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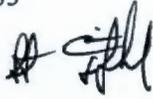
Fluor Hanford
WSCF Analytical
P.O. Box 1000
Richland, WA 99352
Telephone 373-7495
Telefax 372-0456

FLUOR

Memorandum

M4W41-SLF-07-495

To: H. Hampt E6-35 Date: July 30, 2007

From: S. L. Fitzgerald, Manager 
WSCF Analytical

cc: w/Attachments
T. F. Dale S3-30 S. J. Trent E6-35
H. K. Meznarich S3-30 D. D. Wright S3-30
P. D. Mix S3-30 File/LB
J. E. Trechter S3-30

Subject: FINAL RESULTS FOR SAMPLE DELIVERY GROUP WSCF20071203 – 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. 8, Waste Sampling & Characterization Facility Quality Assurance Plan

This letter contains the following attachments for sample delivery group WSCF20071203:

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

SLF/grf

Attachments 4

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M4W41-SLF-07-495

ATTACHMENT 1

COVER SHEET

Consisting of 2 pages
Including cover page

WSCF SAF NUMBER CROSS REFERENCE

Group#: WSCF20071203
Data Deliverable Date: 30-jul-2007
Data Deliverable: Cover Sheet

SAF#	Sample ID	WSCF#	Matrix
F06-027	B1P404	W07GR01796	WATER
	B1P405	W07GR01797	WATER
	B1P406	W07GR01798	WATER
	B1P407	W07GR01799	WATER
	B1P408	W07GR01800	WATER
	B1P409	W07GR01801	WATER
	B1P410	W07GR01802	WATER

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ATTACHMENT 2

NARRATIVE

**Consisting of 3 pages
Including cover page**

Sample Delivery Group	WSCF20071203
Sample Matrix	Water
Data Deliverable	Summary Report

Introduction

Seven (7) 100-N Apatite Barrier samples were received at the WSCF Laboratory on July 16, 2007. 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 Data Summary Report (Attachment 3) 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 4.

It should be noted that the attached chain of custody was stamped “iced” and initialed 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*, pages 11 through 12, for a complete listing of approved analytical methods.

Inorganic Comments

Anions – Holding time requirements for this analysis were not met. See note below. A Duplicate, Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group per GRP Letter of Instruction. See pages 27 through 30 for QC details. Analytical Note(s):

- Samples were taken on July 15 and delivered to the WSCF Laboratory on July 16. Analysis was completed on July 18; exceeding the regulatory hold time requirement.
- Sample results were D flagged (dilution).
- Duplicates, Matrix Spikes and Matrix Spike Duplicates were analyzed on samples B1P403 (SDG# 20071202, SAF# F06-027); and B1P408 of this SDG.
- Sample results were B flagged if analytical results were less than the reportable limit, but greater than the method detection limit.

All QC controls are within the established limits.

ICP-AES Metals – The holding time requirements for this analysis were met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery

group per the GRP Letter of Instruction. See pages 31 through 34 for QC details. Analytical Note(s):

- Sample results were D flagged (dilution).
- Calcium, Magnesium and Sodium – insufficient spike concentrations. Sample concentrations were greater than four times the spike concentration. For results higher than the highest calibration standard, a high-level standard and an ICP interference check sample were analyzed to ensure acceptable sample results.
- Copper and Magnesium contamination detected in the Blank was evaluated and affected sample results for Copper were C flagged.

All other QC controls are within the established limits.

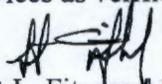
Radiochemistry Comments

Rad Chem – There are no holding times associated with WSCF’s radiochemical methods. A Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group per GRP Letter of Instruction. See pages 43 through 44 for QC details. Analytical Note(s):

- Strontium – Duplicate QC was analyzed on samples B1P3Y7 (SDG# 20071202, SAF# F06-027) and B1P406 of this SDG.
- Strontium (B1P3Y7) – Duplicate Relative Percent Difference (RPD) slightly exceeded established laboratory limits.

All other QC controls are within the established limits.

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.



Scot L. Fitzgerald
WSCF Analytical Laboratory Manager



Pauline D. Mix
WSCF Client Services

Abbreviations

Hg – mercury
IC – ion chromatography
ICP – inductively coupled plasma
ICP/AES – ICP/atomic emission spectroscopy
ICP/MS – ICP/mass spectrometry
Total U – total uranium
AT/TB – total alpha/total beta
AEA – Alpha Energy Analysis
WTPH-G – Total Hydrocarbons-Gasoline

Am – americium
Cm – curium
Pu – plutonium
Np – neptunium
GEA – gamma energy analysis
H3 – Tritium
Sr – Strontium 89, 90
WTPH-D – Total Hydrocarbons-Diesel
TSS – Total Suspended Solids

M4W41-SLF-07-495

ATTACHMENT 3

ANALYTICAL RESULTS

Consisting of 39 pages
Including cover page

**WSCF
ANALYTICAL RESULTS REPORT**

for

Groundwater Remediation Program

Richland, WA 99354

Attention: Steve Trent

Analytical: *S.F. Fitzgerald 7/31/07*
Client Services: *P.D. Miley 7/30/2007*

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#: WSCF20071203
Report Date: 27-jul-2007
Report WGPP/ver. 5.2
Groundwater Remediation Program

Department: Inorganic

W13q Worklist/Batch/QC Report for Group# WSCF20071203

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
32618	2	33011	37083	BLANK		Anions by Ion Chromatography
32618	12	33011	37083	BLANK		Anions by Ion Chromatography
32618	3	33011	37083	LCS		Anions by Ion Chromatography
32618	8	33011	37083	SAMPLE	W07GR01796	Anions by Ion Chromatography
32618	9	33011	37083	SAMPLE	W07GR01797	Anions by Ion Chromatography
32618	10	33011	37083	SAMPLE	W07GR01798	Anions by Ion Chromatography
32618	11	33011	37083	SAMPLE	W07GR01799	Anions by Ion Chromatography
32618	5	33011	37083	DUP	W07GR01800	Anions by Ion Chromatography
32618	6	33011	37083	MS	W07GR01800	Anions by Ion Chromatography
32618	7	33011	37083	MSD	W07GR01800	Anions by Ion Chromatography
32618	4	33011	37083	SAMPLE	W07GR01800	Anions by Ion Chromatography
32618	7	33011	37083	SPK-RPD	W07GR01800	Anions by Ion Chromatography
32637	2	33029	37099	BLANK		Anions by Ion Chromatography
32637	13	33029	37099	BLANK		Anions by Ion Chromatography
32637	3	33029	37099	LCS		Anions by Ion Chromatography
32637	5	33029	37099	DUP	W07GR01795	Anions by Ion Chromatography
32637	6	33029	37099	MS	W07GR01795	Anions by Ion Chromatography
32637	7	33029	37099	MSD	W07GR01795	Anions by Ion Chromatography
32637	7	33029	37099	SPK-RPD	W07GR01795	Anions by Ion Chromatography
32637	11	33029	37099	SAMPLE	W07GR01801	Anions by Ion Chromatography
32637	12	33029	37099	SAMPLE	W07GR01802	Anions by Ion Chromatography
32607	1	32998	37155	BLANK		ICP Metals Analysis, Grd H20 P
32607	2	32998	37155	LCS		ICP Metals Analysis, Grd H20 P
32607	4	32998	37155	MS	W07GR01796	ICP Metals Analysis, Grd H20 P
32607	5	32998	37155	MSD	W07GR01796	ICP Metals Analysis, Grd H20 P
32607	3	32998	37155	SAMPLE	W07GR01796	ICP Metals Analysis, Grd H20 P
32607	5	32998	37155	SPK-RPD	W07GR01796	ICP Metals Analysis, Grd H20 P
32607	9	32998	37155	SAMPLE	W07GR01797	ICP Metals Analysis, Grd H20 P
32607	10	32998	37155	SAMPLE	W07GR01798	ICP Metals Analysis, Grd H20 P
32607	11	32998	37155	SAMPLE	W07GR01799	ICP Metals Analysis, Grd H20 P
32607	12	32998	37155	SAMPLE	W07GR01800	ICP Metals Analysis, Grd H20 P
32607	13	32998	37155	SAMPLE	W07GR01801	ICP Metals Analysis, Grd H20 P
32607	14	32998	37155	SAMPLE	W07GR01802	ICP Metals Analysis, Grd H20 P

W13q Worklist/Batch/QC Report for Group# WSCF20071203

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
32648	1	33040	37165	BLANK		Strontium 89/90
32648	2	33040	37165	LCS		Strontium 89/90
32648	3	33040	37165	DUP	W07GR01798	Strontium 89/90
32648	4	33040	37165	SAMPLE	W07GR01798	Strontium 89/90
32648	5	33040	37165	SURR	W07GR01798	Strontium 89/90
32648	6	33040	37165	SAMPLE	W07GR01799	Strontium 89/90
32648	7	33040	37165	SURR	W07GR01799	Strontium 89/90
32648	8	33040	37165	SAMPLE	W07GR01800	Strontium 89/90
32648	9	33040	37165	SURR	W07GR01800	Strontium 89/90
32648	10	33040	37165	SAMPLE	W07GR01801	Strontium 89/90
32648	11	33040	37165	SURR	W07GR01801	Strontium 89/90
32648	12	33040	37165	SAMPLE	W07GR01802	Strontium 89/90
32648	13	33040	37165	SURR	W07GR01802	Strontium 89/90
32641	1	33033	37166	BLANK		Strontium 89/90
32641	2	33033	37166	LCS		Strontium 89/90
32641	3	33033	37166	DUP	W07GR01789	Strontium 89/90
32641	18	33033	37166	SAMPLE	W07GR01796	Strontium 89/90
32641	19	33033	37166	SURR	W07GR01796	Strontium 89/90
32641	20	33033	37166	SAMPLE	W07GR01797	Strontium 89/90
32641	21	33033	37166	SURR	W07GR01797	Strontium 89/90

WSCF

METHOD REFERENCES REPORT

Department: Inorganic

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.

