



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

Scott Carmichael
Walter Env. & Eng. Group -CO
115 N 5th Street, Suite 340
Grand Junction, CO 81501

Report Summary

Wednesday November 27, 2013

Report Number: L669073

Samples Received: 11/15/13

Client Project: 242-05-001

Description: Lake 6-22

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:

Mark W. Beasley , 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.

Note: The use of the preparatory EPA Method 3511 is not approved or endorsed by the CA ELAP.

This report may not be reproduced, except in full, without written approval from ESC Lab Sciences. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



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

REPORT OF ANALYSIS

Scott Carmichael
Walter Env. & Eng. Group -CO
115 N 5th Street, Suite 340
Grand Junction, CO 81501

November 27, 2013

Date Received : November 15, 2013
Description : Lake 6-22

Sample ID : WATER PIT

Collected By : Scott Carmichael
Collection Date : 11/14/13 11:10

ESC Sample # : L669073-01

Site ID :

Project # : 242-05-001

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chloride	77.	20.	mg/l	9056	11/20/13	20
Sulfate	1300	100	mg/l	9056	11/20/13	20
Alkalinity,Bicarbonate	110	20.	mg/l	2320 B-2011	11/25/13	1
Alkalinity,Carbonate	BDL	20.	mg/l	2320 B-2011	11/25/13	1
pH	7.7		su	9040C	11/21/13	1
Dissolved Solids	2200	10.	mg/l	2540 C-2011	11/20/13	1
Arsenic	0.015	0.0010	mg/l	6020	11/22/13	1
Mercury	BDL	0.00020	mg/l	7470A	11/20/13	1
Barium	0.042	0.0050	mg/l	6010B	11/24/13	1
Cadmium	BDL	0.0050	mg/l	6010B	11/24/13	1
Calcium	230	0.50	mg/l	6010B	11/24/13	1
Chromium	BDL	0.010	mg/l	6010B	11/24/13	1
Copper	BDL	0.020	mg/l	6010B	11/24/13	1
Lead	BDL	0.0050	mg/l	6010B	11/24/13	1
Magnesium	170	0.10	mg/l	6010B	11/24/13	1
Nickel	BDL	0.020	mg/l	6010B	11/24/13	1
Potassium	22.	0.50	mg/l	6010B	11/24/13	1
Selenium	0.025	0.020	mg/l	6010B	11/24/13	1
Silver	BDL	0.010	mg/l	6010B	11/24/13	1
Sodium	170	0.50	mg/l	6010B	11/24/13	1
Zinc	BDL	0.030	mg/l	6010B	11/24/13	1
Benzene	BDL	0.00050	mg/l	8021/8015	11/17/13	1
Toluene	BDL	0.0050	mg/l	8021/8015	11/17/13	1
Ethylbenzene	BDL	0.00050	mg/l	8021/8015	11/17/13	1
Total Xylene	BDL	0.0015	mg/l	8021/8015	11/17/13	1
TPH (GC/FID) Low Fraction	BDL	0.10	mg/l	GRO	11/17/13	1
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	92.4		% Rec.	8021/8015	11/17/13	1
a,a,a-Trifluorotoluene(PID)	101.		% Rec.	8021/8015	11/17/13	1
Diesel and Oil Ranges						
C10-C28 Diesel Range	BDL	1.0	mg/l	8015	11/27/13	10
C28-C40 Oil Range	BDL	1.0	mg/l	8015	11/27/13	10
Surrogate Recovery						
o-Terphenyl	63.3		% Rec.	8015	11/27/13	10

Polynuclear Aromatic Hydrocarbons

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
L669073-01 (PH) - 7.7@21.0c
L669073-01 (DROOROLVI) - Dilution due to matrix
L669073-01 (PAHSIMLVI) - Dilution due to matrix



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

REPORT OF ANALYSIS

Scott Carmichael
Walter Env. & Eng. Group -CO
115 N 5th Street, Suite 340
Grand Junction, CO 81501

November 27, 2013

Date Received : November 15, 2013
Description : Lake 6-22

Sample ID : WATER PIT

Collected By : Scott Carmichael
Collection Date : 11/14/13 11:10

ESC Sample # : L669073-01

Site ID :

