

RECEIVED AUGUST 20, 2008

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**FLUOR****Memorandum**

M4W41-SLF-08-859

To: H. Hampt E6-35 Date: August 19, 2008

From: S. L. Fitzgerald, Manager *by William Edward*  
 WSCF Analytical Lab

cc: w/Attachments

T. F. Dale	S3-30	J. E. Trechter	S3-30
A. J. Kopriva	S3-30	S. J. Trent	E6-35
H. K. Meznarich	S3-30	File/LB	
P. D. Mix	S3-30		

Subject: FINAL RESULTS FOR SAMPLE DELIVERY GROUP WSCF20081528 – SAF NUMBER F06-027

Reference: (1) Groundwater Protection Program-Letter of Instruction, FH-EIS-2003-MEM-001, October 31, 2002

(2) HNF-SD-CD-QAPP-017, Rev. 9, Waste Sampling & Characterization Facility Quality Assurance Plan

This letter contains the following attachments for sample delivery group WSCF20081528:

- Cover Sheet (Attachment 1)
- Narrative (Attachment 2)
- Issue Resolution Form (Attachment 3)
- Analytical Results (Attachment 4)
- Sample Receipt Information (Attachment 5)

SLF/grf

Attachments 5

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**EDMC**

M4W41-SLF-08-859

ATTACHMENT 1

**COVER SHEET**

Consisting of 2 pages  
Including cover page

## WSCF SAF NUMBER CROSS REFERENCE

Group#: WSCF20081528  
Data Deliverable Date: 06-aug-2008  
Data Deliverable: Cover Sheet

SAF#	Sample ID	WSCF#	Matrix
F06-027	B1WCT1	W08GR02838	WATER
	B1WCT2	W08GR02839	WATER
	B1WCT3	W08GR02840	WATER
	B1WCT4	W08GR02841	WATER
	B1WCT5	W08GR02842	WATER
	B1WCT6	W08GR02843	WATER
	B1WCT7	W08GR02844	WATER
	B1WCT8	W08GR02845	WATER
	B1WCT9	W08GR02846	WATER
	B1WCV0	W08GR02847	WATER
	B1WCV1	W08GR02848	WATER
	B1WCV3	W08GR02849	WATER
	B1WCV4	W08GR02850	WATER
	B1WCV5	W08GR02851	WATER
	B1WCV6	W08GR02852	WATER
	B1WCV7	W08GR02853	WATER

**M4W41-SLF-08-859**

**ATTACHMENT 2**

**NARRATIVE**

**Consisting of 3 pages  
Including cover page**

### **Introduction**

Sixteen (16) S&GRP samples were received at the WSCF Laboratory on July 22, 2008. The samples were analyzed for the analytes indicated on the attached copy of the chain of custody (COC) form in accordance with the *Groundwater Remediation Program – Letter of Instruction*, referenced in the cover letter.

The narrative (Attachment 2) will address sample characteristics, analyses requested and general information in performance of the analytical methods. A copy of proposed Issue Resolution Form (IRF) is included as Attachment 3. A Data Summary Report (Attachment 4) includes analytical results, a comment report detailing method abnormalities, tentatively identified peaks if applicable, method references, and Laboratory QC information as applicable. Copies of the chain of custody and sample receipt documentation are included as Attachment 5.

It should be noted that the attached chain of custody was stamped “ICED” by the WSCF Laboratory Sample Custodian during sample receiving, indicating the presence of ice in the sample container.

### **Analytical Methodology for Requested Analyses**

Refer to *WSCF Method References Report*, page 13, for a complete listing of approved analytical methods.

### **Inorganic Comments**

**Anions** – The regulatory hold time requirement was not met for two of these samples, but the 2X extension allowance was met for the remainder of these samples. See comment below.

Duplicate, Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with each batch in this delivery group per GRP Letter of Instruction. See pages 46 through 55 for QC details. Analytical Note(s):

- Samples B1WCT3 through B1WCT4 were not completed within the 2X hold time extension allowed by the client. Refer to e-mail direction provided by the client on extending the hold time requirement to 2X that applies to the remaining samples.
- Duplicates, Matrix Spikes and Matrix Spike Duplicates were analyzed on samples B1WCT5 and B1WCV7 of this SDG and samples B1W1B3 (SDG# 20081551, F08-133), B1VCP3 (SDG# 20081520, F06-027), B1WCW0 (SDG# 20081527, F06-027), and B1WC80 (SDG# 20081544, F06-027) from other SDGs.
- Sample results were D flagged if dilution(s) were required.
- Sample results that were less than the reportable limit, however greater than the method detection limit were B flagged.

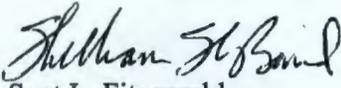
- Sample Batch B1WCT5 – Fluoride: The MS/MSD recovery for fluoride was low in sample B1WCT4 due to unknown peak interference. The samples in this batch were N flagged for fluoride.

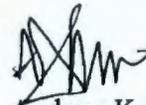
All QC controls are within the established limits.

**ICP-AES Metals** – The hold time requirement for this analysis was met. A Matrix Spike, Matrix Spike Duplicate, Blank, and Laboratory Control Sample were analyzed with each batch in this delivery group per the GRP Letter of Instruction. See pages 56 through 59 for details. Analytical Note(s):

- Duplicates, Matrix Spikes and Matrix Spike Duplicates were analyzed on sample B1WCT1 of this SDG.
- Sample results were D flagged if dilution(s) were required.
- Sample results that were less than the reportable limit, however greater than the method detection limit were B flagged.
- Batch QC - B1WCT1 (samples B1WCT1 through B1WCV7)
  - Calcium and Sodium sample results exceeded the spiking levels by a factor of four in the MS/MSD. Spike recoveries are not valid.
  - Magnesium – MSD recovery was above the established laboratory limits. Affected sample results were N flagged.

I certify that this data package is in compliance with the LOI, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Analytical Manager and Client Services as verified by the following signatures.

*for*   
Scot L. Fitzgerald  
WSCF Analytical Laboratory Manager

  
Andrew Kopriva  
WSCF Client Services

M4W41-SLF-08-859

ATTACHMENT 3

**ISSUE RESOLUTION FORM**

Consisting of 2 pages  
Including cover page

ISSUE RESOLUTION FORM

DRAFT

**PNNL TRACKING NUMBER:** 08-XXX

Date : 8-19-2008      SAF No. F06-027

SDG: WSCF20081528      LOGIN No.:      TEST: ANIONS (@IC-30)

Sample No.(s)      B1WCT3, and B1WCT4.

W08GR02840, W08GR02841

Submitted By: WW Baird      Submitted To: H Hampt  
Phone No.      373-7189      Phone No.      376-4319  
Fax No.      372-0456      Fax No

**ISSUE**

**PROPOSED RESOLUTION**

The 2X regulatory hold time authorization was missed on the S&GRP sample identified above for the Nitrite-N, Nitrate-N and Phosphate-P analyses.

Accept Nitrite-N, Nitrate-N and Phosphate-P analytical results (accept as-is) and document missed holding time in the case narrative.

This sample were collected in the field and submitted to the WSCF Laboratory on July 14, 2008 for analysis.

Sample analysis was delayed beyond the 2X hold time authorization. Refer to e-mail from S&GRP client (Dana Widrig) authorizing a 2X hold time extension for IC analysis on Apatite Barrier samples.

Analytical notes for these samples.

- All of the QC requirements for these samples were met.

**GRP COMMENTS**

\_\_\_\_\_  
Signature and Date

M4W41-SLF-08-859

ATTACHMENT 4

**ANALYTICAL RESULTS**

Consisting of 52 pages  
Including cover page

**WSCF**  
**ANALYTICAL RESULTS REPORT**

for

**Groundwater Remediation Program**

**Richland, WA 99354**

**Attention: Steve Trent**

Analytical: *Julian Baird WW Baird 8/19/08*

Client Services: *A Kopina 8/19/08*

*All results are reported on an "as received" basis unless otherwise noted in the comment section.*

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Contract#: FH-EIS-2003-MEM-001

Report#: WSCF20081528

Report Date: 17-aug-2008

Report WGPP/ver. 5.2

Groundwater Remediation Program

Department: Inorganic

## W13q Worklist/Batch/QC Report for Group# WSCF20081528

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
37288	2	37713	42031	BLANK		Anions by Ion Chromatography
37288	12	37713	42031	BLANK		Anions by Ion Chromatography
37288	3	37713	42031	LCS		Anions by Ion Chromatography
37288	5	37713	42031	DUP	W08GR02842	Anions by Ion Chromatography
37288	6	37713	42031	MS	W08GR02842	Anions by Ion Chromatography
37288	7	37713	42031	MSD	W08GR02842	Anions by Ion Chromatography
37288	4	37713	42031	SAMPLE	W08GR02842	Anions by Ion Chromatography
37288	7	37713	42031	SPK-RPD	W08GR02842	Anions by Ion Chromatography
37288	8	37713	42031	SAMPLE	W08GR02843	Anions by Ion Chromatography
37288	9	37713	42031	SAMPLE	W08GR02844	Anions by Ion Chromatography
37288	10	37713	42031	SAMPLE	W08GR02845	Anions by Ion Chromatography
37288	11	37713	42031	SAMPLE	W08GR02846	Anions by Ion Chromatography
37284	2	37711	42040	BLANK		Anions by Ion Chromatography
37284	12	37711	42040	BLANK		Anions by Ion Chromatography
37284	3	37711	42040	LCS		Anions by Ion Chromatography
37284	8	37711	42040	SAMPLE	W08GR02847	Anions by Ion Chromatography
37284	9	37711	42040	SAMPLE	W08GR02848	Anions by Ion Chromatography
37284	10	37711	42040	SAMPLE	W08GR02849	Anions by Ion Chromatography
37284	5	37711	42040	DUP	W08GR02926	Anions by Ion Chromatography
37284	6	37711	42040	MS	W08GR02926	Anions by Ion Chromatography
37284	7	37711	42040	MSD	W08GR02926	Anions by Ion Chromatography
37284	7	37711	42040	SPK-RPD	W08GR02926	Anions by Ion Chromatography
37286	2	37715	42041	BLANK		Anions by Ion Chromatography
37286	13	37715	42041	BLANK		Anions by Ion Chromatography
37286	3	37715	42041	LCS		Anions by Ion Chromatography
37286	8	37715	42041	SAMPLE	W08GR02850	Anions by Ion Chromatography
37286	9	37715	42041	SAMPLE	W08GR02851	Anions by Ion Chromatography
37286	10	37715	42041	SAMPLE	W08GR02852	Anions by Ion Chromatography
37286	5	37715	42041	DUP	W08GR02853	Anions by Ion Chromatography
37286	6	37715	42041	MS	W08GR02853	Anions by Ion Chromatography
37286	7	37715	42041	MSD	W08GR02853	Anions by Ion Chromatography
37286	4	37715	42041	SAMPLE	W08GR02853	Anions by Ion Chromatography
37286	7	37715	42041	SPK-RPD	W08GR02853	Anions by Ion Chromatography
37285	2	37718	42048	BLANK		Anions by Ion Chromatography
37285	14	37718	42048	BLANK		Anions by Ion Chromatography
37285	27	37718	42048	BLANK		Anions by Ion Chromatography
37285	3	37718	42048	LCS		Anions by Ion Chromatography
37285	15	37718	42048	LCS		Anions by Ion Chromatography
37285	5	37718	42048	DUP	W08GR02829	Anions by Ion Chromatography
37285	6	37718	42048	MS	W08GR02829	Anions by Ion Chromatography
37285	7	37718	42048	MSD	W08GR02829	Anions by Ion Chromatography
37285	7	37718	42048	SPK-RPD	W08GR02829	Anions by Ion Chromatography
37285	17	37718	42048	DUP	W08GR02836	Anions by Ion Chromatography
37285	18	37718	42048	MS	W08GR02836	Anions by Ion Chromatography
37285	19	37718	42048	MSD	W08GR02836	Anions by Ion Chromatography
37285	19	37718	42048	SPK-RPD	W08GR02836	Anions by Ion Chromatography
37285	25	37718	42048	SAMPLE	W08GR02838	Anions by Ion Chromatography
37285	26	37718	42048	SAMPLE	W08GR02839	Anions by Ion Chromatography

37309	2	37739	42059	BLANK		Anions by Ion Chromatography
37309	13	37739	42059	BLANK		Anions by Ion Chromatography
37309	3	37739	42059	LCS		Anions by Ion Chromatography
37309	8	37739	42059	SAMPLE	W08GR02840	Anions by Ion Chromatography
37309	9	37739	42059	SAMPLE	W08GR02841	Anions by Ion Chromatography
37309	5	37739	42059	DUP	W08GR02918	Anions by Ion Chromatography
37309	6	37739	42059	MS	W08GR02918	Anions by Ion Chromatography
37309	7	37739	42059	MSD	W08GR02918	Anions by Ion Chromatography
37309	7	37739	42059	SPK-RPD	W08GR02918	Anions by Ion Chromatography
37505	1	37932	42409	BLANK		ICP Metals Analysis, Grd H20 P
37505	2	37932	42409	LCS		ICP Metals Analysis, Grd H20 P
37505	4	37932	42409	MS	W08GR02838	ICP Metals Analysis, Grd H20 P
37505	5	37932	42409	MSD	W08GR02838	ICP Metals Analysis, Grd H20 P
37505	3	37932	42409	SAMPLE	W08GR02838	ICP Metals Analysis, Grd H20 P
37505	5	37932	42409	SPK-RPD	W08GR02838	ICP Metals Analysis, Grd H20 P
37505	6	37932	42409	SAMPLE	W08GR02839	ICP Metals Analysis, Grd H20 P
37505	7	37932	42409	SAMPLE	W08GR02840	ICP Metals Analysis, Grd H20 P
37505	8	37932	42409	SAMPLE	W08GR02841	ICP Metals Analysis, Grd H20 P
37505	9	37932	42409	SAMPLE	W08GR02842	ICP Metals Analysis, Grd H20 P
37505	10	37932	42409	SAMPLE	W08GR02843	ICP Metals Analysis, Grd H20 P
37505	11	37932	42409	SAMPLE	W08GR02844	ICP Metals Analysis, Grd H20 P
37505	12	37932	42409	SAMPLE	W08GR02845	ICP Metals Analysis, Grd H20 P
37505	13	37932	42409	SAMPLE	W08GR02846	ICP Metals Analysis, Grd H20 P
37505	14	37932	42409	SAMPLE	W08GR02847	ICP Metals Analysis, Grd H20 P
37505	15	37932	42409	SAMPLE	W08GR02848	ICP Metals Analysis, Grd H20 P
37505	16	37932	42409	SAMPLE	W08GR02849	ICP Metals Analysis, Grd H20 P
37505	17	37932	42409	SAMPLE	W08GR02850	ICP Metals Analysis, Grd H20 P
37505	18	37932	42409	SAMPLE	W08GR02851	ICP Metals Analysis, Grd H20 P
37505	19	37932	42409	SAMPLE	W08GR02852	ICP Metals Analysis, Grd H20 P
37505	20	37932	42409	SAMPLE	W08GR02853	ICP Metals Analysis, Grd H20 P

# WSCF

## METHOD REFERENCES REPORT

Department: Inorganic

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The results provided in this report were generated using the following WSCF Laboratory procedures. For your convenience, this table provides a listing of the regulatory or industry methods that are referenced by each of these WSCF procedures. Please note that the most recent version of the regulatory or industry method is listed here even though the WSCF procedure may reference an older version of the method. Also, a reference to a regulatory or industry method here does not necessarily indicate a verbatim implementation of that method.

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<b>LA-505-411</b>	<b>LA-505-411: ELEMENTAL ANALYSIS BY INDUCTIVELY COUPLED PLASMA ATOMIC EMISSION SPE</b> <b>HEIS 6010_METALS_ICP</b> Inductively Coupled Plasma-Atomic Emission Spectrometry
<b>LA-533-410</b>	<b>LA-533-410: ANION ANALYSIS BY ION CHROMATOGRAPHY</b> <b>EPA-600/R-94-111 300.0</b> DETERMINATION OF INORGANIC ANIONS BY ION CHROMATOGRAPHY <b>HEIS 300.0_ANIONS_IC</b> Determination of Inorganic Anions by Ion Chromatography

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Note: A complete list of WSCF analytical procedures and referenced regulatory or industry methods is available online at <http://www2.rl.gov/phmc/as-dol>.

Report Date: 17-aug-2008  
Report#: WSCF20081528  
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# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F06-027  
**Sample #** W08GR02838  
**Client ID:** B1WCT1

**TRENT  
WSCF**

**Matrix: WATER**

**Group #:** WSCF20081528  
**Department:** Inorganic  
**Sampled:** 07/22/08  
**Received:** 07/22/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
<b>Anions by Ion Chromatography</b>											
Fluoride	16984-48-8	LA-533-410	DU	< 0.232	mg/L			10.00	0.23		07/24/08
Chloride	16887-00-6	LA-533-410	D	277	mg/L			51.00	2.4		07/24/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.128	mg/L			10.00	0.13		07/24/08
Nitrogen in Nitrate	NO3-N	LA-533-410	DU	< 0.121	mg/L			10.00	0.12		07/24/08
Phosphate (P) by IC	PO4-P	LA-533-410	D	529	mg/L			51.00	3.1		07/24/08
Sulfate	14808-79-8	LA-533-410	BD	1.50	mg/L			10.00	1.3		07/24/08
<b>ICP Metals Analysis, Grd H20 P Prep</b>											<b>08/08/08</b>
<b>ICP Metals Analysis, Grd H20 P</b>											
Aluminum	7429-90-5	LA-505-411	DU	< 260	ug/L			5.00	2.6e + 02		08/14/08
Iron	7439-89-6	LA-505-411	DU	< 125	ug/L			5.00	1.2e + 02		08/14/08
Magnesium	7439-95-4	LA-505-411	DN	6.41e + 03	ug/L			5.00	2.5e + 02		08/14/08
Manganese	7439-96-5	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Nickel	7440-02-0	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Potassium	7440-09-7	LA-505-411	D	2.36e + 04	ug/L			5.00	8.5e + 02		08/14/08
Silver	7440-22-4	LA-505-411	DU	< 25.0	ug/L			5.00	25		08/14/08
Sodium	7440-23-5	LA-505-411	DX	1.73e + 06	ug/L			5.00	2.6e + 02		08/14/08
Antimony	7440-36-0	LA-505-411	DU	< 280	ug/L			5.00	2.8e + 02		08/14/08
Barium	7440-39-3	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Cadmium	7440-43-9	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Chromium	7440-47-3	LA-505-411	DU	< 65.0	ug/L			5.00	65		08/14/08
Cobalt	7440-48-4	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Copper	7440-50-8	LA-505-411	DU	< 30.0	ug/L			5.00	30		08/14/08
Vanadium	7440-62-2	LA-505-411	DU	< 60.0	ug/L			5.00	60		08/14/08
Zinc	7440-66-6	LA-505-411	DU	< 45.0	ug/L			5.00	45		08/14/08

**MDL=Minimum Detection Limit**

**RQ=Result Qualifier**

**TP Err=Total Propagated Error**

**DF=Dilution Factor**

B - The analyte < the RDL but > = the IDL/MDL (inorg)

D - Analyte was identified at a secondary dilution factor(inorg)

U - Analyzed for but not detected above limiting criteria(inorg)

X - Other flags/notes described in the comments/narrative(inorg)

D - Analyte was identified at a secondary dilution factor

N - Spike sample recovery is outside control limits.(inorg)

U - Analyzed for but not detected above limiting criteria.