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

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: 27-Jul-2007
Report#: WSCF20071203
Report WGPPM/5.2

Page 2

WSCF METHOD REFERENCES REPORT

Department: Radiochemistry

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.

LA-508-415	LA-508-415: OPERATION OF THE PROTEAN 2-INCH ALPHA/BETA COUNTING SYSTEM FOR GROSS
HEIS ALPHA_GPC	GROSS ALPHA GPC
HEIS BETA_GPC	GROSS BETA GPC
HEIS SRTOT_SEP_PRECIP_GPC	Protium 89/90

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: 27-jul-2007
Report#: WSCF20071203
Report WGPPM/5.2

Page 1

WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F06-027
Sample # W07GR01796
Client ID: B1P404

TRENT
 WSCF

Matrix: WATER

Group #: WSCF20071203
Department: Inorganic
Sampled: 07/15/07
Received: 07/16/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Anions by Ion Chromatography											
Fluoride	16984-48-8	LA-533-410	DU	< 0.0300	mg/L			5.00	0.030		07/18/07
Chloride	16887-00-6	LA-533-410	D	214	mg/L			20.00	0.60		07/18/07
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.0500	mg/L			5.00	0.050		07/18/07
Nitrogen in Nitrate	NO3-N	LA-533-410	DU	< 0.0250	mg/L			5.00	0.025		07/18/07
Phosphate (P) by IC	PO4-P	LA-533-410	D	134	mg/L			20.00	0.80		07/18/07
Sulfate	14808-79-8	LA-533-410	BD	3.22	mg/L			5.00	0.35		07/18/07
ICP Metals Analysis, Grd H20 P Prep											07/18/07
ICP Metals Analysis, Grd H20 P											
Aluminum	7429-90-5	LA-505-411	DU	< 150	ug/L			5.00	1.5e+02		07/24/07
Iron	7439-89-6	LA-505-411	D	1.31e+03	ug/L			5.00	45		07/24/07
Magnesium	7439-95-4	LA-505-411	D	5.48e+03	ug/L			5.00	30		07/24/07
Manganese	7439-96-5	LA-505-411	D	2.24e+03	ug/L			5.00	20		07/24/07
Nickel	7440-02-0	LA-505-411	D	36.9	ug/L			5.00	20		07/24/07
Potassium	7440-09-7	LA-505-411	D	4.60e+03	ug/L			5.00	2.2e+02		07/24/07
Silver	7440-22-4	LA-505-411	DU	< 25.0	ug/L			5.00	25		07/24/07
Sodium	7440-23-5	LA-505-411	D	6.45e+05	ug/L			10.00	2.7e+02		07/24/07
Antimony	7440-36-0	LA-505-411	DU	< 160	ug/L			5.00	1.6e+02		07/24/07
Barium	7440-39-3	LA-505-411	DU	< 20.0	ug/L			5.00	20		07/24/07
Cadmium	7440-43-9	LA-505-411	DU	< 20.0	ug/L			5.00	20		07/24/07
Chromium	7440-47-3	LA-505-411	DU	< 20.0	ug/L			5.00	20		07/24/07
Cobalt	7440-48-4	LA-505-411	DU	< 20.0	ug/L			5.00	20		07/24/07
Copper	7440-50-8	LA-505-411	CD	31.0	ug/L			5.00	20		07/24/07
Vanadium	7440-62-2	LA-505-411	DU	< 35.0	ug/L			5.00	35		07/24/07
Zinc	7440-66-6	LA-505-411	DU	< 20.0	ug/L			5.00	20		07/24/07

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)

C - The Analyte was found in the Associated Blank.(inorg)
 U - Analyzed for but not detected above limiting criteria(inorg)

* - 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 # W07GR01796
Client ID: B1P404

TRENT
 WSCF

Matrix: WATER

Group #: WSCF20071203
Department: Inorganic
Sampled: 07/15/07
Received: 07/16/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Calcium	7440-70-2	LA-505-411	D	1.17e+05	ug/L			5.00	1.7e+02		07/24/07
Lead	7439-92-1	LA-505-411	DU	< 135	ug/L			5.00	1.4e+02		07/24/07
Molybdenum	7439-98-7	LA-505-411	DU	< 20.0	ug/L			5.00	20		07/24/07
Strontium	7440-24-6	LA-505-411	D	207	ug/L			5.00	20		07/24/07
Arsenic	7440-38-2	LA-505-411	DU	< 250	ug/L			5.00	2.5e+02		07/24/07

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WSCF ANALYTICAL RESULTS REPORT

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Sample # W07GR01797
Client ID: B1P405

**TRENT
WSCF**

Matrix: WATER

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Department: Inorganic
Sampled: 07/15/07
Received: 07/16/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Anions by Ion Chromatography											
Fluoride	16984-48-8	LA-533-410	DU	< 0.0300	mg/L			5.00	0.030		07/18/07
Chloride	16887-00-6	LA-533-410	D	33.0	mg/L			5.00	0.15		07/18/07
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.0500	mg/L			5.00	0.050		07/18/07
Nitrogen in Nitrate	NO3-N	LA-533-410	DU	< 0.0250	mg/L			5.00	0.025		07/18/07
Phosphate (P) by IC	PO4-P	LA-533-410	D	282	mg/L			20.00	0.80		07/18/07
Sulfate	14808-79-8	LA-533-410	BD	0.425	mg/L			5.00	0.35		07/18/07
ICP Metals Analysis, Grd H20 P Prep											07/18/07
ICP Metals Analysis, Grd H20 P											
Aluminum	7429-90-5	LA-505-411	DU	< 150	ug/L			5.00	1.5e+02		07/24/07
Iron	7439-89-6	LA-505-411	D	826	ug/L			5.00	45		07/24/07
Magnesium	7439-95-4	LA-505-411	D	2.68e+03	ug/L			5.00	30		07/24/07
Manganese	7439-96-5	LA-505-411	D	181	ug/L			5.00	20		07/24/07
Nickel	7440-02-0	LA-505-411	DU	< 20.0	ug/L			5.00	20		07/24/07
Potassium	7440-09-7	LA-505-411	D	2.45e+03	ug/L			5.00	2.2e+02		07/24/07
Silver	7440-22-4	LA-505-411	DU	< 25.0	ug/L			5.00	25		07/24/07
Sodium	7440-23-5	LA-505-411	D	4.55e+05	ug/L			5.00	1.4e+02		07/24/07
Antimony	7440-36-0	LA-505-411	DU	< 160	ug/L			5.00	1.6e+02		07/24/07
Barium	7440-39-3	LA-505-411	DU	< 20.0	ug/L			5.00	20		07/24/07
Cadmium	7440-43-9	LA-505-411	DU	< 20.0	ug/L			5.00	20		07/24/07
Chromium	7440-47-3	LA-505-411	DU	< 20.0	ug/L			5.00	20		07/24/07
Cobalt	7440-48-4	LA-505-411	DU	< 20.0	ug/L			5.00	20		07/24/07
Copper	7440-50-8	LA-505-411	DU	< 20.0	ug/L			5.00	20		07/24/07
Vanadium	7440-62-2	LA-505-411	DU	< 35.0	ug/L			5.00	35		07/24/07
Zinc	7440-66-6	LA-505-411	DU	< 20.0	ug/L			5.00	20		07/24/07

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Report WGPP/ver. 5.2

Groundwater Remediation Program

WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F06-027
Sample # W07GR01797
Client ID: B1P405

TRENT
 WSCF

Matrix: WATER

Group #: WSCF20071203
Department: Inorganic
Sampled: 07/15/07
Received: 07/16/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Calcium	7440-70-2	LA-505-411	D	1.61e+04	ug/L			5.00	1.7e+02		07/24/07
Lead	7439-92-1	LA-505-411	DU	< 135	ug/L			5.00	1.4e+02		07/24/07
Molybdenum	7439-98-7	LA-505-411	DU	< 20.0	ug/L			5.00	20		07/24/07
Strontium	7440-24-6	LA-505-411	D	66.7	ug/L			5.00	20		07/24/07
Arsenic	7440-38-2	LA-505-411	DU	< 250	ug/L			5.00	2.5e+02		07/24/07

