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

FLUOR

Memorandum

M4W41-SLF-08-1025

To: H. Hampt E6-35 Date: September 17, 2008

From: S. L. Fitzgerald, Manager
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 WSCF20081775 – SAF NUMBER F08-155

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 information for sample delivery group WSCF20081775:

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

SLF/grf

Attachments 4

M4W41-SLF-08-1025

ATTACHMENT 1

COVER SHEET

Consisting of 2 pages
Including cover page

WSCF SAF NUMBER CROSS REFERENCE

Group#: WSCF20081775
Data Deliverable Date: 03-sep-2008
Data Deliverable: Cover Sheet

SAF#	Sample ID	WSCF#	Matrix
F08-155	B1WPX4	W08GR03395	WATER
	B1WPX5	W08GR03396	WATER
	B1WPX6	W08GR03397	WATER
	B1WPY8	W08GR03398	WATER
	B1WPY9	W08GR03399	WATER
	B1WR00	W08GR03390	WATER
	B1WR06	W08GR03391	WATER
	B1WR07	W08GR03392	WATER
	B1WR21	W08GR03393	WATER
	B1WR22	W08GR03394	WATER

M4W41-SLF-08-1025

ATTACHMENT 2

NARRATIVE

Consisting of 3 pages
Including cover page

Introduction

Ten (10) S&GRP samples were received at the WSCF Laboratory on August 18, 2008. These 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" 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 11, for a complete listing of approved analytical methods.

Inorganic Comments

Ammonia – The hold time requirement for this analysis was met. A Duplicate, Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group per GRP Letter of Instruction. See page 22 for QC details. Analytical Note(s):

All QC controls are within the established limits.

Anions – The hold time requirement for this analysis was met. 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 23 through 24 for QC details. Analytical Note(s):

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 this delivery group per the GRP Letter of Instruction. See page 25 for QC details. Analytical Note(s):

- Matrix Spike and Matrix Spike Duplicate were analyzed on sample# B1WPX4 of this SDG and sample# B1WPW6 (SDG 20081698, SAF# F08-155).
- Iron sample result exceeded the spiking level by a factor of four. Spike recoveries are not valid. Check standard was analyzed to ensure Iron linearity because sample results were greater than the calibration standard.

All other QC controls are within the established limits.

ICP-MS Metals – The hold time requirement for this analysis was 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 26 through 29 for QC details. Analytical Note(s):

- Matrix Spike and Matrix Spike Duplicate were analyzed on sample# B1WRF6 (SDG# 20081732, SAF# F08-094), B1WPW6 (SDG# 20081698, SAF# F08-155) and B1WPX2 (SDG# 20081746, SAF# F08-155).

- Zinc sample result exceeded the spiking levels by a factor of four. Spike recovery is not valid. The variability of the Zinc results in the sample and MS/MSD indicate that the Zinc is not well distributed in the samples.

- The spike concentration used in the MS/MSD for Manganese and Zinc were low, therefore, the recovery for these analytes did not meet the established limits of the laboratory. The Manganese and Zinc analytes in the samples were X flagged.

- The Nickel and Zinc concentration in the laboratory preparation blank was slightly greater than the MDL, therefore, the result for Nickel and Zinc was "C" flagged when appropriate.

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

Andrew Kopriva
WSCF Client Services

M4W41-SLF-08-1025

ATTACHMENT 3

ANALYTICAL RESULTS

Consisting of 24 pages
Including cover page

WSCF
ANALYTICAL RESULTS REPORT

for

Groundwater Remediation Program

Richland, WA 99354

Attention: Steve Trent

Analytical: S. Fitzgerald 9-17-08

Client Services: A. Kopriva 9-17-08

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

Contract#: FH-EIS-2003-MEM-001
Report#: WSCF20081775
Report Date: 17-sep-2008
Report WGPP/ver. 5.2
Groundwater Remediation Program

w13qlog v4.2 17-sep-2008 08:01:05

Department: Inorganic

W13q Worklist/Batch/QC Report for Group# WSCF20081775

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
37656	2	38085	42472	BLANK		Anions by Ion Chromatography
37656	17	38085	42472	BLANK		Anions by Ion Chromatography
37656	3	38085	42472	LCS		Anions by Ion Chromatography
37656	8	38085	42472	SAMPLE	W08GR03390	Anions by Ion Chromatography
37656	9	38085	42472	SAMPLE	W08GR03391	Anions by Ion Chromatography
37656	10	38085	42472	SAMPLE	W08GR03392	Anions by Ion Chromatography
37656	11	38085	42472	SAMPLE	W08GR03393	Anions by Ion Chromatography
37656	5	38085	42472	DUP	W08GR03394	Anions by Ion Chromatography
37656	6	38085	42472	MS	W08GR03394	Anions by Ion Chromatography
37656	7	38085	42472	MSD	W08GR03394	Anions by Ion Chromatography
37656	4	38085	42472	SAMPLE	W08GR03394	Anions by Ion Chromatography
37656	7	38085	42472	SPK-RPD	W08GR03394	Anions by Ion Chromatography
37656	12	38085	42472	SAMPLE	W08GR03395	Anions by Ion Chromatography
37656	13	38085	42472	SAMPLE	W08GR03396	Anions by Ion Chromatography
37656	14	38085	42472	SAMPLE	W08GR03397	Anions by Ion Chromatography
37656	15	38085	42472	SAMPLE	W08GR03398	Anions by Ion Chromatography
37656	16	38085	42472	SAMPLE	W08GR03399	Anions by Ion Chromatography
37684	1	38119	42479	BLANK		ICP-200.8 MS All possible meta
37684	2	38119	42479	LCS		ICP-200.8 MS All possible meta
37684	4	38119	42479	MS	W08GR03308	ICP-200.8 MS All possible meta
37684	5	38119	42479	MSD	W08GR03308	ICP-200.8 MS All possible meta
37684	5	38119	42479	SPK-RPD	W08GR03308	ICP-200.8 MS All possible meta
37684	7	38119	42479	MS	W08GR03334	ICP-200.8 MS All possible meta
37684	8	38119	42479	MSD	W08GR03334	ICP-200.8 MS All possible meta
37684	8	38119	42479	SPK-RPD	W08GR03334	ICP-200.8 MS All possible meta
37684	10	38119	42479	MS	W08GR03344	ICP-200.8 MS All possible meta
37684	11	38119	42479	MSD	W08GR03344	ICP-200.8 MS All possible meta
37684	11	38119	42479	SPK-RPD	W08GR03344	ICP-200.8 MS All possible meta
37684	31	38119	42479	SAMPLE	W08GR03390	ICP-200.8 MS All possible meta
37684	32	38119	42479	SAMPLE	W08GR03391	ICP-200.8 MS All possible meta
37684	33	38119	42479	SAMPLE	W08GR03392	ICP-200.8 MS All possible meta
37684	34	38119	42479	SAMPLE	W08GR03393	ICP-200.8 MS All possible meta
37684	35	38119	42479	SAMPLE	W08GR03394	ICP-200.8 MS All possible meta
37684	36	38119	42479	SAMPLE	W08GR03395	ICP-200.8 MS All possible meta
37684	37	38119	42479	SAMPLE	W08GR03396	ICP-200.8 MS All possible meta
37684	38	38119	42479	SAMPLE	W08GR03397	ICP-200.8 MS All possible meta
37684	39	38119	42479	SAMPLE	W08GR03398	ICP-200.8 MS All possible meta
37684	40	38119	42479	SAMPLE	W08GR03399	ICP-200.8 MS All possible meta
37698	3	38132	42485	BLANK		Ammonia (N) by IC
37698	18	38132	42485	BLANK		Ammonia (N) by IC
37698	1	38132	42485	LCS		Ammonia (N) by IC
37698	5	38132	42485	DUP	W08GR03390	Ammonia (N) by IC
37698	6	38132	42485	MS	W08GR03390	Ammonia (N) by IC
37698	7	38132	42485	MSD	W08GR03390	Ammonia (N) by IC
37698	4	38132	42485	SAMPLE	W08GR03390	Ammonia (N) by IC
37698	7	38132	42485	SPK-RPD	W08GR03390	Ammonia (N) by IC
37698	8	38132	42485	SAMPLE	W08GR03391	Ammonia (N) by IC
37698	9	38132	42485	SAMPLE	W08GR03392	Ammonia (N) by IC
37698	10	38132	42485	SAMPLE	W08GR03393	Ammonia (N) by IC
37698	11	38132	42485	SAMPLE	W08GR03394	Ammonia (N) by IC

37698	12	38132	42485	SAMPLE	W08GR03395	Ammonia (N) by IC
37698	13	38132	42485	SAMPLE	W08GR03396	Ammonia (N) by IC
37698	14	38132	42485	SAMPLE	W08GR03397	Ammonia (N) by IC
37698	15	38132	42485	SAMPLE	W08GR03398	Ammonia (N) by IC
37698	17	38132	42485	SAMPLE	W08GR03399	Ammonia (N) by IC
37907	1	38334	42841	BLANK		ICP Metals Analysis, Grd H20 P
37907	2	38334	42841	LCS		ICP Metals Analysis, Grd H20 P
37907	4	38334	42841	MS	W08GR03308	ICP Metals Analysis, Grd H20 P
37907	5	38334	42841	MSD	W08GR03308	ICP Metals Analysis, Grd H20 P
37907	5	38334	42841	SPK-RPD	W08GR03308	ICP Metals Analysis, Grd H20 P
37907	20	38334	42841	SAMPLE	W08GR03390	ICP Metals Analysis, Grd H20 P
37907	21	38334	42841	SAMPLE	W08GR03391	ICP Metals Analysis, Grd H20 P
37907	22	38334	42841	SAMPLE	W08GR03392	ICP Metals Analysis, Grd H20 P
37907	23	38334	42841	SAMPLE	W08GR03393	ICP Metals Analysis, Grd H20 P
37907	24	38334	42841	SAMPLE	W08GR03394	ICP Metals Analysis, Grd H20 P
37981	1	38335	42843	BLANK		ICP Metals Analysis, Grd H20 P
37981	2	38335	42843	LCS		ICP Metals Analysis, Grd H20 P
37981	4	38335	42843	MS	W08GR03395	ICP Metals Analysis, Grd H20 P
37981	5	38335	42843	MSD	W08GR03395	ICP Metals Analysis, Grd H20 P
37981	3	38335	42843	SAMPLE	W08GR03395	ICP Metals Analysis, Grd H20 P
37981	5	38335	42843	SPK-RPD	W08GR03395	ICP Metals Analysis, Grd H20 P
37981	6	38335	42843	SAMPLE	W08GR03396	ICP Metals Analysis, Grd H20 P
37981	7	38335	42843	SAMPLE	W08GR03397	ICP Metals Analysis, Grd H20 P
37981	8	38335	42843	SAMPLE	W08GR03398	ICP Metals Analysis, Grd H20 P
37981	9	38335	42843	SAMPLE	W08GR03399	ICP Metals Analysis, Grd H20 P

