



Weston Solutions, Inc.
Suite 100
1435 Garrison Street
Lakewood, Colorado 80215
303-729-6100 • Fax 303-729-6101
www.westonsolutions.com

July 19, 2016

Roger Cesario
P.O. Box 1116
Crested Butte, Co 81224

Dear Mr. Cesario:

On 23 June 2016, Weston Solutions, Inc. collected a baseline groundwater sample from the well located on your property located at approximately Latitude 39.087866° / Longitude -107.477224° in Gunnison County, Colorado. The sample was collected on behalf of Gunnison Energy, LLC. as part of a sampling program to establish baseline conditions for water quality in the area prior to initiation of oil and gas drilling activities on their nearby well pad. The purpose of these results is to act as baseline concentration values to which any future sample results can be compared.

A table summarizing the concentrations reported for your sample is provided as Attachment 1. A copy of the laboratory report is provided as Attachment 2. Please note all results from the well in which samples were collected will be available for the general public to access. Additionally, the laboratory analytical report and other collected data will be shared with government agencies (specifically the Colorado Oil and Gas Conservation Commission).

The U.S. Environmental Protection Agency (EPA) sets two tiers of drinking water standards: primary and secondary. Primary drinking water standards represent the highest level of a constituent that is allowed in public or community drinking water systems based on potential health effects. Secondary drinking water standards are established by EPA for concentrations that may have aesthetic effects (such as an unpleasant taste) if present above the secondary standard in drinking water. Please keep in mind that these standards were established for public (community) drinking water supplies, where water treatment is often performed, and it is not uncommon for private water sources to have concentrations of individual constituents that are higher than the standards. For more information on drinking water standards, please visit the EPA's website at <http://water.epa.gov/drink/contaminants/index.cfm>. (Please note: You may notice comparison standards do not exist for some constituents. This is because the EPA has not established primary or secondary drinking water standards for these constituents.)

The Colorado Department of Public Health and the Environment (CDPHE) also maintains a website on water testing: <http://www.cdphe.state.co.us/lr/water.htm>. Other sources of information on private water well testing and maintenance can be found on the web at:

<http://www.cdphe.state.co.us/wq/drinkingwater/PrivateWellInformation.html>
<http://water.epa.gov/drink/info/well/index.cfm>



Weston Solutions, Inc. wants to thank you for your cooperation and time during this sampling program. If you have any questions or concerns, feel free to contact me at (303)729-6109 or shaun.cwick@westonsolutions.com.

Sincerely,

A handwritten signature in blue ink, appearing to read "Shaun A. Cwick".

Shaun A. Cwick
Associate Geologist
Weston Solutions, Inc.
on behalf of:
Gunnison Energy, LLC.

Attachment 1 – Sample Concentration Summary Table
Attachment 2 – Laboratory Analytical Report

**ATTACHMENT 1 –
SAMPLE CONCENTRATION SUMMARY TABLE**

Sample Concentration Summary Table

Sample ID			Cesario-06232016	
Collection Date			6/23/2016	
Method	Parameter	Units	Value	
9056	Bromide	mg/l	<1.0	
9056	Chloride	mg/l	104	
9056	Fluoride	mg/l	2.37	
9056	Nitrate-Nitrite	mg/l	0.375	
9056	Sulfate	mg/l	6.75	
2320B	Alkalinity	mg/l	102	
2320B	Alkalinity, Bicarbonate	mg/l	90.2	
2320B	Alkalinity, Carbonate	mg/l	<20.0	
RSK175	Methane	mg/l	<0.0100	
RSK175	Ethane	mg/l	<0.0130	
RSK175	Ethene	mg/l	<0.0130	
RSK176	Propane	mg/l	<0.0190	
9040C	pH	su	9.01	T8
365.4	Phosphorus,Total	mg/l	<0.10	
9050A	Specific Conductance	umhos/cm	601	
2540C	Dissolved Solids	mg/l	323	
6010B	Barium	mg/l	0.0174	
6010B	Boron,Dissolved	mg/l	<0.20	
6010B	Calcium,Dissolved	mg/l	7.17	
6010B	Iron,Dissolved	mg/l	0.417	
6010B	Magnesium,Dissolved	mg/l	1.79	
6010B	Manganese,Dissolved	mg/l	<0.0100	
6010B	Potassium,Dissolved	mg/l	1.37	
6010B	Selenium,Dissolved	mg/l	<0.010	
6010B	Sodium,Dissolved	mg/l	53.2	
6010B	Strontium,Dissolved	mg/l	0.117	
8015	TPH Low Fraction	mg/l	<0.100	
8015	TPH High Fraction	mg/l	<0.100	
BART	Iron Related Bacteria	-	Present	
BART	Sulfate Reducing Bacteria	-	Present	
BART	Slime Forming Bacteria	-	Absent	
8260B	Benzene	mg/l	<0.0005	
8260B	Toluene	mg/l	0.0136	
8260B	Ethylbenzene	mg/l	<0.0005	
8260B	Total Xylenes	mg/l	<0.0015	