MDL = Minimum Detection Limit

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Report WGPP/ver. 5.2

Groundwater Remediation Program

WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F06-027
Sample # W07GR01798
Client ID: B1P406

**TRENT
WSCF**

Matrix: WATER

Group #: WSCF20071203
Department: Inorganic
Sampled: 07/15/07
Received: 07/16/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Anions by Ion Chromatography											
Fluoride	16984-48-8	LA-533-410	DU	< 0.0300	mg/L			5.00	0.030		07/18/07
Chloride	16887-00-6	LA-533-410	D	74.0	mg/L			20.00	0.60		07/18/07
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.0500	mg/L			5.00	0.050		07/18/07
Nitrogen in Nitrate	NO3-N	LA-533-410	DU	< 0.0250	mg/L			5.00	0.025		07/18/07
Phosphate (P) by IC	PO4-P	LA-533-410	D	268	mg/L			20.00	0.80		07/18/07
Sulfate	14808-79-8	LA-533-410	BD	1.19	mg/L			5.00	0.35		07/18/07
ICP Metals Analysis, Grd H20 P Prep											
ICP Metals Analysis, Grd H20 P											
Aluminum	7429-90-5	LA-505-411	DU	< 150	ug/L			5.00	1.5e +02		07/24/07
Iron	7439-89-8	LA-505-411	D	277	ug/L			5.00	45		07/24/07
Magnesium	7439-95-4	LA-505-411	D	6.33e +03	ug/L			5.00	30		07/24/07
Manganese	7439-96-5	LA-505-411	D	298	ug/L			5.00	20		07/24/07
Nickel	7440-02-0	LA-505-411	DU	< 20.0	ug/L			5.00	20		07/24/07
Potassium	7440-09-7	LA-505-411	D	4.29e +03	ug/L			5.00	2.2e +02		07/24/07
Silver	7440-22-4	LA-505-411	DU	< 25.0	ug/L			5.00	25		07/24/07
Sodium	7440-23-5	LA-505-411	D	5.26e +05	ug/L			10.00	2.7e +02		07/24/07
Antimony	7440-36-0	LA-505-411	DU	< 160	ug/L			5.00	1.6e +02		07/24/07
Barium	7440-39-3	LA-505-411	DU	< 20.0	ug/L			5.00	20		07/24/07
Cadmium	7440-43-9	LA-505-411	DU	< 20.0	ug/L			5.00	20		07/24/07
Chromium	7440-47-3	LA-505-411	DU	< 20.0	ug/L			5.00	20		07/24/07
Cobalt	7440-48-4	LA-505-411	DU	< 20.0	ug/L			5.00	20		07/24/07
Copper	7440-50-8	LA-505-411	CD	26.0	ug/L			5.00	20		07/24/07
Vanadium	7440-62-2	LA-505-411	DU	< 35.0	ug/L			5.00	35		07/24/07
Zinc	7440-66-8	LA-505-411	DU	< 20.0	ug/L			5.00	20		07/24/07

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)

C - The Analyte was found in the Associated Blank.(inorg)

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

* - 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 # W07GR01798
Client ID: B1P406

TRENT
 WSCF

Matrix: WATER

Group #: WSCF20071203
Department: Inorganic
Sampled: 07/15/07
Received: 07/16/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Calcium	7440-70-2	LA-505-411	D	3.34e+04	ug/L			5.00	1.7e+02		07/24/07
Lead	7439-92-1	LA-505-411	DU	< 135	ug/L			5.00	1.4e+02		07/24/07
Molybdenum	7439-98-7	LA-505-411	DU	< 20.0	ug/L			5.00	20		07/24/07
Strontium	7440-24-6	LA-505-411	D	125	ug/L			5.00	20		07/24/07
Arsenic	7440-38-2	LA-505-411	DU	< 250	ug/L			5.00	2.5e+02		07/24/07

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)

C - The Analyte was found in the Associated Blank.(inorg)

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

* - 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 # W07GR01799
Client ID: B1P407

**TRENT
WSCF**

Matrix: WATER

Group #: WSCF20071203
Department: Inorganic
Sampled: 07/15/07
Received: 07/16/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Anions by Ion Chromatography											
Fluoride	18984-48-8	LA-533-410	DU	< 0.0300	mg/L			5.00	0.030		07/18/07
Chloride	18887-00-6	LA-533-410	D	72.3	mg/L			20.00	0.80		07/18/07
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.0500	mg/L			5.00	0.050		07/18/07
Nitrogen in Nitrate	NO3-N	LA-533-410	DU	< 0.0250	mg/L			5.00	0.025		07/18/07
Phosphate (P) by IC	PO4-P	LA-533-410	D	198	mg/L			20.00	0.80		07/18/07
Sulfate	14808-79-8	LA-533-410	BD	0.582	mg/L			5.00	0.35		07/18/07
ICP Metals Analysis, Grd H20 P Prep											
ICP Metals Analysis, Grd H20 P											
Aluminum	7429-90-5	LA-505-411	DU	< 150	ug/L			5.00	1.5e+02		07/24/07
Iron	7439-89-6	LA-505-411	D	345	ug/L			5.00	45		07/24/07
Magnesium	7439-95-4	LA-505-411	D	2.82e+03	ug/L			5.00	30		07/24/07
Manganese	7439-96-5	LA-505-411	D	719	ug/L			5.00	20		07/24/07
Nickel	7440-02-0	LA-505-411	DU	< 20.0	ug/L			5.00	20		07/24/07
Potassium	7440-09-7	LA-505-411	D	3.47e+03	ug/L			5.00	2.2e+02		07/24/07
Silver	7440-22-4	LA-505-411	DU	< 25.0	ug/L			5.00	25		07/24/07
Sodium	7440-23-5	LA-505-411	D	5.04e+05	ug/L			10.00	2.7e+02		07/24/07
Antimony	7440-36-0	LA-505-411	D	199	ug/L			5.00	1.6e+02		07/24/07
Barium	7440-39-3	LA-505-411	DU	< 20.0	ug/L			5.00	20		07/24/07
Cadmium	7440-43-9	LA-505-411	DU	< 20.0	ug/L			5.00	20		07/24/07
Chromium	7440-47-3	LA-505-411	DU	< 20.0	ug/L			5.00	20		07/24/07
Cobalt	7440-48-4	LA-505-411	DU	< 20.0	ug/L			5.00	20		07/24/07
Copper	7440-50-8	LA-505-411	CD	35.0	ug/L			5.00	20		07/24/07
Vanadium	7440-62-2	LA-505-411	DU	< 35.0	ug/L			5.00	35		07/24/07
Zinc	7440-66-6	LA-505-411	D	93.2	ug/L			5.00	20		07/24/07

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)

C - The Analyte was found in the Associated Blank. (inorg)
 U - Analyzed for but not detected above limiting criteria (inorg)

* - 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 # W07GR01799
Client ID: B1P407

**TRENT
WSCF**

Matrix: WATER

Group #: WSCF20071203
Department: Inorganic
Sampled: 07/15/07
Received: 07/16/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Calcium	7440-70-2	LA-505-411	D	1.58e + 04	ug/L			5.00	1.7e + 02		07/24/07
Lead	7439-92-1	LA-505-411	DU	< 135	ug/L			5.00	1.4e + 02		07/24/07
Molybdenum	7439-98-7	LA-505-411	DU	< 20.0	ug/L			5.00	20		07/24/07
Strontium	7440-24-8	LA-505-411	D	128	ug/L			5.00	20		07/24/07
Arsenic	7440-38-2	LA-505-411	DU	< 250	ug/L			5.00	2.5e + 02		07/24/07

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)

C - The Analyte was found in the Associated Blank.(inorg)

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

* - 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 # W07GR01800
Client ID: B1P408