\* - Indicates results that have NOT been validated; + - Indicates more than six qualifier symbols

Report WGPP/ver. 5.2

Groundwater Remediation Program

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# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F06-027  
**Sample #** W08GR02838  
**Client ID:** B1WCT1

**TRENT**  
**WSCF**

**Matrix:** WATER

**Group #:** WSCF20081528  
**Department:** Inorganic  
**Sampled:** 07/22/08  
**Received:** 07/22/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Calcium	7440-70-2	LA-505-411	DX	2.43e+04	ug/L			5.00	3.6e+02		08/14/08
Lead	7439-92-1	LA-505-411	DU	< 225	ug/L			5.00	2.2e+02		08/14/08
Molybdenum	7439-98-7	LA-505-411	DU	< 25.0	ug/L			5.00	25		08/14/08
Strontium	7440-24-6	LA-505-411	D	690	ug/L			5.00	20		08/14/08
Arsenic	7440-38-2	LA-505-411	DU	< 390	ug/L			5.00	3.9e+02		08/14/08

**MDL = Minimum Detection Limit**  
**RQ = Result Qualifier**  
**TP Err = Total Propagated Error**  
**DF = Dilution Factor**

B - The analyte < the RDL but > = the IDL/MDL (inorg)  
 D - Analyte was identified at a secondary dilution factor (inorg)  
 U - Analyzed for but not detected above limiting criteria (inorg)  
 X - Other flags/notes described in the comments/narrative (inorg)

D - Analyte was identified at a secondary dilution factor  
 N - Spike sample recovery is outside control limits (inorg)  
 U - Analyzed for but not detected above limiting criteria.

\* - Indicates results that have NOT been validated; + - Indicates more than six qualifier symbols

Report WGPP/ver. 5.2  
 Groundwater Remediation Program

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# WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent  
SAF Number: F06-027  
Sample #: W08GR02839  
Client ID: B1WCT2

TRENT  
WSCF

Matrix: WATER

Group #: WSCF20081528  
Department: Inorganic  
Sampled: 07/22/08  
Received: 07/22/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
<b>Anions by Ion Chromatography</b>											
Fluoride	16984-48-8	LA-533-410	DU	< 0.232	mg/L			10.00	0.23		07/24/08
Chloride	16887-00-6	LA-533-410	D	110	mg/L			10.00	0.47		07/24/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.128	mg/L			10.00	0.13		07/24/08
Nitrogen in Nitrate	NO3-N	LA-533-410	DU	< 0.121	mg/L			10.00	0.12		07/24/08
Phosphate (P) by IC	PO4-P	LA-533-410	D	452	mg/L			51.00	3.1		07/24/08
Sulfate	14808-79-8	LA-533-410	BD	3.11	mg/L			10.00	1.3		07/24/08
<b>ICP Metals Analysis, Grd H2O P Prep</b>											<b>08/08/08</b>
<b>ICP Metals Analysis, Grd H2O P</b>											
Aluminum	7429-90-5	LA-505-411	DU	< 260	ug/L			5.00	2.6e +02		08/14/08
Iron	7439-89-6	LA-505-411	DU	< 125	ug/L			5.00	1.2e +02		08/14/08
Magnesium	7439-95-4	LA-505-411	DN	3.98e +03	ug/L			5.00	2.5e +02		08/14/08
Manganese	7439-96-5	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Nickel	7440-02-0	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Potassium	7440-09-7	LA-505-411	D	8.14e +03	ug/L			5.00	8.5e +02		08/14/08
Silver	7440-22-4	LA-505-411	DU	< 25.0	ug/L			5.00	25		08/14/08
Sodium	7440-23-5	LA-505-411	DX	9.85e +05	ug/L			5.00	2.6e +02		08/14/08
Antimony	7440-36-0	LA-505-411	DU	< 280	ug/L			5.00	2.8e +02		08/14/08
Barium	7440-39-3	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Cadmium	7440-43-9	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Chromium	7440-47-3	LA-505-411	DU	< 65.0	ug/L			5.00	65		08/14/08
Cobalt	7440-48-4	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Copper	7440-50-8	LA-505-411	DU	< 30.0	ug/L			5.00	30		08/14/08
Vanadium	7440-62-2	LA-505-411	DU	< 60.0	ug/L			5.00	60		08/14/08
Zinc	7440-66-6	LA-505-411	DU	< 45.0	ug/L			5.00	45		08/14/08

**MDL=Minimum Detection Limit**

**RQ=Result Qualifier**

**TP Err=Total Propagated Error**

**DF=Dilution Factor**

B - The analyte < the RDL but > = the IDL/MDL (inorg)

D - Analyte was identified at a secondary dilution factor(inorg)

U - Analyzed for but not detected above limiting criteria(inorg)

X - Other flags/notes described in the comments/narrative(inorg)

D - Analyte was identified at a secondary dilution factor

N - Spike sample recovery is outside control limits.(inorg)

U - Analyzed for but not detected above limiting criteria.

\* - Indicates results that have NOT been validated;

+ - Indicates more than six qualifier symbols

Report WGPP/ver. 5.2

Groundwater Remediation Program

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# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F06-027  
**Sample #** W08GR02839  
**Client ID:** B1WCT2

**TRENT  
WSCF**

**Matrix:** WATER

**Group #:** WSCF20081528  
**Department:** Inorganic  
**Sampled:** 07/22/08  
**Received:** 07/22/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Calcium	7440-70-2	LA-505-411	DX	1.44e+04	ug/L			5.00	3.6e+02		08/14/08
Lead	7439-92-1	LA-505-411	DU	< 225	ug/L			5.00	2.2e+02		08/14/08
Molybdenum	7439-98-7	LA-505-411	DU	< 25.0	ug/L			5.00	25		08/14/08
Strontium	7440-24-6	LA-505-411	D	403	ug/L			5.00	20		08/14/08
Arsenic	7440-38-2	LA-505-411	DU	< 390	ug/L			5.00	3.9e+02		08/14/08

**MDL=Minimum Detection Limit**  
**RQ=Result Qualifier**  
**TP Err=Total Propagated Error**  
**DF=Dilution Factor**

B - The analyte < the RDL but > = the IDL/MDL (inorg)  
 D - Analyte was identified at a secondary dilution factor(inorg)  
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D - Analyte was identified at a secondary dilution factor  
 N - Spike sample recovery is outside control limits.(inorg)  
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*Report WGPP/ver. 5.2*  
*Groundwater Remediation Program*

# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F06-027  
**Sample #** W08GR02840  
**Client ID:** B1WCT3

**TRENT  
WSCF**

**Matrix:** WATER

**Group #:** WSCF20081528  
**Department:** Inorganic  
**Sampled:** 07/22/08  
**Received:** 07/22/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
<b>Anions by Ion Chromatography</b>											
Fluoride	16984-48-8	LA-533-410	DU	< 0.232	mg/L			10.00	0.23		07/28/08
Chloride	16887-00-6	LA-533-410	D	232	mg/L			51.00	2.4		07/28/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.128	mg/L			10.00	0.13		07/28/08
Nitrogen in Nitrate	NO3-N	LA-533-410	DU	< 0.121	mg/L			10.00	0.12		07/28/08
Phosphate (P) by IC	PO4-P	LA-533-410	D	438	mg/L			51.00	3.1		07/28/08
Sulfate	14808-79-8	LA-533-410	DU	< 1.32	mg/L			10.00	1.3		07/28/08
<b>ICP Metals Analysis, Grd H20 P Prep</b>											<b>08/08/08</b>
<b>ICP Metals Analysis, Grd H20 P</b>											
Aluminum	7429-90-5	LA-505-411	DU	< 260	ug/L			5.00	2.6e+02		08/14/08
Iron	7439-89-6	LA-505-411	DU	< 125	ug/L			5.00	1.2e+02		08/14/08
Magnesium	7439-95-4	LA-505-411	DN	6.10e+03	ug/L			5.00	2.5e+02		08/14/08
Manganese	7439-96-5	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Nickel	7440-02-0	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Potassium	7440-09-7	LA-505-411	D	6.30e+03	ug/L			5.00	8.5e+02		08/14/08
Silver	7440-22-4	LA-505-411	DU	< 25.0	ug/L			5.00	25		08/14/08
Sodium	7440-23-5	LA-505-411	DX	1.50e+06	ug/L			5.00	2.6e+02		08/14/08
Antimony	7440-36-0	LA-505-411	DU	< 280	ug/L			5.00	2.8e+02		08/14/08
Barium	7440-39-3	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Cadmium	7440-43-9	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Chromium	7440-47-3	LA-505-411	DU	< 65.0	ug/L			5.00	65		08/14/08
Cobalt	7440-48-4	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Copper	7440-50-8	LA-505-411	DU	< 30.0	ug/L			5.00	30		08/14/08
Vanadium	7440-62-2	LA-505-411	DU	< 60.0	ug/L			5.00	60		08/14/08
Zinc	7440-66-6	LA-505-411	DU	< 45.0	ug/L			5.00	45		08/14/08

**MDL = Minimum Detection Limit**

**RQ = Result Qualifier**

**TP Err = Total Propagated Error**

**DF = Dilution Factor**

B - The analyte < the RDL but > = the IDL/MDL (inorg)

D - Analyte was identified at a secondary dilution factor (inorg)

U - Analyzed for but not detected above limiting criteria (inorg)

X - Other flags/notes described in the comments/narrative (inorg)

D - Analyte was identified at a secondary dilution factor

N - Spike sample recovery is outside control limits. (inorg)

U - Analyzed for but not detected above limiting criteria.

\* - Indicates results that have NOT been validated;

+ - Indicates more than six qualifier symbols

Report WGPP/ver. 5.2

Groundwater Remediation Program

# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F06-027  
**Sample #** W08GR02840  
**Client ID:** B1WCT3

TRENT  
 WSCF

**Matrix:** WATER

**Group #:** WSCF20081528  
**Department:** Inorganic  
**Sampled:** 07/22/08  
**Received:** 07/22/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Calcium	7440-70-2	LA-505-411	DX	9.72e+03	ug/L			5.00	3.6e+02		08/14/08
Lead	7439-92-1	LA-505-411	DU	< 225	ug/L			5.00	2.2e+02		08/14/08
Molybdenum	7439-98-7	LA-505-411	DU	< 25.0	ug/L			5.00	25		08/14/08
Strontium	7440-24-6	LA-505-411	D	263	ug/L			5.00	20		08/14/08
Arsenic	7440-38-2	LA-505-411	DU	< 390	ug/L			5.00	3.9e+02		08/14/08

**MDL=Minimum Detection Limit**  
**RQ=Result Qualifier**  
**TP Err=Total Propagated Error**  
**DF=Dilution Factor**

B - The analyte < the RDL but > = the IDL/MDL (inorg)  
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 X - Other flags/notes described in the comments/narrative(inorg)

D - Analyte was identified at a secondary dilution factor  
 N - Spike sample recovery is outside control limits.(inorg)  
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Report WGPP/ver. 5.2  
 Groundwater Remediation Program

# WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent  
SAF Number: F06-027  
Sample #: W08GR02841  
Client ID: B1WCT4

TRENT  
WSCF

Matrix: WATER

Group #: WSCF20081528  
Department: Inorganic  
Sampled: 07/22/08  
Received: 07/22/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
<b>Anions by Ion Chromatography</b>											
Fluoride	16984-48-8	LA-533-410	DU	< 0.232	mg/L			10.00	0.23		07/28/08
Chloride	16887-00-6	LA-533-410	D	238	mg/L			51.00	2.4		07/28/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.128	mg/L			10.00	0.13		07/28/08
Nitrogen in Nitrate	NO3-N	LA-533-410	DU	< 0.121	mg/L			10.00	0.12		07/28/08
Phosphate (P) by IC	PO4-P	LA-533-410	D	575	mg/L			51.00	3.1		07/28/08
Sulfate	14808-79-8	LA-533-410	BD	1.43	mg/L			10.00	1.3		07/28/08
<b>ICP Metals Analysis, Grd H2O P Prep</b>											<b>08/08/08</b>
<b>ICP Metals Analysis, Grd H2O P</b>											
Aluminum	7429-90-5	LA-505-411	DU	< 260	ug/L			5.00	2.6e+02		08/14/08
Iron	7439-89-6	LA-505-411	DU	< 125	ug/L			5.00	1.2e+02		08/14/08
Magnesium	7439-95-4	LA-505-411	DN	4.92e+03	ug/L			5.00	2.5e+02		08/14/08
Manganese	7439-96-5	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Nickel	7440-02-0	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Potassium	7440-09-7	LA-505-411	D	1.09e+04	ug/L			5.00	8.5e+02		08/14/08
Silver	7440-22-4	LA-505-411	DU	< 25.0	ug/L			5.00	25		08/14/08
Sodium	7440-23-5	LA-505-411	DX	1.72e+06	ug/L			5.00	2.6e+02		08/14/08
Antimony	7440-36-0	LA-505-411	DU	< 280	ug/L			5.00	2.8e+02		08/14/08
Barium	7440-39-3	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Cadmium	7440-43-9	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Chromium	7440-47-3	LA-505-411	DU	< 65.0	ug/L			5.00	65		08/14/08
Cobalt	7440-48-4	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Copper	7440-50-8	LA-505-411	DU	< 30.0	ug/L			5.00	30		08/14/08
Vanadium	7440-62-2	LA-505-411	DU	< 60.0	ug/L			5.00	60		08/14/08
Zinc	7440-66-6	LA-505-411	DU	< 45.0	ug/L			5.00	45		08/14/08

**MDL = Minimum Detection Limit**

**RQ = Result Qualifier**

**TP Err = Total Propagated Error**

**DF = Dilution Factor**

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B - The analyte < the RDL but > = the IDL/MDL (inorg)

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U - Analyzed for but not detected above limiting criteria (inorg)

X - Other flags/notes described in the comments/narrative (inorg)

+ - Indicates more than six qualifier symbols

D - Analyte was identified at a secondary dilution factor

N - Spike sample recovery is outside control limits. (inorg)

U - Analyzed for but not detected above limiting criteria.

Report WGPP/ver. 5.2

Groundwater Remediation Program

# WSCF

## ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F06-027  
**Sample #** W08GR02841  
**Client ID:** B1WCT4

TRENT  
 WSCF

**Matrix:** WATER

**Group #:** WSCF20081528  
**Department:** Inorganic  
**Sampled:** 07/22/08  
**Received:** 07/22/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Calcium	7440-70-2	LA-505-411	DX	2.02e +04	ug/L			5.00	3.6e +02		08/14/08
Lead	7439-92-1	LA-505-411	DU	< 225	ug/L			5.00	2.2e +02		08/14/08
Molybdenum	7439-98-7	LA-505-411	DU	< 25.0	ug/L			5.00	25		08/14/08
Strontium	7440-24-6	LA-505-411	D	575	ug/L			5.00	20		08/14/08
Arsenic	7440-38-2	LA-505-411	DU	< 390	ug/L			5.00	3.9e +02		08/14/08

**MDL=Minimum Detection Limit**  
**RQ=Result Qualifier**  
**TP Err=Total Propagated Error**  
**DF=Dilution Factor**

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Report WGPP/ver. 5.2

Groundwater Remediation Program

# WSCF

## ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F06-027  
**Sample #** W08GR02842  
**Client ID:** B1WCT5

**TRENT**  
**WSCF**

**Matrix:** WATER

**Group #:** WSCF20081528  
**Department:** Inorganic  
**Sampled:** 07/22/08  
**Received:** 07/22/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
<b>Anions by Ion Chromatography</b>											
Fluoride	16984-48-8	LA-533-410	DNU	< 0.232	mg/L			10.00	0.23		07/25/08
Chloride	18887-00-6	LA-533-410	D	181	mg/L			51.00	2.4		07/25/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.128	mg/L			10.00	0.13		07/25/08
Nitrogen in Nitrate	NO3-N	LA-533-410	DU	< 0.121	mg/L			10.00	0.12		07/25/08
Phosphate (P) by IC	PO4-P	LA-533-410	D	433	mg/L			51.00	3.1		07/25/08
Sulfate	14808-79-8	LA-533-410	D	15.4	mg/L			10.00	1.3		07/25/08
<b>ICP Metals Analysis, Grd H20 P Prep</b>											<b>08/08/08</b>
<b>ICP Metals Analysis, Grd H20 P</b>											
Aluminum	7429-90-5	LA-505-411	DU	< 280	ug/L			5.00	2.6e +02		08/14/08
Iron	7439-89-6	LA-505-411	BD	163	ug/L			5.00	1.2e +02		08/14/08
Magnesium	7439-95-4	LA-505-411	DN	4.96e +03	ug/L			5.00	2.5e +02		08/14/08
Manganese	7439-96-5	LA-505-411	BD	23.0	ug/L			5.00	20		08/14/08
Nickel	7440-02-0	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Potassium	7440-09-7	LA-505-411	D	8.45e +03	ug/L			5.00	8.5e +02		08/14/08
Silver	7440-22-4	LA-505-411	DU	< 25.0	ug/L			5.00	25		08/14/08
Sodium	7440-23-5	LA-505-411	DX	1.29e +06	ug/L			5.00	2.6e +02		08/14/08
Antimony	7440-36-0	LA-505-411	DU	< 280	ug/L			5.00	2.8e +02		08/14/08
Barium	7440-39-3	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Cadmium	7440-43-9	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Chromium	7440-47-3	LA-505-411	DU	< 65.0	ug/L			5.00	65		08/14/08
Cobalt	7440-48-4	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Copper	7440-50-8	LA-505-411	DU	< 30.0	ug/L			5.00	30		08/14/08
Vanadium	7440-62-2	LA-505-411	DU	< 60.0	ug/L			5.00	60		08/14/08
Zinc	7440-66-6	LA-505-411	DU	< 45.0	ug/L			5.00	45		08/14/08

**MDL=Minimum Detection Limit**  
**RQ=Result Qualifier**  
**TP Err=Total Propagated Error**  
**DF=Dilution Factor**

B - The analyte < the RDL but > = the IDL/MDL (inorg)  
 D - Analyte was identified at a secondary dilution factor(inorg)  
 U - Analyzed for but not detected above limiting criteria(inorg)  
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D - Analyte was identified at a secondary dilution factor  
 N - Spike sample recovery is outside control limits.(inorg)  
 U - Analyzed for but not detected above limiting criteria.

