GROUND ENGINEERING

September 15, 2014

Subject: Supplemental Groundwater Sampling and Analytical Laboratory Testing, **North Boulder Armory Redevelopment**, Boulder, Colorado.

Job Number 14-3057

Ms. Liz Petersen
The Mulhern Group, LTD
1730 Blake Street, Suite 435
Denver, Colorado 80202

Dear Ms. Petersen:

This correspondence presents the results of the groundwater sampling and analytical laboratory testing conducted by GROUND Engineering Consultants, Inc. (GROUND), performed in general accordance with GROUND's Proposal No. 1406-0959, Revised, dated July 2, 2014.

On August 12, 2014, a representative of GROUND visited the North Boulder Armory Redevelopment project site for the purpose of obtaining a groundwater sample from a temporary observation hole, previously installed in support of GROUND's geotechnical evaluation (Report dated August 14, 2014). The groundwater sample was obtained from Test Hole 4 (see Report Figure 1 – *Location of Test Holes*).

The sample was placed in a cooled and insulated container and submitted to ESC Lab Sciences for analytical laboratory analysis. Testing procedures generally correspond to applicable EPA methodologies and chain-of-custody sample transfer protocol was strictly followed. The Client is advised to review the analytical laboratory results included at the end of this correspondence.

The groundwater sample was analyzed for:

- Total and dissolved metals (arsenic, barium, beryllium, boron, cadmium, iron, lead, manganese, nickel, selenium, silver, zinc, chromium, calcium, sodium, thallium).
- Mercury
- Ammonia, TKN, Nitrate-Nitrite, Nitrate, Nitrite
- Total suspended solids (TSS)
- Total dissolved solids (TDS)
- Biochemical oxygen demand (BOD)
- Cyanide
- Hexavalent Chromium
- Radionuclides/Uranium
- Fluoride
- Total Phenols
- Total Phosphorous
- Sulfate and sulfide
- Volatile organic compounds and semi-volatile organic compounds

Should you have any questions or require additional sampling and testing, please contact this office.

Sincerely,
GROUND Engineering Consultants, Inc.

Jason A. Smith, REM, P.E.

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Jason Smith
Ground Engineering, Inc
41 Inverness Drive East
Englewood, CO 80112

Report Summary

Thursday August 21, 2014

Report Number: L715729
Samples Received: 08/14/14
Client Project: 14-3057

Description: Boulder Armory

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By: Darren O. Reeder

Darren Reeder , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197, FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704/BIO041, ND - R-140. NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1, TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364, EPA - TN002

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

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Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

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REPORT OF ANALYSIS

Jason Smith
Ground Engineering, Inc
41 Inverness Drive East
Englewood, CO 80112

August 21, 2014

ESC Sample # : L715729-01

Date Received : August 14, 2014
Description : Boulder Armory

Site ID :

Sample ID : BA-1

Project # : 14-3057

Collected By : Jason Smith
Collection Date : 08/12/14 15:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Fluoride	1.1	0.10	mg/l	9056MOD	08/16/14	1
Nitrate	BDL	0.10	mg/l	9056MOD	08/14/14	1
Nitrite	BDL	0.10	mg/l	9056MOD	08/14/14	1
Sulfate	84.	5.0	mg/l	9056MOD	08/16/14	1
BOD	BDL	5.00	mg/l	5210 B-2011	08/19/14	1
Cyanide	BDL	0.0050	mg/l	9012B	08/20/14	1
Chromium,Hexavalent	BDL	0.010	mg/l	7196A	08/14/14	1
Ammonia Nitrogen	0.41	0.25	mg/l	350.1	08/15/14	1
Nitrate-Nitrite	BDL	0.10	mg/l	353.2	08/20/14	1
Total Phenol by 4AAP	BDL	0.040	mg/l	9066	08/21/14	1
Phosphorus,Total	0.27	0.10	mg/l	365.4	08/20/14	1
Sulfide	BDL	0.050	mg/l	4500S2 D-2011	08/19/14	1
Kjeldahl Nitrogen, TKN	0.81	0.25	mg/l	351.2	08/20/14	1
Dissolved Solids	2600	10.	mg/l	2540 C-2011	08/19/14	1
Suspended Solids	370	2.5	mg/l	2540 D-2011	08/16/14	1
Mercury	BDL	0.00020	mg/l	7470A	08/18/14	1
Arsenic	BDL	0.020	mg/l	6010B	08/18/14	1
Arsenic,Dissolved	BDL	0.020	mg/l	6010B	08/18/14	1
Barium	0.21	0.0050	mg/l	6010B	08/18/14	1
Barium,Dissolved	0.22	0.0050	mg/l	6010B	08/18/14	1
Beryllium	BDL	0.0020	mg/l	6010B	08/18/14	1
Beryllium,Dissolved	BDL	0.0020	mg/l	6010B	08/18/14	1
Boron	0.23	0.20	mg/l	6010B	08/18/14	1
Boron,Dissolved	0.21	0.20	mg/l	6010B	08/18/14	1
Cadmium	BDL	0.0050	mg/l	6010B	08/18/14	1
Cadmium,Dissolved	BDL	0.0050	mg/l	6010B	08/18/14	1
Calcium	51.	1.0	mg/l	6010B	08/18/14	1
Calcium,Dissolved	79.	1.0	mg/l	6010B	08/18/14	1
Chromium	0.038	0.010	mg/l	6010B	08/18/14	1
Chromium,Dissolved	BDL	0.010	mg/l	6010B	08/18/14	1
Iron	10.	0.10	mg/l	6010B	08/18/14	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)

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August 21, 2014

ESC Sample # : L715729-01

Date Received : August 14, 2014
Description : Boulder Armory

Site ID :

Sample ID : BA-1

Project # : 14-3057

Collected By : Jason Smith
Collection Date : 08/12/14 15:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Iron,Dissolved	BDL	0.10	mg/l	6010B	08/18/14	1
Lead	0.0076	0.0050	mg/l	6010B	08/18/14	1
Lead,Dissolved	BDL	0.0050	mg/l	6010B	08/18/14	1
Manganese	0.30	0.010	mg/l	6010B	08/18/14	1
Manganese,Dissolved	0.022	0.010	mg/l	6010B	08/18/14	1
Nickel	0.022	0.020	mg/l	6010B	08/18/14	1
Nickel,Dissolved	BDL	0.020	mg/l	6010B	08/18/14	1
Selenium	BDL	0.020	mg/l	6010B	08/18/14	1
Selenium,Dissolved	BDL	0.020	mg/l	6010B	08/18/14	1
Silver	BDL	0.010	mg/l	6010B	08/18/14	1
Silver,Dissolved	BDL	0.010	mg/l	6010B	08/18/14	1
Sodium	95.	1.0	mg/l	6010B	08/18/14	1
Sodium,Dissolved	180	1.0	mg/l	6010B	08/18/14	1
Thallium	BDL	0.020	mg/l	6010B	08/18/14	1
Thallium,Dissolved	BDL	0.020	mg/l	6010B	08/18/14	1
Zinc	BDL	0.050	mg/l	6010B	08/18/14	1
Zinc,Dissolved	BDL	0.050	mg/l	6010B	08/18/14	1
Volatile Organics						
Acetone	BDL	0.050	mg/l	8260B	08/19/14	1
Acrolein	BDL	0.050	mg/l	8260B	08/19/14	1
Acrylonitrile	BDL	0.010	mg/l	8260B	08/19/14	1
Benzene	BDL	0.0010	mg/l	8260B	08/19/14	1
Bromobenzene	BDL	0.0010	mg/l	8260B	08/19/14	1
Bromodichloromethane	BDL	0.0010	mg/l	8260B	08/19/14	1
Bromoform	BDL	0.0010	mg/l	8260B	08/19/14	1
Bromomethane	BDL	0.0050	mg/l	8260B	08/19/14	1
n-Butylbenzene	BDL	0.0010	mg/l	8260B	08/19/14	1
sec-Butylbenzene	BDL	0.0010	mg/l	8260B	08/19/14	1
tert-Butylbenzene	BDL	0.0010	mg/l	8260B	08/19/14	1
Carbon tetrachloride	BDL	0.0010	mg/l	8260B	08/19/14	1
Chlorobenzene	BDL	0.0010	mg/l	8260B	08/19/14	1
Chlorodibromomethane	BDL	0.0010	mg/l	8260B	08/19/14	1
Chloroethane	BDL	0.0050	mg/l	8260B	08/19/14	1
2-Chloroethyl vinyl ether	BDL	0.050	mg/l	8260B	08/19/14	1
Chloroform	BDL	0.0050	mg/l	8260B	08/19/14	1
Chloromethane	BDL	0.0025	mg/l	8260B	08/19/14	1
2-Chlorotoluene	BDL	0.0010	mg/l	8260B	08/19/14	1
4-Chlorotoluene	BDL	0.0010	mg/l	8260B	08/19/14	1
1,2-Dibromo-3-Chloropropane	BDL	0.0050	mg/l	8260B	08/19/14	1
1,2-Dibromoethane	BDL	0.0010	mg/l	8260B	08/19/14	1
Dibromomethane	BDL	0.0010	mg/l	8260B	08/19/14	1
1,2-Dichlorobenzene	BDL	0.0010	mg/l	8260B	08/19/14	1
1,3-Dichlorobenzene	BDL	0.0010	mg/l	8260B	08/19/14	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)

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REPORT OF ANALYSIS

Jason Smith
Ground Engineering, Inc
41 Inverness Drive East
Englewood, CO 80112

August 21, 2014

ESC Sample # : L715729-01

Date Received : August 14, 2014
Description : Boulder Armory

Site ID :

Sample ID : BA-1

Project # : 14-3057

Collected By : Jason Smith
Collection Date : 08/12/14 15:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
1,4-Dichlorobenzene	BDL	0.0010	mg/l	8260B	08/19/14	1
Dichlorodifluoromethane	BDL	0.0050	mg/l	8260B	08/19/14	1
1,1-Dichloroethane	BDL	0.0010	mg/l	8260B	08/19/14	1
1,2-Dichloroethane	BDL	0.0010	mg/l	8260B	08/19/14	1
1,1-Dichloroethene	BDL	0.0010	mg/l	8260B	08/19/14	1
cis-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	08/19/14	1
trans-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	08/19/14	1
1,2-Dichloropropane	BDL	0.0010	mg/l	8260B	08/19/14	1
1,1-Dichloropropene	BDL	0.0010	mg/l	8260B	08/19/14	1
1,3-Dichloropropane	BDL	0.0010	mg/l	8260B	08/19/14	1
cis-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	08/19/14	1
trans-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	08/19/14	1
2,2-Dichloropropane	BDL	0.0010	mg/l	8260B	08/19/14	1
Di-isopropyl ether	BDL	0.0010	mg/l	8260B	08/19/14	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	08/19/14	1
Hexachloro-1,3-butadiene	BDL	0.0010	mg/l	8260B	08/19/14	1
Isopropylbenzene	BDL	0.0010	mg/l	8260B	08/19/14	1
p-Isopropyltoluene	BDL	0.0010	mg/l	8260B	08/19/14	1
2-Butanone (MEK)	BDL	0.010	mg/l	8260B	08/19/14	1
Methylene Chloride	BDL	0.0050	mg/l	8260B	08/19/14	1
4-Methyl-2-pentanone (MIBK)	BDL	0.010	mg/l	8260B	08/19/14	1
Methyl tert-butyl ether	BDL	0.0010	mg/l	8260B	08/19/14	1
Naphthalene	BDL	0.0050	mg/l	8260B	08/19/14	1
n-Propylbenzene	BDL	0.0010	mg/l	8260B	08/19/14	1
Styrene	BDL	0.0010	mg/l	8260B	08/19/14	1
1,1,1,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	08/19/14	1
1,1,2,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	08/19/14	1
1,1,2-Trichlorotrifluoroethane	BDL	0.0010	mg/l	8260B	08/19/14	1
Tetrachloroethene	BDL	0.0010	mg/l	8260B	08/19/14	1
Toluene	BDL	0.0050	mg/l	8260B	08/19/14	1
1,2,3-Trichlorobenzene	BDL	0.0010	mg/l	8260B	08/19/14	1
1,2,4-Trichlorobenzene	BDL	0.0010	mg/l	8260B	08/19/14	1
1,1,1-Trichloroethane	BDL	0.0010	mg/l	8260B	08/19/14	1
1,1,2-Trichloroethane	BDL	0.0010	mg/l	8260B	08/19/14	1
Trichloroethene	BDL	0.0010	mg/l	8260B	08/19/14	1
Trichlorofluoromethane	BDL	0.0050	mg/l	8260B	08/19/14	1
1,2,3-Trichloropropane	BDL	0.0025	mg/l	8260B	08/19/14	1
1,2,4-Trimethylbenzene	BDL	0.0010	mg/l	8260B	08/19/14	1
1,2,3-Trimethylbenzene	BDL	0.0010	mg/l	8260B	08/19/14	1
1,3,5-Trimethylbenzene	BDL	0.0010	mg/l	8260B	08/19/14	1
Vinyl chloride	BDL	0.0010	mg/l	8260B	08/19/14	1
Xylenes, Total	BDL	0.0030	mg/l	8260B	08/19/14	1
Surrogate Recovery						
Toluene-d8	99.1		% Rec.	8260B	08/19/14	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)

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REPORT OF ANALYSIS

Jason Smith
Ground Engineering, Inc
41 Inverness Drive East
Englewood, CO 80112

August 21, 2014

ESC Sample # : L715729-01

Date Received : August 14, 2014
Description : Boulder Armory

Site ID :