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-503-401	LA-503-401: ANALYSIS OF CATIONS BY ION CHROMATOGRAPHY	
	EPA-600/4-86-024 300.7	Dissolved Sodium, Ammonium, Potassium, and Calcium in Wet Deposition by Chemical
	HEIS 300.7_CATIONS_IC	Determination of Ammonium by Ion Chromatography
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-505-412	LA-505-412: DETERMINATION OF TRACE ELEMENTS IN WATERS AND WASTES BY INDUCTIVELY	
	EPA-600/R-94-111 200.8	DETERMINATION OF TRACE ELEMENTS IN WATERS AND WASTES BY INDUCTIVELY COUPLED PLAS
	HEIS 200.8_METALS_ICPMS	Inductively Coupled Plasma - Mass Spectrometry
	HEIS RADISOTOPES_ICPMS	Radioisotopes by ICP/MS
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.

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F08-155
Sample # W08GR03390
Client ID: B1WR00 TRENT WSCF
Matrix: WATER

Group #: WSCF20081775
Department: Inorganic
Sampled: 08/18/08
Received: 08/18/08

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	< 1.18	mg/L			51.00	1.2		08/18/08
Chloride	16887-00-6	LA-533-410	DU	< 2.39	mg/L			51.00	2.4		08/18/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.653	mg/L			51.00	0.65		08/18/08
Bromide	24959-67-9	LA-533-410	DU	< 2.32	mg/L			51.00	2.3		08/18/08
Nitrogen in Nitrate	NO3-N	LA-533-410	DU	< 0.617	mg/L			51.00	0.62		08/18/08
Phosphate (P) by IC	PO4-P	LA-533-410	DU	< 3.09	mg/L			51.00	3.1		08/18/08
Sulfate	14808-79-8	LA-533-410	DU	< 6.73	mg/L			51.00	6.7		08/18/08
ICP Metals Analysis, Grd H20 P Prep											**09/09/08**
ICP Metals Analysis, Grd H20 P											
Iron	7439-89-6	LA-505-411	D	3.21e+05	ug/L			10.00	2.5e+02		09/15/08
ICP-200.8 MS All possible meta Prep											**08/19/08**
ICP-200.8 MS All possible meta											
Manganese	7439-96-5	LA-505-412	X	912	ug/L			1.00	0.100		08/19/08
Nickel	7440-02-0	LA-505-412		18.7	ug/L			1.00	0.200		08/19/08
Cadmium	7440-43-9	LA-505-412	U	< 0.100	ug/L			1.00	0.100		08/19/08
Chromium	7440-47-3	LA-505-412		63.5	ug/L			1.00	0.500		08/19/08
Copper	7440-50-8	LA-505-412		2.48	ug/L			1.00	0.100		08/19/08
Zinc	7440-66-6	LA-505-412	X	104	ug/L			1.00	0.800		08/19/08
Lead	7439-92-1	LA-505-412		1.88	ug/L			1.00	0.100		08/19/08
Molybdenum	7439-98-7	LA-505-412		3.78	ug/L			1.00	0.0500		08/19/08
Arsenic	7440-38-2	LA-505-412		2.51	ug/L			1.00	0.400		08/19/08
Nitrogen in ammonium											
Nitrogen in ammonium	NH4-N	LA-503-401	BD	0.693	mg/L			51.00	0.48		08/19/08

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
U - Analyzed for but not detected above limiting criteria(inorg)
X - Other flags/notes described in the comments/narrative(inorg)

C - The Analyte was found in the Associated Blank.(inorg)
D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria.

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F08-155
Sample # W08GR03391
Client ID: B1WR06 TRENT WSCF

Matrix: WATER

Group #: WSCF20081775
Department: Inorganic
Sampled: 08/16/08
Received: 08/18/08

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	< 1.18	mg/L			51.00	1.2		08/18/08
Chloride	16887-00-6	LA-533-410	DU	< 2.39	mg/L			51.00	2.4		08/18/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.653	mg/L			51.00	0.65		08/18/08
Bromide	24959-67-9	LA-533-410	DU	< 2.32	mg/L			51.00	2.3		08/18/08
Nitrogen in Nitrate	NO3-N	LA-533-410	DU	< 0.617	mg/L			51.00	0.62		08/18/08
Phosphate (P) by IC	PO4-P	LA-533-410	DU	< 3.09	mg/L			51.00	3.1		08/18/08
Sulfate	14808-79-8	LA-533-410	DU	< 6.73	mg/L			51.00	6.7		08/18/08
ICP Metals Analysis, Grd H20 P Prep											**09/09/08**
ICP Metals Analysis, Grd H20 P											
Iron	7439-89-6	LA-505-411		7.99e+03	ug/L			1.00	25		09/11/08
ICP-200.8 MS All possible meta Prep											**08/19/08**
ICP-200.8 MS All possible meta											
Manganese	7439-96-5	LA-505-412	X	41.2	ug/L			1.00	0.100		08/19/08
Nickel	7440-02-0	LA-505-412	C	2.68	ug/L			1.00	0.200		08/19/08
Cadmium	7440-43-9	LA-505-412		0.360	ug/L			1.00	0.100		08/19/08
Chromium	7440-47-3	LA-505-412		25.5	ug/L			1.00	0.500		08/19/08
Copper	7440-50-8	LA-505-412		12.8	ug/L			1.00	0.100		08/19/08
Zinc	7440-66-6	LA-505-412	CX	10.7	ug/L			1.00	0.800		08/19/08
Lead	7439-92-1	LA-505-412		18.2	ug/L			1.00	0.100		08/19/08
Molybdenum	7439-98-7	LA-505-412		7.85	ug/L			1.00	0.0500		08/19/08
Arsenic	7440-38-2	LA-505-412		5.44	ug/L			1.00	0.400		08/19/08
Nitrogen in ammonium											
Nitrogen in ammonium	NH4-N	LA-503-401	DU	< 0.475	mg/L			51.00	0.48		08/19/08

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
U - Analyzed for but not detected above limiting criteria(inorg)
X - Other flags/notes described in the comments/narrative(inorg)

C - The Analyte was found in the Associated Blank.(inorg)
D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria.

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F08-155
Sample # W08GR03392
Client ID: B1WR07 TRENT WSCF
Matrix: WATER

Group #: WSCF20081775
Department: Inorganic
Sampled: 08/18/08
Received: 08/18/08

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	< 1.18	mg/L			51.00	1.2		08/18/08
Chloride	16887-00-6	LA-533-410	DU	< 2.39	mg/L			51.00	2.4		08/18/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.653	mg/L			51.00	0.65		08/18/08
Bromide	24959-67-9	LA-533-410	DU	< 2.32	mg/L			51.00	2.3		08/18/08
Nitrogen in Nitrate	NO3-N	LA-533-410	DU	< 0.617	mg/L			51.00	0.62		08/18/08
Phosphate (P) by IC	PO4-P	LA-533-410	DU	< 3.09	mg/L			51.00	3.1		08/18/08
Sulfate	14808-79-8	LA-533-410	DU	< 6.73	mg/L			51.00	6.7		08/18/08
ICP Metals Analysis, Grd H20 P Prep											**09/09/08**
ICP Metals Analysis, Grd H20 P											
Iron	7439-89-6	LA-505-411		8.20e+03	ug/L			1.00	25		09/11/08
ICP-200.8 MS All possible meta Prep											**08/19/08**
ICP-200.8 MS All possible meta											
Manganese	7439-96-5	LA-505-412	X	37.0	ug/L			1.00	0.100		08/19/08
Nickel	7440-02-0	LA-505-412	C	2.54	ug/L			1.00	0.200		08/19/08
Cadmium	7440-43-9	LA-505-412		0.370	ug/L			1.00	0.100		08/19/08
Chromium	7440-47-3	LA-505-412		25.6	ug/L			1.00	0.500		08/19/08
Copper	7440-50-8	LA-505-412		16.4	ug/L			1.00	0.100		08/19/08
Zinc	7440-66-6	LA-505-412	CX	10.3	ug/L			1.00	0.800		08/19/08
Lead	7439-92-1	LA-505-412		18.9	ug/L			1.00	0.100		08/19/08
Molybdenum	7439-98-7	LA-505-412		8.53	ug/L			1.00	0.0500		08/19/08
Arsenic	7440-38-2	LA-505-412		5.82	ug/L			1.00	0.400		08/19/08
Nitrogen in ammonium											
Nitrogen in ammonium	NH4-N	LA-503-401	DU	< 0.475	mg/L			51.00	0.48		08/19/08

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
U - Analyzed for but not detected above limiting criteria(inorg)
X - Other flags/notes described in the comments/narrative(inorg)

C - The Analyte was found in the Associated Blank.(inorg)
D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria.