Notes

Report generated on: 06-July-16

Bold Concentration detected above laboratory detection limit.

Qualifiers:

T8 (ESC) - Additional method/sample information: Sample(s) received past/too close to holding time expiration.

**ATTACHMENT 2 –
LABORATORY ANALYTICAL REPORT**



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

Shaun Cwick
Weston Solutions - CO
1435 Garrison St., Ste 100
Denver, CO 80215

Report Summary

Wednesday July 06, 2016

Report Number: L843621

Samples Received: 06/25/16

Client Project: 14798-BWS

Description: Gunnison Energy

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:

Shane Gambill , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01,1461-02, AIHA-LAP,LLC - 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, TX MOLD - LAB0152, 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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REPORT OF ANALYSIS

July 06, 2016

Shaun Cwick
Weston Solutions - CO
1435 Garrison St., Ste 100
Denver, CO 80215

Date Received : June 25, 2016
Description : Gunnison Energy

Sample ID : CESARIO-06232016

Collected By : Shaun Cwick
Collection Date : 06/23/16 14:00

ESC Sample # : L843621-01

Site ID :

Project # : 14798-BWS

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1.00	mg/l	9056A	06/28/16	1
Chloride	104.	10.0	mg/l	9056A	06/28/16	10
Fluoride	2.37	0.100	mg/l	9056A	06/28/16	1
Sulfate	6.75	5.00	mg/l	9056A	06/28/16	1
Alkalinity	102.	20.0	mg/l	2320 B-2011	07/01/16	1
Alkalinity,Bicarbonate	90.2	20.0	mg/l	2320 B-2011	07/01/16	1
Alkalinity,Carbonate	BDL	20.0	mg/l	2320 B-2011	07/01/16	1
Methane	BDL	0.0100	mg/l	RSK175	06/29/16	1
Ethane	BDL	0.0130	mg/l	RSK175	06/29/16	1
Ethene	BDL	0.0130	mg/l	RSK175	06/29/16	1
Propane	BDL	0.0190	mg/l	RSK175	06/29/16	1
pH	9.01	0.100	su	9040C	06/27/16	1
Nitrate-Nitrite	0.375	0.100	mg/l	353.2	06/29/16	1
Phosphorus,Total	BDL	0.100	mg/l	365.4	06/30/16	1
Specific Conductance	601.	0.0100	umhos/cm	9050A	06/27/16	1
Dissolved Solids	323.	10.0	mg/l	2540 C-2011	06/30/16	1
Barium	0.0174	0.00500	mg/l	6010B	06/29/16	1
Boron	BDL	0.200	mg/l	6010B	06/29/16	1
Calcium	7.17	1.00	mg/l	6010B	06/29/16	1
Iron	0.417	0.100	mg/l	6010B	06/29/16	1
Magnesium	1.79	1.00	mg/l	6010B	06/29/16	1
Manganese	BDL	0.0100	mg/l	6010B	06/29/16	1
Potassium	1.37	1.00	mg/l	6010B	06/29/16	1
Selenium	BDL	0.0100	mg/l	6010B	06/29/16	1
Sodium	53.2	1.00	mg/l	6010B	06/29/16	1
Strontium	0.117	0.0100	mg/l	6010B	06/29/16	1
TPH (GC/FID) Low Fraction	BDL	0.100	mg/l	8015D/GRO	06/30/16	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	101.		% Rec.	8015D/GRO	06/30/16	1
Iron Related Bacteria	Present			BART	07/05/16	1
Sulfate Reducing Bacteria	Present			BART	07/05/16	1
Slime Forming Bacteria	Absent			BART	07/05/16	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

