



Wednesday, January 04, 2012

Phil Cavendor  
AUC, LLC  
1536 Cole Blvd  
Suite 330  
Lakewood, CO 80401

RE: Reno Creek Project  
Orde

r No.: S1111239

Dear Phil Cavendor:

Inter-Mountain Laboratories received sample SM3-003-111115 on November 15, 2011.

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Lacey Ketron  
Project Manager

xc: File  
Encl.



Date: 1/4/2012

**CLIENT:** AUC LLC  
**Project:** Reno Creek Project  
**Lab Order:** S1111239

**CASE NARRATIVE**  
**Report ID:** S1111239001

Sample SM3-003-111115 was received on November 15, 2011.

All samples were received and analyzed within the EPA recommended holding times, except those noted in this case narrative. Samples were analyzed using the methods outlined in the following references:

- U.S.E.P.A. 600 "Methods for Chemical Analysis of Water and Wastes", 1993
- "Standard Methods For The Examination of Water and Wastewater", 20th ed., 1998
- Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, 3rd Edition
- Methods indicated with the Monday, March 12, 2007 Federal Register, 40 CFR Part 122, 136 et al.

All Quality Control parameters met the acceptance criteria defined by EPA and Inter-Mountain Laboratories except as indicated in this case narrative.

For the purposes of this report, the Reporting Limit (RL) is the Practical Quantitation Limit (PQL).

Radon 222 was analyzed through ALS Laboratory Group Certification #: CO00078.

Qualifiers by sample

- S1111346-001 - Cations/Sodium - Spike Recovery outside accepted recovery limits (1)
- MB-R77480 - General Parameters/Radon-222 - Analyzed by a contract laboratory
- LCS-R77480 - General Parameters/Radon-222 - Analyzed by a contract laboratory
- S1111239-001 - General Parameters/Radon-222 - Analyzed by a contract laboratory

(1) Spike recovery outside acceptance criteria due to presence of analyte in the sample that greatly exceeded level of spike used. Data approved because all other QC were within acceptance limits.

Reviewed by:

Lacey Ketron, Water Lab Supervisor



## Sample Analysis Report

**Company:** AUC LLC  
1536 Cole Blvd  
Lakewood, CO 80401

**Date Reported** 1/4/2012  
**Report ID** S1111239001

**ProjectName:** Reno Creek Project  
**Lab ID:** S1111239-001  
**ClientSample ID:** SM3-003-111115  
**COC:** RC 08408

**WorkOrder:** S1111239  
**CollectionDate:** 11/15/2011 2:30:00 PM  
**DateReceived:** 11/15/2011 4:25:00 PM  
**FieldSampler:** TN  
**Matrix:** Water

## Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init
<b>Field</b>						
pH	6.45	s.u.			Field	11/15/2011 2:30:00 PM
Conductivity	2349	µmhos/cm			Field	11/15/2011 2:30:00 PM
Dissolved Oxygen	4.30	mg/L			Field	11/15/2011 2:30:00 PM
Turbidity	47.1	NTU			Field	11/15/2011 2:30:00 PM
Temperature	8.49	°C			Field	11/15/2011 2:30:00 PM
Oxygen Reduction Potential (ORP)	84.9	mV			Field	11/15/2011 2:30:00 PM
Water Level Reading 1	73.09	Ft			Field	11/15/2011 2:30:00 PM
<b>Anions/Cations</b>						
Alkalinity, Total (As CaCO3)	270	mg/L		5	SM 2320B	11/22/2011 3:16:33 PM KO
Alkalinity, Bicarbonate as HCO3	329	mg/L		5	SM 2320B	11/22/2011 3:16:33 PM KO
Alkalinity, Carbonate as CO3	ND	mg/L		5	SM 2320B	11/22/2011 3:16:33 PM KO
Chloride	12	mg/L		1	EPA 300.0	11/22/2011 2:31:00 PM AMB
Fluoride	0.1	mg/L		0.1	SM 4500FC	11/17/2011 6:41:44 PM AMB
Nitrogen, Nitrate-Nitrite (as N)	0.6	mg/L		0.1	EPA 353.2	11/18/2011 2:43:00 PM MEL
Sulfate	1100	mg/L		1	EPA 300.0	11/22/2011 2:31:00 PM AMB
Calcium	286	mg/L		1	EPA 200.7	11/17/2011 7:10:14 PM DG
Magnesium	64	mg/L		1	EPA 200.7	11/22/2011 3:09:21 PM AB
Potassium	14	mg/L		1	EPA 200.7	11/17/2011 7:10:14 PM DG
Sodium	207	mg/L		1	EPA 200.7	11/17/2011 7:10:14 PM DG
Nitrogen, Ammonia (As N)	ND	mg/L		0.1	EPA 350.1	11/21/2011 4:39:00 PM MB
Silica as SiO2	9	mg/L		1	EPA 200.7	11/17/2011 7:10:14 PM DG
<b>General Parameters</b>						
pH	7.8	s.u.		0.1	SM 4500 H B	11/17/2011 6:41:44 PM AMB
Electrical Conductivity	2190	µmhos/cm		5	SM 2510B	11/17/2011 6:41:44 PM AMB
Total Dissolved Solids (180)	1940	mg/L		10	SM 2540	11/17/2011 8:55:00 AM AF
<b>Data Quality</b>						
Cation Sum	28.87	meq/L		0.01	SM 1030E	11/28/2011 8:56:58 AM LJK
Anion Sum	28.68	meq/L		0.01	SM 1030E	11/28/2011 8:56:58 AM LJK
Cation-Anion Balance (± 5%)	0.31	%		0.01	SM 1030E	11/28/2011 8:56:58 AM LJK
Solids, Total Dissolved (Calc)	1860	mg/L		10	SM 1030E	11/28/2011 8:56:58 AM LJK
Calculated TDS/TDS Ratio (0.80-1.20)	1.04	dec. %		0.01	Calculation	11/28/2011 8:58:38 AM LJK

These results apply only to the samples tested.