Project # : 242-05-001

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Anthracene	BDL	0.00010	mg/l	8270C-SIM	11/20/13	2
Acenaphthene	BDL	0.00010	mg/l	8270C-SIM	11/20/13	2
Acenaphthylene	BDL	0.00010	mg/l	8270C-SIM	11/20/13	2
Benzo(a)anthracene	BDL	0.00010	mg/l	8270C-SIM	11/20/13	2
Benzo(a)pyrene	BDL	0.00010	mg/l	8270C-SIM	11/20/13	2
Benzo(b)fluoranthene	BDL	0.00010	mg/l	8270C-SIM	11/20/13	2
Benzo(g,h,i)perylene	BDL	0.00010	mg/l	8270C-SIM	11/20/13	2
Benzo(k)fluoranthene	BDL	0.00010	mg/l	8270C-SIM	11/20/13	2
Chrysene	BDL	0.00010	mg/l	8270C-SIM	11/20/13	2
Dibenz(a,h)anthracene	BDL	0.00010	mg/l	8270C-SIM	11/20/13	2
Fluoranthene	BDL	0.00010	mg/l	8270C-SIM	11/20/13	2
Fluorene	BDL	0.00010	mg/l	8270C-SIM	11/20/13	2
Indeno(1,2,3-cd)pyrene	BDL	0.00010	mg/l	8270C-SIM	11/20/13	2
Naphthalene	BDL	0.00050	mg/l	8270C-SIM	11/20/13	2
Phenanthrene	BDL	0.00010	mg/l	8270C-SIM	11/20/13	2
Pyrene	BDL	0.00010	mg/l	8270C-SIM	11/20/13	2
1-Methylnaphthalene	BDL	0.00050	mg/l	8270C-SIM	11/20/13	2
2-Methylnaphthalene	BDL	0.00050	mg/l	8270C-SIM	11/20/13	2
2-Chloronaphthalene	BDL	0.00050	mg/l	8270C-SIM	11/20/13	2
Surrogate Recovery						
Nitrobenzene-d5	50.9		% Rec.	8270C-SIM	11/20/13	2
2-Fluorobiphenyl	59.4		% Rec.	8270C-SIM	11/20/13	2
p-Terphenyl-d14	58.5		% Rec.	8270C-SIM	11/20/13	2

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.

Reported: 11/27/13 16:47 Printed: 11/27/13 16:48

L669073-01 (PH) - 7.7@21.0c

L669073-01 (DROOROLVI) - Dilution due to matrix

L669073-01 (PAHSIMLVI) - Dilution due to matrix

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L669073-01	WG693431	SAMP	pH	R2858321	T8
	WG693243	SAMP	C10-C28 Diesel Range	R2860443	O
	WG693243	SAMP	C28-C40 Oil Range	R2860443	O
	WG693000	SAMP	Anthracene	R2857848	O
	WG693000	SAMP	Acenaphthene	R2857848	O
	WG693000	SAMP	Acenaphthylene	R2857848	O
	WG693000	SAMP	Benzo(a)anthracene	R2857848	O
	WG693000	SAMP	Benzo(a)pyrene	R2857848	O
	WG693000	SAMP	Benzo(b)fluoranthene	R2857848	O
	WG693000	SAMP	Benzo(g,h,i)perylene	R2857848	O
	WG693000	SAMP	Benzo(k)fluoranthene	R2857848	O
	WG693000	SAMP	Chrysene	R2857848	O
	WG693000	SAMP	Dibenz(a,h)anthracene	R2857848	O
	WG693000	SAMP	Fluoranthene	R2857848	O
	WG693000	SAMP	Fluorene	R2857848	O
	WG693000	SAMP	Indeno(1,2,3-cd)pyrene	R2857848	O
	WG693000	SAMP	Naphthalene	R2857848	J40
	WG693000	SAMP	Phenanthrene	R2857848	O
	WG693000	SAMP	Pyrene	R2857848	O
	WG693000	SAMP	1-Methylnaphthalene	R2857848	O
	WG693000	SAMP	2-Methylnaphthalene	R2857848	O
	WG693000	SAMP	2-Chloronaphthalene	R2857848	O
	WG693000	SAMP	Nitrobenzene-d5	R2857848	J2
	WG693000	SAMP	2-Fluorobiphenyl	R2857848	J2

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits
J4	The associated batch QC was outside the established quality control range for accuracy.
O	(ESC) Sample diluted due to matrix interferences that impaired the ability to make an accurate analytical determination. The detection limit is elevated in order to reflect the necessary dilution.
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.