TRENT
WSCF

Matrix: WATER

Group #: WSCF20071203
Department: Inorganic
Sampled: 07/15/07
Received: 07/16/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Anions by Ion Chromatography											
Fluoride	16984-48-8	LA-533-410	DU	< 0.0300	mg/L			5.00	0.030		07/18/07
Chloride	16887-00-6	LA-533-410	D	23.1	mg/L			5.00	0.15		07/18/07
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.0500	mg/L			5.00	0.050		07/18/07
Nitrogen in Nitrate	NO3-N	LA-533-410	D	3.08	mg/L			5.00	0.025		07/18/07
Phosphate (P) by IC	PO4-P	LA-533-410	D	53.5	mg/L			5.00	0.20		07/18/07
Sulfate	14808-79-8	LA-533-410	D	7.63	mg/L			5.00	0.35		07/18/07
ICP Metals Analysis, Grd H2O P Prep											
ICP Metals Analysis, Grd H2O P											
Aluminum	7429-90-5	LA-505-411	DU	< 150	ug/L			5.00	1.5e + 02		07/24/07
Iron	7439-89-6	LA-505-411	DU	< 45.0	ug/L			5.00	45		07/24/07
Magnesium	7439-95-4	LA-505-411	D	3.40e + 03	ug/L			5.00	30		07/24/07
Manganese	7439-98-5	LA-505-411	D	662	ug/L			5.00	20		07/24/07
Nickel	7440-02-0	LA-505-411	DU	< 20.0	ug/L			5.00	20		07/24/07
Potassium	7440-09-7	LA-505-411	D	2.08e + 03	ug/L			5.00	2.2e + 02		07/24/07
Silver	7440-22-4	LA-505-411	DU	< 25.0	ug/L			5.00	25		07/24/07
Sodium	7440-23-5	LA-505-411	D	1.66e + 05	ug/L			5.00	1.4e + 02		07/24/07
Antimony	7440-36-0	LA-505-411	DU	< 160	ug/L			5.00	1.6e + 02		07/24/07
Barium	7440-39-3	LA-505-411	DU	< 20.0	ug/L			5.00	20		07/24/07
Cadmium	7440-43-9	LA-505-411	DU	< 20.0	ug/L			5.00	20		07/24/07
Chromium	7440-47-3	LA-505-411	DU	< 20.0	ug/L			5.00	20		07/24/07
Cobalt	7440-48-4	LA-505-411	DU	< 20.0	ug/L			5.00	20		07/24/07
Copper	7440-50-8	LA-505-411	CD	30.0	ug/L			5.00	20		07/24/07
Vanadium	7440-62-2	LA-505-411	DU	< 35.0	ug/L			5.00	35		07/24/07
Zinc	7440-66-6	LA-505-411	DU	< 20.0	ug/L			5.00	20		07/24/07

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)

C - The Analyte was found in the Associated Blank. (inorg)

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

+ - 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 # W07GR01800
Client ID: B1P408

TRENT
 WSCF

Matrix: WATER

Group #: WSCF20071203
Department: Inorganic
Sampled: 07/15/07
Received: 07/16/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Calcium	7440-70-2	LA-505-411	D	1.80e +04	ug/L			5.00	1.7e +02		07/24/07
Lead	7439-92-1	LA-505-411	DU	< 135	ug/L			5.00	1.4e +02		07/24/07
Molybdenum	7439-98-7	LA-505-411	DU	< 20.0	ug/L			5.00	20		07/24/07
Strontium	7440-24-8	LA-505-411	D	125	ug/L			5.00	20		07/24/07
Arsenic	7440-38-2	LA-505-411	DU	< 250	ug/L			5.00	2.5e +02		07/24/07

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)

C - The Analyte was found in the Associated Blank.(Inorg)

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

* - 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 # W07GR01801
Client ID: B1P409

**TRENT
WSCF**

Matrix: WATER

Group #: WSCF20071203
Department: Inorganic
Sampled: 07/15/07
Received: 07/16/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Anions by Ion Chromatography											
Fluoride	16984-48-8	LA-533-410	DU	< 0.0300	mg/L			5.00	0.030		07/18/07
Chloride	16887-00-6	LA-533-410	D	30.4	mg/L			5.00	0.15		07/18/07
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.0500	mg/L			5.00	0.050		07/18/07
Nitrogen in Nitrate	NO3-N	LA-533-410	DU	< 0.0250	mg/L			5.00	0.025		07/18/07
Phosphate (P) by IC	PO4-P	LA-533-410	D	44.6	mg/L			5.00	0.20		07/18/07
Sulfate	14808-79-8	LA-533-410	D	5.18	mg/L			5.00	0.35		07/18/07
ICP Metals Analysis, Grd H20 P Prep											07/18/07
ICP Metals Analysis, Grd H20 P											
Aluminum	7429-90-5	LA-505-411	DU	< 150	ug/L			5.00	1.5e +02		07/24/07
Iron	7439-89-6	LA-505-411	D	222	ug/L			5.00	45		07/24/07
Magnesium	7439-95-4	LA-505-411	D	4.13e +03	ug/L			5.00	30		07/24/07
Manganese	7439-96-5	LA-505-411	D	1.40e +03	ug/L			5.00	20		07/24/07
Nickel	7440-02-0	LA-505-411	DU	< 20.0	ug/L			5.00	20		07/24/07
Potassium	7440-09-7	LA-505-411	D	2.10e +03	ug/L			5.00	2.2e +02		07/24/07
Silver	7440-22-4	LA-505-411	DU	< 25.0	ug/L			5.00	25		07/24/07
Sodium	7440-23-5	LA-505-411	D	2.08e +05	ug/L			5.00	1.4e +02		07/24/07
Antimony	7440-36-0	LA-505-411	DU	< 160	ug/L			5.00	1.6e +02		07/24/07
Barium	7440-39-3	LA-505-411	D	25.0	ug/L			5.00	20		07/24/07
Cadmium	7440-43-9	LA-505-411	DU	< 20.0	ug/L			5.00	20		07/24/07
Chromium	7440-47-3	LA-505-411	DU	< 20.0	ug/L			5.00	20		07/24/07
Cobalt	7440-48-4	LA-505-411	DU	< 20.0	ug/L			5.00	20		07/24/07
Copper	7440-50-8	LA-505-411	DU	< 20.0	ug/L			5.00	20		07/24/07
Vanadium	7440-62-2	LA-505-411	DU	< 35.0	ug/L			5.00	35		07/24/07
Zinc	7440-66-6	LA-505-411	DU	< 20.0	ug/L			5.00	20		07/24/07

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 # W07GR01801
Client ID: B1P409

**TRENT
WSCF**

Matrix: WATER

Group #: WSCF20071203
Department: Inorganic
Sampled: 07/15/07
Received: 07/16/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Calcium	7440-70-2	LA-505-411	D	2.00e +04	ug/L			5.00	1.7e +02		07/24/07
Lead	7439-92-1	LA-505-411	DU	< 135	ug/L			5.00	1.4e +02		07/24/07
Molybdenum	7439-98-7	LA-505-411	DU	< 20.0	ug/L			5.00	20		07/24/07
Strontium	7440-24-6	LA-505-411	D	107	ug/L			5.00	20		07/24/07
Arsenic	7440-38-2	LA-505-411	DU	< 250	ug/L			5.00	2.5e +02		07/24/07

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)

C - The Analyte was found in the Associated Blank.(inorg)

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* - 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 # W07GR01802
Client ID: B1P410

**TRENT
WSCF**

Matrix: WATER

Group #: WSCF20071203
Department: Inorganic
Sampled: 07/15/07
Received: 07/16/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Anions by Ion Chromatography											
Fluoride	16984-48-8	LA-533-410	DU	< 0.0300	mg/L			5.00	0.030		07/18/07
Chloride	16887-00-6	LA-533-410	D	30.6	mg/L			5.00	0.15		07/18/07
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.0500	mg/L			5.00	0.050		07/18/07
Nitrogen in Nitrate	NO3-N	LA-533-410	DU	< 0.0250	mg/L			5.00	0.025		07/18/07
Phosphate (P) by IC	PO4-P	LA-533-410	D	69.9	mg/L			5.00	0.20		07/18/07
Sulfate	14808-79-8	LA-533-410	D	7.69	mg/L			5.00	0.35		07/18/07
ICP Metals Analysis, Grd H20 P Prep											07/18/07
ICP Metals Analysis, Grd H20 P											
Aluminum	7429-90-5	LA-505-411	DU	< 150	ug/L			5.00	1.5e+02		07/24/07
Iron	7439-89-6	LA-505-411	D	64.5	ug/L			5.00	45		07/24/07
Magnesium	7439-95-4	LA-505-411	D	5.22e+03	ug/L			5.00	30		07/24/07
Manganese	7439-96-5	LA-505-411	D	720	ug/L			5.00	20		07/24/07
Nickel	7440-02-0	LA-505-411	DU	< 20.0	ug/L			5.00	20		07/24/07
Potassium	7440-09-7	LA-505-411	D	2.58e+03	ug/L			5.00	2.2e+02		07/24/07
Silver	7440-22-4	LA-505-411	DU	< 25.0	ug/L			5.00	25		07/24/07
Sodium	7440-23-5	LA-505-411	D	1.92e+05	ug/L			5.00	1.4e+02		07/24/07
Antimony	7440-36-0	LA-505-411	DU	< 160	ug/L			5.00	1.6e+02		07/24/07
Berium	7440-39-3	LA-505-411	D	33.0	ug/L			5.00	20		07/24/07
Cadmium	7440-43-9	LA-505-411	DU	< 20.0	ug/L			5.00	20		07/24/07
Chromium	7440-47-3	LA-505-411	DU	< 20.0	ug/L			5.00	20		07/24/07
Cobalt	7440-48-4	LA-505-411	DU	< 20.0	ug/L			5.00	20		07/24/07
Copper	7440-50-8	LA-505-411	CD	45.0	ug/L			5.00	20		07/24/07
Vanadium	7440-82-2	LA-505-411	DU	< 35.0	ug/L			5.00	35		07/24/07
Zinc	7440-86-6	LA-505-411	DU	< 20.0	ug/L			5.00	20		07/24/07

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)

C - The Analyte was found in the Associated Blank. (Inorg)

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

* - 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 # W07GR01802
Client ID: B1P410

