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

1213990

FLUOR

Memorandum

M4W41-SLF-08-054

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

From: S. L. Fitzgerald, Manager
WSCF Analytical Lab

cc: w/Attachments

T. F. Dale	S3-30	C. J. Thompson (PNNL)	K6-96
D. Felmy (PNNL)	K6-75	J. E. Trechter	S3-30
H. K. Meznarich	S3-30	S. J. Trent	E6-35
P. D. Mix	S3-30	File/LB	

Subject: RDR# R4499 - SAMPLE DELIVERY GROUP WSCF20071117

Reference:
1) Letter, SL Fitzgerald to H Hampt, Final Results for SDG WSCF20071117 (M4W41-SLF-07-523), dated August 9, 2007
2) Letter of Instruction for Analytical Services for the Groundwater Performance Assessment Project and Analytical Laboratory Transition Plan, FH-0602422, September 19, 2006
3) HNF-SD-CD-QAPP-017, Rev. 8, Waste Sampling & Characterization Facility Quality Assurance Plan

On January 2, 2008, RDR# R4499 was received by the WSCF Laboratory. This transmittal contains the following information for sample delivery group WSCF20071117:

- Cover Sheet (Attachment 1)
- Analytical Results (Attachment 2)
- Analytical (Dionex) Data (Attachment 3)
- Recheck, Recount, or Reanalysis Order #R4499, dated January 2, 2008 (Attachment 4)

Reevaluation of the Fluoride result with the minimum peak area set lower resulted in an analytical data change from <0.03 mg/L to 0.133 mg/L. Please accept our apology for any inconvenience this may have created. If you have any questions, don't hesitate to call on Pauline Mix, telephone 372-1488, for assistance.

SLF/grf

Attachments 4

RECEIVED
MAY 18 2012
EDMC

JAN 2008
RECEIVED

M4W41-SLF-08-054

ATTACHMENT 1

COVER SHEET

Consisting of 2 pages
Including cover page

WSCF SAF NUMBER CROSS REFERENCE

Group#: WSCF20071117
Data Deliverable Date: 15-aug-2007
Data Deliverable: Cover Sheet

SAF#	Sample ID	WSCF#	Matrix
I07-049	B1NJY6	W07P001294	WATER
I07-055	B1P1B2	W07P001295	WATER
S07-006	B1P097	W07P001296	WATER
W07-006	B1NN05	W07P001298	WATER
	B1NN71	W07P001299	WATER
	B1NN76	W07P001297	WATER

M4W41-SLF-08-054

ATTACHMENT 2

ANALYTICAL RESULTS

Consisting of 2 pages
Including cover page

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I07-055
Sample # W07P001295
Client ID: B1P1B2 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20071117
Department: Inorganic
Sampled: 07/02/07
Received: 07/02/07

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	D	0.133	mg/L			5.00	0.030		07/03/07
Chloride	16887-00-6	LA-533-410	D	20.3	mg/L			5.00	0.15		07/03/07
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.0500	mg/L			5.00	0.050		07/03/07
Nitrogen in Nitrate	NO3-N	LA-533-410	D	262	mg/L			1.01e+002	0.50		07/03/07
Sulfate	14808-79-8	LA-533-410	D	50.7	mg/L			5.00	0.35		07/03/07
ICP-200.8 MS All possible meta Prep											**07/05/07**
ICP-200.8 MS All possible meta											
Uranium	7440-61-1	LA-505-412		379	ug/L			1.00	0.0500		07/10/07

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

B - The Analyte detected in both the BLANK and the SAMPLE.(org)
D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)

D - Analyte was identified at a secondary dilution factor
J - Analyte < lowest calibration but > = MDL.(org)
U - Analyzed for but not detected above limiting criteria.(org)

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

Report WGPP/ver. 5.2
GPAP

WSCF
ANALYTICAL COMMENT REPORT

Attention: Steve Trent E6-35

Group #: WSCF20071117
Department: Inorganic

Sample #	Client ID	Lab Area	Test	Comment
		VALGROUP		W07P001294/Tc99 matrix spike failed because the spike activity added to the sample was very small compared to the sample activity. lmh IC Anion - Fluoride result for sample W07P001295 updated following adjustment of minimum peak area in evaluation software. DTS 01/16/08