\* - Indicates results that have NOT been validated; + - Indicates more than six qualifier symbols

Report WGPP/ver. 5.2  
 Groundwater Remediation Program

# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F06-027  
**Sample #** W08GR02842  
**Client ID:** B1WCT5

TRENT  
 WSCF

**Matrix:** WATER

**Group #:** WSCF20081528  
**Department:** Inorganic  
**Sampled:** 07/22/08  
**Received:** 07/22/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Calcium	7440-70-2	LA-505-411	DX	2.54e+04	ug/L			5.00	3.6e+02		08/14/08
Lead	7439-92-1	LA-505-411	DU	< 225	ug/L			5.00	2.2e+02		08/14/08
Molybdenum	7439-98-7	LA-505-411	DU	< 25.0	ug/L			5.00	25		08/14/08
Strontium	7440-24-6	LA-505-411	D	666	ug/L			5.00	20		08/14/08
Arsenic	7440-38-2	LA-505-411	DU	< 390	ug/L			5.00	3.9e+02		08/14/08

**MDL=Minimum Detection Limit**

**RQ=Result Qualifier**

**TP Err=Total Propagated Error**

**DF=Dilution Factor**

B - The analyte < the RDL but > = the IDL/MDL (inorg)

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Report WGPP/ver. 5.2

Groundwater Remediation Program

# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F06-027  
**Sample #** W08GR02843  
**Client ID:** B1WCT6

**TRENT  
WSCF**

**Matrix: WATER**

**Group #:** WSCF20081528  
**Department:** Inorganic  
**Sampled:** 07/22/08  
**Received:** 07/22/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
<b>Anions by Ion Chromatography</b>											
Fluoride	16984-48-8	LA-533-410	DNU	< 0.464	mg/L			20.00	0.46		07/25/08
Chloride	16887-00-6	LA-533-410	D	357	mg/L			1.01e+002	4.7		07/25/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.256	mg/L			20.00	0.26		07/25/08
Nitrogen in Nitrate	NO3-N	LA-533-410	DU	< 0.242	mg/L			20.00	0.24		07/25/08
Phosphate (P) by IC	PO4-P	LA-533-410	D	1.29e+03	mg/L			1.01e+002	6.1		07/25/08
Sulfate	14808-79-8	LA-533-410	BD	2.98	mg/L			20.00	2.6		07/25/08
<b>ICP Metals Analysis, Grd H2O P Prep</b>											<b>08/08/08</b>
<b>ICP Metals Analysis, Grd H2O P</b>											
Aluminum	7429-90-5	LA-505-411	DU	< 260	ug/L			5.00	2.6e+02		08/14/08
Iron	7439-89-6	LA-505-411	DU	< 125	ug/L			5.00	1.2e+02		08/14/08
Magnesium	7439-95-4	LA-505-411	DN	6.40e+03	ug/L			5.00	2.5e+02		08/14/08
Manganese	7439-96-5	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Nickel	7440-02-0	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Potassium	7440-09-7	LA-505-411	D	2.30e+04	ug/L			5.00	8.5e+02		08/14/08
Silver	7440-22-4	LA-505-411	DU	< 25.0	ug/L			5.00	25		08/14/08
Sodium	7440-23-5	LA-505-411	DX	2.97e+06	ug/L			5.00	2.6e+02		08/14/08
Antimony	7440-36-0	LA-505-411	DU	< 280	ug/L			5.00	2.8e+02		08/14/08
Barium	7440-39-3	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Cadmium	7440-43-9	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Chromium	7440-47-3	LA-505-411	DU	< 65.0	ug/L			5.00	65		08/14/08
Cobalt	7440-48-4	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Copper	7440-50-8	LA-505-411	DU	< 30.0	ug/L			5.00	30		08/14/08
Vanadium	7440-62-2	LA-505-411	DU	< 60.0	ug/L			5.00	60		08/14/08
Zinc	7440-66-6	LA-505-411	DU	< 45.0	ug/L			5.00	45		08/14/08

**MDL=Minimum Detection Limit**

**RQ=Result Qualifier**

**TP Err=Total Propagated Error**

**DF=Dilution Factor**

B - The analyte < the RDL but > = the IDL/MDL (inorg)

D - Analyte was identified at a secondary dilution factor(inorg)

U - Analyzed for but not detected above limiting criteria(inorg)

X - Other flags/notes described in the comments/narrative(inorg)

D - Analyte was identified at a secondary dilution factor

N - Spike sample recovery is outside control limits.(inorg)

U - Analyzed for but not detected above limiting criteria.

\* - Indicates results that have NOT been validated; + - Indicates more than six qualifier symbols

Report WGPP/ver. 5.2

Groundwater Remediation Program

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# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F06-027  
**Sample #** W08GR02843  
**Client ID:** B1WCT6

TRENT  
 WSCF

**Matrix:** WATER

**Group #:** WSCF20081528  
**Department:** Inorganic  
**Sampled:** 07/22/08  
**Received:** 07/22/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Calcium	7440-70-2	LA-505-411	DX	1.47e+04	ug/L			5.00	3.6e+02		08/14/08
Lead	7439-92-1	LA-505-411	DU	< 225	ug/L			5.00	2.2e+02		08/14/08
Molybdenum	7439-98-7	LA-505-411	DU	< 25.0	ug/L			5.00	25		08/14/08
Strontium	7440-24-6	LA-505-411	D	427	ug/L			5.00	20		08/14/08
Arsenic	7440-38-2	LA-505-411	DU	< 390	ug/L			5.00	3.9e+02		08/14/08

**MDL=Minimum Detection Limit**  
**RQ=Result Qualifier**  
**TP Err=Total Propagated Error**  
**DF=Dilution Factor**

B - The analyte < the RDL but > = the IDL/MDL (inorg)  
 D - Analyte was identified at a secondary dilution factor(inorg)  
 U - Analyzed for but not detected above limiting criteria(inorg)  
 X - Other flags/notes described in the comments/narrative(inorg)

D - Analyte was identified at a secondary dilution factor  
 N - Spike sample recovery is outside control limits.(inorg)  
 U - Analyzed for but not detected above limiting criteria.

\* - Indicates results that have NOT been validated; + - Indicates more than six qualifier symbols

Report WGPP/ver. 5.2  
 Groundwater Remediation Program

# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F06-027  
**Sample #** W08GR02844  
**Client ID:** B1WCT7

**TRENT  
WSCF**

**Matrix: WATER**

**Group #:** WSCF20081528  
**Department:** Inorganic  
**Sampled:** 07/22/08  
**Received:** 07/22/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
<b>Anions by Ion Chromatography</b>											
Fluoride	16984-48-8	LA-533-410	DNU	< 0.464	mg/L			20.00	0.48		07/25/08
Chloride	16887-00-6	LA-533-410	D	285	mg/L			20.00	0.94		07/25/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.256	mg/L			20.00	0.26		07/25/08
Nitrogen in Nitrate	NO3-N	LA-533-410	DU	< 0.242	mg/L			20.00	0.24		07/25/08
Phosphate (P) by IC	PO4-P	LA-533-410	D	1.05e+03	mg/L			1.01e+002	6.1		07/25/08
Sulfate	14808-79-8	LA-533-410	BD	9.56	mg/L			20.00	2.6		07/25/08
<b>ICP Metals Analysis, Grd H20 P Prep</b>											<b>08/08/08</b>
<b>ICP Metals Analysis, Grd H20 P</b>											
Aluminum	7429-90-5	LA-505-411	DU	< 260	ug/L			5.00	2.6e+02		08/14/08
Iron	7439-89-6	LA-505-411	DU	< 125	ug/L			5.00	1.2e+02		08/14/08
Magnesium	7439-95-4	LA-505-411	DN	4.88e+03	ug/L			5.00	2.5e+02		08/14/08
Manganese	7439-96-5	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Nickel	7440-02-0	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Potassium	7440-09-7	LA-505-411	D	1.49e+04	ug/L			5.00	8.5e+02		08/14/08
Silver	7440-22-4	LA-505-411	DU	< 25.0	ug/L			5.00	25		08/14/08
Sodium	7440-23-5	LA-505-411	DX	2.88e+06	ug/L			5.00	2.6e+02		08/14/08
Antimony	7440-36-0	LA-505-411	DU	< 280	ug/L			5.00	2.8e+02		08/14/08
Barium	7440-39-3	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Cadmium	7440-43-9	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Chromium	7440-47-3	LA-505-411	DU	< 65.0	ug/L			5.00	65		08/14/08
Cobalt	7440-48-4	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Copper	7440-50-8	LA-505-411	DU	< 30.0	ug/L			5.00	30		08/14/08
Vanadium	7440-62-2	LA-505-411	DU	< 60.0	ug/L			5.00	60		08/14/08
Zinc	7440-66-6	LA-505-411	BD	67.6	ug/L			5.00	45		08/14/08

**MDL = Minimum Detection Limit**

**RQ = Result Qualifier**

**TP Err = Total Propagated Error**

**DF = Dilution Factor**

B - The analyte < the RDL but > = the IDL/MDL (inorg)

D - Analyte was identified at a secondary dilution factor(inorg)

U - Analyzed for but not detected above limiting criteria(inorg)

X - Other flags/notes described in the comments/narrative(inorg)

D - Analyte was identified at a secondary dilution factor

N - Spike sample recovery is outside control limits.(inorg)

U - Analyzed for but not detected above limiting criteria.

\* - Indicates results that have NOT been validated; + - Indicates more than six qualifier symbols

Report WGPP/ver. 5.2

Groundwater Remediation Program

# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F06-027  
**Sample #** W08GR02844  
**Client ID:** B1WCT7

**TRENT  
WSCF**

**Matrix:** WATER

**Group #:** WSCF20081528  
**Department:** Inorganic  
**Sampled:** 07/22/08  
**Received:** 07/22/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Calcium	7440-70-2	LA-505-411	DX	1.35e+04	ug/L			5.00	3.6e+02		08/14/08
Lead	7439-92-1	LA-505-411	DU	< 225	ug/L			5.00	2.2e+02		08/14/08
Molybdenum	7439-98-7	LA-505-411	DU	< 25.0	ug/L			5.00	25		08/14/08
Strontium	7440-24-6	LA-505-411	D	351	ug/L			5.00	20		08/14/08
Arsenic	7440-38-2	LA-505-411	DU	< 390	ug/L			5.00	3.9e+02		08/14/08

**MDL = Minimum Detection Limit**

**RQ = Result Qualifier**

**TP Err = Total Propagated Error**

**DF = Dilution Factor**

B - The analyte < the RDL but > = the IDL/MDL (inorg)

D - Analyte was identified at a secondary dilution factor (inorg)

U - Analyzed for but not detected above limiting criteria (inorg)

X - Other flags/notes described in the comments/narrative (inorg)

D - Analyte was identified at a secondary dilution factor

N - Spike sample recovery is outside control limits (inorg)

U - Analyzed for but not detected above limiting criteria.

\* - Indicates results that have NOT been validated; + - Indicates more than six qualifier symbols

Report WGPP/ver. 5.2

Groundwater Remediation Program

# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F06-027  
**Sample #** W08GR02845  
**Client ID:** B1WCT8

**TRENT  
WSCF**

**Matrix:** WATER

**Group #:** WSCF20081528  
**Department:** Inorganic  
**Sampled:** 07/22/08  
**Received:** 07/22/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
<b>Anions by Ion Chromatography</b>											
Fluoride	16984-48-8	LA-533-410	DNU	< 0.766	mg/L			33.00	0.77		07/25/08
Chloride	16887-00-6	LA-533-410	D	161	mg/L			33.00	1.5		07/25/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.422	mg/L			33.00	0.42		07/25/08
Nitrogen in Nitrate	NO3-N	LA-533-410	DU	< 0.399	mg/L			33.00	0.40		07/25/08
Phosphate (P) by IC	PO4-P	LA-533-410	D	325	mg/L			33.00	2.0		07/25/08
Sulfate	14808-79-8	LA-533-410	DU	< 4.36	mg/L			33.00	4.4		07/25/08
<b>ICP Metals Analysis, Grd H20 P Prep</b>											<b>08/08/08</b>
<b>ICP Metals Analysis, Grd H20 P</b>											
Aluminum	7429-90-5	LA-505-411	DU	< 260	ug/L			5.00	2.6e+02		08/14/08
Iron	7439-89-6	LA-505-411	D	677	ug/L			5.00	1.2e+02		08/14/08
Magnesium	7439-95-4	LA-505-411	DN	6.13e+03	ug/L			5.00	2.5e+02		08/14/08
Manganese	7439-96-5	LA-505-411	D	1.80e+03	ug/L			5.00	20		08/14/08
Nickel	7440-02-0	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Potassium	7440-09-7	LA-505-411	D	4.59e+03	ug/L			5.00	8.5e+02		08/14/08
Silver	7440-22-4	LA-505-411	DU	< 25.0	ug/L			5.00	25		08/14/08
Sodium	7440-23-5	LA-505-411	DX	8.81e+05	ug/L			5.00	2.6e+02		08/14/08
Antimony	7440-36-0	LA-505-411	DU	< 280	ug/L			5.00	2.8e+02		08/14/08
Barium	7440-39-3	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Cadmium	7440-43-9	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Chromium	7440-47-3	LA-505-411	DU	< 65.0	ug/L			5.00	65		08/14/08
Cobalt	7440-48-4	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Copper	7440-50-8	LA-505-411	DU	< 30.0	ug/L			5.00	30		08/14/08
Vanadium	7440-82-2	LA-505-411	DU	< 60.0	ug/L			5.00	60		08/14/08
Zinc	7440-66-6	LA-505-411	DU	< 45.0	ug/L			5.00	45		08/14/08

**MDL=Minimum Detection Limit**

**RQ=Result Qualifier**

**TP Err=Total Propagated Error**

**DF=Dilution Factor**

B - The analyte < the RDL but > = the IDL/MDL (inorg)

D - Analyte was identified at a secondary dilution factor(inorg)

U - Analyzed for but not detected above limiting criteria(inorg)

X - Other flags/notes described in the comments/narrative(inorg)

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N - Spike sample recovery is outside control limits.(inorg)

U - Analyzed for but not detected above limiting criteria.

\* - Indicates results that have NOT been validated; + - Indicates more than six qualifier symbols

Report WGPP/ver. 5.2

Groundwater Remediation Program

# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F06-027  
**Sample #** W08GR02845  
**Client ID:** B1WCT8

TRENT  
 WSCF

**Matrix:** WATER

**Group #:** WSCF20081528  
**Department:** Inorganic  
**Sampled:** 07/22/08  
**Received:** 07/22/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Calcium	7440-70-2	LA-505-411	DX	1.86e +04	ug/L			5.00	3.6e +02		08/14/08
Lead	7439-92-1	LA-505-411	DU	< 225	ug/L			5.00	2.2e +02		08/14/08
Molybdenum	7439-98-7	LA-505-411	DU	< 25.0	ug/L			5.00	25		08/14/08
Strontium	7440-24-6	LA-505-411	D	175	ug/L			5.00	20		08/14/08
Arsenic	7440-38-2	LA-505-411	DU	< 390	ug/L			5.00	3.9e +02		08/14/08

**MDL=Minimum Detection Limit**

**RQ=Result Qualifier**

**TP Err=Total Propagated Error**

**DF=Dilution Factor**

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B - The analyte < the RDL but > = the IDL/MDL (inorg)

D - Analyte was identified at a secondary dilution factor(inorg)

U - Analyzed for but not detected above limiting criteria(inorg)

X - Other flags/notes described in the comments/narrative(inorg)

+ - Indicates more than six qualifier symbols

D - Analyte was identified at a secondary dilution factor

N - Spike sample recovery is outside control limits.(inorg)

U - Analyzed for but not detected above limiting criteria.