Summary of Remarks For Samples Printed
11/27/13 at 16:48:09

TSR Signing Reports: 134
R5 - Desired TAT

Accounting - pending credit app

Sample: L669073-01 Account: WALTERGJCO Received: 11/15/13 09:00 Due Date: 11/22/13 00:00 RPT Date: 11/27/13 16:47



YOUR LAB OF CHOICE

Walter Env. & Eng. Group -CO
Scott Carmichael
115 N 5th Street, Suite 340

Grand Junction, CO 81501

Quality Assurance Report
Level II
L669073

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

November 27, 2013

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Benzene	< .0005	mg/l			WG692785	11/17/13 00:25
Ethylbenzene	< .0005	mg/l			WG692785	11/17/13 00:25
Toluene	< .005	mg/l			WG692785	11/17/13 00:25
TPH (GC/FID) Low Fraction	< .1	mg/l			WG692785	11/17/13 00:25
Total Xylene	< .0015	mg/l			WG692785	11/17/13 00:25
a,a,a-Trifluorotoluene(FID)		% Rec.	92.00	62-128	WG692785	11/17/13 00:25
a,a,a-Trifluorotoluene(PID)		% Rec.	100.0	55-122	WG692785	11/17/13 00:25
Mercury	< .0002	mg/l			WG693048	11/20/13 09:02
Dissolved Solids	< 10	mg/l			WG692940	11/20/13 14:55
1-Methylnaphthalene	< .00025	mg/l			WG693000	11/20/13 09:09
2-Chloronaphthalene	< .00005	mg/l			WG693000	11/20/13 09:09
2-Methylnaphthalene	< .00025	mg/l			WG693000	11/20/13 09:09
Acenaphthene	< .00005	mg/l			WG693000	11/20/13 09:09
Acenaphthylene	< .00005	mg/l			WG693000	11/20/13 09:09
Anthracene	< .00005	mg/l			WG693000	11/20/13 09:09
Benzo(a)anthracene	< .00005	mg/l			WG693000	11/20/13 09:09
Benzo(a)pyrene	< .00005	mg/l			WG693000	11/20/13 09:09
Benzo(b)fluoranthene	< .00005	mg/l			WG693000	11/20/13 09:09
Benzo(g,h,i)perylene	< .00005	mg/l			WG693000	11/20/13 09:09
Benzo(k)fluoranthene	< .00005	mg/l			WG693000	11/20/13 09:09
Chrysene	< .00005	mg/l			WG693000	11/20/13 09:09
Dibenz(a,h)anthracene	< .00005	mg/l			WG693000	11/20/13 09:09
Fluoranthene	< .00005	mg/l			WG693000	11/20/13 09:09
Fluorene	< .00005	mg/l			WG693000	11/20/13 09:09
Indeno(1,2,3-cd)pyrene	< .00005	mg/l			WG693000	11/20/13 09:09
Naphthalene	< .00025	mg/l			WG693000	11/20/13 09:09
Phenanthrene	< .00005	mg/l			WG693000	11/20/13 09:09
Pyrene	< .00005	mg/l			WG693000	11/20/13 09:09
2-Fluorobiphenyl		% Rec.	106.0	64.4-143	WG693000	11/20/13 09:09
Nitrobenzene-d5		% Rec.	88.00	61.3-162	WG693000	11/20/13 09:09
p-Terphenyl-d14		% Rec.	113.0	55.3-145	WG693000	11/20/13 09:09
Chloride	< 1	mg/l			WG693199	11/20/13 17:08
Sulfate	< 5	mg/l			WG693199	11/20/13 17:08
Barium	< .005	mg/l			WG693033	11/24/13 08:55
Cadmium	< .005	mg/l			WG693033	11/24/13 08:55
Calcium	< .5	mg/l			WG693033	11/24/13 08:55
Chromium	< .01	mg/l			WG693033	11/24/13 08:55
Copper	< .02	mg/l			WG693033	11/24/13 08:55
Lead	< .005	mg/l			WG693033	11/24/13 08:55
Magnesium	< .1	mg/l			WG693033	11/24/13 08:55
Nickel	< .02	mg/l			WG693033	11/24/13 08:55
Potassium	< .5	mg/l			WG693033	11/24/13 08:55
Selenium	< .02	mg/l			WG693033	11/24/13 08:55
Silver	< .01	mg/l			WG693033	11/24/13 08:55
Sodium	< .5	mg/l			WG693033	11/24/13 08:55
Zinc	< .03	mg/l			WG693033	11/24/13 08:55
Arsenic	< .001	mg/l			WG693293	11/22/13 01:38