## RL - Reporting Limit

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level
- C Calculated Value
- H Holding times for preparation or analysis exceeded
- L Analyzed by a contract laboratory
- ND Not Detected at the Reporting Limit
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- M Value exceeds Monthly Ave or MCL
- O Outside the Range of Dilutions

Reviewed by:

  
Lacey Ketron, Water Lab Supervisor



### Sample Analysis Report

**Company:** AUC LLC  
 1536 Cole Blvd  
 Lakewood, CO 80401

**ProjectName:** Reno Creek Project  
**Lab ID:** S1111239-001  
**ClientSample ID:** SM3-003-111115  
**COC:** RC 08408

**Date Reported:** 1/4/2012  
**Report ID:** S1111239001

**WorkOrder:** S1111239  
**CollectionDate:** 11/15/2011 2:30:00 PM  
**DateReceived:** 11/15/2011 4:25:00 PM  
**FieldSampler:** TN  
**Matrix:** Water

#### Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init
<b>Metals - Dissolved</b>						
Aluminum	ND	mg/L		0.1	EPA 200.7	11/17/2011 7:10:14 PM DG
Arsenic	0.005	mg/L		0.001	EPA 200.8	11/16/2011 5:34:00 PM MS
Barium	ND	mg/L		0.1	EPA 200.8	11/16/2011 5:34:00 PM MS
Boron	ND	mg/L		0.1	EPA 200.7	11/17/2011 7:10:14 PM DG
Cadmium	ND	mg/L		0.001	EPA 200.8	11/16/2011 5:34:00 PM MS
Chromium	ND	mg/L		0.01	EPA 200.7	11/17/2011 7:10:14 PM DG
Copper	ND	mg/L		0.01	EPA 200.8	11/16/2011 5:34:00 PM MS
Iron	ND	mg/L		0.05	EPA 200.7	11/17/2011 7:10:14 PM DG
Lead	ND	mg/L		0.01	EPA 200.8	11/16/2011 5:34:00 PM MS
Manganese	0.18	mg/L		0.01	EPA 200.7	11/17/2011 7:10:14 PM DG
Mercury	ND	mg/L		0.001	EPA 245.1	11/18/2011 11:54:11 AM BK
Molybdenum	ND	mg/L		0.01	EPA 200.8	11/16/2011 5:34:00 PM MS
Nickel	ND	mg/L		0.05	EPA 200.7	11/17/2011 7:10:14 PM DG
Selenium	ND	mg/L		0.005	EPA 200.8	11/16/2011 5:34:00 PM MS
Uranium	0.0010	mg/L		0.0003	EPA 200.8	11/16/2011 5:34:00 PM MS
Vanadium	ND	mg/L		0.1	EPA 200.8	11/16/2011 5:34:00 PM MS
Zinc	0.03	mg/L		0.01	EPA 200.7	11/17/2011 7:10:14 PM DG
<b>Metals - Suspended</b>						
Uranium	0.0004	mg/L		0.0003	EPA 200.8	11/19/2011 1:14:00 AM MS
<b>Metals - Total</b>						
Iron	2.18	mg/L		0.05	EPA 200.7	11/18/2011 5:25:56 PM DG
Manganese	0.20	mg/L		0.01	EPA 200.7	11/18/2011 5:25:56 PM DG

These results apply only to the samples tested.

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- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
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- O Outside the Range of Dilutions

Reviewed by:   
 Lacey Ketron, Water Lab Supervisor



## Sample Analysis Report

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1536 Cole Blvd  
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**Date Reported:** 1/4/2012  
**Report ID:** S1111239001

**ProjectName:** Reno Creek Project  
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**FieldSampler:** TN  
**Matrix:** Water

## Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init	
<b>Radionuclides - Dissolved</b>							
Gross Alpha	ND	pCi/L		5	SM 7110B	12/7/2011 8:45:00 PM	SH
Gross Alpha Precision (±)	NA	pCi/L			SM 7110B	12/7/2011 8:45:00 PM	SH
Gross Beta	7.6	pCi/L		7	SM 7110B	12/7/2011 8:45:00 PM	SH
Gross Beta Precision (±)	4.1	pCi/L			SM 7110B	12/7/2011 8:45:00 PM	SH
Lead 210	ND	pCi/L		1	OTW01	11/30/2011 11:05:00 AM	SH
Lead 210 Precision (±)	NA	pCi/L			OTW01	11/30/2011 11:05:00 AM	SH
Polonium 210	ND	pCi/L		1	OTW01	11/29/2011 5:17:00 PM	SH
Polonium 210 Precision (±)	NA	pCi/L			OTW01	11/29/2011 5:17:00 PM	SH
Radium 226	0.9	pCi/L		0.2	SM 7500-Ra B	12/5/2011 5:02:00 PM	SH
Radium 226 Precision (±)	0.1	pCi/L			SM 7500-Ra B	12/5/2011 5:02:00 PM	SH
Radium 228	ND	pCi/L		1	Ra-05	12/23/2011 5:05:00 PM	SH
Radium 228 Precision (±)	NA	pCi/L			Ra-05	12/23/2011 5:05:00 PM	SH
Thorium 230	ND	pCi/L		0.2	ACW10	12/1/2011 9:21:00 AM	WL
Thorium 230 Precision (±)	NA	pCi/L			ACW10	12/1/2011 9:21:00 AM	WL
<b>Radionuclides - Suspended</b>							
Lead 210	1.5	pCi/L		1	OTW01	11/30/2011 11:05:00 AM	SH
Lead 210 Precision (±)	0.5	pCi/L			OTW01	11/30/2011 11:05:00 AM	SH
Polonium 210	ND	pCi/L		1	OTW01	11/29/2011 5:17:00 PM	SH
Polonium 210 Precision (±)	NA	pCi/L			OTW01	11/29/2011 5:17:00 PM	SH
Radium 226	0.4	pCi/L		0.2	SM 7500-Ra B	12/1/2011 12:35:00 PM	SH
Radium 226 Precision (±)	0.1	pCi/L			SM 7500-Ra B	12/1/2011 12:35:00 PM	SH
Thorium 230	ND	pCi/L		0.2	ACW10	12/2/2011 9:11:00 AM	WL
Thorium 230 Precision (±)	NA	pCi/L			ACW10	12/2/2011 9:11:00 AM	WL
<b>Radionuclides - Total</b>							
Radon 222	601	pCi/L	L	50	SM7500-RN	11/16/2011	LJK
Radon 222 Precision (±)	77	pCi/L	L		SM7500-RN	11/16/2011	LJK

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- ND Not Detected at the Reporting Limit
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- M Value exceeds Monthly Ave or MCL
- O Outside the Range of Dilutions

Reviewed by:   
Lacey Ketron, Water Lab Supervisor



### ANALYTICAL QC SUMMARY REPORT

**CLIENT:** AUC LLC  
**Work Order:** S1111239  
**Project:** Reno Creek Project

**Date:** 1/4/2012  
**Report ID:** S1111239001

**Alkalinity**

Sample Type **MBLK** Units: mg/L

Sample ID	RunNo: 77236	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
BLANK	11/22/11 14:15	Alkalinity, Total (As CaCO3)	ND	5					