Sample ID : BA-1

Project # : 14-3057

Collected By : Jason Smith
Collection Date : 08/12/14 15:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Dibromofluoromethane	97.8		% Rec.	8260B	08/19/14	1
4-Bromofluorobenzene	101.		% Rec.	8260B	08/19/14	1
Base/Neutral Extractables						
Acenaphthene	BDL	0.0010	mg/l	8270C	08/19/14	1
Acenaphthylene	BDL	0.0010	mg/l	8270C	08/19/14	1
Anthracene	BDL	0.0010	mg/l	8270C	08/19/14	1
Benzidine	BDL	0.010	mg/l	8270C	08/19/14	1
Benzo(a)anthracene	BDL	0.0010	mg/l	8270C	08/19/14	1
Benzo(b)fluoranthene	BDL	0.0010	mg/l	8270C	08/19/14	1
Benzo(k)fluoranthene	BDL	0.0010	mg/l	8270C	08/19/14	1
Benzo(g,h,i)perylene	BDL	0.0010	mg/l	8270C	08/19/14	1
Benzo(a)pyrene	BDL	0.0010	mg/l	8270C	08/19/14	1
Bis(2-chlorethoxy)methane	BDL	0.010	mg/l	8270C	08/19/14	1
Bis(2-chloroethyl)ether	BDL	0.010	mg/l	8270C	08/19/14	1
Bis(2-chloroisopropyl)ether	BDL	0.010	mg/l	8270C	08/19/14	1
4-Bromophenyl-phenylether	BDL	0.010	mg/l	8270C	08/19/14	1
2-Chloronaphthalene	BDL	0.0010	mg/l	8270C	08/19/14	1
4-Chlorophenyl-phenylether	BDL	0.010	mg/l	8270C	08/19/14	1
Chrysene	BDL	0.0010	mg/l	8270C	08/19/14	1
Dibenz(a,h)anthracene	BDL	0.0010	mg/l	8270C	08/19/14	1
3,3-Dichlorobenzidine	BDL	0.010	mg/l	8270C	08/19/14	1
2,4-Dinitrotoluene	BDL	0.010	mg/l	8270C	08/19/14	1
2,6-Dinitrotoluene	BDL	0.010	mg/l	8270C	08/19/14	1
Fluoranthene	BDL	0.0010	mg/l	8270C	08/19/14	1
Fluorene	BDL	0.0010	mg/l	8270C	08/19/14	1
Hexachlorobenzene	BDL	0.0010	mg/l	8270C	08/19/14	1
Hexachloro-1,3-butadiene	BDL	0.010	mg/l	8270C	08/19/14	1
Hexachlorocyclopentadiene	BDL	0.010	mg/l	8270C	08/19/14	1
Hexachloroethane	BDL	0.010	mg/l	8270C	08/19/14	1
Indeno(1,2,3-cd)pyrene	BDL	0.0010	mg/l	8270C	08/19/14	1
Isophorone	BDL	0.010	mg/l	8270C	08/19/14	1
Naphthalene	BDL	0.0010	mg/l	8270C	08/19/14	1
Nitrobenzene	BDL	0.010	mg/l	8270C	08/19/14	1
n-Nitrosodimethylamine	BDL	0.010	mg/l	8270C	08/19/14	1
n-Nitrosodiphenylamine	BDL	0.010	mg/l	8270C	08/19/14	1
n-Nitrosodi-n-propylamine	BDL	0.010	mg/l	8270C	08/19/14	1
Phenanthrene	BDL	0.0010	mg/l	8270C	08/19/14	1
Benzylbutyl phthalate	BDL	0.0030	mg/l	8270C	08/19/14	1
Bis(2-ethylhexyl)phthalate	BDL	0.0030	mg/l	8270C	08/19/14	1
Di-n-butyl phthalate	BDL	0.0030	mg/l	8270C	08/19/14	1
Diethyl phthalate	BDL	0.0030	mg/l	8270C	08/19/14	1
Dimethyl phthalate	BDL	0.0030	mg/l	8270C	08/19/14	1
Di-n-octyl phthalate	BDL	0.0030	mg/l	8270C	08/19/14	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)

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August 21, 2014

ESC Sample # : L715729-01

Date Received : August 14, 2014
Description : Boulder Armory

Site ID :

Sample ID : BA-1

Project # : 14-3057

Collected By : Jason Smith
Collection Date : 08/12/14 15:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Pyrene	BDL	0.0010	mg/l	8270C	08/19/14	1
1,2,4-Trichlorobenzene	BDL	0.010	mg/l	8270C	08/19/14	1
Acid Extractables						
4-Chloro-3-methylphenol	BDL	0.010	mg/l	8270C	08/19/14	1
2-Chlorophenol	BDL	0.010	mg/l	8270C	08/19/14	1
2,4-Dichlorophenol	BDL	0.010	mg/l	8270C	08/19/14	1
2,4-Dimethylphenol	BDL	0.010	mg/l	8270C	08/19/14	1
4,6-Dinitro-2-methylphenol	BDL	0.010	mg/l	8270C	08/19/14	1
2,4-Dinitrophenol	BDL	0.010	mg/l	8270C	08/19/14	1
2-Nitrophenol	BDL	0.010	mg/l	8270C	08/19/14	1
4-Nitrophenol	BDL	0.010	mg/l	8270C	08/19/14	1
Pentachlorophenol	BDL	0.010	mg/l	8270C	08/19/14	1
Phenol	BDL	0.010	mg/l	8270C	08/19/14	1
2,4,6-Trichlorophenol	BDL	0.010	mg/l	8270C	08/19/14	1
Surrogate Recovery						
2-Fluorophenol	34.5		% Rec.	8270C	08/19/14	1
Phenol-d5	28.7		% Rec.	8270C	08/19/14	1
Nitrobenzene-d5	61.7		% Rec.	8270C	08/19/14	1
2-Fluorobiphenyl	57.3		% Rec.	8270C	08/19/14	1
2,4,6-Tribromophenol	75.5		% Rec.	8270C	08/19/14	1
p-Terphenyl-d14	61.8		% Rec.	8270C	08/19/14	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.
This report shall not be reproduced, except in full, without the written approval from ESC.
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Reported: 08/21/14 15:05 Printed: 08/21/14 15:05

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L715729-01	WG737263	SAMP	BOD	R2977888	Q
	WG737298	SAMP	Chromium,Hexavalent	R2976111	T8

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
Q	(ESC) Sample held beyond the accepted holding time.
T8	(ESC) - Additional method/sample information: Sample(s) received past/too close to holding time expiration.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods,it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.

Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Differrence.

Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromotography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.

TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Summary of Remarks For Samples Printed
08/21/14 at 15:05:41

TSR Signing Reports: 296
R5 - Desired TAT

Sample: L715729-01 Account: GROENGECO Received: 08/14/14 09:00 Due Date: 08/21/14 00:00 RPT Date: 08/21/14 15:05
run CR6 OOH per NCF - JCR 8/14

12065 Lebanon Rd.
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Tax I.D. 62-0814289

Est. 1970

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Jason Smith
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Englewood, CO 80112

Quality Assurance Report
Level II

L715729

August 21, 2014

Laboratory Blank

Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
Chromium,Hexavalent	< .01	mg/l			WG737298	08/14/14 12:27
Nitrate	< .1	mg/l			WG737273	08/14/14 08:23
Nitrite	< .1	mg/l			WG737273	08/14/14 08:23
Ammonia Nitrogen	< .25	mg/l			WG737404	08/15/14 11:18
Suspended Solids	< 2.5	mg/l			WG737321	08/16/14 16:45
Fluoride	< .1	mg/l			WG737566	08/16/14 08:39
Sulfate	< 5	mg/l			WG737566	08/16/14 08:39
Mercury	< .0002	mg/l			WG737529	08/18/14 08:04
Arsenic	< .02	mg/l			WG737881	08/18/14 14:34
Barium	< .005	mg/l			WG737881	08/18/14 14:34
Beryllium	< .002	mg/l			WG737881	08/18/14 14:34
Boron	< .2	mg/l			WG737881	08/18/14 14:34
Cadmium	< .005	mg/l			WG737881	08/18/14 14:34
Calcium	< 1	mg/l			WG737881	08/18/14 14:34
Chromium	< .01	mg/l			WG737881	08/18/14 14:34
Iron	< .1	mg/l			WG737881	08/18/14 14:34
Lead	< .005	mg/l			WG737881	08/18/14 14:34
Manganese	< .01	mg/l			WG737881	08/18/14 14:34
Nickel	< .02	mg/l			WG737881	08/18/14 14:34
Selenium	< .02	mg/l			WG737881	08/18/14 14:34
Silver	< .01	mg/l			WG737881	08/18/14 14:34
Sodium	< 1	mg/l			WG737881	08/18/14 14:34
Thallium	< .02	mg/l			WG737881	08/18/14 14:34
Zinc	< .05	mg/l			WG737881	08/18/14 14:34
Arsenic,Dissolved	< .02	mg/l			WG737904	08/18/14 18:00
Barium,Dissolved	< .005	mg/l			WG737904	08/18/14 18:00
Beryllium,Dissolved	< .002	mg/l			WG737904	08/18/14 18:00
Boron,Dissolved	< .2	mg/l			WG737904	08/18/14 18:00
Cadmium,Dissolved	< .005	mg/l			WG737904	08/18/14 18:00
Calcium,Dissolved	< 1	mg/l			WG737904	08/18/14 18:00
Chromium,Dissolved	< .01	mg/l			WG737904	08/18/14 18:00
Iron,Dissolved	< .1	mg/l			WG737904	08/18/14 18:00
Lead,Dissolved	< .005	mg/l			WG737904	08/18/14 18:00
Manganese,Dissolved	< .01	mg/l			WG737904	08/18/14 18:00
Nickel,Dissolved	< .02	mg/l			WG737904	08/18/14 18:00
Selenium,Dissolved	< .02	mg/l			WG737904	08/18/14 18:00
Silver,Dissolved	< .01	mg/l			WG737904	08/18/14 18:00
Sodium,Dissolved	< 1	mg/l			WG737904	08/18/14 18:00
Thallium,Dissolved	< .02	mg/l			WG737904	08/18/14 18:00
Zinc,Dissolved	< .05	mg/l			WG737904	08/18/14 18:00
1,1,1,2-Tetrachloroethane	< .001	mg/l			WG738003	08/19/14 00:29
1,1,1-Trichloroethane	< .001	mg/l			WG738003	08/19/14 00:29
1,1,2,2-Tetrachloroethane	< .001	mg/l			WG738003	08/19/14 00:29

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Level II

L715729

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Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
1,1,2-Trichloroethane	< .001	mg/l			WG738003	08/19/14 00:29
1,1,2-Trichlorotrifluoroethane	< .001	mg/l			WG738003	08/19/14 00:29
1,1-Dichloroethane	< .001	mg/l			WG738003	08/19/14 00:29
1,1-Dichloroethene	< .001	mg/l			WG738003	08/19/14 00:29
1,1-Dichloropropene	< .001	mg/l			WG738003	08/19/14 00:29
1,2,3-Trichlorobenzene	< .001	mg/l			WG738003	08/19/14 00:29
1,2,3-Trichloropropane	< .001	mg/l			WG738003	08/19/14 00:29
1,2,3-Trimethylbenzene	< .001	mg/l			WG738003	08/19/14 00:29
1,2,4-Trichlorobenzene	< .001	mg/l			WG738003	08/19/14 00:29
1,2,4-Trimethylbenzene	< .001	mg/l			WG738003	08/19/14 00:29
1,2-Dibromo-3-Chloropropane	< .005	mg/l			WG738003	08/19/14 00:29
1,2-Dibromoethane	< .001	mg/l			WG738003	08/19/14 00:29
1,2-Dichlorobenzene	< .001	mg/l			WG738003	08/19/14 00:29
1,2-Dichloroethane	< .001	mg/l			WG738003	08/19/14 00:29
1,2-Dichloropropane	< .001	mg/l			WG738003	08/19/14 00:29
1,3,5-Trimethylbenzene	< .001	mg/l			WG738003	08/19/14 00:29
1,3-Dichlorobenzene	< .001	mg/l			WG738003	08/19/14 00:29
1,3-Dichloropropane	< .001	mg/l			WG738003	08/19/14 00:29
1,4-Dichlorobenzene	< .001	mg/l			WG738003	08/19/14 00:29
2,2-Dichloropropane	< .001	mg/l			WG738003	08/19/14 00:29
2-Butanone (MEK)	< .01	mg/l			WG738003	08/19/14 00:29
2-Chloroethyl vinyl ether	< .05	mg/l			WG738003	08/19/14 00:29
2-Chlorotoluene	< .001	mg/l			WG738003	08/19/14 00:29
4-Chlorotoluene	< .001	mg/l			WG738003	08/19/14 00:29
4-Methyl-2-pentanone (MIBK)	< .01	mg/l			WG738003	08/19/14 00:29
Acetone	< .05	mg/l			WG738003	08/19/14 00:29
Acrolein	< .025	mg/l			WG738003	08/19/14 00:29
Acrylonitrile	< .01	mg/l			WG738003	08/19/14 00:29
Benzene	< .001	mg/l			WG738003	08/19/14 00:29
Bromobenzene	< .001	mg/l			WG738003	08/19/14 00:29
Bromodichloromethane	< .001	mg/l			WG738003	08/19/14 00:29
Bromoform	< .001	mg/l			WG738003	08/19/14 00:29
Bromomethane	< .005	mg/l			WG738003	08/19/14 00:29
Carbon tetrachloride	< .001	mg/l			WG738003	08/19/14 00:29
Chlorobenzene	< .001	mg/l			WG738003	08/19/14 00:29
Chlorodibromomethane	< .001	mg/l			WG738003	08/19/14 00:29
Chloroethane	< .005	mg/l			WG738003	08/19/14 00:29
Chloroform	< .005	mg/l			WG738003	08/19/14 00:29
Chloromethane	< .0025	mg/l			WG738003	08/19/14 00:29
cis-1,2-Dichloroethene	< .001	mg/l			WG738003	08/19/14 00:29
cis-1,3-Dichloropropene	< .001	mg/l			WG738003	08/19/14 00:29
Di-isopropyl ether	< .001	mg/l			WG738003	08/19/14 00:29
Dibromomethane	< .001	mg/l			WG738003	08/19/14 00:29
Dichlorodifluoromethane	< .005	mg/l			WG738003	08/19/14 00:29
Ethylbenzene	< .001	mg/l			WG738003	08/19/14 00:29
Hexachloro-1,3-butadiene	< .001	mg/l			WG738003	08/19/14 00:29
Isopropylbenzene	< .001	mg/l			WG738003	08/19/14 00:29
Methyl tert-butyl ether	< .001	mg/l			WG738003	08/19/14 00:29
Methylene Chloride	< .005	mg/l			WG738003	08/19/14 00:29
n-Butylbenzene	< .001	mg/l			WG738003	08/19/14 00:29
n-Propylbenzene	< .001	mg/l			WG738003	08/19/14 00:29
Naphthalene	< .005	mg/l			WG738003	08/19/14 00:29
p-Isopropyltoluene	< .001	mg/l			WG738003	08/19/14 00:29
sec-Butylbenzene	< .001	mg/l			WG738003	08/19/14 00:29
Styrene	< .001	mg/l			WG738003	08/19/14 00:29
tert-Butylbenzene	< .001	mg/l			WG738003	08/19/14 00:29
Tetrachloroethene	< .001	mg/l			WG738003	08/19/14 00:29
Toluene	< .005	mg/l			WG738003	08/19/14 00:29
trans-1,2-Dichloroethene	< .001	mg/l			WG738003	08/19/14 00:29