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F08-155
Sample # W08GR03393
Client ID: B1WR21 TRENT WSCF
Matrix: WATER

Group #: WSCF20081775
Department: Inorganic
Sampled: 08/16/08
Received: 08/18/08

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	< 1.18	mg/L			51.00	1.2		08/18/08
Chloride	16887-00-6	LA-533-410	DU	< 2.39	mg/L			51.00	2.4		08/18/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.653	mg/L			51.00	0.65		08/18/08
Bromide	24959-67-9	LA-533-410	DU	< 2.32	mg/L			51.00	2.3		08/18/08
Nitrogen in Nitrate	NO3-N	LA-533-410	DU	< 0.617	mg/L			51.00	0.62		08/18/08
Phosphate (P) by IC	PO4-P	LA-533-410	DU	< 3.09	mg/L			51.00	3.1		08/18/08
Sulfate	14808-79-8	LA-533-410	DU	< 6.73	mg/L			51.00	6.7		08/18/08
ICP Metals Analysis, Grd H20 P Prep											**09/09/08**
ICP Metals Analysis, Grd H20 P											
Iron	7439-89-6	LA-505-411		1.18e+03	ug/L			1.00	25		09/11/08
ICP-200.8 MS All possible meta Prep											**08/19/08**
ICP-200.8 MS All possible meta											
Manganese	7439-96-5	LA-505-412	X	14.4	ug/L			1.00	0.100		08/19/08
Nickel	7440-02-0	LA-505-412	C	2.75	ug/L			1.00	0.200		08/19/08
Cadmium	7440-43-9	LA-505-412	U	< 0.100	ug/L			1.00	0.100		08/19/08
Chromium	7440-47-3	LA-505-412		81.8	ug/L			1.00	0.500		08/19/08
Copper	7440-50-8	LA-505-412		2.59	ug/L			1.00	0.100		08/19/08
Zinc	7440-66-6	LA-505-412	CX	1.37	ug/L			1.00	0.800		08/19/08
Lead	7439-92-1	LA-505-412		2.27	ug/L			1.00	0.100		08/19/08
Molybdenum	7439-98-7	LA-505-412		3.90	ug/L			1.00	0.0500		08/19/08
Arsenic	7440-38-2	LA-505-412		1.82	ug/L			1.00	0.400		08/19/08
Nitrogen in ammonium											
Nitrogen in ammonium	NH4-N	LA-503-401	DU	< 0.475	mg/L			51.00	0.48		08/19/08

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
U - Analyzed for but not detected above limiting criteria(inorg)
X - Other flags/notes described in the comments/narrative(inorg)

C - The Analyte was found in the Associated Blank.(inorg)
D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria.

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F08-155
Sample # W08GR03394
Client ID: B1WR22 TRENT WSCF
Matrix: WATER
Group #: WSCF20081775
Department: Inorganic
Sampled: 08/18/08
Received: 08/18/08

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	< 1.18	mg/L			51.00	1.2		08/18/08
Chloride	16887-00-6	LA-533-410	BD	16.2	mg/L			51.00	2.4		08/18/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.653	mg/L			51.00	0.65		08/18/08
Bromide	24959-67-9	LA-533-410	DU	< 2.32	mg/L			51.00	2.3		08/18/08
Nitrogen in Nitrate	NO3-N	LA-533-410	D	7.72	mg/L			51.00	0.62		08/18/08
Phosphate (P) by IC	PO4-P	LA-533-410	DU	< 3.09	mg/L			51.00	3.1		08/18/08
Sulfate	14808-79-8	LA-533-410	D	97.1	mg/L			51.00	6.7		08/18/08
ICP Metals Analysis, Grd H20 P Prep											**09/09/08**
ICP Metals Analysis, Grd H20 P											
Iron	7439-89-6	LA-505-411		866	ug/L			1.00	25		09/11/08
ICP-200.8 MS All possible meta Prep											**08/19/08**
ICP-200.8 MS All possible meta											
Manganese	7439-96-5	LA-505-412	X	5.84	ug/L			1.00	0.100		08/19/08
Nickel	7440-02-0	LA-505-412	C	2.84	ug/L			1.00	0.200		08/19/08
Cadmium	7440-43-9	LA-505-412	U	< 0.100	ug/L			1.00	0.100		08/19/08
Chromium	7440-47-3	LA-505-412		84.3	ug/L			1.00	0.500		08/19/08
Copper	7440-50-8	LA-505-412		2.18	ug/L			1.00	0.100		08/19/08
Zinc	7440-66-6	LA-505-412	CX	1.20	ug/L			1.00	0.800		08/19/08
Lead	7439-92-1	LA-505-412		1.74	ug/L			1.00	0.100		08/19/08
Molybdenum	7439-98-7	LA-505-412		3.64	ug/L			1.00	0.0500		08/19/08
Arsenic	7440-38-2	LA-505-412		1.67	ug/L			1.00	0.400		08/19/08
Nitrogen in ammonium											
Nitrogen in ammonium	NH4-N	LA-503-401	DU	< 0.475	mg/L			51.00	0.48		08/19/08

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
U - Analyzed for but not detected above limiting criteria(inorg)
X - Other flags/notes described in the comments/narrative(inorg)

C - The Analyte was found in the Associated Blank.(inorg)
D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria.

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F08-155
Sample # W08GR03395
Client ID: B1WPX4 TRENT WSCF

Matrix: WATER

Group #: WSCF20081775
Department: Inorganic
Sampled: 08/16/08
Received: 08/18/08

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	< 1.18	mg/L			51.00	1.2		08/18/08
Chloride	16887-00-6	LA-533-410	BD	3.12	mg/L			51.00	2.4		08/18/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.653	mg/L			51.00	0.65		08/18/08
Bromide	24959-67-9	LA-533-410	DU	< 2.32	mg/L			51.00	2.3		08/18/08
Nitrogen in Nitrate	NO3-N	LA-533-410	DU	< 0.617	mg/L			51.00	0.62		08/18/08
Phosphate (P) by IC	PO4-P	LA-533-410	DU	< 3.09	mg/L			51.00	3.1		08/18/08
Sulfate	14808-79-8	LA-533-410	BD	10.2	mg/L			51.00	6.7		08/18/08
ICP Metals Analysis, Grd H20 P Prep											**09/09/08**
ICP Metals Analysis, Grd H20 P											
Iron	7439-89-6	LA-505-411	D	6.84e+05	ug/L			10.00	2.5e+02		09/11/08
ICP-200.8 MS All possible meta Prep											**08/19/08**
ICP-200.8 MS All possible meta											
Manganese	7439-96-5	LA-505-412	X	1.53e+03	ug/L			1.00	0.100		08/19/08
Nickel	7440-02-0	LA-505-412	C	2.17	ug/L			1.00	0.200		08/19/08
Cadmium	7440-43-9	LA-505-412	U	< 0.100	ug/L			1.00	0.100		08/19/08
Chromium	7440-47-3	LA-505-412		120	ug/L			1.00	0.500		08/19/08
Copper	7440-50-8	LA-505-412		0.870	ug/L			1.00	0.100		08/19/08
Zinc	7440-66-6	LA-505-412	X	212	ug/L			1.00	0.800		08/19/08
Lead	7439-92-1	LA-505-412		0.620	ug/L			1.00	0.100		08/19/08
Molybdenum	7439-98-7	LA-505-412		5.35	ug/L			1.00	0.0500		08/19/08
Arsenic	7440-38-2	LA-505-412		1.69	ug/L			1.00	0.400		08/19/08
Nitrogen in ammonium											
Nitrogen in ammonium	NH4-N	LA-503-401	BD	0.647	mg/L			51.00	0.48		08/19/08

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
U - Analyzed for but not detected above limiting criteria(inorg)
X - Other flags/notes described in the comments/narrative(inorg)

C - The Analyte was found in the Associated Blank.(inorg)
D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria.

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F08-155
Sample # W08GR03396
Client ID: B1WPX5 TRENT WSCF

Matrix: WATER

Group #: WSCF20081775
Department: Inorganic
Sampled: 08/17/08
Received: 08/18/08

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	< 1.18	mg/L			51.00	1.2		08/18/08
Chloride	16887-00-6	LA-533-410	BD	2.48	mg/L			51.00	2.4		08/18/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.653	mg/L			51.00	0.65		08/18/08
Bromide	24959-67-9	LA-533-410	DU	< 2.32	mg/L			51.00	2.3		08/18/08
Nitrogen in Nitrate	NO3-N	LA-533-410	DU	< 0.617	mg/L			51.00	0.62		08/18/08
Phosphate (P) by IC	PO4-P	LA-533-410	DU	< 3.09	mg/L			51.00	3.1		08/18/08
Sulfate	14808-79-8	LA-533-410	BD	9.95	mg/L			51.00	6.7		08/18/08
ICP Metals Analysis, Grd H20 P Prep											**09/09/08**
ICP Metals Analysis, Grd H20 P											
Iron	7439-89-6	LA-505-411	D	3.06e+05	ug/L			10.00	2.5e+02		09/15/08
ICP-200.8 MS All possible meta Prep											**08/19/08**
ICP-200.8 MS All possible meta											
Manganese	7439-96-5	LA-505-412	X	790	ug/L			1.00	0.100		08/19/08
Nickel	7440-02-0	LA-505-412		18.3	ug/L			1.00	0.200		08/19/08
Cadmium	7440-43-9	LA-505-412	U	< 0.100	ug/L			1.00	0.100		08/19/08
Chromium	7440-47-3	LA-505-412		50.6	ug/L			1.00	0.500		08/19/08
Copper	7440-50-8	LA-505-412		1.57	ug/L			1.00	0.100		08/19/08
Zinc	7440-66-6	LA-505-412	X	141	ug/L			1.00	0.800		08/19/08
Lead	7439-92-1	LA-505-412		2.62	ug/L			1.00	0.100		08/19/08
Molybdenum	7439-98-7	LA-505-412		2.05	ug/L			1.00	0.0500		08/19/08
Arsenic	7440-38-2	LA-505-412		1.67	ug/L			1.00	0.400		08/19/08
Nitrogen in ammonium											
Nitrogen in ammonium	NH4-N	LA-503-401	BD	0.818	mg/L			51.00	0.48		08/19/08

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
U - Analyzed for but not detected above limiting criteria(inorg)
X - Other flags/notes described in the comments/narrative(inorg)

C - The Analyte was found in the Associated Blank.(inorg)
D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria.