Sample Type **LCS** Units: mg/L

Sample ID	RunNo: 77236	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
ATQC	11/22/11 14:05	Alkalinity, Total (As CaCO3)	594	5	601		98.9	90 - 110	

Sample Type **DUP** Units: mg/L

Sample ID	RunNo: 77236	Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual
S1111298-005AD	11/22/11 15:45	Alkalinity, Bicarbonate as HCO3	587	5	591	0.597		20	
		Alkalinity, Carbonate as CO3	ND	5	ND			20	
		Alkalinity, Total (As CaCO3)	481	5	484	0.597		20	

**Conductivity**

Sample Type **MBLK** Units: µmhos/cm

Sample ID	RunNo: 77050	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
BLANK	11/17/11 11:18	Electrical Conductivity	ND	5					

Sample Type **LCS** Units: µmhos/cm

Sample ID	RunNo: 77050	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
ATQC	11/17/11 11:09	Electrical Conductivity	1070	5	1120		95.3	90 - 110	

Sample Type **DUP** Units: µmhos/cm

Sample ID	RunNo: 77050	Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual
S1111240-003AD	11/17/11 19:12	Electrical Conductivity	133	5	134	0.596		20	

- Qualifiers:**
- B Analyte detected in the associated Method Blank
  - H Holding times for preparation or analysis exceeded
  - L Analyzed by a contract laboratory
  - O Outside the Range of Dilutions
  - S Spike Recovery outside accepted recovery limits
  - E Value above quantitation range
  - J Analyte detected below quantitation limits
  - ND Not Detected at the Reporting Limit
  - R RPD outside accepted recovery limits



### ANALYTICAL QC SUMMARY REPORT

**CLIENT:** AUC LLC  
**Work Order:** S1111239  
**Project:** Reno Creek Project

**Date:** 1/4/2012  
**Report ID:** S1111239001

**Dissolved Mercury by EPA 245.1 - Water**

Sample Type **MBLK** Units: mg/L

Sample ID	RunNo: 77077	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
LRB	11/18/11 8:39	Mercury	ND	0.001					

Sample Type **LCS** Units: mg/L

Sample ID	RunNo: 77077	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
LCS	11/18/11 8:37	Mercury	0.002	0.001	0.002		103	85 - 115	

Sample Type **MS** Units: mg/L

Sample ID	RunNo: 77077	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
S1111235-027C	11/18/11 11:40	Mercury	0.002	0.001	0.00244	ND	98.2	70 - 130	

Sample Type **MSD** Units: mg/L

Sample ID	RunNo: 77077	Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual
S1111235-027C	11/18/11 11:41	Mercury	0.002	0.001	0.002	2.08		20	

Sample Type **DUP** Units: mg/L

Sample ID	RunNo: 77077	Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual
S1111235-027C	11/18/11 11:38	Mercury	ND	0.001	ND			20	

- Qualifiers:**
- B Analyte detected in the associated Method Blank
  - H Holding times for preparation or analysis exceeded
  - L Analyzed by a contract laboratory
  - O Outside the Range of Dilutions
  - S Spike Recovery outside accepted recovery limits
  - E Value above quantitation range
  - J Analyte detected below quantitation limits
  - ND Not Detected at the Reporting Limit
  - R RPD outside accepted recovery limits

**ANALYTICAL QC SUMMARY REPORT**

**CLIENT:** AUC LLC  
**Work Order:** S1111239  
**Project:** Reno Creek Project

**Date:** 1/4/2012  
**Report ID:** S1111239001

**Dissolved Metals by ICP - EPA 200.7 - Water**Sample Type **MBLK** Units: mg/L

Sample ID	RunNo: 77052	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
MBLK DISS/CAT	11/17/11 10:19	Aluminum	ND	0.1					
		Boron	ND	0.1					
		Chromium	ND	0.01					
		Iron	ND	0.05					
		Manganese	ND	0.02					
		Nickel	ND	0.01					
		Zinc	ND	0.01					

Sample Type **LCS** Units: mg/L

Sample ID	RunNo: 77052	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
DISS LCS Q	11/17/11 10:22	Aluminum	1.0	0.1	1		99.2	85 - 115	
		Boron	1.0	0.1	1		97.1	85 - 115	
		Chromium	1.01	0.01	1		101	85 - 115	
		Iron	1.02	0.05	1		102	85 - 115	
		Manganese	1.04	0.02	1		104	85 - 115	
		Nickel	1.05	0.01	1		105	85 - 115	
		Zinc	1.03	0.01	1		103	85 - 115	

Sample Type **MS** Units: mg/L

Sample ID	RunNo: 77052	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
S1111237-001DS	11/17/11 18:55	Aluminum	0.5	0.1	0.5	ND	104	70 - 130	
		Boron	0.6	0.1	0.5	ND	101	70 - 130	
		Chromium	0.52	0.01	0.5	ND	103	70 - 130	
		Iron	0.53	0.05	0.5	ND	103	70 - 130	
		Manganese	0.57	0.02	0.5	0.06	101	70 - 130	
		Nickel	0.51	0.01	0.5	ND	102	70 - 130	
		Zinc	0.50	0.01	0.5	ND	99.6	70 - 130	

Sample Type **MSD** Units: mg/L

Sample ID	RunNo: 77052	Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual
S1111237-001DSD	11/17/11 18:58	Aluminum	0.5	0.1	0.5	2.85		20	
		Boron	0.5	0.1	0.6	1.22		20	
		Chromium	0.50	0.01	0.52	2.48		20	
		Iron	0.52	0.05	0.53	1.14		20	
		Manganese	0.56	0.02	0.57	2.03		20	
		Nickel	0.50	0.01	0.51	1.79		20	
		Zinc	0.50	0.01	0.50	0.0402		20	

**Qualifiers:**

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
L	Analyzed by a contract laboratory	ND	Not Detected at the Reporting Limit
O	Outside the Range of Dilutions	R	RPD outside accepted recovery limits
S	Spike Recovery outside accepted recovery limits		





### ANALYTICAL QC SUMMARY REPORT

**CLIENT:** AUC LLC  
**Work Order:** S1111239  
**Project:** Reno Creek Project

**Date:** 1/4/2012  
**Report ID:** S1111239001

**Dissolved Metals by ICP - EPA 200.7 - Water**

Sample Type **DUP** Units: mg/L

Sample ID	RunNo: 77052	Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual
S1111236-001DD	11/17/11 18:51	Aluminum	ND	0.1	ND			20	
		Boron	ND	0.1	ND			20	
		Chromium	ND	0.01	ND			20	
		Iron	ND	0.05	ND			20	
		Manganese	0.04	0.02	0.04	0.509		20	
		Nickel	ND	0.01	ND			20	
		Zinc	ND	0.01	ND			20	