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

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M4W41-SLF-08-054

ATTACHMENT 3

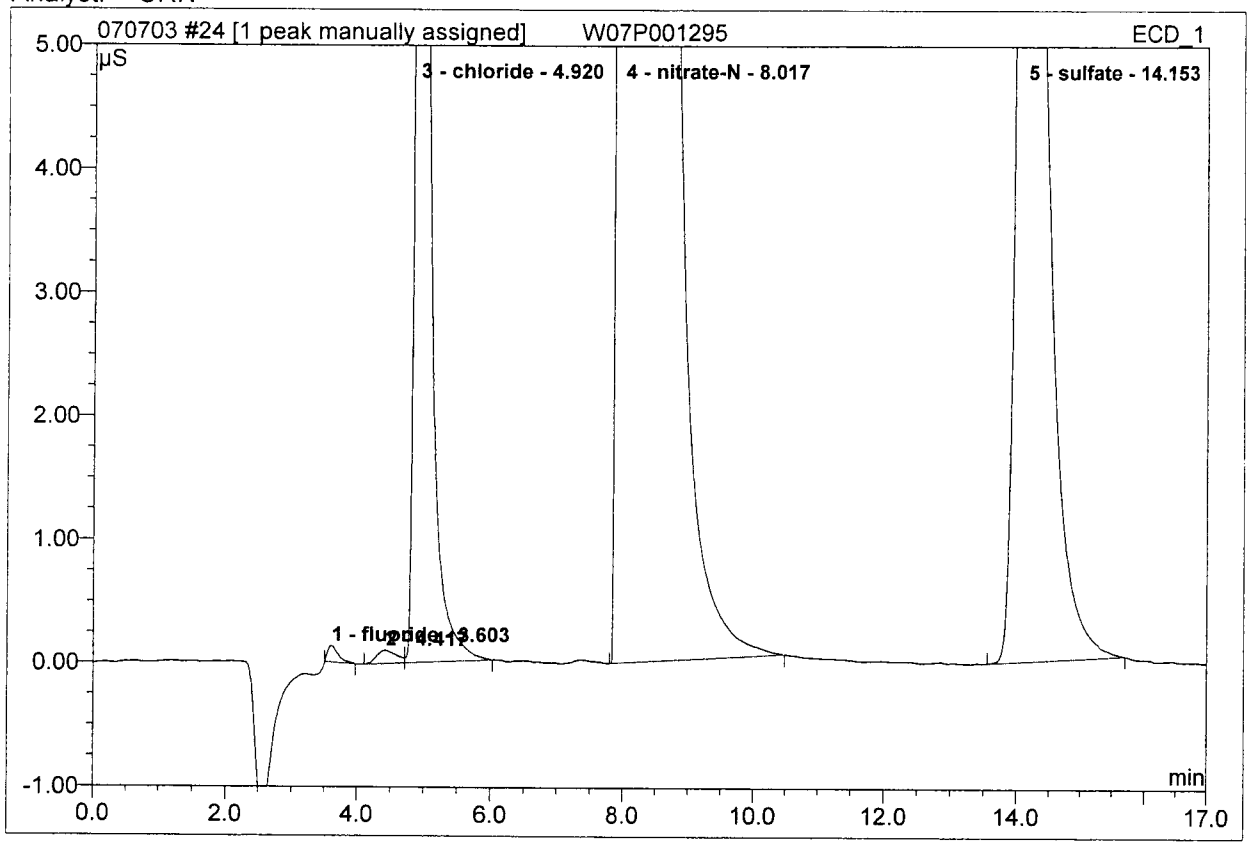
ANALYTICAL (DIONEX) DATA

Consisting of 2 pages
Including cover page

24 W07P001295

Sample Name:	**W07P001295**	*Injection Volume:*	**25.0**
Vial Number:	**14**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**AS14**		
Quantif. Method:	**xquad**	*Dilution Factor:*	**5.0000**
Recording Time:	**7/3/2007 12:37**	*Sample Weight:*	**1.0000**
Run Time (min):	**17.00**	*Sample Amount:*	**1.0000**