Report WGPP/ver. 5.2

Groundwater Remediation Program

# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F06-027  
**Sample #** W08GR02846  
**Client ID:** B1WCT9

**TRENT  
WSCF**

**Matrix: WATER**

**Group #:** WSCF20081528  
**Department:** Inorganic  
**Sampled:** 07/22/08  
**Received:** 07/22/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
<b>Anions by Ion Chromatography</b>											
Fluoride	16984-48-8	LA-533-410	DNU	< 0.766	mg/L			33.00	0.77		07/25/08
Chloride	16887-00-6	LA-533-410	D	244	mg/L			33.00	1.5		07/25/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.422	mg/L			33.00	0.42		07/25/08
Nitrogen in Nitrate	NO3-N	LA-533-410	DU	< 0.399	mg/L			33.00	0.40		07/25/08
Phosphate (P) by IC	PO4-P	LA-533-410	D	523	mg/L			2.01e+002	12		07/25/08
Sulfate	14808-79-8	LA-533-410	DU	< 4.36	mg/L			33.00	4.4		07/25/08
<b>ICP Metals Analysis, Grd H20 P Prep</b>											<b>08/08/08</b>
<b>ICP Metals Analysis, Grd H20 P</b>											
Aluminum	7429-90-5	LA-505-411	DU	< 260	ug/L			5.00	2.6e+02		08/14/08
Iron	7439-89-6	LA-505-411	DU	< 125	ug/L			5.00	1.2e+02		08/14/08
Magnesium	7439-95-4	LA-505-411	DN	7.45e+03	ug/L			5.00	2.5e+02		08/14/08
Manganese	7439-96-5	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Nickel	7440-02-0	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Potassium	7440-09-7	LA-505-411	D	5.19e+03	ug/L			5.00	8.5e+02		08/14/08
Silver	7440-22-4	LA-505-411	DU	< 25.0	ug/L			5.00	25		08/14/08
Sodium	7440-23-5	LA-505-411	DX	1.51e+06	ug/L			5.00	2.6e+02		08/14/08
Antimony	7440-36-0	LA-505-411	DU	< 280	ug/L			5.00	2.8e+02		08/14/08
Barium	7440-39-3	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Cadmium	7440-43-9	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Chromium	7440-47-3	LA-505-411	DU	< 65.0	ug/L			5.00	65		08/14/08
Cobalt	7440-48-4	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Copper	7440-50-8	LA-505-411	DU	< 30.0	ug/L			5.00	30		08/14/08
Vanadium	7440-62-2	LA-505-411	DU	< 60.0	ug/L			5.00	60		08/14/08
Zinc	7440-66-6	LA-505-411	DU	< 45.0	ug/L			5.00	45		08/14/08

**MDL = Minimum Detection Limit**

**RQ = Result Qualifier**

**TP Err = Total Propagated Error**

**DF = Dilution Factor**

B - The analyte < the RDL but > = the IDL/MDL (inorg)

D - Analyte was identified at a secondary dilution factor (inorg)

U - Analyzed for but not detected above limiting criteria (inorg)

X - Other flags/notes described in the comments/narrative (inorg)

D - Analyte was identified at a secondary dilution factor

N - Spike sample recovery is outside control limits (inorg)

U - Analyzed for but not detected above limiting criteria.

\* - Indicates results that have NOT been validated;

+ - Indicates more than six qualifier symbols

Report WGPP/ver. 5.2

Groundwater Remediation Program

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# WSCF

## ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F06-027  
**Sample #** W08GR02846  
**Client ID:** B1WCT9

TRENT  
 WSCF

**Matrix:** WATER

**Group #:** WSCF20081528  
**Department:** Inorganic  
**Sampled:** 07/22/08  
**Received:** 07/22/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Calcium	7440-70-2	LA-505-411	DX	1.04e+04	ug/L			5.00	3.6e+02		08/14/08
Lead	7439-92-1	LA-505-411	DU	< 225	ug/L			5.00	2.2e+02		08/14/08
Molybdenum	7439-98-7	LA-505-411	DU	< 25.0	ug/L			5.00	25		08/14/08
Strontium	7440-24-8	LA-505-411	D	273	ug/L			5.00	20		08/14/08
Arsenic	7440-38-2	LA-505-411	DU	< 390	ug/L			5.00	3.9e+02		08/14/08

**MDL=Minimum Detection Limit**  
**RQ=Result Qualifier**  
**TP Err=Total Propagated Error**  
**DF=Dilution Factor**

B - The analyte < the RDL but > = the IDL/MDL (inorg)  
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 U - Analyzed for but not detected above limiting criteria(inorg)  
 X - Other flags/notes described in the comments/narrative(inorg)

D - Analyte was identified at a secondary dilution factor  
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Report WGPP/ver. 5.2  
 Groundwater Remediation Program

# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F06-027  
**Sample #** W08GR02847  
**Client ID:** B1WCV0

**TRENT  
WSCF**

**Matrix: WATER**

**Group #:** WSCF20081528  
**Department:** Inorganic  
**Sampled:** 07/22/08  
**Received:** 07/22/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
<b>Anions by Ion Chromatography</b>											
Fluoride	16984-48-8	LA-533-410	DU	< 0.464	mg/L			20.00	0.46		07/25/08
Chloride	16887-00-6	LA-533-410	D	102	mg/L			20.00	0.94		07/25/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.256	mg/L			20.00	0.26		07/25/08
Nitrogen in Nitrate	NO3-N	LA-533-410	DU	< 0.242	mg/L			20.00	0.24		07/25/08
Phosphate (P) by IC	PO4-P	LA-533-410	D	253	mg/L			20.00	1.2		07/25/08
Sulfate	14808-79-8	LA-533-410	DU	< 2.64	mg/L			20.00	2.6		07/25/08
<b>ICP Metals Analysis, Grd H20 P Prep</b>											<b>08/08/08</b>
<b>ICP Metals Analysis, Grd H20 P</b>											
Aluminum	7429-90-5	LA-505-411	DU	< 260	ug/L			5.00	2.6e+02		08/14/08
Iron	7439-89-6	LA-505-411	DU	< 125	ug/L			5.00	1.2e+02		08/14/08
Magnesium	7439-95-4	LA-505-411	DN	4.48e+03	ug/L			5.00	2.5e+02		08/14/08
Manganese	7439-96-5	LA-505-411	D	414	ug/L			5.00	20		08/14/08
Nickel	7440-02-0	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Potassium	7440-09-7	LA-505-411	D	3.81e+03	ug/L			5.00	8.5e+02		08/14/08
Silver	7440-22-4	LA-505-411	DU	< 25.0	ug/L			5.00	25		08/14/08
Sodium	7440-23-5	LA-505-411	DX	7.89e+05	ug/L			5.00	2.6e+02		08/14/08
Antimony	7440-36-0	LA-505-411	DU	< 280	ug/L			5.00	2.8e+02		08/14/08
Barium	7440-39-3	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Cadmium	7440-43-9	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Chromium	7440-47-3	LA-505-411	DU	< 65.0	ug/L			5.00	65		08/14/08
Cobalt	7440-48-4	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Copper	7440-50-8	LA-505-411	DU	< 30.0	ug/L			5.00	30		08/14/08
Vanadium	7440-82-2	LA-505-411	DU	< 60.0	ug/L			5.00	60		08/14/08
Zinc	7440-66-6	LA-505-411	DU	< 45.0	ug/L			5.00	45		08/14/08

**MDL = Minimum Detection Limit**

**RQ = Result Qualifier**

**TP Err = Total Propagated Error**

**DF = Dilution Factor**

\* - Indicates results that have NOT been validated;

B - The analyte < the RDL but > = the IDL/MDL (inorg)

D - Analyte was identified at a secondary dilution factor(inorg)

U - Analyzed for but not detected above limiting criteria(inorg)

X - Other flags/notes described in the comments/narrative(inorg)

+ - Indicates more than six qualifier symbols

D - Analyte was identified at a secondary dilution factor

N - Spike sample recovery is outside control limits.(inorg)

U - Analyzed for but not detected above limiting criteria.

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# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F06-027  
**Sample #** W08GR02847  
**Client ID:** B1WCV0

TRENT  
 WSCF

**Matrix:** WATER

**Group #:** WSCF20081528  
**Department:** Inorganic  
**Sampled:** 07/22/08  
**Received:** 07/22/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Calcium	7440-70-2	LA-505-411	DX	1.34e +04	ug/L			5.00	3.6e+02		08/14/08
Lead	7439-92-1	LA-505-411	DU	< 225	ug/L			5.00	2.2e+02		08/14/08
Molybdenum	7439-98-7	LA-505-411	DU	< 25.0	ug/L			5.00	25		08/14/08
Strontium	7440-24-6	LA-505-411	D	108	ug/L			5.00	20		08/14/08
Arsenic	7440-38-2	LA-505-411	DU	< 390	ug/L			5.00	3.9e+02		08/14/08

**MDL = Minimum Detection Limit**

**RQ = Result Qualifier**

**TP Err = Total Propagated Error**

**DF = Dilution Factor**

\* - Indicates results that have NOT been validated;

B - The analyte < the RDL but > = the IDL/MDL (inorg)

D - Analyte was identified at a secondary dilution factor (inorg)

U - Analyzed for but not detected above limiting criteria (inorg)

X - Other flags/notes described in the comments/narrative (inorg)

+ - Indicates more than six qualifier symbols

D - Analyte was identified at a secondary dilution factor

N - Spike sample recovery is outside control limits. (inorg)

U - Analyzed for but not detected above limiting criteria.

Report WGPP/ver. 5.2

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# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F06-027  
**Sample #** W08GR02848  
**Client ID:** B1WCV1

**TRENT  
WSCF**

**Matrix:** WATER

**Group #:** WSCF20081528  
**Department:** Inorganic  
**Sampled:** 07/22/08  
**Received:** 07/22/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
<b>Anions by Ion Chromatography</b>											
Fluoride	16984-48-8	LA-533-410	DU	< 0.464	mg/L			20.00	0.46		07/25/08
Chloride	16887-00-6	LA-533-410	D	175	mg/L			20.00	0.94		07/25/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.256	mg/L			20.00	0.26		07/25/08
Nitrogen in Nitrate	NO3-N	LA-533-410	DU	< 0.242	mg/L			20.00	0.24		07/25/08
Phosphate (P) by IC	PO4-P	LA-533-410	D	290	mg/L			20.00	1.2		07/25/08
Sulfate	14808-79-8	LA-533-410	DU	< 2.64	mg/L			20.00	2.6		07/25/08
<b>ICP Metals Analysis, Grd H20 P Prep</b>											<b>08/08/08</b>
<b>ICP Metals Analysis, Grd H20 P</b>											
Aluminum	7429-90-5	LA-505-411	DU	< 260	ug/L			5.00	2.6e + 02		08/14/08
Iron	7439-89-8	LA-505-411	BD	414	ug/L			5.00	1.2e + 02		08/14/08
Magnesium	7439-95-4	LA-505-411	DN	3.02e + 03	ug/L			5.00	2.5e + 02		08/14/08
Manganese	7439-96-5	LA-505-411	D	21.0	ug/L			5.00	20		08/14/08
Nickel	7440-02-0	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Potassium	7440-09-7	LA-505-411	BD	3.55e + 03	ug/L			5.00	8.5e + 02		08/14/08
Silver	7440-22-4	LA-505-411	D	41.0	ug/L			5.00	25		08/14/08
Sodium	7440-23-5	LA-505-411	DX	9.94e + 05	ug/L			5.00	2.6e + 02		08/14/08
Antimony	7440-36-0	LA-505-411	DU	< 280	ug/L			5.00	2.8e + 02		08/14/08
Barium	7440-39-3	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Cadmium	7440-43-9	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Chromium	7440-47-3	LA-505-411	DU	< 65.0	ug/L			5.00	65		08/14/08
Cobalt	7440-48-4	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Copper	7440-50-8	LA-505-411	DU	< 30.0	ug/L			5.00	30		08/14/08
Vanadium	7440-62-2	LA-505-411	DU	< 60.0	ug/L			5.00	60		08/14/08
Zinc	7440-66-8	LA-505-411	DU	< 45.0	ug/L			5.00	45		08/14/08

**MDL = Minimum Detection Limit**

**RQ = Result Qualifier**

**TP Err = Total Propagated Error**

**DF = Dilution Factor**

B - The analyte < the RDL but > = the IDL/MDL (inorg)

D - Analyte was identified at a secondary dilution factor (inorg)

U - Analyzed for but not detected above limiting criteria (inorg)

X - Other flags/notes described in the comments/narrative (inorg)

D - Analyte was identified at a secondary dilution factor

N - Spike sample recovery is outside control limits. (inorg)

U - Analyzed for but not detected above limiting criteria.

\* - Indicates results that have NOT been validated; + - Indicates more than six qualifier symbols

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# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F06-027  
**Sample #** W08GR02848  
**Client ID:** B1WCV1

**Group #:** WSCF20081528  
**Department:** Inorganic  
**Sampled:** 07/22/08  
**Received:** 07/22/08

TRENT  
WSCF

**Matrix:** WATER

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Calcium	7440-70-2	LA-505-411	DX	8.52e+03	ug/L			5.00	3.8e+02		08/14/08
Lead	7439-92-1	LA-505-411	DU	< 225	ug/L			5.00	2.2e+02		08/14/08
Molybdenum	7439-98-7	LA-505-411	DU	< 25.0	ug/L			5.00	25		08/14/08
Strontium	7440-24-6	LA-505-411	D	129	ug/L			5.00	20		08/14/08
Arsenic	7440-38-2	LA-505-411	DU	< 390	ug/L			5.00	3.9e+02		08/14/08

**MDL = Minimum Detection Limit**

**RQ = Result Qualifier**

**TP Err = Total Propagated Error**

**DF = Dilution Factor**

\* - Indicates results that have NOT been validated;

B - The analyte < the RDL but > = the IDL/MDL (inorg)

D - Analyte was identified at a secondary dilution factor (inorg)

U - Analyzed for but not detected above limiting criteria (inorg)

X - Other flags/notes described in the comments/narrative (inorg)

+ - Indicates more than six qualifier symbols

D - Analyte was identified at a secondary dilution factor

N - Spike sample recovery is outside control limits. (inorg)

U - Analyzed for but not detected above limiting criteria.

Report WGPP/ver. 5.2

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# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F06-027  
**Sample #** W08GR02849  
**Client ID:** B1WCV3

**TRENT  
WSCF**

**Matrix: WATER**

**Group #:** WSCF20081528  
**Department:** Inorganic  
**Sampled:** 07/22/08  
**Received:** 07/22/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
<b>Anions by Ion Chromatography</b>											
Fluoride	16984-48-8	LA-533-410	DU	< 0.464	mg/L			20.00	0.46		07/25/08
Chloride	16887-00-6	LA-533-410	D	135	mg/L			20.00	0.94		07/25/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.256	mg/L			20.00	0.26		07/25/08
Nitrogen in Nitrate	NO3-N	LA-533-410	DU	< 0.242	mg/L			20.00	0.24		07/25/08
Phosphate (P) by IC	PO4-P	LA-533-410	D	180	mg/L			20.00	1.2		07/25/08
Sulfate	14808-79-8	LA-533-410	DU	< 2.64	mg/L			20.00	2.6		07/25/08
<b>ICP Metals Analysis, Grd H20 P Prep</b>											
<b>ICP Metals Analysis, Grd H20 P</b>											
Aluminum	7429-90-5	LA-505-411	DU	< 260	ug/L			5.00	2.6e+02		08/14/08
Iron	7439-89-6	LA-505-411	D	621	ug/L			5.00	1.2e+02		08/14/08
Magnesium	7439-95-4	LA-505-411	DN	1.15e+04	ug/L			5.00	2.5e+02		08/14/08
Manganese	7439-96-5	LA-505-411	D	1.62e+03	ug/L			5.00	20		08/14/08
Nickel	7440-02-0	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Potassium	7440-09-7	LA-505-411	D	5.93e+03	ug/L			5.00	8.5e+02		08/14/08
Silver	7440-22-4	LA-505-411	BD	27.0	ug/L			5.00	25		08/14/08
Sodium	7440-23-5	LA-505-411	DX	8.79e+05	ug/L			5.00	2.6e+02		08/14/08
Antimony	7440-36-0	LA-505-411	DU	< 280	ug/L			5.00	2.8e+02		08/14/08
Barium	7440-39-3	LA-505-411	BD	25.0	ug/L			5.00	20		08/14/08
Cadmium	7440-43-9	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Chromium	7440-47-3	LA-505-411	DU	< 65.0	ug/L			5.00	65		08/14/08
Cobalt	7440-48-4	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Copper	7440-50-8	LA-505-411	DU	< 30.0	ug/L			5.00	30		08/14/08
Vanadium	7440-62-2	LA-505-411	DU	< 60.0	ug/L			5.00	60		08/14/08
Zinc	7440-66-6	LA-505-411	DU	< 45.0	ug/L			5.00	45		08/14/08

**MDL=Minimum Detection Limit**

**RQ=Result Qualifier**

**TP Err=Total Propagated Error**

**DF=Dilution Factor**

B - The analyte < the RDL but > = the IDL/MDL (inorg)

D - Analyte was identified at a secondary dilution factor(inorg)

U - Analyzed for but not detected above limiting criteria(inorg)

X - Other flags/notes described in the comments/narrative(inorg)

D - Analyte was identified at a secondary dilution factor

N - Spike sample recovery is outside control limits.(inorg)

U - Analyzed for but not detected above limiting criteria.

\* - Indicates results that have NOT been validated; + - Indicates more than six qualifier symbols

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# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F06-027  
**Sample #** W08GR02849  
**Client ID:** B1WCV3

**TRENT  
WSCF**

**Matrix: WATER**

**Group #:** WSCF20081528  
**Department:** Inorganic  
**Sampled:** 07/22/08  
**Received:** 07/22/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Calcium	7440-70-2	LA-505-411	DX	4.71e+04	ug/L			5.00	3.6e+02		08/14/08
Lead	7439-92-1	LA-505-411	DU	< 225	ug/L			5.00	2.2e+02		08/14/08
Molybdenum	7439-98-7	LA-505-411	DU	< 25.0	ug/L			5.00	25		08/14/08
Strontium	7440-24-6	LA-505-411	D	162	ug/L			5.00	20		08/14/08
Arsenic	7440-38-2	LA-505-411	DU	< 390	ug/L			5.00	3.9e+02		08/14/08

**MDL = Minimum Detection Limit**  
**RQ = Result Qualifier**  
**TP Err = Total Propagated Error**  
**DF = Dilution Factor**

B - The analyte < the RDL but > = the IDL/MDL (inorg)  
 D - Analyte was identified at a secondary dilution factor (inorg)  
 U - Analyzed for but not detected above limiting criteria (inorg)  
 X - Other flags/notes described in the comments/narrative (inorg)

D - Analyte was identified at a secondary dilution factor  
 N - Spike sample recovery is outside control limits (inorg)  
 U - Analyzed for but not detected above limiting criteria.