TRENT
 WSCF

Matrix: WATER

Group #: WSCF20071203
Department: Inorganic
Sampled: 07/15/07
Received: 07/16/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Calcium	7440-70-2	LA-505-411	D	2.70e+04	ug/L			5.00	1.7e+02		07/24/07
Lead	7439-92-1	LA-505-411	DU	< 135	ug/L			5.00	1.4e+02		07/24/07
Molybdenum	7439-98-7	LA-505-411	DU	< 20.0	ug/L			5.00	20		07/24/07
Strontium	7440-24-6	LA-505-411	D	124	ug/L			5.00	20		07/24/07
Arsenic	7440-38-2	LA-505-411	DU	< 250	ug/L			5.00	2.5e+02		07/24/07

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)

C - The Analyte was found in the Associated Blank.(inorg)

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

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

Report WGPP/ver. 5.2

Groundwater Remediation Program

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20071203
 Matrix: WATER
 Test: Anions by Ion Chromatography

Sample Date: 07/15/07
 Receive Date: 07/16/07

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W07GR01800											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Chloride	16887-00-8	23.0801		RPD			0.129	20.000		07/18/07
DUP	Fluoride	16984-48-8	<3e-2		RPD			n/a	20.000	U	07/18/07
DUP	Nitrogen in Nitrite	NO2-N	<5e-2		RPD			n/a	20.000	U	07/18/07
DUP	Nitrogen in Nitrate	NO3-N	3.0638		RPD			0.534	20.000		07/18/07
DUP	Phosphate (P) by IC	PO4-P	53.5985		RPD			0.140	20.000		07/18/07
DUP	Sulfate	14808-79-8	7.5131		RPD			1.586	20.000		07/18/07
MS	Chloride	16887-00-8	1.01938	102.968	% Recov	75.000	125.000				07/18/07
MS	Fluoride	16984-48-8	0.50428	100.454	% Recov	75.000	125.000				07/18/07
MS	Nitrogen in Nitrite	NO2-N	0.45718	92.734	% Recov	75.000	125.000				07/18/07
MS	Nitrogen in Nitrate	NO3-N	0.4226	93.703	% Recov	75.000	125.000				07/18/07
MS	Phosphate (P) by IC	PO4-P	0.87404	91.818	% Recov	75.000	125.000				07/18/07
MS	Sulfate	14808-79-8	1.89198	95.555	% Recov	75.000	125.000				07/18/07
MSD	Chloride	16887-00-8	1.02576	103.612	% Recov	75.000	125.000				07/18/07
MSD	Fluoride	16984-48-8	0.50356	100.311	% Recov	75.000	125.000				07/18/07
MSD	Nitrogen in Nitrite	NO2-N	0.4737	96.085	% Recov	75.000	125.000				07/18/07
MSD	Nitrogen in Nitrate	NO3-N	0.45274	100.386	% Recov	75.000	125.000				07/18/07
MSD	Phosphate (P) by IC	PO4-P	0.92624	97.090	% Recov	75.000	125.000				07/18/07
MSD	Sulfate	14808-79-8	1.88892	95.400	% Recov	75.000	125.000				07/18/07
SPK-RPD	Chloride	16887-00-8	103.612		RPD			0.623	20.000		07/18/07
SPK-RPD	Fluoride	16984-48-8	100.311		RPD			0.142	20.000		07/18/07
SPK-RPD	Nitrogen in Nitrite	NO2-N	96.085		RPD			3.549	20.000		07/18/07
SPK-RPD	Nitrogen in Nitrate	NO3-N	100.386		RPD			6.887	20.000		07/18/07
SPK-RPD	Phosphate (P) by IC	PO4-P	97.090		RPD			5.799	20.000		07/18/07
SPK-RPD	Sulfate	14808-79-8	95.400		RPD			0.162	20.000		07/18/07

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20071203
 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
BATCH QC											
BLANK	Chloride	16887-00-6	<3e-2	n/a	mg/L	0.000	0.030			U	07/18/07
BLANK	Chloride	16887-00-6	<3e-2	n/a	mg/L	0.000	0.030			U	07/18/07
BLANK	Fluoride	16984-48-8	<6e-3	n/a	mg/L	0.000	0.030			U	07/18/07
BLANK	Fluoride	16984-48-8	<6e-3	n/a	mg/L	0.000	0.030			U	07/18/07
BLANK	Nitrogen in Nitrite	NO2-N	<1e-2	n/a	mg/L	0.000	0.020			U	07/18/07
BLANK	Nitrogen in Nitrite	NO2-N	<1e-2	n/a	mg/L	0.000	0.020			U	07/18/07
BLANK	Nitrogen in Nitrate	NO3-N	<5e-3	n/a	mg/L	0.000	0.040			U	07/18/07
BLANK	Nitrogen in Nitrate	NO3-N	<5e-3	n/a	mg/L	0.000	0.040			U	07/18/07
BLANK	Phosphate (P) by IC	PO4-P	<4e-2	n/a	mg/L	0.000	0.200			U	07/18/07
BLANK	Phosphate (P) by IC	PO4-P	<4e-2	n/a	mg/L	0.000	0.200			U	07/18/07
BLANK	Sulfate	14808-79-8	<7e-2	n/a	mg/L	0.000	0.200			U	07/18/07
BLANK	Sulfate	14808-79-8	<7e-2	n/a	mg/L	0.000	0.200			U	07/18/07
LCS	Chloride	16887-00-6	200.2677	100.134	% Recov	80.000	120.000				07/18/07
LCS	Fluoride	16984-48-8	106.9127	105.854	% Recov	80.000	120.000				07/18/07
LCS	Nitrogen in Nitrite	NO2-N	99.9506	100.352	% Recov	80.000	120.000				07/18/07
LCS	Nitrogen in Nitrate	NO3-N	91.8253	100.686	% Recov	80.000	120.000				07/18/07
LCS	Phosphate (P) by IC	PO4-P	201.4697	104.497	% Recov	80.000	120.000				07/18/07
LCS	Sulfate	14808-79-8	398.2641	99.566	% Recov	80.000	120.000				07/18/07

Lab ID: W07GR01795

BATCH QC ASSOCIATED WITH SAMPLE

DUP	Chloride	16887-00-6	57.4986		RPD			0.405	20.000		07/18/07
DUP	Fluoride	16984-48-8	<3e-2		RPD			n/a	20.000	U	07/18/07
DUP	Nitrogen in Nitrite	NO2-N	<5e-2		RPD			n/a	20.000	U	07/18/07
DUP	Nitrogen in Nitrate	NO3-N	<2.5e-2		RPD			n/a	20.000	U	07/18/07
DUP	Phosphate (P) by IC	PO4-P	125.5849		RPD			3.254	20.000		07/18/07
DUP	Sulfate	14808-79-8	7.8085		RPD			0.765	20.000		07/18/07
MS	Chloride	16887-00-6	1.025	103.535	% Recov	75.000	125.000				07/18/07

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20071203
 Matrix: WATER
 Test: Anions by Ion Chromatography

Sample Date: 07/14/07
 Receive Date: 07/16/07

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
MS	Fluoride	16984-48-8	0.47778	95.175	% Recov	75.000	125.000				07/18/07
MS	Nitrogen in Nitrite	NO2-N	0.43752	88.746	% Recov	75.000	125.000				07/18/07
MS	Nitrogen in Nitrate	NO3-N	0.41804	92.692	% Recov	75.000	125.000				07/18/07
MS	Phosphate (P) by IC	PO4-P	1.042865	109.315	% Recov	75.000	125.000				07/18/07
MS	Sulfate	14808-79-8	1.99774	100.896	% Recov	75.000	125.000				07/18/07
MSD	Chloride	16887-00-6	1.015135	102.539	% Recov	75.000	125.000				07/18/07
MSD	Fluoride	16984-48-8	0.47696	95.012	% Recov	75.000	125.000				07/18/07
MSD	Nitrogen in Nitrite	NO2-N	0.44914	91.103	% Recov	75.000	125.000				07/18/07
MSD	Nitrogen in Nitrate	NO3-N	0.44994	99.765	% Recov	75.000	125.000				07/18/07
MSD	Phosphate (P) by IC	PO4-P	1.004685	105.313	% Recov	75.000	125.000				07/18/07
MSD	Sulfate	14808-79-8	1.96626	99.306	% Recov	75.000	125.000				07/18/07
SPK-RPD	Chloride	16887-00-6	102.539		RPD			0.967	20.000		07/19/07
SPK-RPD	Fluoride	16984-48-8	95.012		RPD			0.171	20.000		07/19/07
SPK-RPD	Nitrogen in Nitrite	NO2-N	91.103		RPD			2.621	20.000		07/19/07
SPK-RPD	Nitrogen in Nitrate	NO3-N	99.765		RPD			7.350	20.000		07/19/07
SPK-RPD	Phosphate (P) by IC	PO4-P	105.313		RPD			3.729	20.000		07/19/07
SPK-RPD	Sulfate	14808-79-8	99.306		RPD			1.588	20.000		07/19/07
BATCH QC											
BLANK	Chloride	16887-00-6	<3e-2	n/a	mg/L	0.000	0.030			U	07/18/07
BLANK	Chloride	16887-00-6	<3e-2	n/a	mg/L	0.000	0.030			U	07/18/07
BLANK	Fluoride	16984-48-8	<6e-3	n/a	mg/L	0.000	0.030			U	07/18/07
BLANK	Fluoride	16984-48-8	<6e-3	n/a	mg/L	0.000	0.030			U	07/18/07
BLANK	Nitrogen in Nitrite	NO2-N	<1e-2	n/a	mg/L	0.000	0.020			U	07/18/07
BLANK	Nitrogen in Nitrite	NO2-N	<1e-2	n/a	mg/L	0.000	0.020			U	07/18/07
BLANK	Nitrogen in Nitrate	NO3-N	<5e-3	n/a	mg/L	0.000	0.040			U	07/18/07
BLANK	Nitrogen in Nitrate	NO3-N	<5e-3	n/a	mg/L	0.000	0.040			U	07/18/07
BLANK	Phosphate (P) by IC	PO4-P	<4e-2	n/a	mg/L	0.000	0.200			U	07/18/07
BLANK	Phosphate (P) by IC	PO4-P	<4e-2	n/a	mg/L	0.000	0.200			U	07/18/07
BLANK	Sulfate	14808-79-8	<7e-2	n/a	mg/L	0.000	0.200			U	07/18/07

