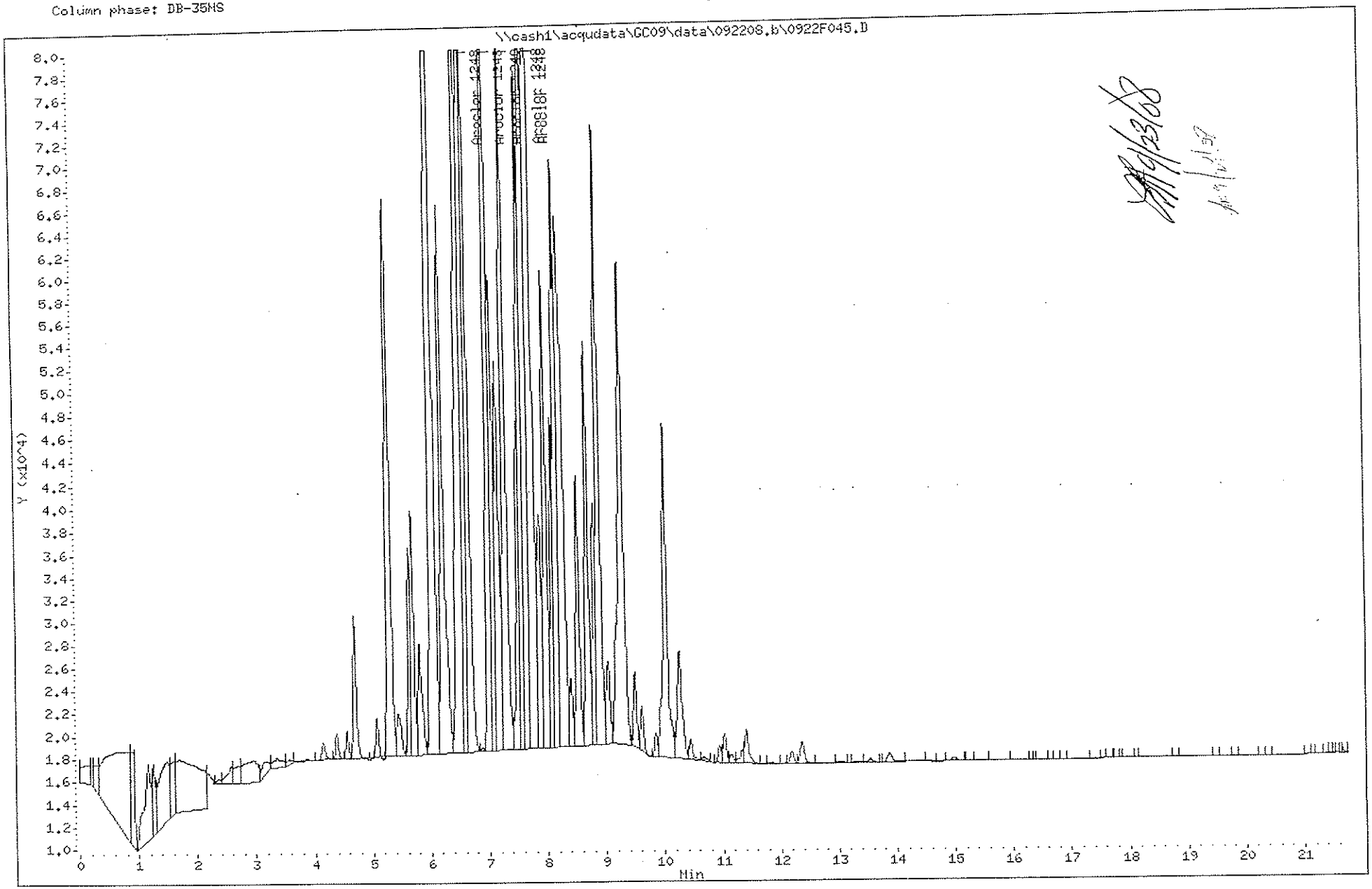
9/23/08

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F045.D
Date : 23-SEP-2008 11:32
Client ID:
Sample Info: 1248 @ 1000ppb | PCB5-19E | KWG0804201-19

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-35MS

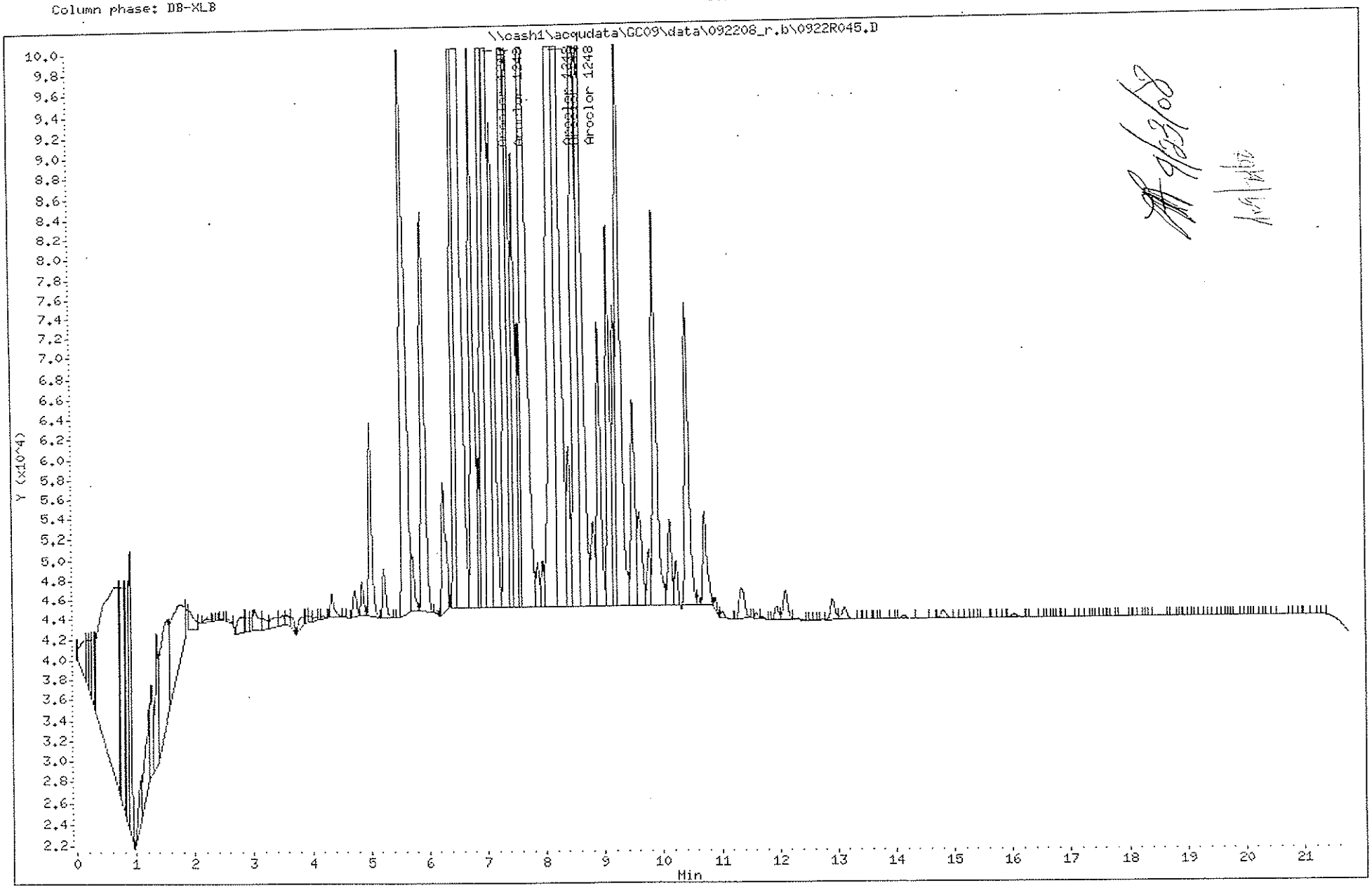


Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R045.D
Date : 23-SEP-2008 11:32
Client ID:
Sample Info: 1248 @ 1000ppb | PCB5-19E | KWG0804201-19

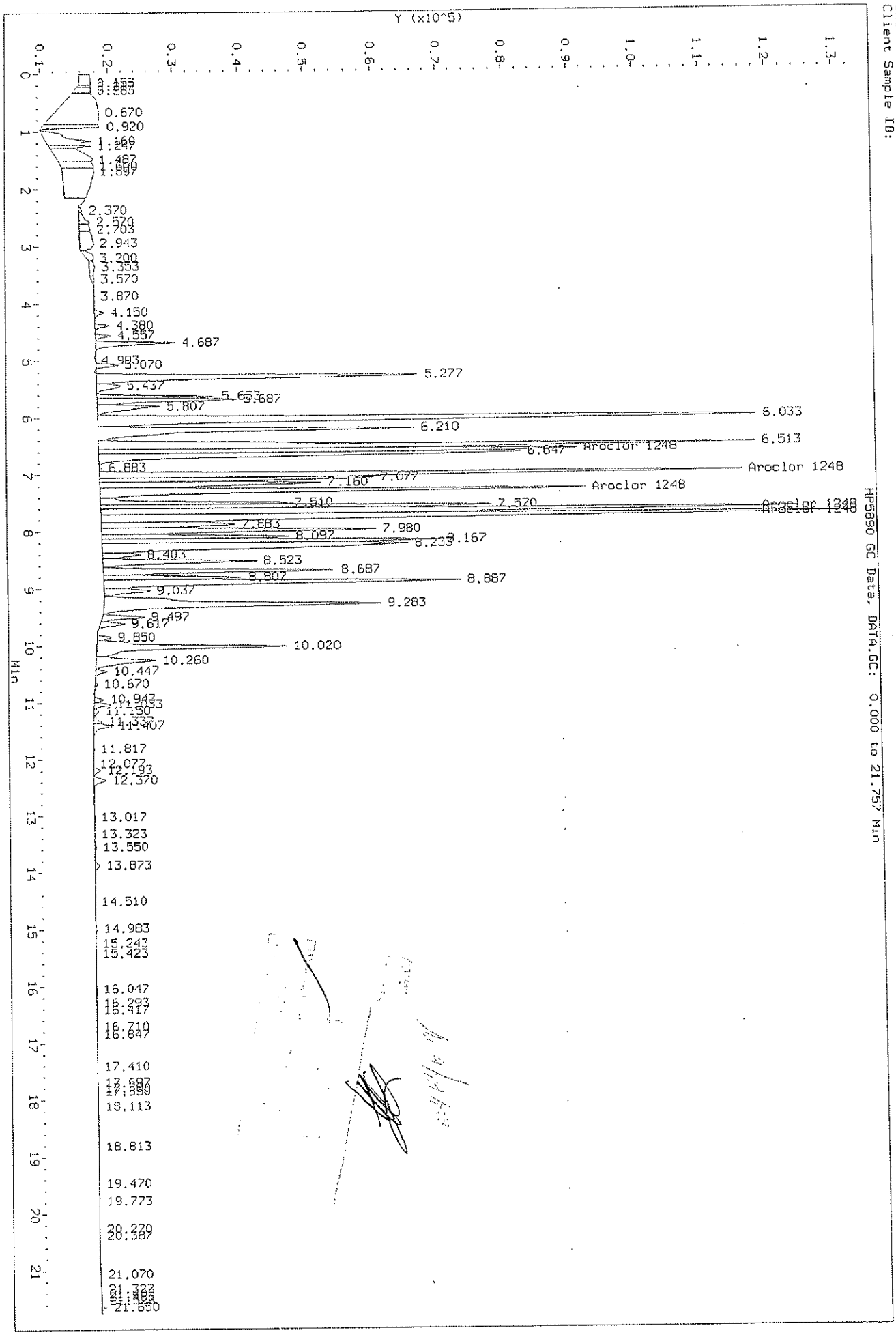
Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

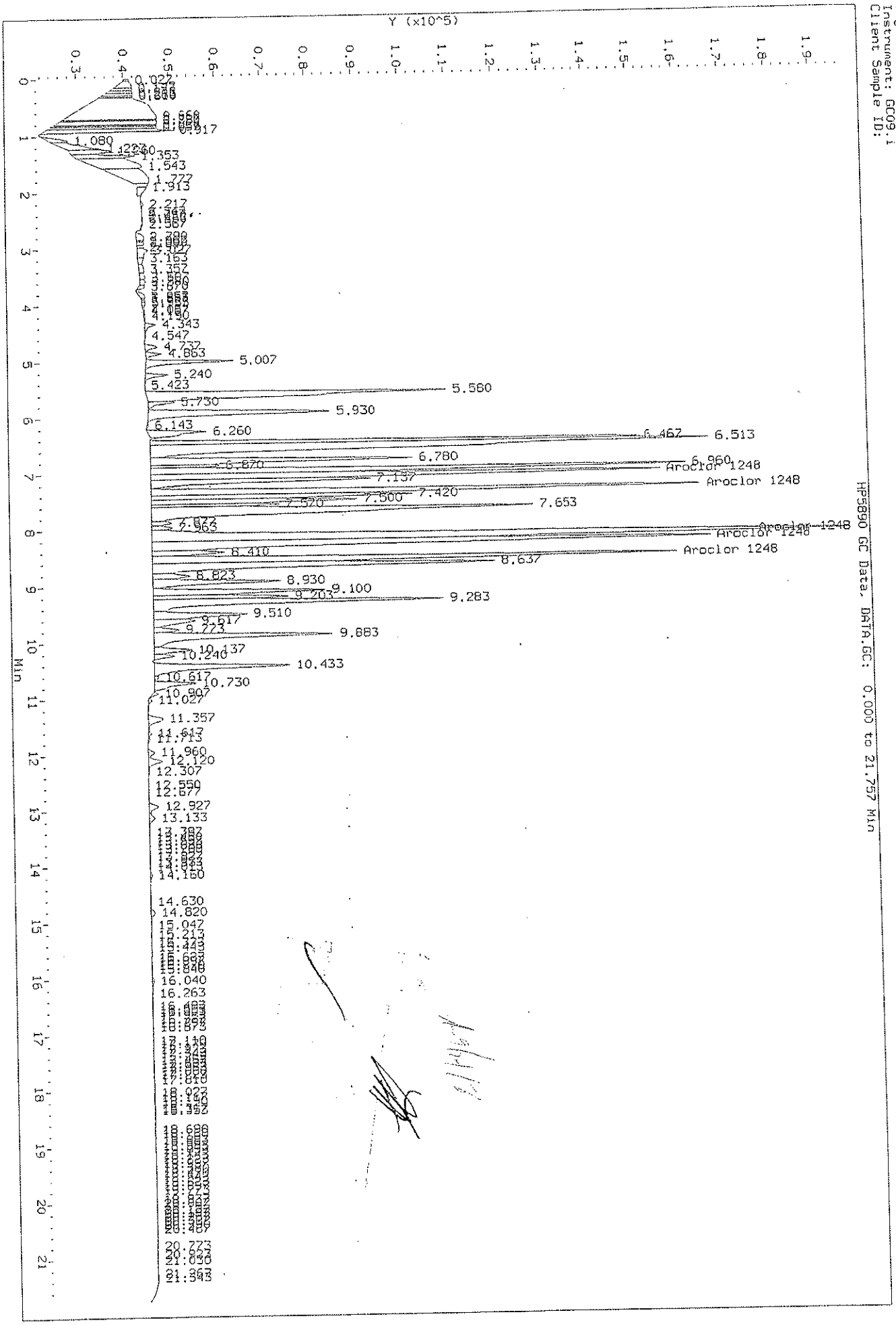
Column phase: DB-XLB



Data File: \\cash1\acqudata\GC09\data\092208.b\0922F045.D
Injection Date: 23-SEP-2008 11:32
Instrument: GC09.i
Client Sample ID:
Y (x10^6)
Min
HP5890 GC Data, DATA.GC: 0.000 to 21.757 Min
0.670
0.920
2.370
2.570
2.703
2.943
3.200
3.353
3.570
3.870
4.150
4.380
4.557
4.687
5.070
5.277
5.437
5.687
5.807
6.033
6.210
6.513
Aroclor 1248
6.883
Aroclor 1248
7.160
7.077
Aroclor 1248
7.510
7.520
7.883
7.980
8.092
8.167
8.403
8.523
8.687
8.807
8.887
9.037
9.283
9.497
9.617
9.850
10.020
10.260
10.447
10.670
10.943
11.150
11.407
11.817
12.077
12.370
13.017
13.323
13.550
13.873
14.510
14.983
15.243
15.423
16.047
16.293
16.417
16.710
16.847
17.410
18.113
18.813
19.470
19.773
20.279
20.367
21.070
21.650
SEP 23 2008


Data File: \\cash1\acqudata\GC09\data\092208.b\0922F045.D
Injection Date: 23-SEP-2008 11:32
Instrument: GC09.i
Client Sample ID:
HP5890 GC Data, DATA.GC: 0.000 to 21.757 Min
Y (x10^5)
Min
Aroclor 1248
Aroclor 1248
Aroclor 1248
Aroclor 1248
0.670
0.920
1.487
2.370
2.570
2.703
2.943
3.570
3.870
4.150
4.380
4.557
4.687
5.070
5.277
5.437
5.807
6.033
6.210
6.513
6.647
6.883
7.160
7.077
7.510
7.520
7.883
7.980
8.092
8.167
8.403
8.523
8.687
8.807
8.887
9.037
9.283
9.497
9.617
9.850
10.020
10.260
10.447
10.670
11.190
11.817
12.077
12.370
13.017
13.323
13.550
13.873
14.510
14.983
15.243
15.423
16.047
16.293
16.417
16.710
16.847
17.410
18.113
18.813
19.470
19.773
20.220
20.387
21.070
21.650

Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R045.D
Injection Date: 23-SEP-2008 11:32
Instrument: GC09.i
Client Sample ID:
HP5890 GC Data, DATA.GC: 0.000 to 21.757 Min
Y (x10^5)
Min
Aroclor 1248
Aroclor 1248
Aroclor 1248
Aroclor 1248
Aroclor 1248
Before
SEP 23 2008


Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R045.D
Injection Date: 23-SEP-2008 11:32
Instrument: GC09.i
Client Sample ID:
HP5890 GC Data, DATA.GC: 0.000 to 21.757 Min
Y (x10^5)
Min
Aroclor 1248
Aroclor 1248
Aroclor 1248
Aroclor 1248
Aroclor 1248
1.080
5.007
5.560
5.930
6.260
6.513
6.780
6.960
7.420
7.653
8.637
9.100
9.283
9.510
9.883
10.433

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F046.D
Report Date: 23-Sep-2008 16:37

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\092208.b\0922F046.D
Sample #2 : \\cash1\acqudata\GC09\data\092208_r.b\0922R046.D
Inj Date : 23-SEP-2008 11:58
Sample Info: 1254 @ 1000ppb | PCB5-19F | KWG0804201-20
Misc Info : SEMIVOA GC\W0804201\20-ICV.H
Cal Date : 23-SEP-2008 16:08
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\092208.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\092208_r.b\092208_r.m
Sub List #1 : AR1254.SUB
Sub List #2 : AR1254.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