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Level II

L715729

August 21, 2014

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Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
trans-1,3-Dichloropropene	< .001	mg/l			WG738003	08/19/14 00:29
Trichloroethene	< .001	mg/l			WG738003	08/19/14 00:29
Trichlorofluoromethane	< .005	mg/l			WG738003	08/19/14 00:29
Vinyl chloride	< .001	mg/l			WG738003	08/19/14 00:29
Xylenes, Total	< .003	mg/l			WG738003	08/19/14 00:29
4-Bromofluorobenzene		% Rec.	102.0	71-126	WG738003	08/19/14 00:29
Dibromofluoromethane		% Rec.	95.30	78.3-121	WG738003	08/19/14 00:29
Toluene-d8		% Rec.	98.30	88.5-111	WG738003	08/19/14 00:29
1,2,4-Trichlorobenzene	< .01	mg/l			WG737461	08/18/14 19:03
2,4,6-Trichlorophenol	< .01	mg/l			WG737461	08/18/14 19:03
2,4-Dichlorophenol	< .01	mg/l			WG737461	08/18/14 19:03
2,4-Dimethylphenol	< .01	mg/l			WG737461	08/18/14 19:03
2,4-Dinitrophenol	< .01	mg/l			WG737461	08/18/14 19:03
2,4-Dinitrotoluene	< .01	mg/l			WG737461	08/18/14 19:03
2,6-Dinitrotoluene	< .01	mg/l			WG737461	08/18/14 19:03
2-Chloronaphthalene	< .001	mg/l			WG737461	08/18/14 19:03
2-Chlorophenol	< .01	mg/l			WG737461	08/18/14 19:03
2-Nitrophenol	< .01	mg/l			WG737461	08/18/14 19:03
3,3-Dichlorobenzidine	< .01	mg/l			WG737461	08/18/14 19:03
4,6-Dinitro-2-methylphenol	< .01	mg/l			WG737461	08/18/14 19:03
4-Bromophenyl-phenylether	< .01	mg/l			WG737461	08/18/14 19:03
4-Chloro-3-methylphenol	< .01	mg/l			WG737461	08/18/14 19:03
4-Chlorophenyl-phenylether	< .01	mg/l			WG737461	08/18/14 19:03
4-Nitrophenol	< .01	mg/l			WG737461	08/18/14 19:03
Acenaphthene	< .001	mg/l			WG737461	08/18/14 19:03
Acenaphthylene	< .001	mg/l			WG737461	08/18/14 19:03
Anthracene	< .001	mg/l			WG737461	08/18/14 19:03
Benzidine	< .01	mg/l			WG737461	08/18/14 19:03
Benzo(a)anthracene	< .001	mg/l			WG737461	08/18/14 19:03
Benzo(a)pyrene	< .001	mg/l			WG737461	08/18/14 19:03
Benzo(b)fluoranthene	< .001	mg/l			WG737461	08/18/14 19:03
Benzo(g,h,i)perylene	< .001	mg/l			WG737461	08/18/14 19:03
Benzo(k)fluoranthene	< .001	mg/l			WG737461	08/18/14 19:03
Benzylbutyl phthalate	< .003	mg/l			WG737461	08/18/14 19:03
Bis(2-chlorethoxy)methane	< .01	mg/l			WG737461	08/18/14 19:03
Bis(2-chloroethyl)ether	< .01	mg/l			WG737461	08/18/14 19:03
Bis(2-chloroisopropyl)ether	< .01	mg/l			WG737461	08/18/14 19:03
Bis(2-ethylhexyl)phthalate	< .003	mg/l			WG737461	08/18/14 19:03
Chrysene	< .001	mg/l			WG737461	08/18/14 19:03
Di-n-butyl phthalate	< .003	mg/l			WG737461	08/18/14 19:03
Di-n-octyl phthalate	< .003	mg/l			WG737461	08/18/14 19:03
Dibenz(a,h)anthracene	< .001	mg/l			WG737461	08/18/14 19:03
Diethyl phthalate	< .003	mg/l			WG737461	08/18/14 19:03
Dimethyl phthalate	< .003	mg/l			WG737461	08/18/14 19:03
Fluoranthene	< .001	mg/l			WG737461	08/18/14 19:03
Fluorene	< .001	mg/l			WG737461	08/18/14 19:03
Hexachloro-1,3-butadiene	< .01	mg/l			WG737461	08/18/14 19:03
Hexachlorobenzene	< .001	mg/l			WG737461	08/18/14 19:03
Hexachlorocyclopentadiene	< .01	mg/l			WG737461	08/18/14 19:03
Hexachloroethane	< .01	mg/l			WG737461	08/18/14 19:03
Indeno(1,2,3-cd)pyrene	< .001	mg/l			WG737461	08/18/14 19:03
Isophorone	< .01	mg/l			WG737461	08/18/14 19:03
n-Nitrosodi-n-propylamine	< .01	mg/l			WG737461	08/18/14 19:03
n-Nitrosodimethylamine	< .01	mg/l			WG737461	08/18/14 19:03
n-Nitrosodiphenylamine	< .01	mg/l			WG737461	08/18/14 19:03
Naphthalene	< .001	mg/l			WG737461	08/18/14 19:03
Nitrobenzene	< .01	mg/l			WG737461	08/18/14 19:03

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Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
Pentachlorophenol	< .001	mg/l			WG737461	08/18/14 19:03
Phenanthrene	< .001	mg/l			WG737461	08/18/14 19:03
Phenol	< .01	mg/l			WG737461	08/18/14 19:03
Pyrene	< .001	mg/l			WG737461	08/18/14 19:03
2,4,6-Tribromophenol		% Rec.	41.80	11.2-130	WG737461	08/18/14 19:03
2-Fluorobiphenyl		% Rec.	44.30	29.5-131	WG737461	08/18/14 19:03
2-Fluorophenol		% Rec.	33.70	10-77.9	WG737461	08/18/14 19:03
Nitrobenzene-d5		% Rec.	36.60	21.8-123	WG737461	08/18/14 19:03
Phenol-d5		% Rec.	27.30	5-70.1	WG737461	08/18/14 19:03
p-Terphenyl-d14		% Rec.	49.10	29.3-137	WG737461	08/18/14 19:03
BOD		mg/l			WG737263	08/19/14 09:15
BOD		mg/l			WG737263	08/19/14 09:15
BOD		mg/l			WG737263	08/19/14 11:44
BOD		mg/l			WG737263	08/19/14 11:45
Dissolved Solids	< 10	mg/l			WG737728	08/19/14 14:46
Sulfide	< .05	mg/l			WG737854	08/19/14 13:37
Nitrate-Nitrite	< .1	mg/l			WG737680	08/20/14 09:09
Kjeldahl Nitrogen, TKN	< .25	mg/l			WG738201	08/20/14 14:21
Cyanide	< .005	mg/l			WG738191	08/20/14 15:12
Phosphorus,Total	< .1	mg/l			WG738199	08/20/14 16:22
Total Phenol by 4AAP	< .04	mg/l			WG738197	08/21/14 11:35

Duplicate

Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
Chromium,Hexavalent	mg/l	0.0	0.0	0.0	20	L715731-01	WG737298
Nitrate	mg/l	7.70	7.91	2.00	20	L715588-01	WG737273
Nitrate	mg/l	0.330	0.293	12.0	20	L715775-01	WG737273
Ammonia Nitrogen	mg/l	0.0	0.0	0.0	20	L715781-01	WG737404
Ammonia Nitrogen	mg/l	2.40	2.40	0.0	20	L715598-05	WG737404
Suspended Solids	mg/l	54.5	54.5	0.00	5	L715562-01	WG737321
Suspended Solids	mg/l	54.0	53.0	1.87	5	L715674-01	WG737321
Fluoride	mg/l	2.50	2.58	2.00	20	L715334-02	WG737566

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Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
			Duplicate				
Mercury	mg/l	0.0	0.00000636	4.00	20	L715938-02	WG737529
BOD	mg/l	0.00	1.20	0.00	30	L715586-01	WG737263
BOD	mg/l	0.00	2.00	0.00	30	L715648-01	WG737263
BOD	mg/l	23.8	22.5	6.00	30	L715749-01	WG737263
BOD	mg/l	0.00	1.40	0.00	30	L715778-01	WG737263
BOD	mg/l	0.00	-0.290	0.00	30	L715845-10	WG737263
BOD	mg/l	0.00	0.770	0.00	30	L715829-01	WG737263
Dissolved Solids	mg/l	496.	484.	2.45	5	L715562-01	WG737728
Sulfide	mg/l	0.0	0.0	0.0	20	L716079-01	WG737854
Sulfide	mg/l	0.0	0.0	0.0	20	L715517-01	WG737854
Nitrate-Nitrite	mg/l	0.0	0.0	0.0	20	L715758-01	WG737680
Nitrate-Nitrite	mg/l	0.0	0.0	0.0	20	L715758-03	WG737680
Kjeldahl Nitrogen, TKN	mg/l	0.00	0.00	0.00	20	L714387-01	WG738201
Cyanide	mg/l	0.0	0.0	0.0	20	L715731-02	WG738191
Cyanide	mg/l	0.0	0.0	0.0	20	L715826-01	WG738191
Phosphorus,Total	mg/l	4.10	4.30	4.76	20	L715727-06	WG738199
Phosphorus,Total	mg/l	2.20	2.20	0.0	20	L715211-01	WG738199
Total Phenol by 4AAP	mg/l	0.0	0.0	0.0	20	L715858-02	WG738197
Total Phenol by 4AAP	mg/l	0.0420	0.0	NA	20	L715136-02	WG738197

Analyte	Units	Known Val	Result	% Rec	Limit	Batch
			Laboratory Control Sample			
Chromium,Hexavalent	mg/l	.6	0.618	103.	85-115	WG737298
Nitrate	mg/l	8	8.26	103.	90-110	WG737273
Nitrite	mg/l	8	7.97	100.	90-110	WG737273
Ammonia Nitrogen	mg/l	7.5	6.96	92.8	90-110	WG737404
Suspended Solids	mg/l	773	828.	107.	85-115	WG737321
Fluoride	mg/l	8	8.09	101.	90-110	WG737566
Sulfate	mg/l	40	40.0	100.	90-110	WG737566
Mercury	mg/l	.003	0.00287	96.0	85-115	WG737529

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Est. 1970

Ground Engineering, Inc
Jason Smith
41 Inverness Drive East

Englewood, CO 80112

Quality Assurance Report
Level II

L715729

August 21, 2014

Analyte	Units	Laboratory Control Sample Known Val	Result	% Rec	Limit	Batch
Arsenic	mg/l	1	1.06	106.	80-120	WG737881
Barium	mg/l	1	1.07	107.	80-120	WG737881
Beryllium	mg/l	1	1.06	106.	80-120	WG737881
Boron	mg/l	1	1.03	103.	80-120	WG737881
Cadmium	mg/l	1	1.06	106.	80-120	WG737881
Calcium	mg/l	10	10.9	109.	80-120	WG737881
Chromium	mg/l	1	1.04	104.	80-120	WG737881
Iron	mg/l	1	1.05	105.	80-120	WG737881
Lead	mg/l	1	1.04	104.	80-120	WG737881
Manganese	mg/l	1	1.07	107.	80-120	WG737881
Nickel	mg/l	1	1.01	101.	80-120	WG737881
Selenium	mg/l	1	1.06	106.	80-120	WG737881
Silver	mg/l	1	1.01	101.	80-120	WG737881
Sodium	mg/l	10	11.0	110.	80-120	WG737881
Thallium	mg/l	1	1.09	109.	80-120	WG737881
Zinc	mg/l	1	1.05	105.	80-120	WG737881
Arsenic,Dissolved	mg/l	1	1.12	112.	80-120	WG737904
Barium,Dissolved	mg/l	1	1.15	115.	80-120	WG737904
Beryllium,Dissolved	mg/l	1	1.13	113.	80-120	WG737904
Boron,Dissolved	mg/l	1	1.10	110.	80-120	WG737904
Cadmium,Dissolved	mg/l	1	1.12	112.	80-120	WG737904
Calcium,Dissolved	mg/l	10	11.7	117.	80-120	WG737904
Chromium,Dissolved	mg/l	1	1.15	115.	80-120	WG737904
Iron,Dissolved	mg/l	1	1.11	111.	80-120	WG737904
Lead,Dissolved	mg/l	1	1.13	113.	80-120	WG737904
Manganese,Dissolved	mg/l	1	1.14	114.	80-120	WG737904
Nickel,Dissolved	mg/l	1	1.07	107.	80-120	WG737904
Selenium,Dissolved	mg/l	1	1.12	112.	80-120	WG737904
Silver,Dissolved	mg/l	1	1.12	112.	80-120	WG737904
Sodium,Dissolved	mg/l	10	11.0	110.	80-120	WG737904
Thallium,Dissolved	mg/l	1	1.20	120.	80-120	WG737904
Zinc,Dissolved	mg/l	1	1.13	113.	80-120	WG737904
1,1,1,2-Tetrachloroethane	mg/l	.025	0.0211	84.2	74.2-124	WG738003
1,1,1-Trichloroethane	mg/l	.025	0.0206	82.4	73.2-123	WG738003
1,1,2,2-Tetrachloroethane	mg/l	.025	0.0233	93.2	70.7-122	WG738003
1,1,2-Trichloroethane	mg/l	.025	0.0230	91.9	77.7-118	WG738003
1,1,2-Trichlorotrifluoroethane	mg/l	.025	0.0214	85.8	67.2-143	WG738003
1,1-Dichloroethane	mg/l	.025	0.0206	82.2	70.7-126	WG738003
1,1-Dichloroethene	mg/l	.025	0.0206	82.2	67.8-129	WG738003
1,1-Dichloropropene	mg/l	.025	0.0213	85.0	73.1-125	WG738003
1,2,3-Trichlorobenzene	mg/l	.025	0.0241	96.6	64.9-135	WG738003
1,2,3-Trichloropropane	mg/l	.025	0.0247	98.9	71.8-121	WG738003
1,2,3-Trimethylbenzene	mg/l	.025	0.0207	82.8	72.3-116	WG738003
1,2,4-Trichlorobenzene	mg/l	.025	0.0237	94.6	69.7-136	WG738003
1,2,4-Trimethylbenzene	mg/l	.025	0.0222	88.9	75-123	WG738003
1,2-Dibromo-3-Chloropropane	mg/l	.025	0.0251	101.	65.4-128	WG738003
1,2-Dibromoethane	mg/l	.025	0.0236	94.4	76.6-121	WG738003
1,2-Dichlorobenzene	mg/l	.025	0.0226	90.6	78.4-117	WG738003
1,2-Dichloroethane	mg/l	.025	0.0221	88.3	68.8-124	WG738003
1,2-Dichloropropane	mg/l	.025	0.0211	84.6	76.5-119	WG738003
1,3,5-Trimethylbenzene	mg/l	.025	0.0219	87.6	75.6-124	WG738003
1,3-Dichlorobenzene	mg/l	.025	0.0238	95.0	70.8-128	WG738003
1,3-Dichloropropane	mg/l	.025	0.0226	90.3	77.4-117	WG738003
1,4-Dichlorobenzene	mg/l	.025	0.0214	85.5	78.8-115	WG738003
2,2-Dichloropropane	mg/l	.025	0.0200	80.0	62.4-133	WG738003