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



YOUR LAB OF CHOICE

Walter Env. & Eng. Group -CO
Scott Carmichael
115 N 5th Street, Suite 340

Grand Junction, CO 81501

Quality Assurance Report
Level II

L669073

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

November 27, 2013

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
C10-C28 Diesel Range	< .1	mg/l			WG693243	11/21/13 16:26
C28-C40 Oil Range	< .1	mg/l			WG693243	11/21/13 16:26
o-Terphenyl		% Rec.	96.50	50-150	WG693243	11/21/13 16:26

Analyte	Units	Result	Duplicate		Limit	Ref Samp	Batch
			Duplicate	RPD			
Mercury	mg/l	0.0	0.0000259	30.1*	20	L669083-01	WG693048
Dissolved Solids	mg/l	2320	2220	4.63	5	L669073-01	WG692940
pH	su	7.80	7.80	0.257	1	L668821-01	WG693431
pH	su	7.80	7.80	0.0	1	L669247-01	WG693431
Chloride	mg/l	4.80	4.80	0.0	20	L669023-05	WG693199
Sulfate	mg/l	0.0	0.0	0.0	20	L669023-05	WG693199
Chloride	mg/l	2.10	2.10	0.0	20	L669088-04	WG693199
Sulfate	mg/l	14.0	13.0	7.41	20	L669088-04	WG693199
Barium	mg/l	0.140	0.140	2.00	20	L668992-10	WG693033
Cadmium	mg/l	0.0	0.00314	11.0	20	L668992-10	WG693033
Calcium	mg/l	75.0	73.6	2.00	20	L668992-10	WG693033
Chromium	mg/l	0.0	0.00166	57.0*	20	L668992-10	WG693033
Copper	mg/l	0.0	0.00624	11.0	20	L668992-10	WG693033
Lead	mg/l	0.00620	0.00570	8.00	20	L668992-10	WG693033
Magnesium	mg/l	8.20	7.98	3.00	20	L668992-10	WG693033
Nickel	mg/l	0.0	-0.00139	71.0*	20	L668992-10	WG693033
Potassium	mg/l	2.30	2.18	5.00	20	L668992-10	WG693033
Selenium	mg/l	0.0	0.0129	20.0	20	L668992-10	WG693033
Silver	mg/l	0.0	0.00242	33.0*	20	L668992-10	WG693033
Sodium	mg/l	150.	143.	4.00	20	L668992-10	WG693033
Zinc	mg/l	0.0	0.0158	0.0	20	L668992-10	WG693033
Arsenic	mg/l	0.0	0.00160	NA	20	L669113-20	WG693293

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
TPH (GC/FID) Low Fraction	mg/l	5.5	4.80	87.2	67-132	WG692785
a,a,a-Trifluorotoluene(FID)				98.40	62-128	WG692785
Benzene	mg/l	.05	0.0496	99.3	70-130	WG692785
Ethylbenzene	mg/l	.05	0.0502	100.	70-130	WG692785
Toluene	mg/l	.05	0.0495	99.0	70-130	WG692785
Total Xylene	mg/l	.15	0.153	102.	70-130	WG692785
a,a,a-Trifluorotoluene(PID)				99.60	55-122	WG692785
Mercury	mg/l	.003	0.00304	101.	85-115	WG693048
Dissolved Solids	mg/l	8800	8610	97.8	85-115	WG692940
1-Methylnaphthalene	mg/l	.002	0.00163	81.6	71.2-137	WG693000