L843621-01 (IRB) - Approximate IRB population= 35,000 cfu/mL. Reactions=BC/BR/FO

L843621-01 (SRB) - Approximate SRB population= 1,200 cfu/mL. Reaction=BB

L843621-01 (PH) - 9.01 at 13.0C



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REPORT OF ANALYSIS

Shaun Cwick
Weston Solutions - CO
1435 Garrison St., Ste 100
Denver, CO 80215

July 06, 2016

Date Received : June 25, 2016
Description : Gunnison Energy
Sample ID : CESARIO-06232016
Collected By : Shaun Cwick
Collection Date : 06/23/16 14:00

ESC Sample # : L843621-01

Site ID :

Project # : 14798-BWS

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	BDL	0.00100	mg/l	8260B	06/30/16	1
Toluene	0.0136	0.00500	mg/l	8260B	06/30/16	1
Ethylbenzene	BDL	0.00100	mg/l	8260B	06/30/16	1
Total Xylenes	BDL	0.00300	mg/l	8260B	06/30/16	1
Surrogate Recovery						
Toluene-d8	101.		% Rec.	8260B	06/30/16	1
Dibromofluoromethane	102.		% Rec.	8260B	06/30/16	1
a,a,a-Trifluorotoluene	98.0		% Rec.	8260B	06/30/16	1
4-Bromofluorobenzene	93.5		% Rec.	8260B	06/30/16	1
TPH (GC/FID) High Fraction	BDL	0.100	mg/l	3511/8015	06/29/16	1
Surrogate recovery(%)						
o-Terphenyl	110.		% Rec.	3511/8015	06/29/16	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 07/06/16 12:09 Printed: 07/06/16 13:17

L843621-01 (IRB) - Approximate IRB population= 35,000 cfu/mL. Reactions=BC/BR/FO

L843621-01 (SRB) - Approximate SRB population= 1,200 cfu/mL. Reaction=BB

L843621-01 (PH) - 9.01 at 13.0C

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L843621-01	WG883492	SAMP	pH	R3146485	T8

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
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 Difference.
- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography 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.



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Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Bromide	< 1	mg/l			WG883764	06/28/16 06:46
Chloride	< 1	mg/l			WG883764	06/28/16 06:46
Fluoride	< .1	mg/l			WG883764	06/28/16 06:46
Sulfate	< 5	mg/l			WG883764	06/28/16 06:46
Barium	< .005	mg/l			WG883864	06/29/16 02:13
Boron	< .2	mg/l			WG883864	06/29/16 02:13
Calcium	< 1	mg/l			WG883864	06/29/16 02:13
Iron	< .1	mg/l			WG883864	06/29/16 02:13
Magnesium	< 1	mg/l			WG883864	06/29/16 02:13
Manganese	< .01	mg/l			WG883864	06/29/16 02:13
Potassium	< 1	mg/l			WG883864	06/29/16 02:13
Selenium	< .01	mg/l			WG883864	06/29/16 02:13
Sodium	< 1	mg/l			WG883864	06/29/16 02:13
Strontium	< .01	mg/l			WG883864	06/29/16 02:13
Specific Conductance	2.00	umhos/cm			WG883616	06/27/16 14:17
Ethane	< .013	mg/l			WG884366	06/29/16 11:07
Ethene	< .013	mg/l			WG884366	06/29/16 11:07
Methane	< .01	mg/l			WG884366	06/29/16 11:07
Propane	< .0186	mg/l			WG884366	06/29/16 11:07
Nitrate-Nitrite	< .1	mg/l			WG884323	06/29/16 19:42
TPH (GC/FID) High Fraction	< .1	mg/l			WG883955	06/29/16 12:33
o-Terphenyl		% Rec.	95.00	50-150	WG883955	06/29/16 12:33
Benzene	< .001	mg/l			WG884175	06/30/16 00:47
Ethylbenzene	< .001	mg/l			WG884175	06/30/16 00:47
Toluene	< .005	mg/l			WG884175	06/30/16 00:47
Total Xylenes	< .003	mg/l			WG884175	06/30/16 00:47
4-Bromofluorobenzene		% Rec.	92.20	80.1-120	WG884175	06/30/16 00:47
Dibromofluoromethane		% Rec.	99.50	79-121	WG884175	06/30/16 00:47
Toluene-d8		% Rec.	101.0	90-115	WG884175	06/30/16 00:47
a,a,a-Trifluorotoluene		% Rec.	98.10	90.4-116	WG884175	06/30/16 00:47
Dissolved Solids	< 10	mg/l			WG884112	06/30/16 00:42
Phosphorus, Total	< .1	mg/l			WG884612	06/30/16 18:30
Alkalinity	< 20	mg/l			WG884924	07/01/16 12:35
Alkalinity, Bicarbonate	< 20	mg/l			WG884924	07/01/16 12:35
Alkalinity, Carbonate	< 20	mg/l			WG884924	07/01/16 12:35
TPH (GC/FID) Low Fraction	< .1	mg/l			WG884208	06/30/16 15:05
a,a,a-Trifluorotoluene(FID)		% Rec.	100.0	62-128	WG884208	06/30/16 15:05