**Dissolved Metals by ICPMS EPA 200.8 - Water**

Sample Type **MBLK** Units: mg/L

Sample ID	RunNo: 77013	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
BLK	11/16/11 12:43	Arsenic	ND	0.005					
		Barium	ND	0.5					
		Cadmium	ND	0.002					
		Copper	ND	0.01					
		Lead	ND	0.02					
		Molybdenum	ND	0.02					
		Selenium	ND	0.005					
		Uranium	ND	0.001					
		Vanadium	ND	0.02					

Sample Type **LCS** Units: mg/L

Sample ID	RunNo: 77013	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
LCS	11/16/11 12:39	Arsenic	0.094	0.005	0.1		94.3	85 - 115	
		Barium	ND	0.5	0.1		91.9	85 - 115	
		Cadmium	0.095	0.002	0.1		94.8	85 - 115	
		Copper	0.10	0.01	0.1		96.3	85 - 115	
		Lead	0.10	0.02	0.1		99.0	85 - 115	
		Molybdenum	0.09	0.02	0.1		93.6	85 - 115	
		Selenium	0.097	0.005	0.1		97.2	85 - 115	
		Uranium	0.098	0.001	0.1		97.5	85 - 115	
		Vanadium	0.09	0.02	0.1		94.4	85 - 115	

- Qualifiers:**
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### ANALYTICAL QC SUMMARY REPORT

**CLIENT:** AUC LLC  
**Work Order:** S1111239  
**Project:** Reno Creek Project

**Date:** 1/4/2012  
**Report ID:** S1111239001

**Dissolved Metals by ICPMS EPA 200.8 - Water**

Sample Type **MS** Units: mg/L

Sample ID	RunNo: 77013	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
S1111239-001DS	11/16/11 17:43	Arsenic	1.02	0.005	1.1	ND	92.0	70 - 130	
		Barium	1.0	0.5	1.1	ND	90.4	70 - 130	
		Cadmium	0.990	0.002	1.1	ND	90.0	70 - 130	
		Copper	1.05	0.01	1.1	ND	95.1	70 - 130	
		Lead	1.03	0.02	1.1	ND	93.6	70 - 130	
		Molybdenum	1.03	0.02	1.1	ND	93.5	70 - 130	
		Selenium	1.03	0.005	1.1	ND	93.9	70 - 130	
		Uranium	1.04	0.001	1.1	0.001	94.7	70 - 130	
		Vanadium	1.05	0.02	1.1	ND	95.5	70 - 130	

Sample Type **MSD** Units: mg/L

Sample ID	RunNo: 77013	Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual
S1111239-001DMSD	11/16/11 17:56	Arsenic	1.02	0.005	1.02	0.0721		20	
		Barium	1.0	0.5	1.0	1.53		20	
		Cadmium	1.02	0.002	0.990	2.74		20	
		Copper	0.99	0.01	1.05	5.22		20	
		Lead	1.01	0.02	1.03	1.53		20	
		Molybdenum	1.03	0.02	1.03	0.0315		20	
		Selenium	1.03	0.005	1.03	0.572		20	
		Uranium	1.03	0.001	1.04	0.914		20	
		Vanadium	1.06	0.02	1.05	0.616		20	

Sample Type **DUP** Units: mg/L

Sample ID	RunNo: 77013	Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual
S1111239-001DD	11/16/11 17:38	Arsenic	ND	0.005	ND			20	
		Barium	ND	0.5	ND			20	
		Cadmium	ND	0.002	ND			20	
		Copper	ND	0.01	ND			20	
		Lead	ND	0.02	ND			20	
		Molybdenum	ND	0.02	ND			20	
		Selenium	ND	0.005	ND			20	
		Uranium	ND	0.001	0.001			20	
		Vanadium	ND	0.02	ND			20	

- Qualifiers:**
- B Analyte detected in the associated Method Blank
  - H Holding times for preparation or analysis exceeded
  - L Analyzed by a contract laboratory
  - O Outside the Range of Dilutions
  - S Spike Recovery outside accepted recovery limits
  - E Value above quantitation range
  - J Analyte detected below quantitation limits
  - ND Not Detected at the Reporting Limit
  - R RPD outside accepted recovery limits



### ANALYTICAL QC SUMMARY REPORT

**CLIENT:** AUC LLC  
**Work Order:** S1111239  
**Project:** Reno Creek Project

**Date:** 1/4/2012  
**Report ID:** S1111239001

**Fluoride by SM 4500**

Sample Type **MBLK** Units: mg/L

Sample ID	RunNo: 77050	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
BLANK	11/17/11 11:18	Fluoride	ND	0.1					

Sample Type **LCS** Units: mg/L

Sample ID	RunNo: 77050	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
ATQC	11/17/11 11:09	Fluoride	3.0	0.1	2.96		102	90 - 110	

Sample Type **MS** Units: mg/L

Sample ID	RunNo: 77050	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
S1111235-020ASPK	11/17/11 16:16	Fluoride	2.4	0.1	2.5	ND	93.4	80 - 120	

Sample Type **DUP** Units: mg/L

Sample ID	RunNo: 77050	Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual
S1111235-007AD	11/17/11 13:53	Fluoride	0.1	0.1	0.1	0.516		20	

**Gross Alpha, Beta by SM 7110B**

Sample Type **MBLK** Units: pCi/L

Sample ID	RunNo: 77741	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
MB11-340	12/06/11 21:26	Gross Alpha (Dissolved)	ND	2					
		Gross Beta (Dissolved)	ND	3					

Sample Type **LCS** Units: pCi/L

Sample ID	RunNo: 77741	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
LCS11-340	12/06/11 21:26	Gross Alpha (Dissolved)	96	2	73.6		130	83 - 133	
		Gross Beta (Dissolved)	138	3	126		110	88 - 115	

Sample Type **MS** Units: pCi/L

Sample ID	RunNo: 77741	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
S1111040-002EMS	12/06/11 21:26	Gross Alpha (Dissolved)	92	2	98.1	6	88.4	48 - 153	
		Gross Beta (Dissolved)	196	3	168	13	109	60 - 140	