Analyst: CRN



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Type
1	3.60	fluoride	0.133	0.026	0.02	0.155	BMB
2	4.42	n.a.	0.110	0.037	0.02	n.a.	BM
3	4.92	chloride	15.953	3.158	2.07	20.266	MB
4	8.02	nitrate-N	435.588	143.754	94.21	139.703	BMB^
5	14.15	sulfate	12.198	5.607	3.67	50.661	BMB
Total:			463.981	152.582	100.00	210.785	

M4W41-SLF-08-054

ATTACHMENT 4

RECHECK, RECOUNT, OR REANALYSIS ORDER

Consisting of 2 pages
Including cover page

01/02/2008
RECHECK, RECOUNT, OR REANALYSIS ORDER
CONTRACT NO MW6-SBB-A19981

Waste Sampling &
600 AREA Hanford, MSIN
Richland, WA 99352

Battelle PNNL Order Number: 080102WSCF-R4499

Sample Delivery Group: WSCF20071117

Special Instructions ~~None~~ **Please recheck the fluoride result. Evaluate with the minimum peak area set lower.**

Samples(s)

Lab Sample ID	PNNL Sample	Action	TAT	METHOD_NAME:
W07P001295	B1P1B2	Recheck	15/15	300.0_ANIONS_IC

WSCF Response

Recheck of the Fluoride result was performed with the minimum peak area set lower. Re-evaluation revealed/resulted in an analytical result change from < 0.03 mg/L to 0.133 mg/L.

Deliver Report Results to:Fluor Hanford, Inc.
1200 Jadwin Ave.
Richland, WA 99352
C/O Mr. Steve Trent

The report results must reference the Battelle PNNL-order number, SDG number, and the Battelle PNNL sample identification number shown above.

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

FLUOR

Memorandum

M4W41-SLF-07-995

To: H. Hampt E6-35 Date: December 17, 2007

From: S. L. Fitzgerald, Manager
WSCF Analytical Lab

cc: w/Attachments

T. F. Dale	S3-30	J. E. Trechter	S3-30
D. Felmy (PNNL)	K6-75	S. J. Trent	E6-35
H. K. Meznarich	S3-30	File/LB	
P. D. Mix	S3-30		
C. J. Thompson (PNNL)	K6-96		

Subject: RDRs R4397, R4451 & R-ANIONS FOR SAMPLE DELIVERY GROUPS WSCF20071117 AND WSCF20071799 (WSCF20072171)

Reference:
1) Letter of Instruction for Analytical Services for the Groundwater Performance Assessment Project and Analytical Laboratory Transition Plan, FH-0602422, September 19, 2006
2) HNF-SD-CD-QAPP-017, Rev. 8, Waste Sampling & Characterization Facility Quality Assurance Plan

On November 6, November 30 and December 5, 2007, the subject RDRs were received by the WSCF Laboratory. This transmittal contains the following information for sample delivery groups WSCF20071117 and WSCF20071799 (WSCF 20072171):

- Cover Sheet (Attachment 1)
- Analytical Results (Attachment 2)
- Sample Receipt Information (Attachment 3)
- Recheck, Recount, or Reanalysis Orders (Attachment 4)

Reanalysis results are valid and reveal that a probable dilution error was made on sample B1NJY6 during the first (original) analysis.