* 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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Analyte	Units	Result	Duplicate		RPD	Limit	Ref Samp	Batch
			Duplicate					
Bromide	mg/l	0.00	0.00	0.00	15		L843613-03	WG883764
Chloride	mg/l	5.04	5.23	4.00	15		L843613-03	WG883764
Fluoride	mg/l	0.239	0.167	35.0*	15		L843613-03	WG883764
Sulfate	mg/l	7.60	7.61	0.00	15		L843613-03	WG883764
Bromide	mg/l	0.00	0.00	0.00	15		L843613-11	WG883764
Chloride	mg/l	0.00	0.525	0.00	15		L843613-11	WG883764
Fluoride	mg/l	0.00	0.00	0.00	15		L843613-11	WG883764
Sulfate	mg/l	0.00	0.00	0.00	15		L843613-11	WG883764
Specific Conductance	umhos/cm	65.8	65.9	0.152	20		L843098-19	WG883616
Specific Conductance	umhos/cm	408.	407.	0.245	20		L843626-07	WG883616
pH	su	7.17	7.22	0.695	1		L843613-06	WG883492
pH	su	9.75	9.81	0.613	1		L843728-01	WG883492
Ethane	mg/l	0.00	0.00	0.00	20		L843350-05	WG884366
Ethene	mg/l	0.00	0.00	0.00	20		L843350-05	WG884366
Methane	mg/l	0.440	0.457	3.94	20		L843350-05	WG884366
Propane	mg/l	0.00	0.00	0.00	20		L843350-05	WG884366
Ethane	mg/l	0.00	0.00	0.00	20		L843614-02	WG884366
Ethene	mg/l	0.00	0.00	0.00	20		L843614-02	WG884366
Methane	mg/l	0.0431	0.0433	0.420	20		L843614-02	WG884366
Propane	mg/l	0.00	0.00	0.00	20		L843614-02	WG884366
Nitrate-Nitrite	mg/l	4.27	4.25	0.00	20		L843650-02	WG884323
Nitrate-Nitrite	mg/l	0.722	0.720	0.00	20		L843671-06	WG884323
Dissolved Solids	mg/l	567.	569.	0.352	5		L843547-01	WG884112
Phosphorus, Total	mg/l	4.39	4.95	12.0	20		L843078-01	WG884612
Phosphorus, Total	mg/l	3.07	2.84	8.00	20		L843806-02	WG884612
Alkalinity	mg/l	77.7	77.5	0.00	20		L843529-04	WG884924
Alkalinity	mg/l	0.00	13.0	99.0*	20		L843533-01	WG884924