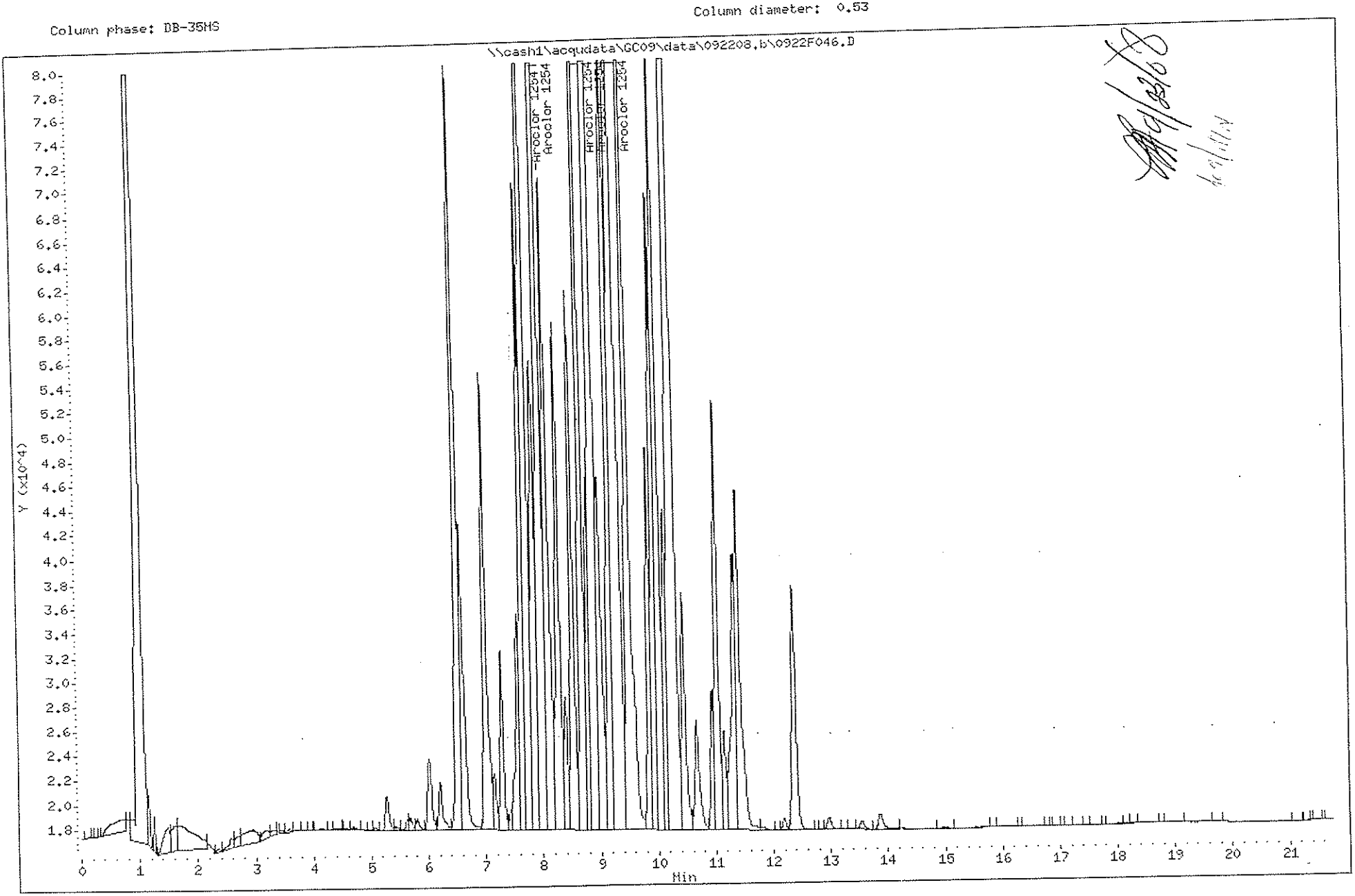
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1254	7.980	8.533	489802	763024	956	949	80.00- 120.00	100.00
	8.097	8.647	262837	318931	928	899	44.24- 66.36	53.66
	8.690	9.100	343576	411538	949	920	56.57- 84.86	70.15
	8.887	9.287	690678	765445	934	923	115.58- 173.38	141.01
	9.287	9.883	609960	570988	949	928	100.44- 150.66	124.53
			Average of Peak Amounts =		943	924		

9/23/08

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F046.D
Date : 23-SEP-2008 11:58
Client ID:
Sample Info: 1254 @ 1000ppb | PCB5-19F | KWG0804201-20

Instrument: GC09.i
Operator: LHarris
Column diameter: 0.53

Column phase: DB-35MS

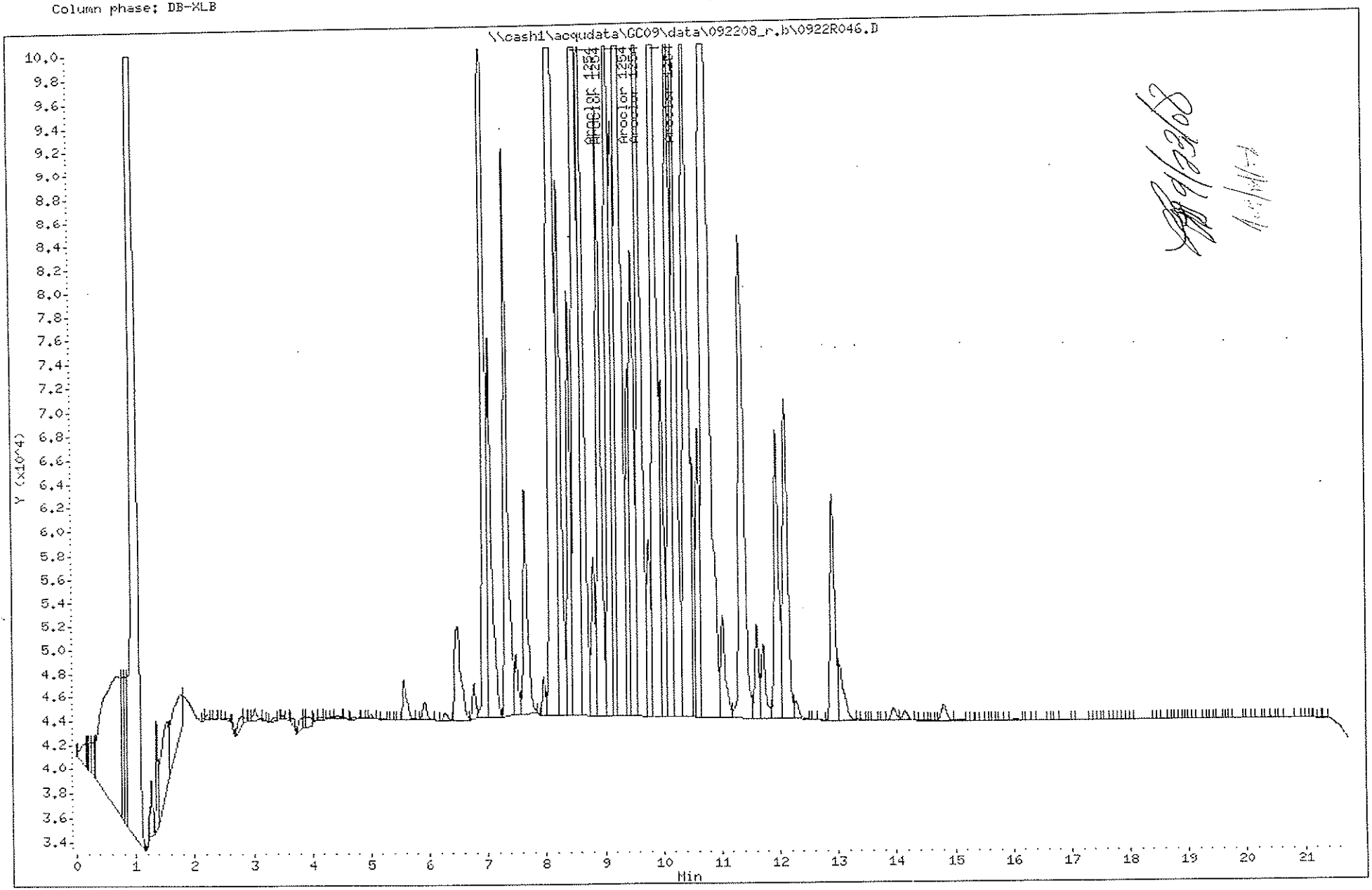


Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R046.D
Date : 23-SEP-2008 11:58
Client ID:
Sample Info: 1254 @ 1000ppb | PCB5-19F | KWG0804201-20

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-XLB



Data File: \\cash1\acqudata\GC09\data\092208.b\0922F047.D
Report Date: 23-Sep-2008 16:37

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\092208.b\0922F047.D
Sample #2 : \\cash1\acqudata\GC09\data\092208_r.b\0922R047.D
Inj Date : 23-SEP-2008 12:25
Sample Info: 1260 @ 1000ppb | PCB5-19G | KWG0804201-21
Misc Info : SEMIVOA GC\W0804201\21-ICV.H
Cal Date : 23-SEP-2008 16:08
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\092208.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\092208_r.b\092208_r.m
Sub List #1 : AR1260.sub
Sub List #2 : AR1260.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1260	9.950	9.620	343659	647015	913	921	80.00- 120.00	100.00
	10.260	10.140	578662	685260	825	926	159.28- 238.92	168.38
	10.327	10.733	532434	808751	1080	880	101.69- 152.53	154.93
	10.947	10.910	467425	550138	1030	1120	101.44- 152.16	136.01
	11.413	12.120	995198	1143454	1060	1080	212.51- 318.76	289.59
			Average of Peak Amounts =		982	985		

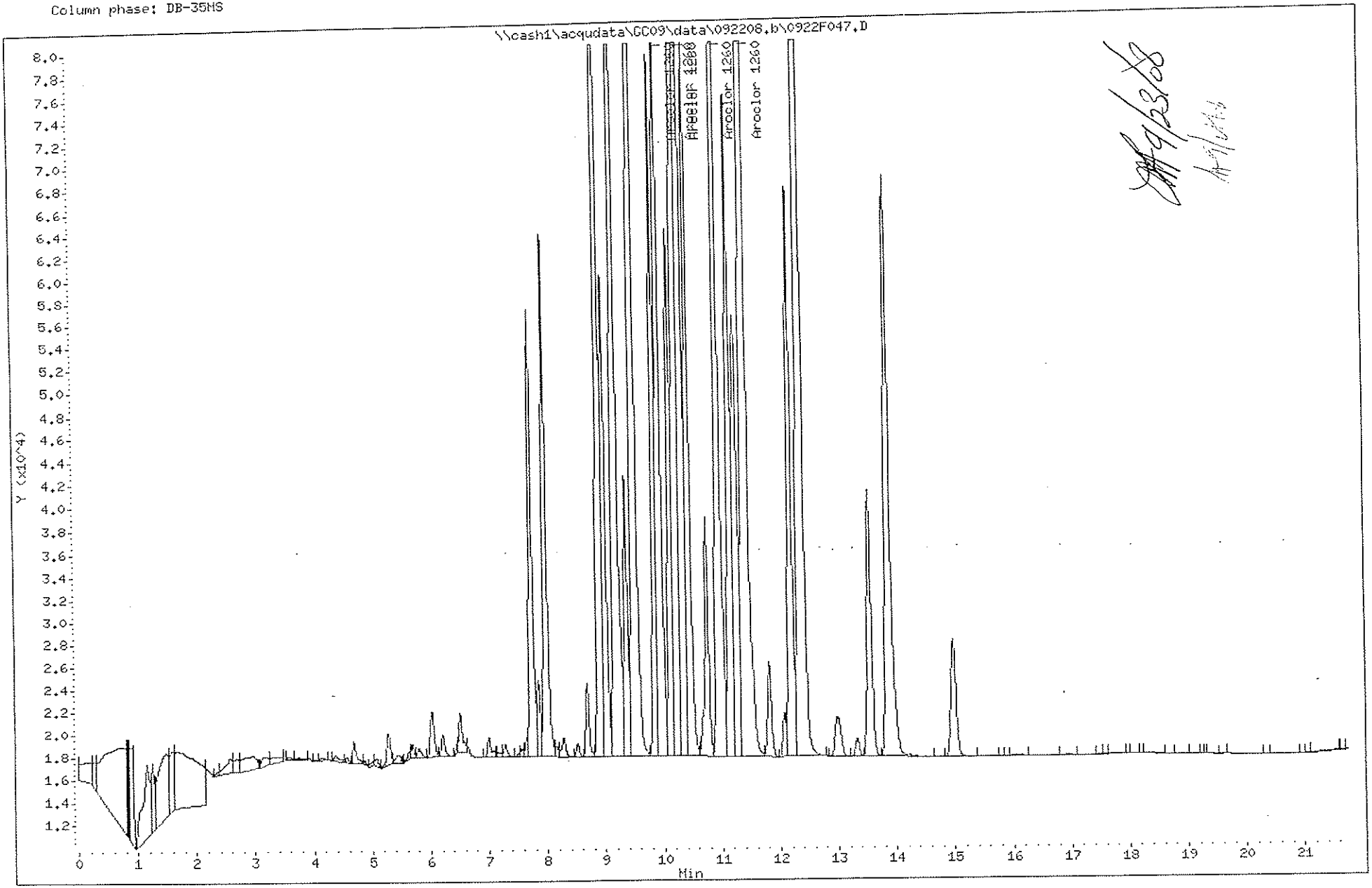
9/23/08

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F047.D
Date : 23-SEP-2008 12:25
Client ID:
Sample Info: 1260 @ 1000ppb | PCB5-19G | KWG0804201-21

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-35MS

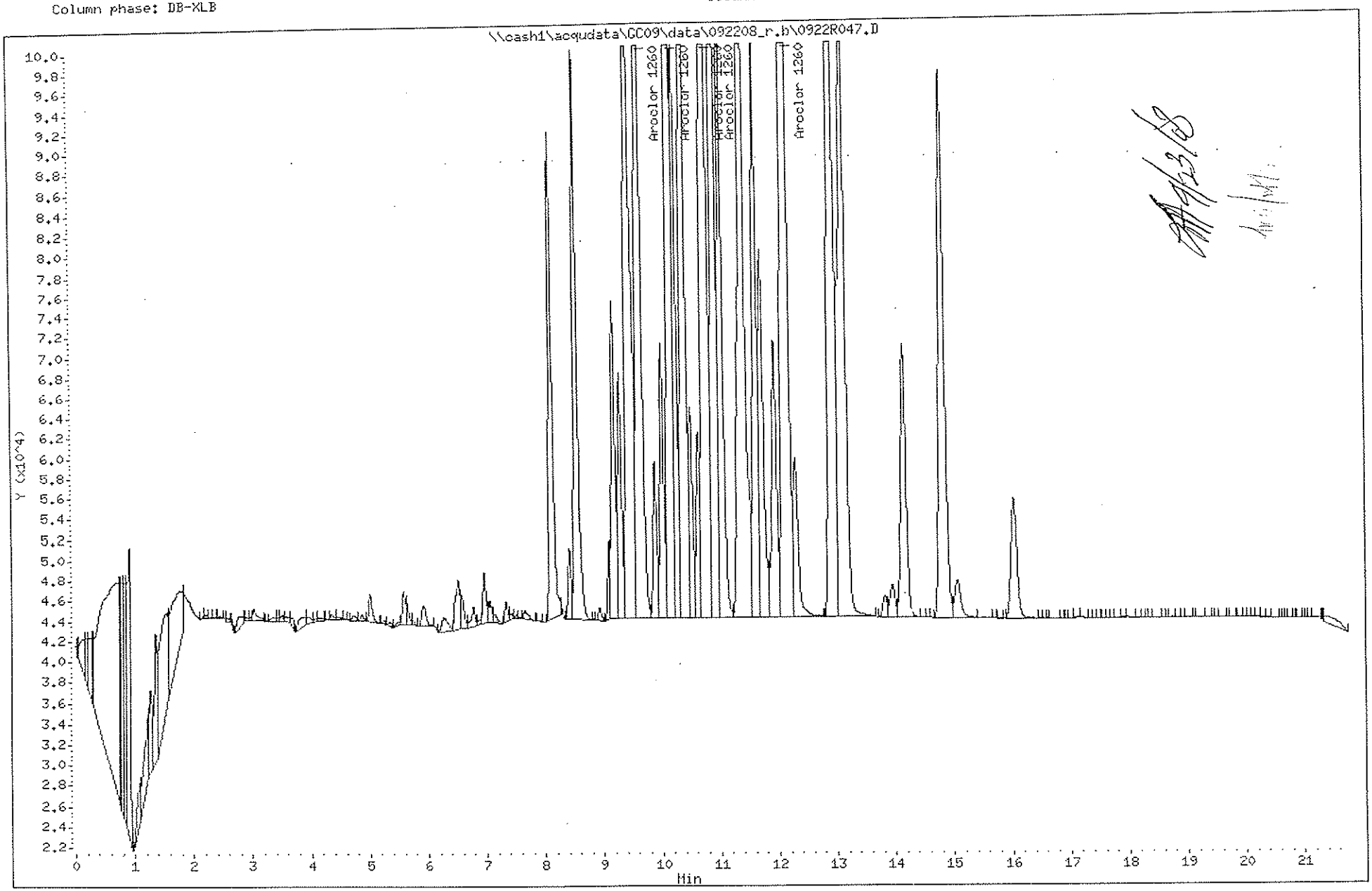


Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R047.D
Date : 23-SEP-2008 12:25
Client ID:
Sample Info: 1260 @ 1000ppb | PCB5-19C | KWG0804201-21

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-XLB



Data File: \\cash1\acqudata\GC09\data\092208.b\0922F048.D
Report Date: 23-Sep-2008 16:37

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\092208.b\0922F048.D
Sample #2 : \\cash1\acqudata\GC09\data\092208_r.b\0922R048.D
Inj Date : 23-SEP-2008 12:51
Sample Info: 1262 @ 1000ppb | PCB5-19H | KWG0804201-22
Misc Info : SEMIVOA GC\W0804201\22-ICV.H
Cal Date : 23-SEP-2008 16:08
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\092208.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\092208_r.b\092208_r.m
Sub List #1 : AR1262.SUB
Sub List #2 : AR1262.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1262	10.330	10.910	722383	773686	1020	1040	80.00- 120.00	100.00
	10.947	11.397	562286	632156	1030	1050	61.26- 91.89	77.84
	11.413	12.120	1078755	1276891	1030	1040	117.63- 176.45	149.33
	12.193	12.927	482832	964436	1030	1040	52.81- 79.21	66.84
	12.370	13.133	854091	733774	1040	1020	92.91- 139.36	118.23
			Average of Peak Amounts =		1030	1040		