Sample Type **DUP** Units: pCi/L

Sample ID	RunNo: 77741	Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual
S1111236-001FDUP	12/06/11 21:26	Gross Alpha (Dissolved)	49	2	52	5.09		20	
		Gross Beta (Dissolved)	17	3	17	3.58		20	

- Qualifiers:**
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  - H Holding times for preparation or analysis exceeded
  - L Analyzed by a contract laboratory
  - O Outside the Range of Dilutions
  - S Spike Recovery outside accepted recovery limits
  - E Value above quantitation range
  - J Analyte detected below quantitation limits
  - ND Not Detected at the Reporting Limit
  - R RPD outside accepted recovery limits



### ANALYTICAL QC SUMMARY REPORT

**CLIENT:** AUC LLC  
**Work Order:** S1111239  
**Project:** Reno Creek Project

**Date:** 1/4/2012  
**Report ID:** S1111239001

**Anions by ION Chromatography**

Sample Type **MBLK** Units: mg/L

Sample ID	RunNo: 77231	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
BLK	11/22/11 12:29	Chloride	ND	1					
		Sulfate	ND	1					

Sample Type **LCS** Units: mg/L

Sample ID	RunNo: 77231	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
DIONEX	11/22/11 12:04	Chloride	31	1	30		103	90 - 110	
		Sulfate	146	1	150		97.4	90 - 110	

Sample Type **MS** Units: mg/L

Sample ID	RunNo: 77231	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
S1111336-008ASPK	11/22/11 21:01	Chloride	59	1	55	8	93.4	80 - 120	
		Sulfate	739	1	440	272	106	80 - 120	

Sample Type **DUP** Units: mg/L

Sample ID	RunNo: 77231	Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual
S1111336-008A	11/22/11 20:49	Chloride	7	1	8	7.93		20	
		Sulfate	275	1	272	0.839		20	

- Qualifiers:**
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  - H Holding times for preparation or analysis exceeded
  - L Analyzed by a contract laboratory
  - O Outside the Range of Dilutions
  - S Spike Recovery outside accepted recovery limits
  - E Value above quantitation range
  - J Analyte detected below quantitation limits
  - ND Not Detected at the Reporting Limit
  - R RPD outside accepted recovery limits



### ANALYTICAL QC SUMMARY REPORT

**CLIENT:** AUC LLC  
**Work Order:** S1111239  
**Project:** Reno Creek Project

**Date:** 1/4/2012  
**Report ID:** S1111239001

**Cations by ICP (Method 200.7)**

Sample Type **MBLK** Units: mg/L

Sample ID	RunNo: 77049	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
MBLK DISS/CAT	11/17/11 10:19	Calcium	ND	1					
		Magnesium	ND	1					
		Potassium	ND	1					
		Sodium	ND	1					

Sample ID	RunNo: 77244	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
MBLK DISS/CAT	11/22/11 13:40	Calcium	ND	1					
		Magnesium	ND	1					
		Potassium	ND	1					
		Sodium	ND	1					

Sample Type **LCS** Units: mg/L

Sample ID	RunNo: 77049	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
CAT LCS IML3	11/17/11 10:24	Calcium	41	1	40		102	85 - 115	
		Magnesium	40	1	40		100	85 - 115	
		Potassium	41	1	40		102	85 - 115	
		Sodium	41	1	40		102	85 - 115	

Sample ID	RunNo: 77244	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
CAT LCS IML3	11/22/11 13:45	Calcium	40	1	40		99.1	85 - 115	
		Magnesium	42	1	40		104	85 - 115	
		Potassium	40	1	40		99.9	85 - 115	
		Sodium	38	1	40		96.0	85 - 115	

Sample Type **MS** Units: mg/L

Sample ID	RunNo: 77049	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
S1111254-001AS	11/17/11 19:26	Calcium	59	1	50	6	105	70 - 130	
		Magnesium	53	1	50	ND	105	70 - 130	
		Potassium	61	1	50	4	115	70 - 130	
		Sodium	188	1	50	144	87.4	70 - 130	

Sample ID	RunNo: 77244	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
S1111346-001AS	11/22/11 15:27	Calcium	121	1	100	20	101	70 - 130	
		Magnesium	114	1	100	11	103	70 - 130	
		Potassium	157	1	100	37	120	70 - 130	
		Sodium	1150	1	100	1110	48.1	70 - 130	S

- Qualifiers:**
- B Analyte detected in the associated Method Blank
  - H Holding times for preparation or analysis exceeded
  - L Analyzed by a contract laboratory
  - O Outside the Range of Dilutions
  - S Spike Recovery outside accepted recovery limits
  - E Value above quantitation range
  - J Analyte detected below quantitation limits
  - ND Not Detected at the Reporting Limit
  - R RPD outside accepted recovery limits

**ANALYTICAL QC SUMMARY REPORT**

**CLIENT:** AUC LLC  
**Work Order:** S1111239  
**Project:** Reno Creek Project

**Date:** 1/4/2012  
**Report ID:** S1111239001

**Cations by ICP (Method 200.7)**Sample Type **MSD** Units: mg/L

Sample ID	RunNo: 77049	Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual
S1111254-001ASD	11/17/11 19:29	Calcium	57	1	59	2.41		20	
		Magnesium	52	1	53	2.01		20	
		Potassium	60	1	61	1.56		20	
		Sodium	187	1	188	0.377		20	

Sample ID	RunNo: 77244	Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual
S1111346-001ASD	11/22/11 15:30	Calcium	132	1	121	9.39		20	
		Magnesium	124	1	114	8.69		20	
		Potassium	167	1	157	6.01		20	
		Sodium	1150	1	1150	0.668		20	

Sample Type **DUP** Units: mg/L

Sample ID	RunNo: 77049	Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual
S1111253-001AD	11/17/11 19:22	Calcium	112	1	114	1.44		20	
		Magnesium	14	1	14	0.471		20	
		Potassium	10	1	10	2.02		20	
		Sodium	364	1	370	1.51		20	

Sample ID	RunNo: 77244	Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual
S1111345-001AD	11/22/11 15:23	Calcium	21	1	21	2.02		20	
		Magnesium	11	1	11	3.67		20	
		Potassium	26	1	26	1.52		20	
		Sodium	686	1	686	0.00889		20	

**Nitrogen, Ammonia (as N)**Sample Type **MBLK** Units: mg/L

Sample ID	RunNo: 77178	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
BLANK	11/21/11 16:14	Nitrogen, Ammonia (As N)	ND	0.1					

Sample Type **LCS** Units: mg/L

Sample ID	RunNo: 77178	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
QC	11/21/11 16:12	Nitrogen, Ammonia (As N)	10.5	0.1	10		105	90 - 110	