SLF/grf

Attachments 4

M4W41-SLF-07-995

ATTACHMENT 1

COVER SHEET

Consisting of 2 pages
Including cover page

WSCF SAF NUMBER CROSS REFERENCE

Group#: WSCF20072171
Data Deliverable Date: 12-dec-2007
Data Deliverable: Cover Sheet

SAF#	Sample ID	WSCF#	Matrix
I07-049	B1NJY6	W07P003567	WATER
X07-048	B1PKN5	W07P003568	WATER
	B1PKN6	W07P003569	WATER
	B1PKN7	W07P003570	WATER

M4W41-SLF-07-995

ATTACHMENT 2

ANALYTICAL RESULTS

Consisting of 10 pages
Including cover page

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I07-049
Sample # W07P003567
Client ID: B1NJY6 IC RERUN WSCF

Group #: WSCF20072171
Department: Inorganic
Sampled: 07/02/07
Received: 07/02/07

Matrix: WATER

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		0.381	mg/L			1.00	6.0e-03		12/05/07
Chloride	16887-00-6	LA-533-410	D	17.1	mg/L			10.00	0.30		12/05/07
Nitrogen in Nitrite	NO2-N	LA-533-410	U	< 0.0100	mg/L			1.00	0.010		12/05/07
Nitrogen in Nitrate	NO3-N	LA-533-410	D	21.3	mg/L			10.00	0.050		12/05/07
Sulfate	14808-79-8	LA-533-410		37.6	mg/L			1.00	0.070		12/05/07

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

D - Analyte was identified at a secondary dilution factor(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
GPAP

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: X07-048
Sample # W07P003568
Client ID: B1PKN5 IC RERUN

Matrix: WATER

Group #: WSCF20072171
Department: Inorganic
Sampled: 10/10/07
Received: 10/10/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Anions by Ion Chromatography		WSCF									
Fluoride	16984-48-8	LA-533-410		2.26	mg/L			1.00	6.0e-03		12/06/07
Chloride	16887-00-6	LA-533-410	D	18.2	mg/L			5.00	0.15		12/06/07
Nitrogen in Nitrite	NO2-N	LA-533-410	U	< 0.0100	mg/L			1.00	0.010		12/06/07
Nitrogen in Nitrate	NO3-N	LA-533-410		1.45	mg/L			1.00	5.0e-03		12/06/07
Sulfate	14808-79-8	LA-533-410		12.8	mg/L			1.00	0.070		12/06/07

=Minimum Detection Limit
Result Qualifier
rr=Total Propagated Error
Dilution Factor

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

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

ates results that have NOT been validated;

+ - Indicates more than six qualifier symbols

WGPP/ver. 5.2

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: X07-048
Sample # W07P003569
Client ID: B1PKN6

Matrix: WATER

Group #: WSCF20072171
Department: Inorganic
Sampled: 10/10/07
Received: 10/10/07

IC RERUN

Test Performed	CAS #	WSCF Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Anions by Ion Chromatography											
Fluoride	16984-48-8	LA-533-410		2.29	mg/L			1.00	6.0e-03		12/06/07
Chloride	16887-00-6	LA-533-410	D	18.3	mg/L			5.00	0.15		12/06/07
Nitrogen in Nitrite	NO2-N	LA-533-410	U	< 0.0100	mg/L			1.00	0.010		12/06/07
Nitrogen in Nitrate	NO3-N	LA-533-410		1.45	mg/L			1.00	5.0e-03		12/06/07
Sulfate	14808-79-8	LA-533-410		12.8	mg/L			1.00	0.070		12/06/07

nimum Detection Limit
t Qualifier
otal Propagated Error
n Factor

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

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

ults that have NOT been validated;

+ - Indicates more than six qualifier symbols

/ver. 5.2

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: X07-048
Sample # W07P003570
Client ID: B1PKN7 IC RERUN WSCF

Matrix: WATER

Group #: WSCF20072171
Department: Inorganic
Sampled: 10/10/07
Received: 10/10/07

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		2.35	mg/L			1.00	6.0e-03		12/11/07
Chloride	16887-00-6	LA-533-410	D	18.7	mg/L			2.00	0.060		12/11/07
Nitrogen in Nitrite	NO2-N	LA-533-410	U	< 0.0100	mg/L			1.00	0.010		12/11/07
Nitrogen in Nitrate	NO3-N	LA-533-410		1.48	mg/L			1.00	5.0e-03		12/11/07
Sulfate	14808-79-8	LA-533-410		12.8	mg/L			1.00	0.070		12/11/07