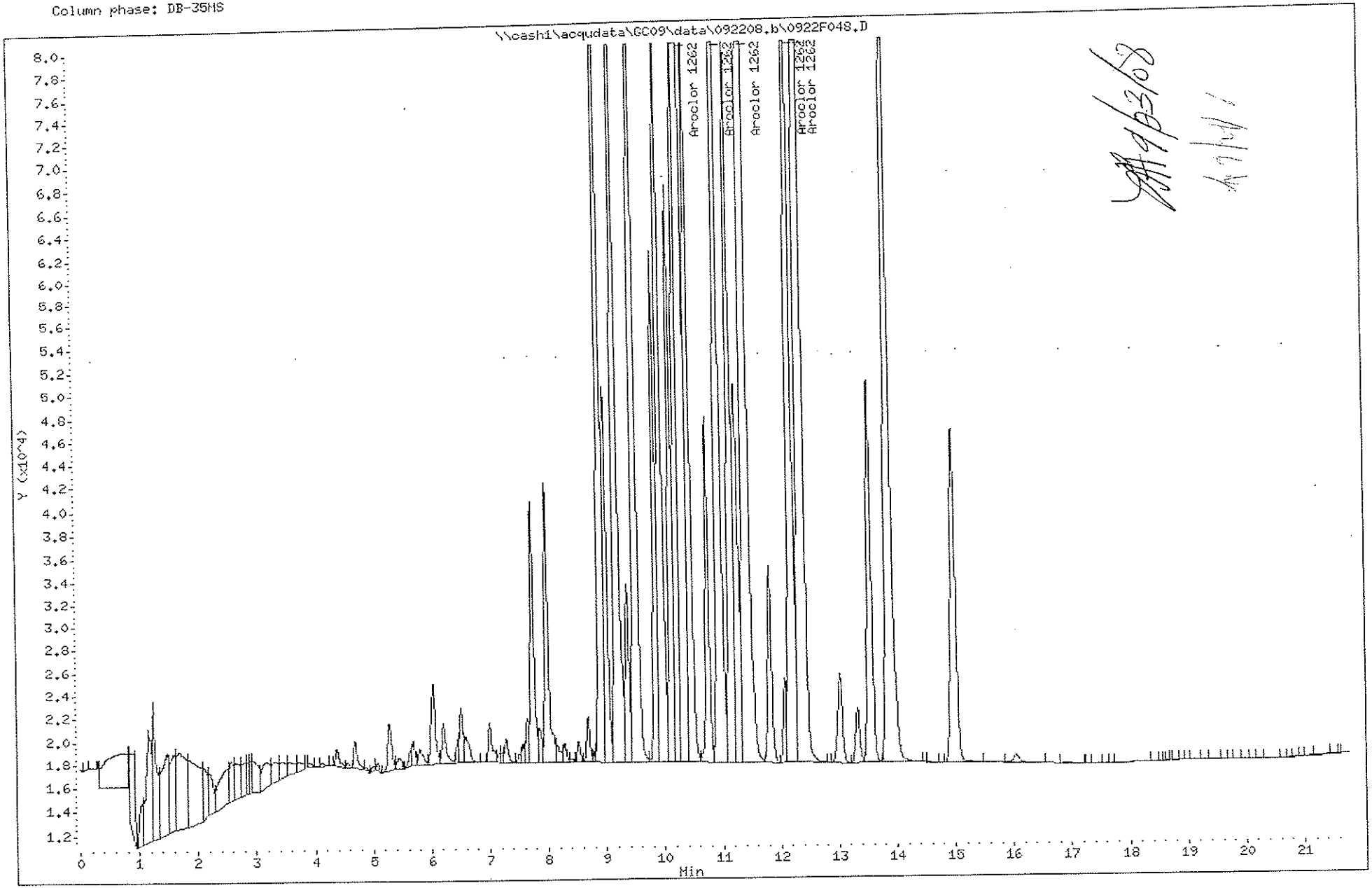
9/23/08

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F048.D
Date : 23-SEP-2008 12:51
Client ID:
Sample Info: 1262 @ 1000ppb | PCB5-19H | KWG0804201-22

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-35MS

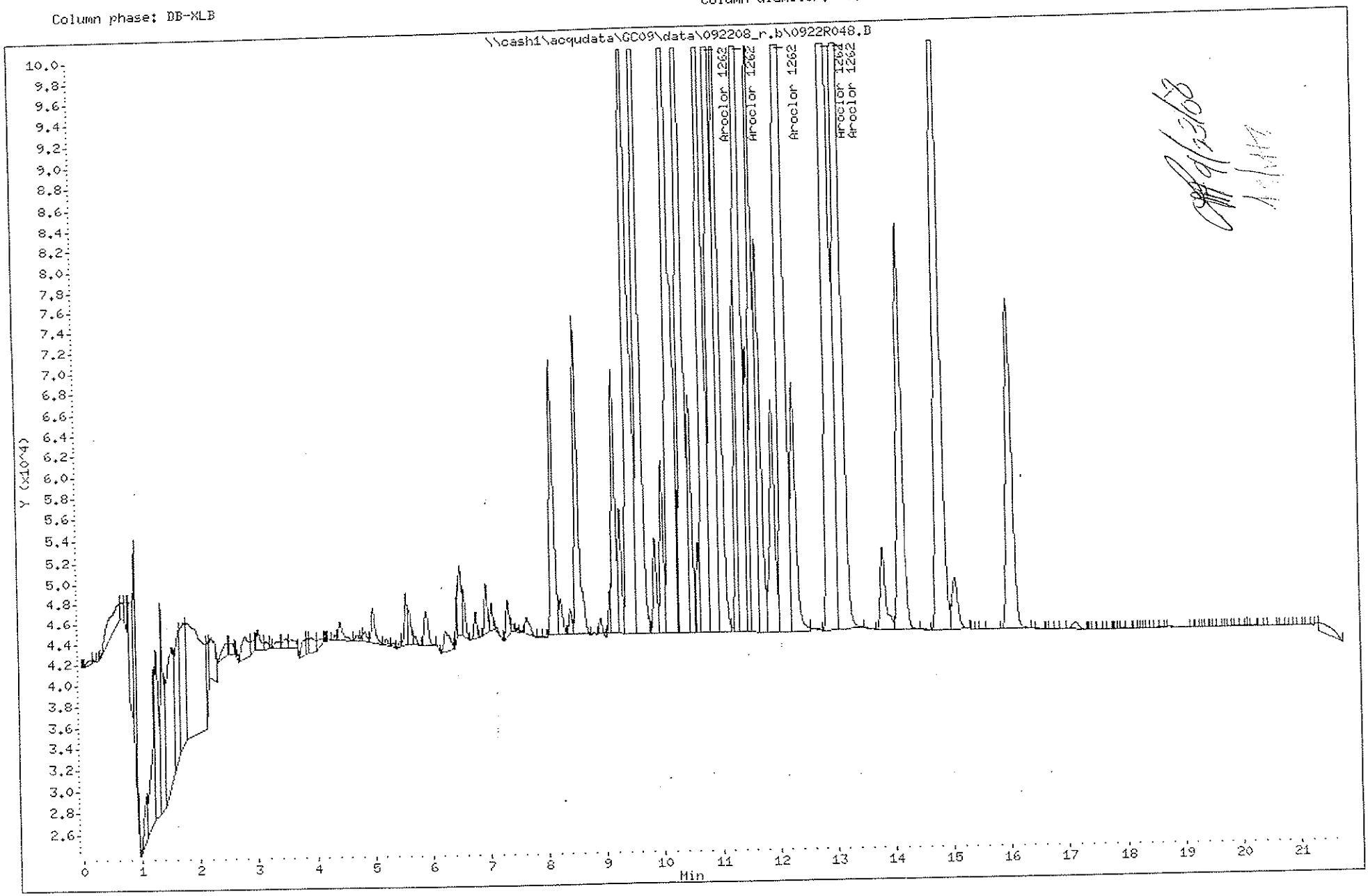


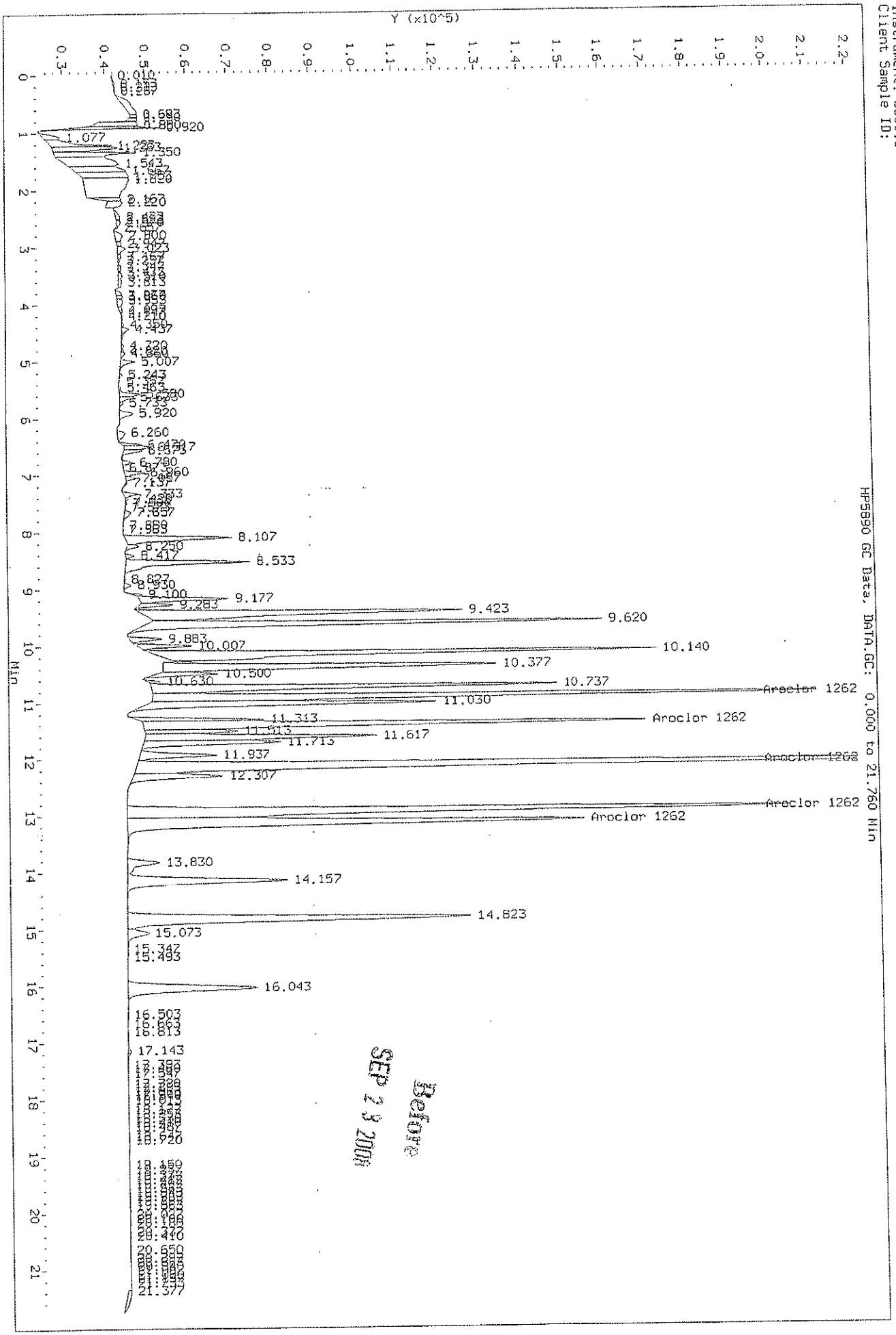
Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R048.D
Date : 23-SEP-2008 12:51
Client ID:
Sample Info: 1262 @ 1000ppb | PCB5-19H | KWG0804201-22

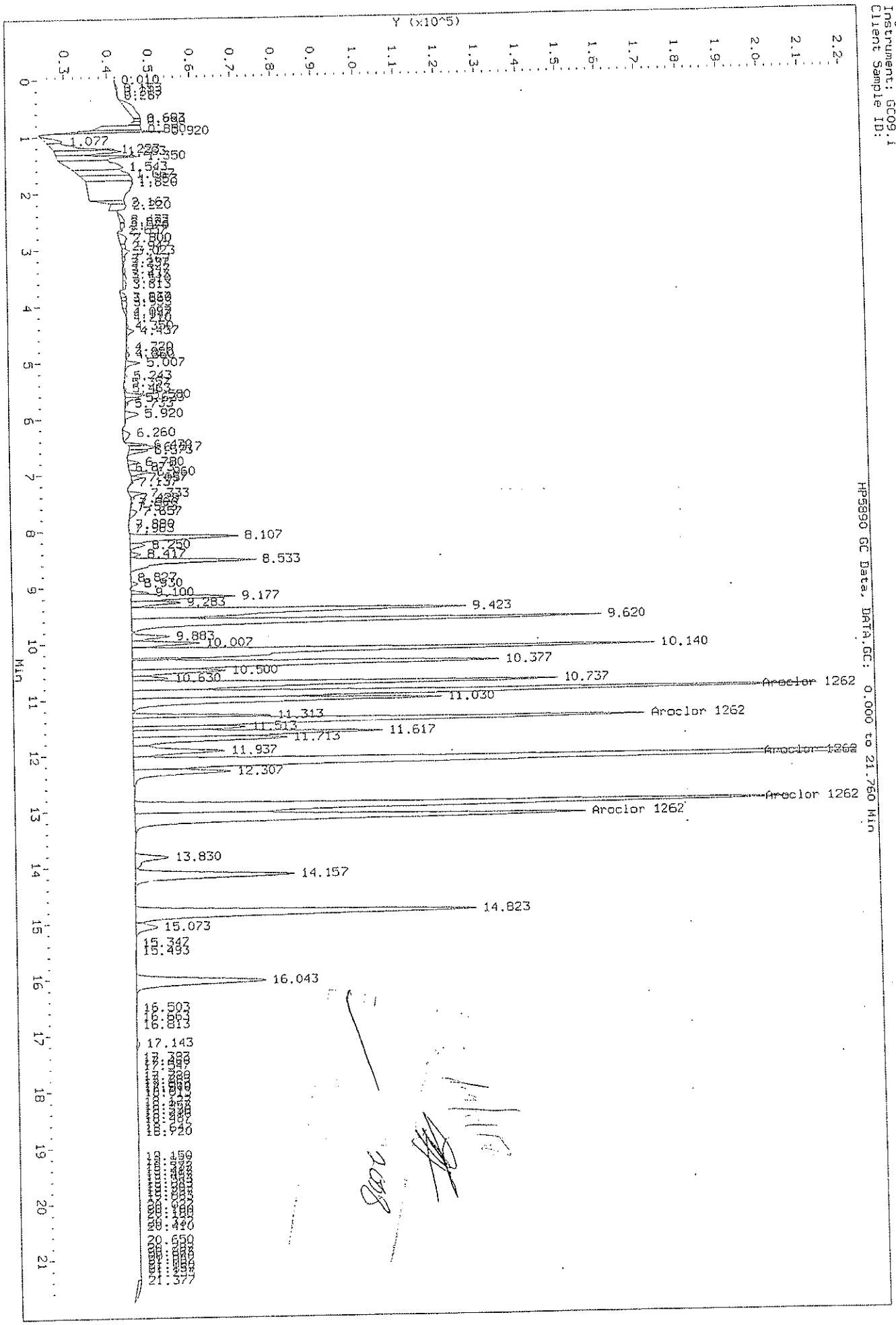
Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-XLB




Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R048.D
Injection Date: 23-SEP-2008 12:51
Instrument: GC09.i
Client Sample ID:
HP5890 GC Data, DATA.GC: 0.000 to 21.760 Min
Y (x10^5)
Min
1.077
8.107
8.533
9.177
9.423
9.620
10.140
10.377
10.737
Aroclor 1262
11.030
11.313
Aroclor 1262
11.617
11.937
Aroclor 1262
12.307
Aroclor 1262
Aroclor 1262
13.830
14.157
14.823
16.043
Before
SEP 23 2008


Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R048.D
Injection Date: 23-SEP-2008 12:51
Instrument: GC09.i
Client Sample ID:
HP5890 GC Data, DATA.GC: 0.000 to 21.760 Min
Y (x10^5)
Min
8.107
8.533
9.177
9.423
9.620
10.140
10.377
10.737
Aroclor 1262
11.030
11.313
Aroclor 1262
11.617
11.937
Aroclor 1262
12.307
Aroclor 1262
Aroclor 1262
13.830
14.157
14.823
15.073
16.043

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F049.D
Report Date: 23-Sep-2008 16:38

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\092208.b\0922F049.D
Sample #2 : \\cash1\acqudata\GC09\data\092208_r.b\0922R049.D
Inj Date : 23-SEP-2008 13:17
Sample Info: 1268 @ 1000ppb | PCB5-19I | KWG0804201-23
Misc Info : SEMIVOA GC\W0804201\23-ICV.H
Cal Date : 23-SEP-2008 16:08
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\092208.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\092208_r.b\092208_r.m
Sub List #1 : AR1268.SUB
Sub List #2 : AR1268.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1268	12.353	13.140	1205405	1483044	914	917	80.00- 120.00	100.00
	13.030	13.830	1061806	1317491	1000	1010	64.08- 96.11	88.09
	13.333	14.110	286441	387772	972	966	17.88- 26.82	23.76
	13.877	14.820	430389	538582	873	884	29.91- 44.86	35.70
	14.987	16.040	2854287	3469164	968	971	178.87- 268.31	236.79
			Average of Peak Amounts =		945	950		

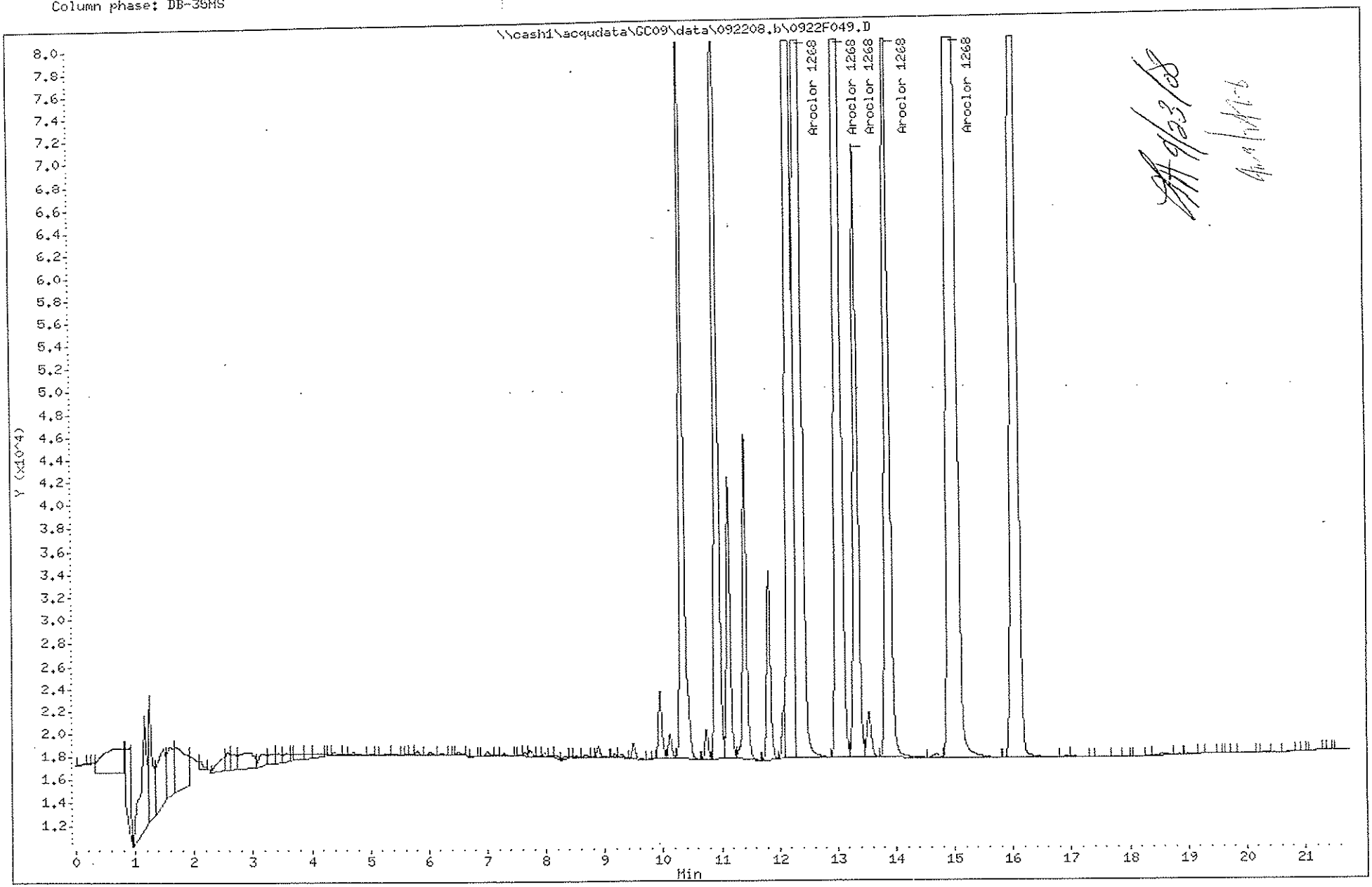
9/23/08

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F049.D
Date : 23-SEP-2008 13:17
Client ID:
Sample Info: 1268 @ 1000ppb | PCB5-19I | KWG0804201-23