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



YOUR LAB OF CHOICE

Walter Env. & Eng. Group -CO
Scott Carmichael
115 N 5th Street, Suite 340

Grand Junction, CO 81501

Quality Assurance Report
Level II

L669073

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

November 27, 2013

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
2-Chloronaphthalene	mg/l	.002	0.00194	97.0	81.1-129	WG693000
2-Methylnaphthalene	mg/l	.002	0.00165	82.4	69.8-134	WG693000
Acenaphthene	mg/l	.002	0.00181	90.7	80.8-128	WG693000
Acenaphthylene	mg/l	.002	0.00163	81.5	77.2-132	WG693000
Anthracene	mg/l	.002	0.00195	97.6	78.4-136	WG693000
Benzo(a)anthracene	mg/l	.002	0.00200	99.9	69.2-141	WG693000
Benzo(a)pyrene	mg/l	.002	0.00178	89.0	71.1-135	WG693000
Benzo(b)fluoranthene	mg/l	.002	0.00183	91.7	69.5-140	WG693000
Benzo(g,h,i)perylene	mg/l	.002	0.00174	86.9	64.6-138	WG693000
Benzo(k)fluoranthene	mg/l	.002	0.00189	94.5	69.3-144	WG693000
Chrysene	mg/l	.002	0.00212	106.	75.6-138	WG693000
Dibenz(a,h)anthracene	mg/l	.002	0.00172	86.1	64.1-139	WG693000
Fluoranthene	mg/l	.002	0.00223	112.	78.6-135	WG693000
Fluorene	mg/l	.002	0.00187	93.5	78.3-131	WG693000
Indeno(1,2,3-cd)pyrene	mg/l	.002	0.00178	89.2	64.8-140	WG693000
Naphthalene	mg/l	.002	0.00153	76.7*	80.2-126	WG693000
Phenanthrene	mg/l	.002	0.00186	92.9	79.6-130	WG693000
Pyrene	mg/l	.002	0.00191	95.4	76.6-134	WG693000
2-Fluorobiphenyl				98.00	64.4-143	WG693000
Nitrobenzene-d5				81.70	61.3-162	WG693000
p-Terphenyl-d14				98.60	55.3-145	WG693000
pH	su	6.96	6.90	99.1	98.3-101.7	WG693431
Chloride	mg/l	40	40.6	102.	90-110	WG693199
Sulfate	mg/l	40	40.9	102.	90-110	WG693199
Barium	mg/l	1	1.01	101.	85-115	WG693033
Cadmium	mg/l	1	1.01	101.	85-115	WG693033
Calcium	mg/l	10	9.83	98.0	85-115	WG693033
Chromium	mg/l	1	1.01	101.	85-115	WG693033
Copper	mg/l	1	0.985	98.0	85-115	WG693033
Lead	mg/l	1	1.01	101.	85-115	WG693033
Magnesium	mg/l	10	10.1	101.	85-115	WG693033
Nickel	mg/l	1	0.889	89.0	85-115	WG693033
Potassium	mg/l	10	9.42	94.0	85-115	WG693033
Selenium	mg/l	1	0.960	96.0	85-115	WG693033
Silver	mg/l	1	0.966	97.0	85-115	WG693033
Sodium	mg/l	10	9.54	95.0	85-115	WG693033
Zinc	mg/l	1	0.985	98.0	85-115	WG693033
Arsenic	mg/l	.05	0.0564	113.	85-115	WG693293

Analyte	Units	Laboratory Control Sample Duplicate		%Rec	Limit	RPD	Limit	Batch
		Result	Ref					
TPH (GC/FID) Low Fraction	mg/l	4.74	4.80	86.0	67-132	1.23	20	WG692785
a,a,a-Trifluorotoluene(FID)				98.30	62-128			WG692785
Benzene	mg/l	0.0487	0.0496	97.0	70-130	1.85	20	WG692785
Ethylbenzene	mg/l	0.0493	0.0502	99.0	70-130	1.70	20	WG692785
Toluene	mg/l	0.0484	0.0495	97.0	70-130	2.24	20	WG692785
Total Xylene	mg/l	0.149	0.153	100.	70-130	2.09	20	WG692785
a,a,a-Trifluorotoluene(PID)				99.80	55-122			WG692785