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20071203
 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	<7e-2	n/a	mg/L	0.000	0.200			U	07/18/07
LCS	Chloride	16887-00-6	200.5975	100.299	% Recov	80.000	120.000				07/18/07
LCS	Fluoride	16984-48-8	106.8946	105.836	% Recov	80.000	120.000				07/18/07
LCS	Nitrogen in Nitrite	NO2-N	100.0992	100.501	% Recov	80.000	120.000				07/18/07
LCS	Nitrogen in Nitrate	NO3-N	91.7767	100.632	% Recov	80.000	120.000				07/18/07
LCS	Phosphate (P) by IC	PO4-P	203.0671	105.325	% Recov	80.000	120.000				07/18/07
LCS	Sulfate	14808-79-8	396.353	99.088	% Recov	80.000	120.000				07/18/07

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20071203
 Matrix: WATER
 Test: ICP Metals Analysis, Grd H20 P

Sample Date: 07/15/07
 Receive Date: 07/16/07

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
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Lab ID: W07GR01796
 BATCH QC ASSOCIATED WITH SAMPLE

MS	Silver	7440-22-4	949	94.900	% Recov	75.000	125.000				07/24/07
MS	Aluminum	7429-90-5	795.7	79.570	% Recov	75.000	125.000				07/24/07
MS	Arsenic	7440-38-2	927	92.700	% Recov	75.000	125.000				07/24/07
MS	Barium	7440-39-3	514	102.800	% Recov	75.000	125.000				07/24/07
MS	Calcium	7440-70-2	NA	n/a	% Recov	75.000	125.000				07/24/07
MS	Cadmium	7440-43-9	962.7	96.270	% Recov	75.000	125.000				07/24/07
MS	Cobalt	7440-48-4	994.7	99.470	% Recov	75.000	125.000				07/24/07
MS	Chromium	7440-47-3	960.1	96.010	% Recov	75.000	125.000				07/24/07
MS	Copper	7440-50-8	951	95.100	% Recov	75.000	125.000				07/24/07
MS	Iron	7439-89-8	963	96.300	% Recov	75.000	125.000				07/24/07
MS	Potassium	7440-09-7	10490	104.900	% Recov	75.000	125.000				07/24/07
MS	Magnesium	7439-95-4	NA	n/a	% Recov	75.000	125.000				07/24/07
MS	Manganese	7439-98-5	1010	101.000	% Recov	75.000	125.000				07/24/07
MS	Molybdenum	7439-98-7	940	94.000	% Recov	70.000	130.000				07/24/07
MS	Sodium	7440-23-6	NA	n/a	% Recov	75.000	125.000				07/24/07
MS	Nickel	7440-02-0	973.1	97.310	% Recov	75.000	125.000				07/24/07
MS	Lead	7439-92-1	1110	111.000	% Recov	75.000	125.000				07/24/07
MS	Antimony	7440-36-0	1045	104.500	% Recov	75.000	125.000				07/24/07
MS	Strontium	7440-24-6	500.8	100.120	% Recov	75.000	125.000				07/24/07
MS	Vanadium	7440-82-2	1060	106.000	% Recov	75.000	125.000				07/24/07
MS	Zinc	7440-66-6	972.8	97.280	% Recov	75.000	125.000				07/24/07
MSD	Silver	7440-22-4	950	95.000	% Recov	75.000	125.000				07/24/07
MSD	Aluminum	7429-90-5	815.8	81.580	% Recov	75.000	125.000				07/24/07
MSD	Arsenic	7440-38-2	895	89.500	% Recov	75.000	125.000				07/24/07
MSD	Barium	7440-39-3	522	104.400	% Recov	75.000	125.000				07/24/07
MSD	Calcium	7440-70-2	NA	n/a	% Recov	75.000	125.000				07/24/07

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20071203
 Matrix: WATER
 Test: ICP Metals Analysis, Grd H2O P

Sample Date: 07/15/07
 Receive Date: 07/16/07

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
MSD	Cadmium	7440-43-9	960.3	96.030	% Recov	75.000	125.000				07/24/07
MSD	Cobalt	7440-48-4	997.2	99.720	% Recov	75.000	125.000				07/24/07
MSD	Chromium	7440-47-3	991.2	99.120	% Recov	75.000	125.000				07/24/07
MSD	Copper	7440-50-8	969	96.900	% Recov	75.000	125.000				07/24/07
MSD	Iron	7439-89-6	1014	101.400	% Recov	75.000	125.000				07/24/07
MSD	Potassium	7440-09-7	10690	106.900	% Recov	75.000	125.000				07/24/07
MSD	Magnesium	7439-95-4	NA	n/a	% Recov	75.000	125.000				07/24/07
MSD	Manganese	7439-96-5	1080	108.000	% Recov	75.000	125.000				07/24/07
MSD	Molybdenum	7439-98-7	950.6	95.060	% Recov	75.000	125.000				07/24/07
MSD	Sodium	7440-23-5	NA	n/a	% Recov	75.000	125.000				07/24/07
MSD	Nickel	7440-02-0	957.8	95.780	% Recov	75.000	125.000				07/24/07
MSD	Lead	7439-92-1	982	98.200	% Recov	75.000	125.000				07/24/07
MSD	Antimony	7440-36-0	1066	106.600	% Recov	75.000	125.000				07/24/07
MSD	Strontium	7440-24-6	513	102.600	% Recov	75.000	125.000				07/24/07
MSD	Vanadium	7440-62-2	1020	102.000	% Recov	75.000	125.000				07/24/07
MSD	Zinc	7440-66-6	974.4	97.440	% Recov	75.000	125.000				07/24/07
SPK-RPD	Silver	7440-22-4	95.000		RPD			0.105	20.000		07/24/07
SPK-RPD	Aluminum	7429-90-5	81.580		RPD			2.495	20.000		07/24/07
SPK-RPD	Arsenic	7440-38-2	89.500		RPD			3.513	20.000		07/24/07
SPK-RPD	Barium	7440-39-3	104.400		RPD			1.544	20.000		07/24/07
SPK-RPD	Calcium	7440-70-2			RPD			n/a	20.000		07/24/07
SPK-RPD	Cadmium	7440-43-9	96.030		RPD			0.250	20.000		07/24/07
SPK-RPD	Cobalt	7440-48-4	99.720		RPD			0.251	20.000		07/24/07
SPK-RPD	Chromium	7440-47-3	99.120		RPD			3.188	20.000		07/24/07
SPK-RPD	Copper	7440-50-8	96.900		RPD			1.875	20.000		07/24/07
SPK-RPD	Iron	7439-89-6	101.400		RPD			5.159	20.000		07/24/07
SPK-RPD	Potassium	7440-09-7	106.900		RPD			1.889	20.000		07/24/07
SPK-RPD	Magnesium	7439-95-4			RPD			n/a	20.000		07/24/07
SPK-RPD	Manganese	7439-96-5	108.000		RPD			6.899	20.000		07/24/07
SPK-RPD	Molybdenum	7439-98-7	95.060		RPD			1.121	20.000		07/24/07

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20071203
 Matrix: WATER
 Test: ICP Metals Analysis, Grd H2O P