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-35MS

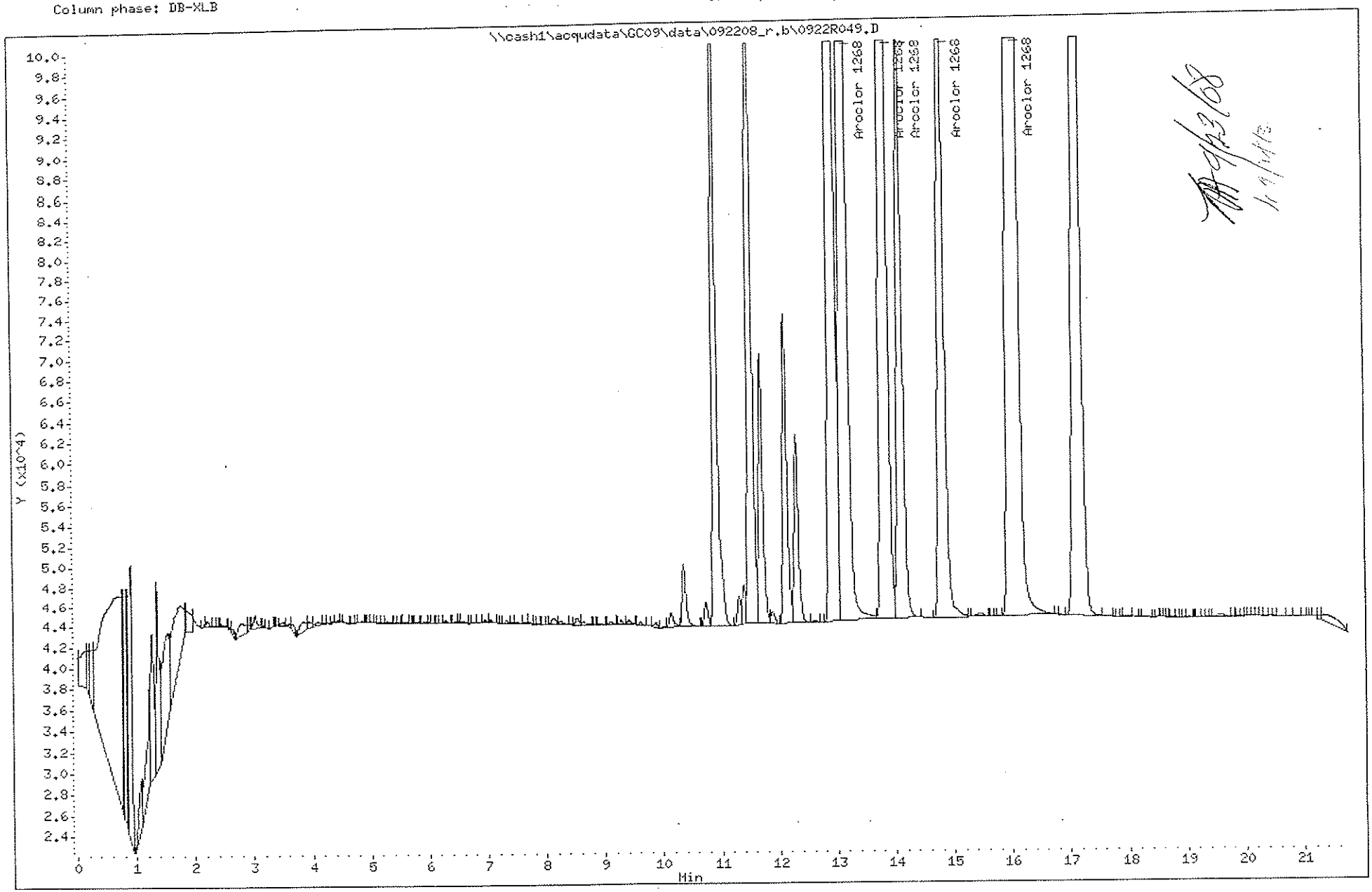


Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R049.D
Date : 23-SEP-2008 13:17
Client ID:
Sample Info: 1268 @ 1000ppb | PCB5-19I | KWG0804201-23

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-XLB



Data File: \\cash1\acqudata\GC09\data\092208.b\0922F050.D
Report Date: 23-Sep-2008 16:38

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\092208.b\0922F050.D
Sample #2 : \\cash1\acqudata\GC09\data\092208_r.b\0922R050.D
Inj Date : 23-SEP-2008 13:44
Sample Info: KWG0804201-24 | IB | 8082 PCB
Misc Info : SEMIVOA GC\W0804201\24-IB.H
Cal Date : 23-SEP-2008 16:08
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\092208.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\092208_r.b\092208_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio

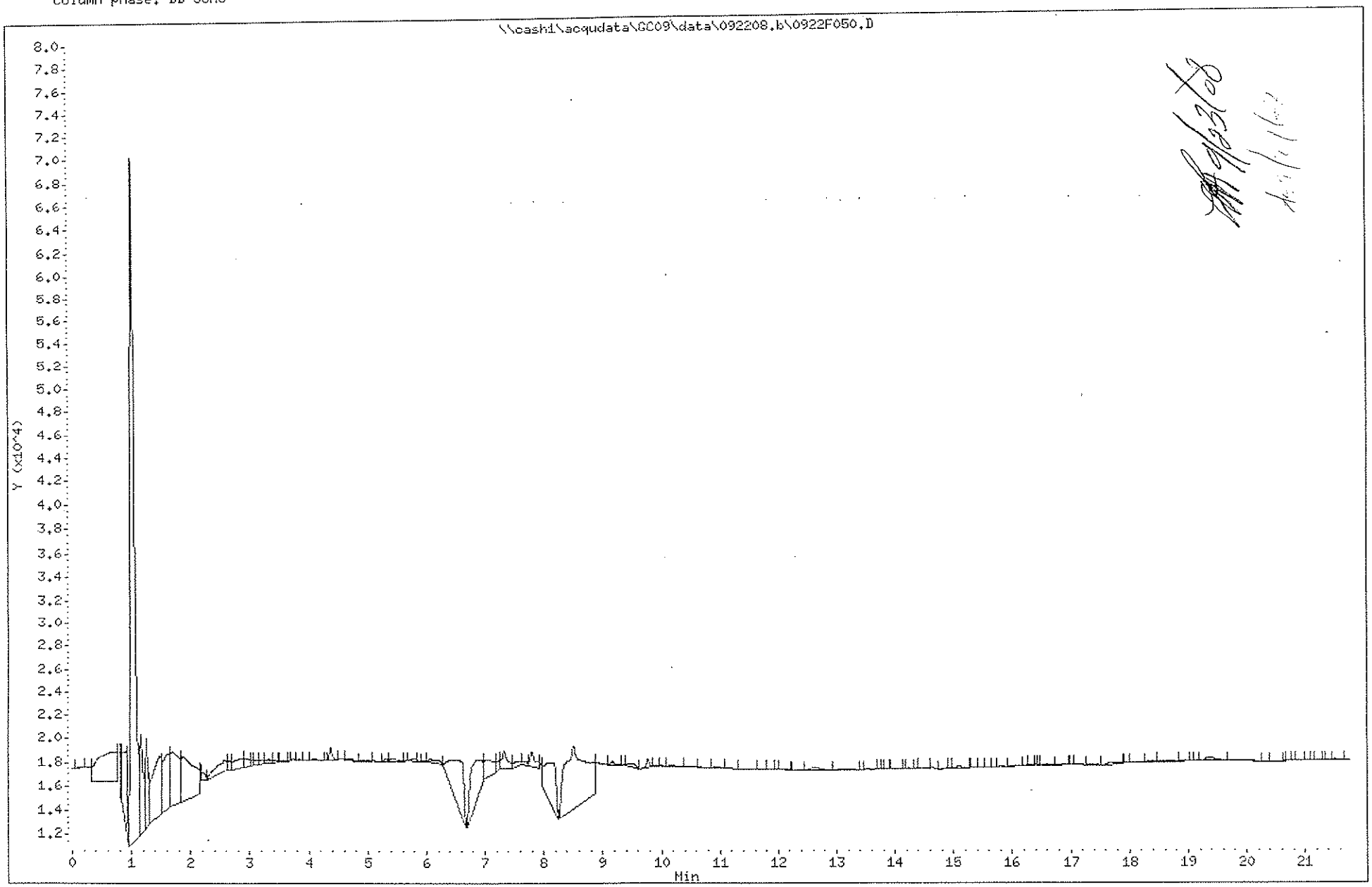
9/23/08

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F050.D
Date : 23-SEP-2008 13:44
Client ID:
Sample Info: KWG0804201-24 | IB | 8082 PCB

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-35MS

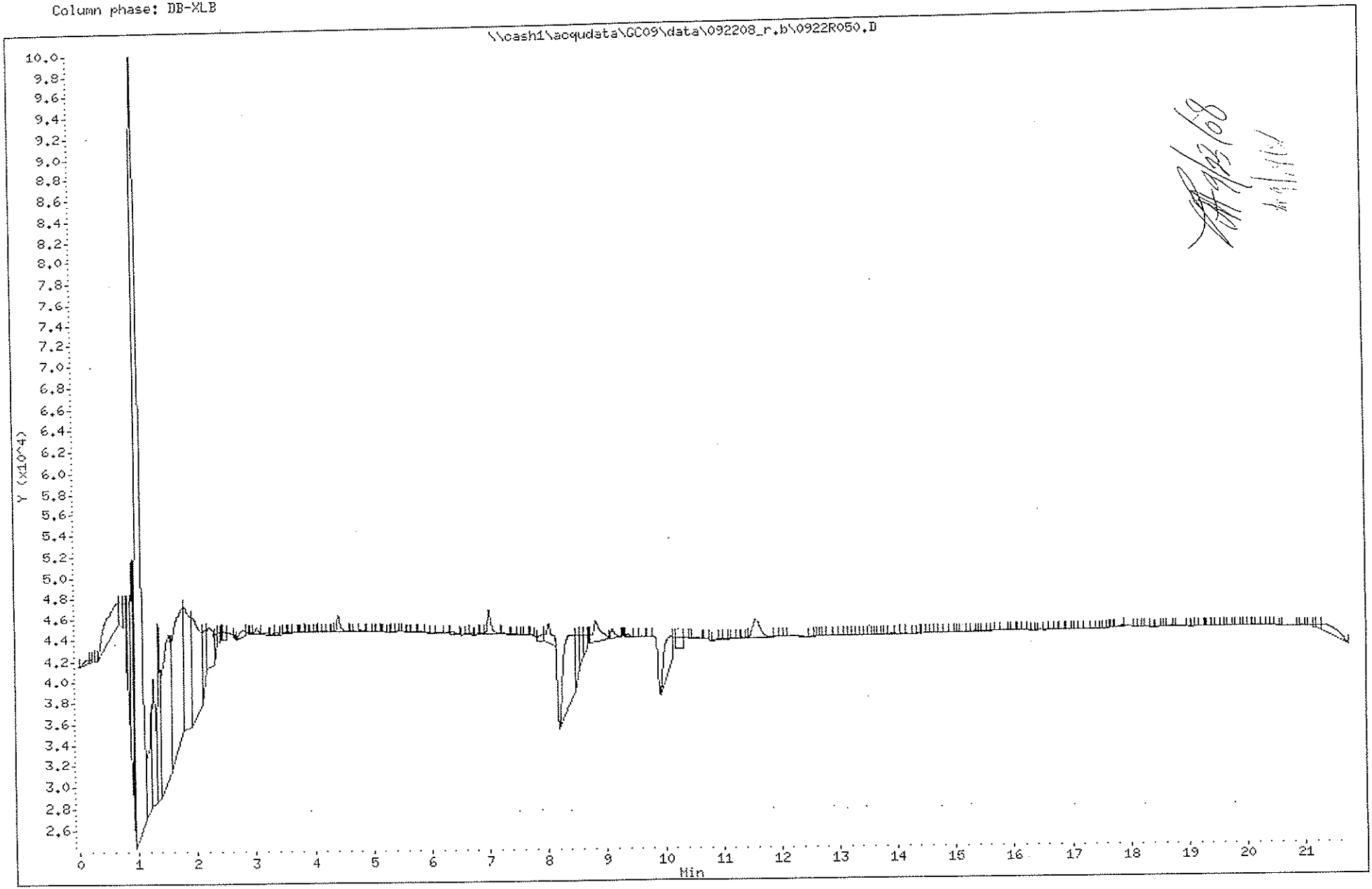


Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R050.D
Date : 23-SEP-2008 13:44
Client ID:
Sample Info: KWG0804201-24 | IB | 8082 PCB

Column phase: DB-XLB

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53



Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04

Service Request: K0810000
Date Analyzed: 10/29/2008

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082
CCV Standard ID: PCB5-24D

Calibration Date: 09/22/2008
Calibration ID: CAL7795
Analysis Lot: KWG0811575
Units: ng/mL

File ID: \\CASH1\ACQUDATA\GC09\DATA\102908.B\1029F005.D

Column ID: DB-35MS

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	100	94	10200	9550	-6	NA	± 15 %	AverageRF
Aroclor 1016 {1}	1000	990	222	220	-1	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	980	433	423	-2	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	930	224	209	-7	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	970	302	294	-3	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	1100	220	235	7	NA	± 100 %	AverageRF
Aroclor 1016	1000	990	NA	NA	NA	-1	± 15 %	NA
Aroclor 1260 {1}	1000	940	376	352	-6	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	960	701	674	-4	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	920	494	457	-8	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	960	452	435	-4	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	960	936	903	-4	NA	± 100 %	AverageRF
Aroclor 1260	1000	950	NA	NA	NA	-5	± 15 %	NA

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04

Service Request: K0810000
Date Analyzed: 10/29/2008

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082
CCV Standard ID: PCB5-24D

Calibration Date: 09/22/2008
Calibration ID: CAL7795
Analysis Lot: KWG0811575
Units: ng/mL

File ID: \\CASH1\ACQUDATA\GC09\DATA\102908_R.B\1029R005.D

Column ID: DB-XLB

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	100	99	13300	13100	-1	NA	± 15 %	AverageRF
Aroclor 1016 {1}	1000	1100	343	374	9	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	1000	681	709	4	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	1100	360	401	11	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	1100	413	466	13	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	1100	368	417	13	NA	± 100 %	AverageRF
Aroclor 1016	1000	1100	NA	NA	NA	10	± 15 %	NA
Aroclor 1260 {1}	1000	1100	703	750	7	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	1100	740	786	6	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	1100	919	1010	10	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	1100	492	537	9	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	1100	1060	1150	8	NA	± 100 %	AverageRF
Aroclor 1260	1000	1100	NA	NA	NA	8	± 15 %	NA

Results flagged with an asterisk (*) indicate values outside control criteria.

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\102908.B\1029F005.D
Lab ID: KWG0811575-1
RunType: CCV
Matrix: LIQUID

Date Acquired: 10/29/2008 12:47
Date Quantitated: 10/31/2008 17:14
Batch ID: KWG0811575
Analysis Method: 8082
MethodJoinID: MJ147

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: WWS 11/3/08

Secondary Review: 11/3/08

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\102908_R.B\1029R005.D
Lab ID: KWG0811575-1
RunType: CCV
Matrix: LIQUID

Date Acquired: 10/29/2008 12:47
Date Quantitated: 10/31/2008 17:15
Batch ID: KWG0811575
Analysis Method: 8082
MethodJoinID: MJ147

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: JWD 11/3/08

Secondary Review: 11/3/08

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	LIQUID
Prod Code:	8151A HERB	**Collect Date:**		**Receive Date:**	10/29/2008

Analysis Lot:	KWG0811575	**Prep Lot:**		**Report Group:**	
Analysis Method:	8082	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\102908.B\092208_F.M	**Calibration ID:**	CAL7795
Title:			
MB Ref:		**Method ID:**	MJ147
		Quant based on Method	

Data File #1:	J:\GC09\DATA\102908.B\1029F005.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\102908_r.b\1029R005.D			**Vial:**	96
Acqu Date:	10/29/2008 12:47	**Quant Date:**	10/31/2008 17:14	**Dilution:**	1.0
Run Type:	CCV			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG0811575-1				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	3.95	4.50	980880	1871524	96.33	108.83			NA
				%Recovery =	NA	NA	Limits =	10-109	
Decachlorobiphenyl	16.02	17.10	955131	1308056	94.01	98.60			NA
				%Recovery =	NA	NA	Limits =	17-140	

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/L #1	ug/L #2	Rpt
Aroclor 1016			0	0	988.65	1,101			
Aroclor 1016 {1}	5.68	5.62	220244	373996	992.68	1,091			
Aroclor 1016 {2}	6.20	6.55	422955	708655	977.78	1,041			
Aroclor 1016 {3}	6.58	6.94	208519	400816	929.62	1,113			
Aroclor 1016 {4}	6.99	7.04	294225	466200	974.82	1,128			
Aroclor 1016 {5}	7.27	7.32	235203	416937	1,068	1,133			
Aroclor 1260			0	0	949.47	1,082			
Aroclor 1260 {1}	9.93	9.60	351887	749811	935.25	1,067			
Aroclor 1260 {2}	10.24	10.12	673527	786047	960.72	1,062			
Aroclor 1260 {3}	10.31	10.71	456884	1013009	924.76	1,102			
Aroclor 1260 {4}	10.93	10.89	434774	537063	962.53	1,092			
Aroclor 1260 {5}	11.39	12.09	902639	1149885	964.09	1,084			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Calibration Verification Report

Calibration ID: CAL7795
Method ID: MJ147
DataFile: \\CASH1\ACQUDATA\GC09\DATA\102908.B\1029F005.D

Parameter Name	Type	PARM Type	Curve Fit	Method Criteria	Min RF	ICAL RF	CCV RF	%Diff	Sol'n Conc.	True Value	% Drift
Aroclor 1016		MS	NA	15					988.6	1,000	-1.1
Aroclor 1260		MS	NA	15					949.5	1,000	-5.1
Tetrachloro-m-xylene		SURR	AverageRF	15		1.0E+4	9.8E+3	-3.7			
Aroclor 1016 {1}		MULTI	AverageRF	100		2.2E+2	2.2E+2	-0.7			
Aroclor 1016 {2}		MULTI	AverageRF	100		4.3E+2	4.2E+2	-2.2			
Aroclor 1016 {3}		MULTI	AverageRF	100		2.2E+2	2.1E+2	-7.0			
Aroclor 1016 {4}		MULTI	AverageRF	100		3.0E+2	2.9E+2	-2.5			
Aroclor 1016 {5}		MULTI	AverageRF	100		2.2E+2	2.4E+2	6.8			
Aroclor 1260 {1}		MULTI	AverageRF	100		3.8E+2	3.5E+2	-6.5			
Aroclor 1260 {2}		MULTI	AverageRF	100		7.0E+2	6.7E+2	-3.9			
Aroclor 1260 {3}		MULTI	AverageRF	100		4.9E+2	4.6E+2	-7.5			
Aroclor 1260 {4}		MULTI	AverageRF	100		4.5E+2	4.3E+2	-3.7			
Aroclor 1260 {5}		MULTI	AverageRF	100		9.4E+2	9.0E+2	-3.6			
Decachlorobiphenyl		SURR	AverageRF	15		1.0E+4	9.6E+3	-6.0			

Alternate Calibration Evaluation Summary

Maximum Allowable Average %D =	15.0
Calculated Average %D =	4.5

Calibration Verification Report

Calibration ID: CAL7795
Method ID: MJ147
DataFile: \\CASH1\ACQUDATA\GC09\DATA\102908_R.B\1029R005.D