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

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

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

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

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20072171
Matrix: WATER
Test: Anions by Ion Chromatography

Sample Date: 12/01/07
Receive Date:12/03/07

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W07P003479											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Chloride	16887-00-6	11.6496		RPD			0.085	20.000		12/05/07
DUP	Fluoride	16984-48-8	0.4093		RPD			1.700	20.000		12/05/07
DUP	Nitrogen in Nitrite	NO2-N	<1e-2		RPD			n/a	20.000	U	12/05/07
DUP	Nitrogen in Nitrate	NO3-N	6.5839		RPD			0.646	20.000		12/05/07
DUP	Sulfate	14808-79-8	50.3758		RPD			0.334	20.000		12/05/07
MS	Chloride	16887-00-6	0.97526	98.511	% Recov	75.000	125.000				12/05/07
MS	Fluoride	16984-48-8	0.5265	104.880	% Recov	75.000	125.000				12/05/07
MS	Nitrogen in Nitrite	NO2-N	0.5023	100.863	% Recov	75.000	125.000				12/05/07
MS	Nitrogen in Nitrate	NO3-N	0.45252	100.337	% Recov	75.000	125.000				12/05/07
MS	Sulfate	14808-79-8	2.04382	103.223	% Recov	75.000	125.000				12/05/07
MSD	Chloride	16887-00-6	1.00762	101.780	% Recov	75.000	125.000				12/05/07
MSD	Fluoride	16984-48-8	0.5301	105.598	% Recov	75.000	125.000				12/05/07
MSD	Nitrogen in Nitrite	NO2-N	0.4959	99.578	% Recov	75.000	125.000				12/05/07
MSD	Nitrogen in Nitrate	NO3-N	0.46334	102.736	% Recov	75.000	125.000				12/05/07
MSD	Sulfate	14808-79-8	1.97556	99.776	% Recov	75.000	125.000				12/05/07
SPK-RPD	Chloride	16887-00-6	101.780		RPD			3.264	20.000		12/05/07
SPK-RPD	Fluoride	16984-48-8	105.598		RPD			0.682	20.000		12/05/07
SPK-RPD	Nitrogen in Nitrite	NO2-N	99.578		RPD			1.282	20.000		12/05/07
SPK-RPD	Nitrogen in Nitrate	NO3-N	102.736		RPD			2.363	20.000		12/05/07
SPK-RPD	Sulfate	14808-79-8	99.776		RPD			3.396	20.000		12/05/07
BATCH QC											
BLANK	Chloride	16887-00-6	<3e-2	n/a	mg/L	0.000	0.030			U	12/05/07
BLANK	Chloride	16887-00-6	<3e-2	n/a	mg/L	0.000	0.030			U	12/05/07
BLANK	Fluoride	16984-48-8	<6e-3	n/a	mg/L	0.000	0.030			U	12/05/07
BLANK	Fluoride	16984-48-8	<6e-3	n/a	mg/L	0.000	0.030			U	12/05/07

WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Inorganic**

SDG Number: WSCF20072171
Matrix: WATER
Test: Anions by Ion Chromatography

Sample Date:
Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
BLANK	Nitrogen in Nitrite	NO2-N	<1e-2	n/a	mg/L	0.000	0.020			U	12/05/07
BLANK	Nitrogen in Nitrite	NO2-N	<1e-2	n/a	mg/L	0.000	0.020			U	12/05/07
BLANK	Nitrogen in Nitrate	NO3-N	<5e-3	n/a	mg/L	0.000	0.040			U	12/05/07
BLANK	Nitrogen in Nitrate	NO3-N	<5e-3	n/a	mg/L	0.000	0.040			U	12/05/07
BLANK	Sulfate	14808-79-8	<7e-2	n/a	mg/L	0.000	0.200			U	12/05/07
BLANK	Sulfate	14808-79-8	<7e-2	n/a	mg/L	0.000	0.200			U	12/05/07
LCS	Chloride	16887-00-6	202.035	101.017	% Recov	80.000	120.000				12/05/07
LCS	Fluoride	16984-48-8	107.4862	106.422	% Recov	80.000	120.000				12/05/07
LCS	Nitrogen in Nitrite	NO2-N	98.6954	98.695	% Recov	80.000	120.000				12/05/07
LCS	Nitrogen in Nitrate	NO3-N	92.225	101.124	% Recov	80.000	120.000				12/05/07
LCS	Sulfate	14808-79-8	393.6644	98.416	% Recov	80.000	120.000				12/05/07