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Quality Assurance Report
Level II

L715729

August 21, 2014

Analyte	Units	Laboratory Control Sample Known Val	Result	% Rec	Limit	Batch
2-Butanone (MEK)	mg/l	.125	0.123	98.6	55-149	WG738003
2-Chloroethyl vinyl ether	mg/l	.125	0.123	98.2	43.8-150	WG738003
2-Chlorotoluene	mg/l	.025	0.0226	90.3	74.7-122	WG738003
4-Chlorotoluene	mg/l	.025	0.0219	87.8	77.5-120	WG738003
4-Methyl-2-pentanone (MIBK)	mg/l	.125	0.113	90.5	70.5-133	WG738003
Acetone	mg/l	.125	0.118	94.1	35.6-163	WG738003
Acrolein	mg/l	.125	0.119	95.3	10-190	WG738003
Acrylonitrile	mg/l	.125	0.114	91.2	55.2-130	WG738003
Benzene	mg/l	.025	0.0208	83.3	74.8-121	WG738003
Bromobenzene	mg/l	.025	0.0219	87.7	77.5-116	WG738003
Bromodichloromethane	mg/l	.025	0.0211	84.2	75.1-116	WG738003
Bromoform	mg/l	.025	0.0241	96.4	67.5-130	WG738003
Bromomethane	mg/l	.025	0.0232	92.9	49.9-162	WG738003
Carbon tetrachloride	mg/l	.025	0.0206	82.6	70.2-123	WG738003
Chlorobenzene	mg/l	.025	0.0221	88.4	78.1-119	WG738003
Chlorodibromomethane	mg/l	.025	0.0228	91.2	74-121	WG738003
Chloroethane	mg/l	.025	0.0216	86.4	61.7-135	WG738003
Chloroform	mg/l	.025	0.0209	83.7	76-121	WG738003
Chloromethane	mg/l	.025	0.0184	73.8	61.5-129	WG738003
cis-1,2-Dichloroethene	mg/l	.025	0.0217	86.8	76-119	WG738003
cis-1,3-Dichloropropene	mg/l	.025	0.0220	87.9	78.2-120	WG738003
Di-isopropyl ether	mg/l	.025	0.0200	79.8	65.6-132	WG738003
Dibromomethane	mg/l	.025	0.0228	91.4	79.5-118	WG738003
Dichlorodifluoromethane	mg/l	.025	0.0222	88.7	54.8-135	WG738003
Ethylbenzene	mg/l	.025	0.0216	86.4	78.8-122	WG738003
Hexachloro-1,3-butadiene	mg/l	.025	0.0219	87.6	64.7-129	WG738003
Isopropylbenzene	mg/l	.025	0.0217	86.8	78.6-132	WG738003
Methyl tert-butyl ether	mg/l	.025	0.0222	88.9	71.2-126	WG738003
Methylene Chloride	mg/l	.025	0.0209	83.7	70.3-120	WG738003
n-Butylbenzene	mg/l	.025	0.0203	81.2	76.2-126	WG738003
n-Propylbenzene	mg/l	.025	0.0219	87.4	78.2-122	WG738003
Naphthalene	mg/l	.025	0.0244	97.8	68.4-128	WG738003
p-Isopropyltoluene	mg/l	.025	0.0220	88.1	74-131	WG738003
sec-Butylbenzene	mg/l	.025	0.0222	88.6	74.4-127	WG738003
Styrene	mg/l	.025	0.0231	92.5	80.4-126	WG738003
tert-Butylbenzene	mg/l	.025	0.0222	88.6	75.3-126	WG738003
Tetrachloroethene	mg/l	.025	0.0223	89.3	72.6-126	WG738003
Toluene	mg/l	.025	0.0210	84.0	79.7-116	WG738003
trans-1,2-Dichloroethene	mg/l	.025	0.0207	82.7	72.6-121	WG738003
trans-1,3-Dichloropropene	mg/l	.025	0.0224	89.8	74.3-123	WG738003
Trichloroethene	mg/l	.025	0.0227	90.8	77.7-118	WG738003
Trichlorofluoromethane	mg/l	.025	0.0222	88.8	63.5-135	WG738003
Vinyl chloride	mg/l	.025	0.0212	84.9	65.9-128	WG738003
Xylenes, Total	mg/l	.075	0.0625	83.3	78.7-121	WG738003
4-Bromofluorobenzene				101.0	71-126	WG738003
Dibromofluoromethane				99.80	78.3-121	WG738003
Toluene-d8				99.70	88.5-111	WG738003
1,2,4-Trichlorobenzene	mg/l	.025	0.0159	63.7	22.9-96.1	WG737461
2,4,6-Trichlorophenol	mg/l	.025	0.0172	68.7	29.8-107	WG737461
2,4-Dichlorophenol	mg/l	.025	0.0171	68.2	31.4-103	WG737461
2,4-Dimethylphenol	mg/l	.025	0.0174	69.5	31.9-107	WG737461
2,4-Dinitrophenol	mg/l	.025	0.00873	34.9	24.2-128	WG737461
2,4-Dinitrotoluene	mg/l	.025	0.0197	78.9	31.2-105	WG737461
2,6-Dinitrotoluene	mg/l	.025	0.0189	75.8	30.6-106	WG737461
2-Chloronaphthalene	mg/l	.025	0.0178	71.4	33.6-105	WG737461
2-Chlorophenol	mg/l	.025	0.0155	62.0	26.2-91.5	WG737461
2-Nitrophenol	mg/l	.025	0.0187	74.8	25.9-106	WG737461

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Quality Assurance Report
Level II

L715729

August 21, 2014

Analyte	Units	Laboratory Control Sample Known Val	Result	% Rec	Limit	Batch
3,3-Dichlorobenzidine	mg/l	.025	0.0214	85.7	27.2-142	WG737461
4,6-Dinitro-2-methylphenol	mg/l	.025	0.0167	66.8	18.4-148	WG737461
4-Bromophenyl-phenylether	mg/l	.025	0.0184	73.5	40.7-116	WG737461
4-Chloro-3-methylphenol	mg/l	.025	0.0179	71.5	35.7-100	WG737461
4-Chlorophenyl-phenylether	mg/l	.025	0.0184	73.6	39-113	WG737461
4-Nitrophenol	mg/l	.025	0.00740	29.6	10-52.7	WG737461
Acenaphthene	mg/l	.025	0.0185	73.9	38.7-109	WG737461
Acenaphthylene	mg/l	.025	0.0178	71.1	36-106	WG737461
Anthracene	mg/l	.025	0.0192	76.7	43.6-113	WG737461
Benzidine	mg/l	.025	0.00802	32.1	10-165.2	WG737461
Benzo(a)anthracene	mg/l	.025	0.0182	72.9	51.2-112	WG737461
Benzo(a)pyrene	mg/l	.025	0.0171	68.4	45.6-106	WG737461
Benzo(b)fluoranthene	mg/l	.025	0.0177	70.9	47.6-111	WG737461
Benzo(g,h,i)perylene	mg/l	.025	0.0188	75.4	45.2-117	WG737461
Benzo(k)fluoranthene	mg/l	.025	0.0192	76.9	49.4-114	WG737461
Benzylbutyl phthalate	mg/l	.025	0.0185	74.2	31.8-123	WG737461
Bis(2-chlorethoxy)methane	mg/l	.025	0.0172	68.6	37.2-111	WG737461
Bis(2-chloroethyl)ether	mg/l	.025	0.0148	59.2	22.6-108	WG737461
Bis(2-chloroisopropyl)ether	mg/l	.025	0.0158	63.3	32.9-100	WG737461
Bis(2-ethylhexyl)phthalate	mg/l	.025	0.0179	71.5	36.9-134	WG737461
Chrysene	mg/l	.025	0.0192	76.6	54.6-120	WG737461
Di-n-butyl phthalate	mg/l	.025	0.0191	76.4	41.8-120	WG737461
Di-n-octyl phthalate	mg/l	.025	0.0167	66.7	39.7-112	WG737461
Dibenz(a,h)anthracene	mg/l	.025	0.0186	74.2	42.8-118	WG737461
Diethyl phthalate	mg/l	.025	0.0189	75.5	36.5-129	WG737461
Dimethyl phthalate	mg/l	.025	0.0187	74.9	35.3-128	WG737461
Fluoranthene	mg/l	.025	0.0191	76.4	45.9-115	WG737461
Fluorene	mg/l	.025	0.0187	74.7	41-112	WG737461
Hexachloro-1,3-butadiene	mg/l	.025	0.0152	60.8	16.1-104	WG737461
Hexachlorobenzene	mg/l	.025	0.0187	74.6	38.5-116	WG737461
Hexachlorocyclopentadiene	mg/l	.025	0.00903	36.1	10-121	WG737461
Hexachloroethane	mg/l	.025	0.0153	61.1	16.5-89.8	WG737461
Indeno(1,2,3-cd)pyrene	mg/l	.025	0.0189	75.7	45-116	WG737461
Isophorone	mg/l	.025	0.0191	76.6	35.4-112	WG737461
n-Nitrosodi-n-propylamine	mg/l	.025	0.0166	66.6	33.2-106	WG737461
n-Nitrosodimethylamine	mg/l	.025	0.00993	39.7	10-80.1	WG737461
n-Nitrosodiphenylamine	mg/l	.025	0.0192	76.7	44.4-113	WG737461
Naphthalene	mg/l	.025	0.0177	70.7	32.2-101	WG737461
Nitrobenzene	mg/l	.025	0.0172	68.9	31.4-106	WG737461
Pentachlorophenol	mg/l	.025	0.0124	49.6	10-97.4	WG737461
Phenanthrene	mg/l	.025	0.0184	73.5	46.4-113	WG737461
Phenol	mg/l	.025	0.00893	35.7	10-57.9	WG737461
Pyrene	mg/l	.025	0.0184	73.7	46.3-117	WG737461
2,4,6-Tribromophenol				69.10	11.2-130	WG737461
2-Fluorobiphenyl				70.60	29.5-131	WG737461
2-Fluorophenol				42.20	10-77.9	WG737461
Nitrobenzene-d5				73.70	21.8-123	WG737461
Phenol-d5				33.90	5-70.1	WG737461
p-Terphenyl-d14				63.60	29.3-137	WG737461
BOD	mg/l	198	221.	112.	84.6-115.4	WG737263
BOD	mg/l	198	247.	125.*	84.6-115.4	WG737263
BOD	mg/l	198	212.	107.	84.6-115.4	WG737263
BOD	mg/l	198	225.	114.	84.6-115.4	WG737263
Dissolved Solids	mg/l	8800	8950	102.	85-115	WG737728

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Quality Assurance Report
Level II

L715729

August 21, 2014

Analyte	Units	Laboratory Control Sample Known Val	Result	% Rec	Limit	Batch
Sulfide	mg/l	.5	0.540	108.	85-115	WG737854
Nitrate-Nitrite	mg/l	5	5.22	104.	90-110	WG737680
Kjeldahl Nitrogen, TKN	mg/l	16.7	18.0	108.	90-110	WG738201
Cyanide	mg/l	.1	0.102	102.	90-110	WG738191
Phosphorus,Total	mg/l	1	0.906	90.6	90-110	WG738199
Total Phenol by 4AAP	mg/l	.5	0.491	98.2	90-110	WG738197

Analyte	Units	Laboratory Control Sample Duplicate Result	Ref	%Rec	Limit	RPD	Limit	Batch
Chromium,Hexavalent	mg/l	0.620	0.618	103.	85-115	0.323	20	WG737298
Nitrate	mg/l	8.27	8.26	103.	90-110	0.0	20	WG737273
Nitrite	mg/l	8.01	7.97	100.	90-110	1.00	20	WG737273
Ammonia Nitrogen	mg/l	7.09	6.96	94.0	90-110	1.85	20	WG737404
Suspended Solids	mg/l	816.	828.	106.	85-115	1.46	5	WG737321
Fluoride	mg/l	8.09	8.09	101.	90-110	0.0	20	WG737566
Sulfate	mg/l	40.1	40.0	100.	90-110	0.0	20	WG737566
Arsenic	mg/l	1.08	1.06	108.	80-120	1.00	20	WG737881
Barium	mg/l	1.08	1.07	108.	80-120	1.00	20	WG737881
Beryllium	mg/l	1.07	1.06	107.	80-120	0.0	20	WG737881
Boron	mg/l	1.05	1.03	105.	80-120	2.00	20	WG737881
Cadmium	mg/l	1.07	1.06	106.	80-120	0.0	20	WG737881
Calcium	mg/l	11.0	10.9	110.	80-120	0.0	20	WG737881
Chromium	mg/l	1.06	1.04	106.	80-120	1.00	20	WG737881
Iron	mg/l	1.05	1.05	105.	80-120	1.00	20	WG737881
Lead	mg/l	1.05	1.04	105.	80-120	1.00	20	WG737881
Manganese	mg/l	1.08	1.07	108.	80-120	0.0	20	WG737881
Nickel	mg/l	1.02	1.01	102.	80-120	1.00	20	WG737881
Selenium	mg/l	1.07	1.06	107.	80-120	2.00	20	WG737881
Silver	mg/l	1.02	1.01	102.	80-120	0.0	20	WG737881
Sodium	mg/l	10.8	11.0	108.	80-120	2.00	20	WG737881
Thallium	mg/l	1.11	1.09	111.	80-120	1.00	20	WG737881
Zinc	mg/l	1.06	1.05	106.	80-120	0.0	20	WG737881
Arsenic,Dissolved	mg/l	1.10	1.12	110.	80-120	1.00	20	WG737904
Barium,Dissolved	mg/l	1.13	1.15	113.	80-120	1.00	20	WG737904
Beryllium,Dissolved	mg/l	1.12	1.13	112.	80-120	1.00	20	WG737904

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Quality Assurance Report
Level II