Parameter Name	Type	PARM Type	Curve Fit	Method Criteria	Min RF	ICAL RF	CCV RF	%Diff	Sol'n Conc.	True Value	% Drift
Aroclor 1016		MS	NA	15					1,101	1,000	10.1
Aroclor 1260		MS	NA	15					1,082	1,000	8.2
Tetrachloro-m-xylene		SURR	AverageRF	15		1.7E+4	1.9E+4	8.8			
Aroclor 1016 {1}		MULTI	AverageRF	100		3.4E+2	3.7E+2	9.1			
Aroclor 1016 {2}		MULTI	AverageRF	100		6.8E+2	7.1E+2	4.1			
Aroclor 1016 {3}		MULTI	AverageRF	100		3.6E+2	4.0E+2	11.3			
Aroclor 1016 {4}		MULTI	AverageRF	100		4.1E+2	4.7E+2	12.8			
Aroclor 1016 {5}		MULTI	AverageRF	100		3.7E+2	4.2E+2	13.3			
Aroclor 1260 {1}		MULTI	AverageRF	100		7.0E+2	7.5E+2	6.7			
Aroclor 1260 {2}		MULTI	AverageRF	100		7.4E+2	7.9E+2	6.2			
Aroclor 1260 {3}		MULTI	AverageRF	100		9.2E+2	1.0E+3	10.2			
Aroclor 1260 {4}		MULTI	AverageRF	100		4.9E+2	5.4E+2	9.2			
Aroclor 1260 {5}		MULTI	AverageRF	100		1.1E+3	1.1E+3	8.4			
Decachlorobiphenyl		SURR	AverageRF	15		1.3E+4	1.3E+4	-1.4			

Alternate Calibration Evaluation Summary

Maximum Allowable Average %D =	15.0
Calculated Average %D =	8.5

Data File: \\cash1\acqudata\GC09\data\102908.b\1029F005.D
Report Date: 31-Oct-2008 17:14

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\102908.b\1029F005.D
Sample #2 : \\cash1\acqudata\GC09\data\102908_r.b\1029R005.D
Inj Date : 29-OCT-2008 12:47
Sample Info: 1660 @ 1000ppb | PCB5-24D | KWG0811575-1
Misc Info : SEMIVOA GC\W0811575\1-CCV.H
Cal Date : 30-OCT-2008 08:55
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\102908.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\102908_r.b\092208_r.m
Sub List #1 : AR1660.SUB
Sub List #2 : AR1660.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

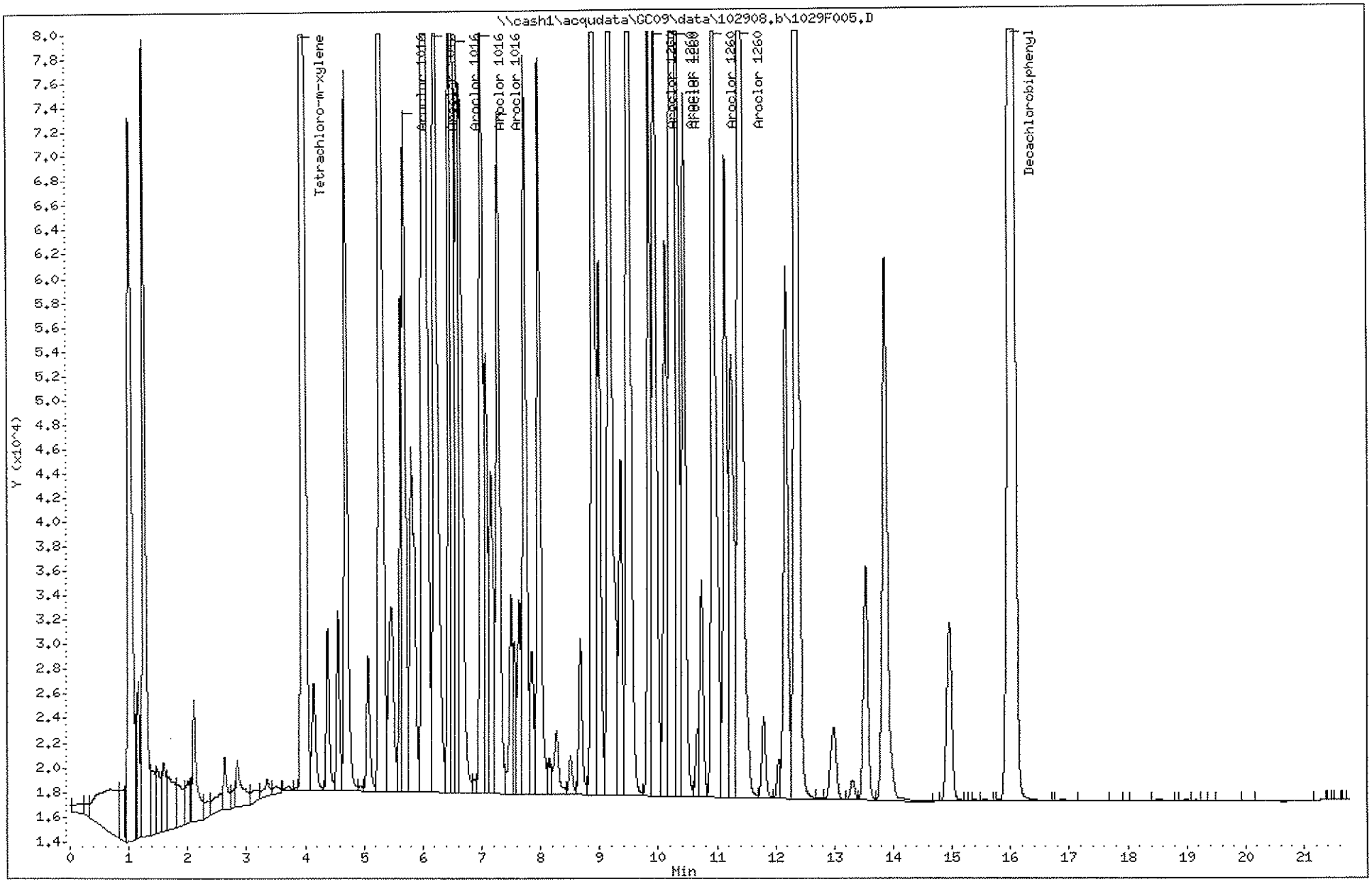
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.950	4.497	980880	1871524	96.3	109		100.00
Aroclor 1016	5.677	5.620	220244	373996	993	1090	80.00- 120.00	100.00
	6.200	6.553	422955	708655	978	1040	150.40- 225.59	192.04
	6.583	6.943	208519	400816	930	1110	78.08- 117.13	94.68
	6.990	7.040	294225	466200	975	1130	105.73- 158.59	133.59
	7.273	7.317	235203	416937	1070	1130	83.59- 125.39	106.79
			Average of Peak Amounts =		989	1100		
Aroclor 1260	9.930	9.603	351887	749811	935	1070	80.00- 120.00	100.00
	10.243	10.120	673527	786047	961	1060	162.12- 243.18	191.40
	10.307	10.710	456884	1013009	925	1100	102.09- 153.13	129.84
	10.930	10.887	434774	537063	962	1090	101.44- 152.16	123.56
	11.393	12.093	902639	1149885	964	1080	212.56- 318.85	256.51
			Average of Peak Amounts =		949	1080		
Decachlorobiphenyl	16.017	17.103	955131	1308056	94.0	98.6		100.00

Data File: \\cash1\acqudata\GC09\data\102908.b\1029F005.D
Date : 29-OCT-2008 12:47
Client ID:
Sample Info: 1660 @ 1000ppb | PCB5-24D | KWG0811575-1

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-35MS

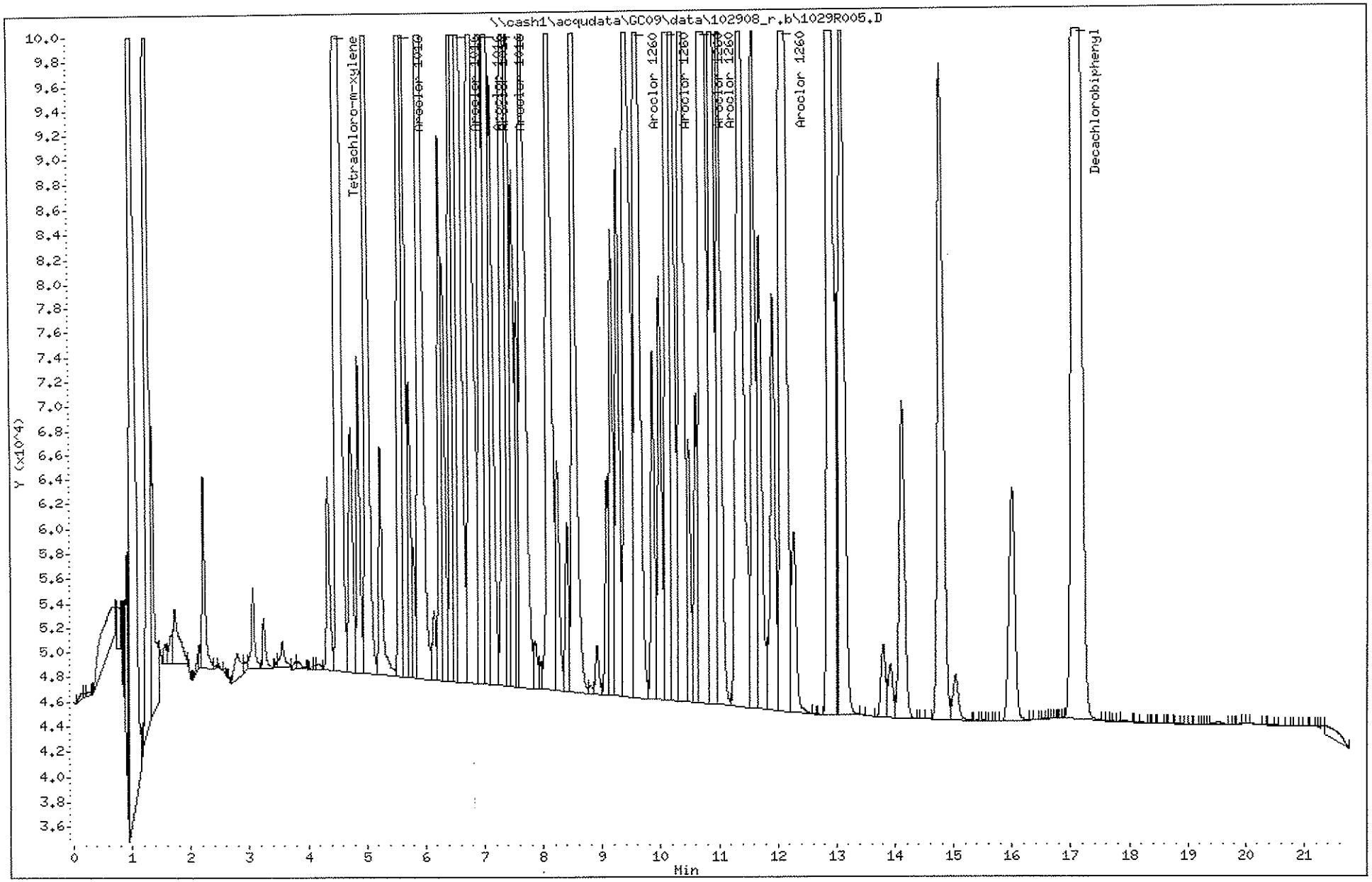


Data File: \\cash1\acqudata\GC09\data\102908_r.b\1029R005.D
Date : 29-OCT-2008 12:47
Client ID:
Sample Info: 1660 @ 1000ppb | PCB5-24D | KWG0811575-1

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-XLB



Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04

Service Request: K0810000
Date Analyzed: 10/29/2008

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082
CCV Standard ID: PCB5-24D

Calibration Date: 09/22/2008
Calibration ID: CAL7795
Analysis Lot: KWG0811575
Units: ng/mL

File ID: \\CASH1\ACQUDATA\GC09\DATA\102908.B\1029F020.D

Column ID: DB-35MS

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	100	89	10200	9080	-11	NA	± 15 %	AverageRF
Aroclor 1016 {1}	1000	970	222	215	-3	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	930	433	404	-7	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	930	224	208	-7	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	920	302	278	-8	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	980	220	216	-2	NA	± 100 %	AverageRF
Aroclor 1016	1000	950	NA	NA	NA	-5	± 15 %	NA
Aroclor 1260 {1}	1000	860	376	324	-14	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	930	701	653	-7	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	860	494	423	-14	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	880	452	396	-12	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	910	936	853	-9	NA	± 100 %	AverageRF
Aroclor 1260	1000	890	NA	NA	NA	-11	± 15 %	NA

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04

Service Request: K0810000
Date Analyzed: 10/29/2008

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082
CCV Standard ID: PCB5-24D

Calibration Date: 09/22/2008
Calibration ID: CAL7795
Analysis Lot: KWG0811575
Units: ng/mL

File ID: \\CASH1\ACQUDATA\GC09\DATA\102908_R.B\1029R020.D

Column ID: DB-XLB

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	100	96	13300	12700	-4	NA	± 15 %	AverageRF
Aroclor 1016 {1}	1000	1000	343	355	4	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	970	681	657	-3	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	1000	360	377	5	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	1100	413	441	7	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	1100	368	394	7	NA	± 100 %	AverageRF
Aroclor 1016	1000	1000	NA	NA	NA	4	± 15 %	NA
Aroclor 1260 {1}	1000	980	703	689	-2	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	1000	740	739	0	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	1100	919	969	5	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	1000	492	505	3	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	1100	1060	1120	6	NA	± 100 %	AverageRF
Aroclor 1260	1000	1000	NA	NA	NA	2	± 15 %	NA

Results flagged with an asterisk (*) indicate values outside control criteria.

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\102908.B\1029F020.D
Lab ID: KWG0811575-3
RunType: CCV
Matrix: LIQUID

Date Acquired: 10/29/2008 19:23
Date Quantitated: 10/31/2008 17:15
Batch ID: KWG0811575
Analysis Method: 8082
MethodJoinID: MJ147

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: [signature]

Secondary Review: [signature] 11/3/08

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\102908_R.B\1029R020.D
Lab ID: KWG0811575-3
RunType: CCV
Matrix: LIQUID

Date Acquired: 10/29/2008 19:23
Date Quantitated: 10/31/2008 17:16
Batch ID: KWG0811575
Analysis Method: 8082
MethodJoinID: MJ147

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: [signature] 10/31/08

Secondary Review: [signature] 11/3/08

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	LIQUID
Prod Code:	8151A HERB	**Collect Date:**		**Receive Date:**	10/29/2008

Analysis Lot:	KWG0811575	**Prep Lot:**		**Report Group:**	
Analysis Method:	8082	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\102908.B\092208_F.M	**Calibration ID:**	CAL7795
Title:			
MB Ref:		**Method ID:**	MJ147
		Quant based on Method	

Data File #1:	J:\GC09\DATA\102908.B\1029F020.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\102908_r.b\1029R020.D			**Vial:**	96
Acqu Date:	10/29/2008 19:23	**Quant Date:**	10/31/2008 17:15	**Dilution:**	1.0
Run Type:	CCV			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG0811575-3				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	3.95	4.50	980995m	1843976	96.34	107.23			NA
				%Recovery =	NA	NA	Limits =	10-109	
Decachlorobiphenyl	16.02	17.10	907998	1274741	89.37	96.09			NA
				%Recovery =	NA	NA	Limits =	17-140	

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/L #1	ug/L #2	Rpt
Aroclor 1016			0	0	946.03	1,037			
Aroclor 1016 {1}	5.68	5.62	214756m	355001	967.95	1,035			
Aroclor 1016 {2}	6.20	6.55	403910m	657190	933.76	965.47			
Aroclor 1016 {3}	6.58	6.94	207940m	376919	927.04	1,047			
Aroclor 1016 {4}	6.99	7.04	277750m	440654	920.23	1,066			
Aroclor 1016 {5}	7.27	7.32	216013m	393897	981.17	1,070			
Aroclor 1260			0	0	887.56	1,024			
Aroclor 1260 {1}	9.93	9.60	324244m	689411	861.78	980.92			
Aroclor 1260 {2}	10.24	10.12	653469m	738820	932.11	998.58			
Aroclor 1260 {3}	10.31	10.71	422911m	969177	856.00	1,055			
Aroclor 1260 {4}	10.93	10.89	396205m	504637	877.15	1,026			
Aroclor 1260 {5}	11.39	12.09	852723m	1121727	910.78	1,057			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Calibration Verification Report

Calibration ID: CAL7795
Method ID: MJ147
DataFile: \\CASH1\ACQUDATA\GC09\DATA\102908.B\1029F020.D

Parameter Name	Type	PARM Type	Curve Fit	Method Criteria	Min RF	ICAL RF	CCV RF	%Diff	Sol'n Conc.	True Value	% Drift
Aroclor 1016		MS	NA	15					946.0	1,000	-5.4
Aroclor 1260		MS	NA	15					887.6	1,000	-11.2
Tetrachloro-m-xylene		SURR	AverageRF	15		1.0E+4	9.8E+3	-3.7			
Aroclor 1016 {1}		MULTI	AverageRF	100		2.2E+2	2.1E+2	-3.2			
Aroclor 1016 {2}		MULTI	AverageRF	100		4.3E+2	4.0E+2	-6.6			
Aroclor 1016 {3}		MULTI	AverageRF	100		2.2E+2	2.1E+2	-7.3			
Aroclor 1016 {4}		MULTI	AverageRF	100		3.0E+2	2.8E+2	-8.0			
Aroclor 1016 {5}		MULTI	AverageRF	100		2.2E+2	2.2E+2	-1.9			
Aroclor 1260 {1}		MULTI	AverageRF	100		3.8E+2	3.2E+2	-13.8			
Aroclor 1260 {2}		MULTI	AverageRF	100		7.0E+2	6.5E+2	-6.8			
Aroclor 1260 {3}		MULTI	AverageRF	100		4.9E+2	4.2E+2	-14.4			
Aroclor 1260 {4}		MULTI	AverageRF	100		4.5E+2	4.0E+2	-12.3			
Aroclor 1260 {5}		MULTI	AverageRF	100		9.4E+2	8.5E+2	-8.9			
Decachlorobiphenyl		SURR	AverageRF	15		1.0E+4	9.1E+3	-10.6			

Alternate Calibration Evaluation Summary

Maximum Allowable Average %D =	15.0
Calculated Average %D =	8.1

Calibration Verification Report

Calibration ID: CAL7795
Method ID: MJ147
DataFile: \\CASH1\ACQUDATA\GC09\DATA\102908_R.B\1029R020.D

Parameter Name	Type	PARM Type	Curve Fit	Method Criteria	Min RF	ICAL RF	CCV RF	%Diff	Sol'n Conc.	True Value	% Drift
Aroclor 1016		MS	NA	15					1,037	1,000	3.7
Aroclor 1260		MS	NA	15					1,024	1,000	2.4
Tetrachloro-m-xylene		SURR	AverageRF	15		1.7E+4	1.8E+4	7.2			
Aroclor 1016 {1}		MULTI	AverageRF	100		3.4E+2	3.6E+2	3.5			
Aroclor 1016 {2}		MULTI	AverageRF	100		6.8E+2	6.6E+2	-3.5			
Aroclor 1016 {3}		MULTI	AverageRF	100		3.6E+2	3.8E+2	4.7			
Aroclor 1016 {4}		MULTI	AverageRF	100		4.1E+2	4.4E+2	6.6			
Aroclor 1016 {5}		MULTI	AverageRF	100		3.7E+2	3.9E+2	7.0			
Aroclor 1260 {1}		MULTI	AverageRF	100		7.0E+2	6.9E+2	-1.9			
Aroclor 1260 {2}		MULTI	AverageRF	100		7.4E+2	7.4E+2	-0.1			
Aroclor 1260 {3}		MULTI	AverageRF	100		9.2E+2	9.7E+2	5.5			
Aroclor 1260 {4}		MULTI	AverageRF	100		4.9E+2	5.0E+2	2.6			
Aroclor 1260 {5}		MULTI	AverageRF	100		1.1E+3	1.1E+3	5.7			
Decachlorobiphenyl		SURR	AverageRF	15		1.3E+4	1.3E+4	-3.9			