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Bromide	mg/l	40	40.4	101.	80-120	WG883764
Chloride	mg/l	40	39.1	98.0	80-120	WG883764
Fluoride	mg/l	8	7.89	99.0	80-120	WG883764
Sulfate	mg/l	40	40.0	100.	80-120	WG883764
Barium	mg/l	1	1.03	103.	80-120	WG883864
Boron	mg/l	1	1.04	104.	80-120	WG883864
Calcium	mg/l	10	10.3	103.	80-120	WG883864
Iron	mg/l	10	10.0	100.	80-120	WG883864
Magnesium	mg/l	10	10.4	104.	80-120	WG883864
Manganese	mg/l	1	0.990	99.0	80-120	WG883864
Potassium	mg/l	10	10.1	101.	80-120	WG883864
Selenium	mg/l	1	1.05	105.	80-120	WG883864
Sodium	mg/l	10	10.1	101.	80-120	WG883864

* 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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July 06, 2016

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Strontium	mg/l	1	1.02	102.	80-120	WG883864
Specific Conductance	umhos/cm	653	670.	103.	90-110	WG883616
pH	su	6.12	6.02	98.4	98.35-101.7	WG883492
Ethane	mg/l	.129	0.141	109.	85-115	WG884366
Ethene	mg/l	.127	0.137	108.	85-115	WG884366
Methane	mg/l	.0678	0.0739	109.	85-115	WG884366
Propane	mg/l	.186	0.199	107.	85-115	WG884366
Nitrate-Nitrite	mg/l	5	5.04	101.	90-110	WG884323
TPH (GC/FID) High Fraction	mg/l	1.5	1.77	118.	50-150	WG883955
o-Terphenyl				120.0	50-150	WG883955
Benzene	mg/l	.025	0.0259	104.	73-122	WG884175
Ethylbenzene	mg/l	.025	0.0245	97.9	80.9-121	WG884175
Toluene	mg/l	.025	0.0258	103.	77.9-116	WG884175
Total Xylenes	mg/l	.075	0.0727	96.9	79.2-122	WG884175
4-Bromofluorobenzene				91.00	80.1-120	WG884175
Dibromofluoromethane				99.00	79-121	WG884175
Toluene-d8				103.0	90-115	WG884175
a,a,a-Trifluorotoluene				98.90	90.4-116	WG884175
Dissolved Solids	mg/l	8800	8420	95.7	85-115	WG884112
Phosphorus, Total	mg/l	2	2.08	104.	90-110	WG884612
Alkalinity	mg/l	100	99.1	99.0	85-115	WG884924
TPH (GC/FID) Low Fraction	mg/l	5.5	4.83	87.8	67-132	WG884208
a,a,a-Trifluorotoluene(FID)				99.40	62-128	WG884208

Analyte	Units	Laboratory Control Sample Duplicate		%Rec	Limit	RPD	Limit	Batch
		Result	Ref					
Bromide	mg/l	40.8	40.4	102.	80-120	1.00	15	WG883764
Chloride	mg/l	39.3	39.1	98.0	80-120	0.00	15	WG883764
Fluoride	mg/l	7.86	7.89	98.0	80-120	0.00	15	WG883764
Sulfate	mg/l	40.1	40.0	100.	80-120	0.00	15	WG883764
Barium	mg/l	1.02	1.03	102.	80-120	1.00	20	WG883864
Boron	mg/l	1.02	1.04	102.	80-120	2.00	20	WG883864
Calcium	mg/l	10.1	10.3	101.	80-120	2.00	20	WG883864
Iron	mg/l	9.97	10.0	100.	80-120	1.00	20	WG883864
Magnesium	mg/l	10.3	10.4	103.	80-120	1.00	20	WG883864
Manganese	mg/l	0.985	0.990	98.0	80-120	1.00	20	WG883864