Sample Type **MS** Units: mg/L

Sample ID	RunNo: 77178	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
S1111252-001C	11/21/11 16:42	Nitrogen, Ammonia (As N)	10.4	0.1	10	ND	104	80 - 120	

Sample Type **DUP** Units: mg/L

Sample ID	RunNo: 77178	Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual
S1111252-001C	11/21/11 16:41	Nitrogen, Ammonia (As N)	ND	0.1	ND				

**Qualifiers:**

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
L	Analyzed by a contract laboratory	ND	Not Detected at the Reporting Limit
O	Outside the Range of Dilutions	R	RPD outside accepted recovery limits
S	Spike Recovery outside accepted recovery limits		



### ANALYTICAL QC SUMMARY REPORT

**CLIENT:** AUC LLC  
**Work Order:** S1111239  
**Project:** Reno Creek Project

**Date:** 1/4/2012  
**Report ID:** S1111239001

**Nitrogen, Nitrate-Nitrite (as N)**

Sample Type **MBLK** Units: mg/L

Sample ID	RunNo: 77103	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
BLK	11/18/11 12:55	Nitrogen, Nitrate-Nitrite (as N)	ND	0.1					

Sample Type **LCS** Units: mg/L

Sample ID	RunNo: 77103	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
QC	11/18/11 12:52	Nitrogen, Nitrate-Nitrite (as N)	2.3	0.1	2.31		98.7	90 - 110	

Sample Type **MS** Units: mg/L

Sample ID	RunNo: 77103	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
S1111277-002B	11/18/11 14:53	Nitrogen, Nitrate-Nitrite (as N)	11.6	0.1	10	0.4	112	80 - 120	

Sample Type **DUP** Units: mg/L

Sample ID	RunNo: 77103	Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual
S1111277-002B	11/18/11 14:52	Nitrogen, Nitrate-Nitrite (as N)	0.4	0.1	0.4	1.54		20	

- Qualifiers:**
- B Analyte detected in the associated Method Blank
  - H Holding times for preparation or analysis exceeded
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  - O Outside the Range of Dilutions
  - S Spike Recovery outside accepted recovery limits
  - E Value above quantitation range
  - J Analyte detected below quantitation limits
  - ND Not Detected at the Reporting Limit
  - R RPD outside accepted recovery limits

**ANALYTICAL QC SUMMARY REPORT**

**CLIENT:** AUC LLC  
**Work Order:** S1111239  
**Project:** Reno Creek Project

**Date:** 1/4/2012  
**Report ID:** S1111239001

**Lead 210 and Polonium 210**Sample Type **MBLK** Units: pCi/L

Sample ID	RunNo: 77562	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
MB11-325	11/30/11 11:05	Lead 210 (Dissolved)	ND	1					

Sample ID	RunNo: 77562	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
MB11-325	11/30/11 11:05	Lead 210 (Suspended)	ND	1					

Sample ID	RunNo: 77563	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
MB11-325	11/29/11 17:17	Polonium 210 (Dissolved)	ND	1					

Sample ID	RunNo: 77563	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
MB11-325	11/29/11 17:17	Polonium 210 (Suspended)	ND	1					

Sample Type **LCS** Units: pCi/L

Sample ID	RunNo: 77562	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
LCS11-325	11/30/11 11:05	Lead 210 (Dissolved)	14	1	12.8		111	67.6 - 131	
		Lead 210 (Suspended)	14	1	12.8		111	60.3 - 141	

Sample ID	RunNo: 77563	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
LCS11-325	11/29/11 17:17	Polonium 210 (Dissolved)	10	1	12.8		80.0	35.1 - 175	
		Polonium 210 (Suspended)	10	1	12.8		80.0	48.6 - 156	

Sample ID	RunNo: 77563	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
LCS11-325 PO	11/29/11 17:17	Polonium 210 (Dissolved)	5	1	3.78		120	35.1 - 175	

Sample Type **MS** Units: pCi/L

Sample ID	RunNo: 77562	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
TAP WATER MS	11/30/11 13:41	Lead 210 (Dissolved)	14	1	12.8	1	98.3	66 - 133	
		Lead 210 (Suspended)	14	1	12.8	1	98.3	62.4 - 132	

Sample ID	RunNo: 77563	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
TAP WATER MS	11/30/11 9:22	Polonium 210 (Dissolved)	12	1	12.8	ND	91.2	20.9 - 160	
		Polonium 210 (Suspended)	12	1	12.8	ND	91.2	28 - 173	

Sample Type **MSD** Units: pCi/L

Sample ID	RunNo: 77562	Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual
TAP WATER MSD	11/30/11 13:41	Lead 210 (Dissolved)	14	1	14	3.13		30	
		Lead 210 (Suspended)	14	1	14	3.13		30	

Sample ID	RunNo: 77563	Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual
TAP WATER MSD	11/30/11 9:22	Polonium 210 (Dissolved)	14	1	12	19.3		30	
		Polonium 210 (Suspended)	14	1	12	19.3		30	

**Qualifiers:**

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
L	Analyzed by a contract laboratory	ND	Not Detected at the Reporting Limit
O	Outside the Range of Dilutions	R	RPD outside accepted recovery limits
S	Spike Recovery outside accepted recovery limits		





### ANALYTICAL QC SUMMARY REPORT

**CLIENT:** AUC LLC  
**Work Order:** S1111239  
**Project:** Reno Creek Project

**Date:** 1/4/2012  
**Report ID:** S1111239001

**Lead 210 and Polonium 210**

Sample Type **DUP** Units: pCi/L

Sample ID	RunNo: 77562	Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual
S1111237-001FDUP	11/30/11 11:05	Lead 210 (Dissolved)	3	1	3	16.1		20	
Sample ID	RunNo: 77563	Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual
S1111237-001FDUP	11/29/11 17:17	Polonium 210 (Dissolved)	ND	1	ND			20	

**Radium 228**

Sample Type **MBLK** Units: pCi/L

Sample ID	RunNo: 78282	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
MB11-353	12/23/11 17:05	Radium 228 (Dissolved)	ND	1					

Sample Type **LCS** Units: pCi/L

Sample ID	RunNo: 78282	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
LCS11-353	12/23/11 17:05	Radium 228 (Dissolved)	11	1	9.99		106	74.9 - 122	

Sample Type **MS** Units: pCi/L

Sample ID	RunNo: 78282	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
S1111297-004EMS	12/23/11 17:05	Radium 228 (Dissolved)	12	1	9.99	ND	116	48.4 - 167	