Alternate Calibration Evaluation Summary

Maximum Allowable Average %D =	15.0
Calculated Average %D =	4.4

Data File: \\cash1\acqudata\GC09\data\102908.b\1029F020.D
Report Date: 31-Oct-2008 17:15

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\102908.b\1029F020.D
Sample #2 : \\cash1\acqudata\GC09\data\102908_r.b\1029R020.D
Inj Date : 29-OCT-2008 19:23
Sample Info: 1660 @ 1000ppb | PCB5-24D | KWG0811575-3
Misc Info : SEMIVOA GC\W0811575\3-CCV.H
Cal Date : 30-OCT-2008 08:56
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\102908.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\102908_r.b\092208_r.m
Sub List #1 : AR1660.SUB
Sub List #2 : AR1660.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.947	4.497	980995	1843976	96.3	107		100.00(M)
Aroclor 1016	5.677	5.617	214756	355001	968	1040	80.00- 120.00	100.00(M)
	6.200	6.553	403910	657190	934	965	150.40- 225.59	188.08(M)
	6.583	6.943	207940	376919	927	1050	78.08- 117.13	96.83(M)
	6.990	7.040	277750	440654	920	1070	105.73- 158.59	129.33(M)
	7.273	7.317	216013	393897	981	1070	83.59- 125.39	100.59(M)
			Average of Peak Amounts =		946	1040		
Aroclor 1260	9.930	9.600	324244	689411	862	981	80.00- 120.00	100.00(M)
	10.243	10.123	653469	738820	932	998	162.12- 243.18	201.54(M)
	10.307	10.710	422911	969177	856	1050	102.09- 153.13	130.43(M)
	10.930	10.890	396205	504637	877	1030	101.44- 152.16	122.19(M)
	11.393	12.093	852723	1121727	911	1060	212.56- 318.85	262.99(M)
			Average of Peak Amounts =		888	1020		
Decachlorobiphenyl	16.020	17.103	907998	1274741	89.4	96.1		100.00

QC Flag Legend

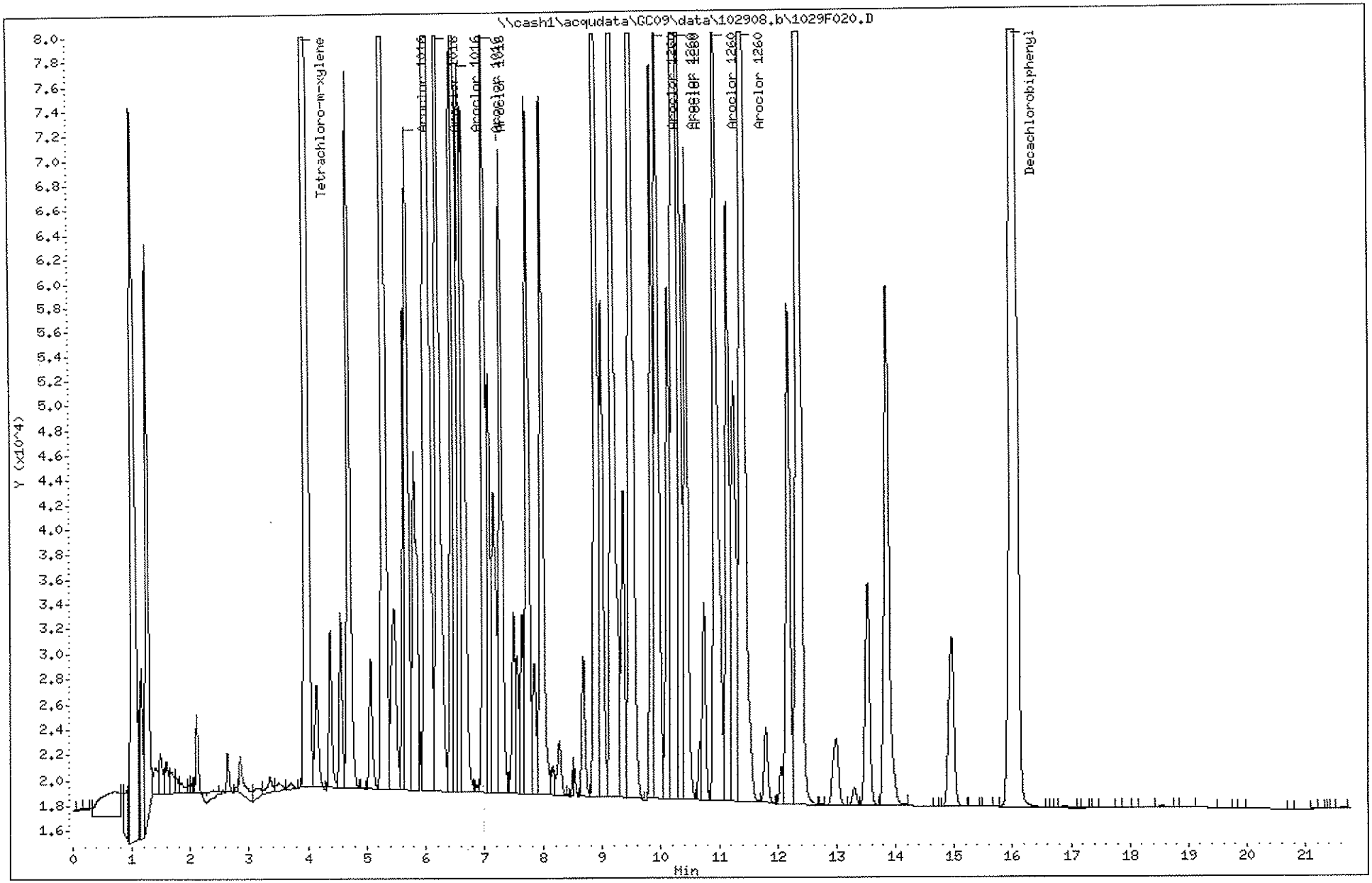
M - Compound response manually integrated.

Data File: \\cash1\acqudata\GC09\data\102908.b\1029F020.D
Date : 29-OCT-2008 19:23
Client ID:
Sample Info: 1660 @ 1000ppb | PCB5-24D | KWG0811575-3

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-35MS

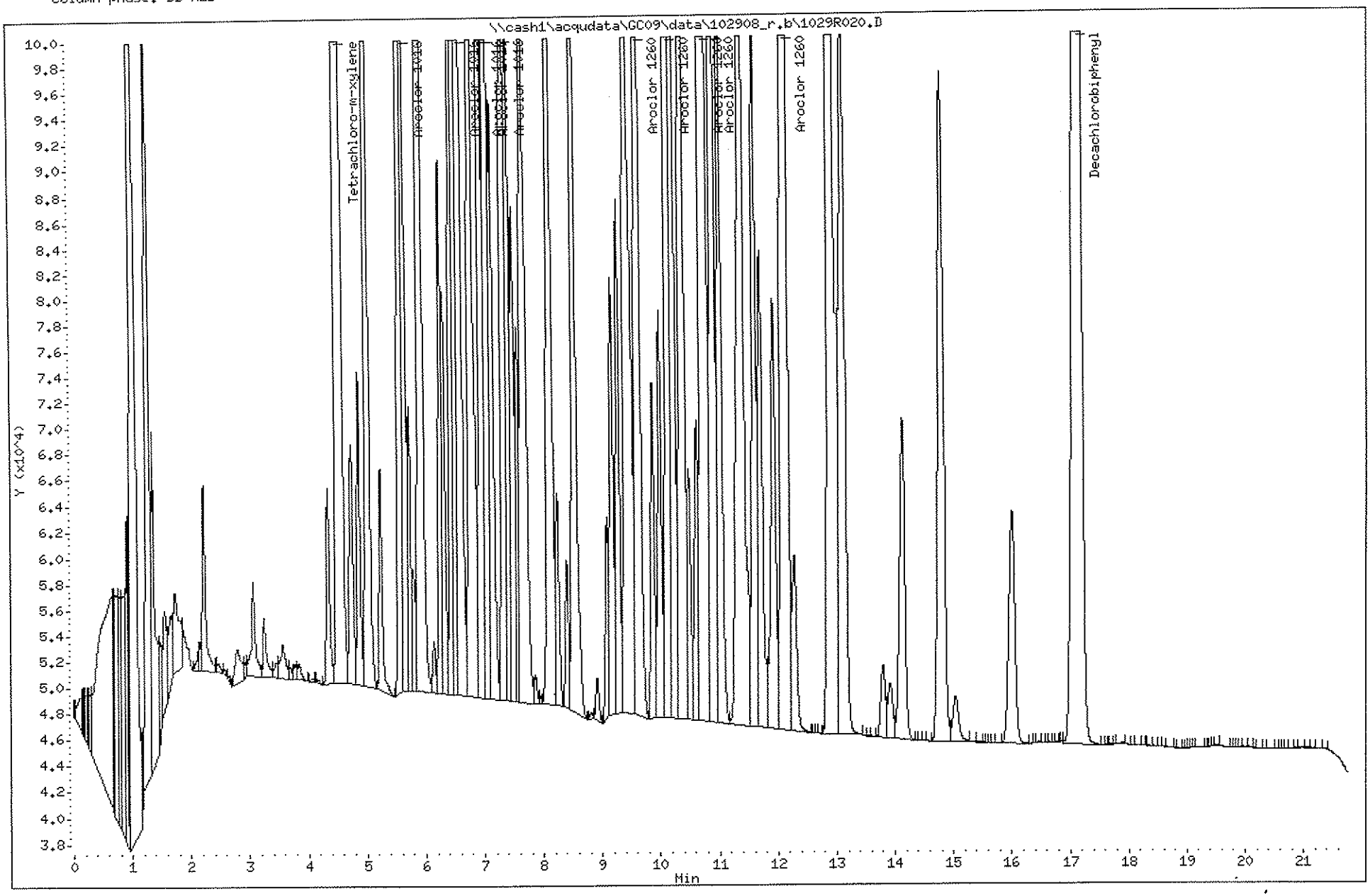


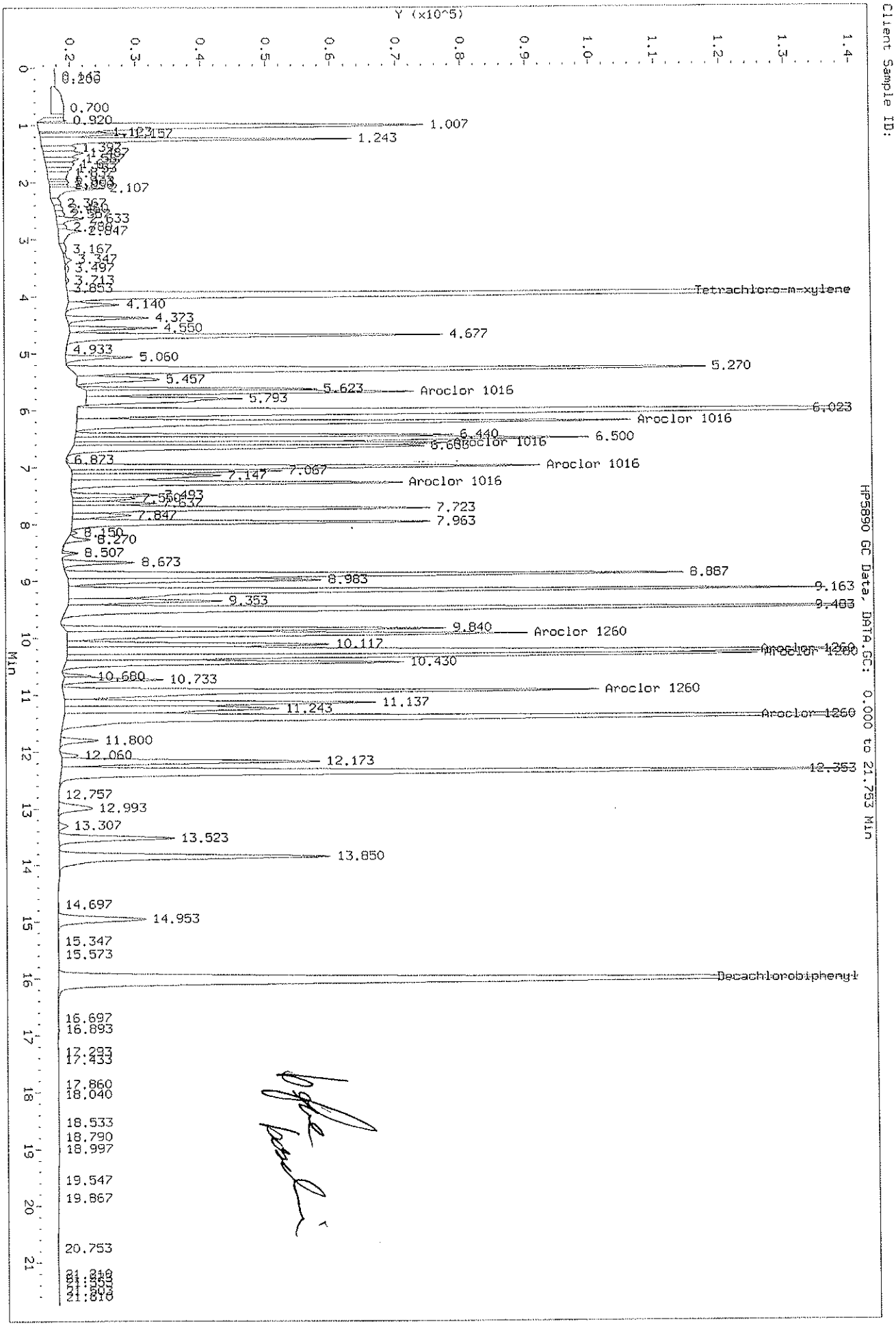
Data File: \\cash1\acqudata\GC09\data\102908_r.b\1029R020.D
Date : 29-OCT-2008 19:23
Client ID:
Sample Info: 1660 @ 1000ppb | PCB5-24D | KWG0811575-3

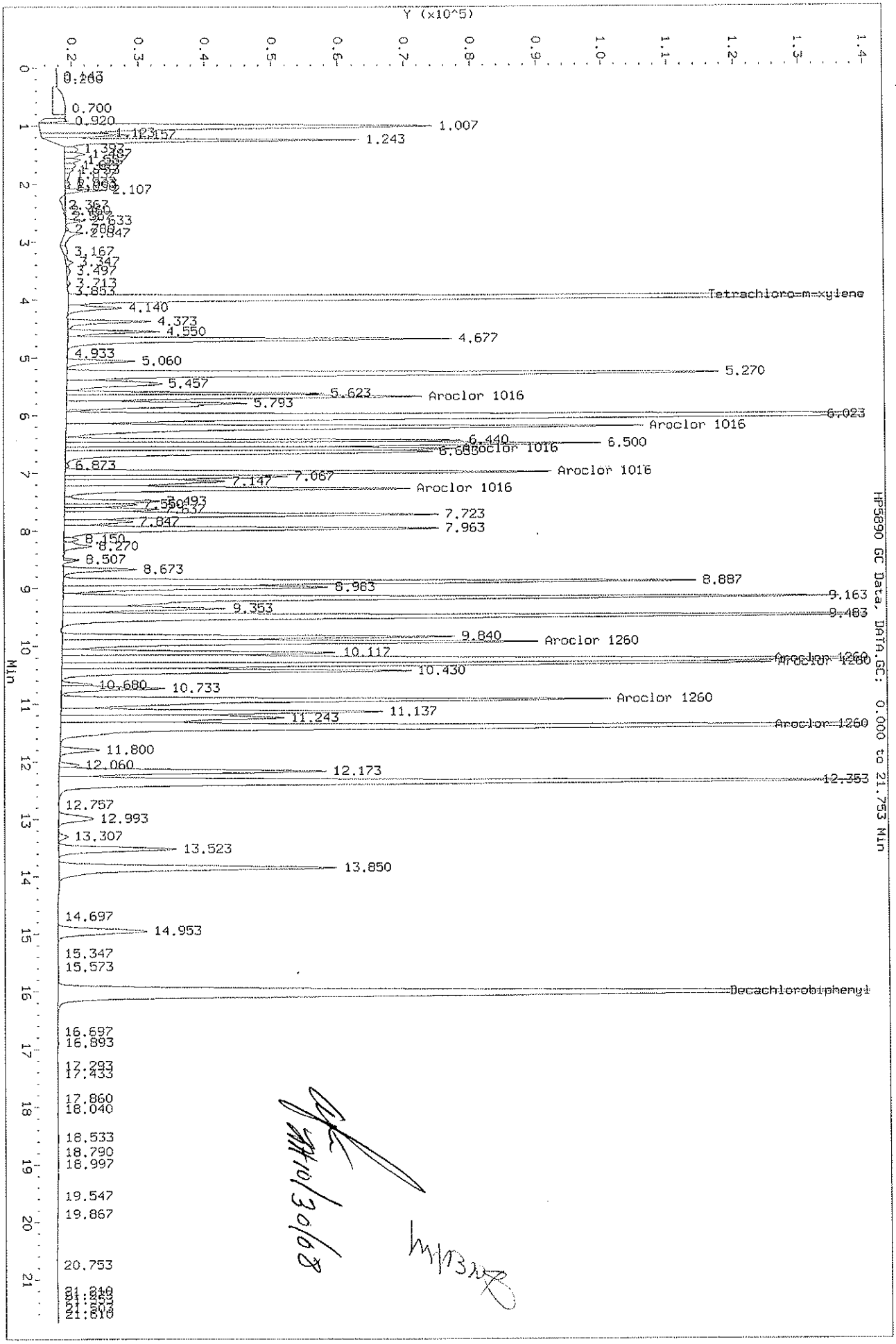
Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-XLB




Data File: \\cash1\acqudata\GC09\data\102908.b\1029F020.D
Injection Date: 29-OCT-2008 19:23
Instrument: GC09.i
Client Sample ID:
Y (x10^5)
Min
HP5890 GC Data, DATA.GC: 0.000 to 21.753 Min
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor 1016
Aroclor 1260


Data File: \\cash1\acqudata\GC09\data\102908.b\1029F020.D
Injection Date: 29-OCT-2008 19:23
Instrument: GC09.i
Client Sample ID:
Y (x10^5)
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
1.4
Min
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
0.260
0.700
0.920
1.007
1.123
1.157
1.243
2.107
Tetrachloro-m-xylene
4.140
4.323
4.550
4.677
4.933
5.060
5.270
5.457
5.623
Aroclor 1016
5.793
6.023
Aroclor 1016
6.440
6.500
Aroclor 1016
6.873
Aroclor 1016
7.147
7.057
Aroclor 1016
7.537
7.723
7.847
7.963
8.150
8.270
8.507
8.673
8.887
8.983
9.163
9.353
9.483
9.840
Aroclor 1260
10.117
Aroclor 1260
10.430
10.680
10.733
Aroclor 1260
11.137
11.243
Aroclor 1260
11.800
12.060
12.173
12.353
12.757
12.993
13.307
13.523
13.850
14.697
14.953
15.347
15.573
Decachlorobiphenyl
16.697
16.893
17.293
17.433
17.860
18.040
18.533
18.790
18.997
19.547
19.867
20.753
21.210
21.610
HP5890 GC Data, DATA.GC; 0.000 to 21.753 Min

Organic Analysis:
Polychlorinated Biphenyls (PCBs)