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F08-155
Sample # W08GR03397
Client ID: B1WPX6 TRENT WSCF

Matrix: WATER

Group #: WSCF20081775
Department: Inorganic
Sampled: 08/18/08
Received: 08/18/08

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	< 1.18	mg/L			51.00	1.2		08/18/08
Chloride	16887-00-6	LA-533-410	BD	3.42	mg/L			51.00	2.4		08/18/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.653	mg/L			51.00	0.65		08/18/08
Bromide	24959-67-9	LA-533-410	DU	< 2.32	mg/L			51.00	2.3		08/18/08
Nitrogen in Nitrate	NO3-N	LA-533-410	DU	< 0.617	mg/L			51.00	0.62		08/18/08
Phosphate (P) by IC	PO4-P	LA-533-410	DU	< 3.09	mg/L			51.00	3.1		08/18/08
Sulfate	14808-79-8	LA-533-410	BD	11.7	mg/L			51.00	6.7		08/18/08
ICP Metals Analysis, Grd H20 P Prep											**09/09/08**
ICP Metals Analysis, Grd H20 P											
Iron	7439-89-6	LA-505-411	D	3.76e+05	ug/L			10.00	2.5e+02		09/11/08
ICP-200.8 MS All possible meta Prep											**08/19/08**
ICP-200.8 MS All possible meta											
Manganese	7439-96-5	LA-505-412	X	1.16e+03	ug/L			1.00	0.100		08/19/08
Nickel	7440-02-0	LA-505-412		28.5	ug/L			1.00	0.200		08/19/08
Cadmium	7440-43-9	LA-505-412	U	< 0.100	ug/L			1.00	0.100		08/19/08
Chromium	7440-47-3	LA-505-412		62.8	ug/L			1.00	0.500		08/19/08
Copper	7440-50-8	LA-505-412		1.41	ug/L			1.00	0.100		08/19/08
Zinc	7440-66-6	LA-505-412	X	222	ug/L			1.00	0.800		08/19/08
Lead	7439-92-1	LA-505-412		2.78	ug/L			1.00	0.100		08/19/08
Molybdenum	7439-98-7	LA-505-412		2.43	ug/L			1.00	0.0500		08/19/08
Arsenic	7440-38-2	LA-505-412		1.85	ug/L			1.00	0.400		08/19/08
Nitrogen in ammonium											
Nitrogen in ammonium	NH4-N	LA-503-401	BD	0.777	mg/L			51.00	0.48		08/19/08

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
U - Analyzed for but not detected above limiting criteria(inorg)
X - Other flags/notes described in the comments/narrative(inorg)

C - The Analyte was found in the Associated Blank.(inorg)
D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria.

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F08-155
Sample # W08GR03398
Client ID: B1WPY8 TRENT WSCF
Matrix: WATER
Group #: WSCF20081775
Department: Inorganic
Sampled: 08/16/08
Received: 08/18/08

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	< 1.18	mg/L			51.00	1.2		08/18/08
Chloride	16887-00-6	LA-533-410	BD	3.16	mg/L			51.00	2.4		08/18/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.653	mg/L			51.00	0.65		08/18/08
Bromide	24959-67-9	LA-533-410	DU	< 2.32	mg/L			51.00	2.3		08/18/08
Nitrogen in Nitrate	NO3-N	LA-533-410	DU	< 0.617	mg/L			51.00	0.62		08/18/08
Phosphate (P) by IC	PO4-P	LA-533-410	DU	< 3.09	mg/L			51.00	3.1		08/18/08
Sulfate	14808-79-8	LA-533-410	BD	13.0	mg/L			51.00	6.7		08/18/08
ICP Metals Analysis, Grd H20 P Prep											**09/09/08**
ICP Metals Analysis, Grd H20 P											
Iron	7439-89-6	LA-505-411	D	3.19e+05	ug/L			10.00	2.5e+02		09/11/08
ICP-200.8 MS All possible meta Prep											**08/19/08**
ICP-200.8 MS All possible meta											
Manganese	7439-96-5	LA-505-412	X	1.09e+03	ug/L			1.00	0.100		08/19/08
Nickel	7440-02-0	LA-505-412		23.0	ug/L			1.00	0.200		08/19/08
Cadmium	7440-43-9	LA-505-412	U	< 0.100	ug/L			1.00	0.100		08/19/08
Chromium	7440-47-3	LA-505-412		77.9	ug/L			1.00	0.500		08/19/08
Copper	7440-50-8	LA-505-412		3.12	ug/L			1.00	0.100		08/19/08
Zinc	7440-66-6	LA-505-412	X	183	ug/L			1.00	0.800		08/19/08
Lead	7439-92-1	LA-505-412		2.69	ug/L			1.00	0.100		08/19/08
Molybdenum	7439-98-7	LA-505-412		3.80	ug/L			1.00	0.0500		08/19/08
Arsenic	7440-38-2	LA-505-412		3.30	ug/L			1.00	0.400		08/19/08
Nitrogen in ammonium											
Nitrogen in ammonium	NH4-N	LA-503-401	BD	0.790	mg/L			51.00	0.48		08/19/08

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
U - Analyzed for but not detected above limiting criteria(inorg)
X - Other flags/notes described in the comments/narrative(inorg)

C - The Analyte was found in the Associated Blank.(inorg)
D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria.

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F08-155
Sample # W08GR03399
Client ID: B1WPY9 TRENT WSCF

Matrix: WATER

Group #: WSCF20081775
Department: Inorganic
Sampled: 08/17/08
Received: 08/18/08

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	< 1.18	mg/L			51.00	1.2		08/18/08
Chloride	16887-00-6	LA-533-410	BD	2.70	mg/L			51.00	2.4		08/18/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.653	mg/L			51.00	0.65		08/18/08
Bromide	24959-67-9	LA-533-410	DU	< 2.32	mg/L			51.00	2.3		08/18/08
Nitrogen in Nitrate	NO3-N	LA-533-410	DU	< 0.617	mg/L			51.00	0.62		08/18/08
Phosphate (P) by IC	PO4-P	LA-533-410	DU	< 3.09	mg/L			51.00	3.1		08/18/08
Sulfate	14808-79-8	LA-533-410	BD	14.7	mg/L			51.00	6.7		08/18/08
ICP Metals Analysis, Grd H20 P Prep											**09/09/08**
ICP Metals Analysis, Grd H20 P											
Iron	7439-89-6	LA-505-411	D	3.62e+05	ug/L			10.00	2.5e+02		09/15/08
ICP-200.8 MS All possible meta Prep											**08/19/08**
ICP-200.8 MS All possible meta											
Manganese	7439-96-5	LA-505-412	X	1.09e+03	ug/L			1.00	0.100		08/19/08
Nickel	7440-02-0	LA-505-412		24.2	ug/L			1.00	0.200		08/19/08
Cadmium	7440-43-9	LA-505-412	U	< 0.100	ug/L			1.00	0.100		08/19/08
Chromium	7440-47-3	LA-505-412		95.1	ug/L			1.00	0.500		08/19/08
Copper	7440-50-8	LA-505-412		3.99	ug/L			1.00	0.100		08/19/08
Zinc	7440-66-6	LA-505-412	X	239	ug/L			1.00	0.800		08/19/08
Lead	7439-92-1	LA-505-412		2.51	ug/L			1.00	0.100		08/19/08
Molybdenum	7439-98-7	LA-505-412		4.65	ug/L			1.00	0.0500		08/19/08
Arsenic	7440-38-2	LA-505-412		3.04	ug/L			1.00	0.400		08/19/08
Nitrogen in ammonium											
Nitrogen in ammonium	NH4-N	LA-503-401	DU	< 0.475	mg/L			51.00	0.48		08/19/08

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
U - Analyzed for but not detected above limiting criteria(inorg)
X - Other flags/notes described in the comments/narrative(inorg)

C - The Analyte was found in the Associated Blank.(inorg)
D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria.

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

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081775
Matrix: WATER
Test: Ammonia (N) by IC

Sample Date: 08/18/08
Receive Date:08/18/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR03390											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Ammonia (N) by IC	7664-41-7	0.715		RPD			3.125	20.000		08/19/08
MS	Ammonia (N) by IC	7664-41-7	0.501116	100.626	% Recov	80.000	120.000				08/19/08
MSD	Ammonia (N) by IC	7664-41-7	0.502373	100.878	% Recov	80.000	120.000				08/19/08
SPK-RPD	Ammonia (N) by IC	7664-41-7	100.878		RPD			0.250	20.000		08/19/08
BATCH QC											
BLANK	Ammonia (N) by IC	7664-41-7	<9.32e-3	n/a	mg/L	0.000	0.002			U	08/19/08
BLANK	Ammonia (N) by IC	7664-41-7	<9.32e-3	n/a	mg/L	0.000	0.002			U	08/19/08
LCS	Ammonia (N) by IC	7664-41-7	98.3006	98.301	% Recov	80.000	120.000				08/19/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081775
Matrix: WATER
Test: Anions by Ion Chromatography