\* - Indicates results that have NOT been validated; + - Indicates more than six qualifier symbols

*Report WGPP/ver. 5.2  
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# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F06-027  
**Sample #** W08GR02850  
**Client ID:** B1WCV4

**TRENT  
WSCF**

**Matrix: WATER**

**Group #:** WSCF20081528  
**Department:** Inorganic  
**Sampled:** 07/22/08  
**Received:** 07/22/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
<b>Anions by Ion Chromatography</b>											
Fluoride	16984-48-8	LA-533-410	DU	< 0.232	mg/L			10.00	0.23		07/25/08
Chloride	16887-00-6	LA-533-410	D	44.3	mg/L			10.00	0.47		07/25/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.128	mg/L			10.00	0.13		07/25/08
Nitrogen in Nitrate	NO3-N	LA-533-410	DU	< 0.121	mg/L			10.00	0.12		07/25/08
Phosphate (P) by IC	PO4-P	LA-533-410	D	126	mg/L			10.00	0.61		07/25/08
Sulfate	14808-79-8	LA-533-410	BD	5.37	mg/L			10.00	1.3		07/25/08
<b>ICP Metals Analysis, Grd H20 P Prep</b>											<b>08/08/08</b>
<b>ICP Metals Analysis, Grd H20 P</b>											
Aluminum	7429-90-5	LA-505-411	DU	< 260	ug/L			5.00	2.6e+02		08/14/08
Iron	7439-89-6	LA-505-411	BD	511	ug/L			5.00	1.2e+02		08/14/08
Magnesium	7439-95-4	LA-505-411	DN	1.67e+03	ug/L			5.00	2.5e+02		08/14/08
Manganese	7439-96-5	LA-505-411	D	462	ug/L			5.00	20		08/14/08
Nickel	7440-02-0	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Potassium	7440-09-7	LA-505-411	BD	2.30e+03	ug/L			5.00	8.5e+02		08/14/08
Silver	7440-22-4	LA-505-411	DU	< 25.0	ug/L			5.00	25		08/14/08
Sodium	7440-23-5	LA-505-411	DX	4.02e+05	ug/L			5.00	2.6e+02		08/14/08
Antimony	7440-36-0	LA-505-411	DU	< 280	ug/L			5.00	2.8e+02		08/14/08
Barium	7440-39-3	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Cadmium	7440-43-9	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Chromium	7440-47-3	LA-505-411	DU	< 65.0	ug/L			5.00	65		08/14/08
Cobalt	7440-48-4	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Copper	7440-50-8	LA-505-411	DU	< 30.0	ug/L			5.00	30		08/14/08
Vanadium	7440-62-2	LA-505-411	DU	< 60.0	ug/L			5.00	60		08/14/08
Zinc	7440-66-6	LA-505-411	DU	< 45.0	ug/L			5.00	45		08/14/08

**MDL = Minimum Detection Limit**

**RQ = Result Qualifier**

**TP Err = Total Propagated Error**

**DF = Dilution Factor**

B - The analyte < the RDL but > = the IDL/MDL (inorg)

D - Analyte was identified at a secondary dilution factor (inorg)

U - Analyzed for but not detected above limiting criteria (inorg)

X - Other flags/notes described in the comments/narrative (inorg)

D - Analyte was identified at a secondary dilution factor

N - Spike sample recovery is outside control limits (inorg)

U - Analyzed for but not detected above limiting criteria.

\* - Indicates results that have NOT been validated; + - Indicates more than six qualifier symbols

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# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F06-027  
**Sample #** W08GR02850  
**Client ID:** B1WCV4

TRENT  
 WSCF

**Matrix:** WATER

**Group #:** WSCF20081528  
**Department:** Inorganic  
**Sampled:** 07/22/08  
**Received:** 07/22/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Calcium	7440-70-2	LA-505-411	DX	9.76e+03	ug/L			5.00	3.6e+02		08/14/08
Lead	7439-92-1	LA-505-411	DU	< 225	ug/L			5.00	2.2e+02		08/14/08
Molybdenum	7439-98-7	LA-505-411	DU	< 25.0	ug/L			5.00	25		08/14/08
Strontium	7440-24-6	LA-505-411	BD	60.1	ug/L			5.00	20		08/14/08
Arsenic	7440-38-2	LA-505-411	DU	< 390	ug/L			5.00	3.9e+02		08/14/08

**MDL = Minimum Detection Limit**

**RQ = Result Qualifier**

**TP Err = Total Propagated Error**

**DF = Dilution Factor**

\* - Indicates results that have NOT been validated;

B - The analyte < the RDL but > = the IDL/MDL (inorg)

D - Analyte was identified at a secondary dilution factor (inorg)

U - Analyzed for but not detected above limiting criteria (inorg)

X - Other flags/notes described in the comments/narrative (inorg)

+ - Indicates more than six qualifier symbols

D - Analyte was identified at a secondary dilution factor

N - Spike sample recovery is outside control limits. (inorg)

U - Analyzed for but not detected above limiting criteria.

Report WGPP/ver. 5.2

Groundwater Remediation Program

# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F06-027  
**Sample #** W08GR02851  
**Client ID:** B1WCV5

**TRENT  
WSCF**

**Matrix: WATER**

**Group #:** WSCF20081528  
**Department:** Inorganic  
**Sampled:** 07/22/08  
**Received:** 07/22/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
<b>Anions by Ion Chromatography</b>											
Fluoride	16984-48-8	LA-533-410	DU	< 0.464	mg/L			20.00	0.46		07/25/08
Chloride	16887-00-6	LA-533-410	D	66.4	mg/L			20.00	0.94		07/25/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.256	mg/L			20.00	0.26		07/25/08
Nitrogen in Nitrate	NO3-N	LA-533-410	DU	< 0.242	mg/L			20.00	0.24		07/25/08
Phosphate (P) by IC	PO4-P	LA-533-410	D	168	mg/L			20.00	1.2		07/25/08
Sulfate	14808-79-8	LA-533-410	DU	< 2.64	mg/L			20.00	2.6		07/25/08
<b>ICP Metals Analysis, Grd H20 P Prep</b>											
<b>ICP Metals Analysis, Grd H20 P</b>											
Aluminum	7429-90-5	LA-505-411	DU	< 260	ug/L			5.00	2.6e+02		08/14/08
Iron	7439-89-6	LA-505-411	BD	270	ug/L			5.00	1.2e+02		08/14/08
Magnesium	7439-95-4	LA-505-411	DN	6.58e+03	ug/L			5.00	2.5e+02		08/14/08
Manganese	7439-96-5	LA-505-411	D	715	ug/L			5.00	20		08/14/08
Nickel	7440-02-0	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Potassium	7440-09-7	LA-505-411	BD	4.02e+03	ug/L			5.00	8.5e+02		08/14/08
Silver	7440-22-4	LA-505-411	DU	< 25.0	ug/L			5.00	25		08/14/08
Sodium	7440-23-5	LA-505-411	DX	6.10e+05	ug/L			5.00	2.6e+02		08/14/08
Antimony	7440-36-0	LA-505-411	DU	< 280	ug/L			5.00	2.8e+02		08/14/08
Barium	7440-39-3	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Cadmium	7440-43-9	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Chromium	7440-47-3	LA-505-411	DU	< 65.0	ug/L			5.00	65		08/14/08
Cobalt	7440-48-4	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Copper	7440-50-8	LA-505-411	DU	< 30.0	ug/L			5.00	30		08/14/08
Vanadium	7440-62-2	LA-505-411	DU	< 60.0	ug/L			5.00	60		08/14/08
Zinc	7440-66-6	LA-505-411	DU	< 45.0	ug/L			5.00	45		08/14/08

**MDL = Minimum Detection Limit**

**RQ = Result Qualifier**

**TP Err = Total Propagated Error**

**DF = Dilution Factor**

B - The analyte < the RDL but > = the IDL/MDL (inorg)

D - Analyte was identified at a secondary dilution factor (inorg)

U - Analyzed for but not detected above limiting criteria (inorg)

X - Other flags/notes described in the comments/narrative (inorg)

D - Analyte was identified at a secondary dilution factor

N - Spike sample recovery is outside control limits. (inorg)

U - Analyzed for but not detected above limiting criteria.

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# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F06-027  
**Sample #** W08GR02851  
**Client ID:** B1WCV5

TRENT  
 WSCF

**Matrix:** WATER

**Group #:** WSCF20081528  
**Department:** Inorganic  
**Sampled:** 07/22/08  
**Received:** 07/22/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Calcium	7440-70-2	LA-505-411	DX	1.55e + 04	ug/L			5.00	3.6e + 02		08/14/08
Lead	7439-92-1	LA-505-411	DU	< 225	ug/L			5.00	2.2e + 02		08/14/08
Molybdenum	7439-98-7	LA-505-411	DU	< 25.0	ug/L			5.00	25		08/14/08
Strontium	7440-24-6	LA-505-411	BD	88.9	ug/L			5.00	20		08/14/08
Arsenic	7440-38-2	LA-505-411	DU	< 390	ug/L			5.00	3.9e + 02		08/14/08

**MDL=Minimum Detection Limit**

**RQ=Result Qualifier**

**TP Err=Total Propagated Error**

**DF=Dilution Factor**

B - The analyte < the RDL but > = the IDL/MDL (inorg)  
 D - Analyte was identified at a secondary dilution factor(inorg)  
 U - Analyzed for but not detected above limiting criteria(inorg)  
 X - Other flags/notes described in the comments/narrative(inorg)

D - Analyte was identified at a secondary dilution factor  
 N - Spike sample recovery is outside control limits.(inorg)  
 U - Analyzed for but not detected above limiting criteria.

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+ - Indicates more than six qualifier symbols

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# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F06-027  
**Sample #** W08GR02852  
**Client ID:** B1WCV6

**TRENT  
WSCF**

**Matrix: WATER**

**Group #:** WSCF20081528  
**Department:** Inorganic  
**Sampled:** 07/22/08  
**Received:** 07/22/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
<b>Anions by Ion Chromatography</b>											
Fluoride	16984-48-8	LA-533-410	DU	< 0.232	mg/L			10.00	0.23		07/25/08
Chloride	16887-00-6	LA-533-410	D	75.0	mg/L			10.00	0.47		07/25/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.128	mg/L			10.00	0.13		07/25/08
Nitrogen in Nitrate	NO3-N	LA-533-410	DU	< 0.121	mg/L			10.00	0.12		07/25/08
Phosphate (P) by IC	PO4-P	LA-533-410	D	223	mg/L			51.00	3.1		07/25/08
Sulfate	14808-79-8	LA-533-410	DU	< 1.32	mg/L			10.00	1.3		07/25/08
<b>ICP Metals Analysis, Grd H20 P Prep</b>											<b>08/08/08</b>
<b>ICP Metals Analysis, Grd H20 P</b>											
Aluminum	7429-90-5	LA-505-411	DU	< 260	ug/L			5.00	2.6e+02		08/14/08
Iron	7439-89-6	LA-505-411	D	663	ug/L			5.00	1.2e+02		08/14/08
Magnesium	7439-95-4	LA-505-411	DN	3.15e+03	ug/L			5.00	2.5e+02		08/14/08
Manganese	7439-96-5	LA-505-411	D	644	ug/L			5.00	20		08/14/08
Nickel	7440-02-0	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Potassium	7440-09-7	LA-505-411	D	3.25e+03	ug/L			5.00	8.5e+02		08/14/08
Silver	7440-22-4	LA-505-411	DU	< 25.0	ug/L			5.00	25		08/14/08
Sodium	7440-23-5	LA-505-411	DX	6.61e+05	ug/L			5.00	2.6e+02		08/14/08
Antimony	7440-36-0	LA-505-411	DU	< 280	ug/L			5.00	2.8e+02		08/14/08
Barium	7440-39-3	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Cadmium	7440-43-9	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Chromium	7440-47-3	LA-505-411	DU	< 65.0	ug/L			5.00	65		08/14/08
Cobalt	7440-48-4	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Copper	7440-50-8	LA-505-411	DU	< 30.0	ug/L			5.00	30		08/14/08
Vanadium	7440-82-2	LA-505-411	DU	< 60.0	ug/L			5.00	60		08/14/08
Zinc	7440-66-6	LA-505-411	DU	< 45.0	ug/L			5.00	45		08/14/08

**MDL = Minimum Detection Limit**

**RQ = Result Qualifier**

**TP Err = Total Propagated Error**

**DF = Dilution Factor**

\* - Indicates results that have NOT been validated;

B - The analyte < the RDL but > = the IDL/MDL (inorg)

D - Analyte was identified at a secondary dilution factor(inorg)

U - Analyzed for but not detected above limiting criteria(inorg)

X - Other flags/notes described in the comments/narrative(inorg)

+ - Indicates more than six qualifier symbols

D - Analyte was identified at a secondary dilution factor

N - Spike sample recovery is outside control limits.(inorg)

U - Analyzed for but not detected above limiting criteria.

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# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F06-027  
**Sample #** W08GR02852  
**Client ID:** B1WCV6

TRENT  
 WSCF

**Matrix:** WATER

**Group #:** WSCF20081528  
**Department:** Inorganic  
**Sampled:** 07/22/08  
**Received:** 07/22/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Calcium	7440-70-2	LA-505-411	DX	1.17e+04	ug/L			5.00	3.6e+02		08/14/08
Lead	7438-92-1	LA-505-411	DU	< 225	ug/L			5.00	2.2e+02		08/14/08
Molybdenum	7439-98-7	LA-505-411	DU	< 25.0	ug/L			5.00	25		08/14/08
Strontium	7440-24-6	LA-505-411	BD	89.4	ug/L			5.00	20		08/14/08
Arsenic	7440-38-2	LA-505-411	DU	< 390	ug/L			5.00	3.9e+02		08/14/08

**MDL=Minimum Detection Limit**

**RQ=Result Qualifier**

**TP Err=Total Propagated Error**

**DF=Dilution Factor**

B - The analyte < the RDL but > = the IDL/MDL (inorg)

D - Analyte was identified at a secondary dilution factor(inorg)

U - Analyzed for but not detected above limiting criteria(inorg)

X - Other flags/notes described in the comments/narrative(inorg)

D - Analyte was identified at a secondary dilution factor

N - Spike sample recovery is outside control limits.(inorg)

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# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F06-027  
**Sample #** W08GR02853  
**Client ID:** B1WCV7

**TRENT  
WSCF**

**Matrix: WATER**

**Group #:** WSCF20081528  
**Department:** Inorganic  
**Sampled:** 07/22/08  
**Received:** 07/22/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
<b>Anions by Ion Chromatography</b>											
Fluoride	16984-48-8	LA-533-410	DU	< 0.232	mg/L			10.00	0.23		07/25/08
Chloride	16887-00-6	LA-533-410	D	13.8	mg/L			10.00	0.47		07/25/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.128	mg/L			10.00	0.13		07/25/08
Nitrogen in Nitrate	NO3-N	LA-533-410	DU	< 0.121	mg/L			10.00	0.12		07/25/08
Phosphate (P) by IC	PO4-P	LA-533-410	D	14.8	mg/L			10.00	0.61		07/25/08
Sulfate	14808-79-8	LA-533-410	BD	4.92	mg/L			10.00	1.3		07/25/08
<b>ICP Metals Analysis, Grd H20 P Prep</b>											<b>08/08/08</b>
<b>ICP Metals Analysis, Grd H20 P</b>											
Aluminum	7429-90-5	LA-505-411	DU	< 260	ug/L			5.00	2.6e+02		08/14/08
Iron	7439-89-6	LA-505-411	BD	263	ug/L			5.00	1.2e+02		08/14/08
Magnesium	7439-95-4	LA-505-411	DN	5.18e+03	ug/L			5.00	2.5e+02		08/14/08
Manganese	7439-96-5	LA-505-411	D	563	ug/L			5.00	20		08/14/08
Nickel	7440-02-0	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Potassium	7440-09-7	LA-505-411	D	2.14e+03	ug/L			5.00	8.5e+02		08/14/08
Silver	7440-22-4	LA-505-411	DU	< 25.0	ug/L			5.00	25		08/14/08
Sodium	7440-23-5	LA-505-411	DX	9.15e+04	ug/L			5.00	2.6e+02		08/14/08
Antimony	7440-36-0	LA-505-411	DU	< 280	ug/L			5.00	2.8e+02		08/14/08
Barium	7440-39-3	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Cadmium	7440-43-9	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Chromium	7440-47-3	LA-505-411	DU	< 65.0	ug/L			5.00	65		08/14/08
Cobalt	7440-48-4	LA-505-411	DU	< 20.0	ug/L			5.00	20		08/14/08
Copper	7440-50-8	LA-505-411	DU	< 30.0	ug/L			5.00	30		08/14/08
Vanadium	7440-62-2	LA-505-411	DU	< 60.0	ug/L			5.00	60		08/14/08
Zinc	7440-66-6	LA-505-411	DU	< 45.0	ug/L			5.00	45		08/14/08

**MDL = Minimum Detection Limit**

**RQ = Result Qualifier**

**TP Err = Total Propagated Error**

**DF = Dilution Factor**

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# WSCF

## ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F06-027  
**Sample #** W08GR02853  
**Client ID:** B1WCV7

TRENT  
 WSCF

**Matrix:** WATER

**Group #:** WSCF20081528  
**Department:** Inorganic  
**Sampled:** 07/22/08  
**Received:** 07/22/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Calcium	7440-70-2	LA-505-411	DX	2.93e+04	ug/L			5.00	3.6e+02		08/14/08
Lead	7439-92-1	LA-505-411	DU	< 225	ug/L			5.00	2.2e+02		08/14/08
Molybdenum	7439-98-7	LA-505-411	DU	< 25.0	ug/L			5.00	25		08/14/08
Strontium	7440-24-6	LA-505-411	D	121	ug/L			5.00	20		08/14/08
Arsenic	7440-38-2	LA-505-411	DU	< 390	ug/L			5.00	3.9e+02		08/14/08

**MDL=Minimum Detection Limit**

**RQ=Result Qualifier**

**TP Err=Total Propagated Error**

**DF=Dilution Factor**

B - The analyte < the RDL but > = the IDL/MDL (inorg)

D - Analyte was identified at a secondary dilution factor(inorg)

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N - Spike sample recovery is outside control limits.(inorg)

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Report WGPP/ver. 5.2

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# WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081528  
 Matrix: WATER  
 Test: Anions by Ion Chromatography