L715729

August 21, 2014

		Laboratory Control Sample Duplicate						
Analyte	Units	Result	Ref	%Rec	Limit	RPD	Limit	Batch
Boron,Dissolved	mg/l	1.10	1.10	110.	80-120	0.0	20	WG737904
Cadmium,Dissolved	mg/l	1.12	1.12	112.	80-120	0.0	20	WG737904
Calcium,Dissolved	mg/l	11.6	11.7	116.	80-120	1.00	20	WG737904
Chromium,Dissolved	mg/l	1.14	1.15	114.	80-120	1.00	20	WG737904
Iron,Dissolved	mg/l	1.13	1.11	113.	80-120	2.00	20	WG737904
Lead,Dissolved	mg/l	1.13	1.13	113.	80-120	0.0	20	WG737904
Manganese,Dissolved	mg/l	1.13	1.14	113.	80-120	1.00	20	WG737904
Nickel,Dissolved	mg/l	1.06	1.07	106.	80-120	1.00	20	WG737904
Selenium,Dissolved	mg/l	1.10	1.12	110.	80-120	1.00	20	WG737904
Silver,Dissolved	mg/l	1.10	1.12	110.	80-120	1.00	20	WG737904
Sodium,Dissolved	mg/l	11.1	11.0	111.	80-120	1.00	20	WG737904
Thallium,Dissolved	mg/l	1.20	1.20	120.	80-120	1.00	20	WG737904
Zinc,Dissolved	mg/l	1.12	1.13	112.	80-120	1.00	20	WG737904
1,1,1,2-Tetrachloroethane	mg/l	0.0217	0.0211	87.0	74.2-124	2.83	20	WG738003
1,1,1-Trichloroethane	mg/l	0.0204	0.0206	82.0	73.2-123	0.840	20	WG738003
1,1,2,2-Tetrachloroethane	mg/l	0.0237	0.0233	95.0	70.7-122	1.48	20	WG738003
1,1,2-Trichloroethane	mg/l	0.0234	0.0230	93.0	77.7-118	1.66	20	WG738003
1,1,2-Trichlorotrifluoroethane	mg/l	0.0212	0.0214	85.0	67.2-143	1.00	20	WG738003
1,1-Dichloroethane	mg/l	0.0199	0.0206	80.0	70.7-126	3.33	20	WG738003
1,1-Dichloroethene	mg/l	0.0201	0.0206	80.0	67.8-129	2.35	20	WG738003
1,1-Dichloropropene	mg/l	0.0209	0.0213	84.0	73.1-125	1.69	20	WG738003
1,2,3-Trichlorobenzene	mg/l	0.0251	0.0241	100.	64.9-135	3.83	20	WG738003
1,2,3-Trichloropropane	mg/l	0.0251	0.0247	100.	71.8-121	1.37	20	WG738003
1,2,3-Trimethylbenzene	mg/l	0.0208	0.0207	83.0	72.3-116	0.440	20	WG738003
1,2,4-Trichlorobenzene	mg/l	0.0239	0.0237	96.0	69.7-136	1.11	20	WG738003
1,2,4-Trimethylbenzene	mg/l	0.0220	0.0222	88.0	75-123	0.860	20	WG738003
1,2-Dibromo-3-Chloropropane	mg/l	0.0254	0.0251	102.	65.4-128	1.14	20	WG738003
1,2-Dibromoethane	mg/l	0.0237	0.0236	95.0	76.6-121	0.610	20	WG738003
1,2-Dichlorobenzene	mg/l	0.0225	0.0226	90.0	78.4-117	0.540	20	WG738003
1,2-Dichloroethane	mg/l	0.0216	0.0221	86.0	68.8-124	2.09	20	WG738003
1,2-Dichloropropane	mg/l	0.0210	0.0211	84.0	76.5-119	0.850	20	WG738003
1,3,5-Trimethylbenzene	mg/l	0.0221	0.0219	88.0	75.6-124	1.04	20	WG738003
1,3-Dichlorobenzene	mg/l	0.0239	0.0238	96.0	70.8-128	0.780	20	WG738003
1,3-Dichloropropane	mg/l	0.0228	0.0226	91.0	77.4-117	1.02	20	WG738003
1,4-Dichlorobenzene	mg/l	0.0216	0.0214	86.0	78.8-115	1.19	20	WG738003
2,2-Dichloropropane	mg/l	0.0194	0.0200	77.0	62.4-133	3.24	20	WG738003
2-Butanone (MEK)	mg/l	0.122	0.123	98.0	55-149	0.980	20	WG738003
2-Chloroethyl vinyl ether	mg/l	0.123	0.123	98.0	43.8-150	0.340	20	WG738003
2-Chlorotoluene	mg/l	0.0225	0.0226	90.0	74.7-122	0.130	20	WG738003
4-Chlorotoluene	mg/l	0.0222	0.0219	89.0	77.5-120	1.40	20	WG738003
4-Methyl-2-pentanone (MIBK)	mg/l	0.115	0.113	92.0	70.5-133	1.75	20	WG738003
Acetone	mg/l	0.114	0.118	91.0	35.6-163	3.36	23.9	WG738003
Acrolein	mg/l	0.115	0.119	92.0	10-190	3.26	28.1	WG738003
Acrylonitrile	mg/l	0.115	0.114	92.0	55.2-130	0.500	20	WG738003
Benzene	mg/l	0.0203	0.0208	81.0	74.8-121	2.62	20	WG738003
Bromobenzene	mg/l	0.0221	0.0219	88.0	77.5-116	0.700	20	WG738003
Bromodichloromethane	mg/l	0.0210	0.0211	84.0	75.1-116	0.520	20	WG738003
Bromoform	mg/l	0.0244	0.0241	98.0	67.5-130	1.22	20	WG738003
Bromomethane	mg/l	0.0227	0.0232	91.0	49.9-162	2.50	20	WG738003
Carbon tetrachloride	mg/l	0.0199	0.0206	79.0	70.2-123	3.86	20	WG738003
Chlorobenzene	mg/l	0.0225	0.0221	90.0	78.1-119	1.77	20	WG738003
Chlorodibromomethane	mg/l	0.0229	0.0228	92.0	74-121	0.380	20	WG738003
Chloroethane	mg/l	0.0202	0.0216	81.0	61.7-135	6.69	20	WG738003
Chloroform	mg/l	0.0208	0.0209	83.0	76-121	0.830	20	WG738003
Chloromethane	mg/l	0.0182	0.0184	73.0	61.5-129	1.46	20	WG738003
cis-1,2-Dichloroethene	mg/l	0.0211	0.0217	84.0	76-119	2.90	20	WG738003
cis-1,3-Dichloropropene	mg/l	0.0224	0.0220	90.0	78.2-120	2.11	20	WG738003

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Quality Assurance Report
Level II

L715729

August 21, 2014

Analyte	Units	Laboratory Control Sample Duplicate Result	Ref	%Rec	Limit	RPD	Limit	Batch
Di-isopropyl ether	mg/l	0.0197	0.0200	79.0	65.6-132	1.12	20	WG738003
Dibromomethane	mg/l	0.0226	0.0228	90.0	79.5-118	1.31	20	WG738003
Dichlorodifluoromethane	mg/l	0.0211	0.0222	84.0	54.8-135	4.84	20	WG738003
Ethylbenzene	mg/l	0.0219	0.0216	88.0	78.8-122	1.41	20	WG738003
Hexachloro-1,3-butadiene	mg/l	0.0220	0.0219	88.0	64.7-129	0.320	20	WG738003
Isopropylbenzene	mg/l	0.0218	0.0217	87.0	78.6-132	0.420	20	WG738003
Methyl tert-butyl ether	mg/l	0.0218	0.0222	87.0	71.2-126	1.87	20	WG738003
Methylene Chloride	mg/l	0.0201	0.0209	80.0	70.3-120	4.06	20	WG738003
n-Butylbenzene	mg/l	0.0206	0.0203	82.0	76.2-126	1.29	20	WG738003
n-Propylbenzene	mg/l	0.0219	0.0219	87.0	78.2-122	0.0500	20	WG738003
Naphthalene	mg/l	0.0251	0.0244	100.	68.4-128	2.82	20	WG738003
p-Isopropyltoluene	mg/l	0.0224	0.0220	89.0	74-131	1.57	20	WG738003
sec-Butylbenzene	mg/l	0.0224	0.0222	90.0	74.4-127	1.14	20	WG738003
Styrene	mg/l	0.0234	0.0231	93.0	80.4-126	1.02	20	WG738003
tert-Butylbenzene	mg/l	0.0222	0.0222	89.0	75.3-126	0.360	20	WG738003
Tetrachloroethene	mg/l	0.0227	0.0223	91.0	72.6-126	1.84	20	WG738003
Toluene	mg/l	0.0210	0.0210	84.0	79.7-116	0.0700	20	WG738003
trans-1,2-Dichloroethene	mg/l	0.0201	0.0207	80.0	72.6-121	2.77	20	WG738003
trans-1,3-Dichloropropene	mg/l	0.0228	0.0224	91.0	74.3-123	1.63	20	WG738003
Trichloroethene	mg/l	0.0230	0.0227	92.0	77.7-118	1.05	20	WG738003
Trichlorofluoromethane	mg/l	0.0219	0.0222	87.0	63.5-135	1.56	20	WG738003
Vinyl chloride	mg/l	0.0205	0.0212	82.0	65.9-128	3.28	20	WG738003
Xylenes, Total	mg/l	0.0629	0.0625	84.0	78.7-121	0.690	20	WG738003
4-Bromofluorobenzene				102.0	71-126			WG738003
Dibromofluoromethane				97.10	78.3-121			WG738003
Toluene-d8				100.0	88.5-111			WG738003
1,2,4-Trichlorobenzene	mg/l	0.0155	0.0159	62.0	22.9-96.1	2.90	27.5	WG737461
2,4,6-Trichlorophenol	mg/l	0.0175	0.0172	70.0	29.8-107	1.94	24.1	WG737461
2,4-Dichlorophenol	mg/l	0.0174	0.0171	70.0	31.4-103	2.10	24.9	WG737461
2,4-Dimethylphenol	mg/l	0.0174	0.0174	69.0	31.9-107	0.0300	25.7	WG737461
2,4-Dinitrophenol	mg/l	0.00952	0.00873	38.0	24.2-128	8.61	20.5	WG737461
2,4-Dinitrotoluene	mg/l	0.0196	0.0197	78.0	31.2-105	0.850	22	WG737461
2,6-Dinitrotoluene	mg/l	0.0187	0.0189	75.0	30.6-106	1.55	23.1	WG737461
2-Chloronaphthalene	mg/l	0.0175	0.0178	70.0	33.6-105	1.90	23	WG737461
2-Chlorophenol	mg/l	0.0155	0.0155	62.0	26.2-91.5	0.200	26.5	WG737461
2-Nitrophenol	mg/l	0.0190	0.0187	76.0	25.9-106	1.62	26.9	WG737461
3,3-Dichlorobenzidine	mg/l	0.0212	0.0214	85.0	27.2-142	1.04	22.3	WG737461
4,6-Dinitro-2-methylphenol	mg/l	0.0179	0.0167	72.0	18.4-148	6.91	24.4	WG737461
4-Bromophenyl-phenylether	mg/l	0.0185	0.0184	74.0	40.7-116	0.480	21	WG737461
4-Chloro-3-methylphenol	mg/l	0.0182	0.0179	73.0	35.7-100	1.78	22.9	WG737461
4-Chlorophenyl-phenylether	mg/l	0.0181	0.0184	72.0	39-113	1.44	20.9	WG737461
4-Nitrophenol	mg/l	0.00863	0.00740	34.0	10-52.7	15.3	40	WG737461
Acenaphthene	mg/l	0.0181	0.0185	72.0	38.7-109	1.95	21.5	WG737461
Acenaphthylene	mg/l	0.0177	0.0178	71.0	36-106	0.550	21	WG737461
Anthracene	mg/l	0.0195	0.0192	78.0	43.6-113	1.69	18.8	WG737461
Benzidine	mg/l	0.00752	0.00802	30.0	10-165.2	6.38	40	WG737461
Benzo(a)anthracene	mg/l	0.0183	0.0182	73.0	51.2-112	0.470	20	WG737461
Benzo(a)pyrene	mg/l	0.0172	0.0171	69.0	45.6-106	0.740	20	WG737461
Benzo(b)fluoranthene	mg/l	0.0187	0.0177	75.0	47.6-111	5.15	20	WG737461
Benzo(g,h,i)perylene	mg/l	0.0192	0.0188	77.0	45.2-117	1.70	20	WG737461
Benzo(k)fluoranthene	mg/l	0.0188	0.0192	75.0	49.4-114	2.28	20	WG737461
Benzylbutyl phthalate	mg/l	0.0188	0.0185	75.0	31.8-123	1.51	20.7	WG737461
Bis(2-chlorethoxy)methane	mg/l	0.0169	0.0172	68.0	37.2-111	1.48	24.1	WG737461
Bis(2-chloroethyl)ether	mg/l	0.0147	0.0148	59.0	22.6-108	0.630	27.9	WG737461
Bis(2-chloroisopropyl)ether	mg/l	0.0158	0.0158	63.0	32.9-100	0.480	25.1	WG737461
Bis(2-ethylhexyl)phthalate	mg/l	0.0180	0.0179	72.0	36.9-134	0.980	23.6	WG737461
Chrysene	mg/l	0.0192	0.0192	77.0	54.6-120	0.310	20	WG737461