Sample Date: 08/18/08
Receive Date:08/18/08

Lab ID: W08GR03394
BATCH QC ASSOCIATED WITH SAMPLE

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
DUP	Bromide	24959-67-9	<2.3205		RPD			n/a	20.000	U	08/18/08
DUP	Chloride	16887-00-6	16.5316		RPD			2.238	20.000		08/18/08
DUP	Fluoride	16984-48-8	<1.1832		RPD			n/a	20.000	U	08/18/08
DUP	Nitrogen in Nitrite	NO2-N	<0.6528		RPD			n/a	20.000	U	08/18/08
DUP	Nitrogen in Nitrate	NO3-N	7.5319		RPD			2.513	20.000		08/18/08
DUP	Phosphate (P) by IC	PO4-P	<3.0906		RPD			n/a	20.000	U	08/18/08
DUP	Sulfate	14808-79-8	98.5771		RPD			1.461	20.000		08/18/08
MS	Bromide	24959-67-9	1.872984	93.649	% Recov	80.000	120.000				08/18/08
MS	Chloride	16887-00-6	0.863527	86.787	% Recov	80.000	120.000				08/18/08
MS	Fluoride	16984-48-8	0.462659	93.846	% Recov	80.000	120.000				08/18/08
MS	Nitrogen in Nitrite	NO2-N	0.4538	92.236	% Recov	80.000	120.000				08/18/08
MS	Nitrogen in Nitrate	NO3-N	0.43009	96.433	% Recov	80.000	120.000				08/18/08
MS	Phosphate (P) by IC	PO4-P	0.882718	92.238	% Recov	80.000	120.000				08/18/08
MS	Sulfate	14808-79-8	1.859612	94.878	% Recov	80.000	120.000				08/18/08
MSD	Bromide	24959-67-9	1.923351	96.168	% Recov	80.000	120.000				08/18/08
MSD	Chloride	16887-00-6	0.89571	90.021	% Recov	80.000	120.000				08/18/08
MSD	Fluoride	16984-48-8	0.468824	95.096	% Recov	80.000	120.000				08/18/08
MSD	Nitrogen in Nitrite	NO2-N	0.469478	95.422	% Recov	80.000	120.000				08/18/08
MSD	Nitrogen in Nitrate	NO3-N	0.440469	98.760	% Recov	80.000	120.000				08/18/08
MSD	Phosphate (P) by IC	PO4-P	0.890271	93.027	% Recov	80.000	120.000				08/18/08
MSD	Sulfate	14808-79-8	1.855739	94.681	% Recov	80.000	120.000				08/18/08
SPK-RPD	Bromide	24959-67-9	96.168		RPD			2.654	20.000		08/18/08
SPK-RPD	Chloride	16887-00-6	90.021		RPD			3.658	20.000		08/18/08
SPK-RPD	Fluoride	16984-48-8	95.096		RPD			1.323	20.000		08/18/08
SPK-RPD	Nitrogen in Nitrite	NO2-N	95.422		RPD			3.396	20.000		08/18/08
SPK-RPD	Nitrogen in Nitrate	NO3-N	98.760		RPD			2.384	20.000		08/18/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081775
Matrix: WATER
Test: Anions by Ion Chromatography

Sample Date: 08/18/08
Receive Date:08/18/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
SPK-RPD	Phosphate (P) by IC	PO4-P	93.027		RPD			0.852	20.000		08/18/08
SPK-RPD	Sulfate	14808-79-8	94.681		RPD			0.208	20.000		08/18/08
BATCH QC											
BLANK	Bromide	24959-67-9	<4.55e-2	n/a	mg/L	0.000	0.100			U	08/18/08
BLANK	Bromide	24959-67-9	<4.55e-2	n/a	mg/L	0.000	0.100			U	08/18/08
BLANK	Chloride	16887-00-6	<4.69e-2	n/a	mg/L	0.000	0.030			U	08/18/08
BLANK	Chloride	16887-00-6	<4.69e-2	n/a	mg/L	0.000	0.030			U	08/18/08
BLANK	Fluoride	16984-48-8	<2.32e-2	n/a	mg/L	0.000	0.030			U	08/18/08
BLANK	Fluoride	16984-48-8	<2.32e-2	n/a	mg/L	0.000	0.030			U	08/18/08
BLANK	Nitrogen in Nitrite	NO2-N	<1.28e-2	n/a	mg/L	0.000	0.020			U	08/18/08
BLANK	Nitrogen in Nitrite	NO2-N	<1.28e-2	n/a	mg/L	0.000	0.020			U	08/18/08
BLANK	Nitrogen in Nitrate	NO3-N	<1.21e-2	n/a	mg/L	0.000	0.040			U	08/18/08
BLANK	Nitrogen in Nitrate	NO3-N	<1.21e-2	n/a	mg/L	0.000	0.040			U	08/18/08
BLANK	Phosphate (P) by IC	PO4-P	<6.06e-2	n/a	mg/L	0.000	0.200			U	08/18/08
BLANK	Phosphate (P) by IC	PO4-P	<6.06e-2	n/a	mg/L	0.000	0.200			U	08/18/08
BLANK	Sulfate	14808-79-8	<0.132	n/a	mg/L	0.000	0.200			U	08/18/08
BLANK	Sulfate	14808-79-8	<0.132	n/a	mg/L	0.000	0.200			U	08/18/08
LCS	Bromide	24959-67-9	405.5736	100.639	% Recov	80.000	120.000				08/18/08
LCS	Chloride	16887-00-6	195.9656	97.495	% Recov	80.000	120.000				08/18/08
LCS	Fluoride	16984-48-8	109.3491	109.788	% Recov	80.000	120.000				08/18/08
LCS	Nitrogen in Nitrite	NO2-N	100.3673	100.973	% Recov	80.000	120.000				08/18/08
LCS	Nitrogen in Nitrate	NO3-N	92.9514	103.165	% Recov	80.000	120.000				08/18/08
LCS	Phosphate (P) by IC	PO4-P	197.1227	101.925	% Recov	80.000	120.000				08/18/08
LCS	Sulfate	14808-79-8	383.3061	96.794	% Recov	80.000	120.000				08/18/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081775
Matrix: WATER
Test: ICP Metals Analysis, Grd H20 P

Sample Date: 08/10/08
Receive Date:08/11/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit		RQ	Analysis Date
Lab ID: W08GR03308												
BATCH QC ASSOCIATED WITH SAMPLE												
MS	Iron	7439-89-6	-109100	-10910.000	% Recov	75.000	125.000			*		09/11/08
MSD	Iron	7439-89-6	-110200	-11020.000	% Recov	75.000	125.000			*		09/11/08
SPK-RPD	Iron	7439-89-6	-11020.000		RPD			-1.003	20.000	*		09/11/08
BATCH QC												
BLANK	Iron	7439-89-6	<25	n/a	ug/L						U	09/11/08
LCS	Iron	7439-89-6	1031	103.100	% Recov	80.000	120.000					09/11/08
Lab ID: W08GR03395												
BATCH QC ASSOCIATED WITH SAMPLE												
MS	Iron	7439-89-6	-195800	-19580.000	% Recov	75.000	125.000			*		09/11/08
MSD	Iron	7439-89-6	-191000	-19100.000	% Recov	75.000	125.000			*		09/11/08
SPK-RPD	Iron	7439-89-6	-19100.000		RPD			-2.482	20.000	*		09/11/08
BATCH QC												
BLANK	Iron	7439-89-6	<25	n/a	ug/L						U	09/11/08
LCS	Iron	7439-89-6	1002	100.200	% Recov	80.000	120.000					09/11/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081775
Matrix: WATER
Test: ICP-200.8 MS All possible meta

Sample Date: 08/10/08
Receive Date:08/11/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR03308											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Arsenic	7440-38-2	36.4	91.000	% Recov	70.000	130.000				08/19/08
MS	Cadmium	7440-43-9	35.06	87.650	% Recov	70.000	130.000				08/19/08
MS	Chromium	7440-47-3	31.5	78.750	% Recov	70.000	130.000				08/19/08
MS	Copper	7440-50-8	31.84	79.600	% Recov	70.000	130.000				08/19/08
MS	Manganese	7439-96-5	14	35.000	% Recov	70.000	130.000			•	08/19/08
MS	Molybdenum	7439-98-7	37.36	93.400	% Recov	70.000	130.000				08/19/08
MS	Nickel	7440-02-0	32.74	81.850	% Recov	70.000	130.000				08/19/08
MS	Lead	7439-92-1	39.86	99.650	% Recov	70.000	130.000				08/19/08
MS	Zinc	7440-66-6	117.2	293.000	% Recov	70.000	130.000			•	08/19/08
MSD	Arsenic	7440-38-2	35.66	89.150	% Recov	70.000	130.000				08/19/08
MSD	Cadmium	7440-43-9	34.16	85.400	% Recov	70.000	130.000				08/19/08
MSD	Chromium	7440-47-3	30	75.000	% Recov	70.000	130.000				08/19/08
MSD	Copper	7440-50-8	30.88	77.200	% Recov	70.000	130.000				08/19/08
MSD	Manganese	7439-96-5	-22	-55.000	% Recov	70.000	130.000			•	08/19/08
MSD	Molybdenum	7439-98-7	37.42	93.550	% Recov	70.000	130.000				08/19/08
MSD	Nickel	7440-02-0	32.03	80.075	% Recov	70.000	130.000				08/19/08
MSD	Lead	7439-92-1	38.9	97.250	% Recov	70.000	130.000				08/19/08
MSD	Zinc	7440-66-6	117.9	294.750	% Recov	70.000	130.000			•	08/19/08
SPK-RPD	Arsenic	7440-38-2	89.150		RPD			2.054	20.000		08/19/08
SPK-RPD	Cadmium	7440-43-9	85.400		RPD			2.600	20.000		08/19/08
SPK-RPD	Chromium	7440-47-3	75.000		RPD			4.878	20.000		08/19/08
SPK-RPD	Copper	7440-50-8	77.200		RPD			3.061	20.000		08/19/08
SPK-RPD	Manganese	7439-96-5	-55.000		RPD			-900.000	20.000	•	08/19/08
SPK-RPD	Molybdenum	7439-98-7	93.550		RPD			0.160	20.000		08/19/08
SPK-RPD	Nickel	7440-02-0	80.075		RPD			2.192	20.000		08/19/08
SPK-RPD	Lead	7439-92-1	97.250		RPD			2.438	20.000		08/19/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081775
Matrix: WATER
Test: ICP-200.8 MS All possible meta