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Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Potassium	mg/l	10.0	10.1	100.	80-120	1.00	20	WG883864
Selenium	mg/l	1.04	1.05	104.	80-120	1.00	20	WG883864
Sodium	mg/l	10.0	10.1	100.	80-120	1.00	20	WG883864
Strontium	mg/l	1.01	1.02	101.	80-120	1.00	20	WG883864
Specific Conductance	umhos/	671.	670.	103.	90-110	0.149	20	WG883616
pH	su	6.02	6.02	98*	98.35-101.7	0.00	1	WG883492
Ethane	mg/l	0.127	0.141	98.0	85-115	10.1	20	WG884366
Ethene	mg/l	0.124	0.137	97.0	85-115	10.0	20	WG884366
Methane	mg/l	0.0665	0.0739	98.0	85-115	10.6	20	WG884366
Propane	mg/l	0.180	0.199	97.0	85-115	10.0	20	WG884366
Nitrate-Nitrite	mg/l	4.98	5.04	100.	90-110	1.00	20	WG884323
TPH (GC/FID) High Fraction o-Terphenyl	mg/l	1.71	1.77	114. 116.0	50-150 50-150	3.24	20	WG883955 WG883955
Benzene	mg/l	0.0266	0.0259	106.	73-122	2.80	20	WG884175
Ethylbenzene	mg/l	0.0259	0.0245	104.	80.9-121	5.79	20	WG884175
Toluene	mg/l	0.0260	0.0258	104.	77.9-116	0.700	20	WG884175
Total Xylenes	mg/l	0.0758	0.0727	101.	79.2-122	4.17	20	WG884175
4-Bromofluorobenzene				91.60	80.1-120			WG884175
Dibromofluoromethane				101.0	79-121			WG884175
Toluene-d8				101.0	90-115			WG884175
a,a,a-Trifluorotoluene				98.80	90.4-116			WG884175
Dissolved Solids	mg/l	8550	8420	97.0	85-115	1.53	5	WG884112
Phosphorus,Total	mg/l	2.02	2.08	101.	90-110	2.93	20	WG884612
Alkalinity	mg/l	104.	99.1	104.	85-115	5.00	20	WG884924
TPH (GC/FID) Low Fraction a,a,a-Trifluorotoluene(FID)	mg/l	4.78	4.83	87.0 98.90	67-132 62-128	1.02	20	WG884208 WG884208

Analyte	Units	Matrix Spike				Limit	Ref Samp	Batch
		MS Res	Ref Res	TV	% Rec			
Barium	mg/l	4.99	4.09	1	90.0	75-125	L843498-06	WG883864
Boron	mg/l	2.21	1.20	1	101.	75-125	L843498-06	WG883864
Calcium	mg/l	109.	99.2	10	95.0	75-125	L843498-06	WG883864
Iron	mg/l	16.2	6.53	10	97.0	75-125	L843498-06	WG883864
Magnesium	mg/l	114.	105.	10	91.0	75-125	L843498-06	WG883864
Manganese	mg/l	1.99	1.06	1	93.0	75-125	L843498-06	WG883864
Potassium	mg/l	16.7	6.75	10	99.0	75-125	L843498-06	WG883864
Selenium	mg/l	1.09	0.000508	1	109.	75-125	L843498-06	WG883864
Sodium	mg/l	124.	116.	10	80.0	75-125	L843498-06	WG883864

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Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
Strontium	mg/l	6.75	5.86	1	89.0	75-125	L843498-06	WG883864
Bromide	mg/l	50.7	0.00	50	101.	80-120	L843613-04	WG883764
Chloride	mg/l	53.9	3.08	50	102.	80-120	L843613-04	WG883764
Fluoride	mg/l	5.33	0.202	5	103.	80-120	L843613-04	WG883764
Sulfate	mg/l	66.3	14.9	50	103.	80-120	L843613-04	WG883764
Bromide	mg/l	35.9	0.00	50	72.0*	80-120	L843613-05	WG883764
Chloride	mg/l	89.5	40.6	50	98.0	80-120	L843613-05	WG883764
Fluoride	mg/l	5.37	0.253	5	102.	80-120	L843613-05	WG883764
Nitrate-Nitrite	mg/l	5.60	0.0790	5	110.	90-110	L843671-01	WG884323
Nitrate-Nitrite	mg/l	5.18	0.150	5	101.	90-110	L843804-02	WG884323
Benzene	mg/l	0.0249	0.00	.025	99.5	58.6-133	L843614-01	WG884175
Ethylbenzene	mg/l	0.0250	0.00	.025	100.	62.7-136	L843614-01	WG884175
Toluene	mg/l	0.0245	0.00	.025	98.2	67.8-124	L843614-01	WG884175
Total Xylenes	mg/l	0.0731	0.00	.075	97.5	65.6-133	L843614-01	WG884175
4-Bromofluorobenzene					91.30	80.1-120		WG884175
Dibromofluoromethane					101.0	79-121		WG884175
Toluene-d8					102.0	90-115		WG884175
a,a,a-Trifluorotoluene					99.30	90.4-116		WG884175
Phosphorus, Total	mg/l	5.77	3.87	2.5	76.0*	90-110	L843806-01	WG884612
Alkalinity	mg/l	164.	74.1	100	90.0	80-120	L843533-07	WG884924
TPH (GC/FID) Low Fraction	mg/l	5.80	0.00	5.5	106.	50-143	L843605-01	WG884208
a,a,a-Trifluorotoluene(FID)					99.80	62-128		WG884208