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Analyte	Units	Laboratory Control Sample Duplicate Result	Ref	%Rec	Limit	RPD	Limit	Batch
Di-n-butyl phthalate	mg/l	0.0194	0.0191	77.0	41.8-120	1.34	20.2	WG737461
Di-n-octyl phthalate	mg/l	0.0167	0.0167	67.0	39.7-112	0.0500	21.1	WG737461
Dibenz(a,h)anthracene	mg/l	0.0191	0.0186	76.0	42.8-118	2.81	20	WG737461
Diethyl phthalate	mg/l	0.0192	0.0189	77.0	36.5-129	1.62	20	WG737461
Dimethyl phthalate	mg/l	0.0191	0.0187	76.0	35.3-128	1.97	20.8	WG737461
Fluoranthene	mg/l	0.0192	0.0191	77.0	45.9-115	0.630	20	WG737461
Fluorene	mg/l	0.0186	0.0187	74.0	41-112	0.230	20.2	WG737461
Hexachloro-1,3-butadiene	mg/l	0.0148	0.0152	59.0	16.1-104	2.75	31.2	WG737461
Hexachlorobenzene	mg/l	0.0183	0.0187	73.0	38.5-116	2.04	20.1	WG737461
Hexachlorocyclopentadiene	mg/l	0.00880	0.00903	35.0	10-121	2.55	27.9	WG737461
Hexachloroethane	mg/l	0.0142	0.0153	57.0	16.5-89.8	6.93	30.7	WG737461
Indeno(1,2,3-cd)pyrene	mg/l	0.0191	0.0189	76.0	45-116	1.20	20	WG737461
Isophorone	mg/l	0.0189	0.0191	76.0	35.4-112	1.31	21.5	WG737461
n-Nitrosodi-n-propylamine	mg/l	0.0167	0.0166	67.0	33.2-106	0.0500	23.7	WG737461
n-Nitrosodimethylamine	mg/l	0.0102	0.00993	41.0	10-80.1	2.24	37.5	WG737461
n-Nitrosodiphenylamine	mg/l	0.0184	0.0192	74.0	44.4-113	3.94	20	WG737461
Naphthalene	mg/l	0.0174	0.0177	70.0	32.2-101	1.57	23.8	WG737461
Nitrobenzene	mg/l	0.0166	0.0172	66.0	31.4-106	3.63	25.7	WG737461
Pentachlorophenol	mg/l	0.0132	0.0124	53.0	10-97.4	6.41	35.1	WG737461
Phenanthrene	mg/l	0.0183	0.0184	73.0	46.4-113	0.350	20	WG737461
Phenol	mg/l	0.00962	0.00893	38.0	10-57.9	7.53	35	WG737461
Pyrene	mg/l	0.0185	0.0184	74.0	46.3-117	0.230	20	WG737461
2,4,6-Tribromophenol				69.70	11.2-130			WG737461
2-Fluorobiphenyl				68.80	29.5-131			WG737461
2-Fluorophenol				45.10	10-77.9			WG737461
Nitrobenzene-d5				70.80	21.8-123			WG737461
Phenol-d5				36.90	5-70.1			WG737461
p-Terphenyl-d14				62.20	29.3-137			WG737461
Dissolved Solids	mg/l	9000	8950	102.	85-115	0.557	5	WG737728
Sulfide	mg/l	0.535	0.540	107.	85-115	0.930	20	WG737854
Nitrate-Nitrite	mg/l	5.24	5.22	105.	90-110	0.382	20	WG737680
Kjeldahl Nitrogen, TKN	mg/l	18.2	18.0	109.	90-110	1.10	20	WG738201
Cyanide	mg/l	0.0935	0.102	94.0	90-110	8.70	20	WG738191
Phosphorus,Total	mg/l	0.908	0.906	91.0	90-110	0.221	20	WG738199
Total Phenol by 4AAP	mg/l	0.493	0.491	99.0	90-110	0.407	20	WG738197

Analyte	Units	Matrix Spike MS Res	Ref Res	TV	% Rec	Limit	Ref Samp	Batch
Chromium,Hexavalent	mg/l	0.494	0.0	.5	99.0	85-115	L715732-01	WG737298
Nitrate	mg/l	5.97	1.05	5	98.0	80-120	L715747-01	WG737273

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Ammonia Nitrogen	mg/l	9.68	0.410	10	93.0	90-110	L715763-01	WG737404
Fluoride	mg/l	5.12	1.09	5	81.0	80-120	L715729-01	WG737566
Sulfate	mg/l	130.	83.8	50	93.0	80-120	L715729-01	WG737566
Mercury	mg/l	0.00299	0.0000063	.003	100.	80-120	L715938-02	WG737529
Arsenic	mg/l	1.07	0.00374	1	110.	75-125	L715826-02	WG737881
Barium	mg/l	1.08	0.0189	1	110.	75-125	L715826-02	WG737881
Beryllium	mg/l	1.06	0.000284	1	110.	75-125	L715826-02	WG737881
Cadmium	mg/l	1.05	-0.000059	1	100.	75-125	L715826-02	WG737881
Chromium	mg/l	1.05	0.0000942	1	100.	75-125	L715826-02	WG737881
Lead	mg/l	1.04	-0.00132	1	100.	75-125	L715826-02	WG737881
Selenium	mg/l	1.07	-0.00707	1	110.	75-125	L715826-02	WG737881
Silver	mg/l	1.01	0.000132	1	100.	75-125	L715826-02	WG737881
Barium,Dissolved	mg/l	1.23	0.0864	1	110.	75-125	L715728-01	WG737904
Lead,Dissolved	mg/l	1.17	0.000802	1	120.	75-125	L715728-01	WG737904
Sodium,Dissolved	mg/l	195.	187.	10	81.0	75-125	L715728-01	WG737904
1,1,1,2-Tetrachloroethane	mg/l	0.0176	0.0	.025	70.0	64-128	L715267-10	WG738003
1,1,1-Trichloroethane	mg/l	0.0216	0.0	.025	86.0	58.7-134	L715267-10	WG738003
1,1,2,2-Tetrachloroethane	mg/l	0.000383	0.0	.025	1.50*	56-132	L715267-10	WG738003
1,1,2-Trichloroethane	mg/l	0.0298	0.0	.025	120.	66.3-125	L715267-10	WG738003
1,1,2-Trichlorotrifluoroethane	mg/l	0.0215	0.0	.025	86.0	54.8-154	L715267-10	WG738003
1,1-Dichloroethane	mg/l	0.0209	0.0	.025	84.0	58.5-132	L715267-10	WG738003
1,1-Dichloroethene	mg/l	0.0213	0.0	.025	85.0	51.1-140	L715267-10	WG738003
1,1-Dichloropropene	mg/l	0.0209	0.0	.025	84.0	57.3-136	L715267-10	WG738003
1,2,3-Trichlorobenzene	mg/l	0.0200	0.0	.025	80.0	59.1-138	L715267-10	WG738003
1,2,3-Trichloropropane	mg/l	0.0225	0.0	.025	90.0	61.4-128	L715267-10	WG738003
1,2,3-Trimethylbenzene	mg/l	0.0215	0.00162	.025	80.0	61.3-122	L715267-10	WG738003
1,2,4-Trichlorobenzene	mg/l	0.0191	0.0	.025	76.0	63.6-143	L715267-10	WG738003
1,2,4-Trimethylbenzene	mg/l	0.0179	0.00121	.025	67.0	57.4-137	L715267-10	WG738003
1,2-Dibromo-3-Chloropropane	mg/l	0.0255	0.0	.025	100.	57.3-136	L715267-10	WG738003
1,2-Dibromoethane	mg/l	0.0204	0.0	.025	82.0	67.1-125	L715267-10	WG738003
1,2-Dichlorobenzene	mg/l	0.0219	0.0	.025	88.0	68.2-123	L715267-10	WG738003
1,2-Dichloroethane	mg/l	0.0221	0.0	.025	88.0	60-126	L715267-10	WG738003
1,2-Dichloropropane	mg/l	0.0208	0.0	.025	83.0	64.2-123	L715267-10	WG738003
1,3,5-Trimethylbenzene	mg/l	0.0177	0.000664	.025	68.0	63.6-132	L715267-10	WG738003
1,3-Dichlorobenzene	mg/l	0.0185	0.0	.025	74.0	63.1-131	L715267-10	WG738003
1,3-Dichloropropane	mg/l	0.0190	0.0	.025	76.0	67.9-121	L715267-10	WG738003
1,4-Dichlorobenzene	mg/l	0.0207	0.0	.025	83.0	68.6-123	L715267-10	WG738003
2,2-Dichloropropane	mg/l	0.0208	0.0	.025	83.0	50.5-144	L715267-10	WG738003
2-Butanone (MEK)	mg/l	0.133	0.0	.125	110.	22.4-138	L715267-10	WG738003
2-Chloroethyl vinyl ether	mg/l	0.115	0.0	.125	92.0	10-155	L715267-10	WG738003
2-Chlorotoluene	mg/l	0.0179	0.0	.025	72.0	63.6-128	L715267-10	WG738003
4-Chlorotoluene	mg/l	0.0175	0.0	.025	70.0	65.7-127	L715267-10	WG738003
4-Methyl-2-pentanone (MIBK)	mg/l	0.115	0.0	.125	92.0	60.8-140	L715267-10	WG738003
Acetone	mg/l	0.179	0.0	.125	140.*	10-130	L715267-10	WG738003
Acrolein	mg/l	0.0496	0.0	.125	40.0	10-200	L715267-10	WG738003
Acrylonitrile	mg/l	0.147	0.0	.125	120.	49.4-133	L715267-10	WG738003
Benzene	mg/l	0.0899	0.0704	.025	78.0	54.3-133	L715267-10	WG738003
Bromobenzene	mg/l	0.0183	0.0	.025	73.0	63.9-124	L715267-10	WG738003
Bromodichloromethane	mg/l	0.0215	0.0	.025	86.0	63.9-121	L715267-10	WG738003

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Ground Engineering, Inc
Jason Smith
41 Inverness Drive East

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Quality Assurance Report
Level II

L715729

August 21, 2014

Analyte	Units	Matrix Spike MS Res	Ref Res	TV	% Rec	Limit	Ref Samp	Batch
Bromoform	mg/l	0.0208	0.0	.025	83.0	59.5-134	L715267-10	WG738003
Bromomethane	mg/l	0.0210	0.0	.025	84.0	41.7-155	L715267-10	WG738003
Carbon tetrachloride	mg/l	0.0208	0.0	.025	83.0	55.7-134	L715267-10	WG738003
Chlorobenzene	mg/l	0.0186	0.0	.025	74.0	67-125	L715267-10	WG738003
Chlorodibromomethane	mg/l	0.0194	0.0	.025	78.0	64.3-125	L715267-10	WG738003
Chloroethane	mg/l	0.0200	0.0	.025	80.0	51.5-136	L715267-10	WG738003
Chloroform	mg/l	0.0229	0.0	.025	92.0	63-129	L715267-10	WG738003
Chloromethane	mg/l	0.0171	0.0	.025	69.0	42.4-135	L715267-10	WG738003
cis-1,2-Dichloroethene	mg/l	0.0226	0.0	.025	90.0	59.2-129	L715267-10	WG738003
cis-1,3-Dichloropropene	mg/l	0.0216	0.0	.025	86.0	66.4-125	L715267-10	WG738003
Di-isopropyl ether	mg/l	0.0207	0.0	.025	83.0	56.9-136	L715267-10	WG738003
Dibromomethane	mg/l	0.0261	0.0	.025	100.	68.2-124	L715267-10	WG738003
Dichlorodifluoromethane	mg/l	0.0193	0.0	.025	77.0	40.6-144	L715267-10	WG738003
Ethylbenzene	mg/l	0.0214	0.00371	.025	71.0	61.4-133	L715267-10	WG738003
Hexachloro-1,3-butadiene	mg/l	0.0133	0.0	.025	53.0*	55.1-136	L715267-10	WG738003
Isopropylbenzene	mg/l	0.0244	0.00678	.025	70.0	66.8-141	L715267-10	WG738003
Methyl tert-butyl ether	mg/l	0.0207	0.0	.025	83.0	57.7-134	L715267-10	WG738003
Methylene Chloride	mg/l	0.0207	0.0	.025	83.0	58.1-122	L715267-10	WG738003
n-Butylbenzene	mg/l	0.0197	0.00209	.025	70.0	62.7-140	L715267-10	WG738003
n-Propylbenzene	mg/l	0.0261	0.00873	.025	69.0	65.9-131	L715267-10	WG738003
Naphthalene	mg/l	0.0327	0.00872	.025	96.0	58-135	L715267-10	WG738003
p-Isopropyltoluene	mg/l	0.0186	0.00158	.025	68.0	63.2-139	L715267-10	WG738003
sec-Butylbenzene	mg/l	0.0202	0.0	.025	81.0	62.2-136	L715267-10	WG738003
Styrene	mg/l	0.0189	0.0	.025	76.0	66.8-133	L715267-10	WG738003
tert-Butylbenzene	mg/l	0.0184	0.000998	.025	69.0	63.3-134	L715267-10	WG738003
Tetrachloroethene	mg/l	0.0184	0.0	.025	73.0	53-139	L715267-10	WG738003
Toluene	mg/l	0.0272	0.00696	.025	81.0	61.4-130	L715267-10	WG738003
trans-1,2-Dichloroethene	mg/l	0.0204	0.0	.025	82.0	56.5-129	L715267-10	WG738003
trans-1,3-Dichloropropene	mg/l	0.0402	0.0	.025	160.*	64.1-128	L715267-10	WG738003
Trichloroethene	mg/l	0.0407	0.0	.025	160.*	44.1-149	L715267-10	WG738003
Trichlorofluoromethane	mg/l	0.0215	0.0	.025	86.0	49.6-145	L715267-10	WG738003
Vinyl chloride	mg/l	0.0199	0.0	.025	80.0	47.8-137	L715267-10	WG738003
Xylenes, Total	mg/l	0.0614	0.0114	.075	67.0	63.3-131	L715267-10	WG738003
4-Bromofluorobenzene					86.90	71-126		WG738003
Dibromofluoromethane					93.50	78.3-121		WG738003
Toluene-d8					100.0	88.5-111		WG738003
Sulfide	mg/l	0.988	0.0	1	99.0	80-120	L715517-02	WG737854
Nitrate-Nitrite	mg/l	5.22	0.0	5	100.	90-110	L715830-02	WG737680
Kjeldahl Nitrogen, TKN	mg/l	22.1	17.0	5	102.	90-110	L715768-01	WG738201
Cyanide	mg/l	0.176	0.0	.2	88.0*	90-110	L715768-01	WG738191
Phosphorus,Total	mg/l	2.71	0.0	2.5	110.	90-110	L715629-01	WG738199
Total Phenol by 4AAP	mg/l	0.909	0.0	1	91.0	90-110	L715320-01	WG738197

Analyte	Units	Matrix Spike Duplicate MSD	Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
Chromium,Hexavalent	mg/l	0.494	0.494	98.8	85-115	0.0	20	L715732-01	WG737298