Sample Date: 08/10/08
Receive Date:08/11/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
SPK-RPD	Zinc	7440-66-6	294.750		RPD			0.595	20.000		08/19/08
Lab ID: W08GR03334											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Cadmium	7440-43-9	36.22	90.550	% Recov	70.000	130.000				08/19/08
MS	Chromium	7440-47-3	36.3	90.750	% Recov	70.000	130.000				08/19/08
MS	Copper	7440-50-8	37.08	92.700	% Recov	70.000	130.000				08/19/08
MS	Manganese	7439-96-5	35.02	87.550	% Recov	70.000	130.000				08/19/08
MS	Nickel	7440-02-0	37.42	93.550	% Recov	70.000	130.000				08/19/08
MS	Lead	7439-92-1	38.68	96.700	% Recov	70.000	130.000				08/19/08
MS	Zinc	7440-66-6	38.55	96.375	% Recov	70.000	130.000				08/19/08
MSD	Cadmium	7440-43-9	37.37	93.425	% Recov	70.000	130.000				08/19/08
MSD	Chromium	7440-47-3	38.43	96.075	% Recov	70.000	130.000				08/19/08
MSD	Copper	7440-50-8	38.49	96.225	% Recov	70.000	130.000				08/19/08
MSD	Manganese	7439-96-5	36.84	92.100	% Recov	70.000	130.000				08/19/08
MSD	Nickel	7440-02-0	38.98	97.450	% Recov	70.000	130.000				08/19/08
MSD	Lead	7439-92-1	38.55	96.375	% Recov	70.000	130.000				08/19/08
MSD	Zinc	7440-66-6	40.22	100.550	% Recov	70.000	130.000				08/19/08
SPK-RPD	Cadmium	7440-43-9	93.425		RPD			3.125	20.000		08/19/08
SPK-RPD	Chromium	7440-47-3	96.075		RPD			5.701	20.000		08/19/08
SPK-RPD	Copper	7440-50-8	96.225		RPD			3.732	20.000		08/19/08
SPK-RPD	Manganese	7439-96-5	92.100		RPD			5.065	20.000		08/19/08
SPK-RPD	Nickel	7440-02-0	97.450		RPD			4.084	20.000		08/19/08
SPK-RPD	Lead	7439-92-1	96.375		RPD			0.337	20.000		08/19/08
SPK-RPD	Zinc	7440-66-6	100.550		RPD			4.240	20.000		08/19/08
Lab ID: W08GR03344											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Arsenic	7440-38-2	35.13	87.825	% Recov	70.000	130.000				08/19/08
MS	Cadmium	7440-43-9	35.1	87.750	% Recov	70.000	130.000				08/19/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081775
Matrix: WATER
Test: ICP-200.8 MS All possible meta

Sample Date: 08/14/08
Receive Date:08/14/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
MS	Chromium	7440-47-3	38.9	97.250	% Recov	70.000	130.000				08/19/08
MS	Manganese	7439-96-5	44	110.000	% Recov	70.000	130.000				08/19/08
MS	Molybdenum	7439-98-7	38.73	96.825	% Recov	70.000	130.000				08/19/08
MS	Nickel	7440-02-0	33.9	84.750	% Recov	70.000	130.000				08/19/08
MS	Lead	7439-92-1	40.35	100.875	% Recov	70.000	130.000				08/19/08
MS	Zinc	7440-66-6	64.4	161.000	% Recov	70.000	130.000			•	08/19/08
MSD	Arsenic	7440-38-2	34.58	86.450	% Recov	70.000	130.000				08/19/08
MSD	Cadmium	7440-43-9	34.65	86.625	% Recov	70.000	130.000				08/19/08
MSD	Chromium	7440-47-3	30.5	76.250	% Recov	70.000	130.000				08/19/08
MSD	Manganese	7439-96-5	-6	-15.000	% Recov	70.000	130.000			•	08/19/08
MSD	Molybdenum	7439-98-7	38.62	96.550	% Recov	70.000	130.000				08/19/08
MSD	Nickel	7440-02-0	32.16	80.400	% Recov	70.000	130.000				08/19/08
MSD	Lead	7439-92-1	39.51	98.775	% Recov	70.000	130.000				08/19/08
MSD	Zinc	7440-66-6	44.8	112.000	% Recov	70.000	130.000				08/19/08
SPK-RPD	Arsenic	7440-38-2	86.450		RPD			1.578	20.000		08/19/08
SPK-RPD	Cadmium	7440-43-9	86.625		RPD			1.290	20.000		08/19/08
SPK-RPD	Chromium	7440-47-3	76.250		RPD			24.207	20.000 •		08/19/08
SPK-RPD	Manganese	7439-96-5	-15.000		RPD			263.158	20.000 •		08/19/08
SPK-RPD	Molybdenum	7439-98-7	96.550		RPD			0.284	20.000		08/19/08
SPK-RPD	Nickel	7440-02-0	80.400		RPD			5.268	20.000		08/19/08
SPK-RPD	Lead	7439-92-1	98.775		RPD			2.104	20.000		08/19/08
SPK-RPD	Zinc	7440-66-6	112.000		RPD			35.897	20.000 •		08/19/08
BATCH QC											
BLANK	Arsenic	7440-38-2	<0.4	n/a	ug/L					U	08/19/08
BLANK	Cadmium	7440-43-9	<0.1	n/a	ug/L					U	08/19/08
BLANK	Chromium	7440-47-3	<0.5	n/a	ug/L					U	08/19/08
BLANK	Copper	7440-50-8	<0.1	n/a	ug/L					U	08/19/08
BLANK	Manganese	7439-96-5	<0.1	n/a	ug/L					U	08/19/08
BLANK	Molybdenum	7439-98-7	< 5e-2	n/a	ug/L					U	08/19/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081775
Matrix: WATER
Test: ICP-200.8 MS All possible meta

Sample Date:
Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
BLANK	Nickel	7440-02-0	0.34	0.340	ug/L						08/19/08
BLANK	Lead	7439-92-1	<0.1	n/a	ug/L					U	08/19/08
BLANK	Zinc	7440-66-6	1.14	1.140	ug/L						08/19/08
LCS	Arsenic	7440-38-2	36.39	90.975	% Recov	85.000	115.000				08/19/08
LCS	Cadmium	7440-43-9	36.62	91.550	% Recov	85.000	115.000				08/19/08
LCS	Chromium	7440-47-3	38.05	95.125	% Recov	85.000	115.000				08/19/08
LCS	Copper	7440-50-8	37.77	94.425	% Recov	85.000	115.000				08/19/08
LCS	Manganese	7439-96-5	37.98	94.950	% Recov	85.000	115.000				08/19/08
LCS	Molybdenum	7439-98-7	37.68	94.200	% Recov	85.000	115.000				08/19/08
LCS	Nickel	7440-02-0	38.46	96.150	% Recov	85.000	115.000				08/19/08
LCS	Lead	7439-92-1	38.25	95.625	% Recov	85.000	115.000				08/19/08
LCS	Zinc	7440-66-6	39.73	99.325	% Recov	85.000	115.000				08/19/08

WSCF
ANALYTICAL COMMENT REPORT

Attention: Steve Trent
Project Number F08-155

Group #: WSCF20081775
Department: Inorganic

Sample #	Client ID	Lab Area	Test	Comment
		VALGROUP		ICP-MS: Nickel and zinc PB above the MDL. "C" flags when there is an impact on sample results. Spike amounts for Manganese and Zinc too low to expect good spike recoveries on two of the three spiked samples."X"flags ICP-AES: [Samples W08GR3390-3399] Iron sample result exceeds spiking level by a factor of 4 so spike recoveries are not valid. High and check standards used to ensure iron linearity because sample results are greater than the calibration standard.

Lab Areas: VALGROUP - Group Validation
LOGSAMP - Login for Sample
VALTEST - Test Validation
LOGTEST - Login for Tests
TESTDATA - Test Data Entry

M4W41-SLF-08-1025

ATTACHMENT 4

SAMPLE RECEIPT INFORMATION

Consisting of 13 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

09/03/08
-tl

ACKNOWLEDGMENT OF SAMPLES RECEIVED

Groundwater Remediation Program
Richland, WA 99354
Attn: Steve Trent

Customer Code: GPP
PO#: 122616/ES10
Group#: 20081775
Project#: F08-155
Proj Mgr: Steve Trent E6-35
Phone: 373-5869

The following samples were received from you on 08/18/08. 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
W08GR03390	B1WR00	TRENT @2008 @GPP6010 @IC-30 NH4-IC	Water	08/18/08
W08GR03391	B1WR06	TRENT @2008 @GPP6010 @IC-30 NH4-IC	Water	08/16/08
W08GR03392	B1WR07	TRENT @2008 @GPP6010 @IC-30 NH4-IC	Water	08/18/08
W08GR03393	B1WR21	TRENT @2008 @GPP6010 @IC-30 NH4-IC	Water	08/16/08
W08GR03394	B1WR22	TRENT @2008 @GPP6010 @IC-30 NH4-IC	Water	08/18/08
W08GR03395	B1WPX4	TRENT @2008 @GPP6010 @IC-30 NH4-IC	Water	08/16/08
W08GR03396	B1WPX5	TRENT @2008 @GPP6010 @IC-30 NH4-IC	Water	08/17/08
W08GR03397	B1WPX6	TRENT @2008 @GPP6010 @IC-30 NH4-IC	Water	08/18/08
W08GR03398	B1WPY8	TRENT @2008 @GPP6010 @IC-30 NH4-IC	Water	08/16/08
W08GR03399	B1WPY9	TRENT @2008 @GPP6010 @IC-30 NH4-IC	Water	08/17/08

Test Acronym Description

Test Acronym	Description
@2008	ICP-200.8 MS All possible meta
@GPP6010	ICP Metals Analysis, Grd H20 P
@IC-30	Anions by Ion Chromatography
NH4-IC	Ammonia (N) by IC