Sample Date: 07/15/07
 Receive Date: 07/16/07

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			RPD			n/a	20.000		07/24/07
SPK-RPD	Nickel	7440-02-0	95.780		RPD			1.585	20.000		07/24/07
SPK-RPD	Lead	7439-92-1	98.200		RPD			12.237	20.000		07/24/07
SPK-RPD	Antimony	7440-36-0	106.600		RPD			1.990	20.000		07/24/07
SPK-RPD	Strontium	7440-24-6	102.600		RPD			2.447	20.000		07/24/07
SPK-RPD	Vanadium	7440-62-2	102.000		RPD			3.846	20.000		07/24/07
SPK-RPD	Zinc	7440-66-6	97.440		RPD			0.164	20.000		07/24/07
BATCH QC											
BLANK	Silver	7440-22-4	<5	n/a	ug/L					U	07/24/07
BLANK	Aluminum	7429-90-5	<30	n/a	ug/L					U	07/24/07
BLANK	Arsenic	7440-38-2	<50	n/a	ug/L					U	07/24/07
BLANK	Barium	7440-39-3	<4	n/a	ug/L					U	07/24/07
BLANK	Calcium	7440-70-2	<34	n/a	ug/L					U	07/24/07
BLANK	Cadmium	7440-43-9	<4	n/a	ug/L					U	07/24/07
BLANK	Cobalt	7440-48-4	<4	n/a	ug/L					U	07/24/07
BLANK	Chromium	7440-47-3	<4	n/a	ug/L					U	07/24/07
BLANK	Copper	7440-50-8	6	6.000	ug/L						07/24/07
BLANK	Iron	7439-89-6	<9	n/a	ug/L					U	07/24/07
BLANK	Potassium	7440-09-7	<45	n/a	ug/L					U	07/24/07
BLANK	Magnesium	7439-95-4	11	11.000	ug/L						07/24/07
BLANK	Manganese	7439-96-5	<4	n/a	ug/L					U	07/24/07
BLANK	Molybdenum	7439-98-7	<4	n/a	ug/L					U	07/24/07
BLANK	Sodium	7440-23-5	<27	n/a	ug/L					U	07/24/07
BLANK	Nickel	7440-02-0	<4	n/a	ug/L					U	07/24/07
BLANK	Lead	7439-92-1	<27	n/a	ug/L					U	07/24/07
BLANK	Antimony	7440-36-0	<32	n/a	ug/L					U	07/24/07
BLANK	Strontium	7440-24-6	<4	n/a	ug/L					U	07/24/07
BLANK	Vanadium	7440-62-2	<7	n/a	ug/L					U	07/24/07
BLANK	Zinc	7440-66-6	<4	n/a	ug/L					U	07/24/07

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20071203
 Matrix: WATER
 Test: ICP Metals Analysis, Grd H2O 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	1010	101.000	% Recov	80.000	120.000				07/24/07
LCS	Aluminum	7429-90-5	989.1	98.910	% Recov	80.000	120.000				07/24/07
LCS	Arsenic	7440-38-2	981	98.100	% Recov	80.000	120.000				07/24/07
LCS	Barium	7440-39-3	502	100.400	% Recov	80.000	120.000				07/24/07
LCS	Calcium	7440-70-2	1070	107.000	% Recov	80.000	120.000				07/24/07
LCS	Cadmium	7440-43-9	1040	104.000	% Recov	80.000	120.000				07/24/07
LCS	Cobalt	7440-48-4	1032	103.200	% Recov	80.000	120.000				07/24/07
LCS	Chromium	7440-47-3	1008	100.800	% Recov	80.000	120.000				07/24/07
LCS	Copper	7440-50-8	1020	102.000	% Recov	80.000	120.000				07/24/07
LCS	Iron	7439-89-6	1027	102.700	% Recov	80.000	120.000				07/24/07
LCS	Potassium	7440-09-7	9891	98.910	% Recov	80.000	120.000				07/24/07
LCS	Magnesium	7439-95-4	977.9	97.790	% Recov	80.000	120.000				07/24/07
LCS	Manganese	7439-96-5	1040	104.000	% Recov	80.000	120.000				07/24/07
LCS	Molybdenum	7439-98-7	1002	100.200	% Recov	80.000	120.000				07/24/07
LCS	Sodium	7440-23-5	976	97.600	% Recov	80.000	120.000				07/24/07
LCS	Nickel	7440-02-0	1027	102.700	% Recov	80.000	120.000				07/24/07
LCS	Lead	7439-92-1	1090	109.000	% Recov	80.000	120.000				07/24/07
LCS	Antimony	7440-36-0	1024	102.400	% Recov	80.000	120.000				07/24/07
LCS	Strontium	7440-24-6	506.7	101.340	% Recov	80.000	120.000				07/24/07
LCS	Vanadium	7440-62-2	1020	102.000	% Recov	80.000	120.000				07/24/07
LCS	Zinc	7440-66-8	1021	102.100	% Recov	80.000	120.000				07/24/07

WSCF
ANALYTICAL COMMENT REPORT

Attention: Steve Trent
Project Number: F06-027

Group #: WSCF20071203
Department: Inorganic

Sample #	Client ID	Lab Area	Test	Comment
		VALGROUP		ICP-AES: High magnesium and copper preparation blank; "C" flag if applicable. Magnesium, sodium, and calcium sample results beyond effective spike range (spike results marked "NA"). Check and high standards are used to ensure sodium and calcium linearity because sample results are greater than the calibration standard. W07GR01796-W07GR01796/Sr89/90 batch dup is flagged for poor RPD. Since all the other QC checks came out fine, this batch has been approved. lmh

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

VALTEST - Test Validation
LOGTEST - Login for Tests

TESTDATA - Test Data Entry

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F06-027
Sample # W07GR01796
Client ID: B1P404 TRENT
 WSCF

Matrix: WATER

Group #: WSCF20071203
Department: Radiochemistry
Sampled: 07/15/07
Received: 07/16/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Strontium 89/90											
Strontium-89/90	SR-RAD	LA-508-415		410	pCi/L	+57.4	pCi/L	1.00	11		07/20/07
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		78.9	Percent			1.00	0.0		07/20/07

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)

C - The Analyte was found in the Associated Blank.(inorg)
 U - Analyzed for but not detected above limiting criteria(inorg)

* - 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 # W07GR01797
Client ID: B1P405

TRENT
 WSCF

Matrix: WATER

Group #: WSCF20071203
Department: Radiochemistry
Sampled: 07/15/07
Received: 07/16/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Strontium 89/90											
Strontium-89/90	SR-RAD	LA-508-415		86.0	pCi/L	+ -21.5	pCi/L	1.00	8.9		07/20/07
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		101	Percent			1.00	0.0		07/20/07

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)

C - The Analyte was found in the Associated Blank.(inorg)

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

* - 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 # W07GR01798
Client ID: B1P406 TRENT
 WSCF

Matrix: WATER

Group #: WSCF20071203
Department: Radiochemistry
Sampled: 07/15/07
Received: 07/16/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Strontium 89/90											
Strontium-89/90	SR-RAD	LA-508-415		490	pCi/L	+ -68.6	pCi/L	1.00	9.3		07/20/07
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		89.7	Percent			1.00	0.0		07/20/07

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)

C - The Analyte was found in the Associated Blank. (inorg)
 U - Analyzed for but not detected above limiting criteria (inorg)

* - 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 # W07GR01799
Client ID: B1P407 TRENT
 WSCF

Matrix: WATER

Group #: WSCF20071203
Department: Radiochemistry
Sampled: 07/15/07
Received: 07/16/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Strontium 89/90											
Strontium-89/90	SR-RAD	LA-508-415		650	pCi/L	+84.5	pCi/L	1.00	9.2		07/20/07
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		90.6	Percent			1.00	0.0		07/20/07

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)

C - The Analyte was found in the Associated Blank.(inorg)
 U - Analyzed for but not detected above limiting criteria(inorg)

* - 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 # W07GR01800
Client ID: B1P408

TRENT
 WSCF

Matrix: WATER

Group #: WSCF20071203
Department: Radiochemistry
Sampled: 07/15/07
Received: 07/16/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Strontium 89/90											
Strontium-89/90	SR-RAD	LA-508-415		880	pCi/L	+ -81.8	pCi/L	1.00	9.1		07/20/07
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		91.0	Percent			1.00	0.0		07/20/07

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)

C - The Analyte was found in the Associated Blank.(inorg)

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

* - 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 # W07GR01801
Client ID: B1P409

TRENT
WSCF

Matrix: WATER

Group #: WSCF20071203
Department: Radiochemistry
Sampled: 07/15/07
Received: 07/16/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Strontium 89/90											
Strontium-89/90	SR-RAD	LA-508-415		980	pCi/L	+ -118	pCi/L	1.00	8.8		07/20/07
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		94.7	Percent			1.00	0.0		07/20/07

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)

C - The Analyte was found in the Associated Blank. (inorg)

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

* - 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 # W07GR01802
Client ID: B1P410 TRENT
 WSCF

Matrix: WATER

Group #: WSCF20071203
Department: Radiochemistry
Sampled: 07/15/07
Received: 07/16/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Strontium 89/90											
Strontium-89/90	SR-RAD	LA-508-415		630	pCi/L	+ -81.9	pCi/L	1.00	10		07/20/07
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		82.5	Percent			1.00	0.0		07/20/07

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)

C - The Analyte was found in the Associated Blank.(inorg)
 U - Analyzed for but not detected above limiting criteria(inorg)

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

Report WGPP/ver. 5.2
 Groundwater Remediation Program

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20071203
 Matrix: WATER
 Test: Strontium 89/90