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Analyte	Units	Matrix Spike Duplicate MSD	Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
Nitrate	mg/l	5.92	5.97	97.5	80-120	1.00	20	L715747-01	WG737273
Ammonia Nitrogen	mg/l	9.81	9.68	94.0	90-110	1.33	20	L715763-01	WG737404
Fluoride	mg/l	5.14	5.12	81.0	80-120	0.0	20	L715729-01	WG737566
Sulfate	mg/l	130.	130.	92.4	80-120	0.0	20	L715729-01	WG737566
Mercury	mg/l	0.00304	0.00299	101.	80-120	1.00	20	L715938-02	WG737529
Arsenic	mg/l	1.05	1.07	105.	75-125	2.00	20	L715826-02	WG737881
Barium	mg/l	1.07	1.08	105.	75-125	2.00	20	L715826-02	WG737881
Beryllium	mg/l	1.04	1.06	104.	75-125	2.00	20	L715826-02	WG737881
Cadmium	mg/l	1.03	1.05	103.	75-125	2.00	20	L715826-02	WG737881
Chromium	mg/l	1.03	1.05	103.	75-125	1.00	20	L715826-02	WG737881
Lead	mg/l	1.03	1.04	103.	75-125	1.00	20	L715826-02	WG737881
Selenium	mg/l	1.04	1.07	105.	75-125	2.00	20	L715826-02	WG737881
Silver	mg/l	0.997	1.01	99.7	75-125	1.00	20	L715826-02	WG737881
Barium,Dissolved	mg/l	1.24	1.23	116.	75-125	2.00	20	L715728-01	WG737904
Lead,Dissolved	mg/l	1.18	1.17	118.	75-125	1.00	20	L715728-01	WG737904
Sodium,Dissolved	mg/l	197.	195.	94.0	75-125	1.00	20	L715728-01	WG737904
1,1,1,2-Tetrachloroethane	mg/l	0.0161	0.0176	64.2	64-128	9.03	20	L715267-10	WG738003
1,1,1-Trichloroethane	mg/l	0.0210	0.0216	84.0	58.7-134	2.82	20	L715267-10	WG738003
1,1,2,2-Tetrachloroethane	mg/l	0.0111	0.000383	44.5*	56-132	187.*	22.2	L715267-10	WG738003
1,1,2-Trichloroethane	mg/l	0.0287	0.0298	115.	66.3-125	3.71	20	L715267-10	WG738003
1,1,2-Trichlorotrifluoroethane	mg/l	0.0215	0.0215	85.8	54.8-154	0.0800	22.5	L715267-10	WG738003
1,1-Dichloroethane	mg/l	0.0202	0.0209	80.7	58.5-132	3.39	20	L715267-10	WG738003
1,1-Dichloroethene	mg/l	0.0206	0.0213	82.4	51.1-140	3.43	20.2	L715267-10	WG738003
1,1-Dichloropropene	mg/l	0.0203	0.0209	81.1	57.3-136	3.00	20	L715267-10	WG738003
1,2,3-Trichlorobenzene	mg/l	0.0183	0.0200	73.1	59.1-138	8.84	23.7	L715267-10	WG738003
1,2,3-Trichloropropane	mg/l	0.0175	0.0225	70.1	61.4-128	25.0*	22.4	L715267-10	WG738003
1,2,3-Trimethylbenzene	mg/l	0.0212	0.0215	78.2	61.3-122	1.41	20	L715267-10	WG738003
1,2,4-Trichlorobenzene	mg/l	0.0173	0.0191	69.4	63.6-143	9.52	21.9	L715267-10	WG738003
1,2,4-Trimethylbenzene	mg/l	0.0166	0.0179	61.7	57.4-137	7.13	20	L715267-10	WG738003
1,2-Dibromo-3-Chloropropane	mg/l	0.0200	0.0255	80.2	57.3-136	23.8	27	L715267-10	WG738003
1,2-Dibromoethane	mg/l	0.0174	0.0204	69.7	67.1-125	15.8	20	L715267-10	WG738003
1,2-Dichlorobenzene	mg/l	0.0210	0.0219	84.1	68.2-123	3.98	20	L715267-10	WG738003
1,2-Dichloroethane	mg/l	0.0200	0.0221	80.1	60-126	10.0	20	L715267-10	WG738003
1,2-Dichloropropane	mg/l	0.0202	0.0208	80.9	64.2-123	2.77	20	L715267-10	WG738003
1,3,5-Trimethylbenzene	mg/l	0.0166	0.0177	63.7	63.6-132	6.29	20.5	L715267-10	WG738003
1,3-Dichlorobenzene	mg/l	0.0167	0.0185	66.7	63.1-131	10.1	20	L715267-10	WG738003
1,3-Dichloropropane	mg/l	0.0163	0.0190	65.1*	67.9-121	15.7	20	L715267-10	WG738003
1,4-Dichlorobenzene	mg/l	0.0195	0.0207	78.0	68.6-123	6.05	20	L715267-10	WG738003
2,2-Dichloropropane	mg/l	0.0202	0.0208	80.9	50.5-144	2.99	21.9	L715267-10	WG738003
2-Butanone (MEK)	mg/l	0.112	0.133	89.5	22.4-138	17.1	27	L715267-10	WG738003
2-Chloroethyl vinyl ether	mg/l	0.0939	0.115	75.1	10-155	20.6*	20	L715267-10	WG738003
2-Chlorotoluene	mg/l	0.0169	0.0179	67.4	63.6-128	5.84	20	L715267-10	WG738003
4-Chlorotoluene	mg/l	0.0161	0.0175	64.3*	65.7-127	8.22	20	L715267-10	WG738003
4-Methyl-2-pentanone (MIBK)	mg/l	0.0987	0.115	78.9	60.8-140	14.9	25.1	L715267-10	WG738003
Acetone	mg/l	0.161	0.179	128.	10-130	10.9	27.9	L715267-10	WG738003
Acrolein	mg/l	0.0542	0.0496	43.4	10-200	8.93	27.7	L715267-10	WG738003
Acrylonitrile	mg/l	0.126	0.147	101.	49.4-133	15.1	25.3	L715267-10	WG738003

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August 21, 2014

		Matrix Spike Duplicate							
Analyte	Units	MSD	Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
Benzene	mg/l	0.0984	0.0899	112.	54.3-133	9.07	20	L715267-10	WG738003
Bromobenzene	mg/l	0.0167	0.0183	66.8	63.9-124	9.36	20	L715267-10	WG738003
Bromodichloromethane	mg/l	0.0206	0.0215	82.3	63.9-121	4.39	20	L715267-10	WG738003
Bromoform	mg/l	0.0166	0.0208	66.5	59.5-134	22.2*	20.5	L715267-10	WG738003
Bromomethane	mg/l	0.0200	0.0210	80.0	41.7-155	4.85	21.9	L715267-10	WG738003
Carbon tetrachloride	mg/l	0.0201	0.0208	80.4	55.7-134	3.32	20	L715267-10	WG738003
Chlorobenzene	mg/l	0.0167	0.0186	66.6*	67-125	10.9	20	L715267-10	WG738003
Chlorodibromomethane	mg/l	0.0168	0.0194	67.2	64.3-125	14.2	20.8	L715267-10	WG738003
Chloroethane	mg/l	0.0193	0.0200	77.0	51.5-136	3.90	40	L715267-10	WG738003
Chloroform	mg/l	0.0222	0.0229	88.8	63-129	3.18	20	L715267-10	WG738003
Chloromethane	mg/l	0.0164	0.0171	65.7	42.4-135	4.31	20	L715267-10	WG738003
cis-1,2-Dichloroethene	mg/l	0.0215	0.0226	85.9	59.2-129	5.02	20	L715267-10	WG738003
cis-1,3-Dichloropropene	mg/l	0.0199	0.0216	79.5	66.4-125	8.36	20	L715267-10	WG738003
Di-isopropyl ether	mg/l	0.0194	0.0207	77.6	56.9-136	6.62	20	L715267-10	WG738003
Dibromomethane	mg/l	0.0234	0.0261	93.6	68.2-124	10.9	20	L715267-10	WG738003
Dichlorodifluoromethane	mg/l	0.0185	0.0193	74.2	40.6-144	4.20	20.2	L715267-10	WG738003
Ethylbenzene	mg/l	0.0203	0.0214	66.5	61.4-133	5.23	20	L715267-10	WG738003
Hexachloro-1,3-butadiene	mg/l	0.0142	0.0133	56.8	55.1-136	6.86	23.6	L715267-10	WG738003
Isopropylbenzene	mg/l	0.0240	0.0244	68.8	66.8-141	1.77	20	L715267-10	WG738003
Methyl tert-butyl ether	mg/l	0.0176	0.0207	70.6	57.7-134	16.2	20	L715267-10	WG738003
Methylene Chloride	mg/l	0.0193	0.0207	77.2	58.1-122	6.79	20	L715267-10	WG738003
n-Butylbenzene	mg/l	0.0199	0.0197	71.3	62.7-140	1.37	20.3	L715267-10	WG738003
n-Propylbenzene	mg/l	0.0259	0.0261	68.6	65.9-131	0.730	20	L715267-10	WG738003
Naphthalene	mg/l	0.0301	0.0327	85.4	58-135	8.31	25.5	L715267-10	WG738003
p-Isopropyltoluene	mg/l	0.0176	0.0186	64.3	63.2-139	5.19	20.4	L715267-10	WG738003
sec-Butylbenzene	mg/l	0.0198	0.0202	79.2	62.2-136	1.75	20.3	L715267-10	WG738003
Styrene	mg/l	0.0172	0.0189	68.9	66.8-133	9.42	20	L715267-10	WG738003
tert-Butylbenzene	mg/l	0.0175	0.0184	66.2	63.3-134	4.58	21	L715267-10	WG738003
Tetrachloroethene	mg/l	0.0172	0.0184	68.7	53-139	6.65	20	L715267-10	WG738003
Toluene	mg/l	0.0273	0.0272	81.4	61.4-130	0.570	20	L715267-10	WG738003
trans-1,2-Dichloroethene	mg/l	0.0195	0.0204	77.9	56.5-129	4.75	20	L715267-10	WG738003
trans-1,3-Dichloropropene	mg/l	0.0421	0.0402	168.*	64.1-128	4.49	20	L715267-10	WG738003
Trichloroethene	mg/l	0.0399	0.0407	160.*	44.1-149	1.96	20	L715267-10	WG738003
Trichlorofluoromethane	mg/l	0.0212	0.0215	85.0	49.6-145	1.22	21.2	L715267-10	WG738003
Vinyl chloride	mg/l	0.0189	0.0199	75.8	47.8-137	5.03	20	L715267-10	WG738003
Xylenes, Total	mg/l	0.0589	0.0614	63.2*	63.3-131	4.22	20	L715267-10	WG738003
4-Bromofluorobenzene				83.40	71-126				WG738003
Dibromofluoromethane				90.60	78.3-121				WG738003
Toluene-d8				101.0	88.5-111				WG738003
Sulfide	mg/l	0.969	0.988	96.9	80-120	1.94	20	L715517-02	WG737854
Nitrate-Nitrite	mg/l	5.22	5.22	104.	90-110	0.0	20	L715830-02	WG737680
Kjeldahl Nitrogen, TKN	mg/l	21.6	22.1	92.0	90-110	2.29	20	L715768-01	WG738201
Cyanide	mg/l	0.195	0.176	97.5	90-110	10.2	20	L715768-01	WG738191
Phosphorus,Total	mg/l	2.73	2.71	109.	90-110	0.735	20	L715629-01	WG738199
Total Phenol by 4AAP	mg/l	0.933	0.909	93.3	90-110	2.61	20	L715320-01	WG738197

* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Ground Engineering, Inc
Jason Smith
41 Inverness Drive East

Englewood, CO 80112

Quality Assurance Report
Level II

L715729

August 21, 2014

Post Spike

Serial Dilution

Batch number /Run number / Sample number cross reference

WG737298: R2976111: L715729-01
WG737273: R2976485: L715729-01
WG737404: R2976639: L715729-01
WG737321: R2977025: L715729-01
WG737566: R2977348: L715729-01
WG737529: R2977560: L715729-01
WG737881: R2977590: L715729-01
WG737904: R2977686 R2977706: L715729-01
WG738003: R2977787: L715729-01
WG737461: R2977849 R2978504 R2978658: L715729-01
WG737263: R2977888: L715729-01
WG737728: R2977965: L715729-01
WG737854: R2978010: L715729-01
WG737680: R2978513: L715729-01
WG738201: R2978620: L715729-01
WG738191: R2978626: L715729-01
WG738199: R2978665: L715729-01
WG738197: R2979079: L715729-01

* * Calculations are performed prior to rounding of reported values.
* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

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Jason Smith
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Englewood, CO 80112

Quality Assurance Report
Level II

L715729

August 21, 2014

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.

Ground Engineering, Inc

41 Inverness Drive East
Englewood, CO 80112

Billing Information:
Accounts Payable
41 Inverness Drive East
Englewood, CO 80112

Report to: Jason Smith

Email To: jasons@groundeng.com

Project Description: Boulder Armory

City/State Collected: BOULDER, CO

Phone: 303-289-1989
Fax: 303-289-1686

Client Project #: 14-3057

Lab Project #: GROENGECO-BOULDERARM

Collected by (print): JASON SMITH

Site/Facility ID #:

P.O. #: 14.3057

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed: STANDARD

Email? ___No X__Yes
FAX? X No ___Yes

Chain of Custody Page ___ of ___

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12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L715729

C007

Acctnum: GROENGECO
Template: T95971
Prelogin: P478647
TSR: 296 - Darren Reeder
PB:
Shipped Via:

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Ctrs	8270 100ml Amb NoPres	CN 250mlHDPEAmb-NaOH >12	CR6,TDS 250mlHDPE-NoPres	FL,NO2,SULFATE,NO3 125mlHDPE-NoPres	Metals-Dissolved 500mlHDPE-NoPres	Metals-Total 500mlHDPE-HNO3 <2	NH3 125mlHDPE-H2SO4 <2	NO2NO3,PT,TKN 250mlHDPE-H2SO4 <2	PHT 250mlAmb-H2SO4 <2	SULFIDE 125mlAmb-S-NaOH+ZnAc >12	Rem./Contaminant	Sample # (lab only)
BA-1	GRAB	GW	—	8-12-14	3:00 P	14	X	X	X	X	X	X	X	X	X	X		

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Hold #

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)
	8-13-14	4:40	
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)
	8-13-14	6:52	6089 7173 7424
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☐ _____

Temp: 3.7 °C Bottles Received: 14

Date: 8/14/14 Time: 09:00

Condition: (lab use only) AN

COC Seal Intact: ✓ Y ___N ___NA

pH Checked: >12 <2

NCF: X

Ground Engineering, Inc

41 Inverness Drive East
Englewood, CO 80112

Billing Information:
Accounts Payable
41 Inverness Drive East
Englewood, CO 80112