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
Barium	mg/l	5.02	4.99	93.2	75-125	1.00	20	L843498-06	WG883864
Boron	mg/l	2.24	2.21	103.	75-125	1.00	20	L843498-06	WG883864
Calcium	mg/l	109.	109.	94.4	75-125	0.00	20	L843498-06	WG883864
Iron	mg/l	16.4	16.2	98.5	75-125	1.00	20	L843498-06	WG883864
Magnesium	mg/l	114.	114.	89.8	75-125	0.00	20	L843498-06	WG883864
Manganese	mg/l	2.02	1.99	95.5	75-125	1.00	20	L843498-06	WG883864
Potassium	mg/l	16.9	16.7	102.	75-125	1.00	20	L843498-06	WG883864
Selenium	mg/l	1.12	1.09	112.	75-125	3.00	20	L843498-06	WG883864
Sodium	mg/l	124.	124.	84.2	75-125	0.00	20	L843498-06	WG883864
Strontium	mg/l	6.79	6.75	92.6	75-125	1.00	20	L843498-06	WG883864
Bromide	mg/l	35.8	35.9	71.6*	80-120	0.00	15	L843613-05	WG883764
Chloride	mg/l	89.4	89.5	97.7	80-120	0.00	15	L843613-05	WG883764
Fluoride	mg/l	5.35	5.37	102.	80-120	0.00	15	L843613-05	WG883764
Nitrate-Nitrite	mg/l	5.32	5.18	103.	90-110	3.00	20	L843804-02	WG884323
Benzene	mg/l	0.0238	0.0249	95.2	58.6-133	4.40	20	L843614-01	WG884175

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Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref	Samp	Batch
			Ref	%Rec						
Ethylbenzene	mg/l	0.0243	0.0250	97.0	62.7-136	3.10	20	L843614-01		WG884175
Toluene	mg/l	0.0236	0.0245	94.4	67.8-124	3.97	20	L843614-01		WG884175
Total Xylenes	mg/l	0.0710	0.0731	94.7	65.6-133	2.99	20	L843614-01		WG884175
4-Bromofluorobenzene				91.30	80.1-120					WG884175
Dibromofluoromethane				101.0	79-121					WG884175
Toluene-d8				102.0	90-115					WG884175
a,a,a-Trifluorotoluene				99.80	90.4-116					WG884175
Phosphorus, Total	mg/l	5.81	5.77	77.6*	90-110	1.00	20	L843806-01		WG884612
Alkalinity	mg/l	168.	164.	93.5	80-120	2.00	20	L843533-07		WG884924
TPH (GC/FID) Low Fraction	mg/l	6.13	5.80	111.	50-143	5.39	20	L843605-01		WG884208
a,a,a-Trifluorotoluene(FID)				99.80	62-128					WG884208

Serial Dilution

Batch number /Run number / Sample number cross reference

WG883764: R3146310: L843621-01
WG883864: R3146401 R3146419: L843621-01
WG883616: R3146432: L843621-01
WG883492: R3146485: L843621-01
WG884366: R3146563: L843621-01
WG884323: R3146649: L843621-01
WG883955: R3146759: L843621-01
WG884175: R3146861: L843621-01
WG884112: R3146958: L843621-01
WG884612: R3147019: L843621-01
WG884924: R3147205: L843621-01
WG884208: R3147350: L843621-01
WG885846: R3147375: L843621-01

* * Calculations are performed prior to rounding of reported values.

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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.