Sample Type **DUP** Units: pCi/L

Sample ID	RunNo: 78282	Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual
S1111328-001FDUP	12/23/11 17:05	Radium 228 (Dissolved)	ND	1	ND			20	

- Qualifiers:**
- B Analyte detected in the associated Method Blank
  - H Holding times for preparation or analysis exceeded
  - L Analyzed by a contract laboratory
  - O Outside the Range of Dilutions
  - S Spike Recovery outside accepted recovery limits
  - E Value above quantitation range
  - J Analyte detected below quantitation limits
  - ND Not Detected at the Reporting Limit
  - R RPD outside accepted recovery limits

**ANALYTICAL QC SUMMARY REPORT**

**CLIENT:** AUC LLC  
**Work Order:** S1111239  
**Project:** Reno Creek Project

**Date:** 1/4/2012  
**Report ID:** S1111239001

**Radium 226 by SM 7500**Sample Type **MBLK** Units: pCi/L

Sample ID	RunNo: 77517	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
MB11-325	11/30/11 14:34	Radium 226 (Dissolved)	ND	0.2					

Sample ID	RunNo: 77517	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
MB11-325	12/01/11 12:35	Radium 226 (Suspended)	ND	0.2					

Sample ID	RunNo: 77672	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
MB11-333	12/05/11 17:02	Radium 226 (Dissolved)	ND	0.2					

Sample Type **LCS** Units: pCi/L

Sample ID	RunNo: 77517	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
LCS11-325	11/30/11 14:34	Radium 226 (Dissolved)	4.6	0.2	5.06		91.4	62.5 - 125	

Sample ID	RunNo: 77517	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
LCS11-325	12/01/11 12:35	Radium 226 (Suspended)	4.8	0.2	5.06		94.4	56.4 - 132	

Sample ID	RunNo: 77672	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
LCS11-333	12/05/11 17:02	Radium 226 (Dissolved)	5.0	0.2	5.06		98.8	62.5 - 125	

Sample Type **MS** Units: pCi/L

Sample ID	RunNo: 77517	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
S1111254-005DMS	11/30/11 14:34	Radium 226 (Dissolved)	5.1	0.2	5.06	ND	100	41.6 - 146	

Sample ID	RunNo: 77672	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
S1111247-002AMS	12/05/11 17:02	Radium 226 (Dissolved)	4.9	0.2	5.06	0.5	87.8	41.6 - 146	

Sample Type **DUP** Units: pCi/L

Sample ID	RunNo: 77227	Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual
S1111249-001FDUP	11/21/11 11:25	Radium 226 (Dissolved)	40.3	0.2	38.9	3.42		20	

Sample ID	RunNo: 77517	Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual
S1111254-004DDUP	11/30/11 14:34	Radium 226 (Dissolved)	ND	0.2	ND			20	

**Qualifiers:**

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
L	Analyzed by a contract laboratory	ND	Not Detected at the Reporting Limit
O	Outside the Range of Dilutions	R	RPD outside accepted recovery limits
S	Spike Recovery outside accepted recovery limits		

**ANALYTICAL QC SUMMARY REPORT**

**CLIENT:** AUC LLC  
**Work Order:** S1111239  
**Project:** Reno Creek Project

**Date:** 1/4/2012  
**Report ID:** S1111239001

**Thorium 230 in Water**Sample Type **MBLK** Units: pCi/L

Sample ID	RunNo: 77604	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
MB11-325	12/01/11 9:21	Thorium 230 (Dissolved)	ND	0.2					

Sample ID	RunNo: 77604	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
MB11-325	12/02/11 13:36	Thorium 230 (Suspended)	ND	0.2					

Sample Type **LCS** Units: pCi/L

Sample ID	RunNo: 77604	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
LCS11-325	12/01/11 9:21	Thorium 230 (Dissolved)	14	0.2	12		113	67.1 - 134	
		Thorium 230 (Suspended)	14	0.2	12		113	69.2 - 127	

Sample Type **DUP** Units: pCi/L

Sample ID	RunNo: 77604	Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual
S1111239-001F DUP	12/01/11 9:21	Thorium 230 (Dissolved)	ND	0.2	ND			20	

**Radon 222 by SM7500-RN**Sample Type **MBLK** Units: pCi/L

Sample ID	RunNo: 77480	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
MB-R77480	11/16/11 0:00	Radon-222	ND	50					L

Sample Type **LCS** Units: pCi/L

Sample ID	RunNo: 77480	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
LCS-R77480	11/16/11 0:00	Radon-222	20600	100	22500		91.6	75 - 125	L

Sample Type **DUP** Units: pCi/L

Sample ID	RunNo: 77480	Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual
S1111239-001A	11/16/11 0:00	Radon-222	560	50	600	6.99		20	L

**Silica as SiO2**Sample Type **MBLK** Units: mg/L

Sample ID	RunNo: 77061	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
MBLK DISS/CAT	11/17/11 10:19	Silica as SiO2	ND	0.1					

Sample Type **LCS** Units: mg/L

Sample ID	RunNo: 77061	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
DISS LCS Q	11/17/11 10:22	Silica as SiO2	2.1	0.1	2.14		98.6	85 - 115	

Sample Type **DUP** Units: mg/L

Sample ID	RunNo: 77061	Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual
S1111253-001DD	11/17/11 19:22	Silica as SiO2	9.2	0.1	9.5	3.28		20	

**Qualifiers:**

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
L	Analyzed by a contract laboratory	ND	Not Detected at the Reporting Limit
O	Outside the Range of Dilutions	R	RPD outside accepted recovery limits
S	Spike Recovery outside accepted recovery limits		

**ANALYTICAL QC SUMMARY REPORT**

**CLIENT:** AUC LLC  
**Work Order:** S1111239  
**Project:** Reno Creek Project

**Date:** 1/4/2012  
**Report ID:** S1111239001

**Solids By SM 2540**Sample Type **MBLK** Units: mg/L

Sample ID	RunNo: 77155	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
DI	11/17/11 8:17	Total Dissolved Solids (180)	ND	10					

Sample Type **LCS** Units: mg/L

Sample ID	RunNo: 77155	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
CONTROL	11/17/11 8:18	Total Dissolved Solids (180)	210	10	226		94.7	90 - 110	

Sample Type **DUP** Units: mg/L

Sample ID	RunNo: 77155	Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual
S1111235-010A	11/17/11 8:29	Total Dissolved Solids (180)	40	10	30	5.88		20	