Report to: Jason Smith

Email To: jasons@groundeng.com

Project Description: Boulder Armory

City/State Collected: BOULDER, CO

Phone: 303-289-1989
Fax: 303-289-1686

Client Project # 14-3057

Lab Project # GROENGECO-BOULDERARM

Collected by (print): JASON SMITH

Site/Facility ID #

P.O. # 14-3057

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed: STANDARD

Email? ___No X__Yes
FAX? X No ___Yes

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

ESC LABS
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L715729

Table #

Acctnum: GROENGECO
Template: T95971
Prelogin: P478647
TSR: 296 - Darren Reeder
PB:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	TSS 1L-HDPE NoPres	V8260 40mlAmb-HCl									Rem./Contaminant	Sample # (lab only)
BA-1	GRAB	GW	-	8-12-14	3:00 P	14	X	X										

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	8-13-14	6:40	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	8-13-14	6:50	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☒ FedEx ☐ Courier ☐ _____

Temp: 3.7 °C Bottles Received: 14

Date: 8/14/14 Time: 09:00

Condition: (lab use only)

COC Seal Intact: ____Y ____N ____NA

pH Checked:

NCF: X

Ground Engineering, Inc

41 Inverness Drive East
Englewood, CO 80112

Billing Information:
Accounts Payable
41 Inverness Drive East
Englewood, CO 80112

Report to: Jason Smith

Email To: jasons@groundeng.com

Project Description: Boulder Armory

City/State Collected: BOULDER, CO

Phone: 303-289-1989
Fax: 303-289-1686

Client Project #: 14-3057

Lab Project #: GROENGECO-BOULDERARM

Collected by (print): JASON SMITH

Site/Facility ID #:

P.O. #: 14-3057

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed: STANDARD

Email? ___No X___Yes
FAX? X No ___Yes

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

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12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L715782

T C006

Acctnum: GROENGECO
Template: T95976
Prelogin: P478649
TSR: 296 - Darren Reeder
PB:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	RA226 1L-HDPE-Add HNO3 <2	RA228 1L-HDPE-Add HNO3 <2	URANIUM 500mlHDPE-HNO3 <2	Rem./Contaminant	Sample # (lab only)
BA-1	GRAB	~~DW~~ GW	-	8-12-14	3:00 P	3	X	X	X		-01

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Hold #

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Samples returned via: ☐ UPS ☒ FedEx ☐ Courier ☐ _____	Condition: (lab use only) OK
Relinquished by: (Signature)	8-12-14	4:40			
Relinquished by: (Signature)	8-12-14	6:50	Received by: (Signature) 6089 7173 7424	Temp: 3.7 °C Bottles Received: 3	COC Seal Intact: ___Y ___N ___NA
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 8/14/14 Time: 09:00	pH Checked: <2 NCF:

GEL Laboratories LLC
a member of The GEL Group INC

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171 F 843.766.1178

www.gel.com

September 11, 2014

Ms. Janice Cozby
Environmental Science Corporation
12065 Lebanon Road
Mount Juliet, Tennessee 37122

Re: Radiochemistry
Work Order: 354933

Dear Ms. Cozby:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on August 16, 2014. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4289.

Sincerely,

Julie Robinson

Julie Robinson
Project Manager

Purchase Order: S20518
Chain of Custody: WG737306
Enclosures

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 − (843) 556−8171 − www.gel.com

Certificate of Analysis Report
for

ENVL001 Environmental Science Corporation

Client SDG: 354933 GEL Work Order: 354933

The Qualifiers in this report are defined as follows:

* A quality control analyte recovery is outside of specified acceptance criteria

** Analyte is a Tracer compound

** Analyte is a surrogate compound

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Julie Robinson.

Reviewed by Julie Robinson

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: September 11, 2014

Company :	Environmental Science Corporation
Address :	12065 Lebanon Road
	Mount Juliet, Tennessee 37122
Contact:	Ms. Janice Cozby
Project:	Radiochemistry

Client Sample ID:	L715782-01	Project:	ENVL00307
Sample ID:	354933002	Client ID:	ENVL001
Matrix:	Ground Water		
Collect Date:	12-AUG-14 15:00		
Receive Date:	16-AUG-14		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS											
200.2/200.8 Uranium "As Received"											
Uranium		10.8	0.067	0.200	ug/L	1	BCD1	08/24/14	2351	1412323	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	JXM5	08/19/14	0900	1412322

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 200.8	

Notes:

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: September 11, 2014

Environmental Science Corporation
12065 Lebanon Road
Mount Juliet, Tennessee

Contact: **Ms. Janice Cozby**

Workorder: **354933**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Metals Analysis - ICPMS										
Batch 1412323										
QC1203150256 354933002 DUP										
Uranium		10.8		11.1	ug/L	2.58		(0%-20%)	BCD1	08/24/14 23:55
QC1203150255 LCS										
Uranium	50.0			48.8	ug/L		97.5	(85%-115%)		08/24/14 23:40
QC1203150254 MB										
Uranium			U	ND	ug/L					08/24/14 23:37
QC1203150257 354933002 MS										
Uranium	50.0	10.8		61.3	ug/L		101	(75%-125%)		08/24/14 23:59
QC1203150258 354933002 SDILT										
Uranium		10.8		2.07	ug/L	4.28		(0%-10%)		08/25/14 00:03

Notes:

The Qualifiers in this report are defined as follows:

- < Result is less than value reported
- > Result is greater than value reported
- E %difference of sample and SD is >10%. Sample concentration must meet flagging criteria
- FB Mercury was found present at quantifiable concentrations in field blanks received with these samples. Data associated with the blank are deemed invalid for reporting to regulatory agencies
- H Analytical holding time was exceeded
- J Value is estimated
- N Metals--The Matrix spike sample recovery is not within specified control limits
- N/A RPD or %Recovery limits do not apply.
- N1 See case narrative
- ND Analyte concentration is not detected above the detection limit
- NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Q One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
- R Sample results are rejected
- U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Y Other specific qualifiers were required to properly define the results. Consult case narrative.
- ^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
- h Preparation or preservation holding time was exceeded

QC Summary

Workorder: **354933**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
* Indicates that a Quality Control parameter was not within specifications.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: September 11, 2014

Company :	Environmental Science Corporation
Address :	12065 Lebanon Road
	Mount Juliet, Tennessee 37122
Contact:	Ms. Janice Cozby
Project:	Radiochemistry

Client Sample ID:	L715782-01	Project:	ENVL00307
Sample ID:	354933001	Client ID:	ENVL001
Matrix:	Drinking Water (Potable)		
Collect Date:	12-AUG-14 15:00		
Receive Date:	16-AUG-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
Radium-228 in Drinking Water EPA 904.0 "As Received"												
Radium-228		1.72	+/-0.813	1.29	1.00	pCi/L		CXP3	09/08/14	0843	1415777	1
Rad Radium-226												
Radium-226 in Drinking Water EPA 903.1 (De-emanati "As Received"												
Radium-226		1.50	+/-0.287	0.164	1.00	pCi/L		JAOC	08/26/14	0355	1411487	2

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/ EPA 9320	
2	EPA 903.1	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Yttrium Carrier	Radium-228 in Drinking Water EPA 904.0 "As Received"			86.7	(25%-125%)
Barium Carrier	Radium-228 in Drinking Water EPA 904.0 "As Received"			63.2	(25%-125%)

Notes:
Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: September 11, 2014

Environmental Science Corporation
12065 Lebanon Road
Mount Juliet, Tennessee

Contact: **Ms. Janice Cozby**

Workorder: **354933**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gas Flow										
Batch 1415777										
QC1203158938 354933001 DUP										
Radium-228		1.72		1.49	pCi/L	14.1		(0% - 100%)	CXP3	09/08/14 08:47
	Uncertainty	+/-0.813		+/-0.850						
QC1203158940 LCS										
Radium-228	16.6			13.4	pCi/L		80.6	(80%-120%)		09/08/14 08:43
	Uncertainty			+/-1.05						
QC1203158937 MB										
Radium-228			U	0.0332	pCi/L					09/08/14 08:47
	Uncertainty			+/-0.198						
QC1203158939 354933001 MS										
Radium-228	167	1.72		120	pCi/L		70.5	(70%-130%)		09/08/14 08:43
	Uncertainty	+/-0.813		+/-11.7						
Rad Ra-226										
Batch 1411487										
QC1203148012 354729001 DUP										
Radium-226	U	0.160	U	0.0622	pCi/L	N/A		N/A	JAOC	08/26/14 03:55
	Uncertainty	+/-0.139		+/-0.0879						
QC1203148014 LCS										
Radium-226	12.4			11.3	pCi/L		91.2	(90%-110%)		08/26/14 03:55
	Uncertainty			+/-0.747						
QC1203148011 MB										
Radium-226			U	0.151	pCi/L					08/26/14 03:55
	Uncertainty			+/-0.117						
QC1203148013 355598001 MS										
Radium-226	12.4 U	0.096		12.0	pCi/L		96.9	(80%-120%)		08/26/14 03:55
	Uncertainty	+/-0.0941		+/-0.781						
QC355598001 TW										
Radium-226			U	0.096	pCi/L					08/26/14 03:55
	Uncertainty			+/-0.0941						

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

The Qualifiers in this report are defined as follows:

- ** Analyte is a Tracer compound
- < Result is less than value reported
- > Result is greater than value reported
- BD Results are either below the MDC or tracer recovery is low
- FA Failed analysis.
- H Analytical holding time was exceeded
- J Value is estimated
- K Analyte present. Reported value may be biased high. Actual value is expected to be lower.

QC Summary

Workorder: **354933**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time

L	Analyte present. Reported value may be biased low. Actual value is expected to be higher.
M	M if above MDC and less than LLD
M	REMP Result > MDC/CL and < RDL
N/A	RPD or %Recovery limits do not apply.
N1	See case narrative
ND	Analyte concentration is not detected above the detection limit
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Q	One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
R	Sample results are rejected
U	Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI	Gamma Spectroscopy--Uncertain identification
UJ	Gamma Spectroscopy--Uncertain identification
UL	Not considered detected. The associated number is the reported concentration, which may be inaccurate due to a low bias.
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	Other specific qualifiers were required to properly define the results. Consult case narrative.
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h	Preparation or preservation holding time was exceeded

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
* Indicates that a Quality Control parameter was not within specifications.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

List of current GEL Certifications as of 11 September 2014

State	Certification
Alaska	UST−110
Arkansas	88−0651
CLIA	42D0904046
California NELAP	01151CA
Colorado	SC00012
Connecticut	PH−0169
Delaware	SC000122013−10
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330−12−00283, P330−12−00284
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC000122013−10
Idaho Chemistry	SC00012
Idaho Radiochemistry	SC00012
Illinois NELAP	200029
Indiana	C−SC−01
Kansas NELAP	E−10332
Kentucky	90129
Louisiana NELAP	03046 (AI33904)
Louisiana SDWA	LA130005
Maryland	270
Massachusetts	M−SC012
Michigan	9976
Mississippi	SC000122013−10
Nebraska	NE−OS−26−13
Nevada	SC000122014−1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
Oklahoma	9904
Pennsylvania NELAP	68−00485
Plant Material Permit	PDEP−12−00260
South Carolina Chemistry	10120001
South Carolina GVL	23611001
South Carolina Radiochemi	10120002
Tennessee	TN 02934
Texas NELAP	T104704235−14−9
Utah NELAP	SC000122014−14
Vermont	VT87156
Virginia NELAP	460202
Washington	C780−12
Wisconsin	999887790

There are no "Data Exception Reports" associated with this analytical report.

354933

Sub-Contract Chain of Custody

Environmental Science Corp
12065 Lebanon Road
Mt. Juliet, TN 37122
(615) 773-9756 (615) 758-5859 fax

Sub-Contract Lab : GEL
City / State : Charleston, SC
Results Needed by : 9/11/14
ESC Purchase Order # : S20518

Send Reports To : Janice Cozby jcozby@esclabsciences.com

WORKGROUP	WG737306
Date Created :	8/14/2014

SAMPLENO Container #	MATRIX	Date / Time Collected	PARAMETER	Code	METHOD	Comments
L715782-01	GW	8/12/2014 15:00	Miscellaneous Analyses	MISC-SUB	200.8	U TOT
S17140709						
L715782-01	DW	8/12/2014 15:00	Radium 226	RA226	7500Ra B-2001	
S17140706						
L715782-01	DW	8/12/2014 15:00	Radium 226 - 2 Sigma	RA226S	7500Ra B-2001	
L715782-01	DW	8/12/2014 15:00	Radium 228	RA228	7500Ra D-2001	
S17140707						
L715782-01	DW	8/12/2014 15:00	Radium 228 - 2 Sigma	RA228S	7500Ra D-2001	

Relinquished by [signature] Date: 081414
Received by : [signature] Date: 8-16-14 0845
Relinquished by Date:
Received by : Date:

Page : 1

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: ENVL			**SDG/AR/COC/Work Order:** 354931/354932/354933
Received By: MK			**Date Received:** 8-16-14
Suspected Hazard Information	**Yes**	**No**	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
COC/Samples marked as radioactive?		✓	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): cpm 0
Classified Radioactive II or III by RSO?		✓	If yes, Were swipes taken of sample contatiners < action levels?
COC/Samples marked containing PCBs?		✓	
Package, COC, and/or Samples marked as beryllium or asbestos containing?		✓	If yes, samples are to be segregeated as Safety Controlled Samples, and opened by the GEL Safety Group.
Shipped as a DOT Hazardous?		✓	Hazard Class Shipped: UN#:
Samples identified as Foreign Soil?		✓	

	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	✓			Preservation Method: Ice bags Blue ice Dry ice None Other (describe) *all temperatures are recorded in Celsius 2c
2a	Daily check performed and passed on IR temperature gun?	✓			Temperature Device Serial #: 130532776 Secondary Temperature Device Serial # (If Applicable):
3	Chain of custody documents included with shipment?	✓			
4	Sample containers intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
5	Samples requiring chemical preservation at proper pH?	✓			Sample ID's, containers affected and observed pH: If Preservation added, Lot#:
6	VOA vials free of headspace (defined as < 6mm bubble)?		✓		Sample ID's and containers affected:
7	Are Encore containers present?			✓	(If yes, immediately deliver to Volatiles laboratory)
8	Samples received within holding time?	✓			ID's and tests affected:
9	Sample ID's on COC match ID's on bottles?	✓			Sample ID's and containers affected:
10	Date & time on COC match date & time on bottles?	✓			Sample ID's affected:
11	Number of containers received match number indicated on COC?			✓	Sample ID's affected: 765=2 782=3 753=1 each
12	Are sample containers identifiable as GEL provided?			✓	
13	COC form is properly signed in relinquished/received sections?	✓			
14	Carrier and tracking number.	✓			Circle Applicable: FedEx Air FedEx Ground UPS Field Services Courier Other 6089 7178 2699

Comments (Use Continuation Form if needed):

PM (or PMA) review: Initials AV Date 8/18/14 Page 1 of 1