Lab ID: W07P003554
BATCH QC ASSOCIATED WITH SAMPLE

DUP	Chloride	16887-00-6	3.8189		RPD			0.375	20.000		12/05/07
DUP	Fluoride	16984-48-8	5.52e-2		RPD			9.326	20.000		12/05/07
DUP	Nitrogen in Nitrite	NO2-N	<1e-2		RPD			n/a	20.000	U	12/05/07
DUP	Nitrogen in Nitrate	NO3-N	1.3821		RPD			0.915	20.000		12/05/07
DUP	Sulfate	14808-79-8	16.7358		RPD			0.112	20.000		12/05/07
MS	Chloride	16887-00-6	1.0467	105.727	% Recov	75.000	125.000				12/05/07
MS	Fluoride	16984-48-8	0.4956	98.725	% Recov	75.000	125.000				12/05/07
MS	Nitrogen in Nitrite	NO2-N	0.4481	89.980	% Recov	75.000	125.000				12/05/07
MS	Nitrogen in Nitrate	NO3-N	0.4575	101.441	% Recov	75.000	125.000				12/05/07
MS	Sulfate	14808-79-8	2.0812	105.111	% Recov	75.000	125.000				12/05/07
MSD	Chloride	16887-00-6	1.0631	107.384	% Recov	75.000	125.000				12/05/07
MSD	Fluoride	16984-48-8	0.4981	99.223	% Recov	75.000	125.000				12/05/07
MSD	Nitrogen in Nitrite	NO2-N	0.4507	90.502	% Recov	75.000	125.000				12/05/07
MSD	Nitrogen in Nitrate	NO3-N	0.455	100.887	% Recov	75.000	125.000				12/05/07
MSD	Sulfate	14808-79-8	1.9541	98.692	% Recov	75.000	125.000				12/05/07
SPK-RPD	Chloride	16887-00-6	107.384		RPD			1.555	20.000		12/06/07

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20072171
Matrix: WATER
Test: Anions by Ion Chromatography

Sample Date: 12/04/07
Receive Date: 12/04/07

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
SPK-RPD	Fluoride	16984-48-8	99.223		RPD			0.503	20.000		12/06/07
SPK-RPD	Nitrogen in Nitrite	NO2-N	90.502		RPD			0.578	20.000		12/06/07
SPK-RPD	Nitrogen in Nitrate	NO3-N	100.887		RPD			0.548	20.000		12/06/07
SPK-RPD	Sulfate	14808-79-8	98.692		RPD			6.299	20.000		12/06/07