Fluor Hanford Inc 09/03/08

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F08-155-075 | PAGE 1 OF 1

COLLECTOR J. Mehrer / Adam Logan	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** WIDRIG, DL
SAMPLING LOCATION C4689, I-011	**PROJECT DESIGNATION** ISRM - Zero Valent Iron Injection Sampling		**SAF NO.** F08-155
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**ACTUAL SAMPLE DEPTH**	**COA** 122616ES10
SHIPPED TO Waste Sampling & Characterization 200817755 ~~200817755-12~~ 03	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A

PRICE CODE 7C | **AIR QUALITY** ☐ | **DATA TURNAROUND** 15 Days / 15 Days

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
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
N/A

PRESERVATION	HNO3 to pH <2	H2SO4 to pH <2	Cool~4C
TYPE OF CONTAINER	G/P	G/P	P
NO. OF CONTAINER(S)	1	1	1
VOLUME	500mL	250mL	500mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Cations (IC) - 300.7 (Nitrogen in ammonium)	SEE ITEM (2) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B1WR00 ~~W0861203390~~	WATER	8/18/08	1320	X	X	X

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
J Mehrer	8/18/08 1425	CA Hidinger	8/18/08 1425

SPECIAL INSTRUCTIONS

** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1)ICP/MS - 200.8 (TAL) {Cadmium, Chromium, Copper, Manganese, Nickel, Zinc} ICP/MS - 200.8 (Add-on) {Arsenic, Lead, Molybdenum} ICP Metals - 6010B (TAL) {Iron}
(2)IC Anions - 300.0 {Bromide, Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Phosphorus in phosphate, Sulfate}

ICED

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

A-6003-618(01/06)

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F08-155-081 | PAGE 1 OF 1

COLLECTOR Adam Lange / J. Mehrer	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5870	**PROJECT COORDINATOR** WIDRIG, DL
SAMPLING LOCATION B8976, I-002	**PROJECT DESIGNATION** ISRM - Zero Valent Iron Injection Sampling		**SAF NO.** F08-155
ICE CHEST NO.	**FIELD LOGBOOK NO.** MJE - Monitoring Wells	**ACTUAL SAMPLE DEPTH**	**COA** 122616ES10
SHIPPED TO Waste Sampling & Characterization	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A

PRICE CODE 7C — **DATA TURNAROUND** 15 Days / 15 Days

AIR QUALITY ☐

METHOD OF SHIPMENT GOVERNMENT VEHICLE

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
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
N/A

PRESERVATION	HNO3 to pH <2	H2SO4 to pH <2	Cool~4C
TYPE OF CONTAINER	G/P	G/P	P
NO. OF CONTAINER(S)	1	1	1
VOLUME	500mL	250mL	500mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Cations (IC) - 300.7 (Nitrogen in ammonium)	SEE ITEM (2) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B1WR06 3391	WATER	8/18/08	1034	X	X	X

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
J. Mehrer	8/18/08 1045	ISRM Fridge	8/18/08 1045
ISRM Fridge	8/18/08 1300	J. Mehrer	8/18/08 1300
J. Mehrer	8/18/08 1425	[illegible]	8/18/08 1425

SPECIAL INSTRUCTIONS

** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1)ICP/MS - 200.8 (TAL) {Cadmium, Chromium, Copper, Manganese, Nickel, Zinc} ICP/MS - 200.8 (Add-on) {Arsenic, Lead, Molybdenum} ICP Metals - 6010B (TAL) {Iron}
(2)IC Anions - 300.0 {Bromide, Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Phosphorus in phosphate, Sulfate}

ICED

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

A-6003-618(01/06)

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F08-155-082 | PAGE 1 OF 1

COLLECTOR Adam Logar / R. Hermann	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5870	**PROJECT COORDINATOR** WIDRIG, DL
SAMPLING LOCATION B8976, I-003	**PROJECT DESIGNATION** ISRM - Zero Valent Iron Injection Sampling		**SAF NO.** F08-155
ICE CHEST NO.	**FIELD LOGBOOK NO.** MSE - Monitoring Wells	**ACTUAL SAMPLE DEPTH**	**COA** 122616ES10
SHIPPED TO Waste Sampling & Characterization	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A

PRICE CODE 7C — **DATA TURNAROUND** 15 Days / 15 Days

AIR QUALITY ☐

METHOD OF SHIPMENT GOVERNMENT VEHICLE

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
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
N/A

PRESERVATION	HNO3 to pH <2	H2SO4 to pH <2	Cool~4C
TYPE OF CONTAINER	G/P	G/P	P
NO. OF CONTAINER(S)	1	1	1
VOLUME	500mL	250mL	500mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Cations (IC) - 300.7 (Nitrogen in ammonium)	SEE ITEM (2) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B1WR07 3392	WATER	8/18/08	1100	X	X	X

CHAIN OF POSSESSION — **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
R. Hermann	8/18/08 1425	A. Hinder	8/18/08 1425

SPECIAL INSTRUCTIONS

** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1)ICP/MS - 200.8 (TAL) {Cadmium, Chromium, Copper, Manganese, Nickel, Zinc} ICP/MS - 200.8 (Add-on) {Arsenic, Lead, Molybdenum} ICP Metals - 6010B (TAL) {Iron}
(2)IC Anions - 300.0 {Bromide, Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Phosphorus in phosphate, Sulfate}

ICED

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

A-6003-618(01/06)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F08-155-096	PAGE 1 OF 1
COLLECTOR Adam Lager / J. Mehrer	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5870	**PROJECT COORDINATOR** WIDRIG, DL	**PRICE CODE** 7C	**DATA TURNAROUND** 15 Days / 15 Days
SAMPLING LOCATION B8978, I-002	**PROJECT DESIGNATION** ISRM - Zero Valent Iron Injection Sampling		**SAF NO.** F08-155	**AIR QUALITY** ☐	
ICE CHEST NO.	**FIELD LOGBOOK NO.** USE - Monitoring Wells	**ACTUAL SAMPLE DEPTH**	**COA** 122616ES10	**METHOD OF SHIPMENT** GOVERNMENT VEHICLE	
SHIPPED TO Waste Sampling & Characterization	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A		

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
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
N/A

PRESERVATION	HNO3 to pH <2	H2SO4 to pH <2	Cool~4C
TYPE OF CONTAINER	G/P	G/P	P
NO. OF CONTAINER(S)	1	1	1
VOLUME	500mL	250mL	500mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Cations (IC) - 300.7 (Nitrogen in ammonium)	SEE ITEM (2) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B1WR21 3393	WATER	8/16/08	1055	X	X	X

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
J. Mehrer	8/16/08 1100	ISRM Fridge	8/16/08 1100
ISRM Fridge	8/18/08 1300	J. Mehrer	8/18/08 1300
J. Mehrer	8/18/08 1425	TA FN02 Im Lees.	8/18/08 1425

SPECIAL INSTRUCTIONS

** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1)ICP/MS - 200.8 (TAL) {Cadmium, Chromium, Copper, Manganese, Nickel, Zinc} ICP/MS - 200.8 (Add-on) {Arsenic, Lead, Molybdenum} ICP Metals - 6010B (TAL) {Iron}
(2)IC Anions - 300.0 {Bromide, Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Phosphorus in phosphate, Sulfate}

ICED

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

A-6003-618(01/06)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F08-155-097	PAGE 1 OF 1
COLLECTOR Adam Lay / R. Hermann	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5870	**PROJECT COORDINATOR** WIDRIG, DL	**PRICE CODE** 7C; **DATA TURNAROUND** 15 Days / 15 Days; **AIR QUALITY** ☐
SAMPLING LOCATION B8978, I-003	**PROJECT DESIGNATION** ISRM - Zero Valent Iron Injection Sampling		**SAF NO.** F08-155	
ICE CHEST NO.	**FIELD LOGBOOK NO.** MSE - Monitoring Log	**ACTUAL SAMPLE DEPTH**	**COA** 122616ES10	**METHOD OF SHIPMENT** GOVERNMENT VEHICLE
SHIPPED TO Waste Sampling & Characterization	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A	

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
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
N/A

	HNO3 to pH <2	H2SO4 to pH <2	Cool~4C
PRESERVATION			
TYPE OF CONTAINER	G/P	G/P	P
NO. OF CONTAINER(S)	1	1	1
VOLUME	500mL	250mL	500mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Cations (IC) - 300.7 (Nitrogen in ammonium)	SEE ITEM (2) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B1WR22 3394	WATER	8/13/08	1130	X	X	X

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	SIGN/ PRINT NAMES RECEIVED BY/STORED IN	DATE/TIME
[signature] R. Hermann	8/18/08 1425	[signature]	8/18/08 1425

SPECIAL INSTRUCTIONS

** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1)ICP/MS - 200.8 (TAL) {Cadmium, Chromium, Copper, Manganese, Nickel, Zinc} ICP/MS - 200.8 (Add-on) {Arsenic, Lead, Molybdenum} ICP Metals - 6010B (TAL) {Iron}
(2)IC Anions - 300.0 {Bromide, Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Phosphorus in phosphate, Sulfate}

ICED

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

A-6003-618(01/06)

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F08-155-059 | PAGE 1 OF 1

COLLECTOR Adam Logy / R. Hermann	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** WIDRIG, DL
SAMPLING LOCATION C4688, I-010	**PROJECT DESIGNATION** ISRM - Zero Valent Iron Injection Sampling		**SAF NO.** F08-155
ICE CHEST NO.	**FIELD LOGBOOK NO.** MSE - Monitoring Wells	**ACTUAL SAMPLE DEPTH**	**COA** 122616ES10
SHIPPED TO Waste Sampling & Characterization	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A

PRICE CODE 7C — **DATA TURNAROUND** 15 Days / 15 Days

AIR QUALITY ☐

METHOD OF SHIPMENT GOVERNMENT VEHICLE

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
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
N/A