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



YOUR LAB OF CHOICE

Walter Env. & Eng. Group -CO
Scott Carmichael
115 N 5th Street, Suite 340

Grand Junction, CO 81501

Quality Assurance Report
Level II

L669073

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

November 27, 2013

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Dissolved Solids	mg/l	8970	8610	102.	85-115	4.10	5	WG692940
1-Methylnaphthalene	mg/l	0.00171	0.00163	85.0	71.2-137	4.53	20	WG693000
2-Chloronaphthalene	mg/l	0.00202	0.00194	101.	81.1-129	4.07	20	WG693000
2-Methylnaphthalene	mg/l	0.00171	0.00165	86.0	69.8-134	3.81	20	WG693000
Acenaphthene	mg/l	0.00189	0.00181	95.0	80.8-128	4.33	20	WG693000
Acenaphthylene	mg/l	0.00171	0.00163	85.0	77.2-132	4.77	20	WG693000
Anthracene	mg/l	0.00205	0.00195	103.	78.4-136	5.03	20	WG693000
Benzo(a)anthracene	mg/l	0.00209	0.00200	105.	69.2-141	4.65	20	WG693000
Benzo(a)pyrene	mg/l	0.00188	0.00178	94.0	71.1-135	5.31	20	WG693000
Benzo(b)fluoranthene	mg/l	0.00188	0.00183	94.0	69.5-140	2.52	20	WG693000
Benzo(g,h,i)perylene	mg/l	0.00185	0.00174	92.0	64.6-138	6.36	20	WG693000
Benzo(k)fluoranthene	mg/l	0.00203	0.00189	101.	69.3-144	7.04	20	WG693000
Chrysene	mg/l	0.00225	0.00212	112.	75.6-138	6.01	20	WG693000
Dibenz(a,h)anthracene	mg/l	0.00183	0.00172	92.0	64.1-139	6.29	20	WG693000
Fluoranthene	mg/l	0.00232	0.00223	116.	78.6-135	3.97	20	WG693000
Fluorene	mg/l	0.00195	0.00187	98.0	78.3-131	4.20	20	WG693000
Indeno(1,2,3-cd)pyrene	mg/l	0.00189	0.00178	94.0	64.8-140	5.79	20	WG693000
Naphthalene	mg/l	0.00160	0.00153	80*	80.2-126	4.47	20	WG693000
Phenanthrene	mg/l	0.00194	0.00186	97.0	79.6-130	4.08	20	WG693000
Pyrene	mg/l	0.00202	0.00191	101.	76.6-134	5.56	20	WG693000
2-Fluorobiphenyl				103.0	64.4-143			WG693000
Nitrobenzene-d5				82.30	61.3-162			WG693000
p-Terphenyl-d14				104.0	55.3-145			WG693000
pH	su	6.90	6.90	99.0	98.3-101.7	0.0	20	WG693431
Chloride	mg/l	40.5	40.6	101.	90-110	0.247	20	WG693199
Sulfate	mg/l	41.1	40.9	103.	90-110	0.488	20	WG693199

Analyte	Units	Matrix Spike				Limit	Ref Samp	Batch
		MS Res	Ref Res	TV	% Rec			
Benzene	mg/l	0.0515	0.000154	.05	100.	57.2-131	L668961-01	WG692785
Ethylbenzene	mg/l	0.0522	0.000513	.05	100.	67.5-135	L668961-01	WG692785
Toluene	mg/l	0.0511	0.000110	.05	100.	63.7-134	L668961-01	WG692785
Total Xylene	mg/l	0.160	0.00355	.15	100.	65.9-138	L668961-01	WG692785
a,a,a-Trifluorotoluene(PID)					99.60	55-122		WG692785
TPH (GC/FID) Low Fraction	mg/l	4.86	0.0395	5.5	88.0	50-143	L668961-01	WG692785
a,a,a-Trifluorotoluene(FID)					98.50	62-128		WG692785
Mercury	mg/l	0.00305	0.0000259	.003	100.	80-120	L669083-01	WG693048
Chloride	mg/l	55.6	6.70	50	98.0	80-120	L669088-01	WG693199
Sulfate	mg/l	65.6	18.0	50	95.0	80-120	L669088-01	WG693199
Barium	mg/l	1.13	0.140	1	99.0	75-125	L668992-10	WG693033
Cadmium	mg/l	0.999	0.00314	1	100.	75-125	L668992-10	WG693033
Calcium	mg/l	84.5	73.6	10	110.	75-125	L668992-10	WG693033
Chromium	mg/l	0.996	0.00166	1	99.0	75-125	L668992-10	WG693033
Copper	mg/l	1.04	0.00624	1	100.	75-125	L668992-10	WG693033
Lead	mg/l	0.997	0.00570	1	99.0	75-125	L668992-10	WG693033
Magnesium	mg/l	18.1	7.98	10	100.	75-125	L668992-10	WG693033