**Total (200.2) Metals by EPA 200.7 ICP - Water**Sample Type **MBLK** Units: mg/L

Sample ID	RunNo: 77120	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
MB-5631	11/18/11 17:00	Iron	ND	0.05					
		Manganese	ND	0.02					

Sample Type **LCS** Units: mg/L

Sample ID	RunNo: 77120	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
LCS-5631	11/18/11 17:02	Iron	0.48	0.05	0.5		95.1	85 - 115	
		Manganese	0.20	0.02	0.2		98.0	85 - 115	

Sample Type **MS** Units: mg/L

Sample ID	RunNo: 77120	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
S1111237-001ES	11/18/11 17:18	Iron	0.57	0.05	0.5	0.09	96.4	70 - 130	
		Manganese	0.26	0.02	0.2	0.06	98.0	70 - 130	

Sample Type **MSD** Units: mg/L

Sample ID	RunNo: 77120	Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual
S1111237-001EMSD	11/18/11 17:21	Iron	0.57	0.05	0.57	0.878		20	
		Manganese	0.25	0.02	0.26	1.28		20	

Sample Type **DUP** Units: mg/L

Sample ID	RunNo: 77120	Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual
S1111236-001ED	11/18/11 17:07	Iron	0.07	0.05	0.07	4.57		20	
		Manganese	0.04	0.02	0.04	1.67		20	

**Qualifiers:**

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
L	Analyzed by a contract laboratory	ND	Not Detected at the Reporting Limit
O	Outside the Range of Dilutions	R	RPD outside accepted recovery limits
S	Spike Recovery outside accepted recovery limits		



### ANALYTICAL QC SUMMARY REPORT

**CLIENT:** AUC LLC  
**Work Order:** S1111239  
**Project:** Reno Creek Project

**Date:** 1/4/2012  
**Report ID:** S1111239001

**Suspended Natural Uranium**

Sample Type **MBLK** Units: mg/L

Sample ID	RunNo: 77138	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
BLK	11/18/11 11:31	Uranium Suspended	ND	0.0003					

Sample Type **LCS** Units: mg/L

Sample ID	RunNo: 77138	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
LCS	11/18/11 11:26	Uranium Suspended	0.101	0.0003	0.1		101	85 - 115	

Sample Type **MS** Units: mg/L

Sample ID	RunNo: 77138	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
S1111236-001FS	11/19/11 0:47	Uranium Suspended	1.06	0.0003	1.1	ND	96.3	70 - 130	

Sample Type **MSD** Units: mg/L

Sample ID	RunNo: 77138	Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual
S1111236-001FMSD	11/19/11 0:51	Uranium Suspended	1.09	0.0003	1.06	2.44		20	

Sample Type **DUP** Units: mg/L

Sample ID	RunNo: 77138	Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual
S1111236-001FD	11/19/11 0:42	Uranium Suspended	ND	0.0003	ND			20	

**pH Water**

Sample Type **LCS** Units: s.u.

Sample ID	RunNo: 77050	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
ATQC	11/17/11 11:09	pH	8.5	0.1	8.48		99.7	90 - 110	

Sample Type **DUP** Units: s.u.

Sample ID	RunNo: 77050	Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual
S1111240-003AD	11/17/11 19:12	pH	8.1	0.1	8.0	1.74		20	

- Qualifiers:**
- B Analyte detected in the associated Method Blank
  - H Holding times for preparation or analysis exceeded
  - L Analyzed by a contract laboratory
  - O Outside the Range of Dilutions
  - S Spike Recovery outside accepted recovery limits
  - E Value above quantitation range
  - J Analyte detected below quantitation limits
  - ND Not Detected at the Reporting Limit
  - R RPD outside accepted recovery limits

- CHAIN OF CUSTODY RECORD -

Client Name <b>AUC LLC</b>		Project Identification <b>Reno Creek Project</b>		Sampler (Signature/Printed) <i>Jac. Nickerson</i>		Telephone #	
Report Address pcaavendor@auc-llc.com; trickerson@treccorp.com; jshriver@treccorp.com		Contact Name <i>Jac. Nickerson</i>		ANALYSES / PARAMETERS			
Invoice Address <b>AUC LLC</b> <i>300 W. Wm. G. St 150 Casper WY 82601</i>		Email <i>trickerson@treccorp.com</i>		See Attached Table 1 (4.14, Guide 8, Radon 222)			
		Phone <i>307-265-0696</i>		See Attached Table 2 (Air Particulate)			
		Purchase Order #		See Attached Table 3 (Vegetation)			
		Quote #		See Attached Table 4 (Sediment)			
		SAMPLE IDENTIFICATION		See Attached Table 5 (Soil)			
ITEM	LAB ID (Lab Use Only)	DATE	TIME	Matrix	# of Containers	See Attached Table 8 WYPDES Discharge	REMARKS
1						See Attached Table 9 (Blanks)	
2	<i>S1111239</i>	<i>5/15/11</i>	<i>1430</i>	<i>WT</i>	<i>13</i>		<i>Stream water</i>
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
LAB COMMENTS		Relinquished By (Signature/Printed)		DATE		TIME	
<i>4.5</i>		<i>Jac. Nickerson</i>		<i>5/15/11</i>		<i>1430</i>	
		Received By (Signature/Printed)		DATE		TIME	
		<i>Jac. Nickerson</i>		<i>5/15/11</i>		<i>1430</i>	
				<i>4/16/11</i>		<i>10:07</i>	
SHIPPING INFO		MATRIX CODES		TURNAROUND TIMES		COMPLIANCE INFORMATION	
<input type="checkbox"/> UPS <input type="checkbox"/> Fed Express <input type="checkbox"/> US Mail <input type="checkbox"/> Hand Carried <input checked="" type="checkbox"/> Other		Water <input type="checkbox"/> WT Soil <input type="checkbox"/> SL Solid <input type="checkbox"/> SD Trip Blank <input type="checkbox"/> TB Other <input type="checkbox"/> OT		<input checked="" type="checkbox"/> Check desired service <input checked="" type="checkbox"/> Standard turnaround <input type="checkbox"/> RUSH - 5 Working Days <input type="checkbox"/> URGENT - < 2 Working Days Rush & Urgent Surcharges will be applied		Compliance Monitoring? <input checked="" type="checkbox"/> Y / <input type="checkbox"/> N Program (SDWA, NPDES, ...) PWSID / Permit # Chlorinated? Sample Disposal: Lab <input checked="" type="checkbox"/> Client	
ADDITIONAL REMARKS							