PRESERVATION	HNO3 to pH <2	H2SO4 to pH <2	Cool~4C
TYPE OF CONTAINER	G/P	G/P	P
NO. OF CONTAINER(S)	1	1	1
VOLUME	500mL	250mL	500mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Cations (IC) - 300.7 (Nitrogen in ammonium)	SEE ITEM (2) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B1WPX4 3395	WATER	8/16/08	1117	X	X	X

CHAIN OF POSSESSION

SIGN/ PRINT NAMES			
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
R. Hermann	8/16/08 1120	ISRM Fridge	8/16/08 1120
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
ISRM Fridge	8/18/08 1300	R. Hermann	8/18/08 1300
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
R. Hermann	8/18/08 1425	TA FINAZLIM Jovanoski	8/18/08 1425
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

** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1)ICP/MS - 200.8 (TAL) {Cadmium, Chromium, Copper, Manganese, Nickel, Zinc} ICP/MS - 200.8 (Add-on) {Arsenic, Lead, Molybdenum} ICP Metals - 6010B (TAL) {Iron}
(2)IC Anions - 300.0 {Bromide, Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Phosphorus in phosphate, Sulfate}

ICED

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

A-6003-618(01/06)

Fluor Hanford Inc. | CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST | F08-155-060 | PAGE 1 OF 1

COLLECTOR Adam Lange / J. Mehrer	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** WIDRIG, DL
SAMPLING LOCATION C4688, I-011	**PROJECT DESIGNATION** ISRM - Zero Valent Iron Injection Sampling		**SAF NO.** F08-155
ICE CHEST NO.	**FIELD LOGBOOK NO.** MSE - Monitoring Wells	**ACTUAL SAMPLE DEPTH**	**COA** 122616ES10
SHIPPED TO Waste Sampling & Characterization	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A

PRICE CODE 7C — **DATA TURNAROUND** 15 Days / 15 Days

AIR QUALITY ☐

METHOD OF SHIPMENT GOVERNMENT VEHICLE

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
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
N/A

PRESERVATION	HNO3 to pH <2	H2SO4 to pH <2	Cool~4C
TYPE OF CONTAINER	G/P	G/P	P
NO. OF CONTAINER(S)	1	1	1
VOLUME	500mL	250mL	500mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Cations (IC) - 300.7 (Nitrogen in ammonium)	SEE ITEM (2) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B1WPX5 3396	WATER	8/17/08	0835	X	X	X

CHAIN OF POSSESSION — **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
J. Mehrer	8/17/08 0900	ISRM Fridge	8/17/08 0900
J. Mehrer (SAF Friday)	8/18/08 1200	J. Mehrer	8/18/08 1300
J. Mehrer	8/18/08 1425	[illegible]	8/18/08 1425

SPECIAL INSTRUCTIONS

** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1)ICP/MS - 200.8 (TAL) {Cadmium, Chromium, Copper, Manganese, Nickel, Zinc} ICP/MS - 200.8 (Add-on) {Arsenic, Lead, Molybdenum} ICP Metals - 6010B (TAL) {Iron}
(2)IC Anions - 300.0 {Bromide, Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Phosphorus in phosphate, Sulfate}

ICED

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

A-6003-618(01/06)

Fluor Hanford Inc. | CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST | F08-155-061 | PAGE 1 OF 1

COLLECTOR J. Mehrer / Adam Logan	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** WIDRIG, DL
SAMPLING LOCATION C4688, I-012	**PROJECT DESIGNATION** ISRM - Zero Valent Iron Injection Sampling		**SAF NO.** F08-155
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**ACTUAL SAMPLE DEPTH**	**COA** 122616ES10
SHIPPED TO Waste Sampling & Characterization	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A

PRICE CODE 7C **DATA TURNAROUND** — **AIR QUALITY** ☐ 15 Days / 15 Days

METHOD OF SHIPMENT GOVERNMENT VEHICLE

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
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
N/A

PRESERVATION	HNO3 to pH <2	H2SO4 to pH <2	Cool~4C
TYPE OF CONTAINER	G/P	G/P	P
NO. OF CONTAINER(S)	1	1	1
VOLUME	500mL	250mL	500mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Cations (IC) - 300.7 (Nitrogen in ammonium)	SEE ITEM (2) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B1WPX6 ~~3398~~ 3397 8-19-08	WATER	8/18/08	1315	X	X	X

CHAIN OF POSSESSION / **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
J. Mehrer	8/18/08 1425	CH Thurlow	8/18/08 1425

SPECIAL INSTRUCTIONS

** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1)ICP/MS - 200.8 (TAL) {Cadmium, Chromium, Copper, Manganese, Nickel, Zinc} ICP/MS - 200.8 (Add-on) {Arsenic, Lead, Molybdenum} ICP Metals - 6010B (TAL) {Iron}
(2)IC Anions - 300.0 {Bromide, Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Phosphorus in phosphate, Sulfate}

ICED

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

A-6003-618(01/06)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F08-155-073	PAGE 1 OF 1
COLLECTOR Adam Lagar / R. Herrmann	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** WIDRIG, DL	**PRICE CODE** 7C	**DATA TURNAROUND** 15 Days / 15 Days
SAMPLING LOCATION C4689, I-009	**PROJECT DESIGNATION** ISRM - Zero Valent Iron Injection Sampling		**SAF NO.** F08-155	**AIR QUALITY** ☐	
ICE CHEST NO.	**FIELD LOGBOOK NO.** M3E - Monitoring Exilis	**ACTUAL SAMPLE DEPTH**	**COA** 122616ES10	**METHOD OF SHIPMENT** GOVERNMENT VEHICLE	
SHIPPED TO Waste Sampling & Characterization	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A		

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
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
N/A

PRESERVATION	HNO3 to pH <2	H2SO4 to pH <2	Cool~4C
TYPE OF CONTAINER	G/P	G/P	P
NO. OF CONTAINER(S)	1	1	1
VOLUME	500mL	250mL	500mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Cations (IC) - 300.7 (Nitrogen in ammonium)	SEE ITEM (2) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B1WPY8 3398	WATER	8/16/08	1136	X	X	X							

CHAIN OF POSSESSION / **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
R. Herrmann	8/16/08 1140	ISRM Fridge	8/16/08 1140
ISRM Fridge	8/18/08 1300	R. Herrmann	8/18/08 1300
R. Herrmann	8/18/08 1425	TA Finazzo Jeremy Ji	8/18/08 1425

SPECIAL INSTRUCTIONS

** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1)ICP/MS - 200.8 (TAL) {Cadmium, Chromium, Copper, Manganese, Nickel, Zinc} ICP/MS - 200.8 (Add-on) {Arsenic, Lead, Molybdenum} ICP Metals - 6010B (TAL) {Iron}
(2)IC Anions - 300.0 {Bromide, Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Phosphorus in phosphate, Sulfate}

ICED

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

A-6003-618(01/06)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F08-155-074	PAGE 1 OF 1
COLLECTOR Adam Logan / R. Hermann	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** WIDRIG, DL	**PRICE CODE** 7C	**DATA TURNAROUND** 15 Days / 15 Days
SAMPLING LOCATION C4689, I-010	**PROJECT DESIGNATION** ISRM - Zero Valent Iron Injection Sampling		**SAF NO.** F08-155	**AIR QUALITY** ☐	
ICE CHEST NO.	**FIELD LOGBOOK NO.** MSE - Monitoring Wells	**ACTUAL SAMPLE DEPTH**	**COA** 122616ES10	**METHOD OF SHIPMENT** GOVERNMENT VEHICLE	
SHIPPED TO Waste Sampling & Characterization	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A		

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
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
N/A

PRESERVATION	HNO3 to pH <2	H2SO4 to pH <2	Cool~4C
TYPE OF CONTAINER	G/P	G/P	P
NO. OF CONTAINER(S)	1	1	1
VOLUME	500mL	250mL	500mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Cations (IC) - 300.7 (Nitrogen in ammonium)	SEE ITEM (2) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B1WPY9 3399	WATER	08/17/08	0915	X	X	X

CHAIN OF POSSESSION — **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
R. Hermann	8/17/08 0920	ISRM Fridge	8/17/08 0920
ISRM Fridge	8/18/08 1300	R. Hermann	8/18/08 1300
R. Hermann	8/18/08 1425	[illegible]	8/18/08 1425

SPECIAL INSTRUCTIONS

** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1)ICP/MS - 200.8 (TAL) {Cadmium, Chromium, Copper, Manganese, Nickel, Zinc} ICP/MS - 200.8 (Add-on) {Arsenic, Lead, Molybdenum} ICP Metals - 6010B (TAL) {Iron}
(2)IC Anions - 300.0 {Bromide, Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Phosphorus in phosphate, Sulfate}

ICED

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

Appendix C. Example of Notice of Improper Sample

WASTE SAMPLING AND CHARACTERIZATION FACILITY

NOTICE OF IMPROPER SAMPLE SUBMITTAL

Customer Name: STEVE Isaacs

Sample ID: See Comments Date Received: 8/18

Project Contact: _____ Phone Number: _____

[ ]	Sample not iced
[ ]	Sample does not pass radiological screening
[ ]	Sample not accompanied by a Chain of Custody (COC) or Request for Special Analysis (RSA)
[ ]	Improperly completed COC or RSA
[ ]	Sample information does not agree with documentation
[ ]	Handwriting is illegible
[ ]	Sample container broken/leaking
[ ]	Sample container not labeled/label unreadable
[ ]	Sample received with custody seal broken
[ ]	Sample improperly packaged
[ ]	Preservatives not used correctly
[ ]	Improper sample container for analyses requested
[ ]	Insufficient sample quantity for requested analyses
[X]	Holding time extended
[ ]	Other (See below)
[ ]	

Comments: BWR06, BWR21, BWPX4, BWPY8 FOR IC

For information on proper sample submittal procedures, contact WSCF Sample Custodian at 373-7423 or Sample Receiving at 373-7019.

Signature (Print/Sign) _____ Date: 8/18/08