Validation Package

Sample Prep and Screen Data

Preparation Information

Group ID:	KWG0811356	**Prep Method:**	EPA 3540C	**Prep Date:**	10/23/08 00:00
Department:	Semivoa GC				

Lab Code	Client ID	Product	Matrix	Amt. Ext.	Final Vol.	Solids
K0810000-001	DCI 4-1	8082 PCB_LL	SOIL	23.08g	4ml	
K0810000-002	DCI 4-1a	8082 PCB_LL	SOIL	23.34g	4ml	
KWG0811356-1	Matrix Spike	8082 PCB_LL	SOIL	23.08g	4ml	
KWG0811356-2	Duplicate Matrix Spike	8082 PCB_LL	SOIL	23.11g	4ml	
KWG0811356-3	Lab Control Sample	8082 PCB_LL	SOIL	20.00g	4ml	
KWG0811356-4	Method Blank	8082 PCB_LL	SOIL	23.34g	4ml	

Lab Code	Parent Lab Code	Comments
KWG0811356-1	K0810000-001	
KWG0811356-2	K0810000-001	

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
K0810000-001	771304	PCB5-24F	200uL			DWood
K0810000-002	771305	PCB5-24F	200uL			DWood
KWG0811356-1	771306	PCB5-24F	200uL	PCB5-23N	100uL	DWood
KWG0811356-2	771307	PCB5-24F	200uL	PCB5-23N	100uL	DWood
KWG0811356-3	771308	PCB5-24F	200uL	PCB5-23N	100uL	DWood
KWG0811356-4	771309	PCB5-24F	200uL			DWood

Comments:

Started By: KYip Assisted By: — Training: Yes / No

Completed By: SHeflin Assisted By: — Yes / No

Reviewed By: [signature] Date: 10/31/08 Storage: Tyrone A1-6

Chain of Custody

Relinquished By: SH Date: 10-28-08

Received By: [signature] Date: 10/28/08

Extracts Examined: Yes / No

Preparation Information

due

Group ID:	KWG0811356	**Prep Method:**	EPA 3540C	**Prep Date:**	10/23/08 00:00
Department:	Semivoa GC				

#	Lab Code	Client ID	B#	√	Product	Matrix	Amt. Ext. (g)	pH	Int. Vol.	Final Vol.	Surr. Added	Spike Added
1	K0810000-001	DCI 4-1		✓	8082 PCB_LL	SOIL	23.08	N/A	pg	4mL	200uL	—
2	K0810000-002	DCI 4-1a		✓	8082 PCB_LL	SOIL	23.34	↓	↓	↓	↓	—
3	KWG0811356-1	Matrix Spike 10000-1		✓	8082 PCB_LL	SOIL	23.08	↓	↓	↓	↓	100uL
4	KWG0811356-2	Duplicate Matrix Spike 10000-1		✓	8082 PCB_LL	SOIL	23.11	↓	↓	↓	↓	↓
5	KWG0811356-3	Lab Control Sample		✓	8082 PCB_LL	SOIL	20.00	↓	↓	↓	↓	↓
6	KWG0811356-4	Method Blank		✓	8082 PCB_LL	SOIL	23.34	↓	↓	↓	↓	—

Comments: Prep Run 76594

Surrogate ID: PCBS-24, 2ppm, XP: 4/2/09, 200uL, eppID

Spike ID: PCBS-23N, 40ppm, XP: 3/18/09, 100uL, eppA

Witness: Debi Wood 10/23/08

Started By: KYip Assisted By:

Completed By: SH Assisted By:

STANDARD OPERATING PROCEDURE FOR EXTRACTION OF ORGANOCHLORINE PESTICIDES AND PCBs IN SOIL AND SEDIMENT

EPA 8081A/8082-AR by 3540/Low-Level Method

1. Mix the sample thoroughly. Weigh 20 grams ± 2.0g dry weight into a beaker. Record the weight to the nearest 0.01 gram. Use the same amount of sodium sulfate for method blank and sand for laboratory control sample.

1. Mix the sample with a sufficient amount of muffled sodium sulfate to completely dry the sample.

2. Add 200uL of 8081/8082 surrogate to all samples and add 100uL of 8081 matrix spike and 100uL of 8082 matrix spike to appropriate QC samples.

3. Place 300 mL of **4:1 DCM: Acetone** into a 500 mL Erlenmeyer flask with five to ten clean boiling chips. Attach the flask to a soxhlet trumpet. Pour the sample mixture onto the top of a plug of glass wool in the bottom of the trumpet.
4. Add surrogates and analyte spikes as necessary.

5. Extract the sample for 16-24 hours on setting #4, and record the start and stop times on the bench sheet.

6. Decant the extract into a prerinsed K-D apparatus. If necessary, decant the extract through a modified funnel with small amount of muffled anhydrous sodium sulfate (add more sodium sulfate, if necessary) atop a glass wool plug. Rinse the flask three times (and pass through the sulfate, rinsing the sulfate if applicable), adding rinses to the rest of the extract.

7. Evaporate the extract down on an S-Evap. keeping the temperature 80-85°C. Adjust the bath temperature as necessary. **DO NOT LET THE SAMPLE GO DRY.**

8. Evaporate to about 2 mL on an N-Evap, keeping the temperature <39°C. Take extract to 10 mL intermediate volume in DCM.

9. Do GPC cleanup (3640) on the entire 10 mL of extract. Refer to CAS SOP.

10. Evaporate on the S-Evap, keeping temperature 70-75°C. When extracts are at about 10 mL, squirt about 5 mL of hexane down top of Snyder column, keeping collector in the hot water of the bath. If the extract is allowed to cool, it will be necessary to add another boiling chip to the extract. Let the extracts solvent exchange on the S-Evap (75°C) into hexane for until solvent stops dripping. **Do not let the samples go dry.**

11. Concentrate the extract to about 1 mL on an N-evap, keeping the temperature <39°C.

12. Take the extract to 2 mL final volume in hexane and split for 8082-AR if necessary. The 8082-AR portion will then receive a concentrated sulfuric acid clean up (3665), followed by centrifugation.

13. Place 8082-AR portion in a green vial and the Pesticide portion in a yellow vial for analyses. Mark meniscuses on vials.

Approved by / Date
EE 19/13/04
Instrument Lab Manager
QA Coordinator

Sequence Name: D:\GC09\SEQUENCE\102908.S
Comment:
Operator: LHarris
Data Path: D:\GC09\DATA\102908.B\
Pre-Seq Cmd:
Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

ICAL 7795
Run # 132279
132280 (Cal

	Line	Type	Vial	DataFile	Method	Sample Name
	1	DeleteGC				
	2	MaskName -		----r---		
	3	IB	1	1029F001	PCB1	IB
	4	IB	1	1029F002	PCB1	IB
	5	IB	1	1029F003	PCB1	IB
	6	IB	2	1029F004	PCB1	KWG0811575-2 | IB | 8151A HERB
OK, OK	7	CCV	96	1029F005	PCB1	1660 @ 1000ppb | PCB5-24D | KWG081157
	8	MB	3	1029F006	PCB1	KWG0811356-4 | MB | 8082 PCB_LL | SOI
	9	LCS	4	1029F007	PCB1	KWG0811356-3 | LCS | 8082 PCB_LL | SO
	10	SMPL	5	1029F008	PCB1	K0810000-001 | DCI 4-1
	11	MS	6	1029F009	PCB1	KWG0811356-1 | K0810000-001MS | 8082
	12	DMS	7	1029F010	PCB1	KWG0811356-2 | K0810000-001DMS | 8082
	13	SMPL	8	1029F011	PCB1	K0810000-002 | DCI 4-1a
	14	MB	9	1029F012	PCB1	KWG0811426-3 | MB | 8082 PCB_ULL | WA
	15	LCS	10	1029F013	PCB1	KWG0811426-1 | LCS | 8082 PCB_ULL | W
	16	DLCS	11	1029F014	PCB1	KWG0811426-2 | DLCS | 8082 PCB_ULL |
	17	SMPL	12	1029F015	PCB1	K0810313-004 | HL-MW-2
	18	SMPL	13	1029F016	PCB1	K0810343-013 | TF-MW-4 — NR, need Hg
	19	SMPL	14	1029F017	PCB1	K0810343-017 | TF-MW-2
	20	IB	1	1029F018	PCB1	IB
	21	IB	2	1029F019	PCB1	KWG0811575-4 | IB | 8151A HERB
OK, OK	22	CCV	96	1029F020	PCB1	1660 @ 1000ppb | PCB5-24D | KWG081157
	23	IB	2	1029F021	PCB1	KWG0811575-6 | IB | 8151A HERB
	24	SMPL	15	1029F022	PCB1	K0808986-006 | 6
	25	SMPL	16	1029F023	PCB1	K0809000-001 | 08HNB-SB221N15-1.5
	26	SMPL	17	1029F024	PCB1	K0809000-002 | 08HNB-SB220W10-2.5
	27	SMPL	18	1029F025	PCB1	K0809000-003 | 08HNB-SB220S10-2.5
	28	SMPL	19	1029F026	PCB1	K0809000-004 | 08HNB-SB220N10-2.5
	29	SMPL	20	1029F027	PCB1	K0809000-005 | 08HNB-SB220S30-2.5
	30	SMPL	21	1029F028	PCB1	K0809000-006 | 08HNB-SB221S10-1.5
	31	SMPL	22	1029F029	PCB1	K0809000-007 | 08HNB-SB221W10-1.0
	32	SMPL	23	1029F030	PCB1	K0809000-008 | 08HNB-SB220E15-2.25
	33	SMPL	24	1029F031	PCB1	K0809000-009 | 08HNB-SB232W10-2.0
	34	CCV	97	1029F032	PCB1	1660 @ 1000ppb | PCB5-24D | KWG081157
OK, OK	35	IB	2	1029F033	PCB1	KWG0811575-8 | IB | 8151A HERB
	36	SMPL	25	1029F034	PCB1	K0809000-010 | 08HNB-SB232E10-0.5
	37	SMPL	26	1029F035	PCB1	K0809000-011 | 08HNB-SB232N10-1.25
	38	MS	27	1029F036	PCB1	KWG0810870-1 | K0809000-011MS | 8082
	39	DMS	28	1029F037	PCB1	KWG0810870-2 | K0809000-011DMS | 8082
	40	CCV	97	1029F038	PCB1	1660 @ 1000ppb | PCB5-24D | KWG081157
OK, OK	41	IB	2	1029F039	PCB1	KWG0811575-10 | IB | 8151A HERB

Last Modified: Wed Oct 29 10:57:54 2008 Page: 1

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\102908.B\1029F004.D
Lab ID: KWG0811575-2
RunType: IB
Matrix: LIQUID

Date Acquired: 10/29/2008 12:21
Date Quantitated: 10/31/2008 18:29
Batch ID: KWG0811575
Analysis Method: 8082
MethodJoinID: MJ147

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: [signature]

Secondary Review: [signature] 11/3/08

Printed: 10/31/2008 18:30:00
u:\Stealth\Crystal.rpt\except2.rpt

Exception Report

Data File:	\\CASH1\ACQUDATA\GC09\DATA\102908_R.B\1029R004.D	**Date Acquired:**	10/29/2008 12:21
Lab ID:	KWG0811575-2	**Date Quantitated:**	10/31/2008 18:29
RunType:	IB	**Batch ID:**	KWG0811575
Matrix:	LIQUID	**Analysis Method:**	8082
		MethodJoinID:	MJ147

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: [signature]

Secondary Review: [signature] 11/3/08

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	LIQUID
Prod Code:	8151A HERB	**Collect Date:**		**Receive Date:**	10/29/2008

Analysis Lot:	KWG0811575	**Prep Lot:**		**Report Group:**	
Analysis Method:	8082	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\102908.B\092208_F.M	**Calibration ID:**	CAL7795
Title:			
MB Ref:		**Method ID:**	MJ147
		Quant based on Method	

Data File #1:	J:\GC09\DATA\102908.B\1029F004.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\102908_r.b\1029R004.D			**Vial:**	2
Acqu Date:	10/29/2008 12:21	**Quant Date:**	10/31/2008 18:29	**Dilution:**	1.0
Run Type:	IB			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG0811575-2				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	0.00		0d	0d		0.0000			NA
			%Recovery =		NA	NA	Limits =	10-109	
Decachlorobiphenyl	0.00		0d	0d		0.0000			NA
			%Recovery =		NA	NA	Limits =	17-140	
2,2',4,4',5,5'-Hexabromobiphen	0.00		0d	0		0.0000			NA
			%Recovery =		NA	NA	Limits =	70-130	

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/L #1	ug/L #2	Rpt
Aroclor 1016			0	0	0.0000	0.0000			
Aroclor 1016 {1}			0d	0d	0.0000	0.0000			
Aroclor 1016 {2}			0d	0d	0.0000	0.0000			
Aroclor 1016 {3}			0d	0d	0.0000	0.0000			
Aroclor 1016 {4}			0d	0d	0.0000	0.0000			
Aroclor 1016 {5}			0d	0d	0.0000	0.0000			
Aroclor 1221			0	0	0.0000	0.0000			
Aroclor 1221 {1}			0d	0d	0.0000	0.0000			
Aroclor 1221 {2}			0d	0d	0.0000	0.0000			
Aroclor 1221 {3}			0d	0d	0.0000	0.0000			
Aroclor 1221 {4}			0d	0d	0.0000	0.0000			
Aroclor 1232			0	0	0.0000	0.0000			
Aroclor 1232 {1}			0d	0d	0.0000	0.0000			
Aroclor 1232 {2}			0d	0d	0.0000	0.0000			
Aroclor 1232 {3}			0d	0d	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC09\DATA\102908.B\1029F004.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\102908_r.b\1029R004.D			**Vial:**	2
Acqu Date:	10/29/2008 12:21	**Quant Date:**	10/31/2008 18:29	**Dilution:**	1.0
Run Type:	IB			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG0811575-2				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds — **Final Conc. Units:** ug/L

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/L #1	ug/L #2	Rpt
Aroclor 1232 {4}			0d	0d	0.0000	0.0000			
Aroclor 1242			0	0	0.0000	0.0000			
Aroclor 1242 {1}			0d	0d	0.0000	0.0000			
Aroclor 1242 {2}			0d	0d	0.0000	0.0000			
Aroclor 1242 {3}			0d	0d	0.0000	0.0000			
Aroclor 1242 {4}			0d	0d	0.0000	0.0000			
Aroclor 1242 {5}			0d	0d	0.0000	0.0000			
Aroclor 1248			0	0	0.0000	0.0000			
Aroclor 1248 {1}			0d	0d	0.0000	0.0000			
Aroclor 1248 {2}			0d	0d	0.0000	0.0000			
Aroclor 1248 {3}			0d	0d	0.0000	0.0000			
Aroclor 1248 {4}			0d	0d	0.0000	0.0000			
Aroclor 1248 {5}			0d	0d	0.0000	0.0000			
Aroclor 1254			0	0	0.0000	0.0000			
Aroclor 1254 {1}			0	0d	0.0000	0.0000			
Aroclor 1254 {2}			0	0d	0.0000	0.0000			
Aroclor 1254 {3}			0	0d	0.0000	0.0000			
Aroclor 1254 {4}			0	0d	0.0000	0.0000			
Aroclor 1254 {5}			0	0d	0.0000	0.0000			
Aroclor 1260			0	0	0.0000	0.0000			
Aroclor 1260 {1}			0	0d	0.0000	0.0000			
Aroclor 1260 {2}			0	0d	0.0000	0.0000			
Aroclor 1260 {3}			0	0d	0.0000	0.0000			
Aroclor 1260 {4}			0	0d	0.0000	0.0000			
Aroclor 1260 {5}			0	0d	0.0000	0.0000			
Aroclor 1262			0	0	0.0000	0.0000			
Aroclor 1262 {1}			0	0d	0.0000	0.0000			
Aroclor 1262 {2}			0	0d	0.0000	0.0000			
Aroclor 1262 {3}			0	0d	0.0000	0.0000			
Aroclor 1262 {4}			0	0d	0.0000	0.0000			
Aroclor 1262 {5}			0	0d	0.0000	0.0000			
Aroclor 1268			0	0	0.0000	0.0000			
Aroclor 1268 {1}			0	0d	0.0000	0.0000			
Aroclor 1268 {2}			0	0d	0.0000	0.0000			
Aroclor 1268 {3}			0	0d	0.0000	0.0000			
Aroclor 1268 {4}			0	0d	0.0000	0.0000			
Aroclor 1268 {5}			0	0d	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\cash1\acqudata\GC09\data\102908.b\1029F004.D
Report Date: 31-Oct-2008 18:29

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\102908.b\1029F004.D
Sample #2 : \\cash1\acqudata\GC09\data\102908_r.b\1029R004.D
Inj Date : 29-OCT-2008 12:21
Sample Info: KWG0811575-2 | IB | 8151A HERB
Misc Info : SEMIVOA GC\W0811575\2-IB.H
Cal Date : 29-OCT-2008 09:40
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\102908.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\102908_r.b\092208_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

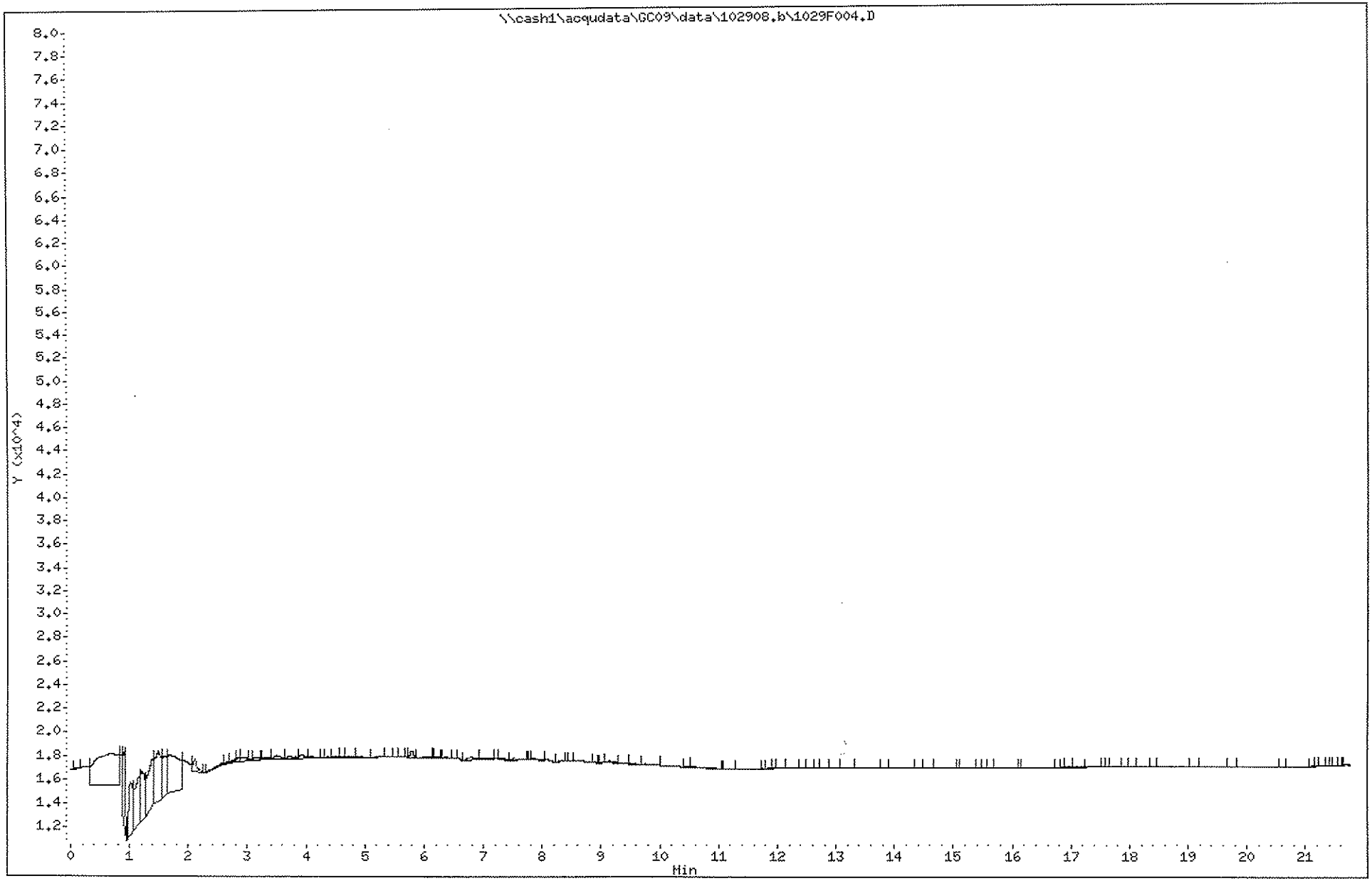
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio

Data File: \\cash1\acqudata\GC09\data\102908.b\1029F004.D
Date : 29-OCT-2008 12:21
Client ID:
Sample Info: KWG0811575-2 | IB | 8151A HERB

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-35MS

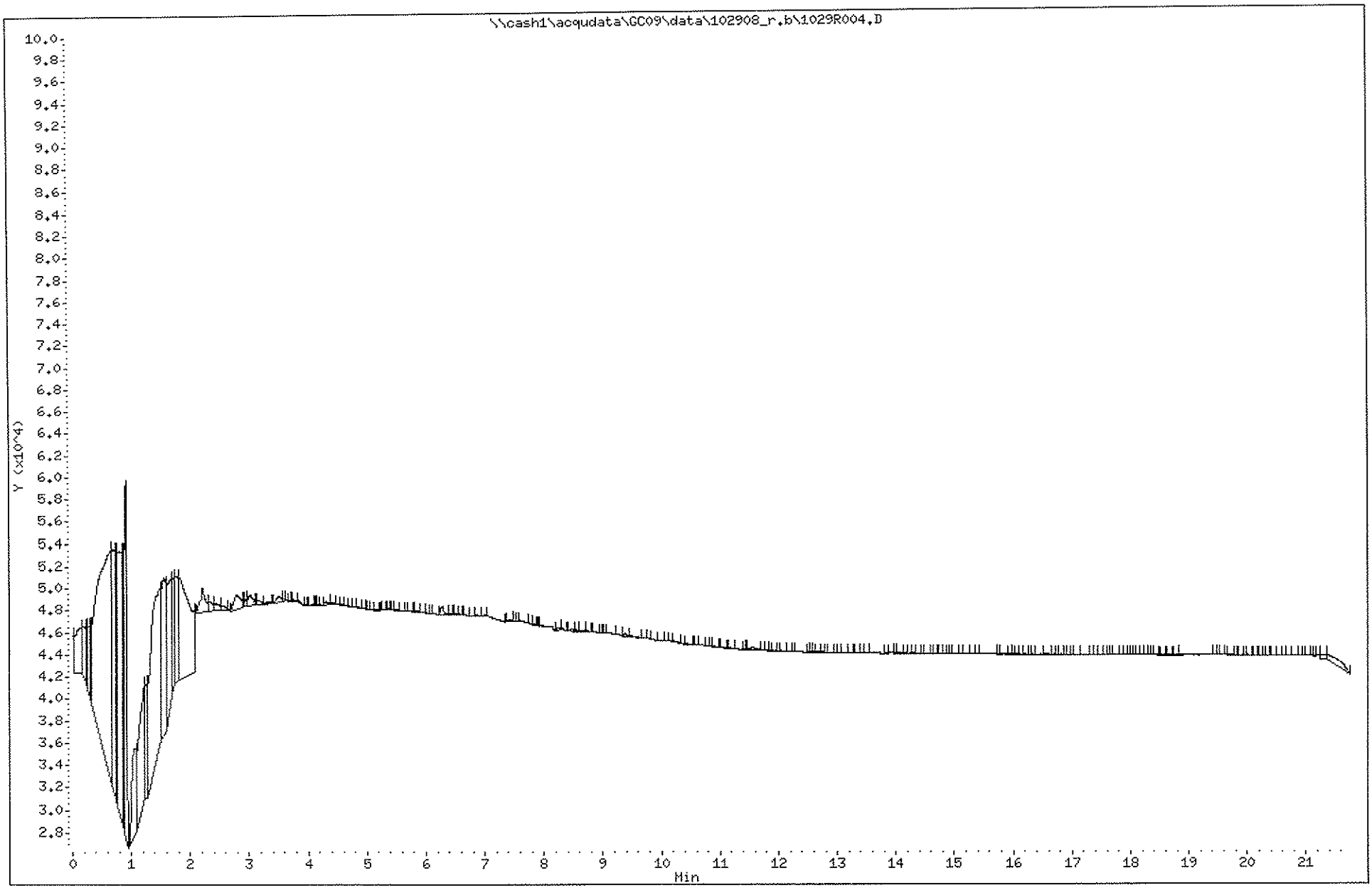


Data File: \\cash1\acqudata\GC09\data\102908_r.b\1029R004.D
Date : 29-OCT-2008 12:21
Client ID:
Sample Info: KWG0811575-2 | IB | 8151A HERB

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-XLB



Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\102908.B\1029F021.D
Lab ID: KWG0811575-6
RunType: IB
Matrix: LIQUID

Date Acquired: 10/29/2008 19:49
Date Quantitated: 10/31/2008 17:15
Batch ID: KWG0811575
Analysis Method: 8082
MethodJoinID: MJ147

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: [signature]

Secondary Review: [signature] 11/3/08

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\102908_R.B\1029R021.D
Lab ID: KWG0811575-6
RunType: IB
Matrix: LIQUID

Date Acquired: 10/29/2008 19:49
Date Quantitated: 10/31/2008 17:16
Batch ID: KWG0811575
Analysis Method: 8082
MethodJoinID: MJ147

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____ 11/3/08

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	LIQUID
Prod Code:	8151A HERB	**Collect Date:**		**Receive Date:**	10/29/2008

Analysis Lot:	KWG0811575	**Prep Lot:**		**Report Group:**	
Analysis Method:	8082	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\102908.B\092208_F.M	**Calibration ID:**	CAL7795
Title:			
MB Ref:		**Method ID:**	MJ147
		Quant based on Method	

Data File #1:	J:\GC09\DATA\102908.B\1029F021.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\102908_r.b\1029R021.D			**Vial:**	2
Acqu Date:	10/29/2008 19:49	**Quant Date:**	10/31/2008 17:15	**Dilution:**	1.0
Run Type:	IB			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG0811575-6				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	0.00		0d	0d	0.0000				NA
			%Recovery =		NA	NA	Limits =	10-109	
Decachlorobiphenyl	0.00		0d	0d	0.0000				NA
			%Recovery =		NA	NA	Limits =	17-140	
2,2',4,4',5,5'-Hexabromobiphen	0.00		0d	0	0.0000				NA
			%Recovery =		NA	NA	Limits =	70-130	

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/L #1	ug/L #2	Rpt
Aroclor 1016			0	0	0.0000	0.0000			
Aroclor 1016 {1}			0d	0d	0.0000	0.0000			
Aroclor 1016 {2}			0d	0d	0.0000	0.0000			
Aroclor 1016 {3}			0d	0d	0.0000	0.0000			
Aroclor 1016 {4}			0d	0d	0.0000	0.0000			
Aroclor 1016 {5}			0d	0d	0.0000	0.0000			
Aroclor 1221			0	0	0.0000	0.0000			
Aroclor 1221 {1}			0d	0d	0.0000	0.0000			
Aroclor 1221 {2}			0d	0d	0.0000	0.0000			
Aroclor 1221 {3}			0d	0d	0.0000	0.0000			
Aroclor 1221 {4}			0d	0d	0.0000	0.0000			
Aroclor 1232			0	0	0.0000	0.0000			
Aroclor 1232 {1}			0d	0d	0.0000	0.0000			
Aroclor 1232 {2}			0d	0d	0.0000	0.0000			
Aroclor 1232 {3}			0d	0d	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
c: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC09\DATA\102908.B\1029F021.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\102908_r.b\1029R021.D			**Vial:**	2
Acqu Date:	10/29/2008 19:49	**Quant Date:**	10/31/2008 17:15	**Dilution:**	1.0
Run Type:	IB			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG0811575-6				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds **Final Conc. Units:** ug/L

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/L #1	ug/L #2	Rpt
Aroclor 1232 {4}			0d	0d	0.0000	0.0000			
Aroclor 1242			0	0	0.0000	0.0000			
Aroclor 1242 {1}			0d	0d	0.0000	0.0000			
Aroclor 1242 {2}			0d	0d	0.0000	0.0000			
Aroclor 1242 {3}			0d	0d	0.0000	0.0000			
Aroclor 1242 {4}			0d	0d	0.0000	0.0000			
Aroclor 1242 {5}			0d	0d	0.0000	0.0000			
Aroclor 1248			0	0	0.0000	0.0000			
Aroclor 1248 {1}			0	0d	0.0000	0.0000			
Aroclor 1248 {2}			0	0d	0.0000	0.0000			
Aroclor 1248 {3}			0	0d	0.0000	0.0000			
Aroclor 1248 {4}			0	0d	0.0000	0.0000			
Aroclor 1248 {5}			0	0d	0.0000	0.0000			
Aroclor 1254			0	0	0.0000	0.0000			
Aroclor 1254 {1}			0	0d	0.0000	0.0000			
Aroclor 1254 {2}			0	0d	0.0000	0.0000			
Aroclor 1254 {3}			0	0d	0.0000	0.0000			
Aroclor 1254 {4}			0	0d	0.0000	0.0000			
Aroclor 1254 {5}			0	0d	0.0000	0.0000			
Aroclor 1260			0	0	0.0000	0.0000			
Aroclor 1260 {1}			0	0	0.0000	0.0000			
Aroclor 1260 {2}			0	0	0.0000	0.0000			
Aroclor 1260 {3}			0	0	0.0000	0.0000			
Aroclor 1260 {4}			0	0	0.0000	0.0000			
Aroclor 1260 {5}			0	0	0.0000	0.0000			
Aroclor 1262			0	0	0.0000	0.0000			
Aroclor 1262 {1}			0d	0	0.0000	0.0000			
Aroclor 1262 {2}			0d	0	0.0000	0.0000			
Aroclor 1262 {3}			0d	0	0.0000	0.0000			
Aroclor 1262 {4}			0d	0	0.0000	0.0000			
Aroclor 1262 {5}			0d	0	0.0000	0.0000			
Aroclor 1268			0	0	0.0000	0.0000			
Aroclor 1268 {1}			0d	0d	0.0000	0.0000			
Aroclor 1268 {2}			0d	0d	0.0000	0.0000			
Aroclor 1268 {3}			0d	0d	0.0000	0.0000			
Aroclor 1268 {4}			0d	0d	0.0000	0.0000			
Aroclor 1268 {5}			0d	0d	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\cash1\acqudata\GC09\data\102908.b\1029F021.D
Report Date: 31-Oct-2008 17:15

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\102908.b\1029F021.D
Sample #2 : \\cash1\acqudata\GC09\data\102908_r.b\1029R021.D
Inj Date : 29-OCT-2008 19:49
Sample Info: KWG0811575-6 | IB | 8151A HERB
Misc Info : SEMIVOA GC\W0811575\6-IB.H
Cal Date : 30-OCT-2008 08:56
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\102908.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\102908_r.b\092208_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

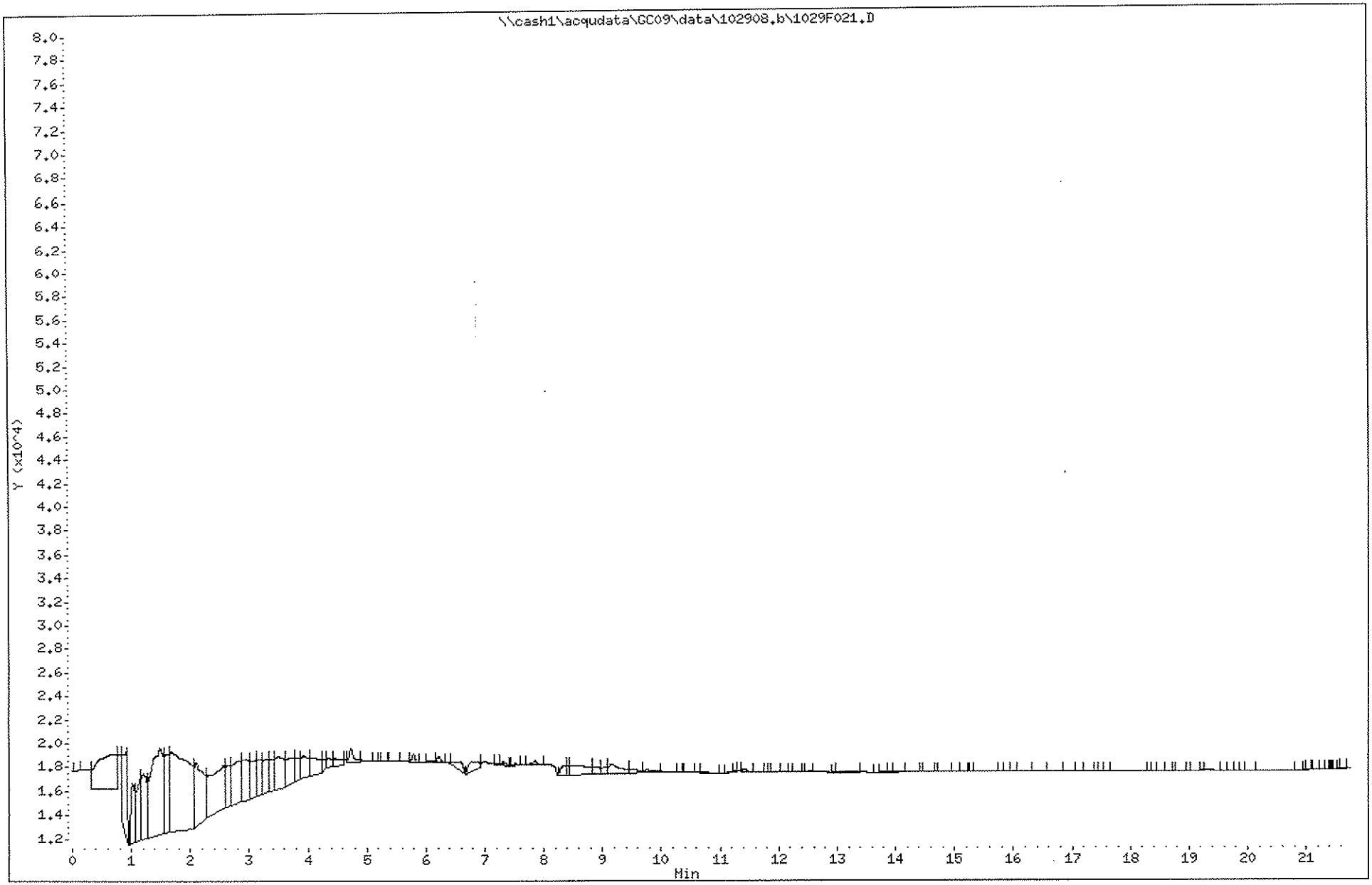
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio

Data File: \\cash1\acqudata\GC09\data\102908.b\1029F021.D
Date : 29-OCT-2008 19:49
Client ID:
Sample Info: KWG0811575-6 | IB | 8151A HERB

Instrument: GC09.i

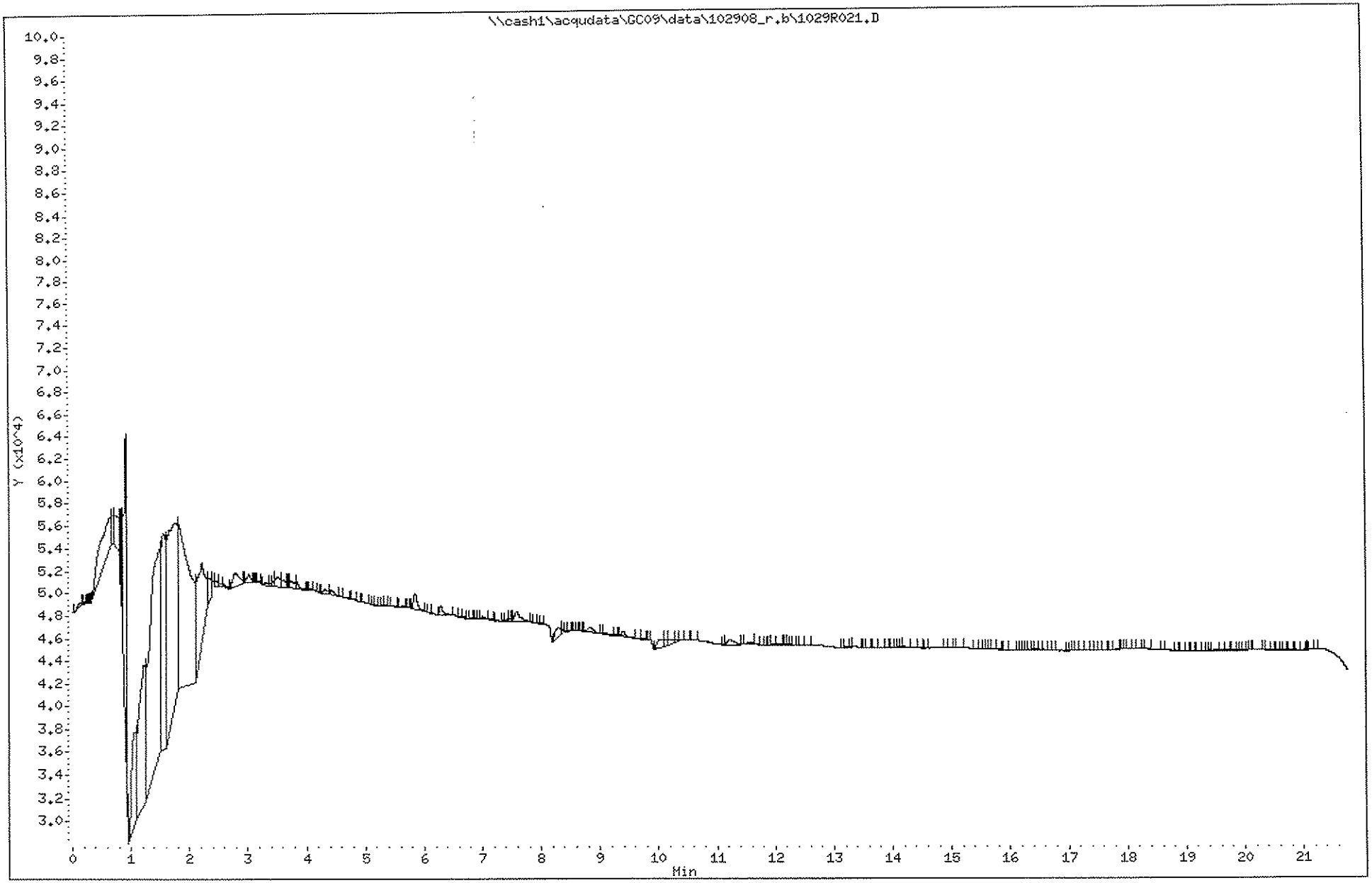
Operator: LHarris
Column diameter: 0.53

Column phase: DB-35MS



Data File: \\cash1\acqudata\GC09\data\102908_r.b\1029R021.D
Date : 29-OCT-2008 19:49
Client ID:
Sample Info: KWG0811575-6 | IB | 8151A HERB

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-XLB