Sample Date: 07/15/07
 Receive Date: 07/16/07

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W07GR01798											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Sr-85 Tracer by Beta Counting	SR85	97.0	97.000	% Recov	30.000	105.000				07/20/07
DUP	Strontium-89/90	SR-RAD	4.8E+02		RPD			2.062	20.000		07/20/07
SURR	Sr-85 Tracer by Beta Counting	SR85	89.7	89.700	% Recov	30.000	105.000				07/20/07
Lab ID: W07GR01799											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	Sr-85 Tracer by Beta Counting	SR85	90.6	90.600	% Recov	30.000	105.000				07/20/07
Lab ID: W07GR01800											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	Sr-85 Tracer by Beta Counting	SR85	91.0	91.000	% Recov	30.000	105.000				07/20/07
Lab ID: W07GR01801											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	Sr-85 Tracer by Beta Counting	SR85	94.7	94.700	% Recov	30.000	105.000				07/20/07
Lab ID: W07GR01802											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	Sr-85 Tracer by Beta Counting	SR85	82.5	82.500	% Recov	30.000	105.000				07/20/07
BATCH QC											
BLANK	Sr-85 Tracer by Beta Counting	SR85	96.8	96.800	% Recov	30.000	105.000				07/20/07
BLANK	Strontium-89/90	10098-97-2	U-2.8	n/a	pCi/L	-10.000	100.000				07/20/07
LCS	Sr-85 Tracer by Beta Counting	SR85	89.3	89.300	% Recov	30.000	105.000				07/20/07
LCS	Strontium-89/90	10098-97-2	1710.0	99.505	% Recov	80.000	120.000				07/20/07

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20071203
 Matrix: WATER
 Test: Strontium 89/90

Sample Date: 07/14/07
 Receive Date: 07/16/07

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W07GR01789											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Sr-85 Tracer by Beta Counting	SR85	85.7	85.700	% Recov	30.000	105.000				07/20/07
DUP	Strontium-89/90	SR-RAD	4.8E+02		RPD			20.690	20.000		07/20/07
Lab ID: W07GR01796											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	Sr-85 Tracer by Beta Counting	SR85	78.9	78.900	% Recov	30.000	105.000				07/20/07
Lab ID: W07GR01797											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	Sr-85 Tracer by Beta Counting	SR85	100.7	100.700	% Recov	30.000	105.000				07/20/07
BATCH QC											
BLANK	Sr-85 Tracer by Beta Counting	SR85	101.8	101.800	% Recov	30.000	105.000				07/20/07
BLANK	Strontium-89/90	10098-97-2	U-1.9E+01	n/a	pCi/L	-10.000	100.000				07/20/07
LCS	Sr-85 Tracer by Beta Counting	SR85	96.8	96.800	% Recov	30.000	105.000				07/20/07
LCS	Strontium-89/90	10098-97-2	1570.5	91.388	% Recov	80.000	120.000				07/20/07

WSCF ANALYTICAL COMMENT REPORT

Attention: Steve Trent
Project Number F06-027

Group #: WSCF20071203
Department: Radiochemistry

Sample #	Client ID	Lab Area	Test	Comment
		VALGROUP		ICP-AES: High magnesium and copper preparation blank; "C" flag if applicable. Magnesium, sodium, and calcium sample results beyond effective spike range (spike results marked "NA"). Check and high standards are used to ensure sodium and calcium linearity because sample results are greater than the calibration standard. W07GR01796-W07GR01796/Sr89/90 batch dup is flagged for poor RPD. Since all the other QC checks came out fine, this batch has been approved. lnh

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-07-495

ATTACHMENT 4

SAMPLE RECEIPT INFORMATION

Consisting of 4 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
07/30/07
Tab

ACKNOWLEDGMENT OF SAMPLES RECEIVED

Groundwater Remediation Program

Richland, WA 99354
Attn: Steve Trent

Customer Code: GPP
PO#: 122561/ES20
Group#: 20071203
Project#: F06-027
Proj Mgr: Steve Trent G6-35
Phone: 373-5869

The following samples were received from you on 07/16/07. 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
W07GR01796	B1P404	TRENT @GPP6010 @IC-30	Water @SR89_90	07/15/07
W07GR01797	B1P405	TRENT @GPP6010 @IC-30	Water @SR89_90	07/15/07
W07GR01798	B1P406	TRENT @GPP6010 @IC-30	Water @SR89_90	07/15/07
W07GR01799	B1P407	TRENT @GPP6010 @IC-30	Water @SR89_90	07/15/07
W07GR01800	B1P408	TRENT @GPP6010 @IC-30	Water @SR89_90	07/15/07
W07GR01801	B1P409	TRENT @GPP6010 @IC-30	Water @SR89_90	07/15/07
W07GR01802	B1P410	TRENT @GPP6010 @IC-30	Water @SR89_90	07/15/07

Test Acronym Description

Test Acronym	Description
@GPP6010	ICP Metals Analysis, Grd H2O P
@IC-30	Anions by Ion Chromatography
@SR89_90	Strontium 89/90

COLLECTOR

Pope/Pfister/Mokler/Connolly/Parchen/White

20071203

COMPANY CONTACT

ALEXANDER,DJ

TELEPHONE NO.

373-7786

PROJECT COORDINATOR

TRENT, SJ

PRICE CODE 7G

DATA TURNAROUND

15 Days / 30 Days

SAMPLING LOCATION

100NR2 SYNAP-Hanf.Fm.Post Inj-Phase III Samples

PROJECT DESIGNATION

100-N Apatite Barrier Performance Monitoring

SAF NO.

F06-027

AIR QUALITY

ICE CHEST NO.

FIELD LOGBOOK NO.

HNF-N-531-2

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

Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)

PRESERVATION

HNO3 to pH <2 HNO3 to pH <2 Cool 4C

TYPE OF CONTAINER

NO. OF CONTAINER(S)

VOLUME

1000ml 250ml 120ml

SPECIAL HANDLING AND/OR STORAGE

SAMPLE ANALYSIS

Strontium-89,90 - Total Sr; SEE ITEM (1) IN SPECIAL INSTRUCTIONS SEE ITEM (2) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B1P404	WATER	7-15-07	0745	X	X	X
B1P405	WATER		0845	X	X	X
B1P406	WATER		0900	X	X	X
B1P407	WATER		0730	X	X	X
B1P408	WATER	7-15-07	0845	X	X	X

ICED Initial Date

CHAIN OF POSSESSION

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

RELINQUISHED BY/REMOVED FROM
J.S. Pope / ASH 7-15-07
RELINQUISHED BY/REMOVED FROM
MA-745 / FRI #1 7-16-07
RELINQUISHED BY/REMOVED FROM
J.S. Pope / ASH 7-16-07

DATE/TIME RECEIVED BY/STORED IN
1100 MO-745 / POF #1 7-15-07
DATE/TIME RECEIVED BY/STORED IN
0630 J. Pope / ASH 7-16-07
DATE/TIME RECEIVED BY/STORED IN
07140 V. [Signature] / [Signature] 7/16/07

DATE/TIME RECEIVED BY/STORED IN
1100
DATE/TIME RECEIVED BY/STORED IN
0630
DATE/TIME RECEIVED BY/STORED IN
07140

All samples filtered 0.45 micron
(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)

ICED Initial Date

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

LABORATORY SECTION RECEIVED BY

TITLE DATE/TIME

FINAL SAMPLE DISPOSITION DISPOSAL METHOD

DISPOSED BY DATE/TIME

48 OF 49

COLLECTOR Pope/Pfister/Mokler/Connolly/Parchen/White	COMPANY CONTACT ALEXANDER,DJ	TELEPHONE NO. 373-7786	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 7G	DATA TURNAROUND 15 Days / 30 Days
SAMPLING LOCATION 100NR2 SYNAP-Hanf.Fm.Post Inj-Phase III Samples	PROJECT DESIGNATION 100-N Apatite Barrier Performance Monitoring	SAF NO. F06-027	AIR QUALITY		
ICE CHEST NO.	FIELD LOGBOOK NO. HNF-N-531-2	COA 122561ES20	METHOD OF SHIPMENT GOVERNMENT VEHICLE		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO.	BILL OF LADING/AIR BILL NO.			

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	HNO3 to pH <2	HNO3 to pH <2	Cool 4C
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	Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)	TYPE OF CONTAINER	P	P	P
		NO. OF CONTAINER(S)	1	1	1
		VOLUME	1000mL	250mL	120mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	Strontium-89,90 - Total Sr;	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	SEE ITEM (2) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B1P409	1801 WATER	7-15-07	0830	X	X	X
B1P410	1802 WATER	7-15-07	0800	X	X	X



CHAIN OF POSSESSION	SIGN/ PRINT NAMES	SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM J.S. Pope / 7-15-07	RECEIVED BY/STORED IN ML-745 / REF-#1 7-15-07	All samples filtered 0.45 micron (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 ML-745 / REF-#1 7-16-07	RECEIVED BY/STORED IN J. Pope / 7-16-07	
RELINQUISHED BY/REMOVED FROM J.S. Pope / 7-16-07	RECEIVED BY/STORED IN V. [Signature] / 7-16-07	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

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