Sample Date: 07/22/08  
 Receive Date: 07/22/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
<b>Lab ID: W08GR02842</b>											
<b>BATCH QC ASSOCIATED WITH SAMPLE</b>											
DUP	Chloride	18887-00-8	175.9847		RPD			3.073	20.000		07/25/08
DUP	Fluoride	18984-48-8	<0.232		RPD			n/a	20.000	U	07/25/08
DUP	Nitrogen in Nitrite	NO2-N	<0.128		RPD			n/a	20.000	U	07/25/08
DUP	Nitrogen in Nitrate	NO3-N	<0.121		RPD			n/a	20.000	U	07/25/08
DUP	Phosphate (P) by IC	PO4-P	430.3345		RPD			0.724	20.000		07/25/08
DUP	Sulfate	14808-79-8	15.3548		RPD			0.567	20.000		07/25/08
MS	Chloride	18887-00-8	1.030259	103.544	% Recov	80.000	120.000				07/25/08
MS	Fluoride	18984-48-8	0.37713	78.497	% Recov	80.000	120.000				07/25/08
MS	Nitrogen in Nitrite	NO2-N	0.57647	117.189	% Recov	80.000	120.000				07/25/08
MS	Nitrogen in Nitrate	NO3-N	0.45413	101.823	% Recov	80.000	120.000				07/25/08
MS	Phosphate (P) by IC	PO4-P	0.791751	82.733	% Recov	80.000	120.000				07/25/08
MS	Sulfate	14808-79-8	1.85785	94.788	% Recov	80.000	120.000				07/25/08
MSD	Chloride	18887-00-8	1.154355	116.016	% Recov	80.000	120.000				07/25/08
MSD	Fluoride	18984-48-8	0.38007	77.093	% Recov	80.000	120.000				07/25/08
MSD	Nitrogen in Nitrite	NO2-N	0.5812	118.130	% Recov	80.000	120.000				07/25/08
MSD	Nitrogen in Nitrate	NO3-N	0.45781	102.648	% Recov	80.000	120.000				07/25/08
MSD	Phosphate (P) by IC	PO4-P	0.874431	91.372	% Recov	80.000	120.000				07/25/08
MSD	Sulfate	14808-79-8	1.90131	97.006	% Recov	80.000	120.000				07/25/08
SPK-RPD	Chloride	18887-00-8	116.016		RPD			11.361	20.000		07/25/08
SPK-RPD	Fluoride	18984-48-8	77.093		RPD			0.776	20.000		07/25/08
SPK-RPD	Nitrogen in Nitrite	NO2-N	118.130		RPD			0.817	20.000		07/25/08
SPK-RPD	Nitrogen in Nitrate	NO3-N	102.648		RPD			0.807	20.000		07/25/08
SPK-RPD	Phosphate (P) by IC	PO4-P	91.372		RPD			9.924	20.000		07/25/08
SPK-RPD	Sulfate	14808-79-8	97.006		RPD			2.313	20.000		07/25/08

# WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081528  
 Matrix: WATER  
 Test: Anions by Ion Chromatography

Sample Date:  
 Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
<b>BATCH QC</b>											
BLANK	Chloride	16887-00-6	<4.69e-2	n/a	mg/L	0.000	0.030			U	07/25/08
BLANK	Chloride	16887-00-6	<4.69e-2	n/a	mg/L	0.000	0.030			U	07/25/08
BLANK	Fluoride	16984-48-8	<2.32e-2	n/a	mg/L	0.000	0.030			U	07/25/08
BLANK	Fluoride	16984-48-8	<2.32e-2	n/a	mg/L	0.000	0.030			U	07/25/08
BLANK	Nitrogen in Nitrite	NO2-N	<1.28e-2	n/a	mg/L	0.000	0.020			U	07/25/08
BLANK	Nitrogen in Nitrite	NO2-N	<1.28e-2	n/a	mg/L	0.000	0.020			U	07/25/08
BLANK	Nitrogen in Nitrate	NO3-N	<1.21e-2	n/a	mg/L	0.000	0.040			U	07/25/08
BLANK	Nitrogen in Nitrate	NO3-N	<1.21e-2	n/a	mg/L	0.000	0.040			U	07/25/08
BLANK	Phosphate (P) by IC	PO4-P	<6.06e-2	n/a	mg/L	0.000	0.200			U	07/25/08
BLANK	Phosphate (P) by IC	PO4-P	<6.06e-2	n/a	mg/L	0.000	0.200			U	07/25/08
BLANK	Sulfate	14808-79-8	<0.132	n/a	mg/L	0.000	0.200			U	07/25/08
BLANK	Sulfate	14808-79-8	<0.132	n/a	mg/L	0.000	0.200			U	07/25/08
LCS	Chloride	16887-00-6	197.3928	98.205	% Recov	80.000	120.000				07/25/08
LCS	Fluoride	16984-48-8	107.0518	107.482	% Recov	80.000	120.000				07/25/08
LCS	Nitrogen in Nitrite	NO2-N	100.9006	101.510	% Recov	80.000	120.000				07/25/08
LCS	Nitrogen in Nitrate	NO3-N	93.8512	104.163	% Recov	80.000	120.000				07/25/08
LCS	Phosphate (P) by IC	PO4-P	199.806	103.209	% Recov	80.000	120.000				07/25/08
LCS	Sulfate	14808-79-8	388.3043	98.057	% Recov	80.000	120.000				07/25/08

Lab ID: W08GR02926

**BATCH QC ASSOCIATED WITH SAMPLE**

DUP	Chloride	16887-00-6	12.7198		RPD			1.491	20.000		07/25/08
DUP	Fluoride	16984-48-8	0.1044		RPD			4.311	20.000		07/25/08
DUP	Nitrogen in Nitrite	NO2-N	0.1231		RPD			119.119	20.000		07/25/08
DUP	Nitrogen in Nitrate	NO3-N	0.6029		RPD			0.875	20.000		07/25/08
DUP	Phosphate (P) by IC	PO4-P	<6.06e-2		RPD			n/a	20.000	U	07/25/08
DUP	Sulfate	14808-79-8	23.9009		RPD			0.035	20.000		07/25/08
MS	Chloride	16887-00-6	0.9647	96.955	% Recov	80.000	120.000				07/25/08

# WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081528  
 Matrix: WATER  
 Test: Anions by Ion Chromatography

Sample Date: 07/25/08  
 Receive Date: 07/25/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
MS	Fluoride	16984-48-8	0.5534	112.252	% Recov	80.000	120.000				07/25/08
MS	Nitrogen in Nitrite	NO2-N	0.5609	114.004	% Recov	80.000	120.000				07/25/08
MS	Nitrogen in Nitrate	NO3-N	0.4225	94.731	% Recov	80.000	120.000				07/25/08
MS	Phosphate (P) by IC	PO4-P	0.7752	81.003	% Recov	80.000	120.000				07/25/08
MS	Sulfate	14808-79-8	1.6781	85.617	% Recov	80.000	120.000				07/25/08
MSD	Chloride	16887-00-6	0.9794	98.432	% Recov	80.000	120.000				07/25/08
MSD	Fluoride	16984-48-8	0.5592	113.428	% Recov	80.000	120.000				07/25/08
MSD	Nitrogen in Nitrite	NO2-N	0.5666	115.163	% Recov	80.000	120.000				07/25/08
MSD	Nitrogen in Nitrate	NO3-N	0.4238	95.022	% Recov	80.000	120.000				07/25/08
MSD	Phosphate (P) by IC	PO4-P	0.7806	81.567	% Recov	80.000	120.000				07/25/08
MSD	Sulfate	14808-79-8	1.6605	84.719	% Recov	80.000	120.000				07/25/08
SPK-RPD	Chloride	16887-00-6	98.432		RPD			1.512	20.000		07/25/08
SPK-RPD	Fluoride	16984-48-8	113.428		RPD			1.042	20.000		07/25/08
SPK-RPD	Nitrogen in Nitrite	NO2-N	115.163		RPD			1.011	20.000		07/25/08
SPK-RPD	Nitrogen in Nitrate	NO3-N	95.022		RPD			0.307	20.000		07/25/08
SPK-RPD	Phosphate (P) by IC	PO4-P	81.567		RPD			0.694	20.000		07/25/08
SPK-RPD	Sulfate	14808-79-8	84.719		RPD			1.054	20.000		07/25/08

## BATCH QC

BLANK	Chloride	16887-00-6	< 4.69e-2	n/a	mg/L	0.000	0.030			U	07/25/08
BLANK	Chloride	16887-00-6	< 4.69e-2	n/a	mg/L	0.000	0.030			U	07/25/08
BLANK	Fluoride	16984-48-8	< 2.32e-2	n/a	mg/L	0.000	0.030			U	07/25/08
BLANK	Fluoride	16984-48-8	< 2.32e-2	n/a	mg/L	0.000	0.030			U	07/25/08
BLANK	Nitrogen in Nitrite	NO2-N	< 1.28e-2	n/a	mg/L	0.000	0.020			U	07/25/08
BLANK	Nitrogen in Nitrite	NO2-N	< 1.28e-2	n/a	mg/L	0.000	0.020			U	07/25/08
BLANK	Nitrogen in Nitrate	NO3-N	< 1.21e-2	n/a	mg/L	0.000	0.040			U	07/25/08
BLANK	Nitrogen in Nitrate	NO3-N	< 1.21e-2	n/a	mg/L	0.000	0.040			U	07/25/08
BLANK	Phosphate (P) by IC	PO4-P	< 6.06e-2	n/a	mg/L	0.000	0.200			U	07/25/08
BLANK	Phosphate (P) by IC	PO4-P	< 6.06e-2	n/a	mg/L	0.000	0.200			U	07/25/08
BLANK	Sulfate	14808-79-8	< 0.132	n/a	mg/L	0.000	0.200			U	07/25/08

# WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081528  
 Matrix: WATER  
 Test: Anions by Ion Chromatography

Sample Date:  
 Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
BLANK	Sulfate	14808-79-8	<0.132	n/a	mg/L	0.000	0.200			U	07/25/08
LCS	Chloride	18887-00-8	195.0298	97.030	% Recov	80.000	120.000				07/25/08
LCS	Fluoride	18984-48-8	104.8914	105.112	% Recov	80.000	120.000				07/25/08
LCS	Nitrogen in Nitrite	NO2-N	97.2444	97.831	% Recov	80.000	120.000				07/25/08
LCS	Nitrogen in Nitrate	NO3-N	91.0167	101.017	% Recov	80.000	120.000				07/25/08
LCS	Phosphate (P) by IC	PO4-P	184.9388	95.825	% Recov	80.000	120.000				07/25/08
LCS	Sulfate	14808-79-8	393.9441	99.481	% Recov	80.000	120.000				07/25/08

Lab ID: W08GR02853  
 BATCH QC ASSOCIATED WITH SAMPLE

DUP	Chloride	18887-00-8	14.0839		RPD			2.300	20.000		07/25/08
DUP	Fluoride	18984-48-8	<0.232		RPD			n/a	20.000	U	07/25/08
DUP	Nitrogen in Nitrite	NO2-N	<0.128		RPD			n/a	20.000	U	07/25/08
DUP	Nitrogen in Nitrate	NO3-N	<0.121		RPD			n/a	20.000	U	07/25/08
DUP	Phosphate (P) by IC	PO4-P	15.196		RPD			2.887	20.000		07/25/08
DUP	Sulfate	14808-79-8	4.8034		RPD			2.461	20.000		07/25/08
MS	Chloride	18887-00-8	0.97337	97.826	% Recov	80.000	120.000				07/25/08
MS	Fluoride	18984-48-8	0.46264	93.842	% Recov	80.000	120.000				07/25/08
MS	Nitrogen in Nitrite	NO2-N	0.47181	95.896	% Recov	80.000	120.000				07/25/08
MS	Nitrogen in Nitrate	NO3-N	0.42537	95.374	% Recov	80.000	120.000				07/25/08
MS	Phosphate (P) by IC	PO4-P	0.88328	92.297	% Recov	80.000	120.000				07/25/08
MS	Sulfate	14808-79-8	1.93178	98.560	% Recov	80.000	120.000				07/25/08
MSD	Chloride	18887-00-8	0.9764	98.131	% Recov	80.000	120.000				07/25/08
MSD	Fluoride	18984-48-8	0.4481	90.892	% Recov	80.000	120.000				07/25/08
MSD	Nitrogen in Nitrite	NO2-N	0.46322	94.150	% Recov	80.000	120.000				07/25/08
MSD	Nitrogen in Nitrate	NO3-N	0.43998	98.850	% Recov	80.000	120.000				07/25/08
MSD	Phosphate (P) by IC	PO4-P	0.91193	95.290	% Recov	80.000	120.000				07/25/08
MSD	Sulfate	14808-79-8	1.92697	98.315	% Recov	80.000	120.000				07/25/08
SPK-RPD	Chloride	18887-00-8	98.131		RPD			0.311	20.000		07/25/08
SPK-RPD	Fluoride	18984-48-8	90.892		RPD			3.194	20.000		07/25/08

# WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081528  
 Matrix: WATER  
 Test: Anions by Ion Chromatography

Sample Date: 07/22/08  
 Receive Date: 07/22/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
SPK-RPD	Nitrogen in Nitrite	NO2-N	94.150		RPD			1.837	20.000		07/25/08
SPK-RPD	Nitrogen in Nitrate	NO3-N	98.650		RPD			3.377	20.000		07/25/08
SPK-RPD	Phosphate (P) by IC	PO4-P	95.290		RPD			3.191	20.000		07/25/08
SPK-RPD	Sulfate	14808-79-8	98.315		RPD			0.249	20.000		07/25/08

## BATCH QC

BLANK	Chloride	16887-00-6	<4.69e-2	n/a	mg/L	0.000	0.030			U	07/25/08
BLANK	Chloride	16887-00-6	<4.69e-2	n/a	mg/L	0.000	0.030			U	07/25/08
BLANK	Fluoride	16984-48-8	<2.32e-2	n/a	mg/L	0.000	0.030			U	07/25/08
BLANK	Fluoride	16984-48-8	<2.32e-2	n/a	mg/L	0.000	0.030			U	07/25/08
BLANK	Nitrogen in Nitrite	NO2-N	<1.28e-2	n/a	mg/L	0.000	0.020			U	07/25/08
BLANK	Nitrogen in Nitrite	NO2-N	<1.28e-2	n/a	mg/L	0.000	0.020			U	07/25/08
BLANK	Nitrogen in Nitrate	NO3-N	<1.21e-2	n/a	mg/L	0.000	0.040			U	07/25/08
BLANK	Nitrogen in Nitrate	NO3-N	<1.21e-2	n/a	mg/L	0.000	0.040			U	07/25/08
BLANK	Phosphate (P) by IC	PO4-P	<6.06e-2	n/a	mg/L	0.000	0.200			U	07/25/08
BLANK	Phosphate (P) by IC	PO4-P	<6.06e-2	n/a	mg/L	0.000	0.200			U	07/25/08
BLANK	Sulfate	14808-79-8	<0.132	n/a	mg/L	0.000	0.200			U	07/25/08
BLANK	Sulfate	14808-79-8	<0.132	n/a	mg/L	0.000	0.200			U	07/25/08
LCS	Chloride	16887-00-6	192.3802	95.712	% Recov	80.000	120.000				07/25/08
LCS	Fluoride	16984-48-8	102.5934	103.005	% Recov	80.000	120.000				07/25/08
LCS	Nitrogen in Nitrite	NO2-N	95.2903	95.865	% Recov	80.000	120.000				07/25/08
LCS	Nitrogen in Nitrate	NO3-N	89.9661	99.851	% Recov	80.000	120.000				07/25/08
LCS	Phosphate (P) by IC	PO4-P	183.0921	94.670	% Recov	80.000	120.000				07/25/08
LCS	Sulfate	14808-79-8	387.1463	97.764	% Recov	80.000	120.000				07/25/08

Lab ID: W08GR02829

## BATCH QC ASSOCIATED WITH SAMPLE

DUP	Chloride	16887-00-6	6.9995		RPD			1.338	20.000		07/24/08
DUP	Fluoride	16984-48-8	<0.232		RPD			n/a	20.000	U	07/24/08
DUP	Nitrogen in Nitrite	NO2-N	<0.128		RPD			n/a	20.000	U	07/24/08

# WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081528  
 Matrix: WATER  
 Test: Anions by Ion Chromatography

Sample Date: 07/21/08  
 Receive Date: 07/21/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
DUP	Nitrogen in Nitrate	NO3-N	<0.121		RPD			n/a	20.000	U	07/24/08
DUP	Phosphate (P) by IC	PO4-P	11.0707		RPD			1.235	20.000		07/24/08
DUP	Sulfate	14808-79-8	6.2718		RPD			0.734	20.000		07/24/08
MS	Chloride	16887-00-6	0.94257	94.731	% Recov	80.000	120.000				07/24/08
MS	Fluoride	16984-48-8	0.53331	108.176	% Recov	80.000	120.000				07/24/08
MS	Nitrogen in Nitrite	NO2-N	0.46905	95.335	% Recov	80.000	120.000				07/24/08
MS	Nitrogen in Nitrate	NO3-N	0.43436	97.390	% Recov	80.000	120.000				07/24/08
MS	Phosphate (P) by IC	PO4-P	0.92066	96.203	% Recov	80.000	120.000				07/24/08
MS	Sulfate	14808-79-8	1.9599	99.995	% Recov	80.000	120.000				07/24/08
MSD	Chloride	16887-00-6	0.95472	95.952	% Recov	80.000	120.000				07/24/08
MSD	Fluoride	16984-48-8	0.54653	110.858	% Recov	80.000	120.000				07/24/08
MSD	Nitrogen in Nitrite	NO2-N	0.46931	95.388	% Recov	80.000	120.000				07/24/08
MSD	Nitrogen in Nitrate	NO3-N	0.43955	98.554	% Recov	80.000	120.000				07/24/08
MSD	Phosphate (P) by IC	PO4-P	0.94888	99.152	% Recov	80.000	120.000				07/24/08
MSD	Sulfate	14808-79-8	1.95728	99.861	% Recov	80.000	120.000				07/24/08
SPK-RPD	Chloride	16887-00-6	95.952		RPD			1.281	20.000		07/24/08
SPK-RPD	Fluoride	16984-48-8	110.858		RPD			2.449	20.000		07/24/08
SPK-RPD	Nitrogen in Nitrite	NO2-N	95.388		RPD			0.056	20.000		07/24/08
SPK-RPD	Nitrogen in Nitrate	NO3-N	98.554		RPD			1.188	20.000		07/24/08
SPK-RPD	Phosphate (P) by IC	PO4-P	99.152		RPD			3.019	20.000		07/24/08
SPK-RPD	Sulfate	14808-79-8	99.861		RPD			0.134	20.000		07/24/08

**Lab ID: W08GR02836**  
**BATCH QC ASSOCIATED WITH SAMPLE**

DUP	Chloride	16887-00-6	29.0637		RPD			0.196	20.000		07/24/08
DUP	Fluoride	16984-48-8	<0.232		RPD			n/a	20.000	U	07/24/08
DUP	Nitrogen in Nitrite	NO2-N	<0.128		RPD			n/a	20.000	U	07/24/08
DUP	Nitrogen in Nitrate	NO3-N	<0.121		RPD			n/a	20.000	U	07/24/08
DUP	Phosphate (P) by IC	PO4-P	<0.606		RPD			n/a	20.000	U	07/24/08
DUP	Sulfate	14808-79-8	8.342		RPD			0.095	20.000		07/24/08

# WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Inorganic**

SDG Number: WSCF20081528  
 Matrix: WATER  
 Test: Anions by Ion Chromatography

Sample Date: 07/22/08  
 Receive Date: 07/22/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
MS	Chloride	16887-00-6	0.9732	97.809	% Recov	80.000	120.000				07/24/08
MS	Fluoride	16984-48-8	0.5462	110.791	% Recov	80.000	120.000				07/24/08
MS	Nitrogen in Nitrite	NO2-N	0.46005	93.506	% Recov	80.000	120.000				07/24/08
MS	Nitrogen in Nitrate	NO3-N	0.43887	98.401	% Recov	80.000	120.000				07/24/08
MS	Phosphate (P) by IC	PO4-P	0.87286	91.208	% Recov	80.000	120.000				07/24/08
MS	Sulfate	14808-79-8	1.90156	97.018	% Recov	80.000	120.000				07/24/08
MSD	Chloride	16887-00-6	0.93764	94.235	% Recov	80.000	120.000				07/24/08
MSD	Fluoride	16984-48-8	0.49461	100.327	% Recov	80.000	120.000				07/24/08
MSD	Nitrogen in Nitrite	NO2-N	0.46167	93.835	% Recov	80.000	120.000				07/24/08
MSD	Nitrogen in Nitrate	NO3-N	0.42584	95.480	% Recov	80.000	120.000				07/24/08
MSD	Phosphate (P) by IC	PO4-P	0.87427	91.355	% Recov	80.000	120.000				07/24/08
MSD	Sulfate	14808-79-8	1.90236	97.059	% Recov	80.000	120.000				07/24/08
SPK-RPD	Chloride	16887-00-6	94.235		RPD			3.722	20.000		07/24/08
SPK-RPD	Fluoride	16984-48-8	100.327		RPD			9.913	20.000		07/24/08
SPK-RPD	Nitrogen in Nitrite	NO2-N	93.835		RPD			0.351	20.000		07/24/08
SPK-RPD	Nitrogen in Nitrate	NO3-N	95.480		RPD			3.013	20.000		07/24/08
SPK-RPD	Phosphate (P) by IC	PO4-P	91.355		RPD			0.161	20.000		07/24/08
SPK-RPD	Sulfate	14808-79-8	97.059		RPD			0.042	20.000		07/24/08
<b>BATCH QC</b>											
BLANK	Chloride	16887-00-6	<4.69e-2	n/a	mg/L	0.000	0.030			U	07/24/08
BLANK	Chloride	16887-00-6	<4.69e-2	n/a	mg/L	0.000	0.030			U	07/24/08
BLANK	Chloride	16887-00-6	<4.69e-2	n/a	mg/L	0.000	0.030			U	07/24/08
BLANK	Fluoride	16984-48-8	<2.32e-2	n/a	mg/L	0.000	0.030			U	07/24/08
BLANK	Fluoride	16984-48-8	<2.32e-2	n/a	mg/L	0.000	0.030			U	07/24/08
BLANK	Fluoride	16984-48-8	<2.32e-2	n/a	mg/L	0.000	0.030			U	07/24/08
BLANK	Nitrogen in Nitrite	NO2-N	<1.28e-2	n/a	mg/L	0.000	0.020			U	07/24/08
BLANK	Nitrogen in Nitrite	NO2-N	<1.28e-2	n/a	mg/L	0.000	0.020			U	07/24/08
BLANK	Nitrogen in Nitrite	NO2-N	<1.28e-2	n/a	mg/L	0.000	0.020			U	07/24/08
BLANK	Nitrogen in Nitrate	NO3-N	<1.21e-2	n/a	mg/L	0.000	0.040			U	07/24/08

# WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Inorganic**

SDG Number: WSCF20081528  
 Matrix: WATER  
 Test: Anions by Ion Chromatography

Sample Date:  
 Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
BLANK	Nitrogen in Nitrate	NO3-N	<1.21e-2	n/a	mg/L	0.000	0.040			U	07/24/08
BLANK	Nitrogen in Nitrate	NO3-N	<1.21e-2	n/a	mg/L	0.000	0.040			U	07/24/08
BLANK	Phosphate (P) by IC	PO4-P	<6.06e-2	n/a	mg/L	0.000	0.200			U	07/24/08
BLANK	Phosphate (P) by IC	PO4-P	<6.06e-2	n/a	mg/L	0.000	0.200			U	07/24/08
BLANK	Phosphate (P) by IC	PO4-P	<6.06e-2	n/a	mg/L	0.000	0.200			U	07/24/08
BLANK	Sulfate	14808-79-8	<0.132	n/a	mg/L	0.000	0.200			U	07/24/08
BLANK	Sulfate	14808-79-8	<0.132	n/a	mg/L	0.000	0.200			U	07/24/08
BLANK	Sulfate	14808-79-8	<0.132	n/a	mg/L	0.000	0.200			U	07/24/08
LCS	Chloride	16887-00-6	192.8276	95.934	% Recov	80.000	120.000				07/24/08
LCS	Chloride	16887-00-6	191.2588	95.154	% Recov	80.000	120.000				07/24/08
LCS	Fluoride	16984-48-8	103.7628	104.180	% Recov	80.000	120.000				07/24/08
LCS	Fluoride	16984-48-8	100.4282	100.832	% Recov	80.000	120.000				07/24/08
LCS	Nitrogen in Nitrite	NO2-N	97.0737	97.660	% Recov	80.000	120.000				07/24/08
LCS	Nitrogen in Nitrite	NO2-N	95.5349	96.112	% Recov	80.000	120.000				07/24/08
LCS	Nitrogen in Nitrate	NO3-N	89.7819	99.647	% Recov	80.000	120.000				07/24/08
LCS	Nitrogen in Nitrate	NO3-N	87.3636	96.963	% Recov	80.000	120.000				07/24/08
LCS	Phosphate (P) by IC	PO4-P	181.3019	93.745	% Recov	80.000	120.000				07/24/08
LCS	Phosphate (P) by IC	PO4-P	179.7289	92.931	% Recov	80.000	120.000				07/24/08
LCS	Sulfate	14808-79-8	384.951	97.210	% Recov	80.000	120.000				07/24/08
LCS	Sulfate	14808-79-8	387.0163	97.731	% Recov	80.000	120.000				07/24/08

Lab ID: W08GR02918

### BATCH QC ASSOCIATED WITH SAMPLE

DUP	Chloride	16887-00-6	1.4529		RPD			0.323	20.000		07/28/08
DUP	Fluoride	16984-48-8	<0.232		RPD			n/a	20.000	U	07/28/08
DUP	Nitrogen in Nitrite	NO2-N	<0.128		RPD			n/a	20.000	U	07/28/08
DUP	Nitrogen in Nitrate	NO3-N	0.2123		RPD			10.235	20.000		07/28/08
DUP	Phosphate (P) by IC	PO4-P	<0.606		RPD			n/a	20.000	U	07/28/08
DUP	Sulfate	14808-79-8	9.3509		RPD			0.272	20.000		07/28/08
MS	Chloride	16887-00-6	0.94879	95.356	% Recov	80.000	120.000				07/28/08

# WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Inorganic**

SDG Number: WSCF20081528  
 Matrix: WATER  
 Test: Anions by Ion Chromatography

Sample Date: 07/24/08  
 Receive Date: 07/24/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
MS	Fluoride	16984-48-8	0.46103	93.515	% Recov	80.000	120.000				07/28/08
MS	Nitrogen in Nitrite	NO2-N	0.4764	96.829	% Recov	80.000	120.000				07/28/08
MS	Nitrogen in Nitrate	NO3-N	0.43144	96.735	% Recov	80.000	120.000				07/28/08
MS	Phosphate (P) by IC	PO4-P	0.86974	90.882	% Recov	80.000	120.000				07/28/08
MS	Sulfate	14808-79-8	1.90374	97.130	% Recov	80.000	120.000				07/28/08
MSD	Chloride	16887-00-6	0.93805	94.276	% Recov	80.000	120.000				07/28/08
MSD	Fluoride	16984-48-8	0.48945	99.280	% Recov	80.000	120.000				07/28/08
MSD	Nitrogen in Nitrite	NO2-N	0.46783	95.087	% Recov	80.000	120.000				07/28/08
MSD	Nitrogen in Nitrate	NO3-N	0.43353	97.204	% Recov	80.000	120.000				07/28/08
MSD	Phosphate (P) by IC	PO4-P	0.86448	90.332	% Recov	80.000	120.000				07/28/08
MSD	Sulfate	14808-79-8	1.90113	96.996	% Recov	80.000	120.000				07/28/08
SPK-RPD	Chloride	18887-00-6	94.276		RPD			1.139	20.000		07/28/08
SPK-RPD	Fluoride	16984-48-8	99.280		RPD			5.980	20.000		07/28/08
SPK-RPD	Nitrogen in Nitrite	NO2-N	95.087		RPD			1.815	20.000		07/28/08
SPK-RPD	Nitrogen in Nitrate	NO3-N	97.204		RPD			0.484	20.000		07/28/08
SPK-RPD	Phosphate (P) by IC	PO4-P	90.332		RPD			0.607	20.000		07/28/08
SPK-RPD	Sulfate	14808-79-8	96.996		RPD			0.138	20.000		07/28/08
<b>BATCH QC</b>											
BLANK	Chloride	16887-00-6	<4.69e-2	n/a	mg/L	0.000	0.030			U	07/28/08
BLANK	Chloride	16887-00-6	<4.69e-2	n/a	mg/L	0.000	0.030			U	07/28/08
BLANK	Fluoride	16984-48-8	<2.32e-2	n/a	mg/L	0.000	0.030			U	07/28/08
BLANK	Fluoride	16984-48-8	<2.32e-2	n/a	mg/L	0.000	0.030			U	07/28/08
BLANK	Nitrogen in Nitrite	NO2-N	<1.28e-2	n/a	mg/L	0.000	0.020			U	07/28/08
BLANK	Nitrogen in Nitrite	NO2-N	<1.28e-2	n/a	mg/L	0.000	0.020			U	07/28/08
BLANK	Nitrogen in Nitrate	NO3-N	<1.21e-2	n/a	mg/L	0.000	0.040			U	07/28/08
BLANK	Nitrogen in Nitrate	NO3-N	<1.21e-2	n/a	mg/L	0.000	0.040			U	07/28/08
BLANK	Phosphate (P) by IC	PO4-P	<8.06e-2	n/a	mg/L	0.000	0.200			U	07/28/08
BLANK	Phosphate (P) by IC	PO4-P	<6.06e-2	n/a	mg/L	0.000	0.200			U	07/28/08
BLANK	Sulfate	14808-79-8	<0.132	n/a	mg/L	0.000	0.200			U	07/28/08

# WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081528  
 Matrix: WATER  
 Test: Anions by Ion Chromatography

Sample Date:  
 Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
BLANK	Sulfate	14808-79-8	<0.132	n/a	mg/L	0.000	0.200			U	07/28/08
LCS	Chloride	16887-00-6	195.6811	97.354	% Recov	80.000	120.000				07/28/08
LCS	Fluoride	16984-48-8	105.0621	105.484	% Recov	80.000	120.000				07/28/08
LCS	Nitrogen in Nitrite	NO2-N	97.6135	98.203	% Recov	80.000	120.000				07/28/08
LCS	Nitrogen in Nitrate	NO3-N	91.2994	101.331	% Recov	80.000	120.000				07/28/08
LCS	Phosphate (P) by IC	PO4-P	189.4542	97.960	% Recov	80.000	120.000				07/28/08
LCS	Sulfate	14808-79-8	395.4924	99.872	% Recov	80.000	120.000				07/28/08

# WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081528  
 Matrix: WATER  
 Test: ICP Metals Analysis, Grd H20 P

Sample Date: 07/22/08  
 Receive Date: 07/22/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR02838											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Silver	7440-22-4	4860	97.200	% Recov	75.000	125.000				08/14/08
MS	Aluminum	7429-90-5	4731	94.620	% Recov	75.000	125.000				08/14/08
MS	Arsenic	7440-38-2	5200	104.000	% Recov	75.000	125.000				08/14/08
MS	Barium	7440-39-3	2470	98.800	% Recov	75.000	125.000				08/14/08
MS	Calcium	7440-70-2	7480	149.600	% Recov	75.000	125.000				08/14/08
MS	Cadmium	7440-43-9	5117	102.340	% Recov	75.000	125.000				08/14/08
MS	Cobalt	7440-48-4	5146	102.920	% Recov	75.000	125.000				08/14/08
MS	Chromium	7440-47-3	5175	103.500	% Recov	75.000	125.000				08/14/08
MS	Copper	7440-50-8	4770	95.400	% Recov	75.000	125.000				08/14/08
MS	Iron	7439-89-6	5067	101.340	% Recov	75.000	125.000				08/14/08
MS	Potassium	7440-09-7	48590	97.180	% Recov	75.000	125.000				08/14/08
MS	Magnesium	7439-95-4	5291	105.820	% Recov	75.000	125.000				08/14/08
MS	Manganese	7439-96-5	5220	104.400	% Recov	75.000	125.000				08/14/08
MS	Molybdenum	7439-98-7	4808	96.160	% Recov	70.000	130.000				08/14/08
MS	Sodium	7440-23-5	185000	3700.000	% Recov	75.000	125.000				08/14/08
MS	Nickel	7440-02-0	5036	100.720	% Recov	75.000	125.000				08/14/08
MS	Lead	7439-92-1	5050	101.000	% Recov	75.000	125.000				08/14/08
MS	Antimony	7440-36-0	4934	98.680	% Recov	75.000	125.000				08/14/08
MS	Strontium	7440-24-6	2617.8	104.712	% Recov	75.000	125.000				08/14/08
MS	Vanadium	7440-62-2	5050	101.000	% Recov	75.000	125.000				08/14/08
MS	Zinc	7440-66-6	5079	101.580	% Recov	75.000	125.000				08/14/08
MSD	Silver	7440-22-4	5030	100.800	% Recov	75.000	125.000				08/14/08
MSD	Aluminum	7429-90-5	5170	103.400	% Recov	75.000	125.000				08/14/08
MSD	Arsenic	7440-38-2	5350	107.000	% Recov	75.000	125.000				08/14/08
MSD	Barium	7440-39-3	2580	103.200	% Recov	75.000	125.000				08/14/08
MSD	Calcium	7440-70-2	11730	234.600	% Recov	75.000	125.000				08/14/08

# WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081528  
 Matrix: WATER  
 Test: ICP Metals Analysis, Grd H20 P

Sample Date: 07/22/08  
 Receive Date: 07/22/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
MSD	Cadmium	7440-43-9	5338	106.760	% Recov	75.000	125.000				08/14/08
MSD	Cobalt	7440-48-4	5368	107.360	% Recov	75.000	125.000				08/14/08
MSD	Chromium	7440-47-3	5388	107.760	% Recov	75.000	125.000				08/14/08
MSD	Copper	7440-50-8	4930	98.600	% Recov	75.000	125.000				08/14/08
MSD	Iron	7439-89-6	5468	109.360	% Recov	75.000	125.000				08/14/08
MSD	Potassium	7440-09-7	52420	104.840	% Recov	75.000	125.000				08/14/08
MSD	Magnesium	7439-95-4	6281	125.620	% Recov	75.000	125.000				08/14/08
MSD	Manganese	7439-96-5	5490	109.800	% Recov	75.000	125.000				08/14/08
MSD	Molybdenum	7439-98-7	4983	99.660	% Recov	75.000	125.000				08/14/08
MSD	Sodium	7440-23-5	378000	7560.000	% Recov	75.000	125.000				08/14/08
MSD	Nickel	7440-02-0	5247	104.940	% Recov	75.000	125.000				08/14/08
MSD	Lead	7439-92-1	5320	106.400	% Recov	75.000	125.000				08/14/08
MSD	Antimony	7440-36-0	5104	102.080	% Recov	75.000	125.000				08/14/08
MSD	Strontium	7440-24-6	2805.8	112.232	% Recov	75.000	125.000				08/14/08
MSD	Vanadium	7440-62-2	5230	104.600	% Recov	75.000	125.000				08/14/08
MSD	Zinc	7440-66-6	5308	106.160	% Recov	75.000	125.000				08/14/08
SPK-RPD	Silver	7440-22-4	100.600		RPD			3.438	20.000		08/14/08
SPK-RPD	Aluminum	7429-90-5	103.400		RPD			8.868	20.000		08/14/08
SPK-RPD	Arsenic	7440-38-2	107.000		RPD			2.844	20.000		08/14/08
SPK-RPD	Barium	7440-39-3	103.200		RPD			4.356	20.000		08/14/08
SPK-RPD	Calcium	7440-70-2	234.600		RPD			44.248	20.000		08/14/08
SPK-RPD	Cadmium	7440-43-9	106.760		RPD			4.228	20.000		08/14/08
SPK-RPD	Cobalt	7440-48-4	107.360		RPD			4.223	20.000		08/14/08
SPK-RPD	Chromium	7440-47-3	107.760		RPD			4.033	20.000		08/14/08
SPK-RPD	Copper	7440-50-8	98.600		RPD			3.299	20.000		08/14/08
SPK-RPD	Iron	7439-89-6	109.360		RPD			7.613	20.000		08/14/08
SPK-RPD	Potassium	7440-09-7	104.840		RPD			7.583	20.000		08/14/08
SPK-RPD	Magnesium	7439-95-4	125.620		RPD			17.110	20.000		08/14/08
SPK-RPD	Manganese	7439-96-5	109.800		RPD			5.042	20.000		08/14/08
SPK-RPD	Molybdenum	7439-98-7	99.660		RPD			3.575	20.000		08/14/08

# WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081528  
 Matrix: WATER  
 Test: ICP Metals Analysis, Grd H2O P

Sample Date: 07/22/08  
 Receive Date: 07/22/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
SPK-RPD	Sodium	7440-23-5	7560.000		RPD			68.581	20.000		08/14/08
SPK-RPD	Nickel	7440-02-0	104.940		RPD			4.104	20.000		08/14/08
SPK-RPD	Lead	7439-92-1	106.400		RPD			5.207	20.000		08/14/08
SPK-RPD	Antimony	7440-38-0	102.080		RPD			3.387	20.000		08/14/08
SPK-RPD	Strontium	7440-24-6	112.232		RPD			6.933	20.000		08/14/08
SPK-RPD	Vanadium	7440-62-2	104.600		RPD			3.502	20.000		08/14/08
SPK-RPD	Zinc	7440-66-6	108.160		RPD			4.409	20.000		08/14/08