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



YOUR LAB OF CHOICE

Walter Env. & Eng. Group -CO
Scott Carmichael
115 N 5th Street, Suite 340

Grand Junction, CO 81501

Quality Assurance Report
Level II

L669073

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

November 27, 2013

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
Nickel	mg/l	0.926	-0.00139	1	93.0	75-125	L668992-10	WG693033
Potassium	mg/l	11.9	2.18	10	97.0	75-125	L668992-10	WG693033
Selenium	mg/l	1.00	0.0129	1	99.0	75-125	L668992-10	WG693033
Silver	mg/l	0.0419	0.00242	1	4.00*	75-125	L668992-10	WG693033
Sodium	mg/l	158.	143.	10	150.*	75-125	L668992-10	WG693033
Zinc	mg/l	1.03	0.0158	1	100.	75-125	L668992-10	WG693033
Arsenic	mg/l	0.0465	0.00160	.05	90.0	75-125	L669113-20	WG693293

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
Benzene	mg/l	0.0500	0.0515	99.6	57.2-131	3.01	20	L668961-01	WG692785
Ethylbenzene	mg/l	0.0512	0.0522	101.	67.5-135	2.02	20	L668961-01	WG692785
Toluene	mg/l	0.0493	0.0511	98.4	63.7-134	3.58	20	L668961-01	WG692785
Total Xylene	mg/l	0.157	0.160	102.	65.9-138	1.92	20	L668961-01	WG692785
a,a,a-Trifluorotoluene(PID)	mg/l	4.76	4.86	100.0	55-122	2.17	20	L668961-01	WG692785
TPH (GC/FID) Low Fraction				85.8	50-143				WG692785
a,a,a-Trifluorotoluene(FID)				98.60	62-128				WG692785
Mercury	mg/l	0.00299	0.00305	98.7	80-120	2.12	20	L669083-01	WG693048
Chloride	mg/l	55.4	55.6	97.4	80-120	0.360	20	L669088-01	WG693199
Sulfate	mg/l	65.7	65.6	95.4	80-120	0.152	20	L669088-01	WG693199
Barium	mg/l	1.12	1.13	97.8	75-125	1.00	20	L668992-10	WG693033
Cadmium	mg/l	0.989	0.999	98.6	75-125	1.00	20	L668992-10	WG693033
Calcium	mg/l	84.1	84.5	105.	75-125	1.00	20	L668992-10	WG693033
Chromium	mg/l	0.989	0.996	98.7	75-125	1.00	20	L668992-10	WG693033
Copper	mg/l	1.03	1.04	102.	75-125	1.00	20	L668992-10	WG693033
Lead	mg/l	0.988	0.997	98.2	75-125	1.00	20	L668992-10	WG693033
Magnesium	mg/l	18.0	18.1	100.	75-125	1.00	20	L668992-10	WG693033
Nickel	mg/l	0.921	0.926	92.2	75-125	1.00	20	L668992-10	WG693033
Potassium	mg/l	11.9	11.9	97.3	75-125	0.0	20	L668992-10	WG693033
Selenium	mg/l	1.00	1.00	98.8	75-125	0.0	20	L668992-10	WG693033
Silver	mg/l	0.0408	0.0419	3.84*	75-125	2.00	20	L668992-10	WG693033
Sodium	mg/l	160.	158.	167.*	75-125	1.00	20	L668992-10	WG693033
Zinc	mg/l	1.02	1.03	100.	75-125	1.00	20	L668992-10	WG693033
Arsenic	mg/l	0.0464	0.0465	89.6	75-125	0.215	20	L669113-20	WG693293

Post Spike

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



YOUR LAB OF CHOICE

Walter Env. & Eng. Group -CO
Scott Carmichael
115 N 5th Street, Suite 340

Grand Junction, CO 81501

Quality Assurance Report
Level II
L669073

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

November 27, 2013

Post Spike

Serial Dilution

Batch number /Run number / Sample number cross reference

WG692785: R2857429: L669073-01
WG693048: R2857820: L669073-01
WG692940: R2857830: L669073-01
WG693000: R2857848: L669073-01
WG693431: R2858321: L669073-01
WG693199: R2858489: L669073-01
WG693033: R2859159: L669073-01
WG693570: R2859363: L669073-01
WG693571: R2859364: L669073-01
WG693293: R2859495: L669073-01
WG693243: R2859630 R2860070 R2860443: L669073-01

* * 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.'



YOUR LAB OF CHOICE

Walter Env. & Eng. Group -CO
Scott Carmichael
115 N 5th Street, Suite 340

Grand Junction, CO 81501

Quality Assurance Report
Level II

L669073

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

November 27, 2013

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.