## BATCH QC

BLANK	Silver	7440-22-4	7	7.000	ug/L						08/14/08
BLANK	Aluminum	7429-90-5	< 52	n/a	ug/L					U	08/14/08
BLANK	Arsenic	7440-38-2	< 78	n/a	ug/L					U	08/14/08
BLANK	Barium	7440-39-3	< 4	n/a	ug/L					U	08/14/08
BLANK	Calcium	7440-70-2	< 73	n/a	ug/L					U	08/14/08
BLANK	Cadmium	7440-43-9	< 4	n/a	ug/L					U	08/14/08
BLANK	Cobalt	7440-48-4	< 4	n/a	ug/L					U	08/14/08
BLANK	Chromium	7440-47-3	< 13	n/a	ug/L					U	08/14/08
BLANK	Copper	7440-50-8	< 6	n/a	ug/L					U	08/14/08
BLANK	Iron	7439-89-6	< 25	n/a	ug/L					U	08/14/08
BLANK	Potassium	7440-09-7	< 170	n/a	ug/L					U	08/14/08
BLANK	Magnesium	7439-95-4	< 50	n/a	ug/L					U	08/14/08
BLANK	Manganese	7439-96-5	< 4	n/a	ug/L					U	08/14/08
BLANK	Molybdenum	7439-98-7	< 5	n/a	ug/L					U	08/14/08
BLANK	Sodium	7440-23-5	< 51	n/a	ug/L					U	08/14/08
BLANK	Nickel	7440-02-0	< 4	n/a	ug/L					U	08/14/08
BLANK	Lead	7439-92-1	< 45	n/a	ug/L					U	08/14/08
BLANK	Antimony	7440-38-0	< 58	n/a	ug/L					U	08/14/08
BLANK	Strontium	7440-24-6	< 4	n/a	ug/L					U	08/14/08
BLANK	Vanadium	7440-62-2	< 12	n/a	ug/L					U	08/14/08
BLANK	Zinc	7440-66-6	< 9	n/a	ug/L					U	08/14/08

# WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081528  
 Matrix: WATER  
 Test: ICP Metals Analysis, Grd H20 P

Sample Date:  
 Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
LCS	Silver	7440-22-4	966	96.600	% Recov	80.000	120.000				08/14/08
LCS	Aluminum	7429-90-5	956.4	95.640	% Recov	80.000	120.000				08/14/08
LCS	Arsenic	7440-38-2	1000	100.000	% Recov	80.000	120.000				08/14/08
LCS	Barium	7440-39-3	473	94.600	% Recov	80.000	120.000				08/14/08
LCS	Calcium	7440-70-2	1147	114.700	% Recov	80.000	120.000				08/14/08
LCS	Cadmium	7440-43-9	1033	103.300	% Recov	80.000	120.000				08/14/08
LCS	Cobalt	7440-48-4	1058	105.800	% Recov	80.000	120.000				08/14/08
LCS	Chromium	7440-47-3	1012	101.200	% Recov	80.000	120.000				08/14/08
LCS	Copper	7440-50-8	972	97.200	% Recov	80.000	120.000				08/14/08
LCS	Iron	7439-89-6	1011	101.100	% Recov	80.000	120.000				08/14/08
LCS	Potassium	7440-09-7	9764	97.640	% Recov	80.000	120.000				08/14/08
LCS	Magnesium	7439-95-4	955.5	95.550	% Recov	80.000	120.000				08/14/08
LCS	Manganese	7439-96-5	1020	102.000	% Recov	80.000	120.000				08/14/08
LCS	Molybdenum	7439-98-7	1045	104.500	% Recov	80.000	120.000				08/14/08
LCS	Sodium	7440-23-5	1040	104.000	% Recov	80.000	120.000				08/14/08
LCS	Nickel	7440-02-0	1040	104.000	% Recov	80.000	120.000				08/14/08
LCS	Lead	7439-92-1	1090	109.000	% Recov	80.000	120.000				08/14/08
LCS	Antimony	7440-36-0	1031	103.100	% Recov	80.000	120.000				08/14/08
LCS	Strontium	7440-24-6	478.1	95.620	% Recov	80.000	120.000				08/14/08
LCS	Vanadium	7440-62-2	993	99.300	% Recov	80.000	120.000				08/14/08
LCS	Zinc	7440-66-6	1023	102.300	% Recov	80.000	120.000				08/14/08

# WSCF ANALYTICAL COMMENT REPORT

Attention: Steve Trent  
Project Number F06-027

Group #: WSCF20081528  
Department: Inorganic

Sample #	Client ID	Lab Area	Test	Comment
		VALGROUP		IC Anion - Sample hold times missed for samples: W08GR02840-41. DTS IC Anion - MS/MSD recoveries low for fluoride in sample W08GR02842 due to unknown peak interference. Data N-flagged. DTS  ICP-AES: sodium, calcium >4x spike amount. MS/MSD recoveries invalid; X-flag. Magnesium MSD high, N-flag B-flag used where sample conc. < 5X MDL

Lab Areas: VALGROUP - Group Validation  
LOGSAMP - Login for Sample

VALTEST - Test Validation  
LOGTEST - Login for Tests

TESTDATA - Test Data Entry

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M4W41-SLF-08-859

ATTACHMENT 5

**SAMPLE RECEIPT INFORMATION**

Consisting of 7 pages  
Including cover page

**Waste Sampling and Characterization Facility**  
P.O. BOX 1970 S3-30, Richland, WA 99352  
PHONE: (509) 373-7004/FAX: (509) 373-7134

*File*  
08/06/08  
*td*

ACKNOWLEDGMENT OF SAMPLES RECEIVED

Groundwater Remediation Program

Richland, WA 99354  
Attn: Steve Trent

Customer Code: GPP  
PO#: 122561/ES20  
Group#: 20081528  
Project#: F06-027  
Proj Mgr: Steve Trent E6-35  
Phone: 373-5869

The following samples were received from you on 07/22/08. They have been scheduled for the tests listed beside each sample. If this information is incorrect, please contact your service representative. Thank you for using Waste Sampling and Characterization Facility.

Sample#	Sample Id	Tests Scheduled	Matrix	Sample Date
W08GR02838	B1WCT1	TRENT @GPP6010 @IC-30	Water	07/22/08
W08GR02839	B1WCT2	TRENT @GPP6010 @IC-30	Water	07/22/08
W08GR02840	B1WCT3	TRENT @GPP6010 @IC-30	Water	07/22/08
W08GR02841	B1WCT4	TRENT @GPP6010 @IC-30	Water	07/22/08
W08GR02842	B1WCT5	TRENT @GPP6010 @IC-30	Water	07/22/08
W08GR02843	B1WCT6	TRENT @GPP6010 @IC-30	Water	07/22/08
W08GR02844	B1WCT7	TRENT @GPP6010 @IC-30	Water	07/22/08
W08GR02845	B1WCT8	TRENT @GPP6010 @IC-30	Water	07/22/08
W08GR02846	B1WCT9	TRENT @GPP6010 @IC-30	Water	07/22/08
W08GR02847	B1WCV0	TRENT @GPP6010 @IC-30	Water	07/22/08
W08GR02848	B1WCV1	TRENT @GPP6010 @IC-30	Water	07/22/08
W08GR02849	B1WCV3	TRENT @GPP6010 @IC-30	Water	07/22/08
W08GR02850	B1WCV4	TRENT @GPP6010 @IC-30	Water	07/22/08
W08GR02851	B1WCV5	TRENT @GPP6010 @IC-30	Water	07/22/08
W08GR02852	B1WCV6	TRENT @GPP6010 @IC-30	Water	07/22/08

Groundwater Remediation Program

Richland, WA 99354  
 Attn: Steve Trent

Customer Code: GPP  
 PO#: 122561/ES20  
 Group#: 20081528  
 Project#: F06-027  
 Proj Mgr: Steve Trent E6-35  
 Phone: 373-5869

Sample#	Sample Id	Tests Scheduled	Matrix	Sample Date
W08GR02853	B1WCV7	TRENT @GPP6010 @IC-30	Water	07/22/08

Test Acronym Description

Test Acronym	Description
@GPP6010 @IC-30	ICP Metals Analysis, Grd H2O P Anions by Ion Chromatography

**COLLECTOR**

D. Webb

**SAMPLING LOCATION**

100NR2 Syn. Apatite Inj. #4-Post-Inj. Smpls-Day4

**ICE CHEST NO.**

**SHIPPED TO**

Waste Sampling & Characterization 20081528

**MATRIX\***

- A=Air
- DL=Drum
- Liquids
- DS=Drum
- Solids
- L=Liquid
- O=Oil
- S=Soil
- SE=Sediment
- T=Tissue
- V=Vegetation
- W=Water
- WI=Wipe
- X=Other

**POSSIBLE SAMPLE HAZARDS/ REMARKS**

Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)

**SPECIAL HANDLING AND/OR STORAGE**

**COMPANY CONTACT**

FABRE, RJ

**PROJECT DESIGNATION**

100-N Apatite Barrier Performance Monitoring

**FIELD LOGBOOK NO.**

HNF-N-585-11

**OFFSITE PROPERTY NO.**

**TELEPHONE NO.**

373-2774

**PROJECT COORDINATOR**

TRENT, SJ

**SAF NO.**

F06-027

**COA**

122561ES20

**BILL OF LADING/AIR BILL NO.**

**PRICE CODE**

7G

**AIR QUALITY**

**METHOD OF SHIPMENT**

GOVERNMENT VEHICLE

**DATA TURNAROUND**

15 Days / 30 Days

**PRESERVATION**

HNO3 to pH <2 Cool-4C

**TYPE OF CONTAINER**

P P

**NO. OF CONTAINER(S)**

1 1

**VOLUME**

250mL 120mL

**SAMPLE ANALYSIS**

SEE ITEM (1) IN SPECIAL INSTRUCTIONS SEE ITEM (2) IN SPECIAL INSTRUCTIONS

**ICED**

029050 029561

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B1WCT1	WATER	7-22-8	1333	X	X
B1WCT2	WATER		1345	X	X
B1WCT3	WATER		1355	X	X
B1WCT4	WATER		1315	X	X
B1WCT5	WATER		1325	X	X

**CHAIN OF POSSESSION**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
D. Webb / Di Webb	7-22-8 / 1445	TAPPAZ in Security	7-22-8 / 1445
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

**SPECIAL INSTRUCTIONS**

- (1) ICP Metals - 6010B (TAL); ICP Metals - 6010B (Add-On) (Arsenic, Lead, Molybdenum, Strontium)
- (2) IC Anions - 300.0 (Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Phosphorus in phosphate, Sulfate)

**LABORATORY SECTION** RECEIVED BY  
**FINAL SAMPLE DISPOSITION** DISPOSAL METHOD

**TITLE** DATE/TIME  
**DISPOSED BY** DATE/TIME

64 of 67

COLLECTOR

*D. Webb*

SAMPLING LOCATION

100NR2 Syn.Apatite Inj.#4-Post-Inj.Smpls-Day4

ICE CHEST NO.

SHIPPED TO

Waste Sampling & Characterization

MATRIX\*

- A=Air
- DL=Drum
- Liquids
- DS=Drum
- Solids
- L=Liquid
- O=Oil
- S=Soil
- SE=Sediment
- T=Tissue
- V=Vegetation
- W=Water
- WT=Wipe
- X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS

Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE

COMPANY CONTACT

FABRE, RJ

TELEPHONE NO.

373-2774

PROJECT COORDINATOR

TRENT, SJ

PROJECT DESIGNATION

100-N Apatite Barrier Performance Monitoring

SAF NO.

F06-027

FIELD LOGBOOK NO.

HNF-N-585-11

ACTUAL SAMPLE DEPTH

COA

122561ES20

PRICE CODE

7G

AIR QUALITY

DATA TURNAROUND

15 Days / 30 Days

METHOD OF SHIPMENT

GOVERNMENT VEHICLE

BILL OF LADING/AIR BILL NO.

PRESERVATION

HNO3 to pH <2 Cool-4C

TYPE OF CONTAINER

P P

NO. OF CONTAINER(S)

1 1

VOLUME

250mL 120mL

SAMPLE ANALYSIS

SEE ITEM (1) IN SPECIAL INSTRUCTIONS SEE ITEM (2) IN SPECIAL INSTRUCTIONS

**ICED**

029050 029561

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME						
B1WCT6	2843 WATER	7-22-8	1240	X	X				
B1WCT7	2844 WATER		1245	X	X				
B1WCT8	2845 WATER		1208	X	X				
B1WCT9	2846 WATER		1250	X	X				
B1WCV0	2847 WATER		1230	X	X				

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM

*D. Webb / D. Webb*

DATE/TIME

7-22-8/1445

RECEIVED BY/STORED IN

*TA PRAZIN*

DATE/TIME

7-22-8/1445

SPECIAL INSTRUCTIONS

- (1)ICP Metals - 6010B (TAL); ICP Metals - 6010B (Add-On) {Arsenic, Lead, Molybdenum, Strontium}
- (2)IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Phosphorus in phosphate, Sulfate}

RELINQUISHED BY/REMOVED FROM

DATE/TIME

RECEIVED BY/STORED IN

DATE/TIME

LABORATORY SECTION

RECEIVED BY

TITLE

DATE/TIME

FINAL SAMPLE DISPOSITION

DISPOSAL METHOD

DISPOSED BY

DATE/TIME

65 of 67

COLLECTOR

D. Webb

COMPANY CONTACT

FABRE, RJ

TELEPHONE NO.

373-2774

PROJECT COORDINATOR

TRENT, SJ

PRICE CODE

7G

DATA TURNAROUND

15 Days / 30 Days

SAMPLING LOCATION

100NR2 Syn.Apatite Inj.#4-Post-Inj.Smpls-Day4

PROJECT DESIGNATION

100-N Apatite Barrier Performance Monitoring

SAF NO.

F06-027

AIR QUALITY

ICE CHEST NO.

FIELD LOGBOOK NO.

HNF-N-585-11

ACTUAL SAMPLE DEPTH

COA

122561ES20

METHOD OF SHIPMENT

GOVERNMENT VEHICLE

SHIPPED TO

Waste Sampling & Characterization

OFFSITE PROPERTY NO.

BILL OF LADING/AIR BILL NO.

MATRIX\*

- A=Air
- DL=Drum
- Liquids
- DS=Drum
- Solids
- L=Liquid
- O=Oil
- S=Soil
- SE=Sediment
- T=Tissue
- V=Vegetation
- W=Water
- WI=Wipe
- X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS

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PRESERVATION

HNO3 to pH <2 Cool-4C

TYPE OF CONTAINER

P P

NO. OF CONTAINER(S)

1 1

VOLUME

250mL 120mL

SPECIAL HANDLING AND/OR STORAGE

SAMPLE ANALYSIS

SEE ITEM (1) IN SPECIAL INSTRUCTIONS SEE ITEM (2) IN SPECIAL INSTRUCTIONS

# ICED

029050 029561

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B1WCV1	WATER	7-22-8	1258	X	X
B1WCV2	WATER			X	X
B1WCV3	WATER		1200	X	X
B1WCV4	WATER		1200	X	X
B1WCV5	WATER		1225	X	X

CHAIN OF POSSESSION

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

RELINQUISHED BY/REMOVED FROM

D. Webb / D. Webb

DATE/TIME

7-22-8/1445

RECEIVED BY/STORED IN

TA PIAZ... [Signature]

DATE/TIME

7-22-8/1445

- (1)ICP Metals - 6010B (TAL); ICP Metals - 6010B (Add-On) (Arsenic, Lead, Molybdenum, Strontium)
- (2)IC Anions - 300.0 (Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Phosphorus in phosphate, Sulfate)

① COULD NOT DRAW LIQUID

RELINQUISHED BY/REMOVED FROM

DATE/TIME

RECEIVED BY/STORED IN

DATE/TIME

LABORATORY SECTION

RECEIVED BY

TITLE

DATE/TIME

FINAL SAMPLE DISPOSITION

DISPOSAL METHOD

DISPOSED BY

DATE/TIME

66 of 67

COLLECTOR

*D. Webb*

COMPANY CONTACT

FABRE, RJ

TELEPHONE NO.

373-2774

PROJECT COORDINATOR

TRENT, SJ

PRICE CODE

7G

DATA TURNAROUND

15 Days / 30 Days

SAMPLING LOCATION

100NR2 Syn.Apatite Inj. #4-Post-Inj.SmpIs-Day4

PROJECT DESIGNATION

100-N Apatite Barrier Performance Monitoring

SAF NO.

F06-027

AIR QUALITY

ICE CHEST NO.

FIELD LOGBOOK NO.

HNF-N-585-11

ACTUAL SAMPLE DEPTH

COA

122561ES20

METHOD OF SHIPMENT

GOVERNMENT VEHICLE

SHIPPED TO

Waste Sampling & Characterization

OFFSITE PROPERTY NO.

BILL OF LADING/AIR BILL NO.

MATRIX\*

A=Air  
DL=Drum  
Liquids  
DS=Drum  
Solids  
L=Liquid  
O=Oil  
S=Soil  
SE=Sediment  
T=Tissue  
V=Vegetation  
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PRESERVATION

HNO3 to pH <2 Cool-4C

TYPE OF CONTAINER

P P

NO. OF CONTAINER(S)

1 1

VOLUME

250mL 120mL

SPECIAL HANDLING AND/OR STORAGE

SAMPLE ANALYSIS

SEE ITEM (1) IN SPECIAL INSTRUCTIONS SEE ITEM (2) IN SPECIAL INSTRUCTIONS

029050 029561

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B1WCV6	2852 WATER	7-22-8	1219	X	X
B1WCV7	2853 WATER	7-22-8	1215	X	X

**ICED**

CHAIN OF POSSESSION

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

RELINQUISHED BY/REMOVED FROM

DATE/TIME

RECEIVED BY/STORED IN

DATE/TIME

LABORATORY SECTION

RECEIVED BY

TITLE

DATE/TIME

FINAL SAMPLE DISPOSITION

DISPOSAL METHOD

DISPOSED BY

DATE/TIME

67 of 67