BATCH QC

BLANK	Chloride	16887-00-6	<3e-2	n/a	mg/L	0.000	0.030			U	12/05/07
BLANK	Chloride	16887-00-6	<3e-2	n/a	mg/L	0.000	0.030			U	12/06/07
BLANK	Fluoride	16984-48-8	<6e-3	n/a	mg/L	0.000	0.030			U	12/06/07
BLANK	Fluoride	16984-48-8	<6e-3	n/a	mg/L	0.000	0.030			U	12/05/07
BLANK	Nitrogen in Nitrite	NO2-N	<1e-2	n/a	mg/L	0.000	0.020			U	12/05/07
BLANK	Nitrogen in Nitrite	NO2-N	<1e-2	n/a	mg/L	0.000	0.020			U	12/06/07
BLANK	Nitrogen in Nitrate	NO3-N	<5e-3	n/a	mg/L	0.000	0.040			U	12/05/07
BLANK	Nitrogen in Nitrate	NO3-N	<5e-3	n/a	mg/L	0.000	0.040			U	12/06/07
BLANK	Sulfate	14808-79-8	<7e-2	n/a	mg/L	0.000	0.200			U	12/05/07
BLANK	Sulfate	14808-79-8	<7e-2	n/a	mg/L	0.000	0.200			U	12/06/07
LCS	Chloride	16887-00-6	200.7308	100.365	% Recov	80.000	120.000				12/05/07
LCS	Fluoride	16984-48-8	106.6956	105.639	% Recov	80.000	120.000				12/05/07
LCS	Nitrogen in Nitrite	NO2-N	98.0567	98.057	% Recov	80.000	120.000				12/05/07
LCS	Nitrogen in Nitrate	NO3-N	92.1833	101.078	% Recov	80.000	120.000				12/05/07
LCS	Sulfate	14808-79-8	395.6984	98.925	% Recov	80.000	120.000				12/05/07

Lab ID: W07P003570

BATCH QC ASSOCIATED WITH SAMPLE

DUP	Chloride	16887-00-6	18.6413		RPD			0.131	20.000		12/11/07
DUP	Fluoride	16984-48-8	2.3165		RPD			1.423	20.000		12/11/07
DUP	Nitrogen in Nitrite	NO2-N	<1e-2		RPD			n/a	20.000	U	12/11/07
DUP	Nitrogen in Nitrate	NO3-N	1.4712		RPD			0.718	20.000		12/11/07
DUP	Sulfate	14808-79-8	12.7802		RPD			0.195	20.000		12/11/07
MS	Chloride	16887-00-6	0.88685	89.581	% Recov	75.000	125.000				12/11/07

WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Inorganic**

SDG Number: WSCF20072171
Matrix: WATER
Test: Anions by Ion Chromatography

Sample Date: 10/10/07
Receive Date:10/10/07

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
MS	Fluoride	16984-48-8	0.4575	91.135	% Recov	75.000	125.000				12/11/07
MS	Nitrogen in Nitrite	NO2-N	0.5057	101.546	% Recov	75.000	125.000				12/11/07
MS	Nitrogen in Nitrate	NO3-N	0.4451	98.692	% Recov	75.000	125.000				12/11/07
MS	Sulfate	14808-79-8	1.9908	100.545	% Recov	75.000	125.000				12/11/07
MSD	Chloride	16887-00-6	0.99135	100.136	% Recov	75.000	125.000				12/11/07
MSD	Fluoride	16984-48-8	0.4565	90.936	% Recov	75.000	125.000				12/11/07
MSD	Nitrogen in Nitrite	NO2-N	0.4842	97.229	% Recov	75.000	125.000				12/11/07
MSD	Nitrogen in Nitrate	NO3-N	0.4498	99.734	% Recov	75.000	125.000				12/11/07
MSD	Sulfate	14808-79-8	2.0474	103.404	% Recov	75.000	125.000				12/11/07
SPK-RPD	Chloride	16887-00-6	100.136		RPD			11.127	20.000		12/11/07
SPK-RPD	Fluoride	16984-48-8	90.936		RPD			0.219	20.000		12/11/07
SPK-RPD	Nitrogen in Nitrite	NO2-N	97.229		RPD			4.344	20.000		12/11/07
SPK-RPD	Nitrogen in Nitrate	NO3-N	99.734		RPD			1.050	20.000		12/11/07
SPK-RPD	Sulfate	14808-79-8	103.404		RPD			2.804	20.000		12/11/07

BATCH QC

BLANK	Chloride	16887-00-6	<3e-2	n/a	mg/L	0.000	0.030			U	12/11/07
BLANK	Chloride	16887-00-6	<3e-2	n/a	mg/L	0.000	0.030			U	12/11/07
BLANK	Fluoride	16984-48-8	<6e-3	n/a	mg/L	0.000	0.030			U	12/11/07
BLANK	Fluoride	16984-48-8	<6e-3	n/a	mg/L	0.000	0.030			U	12/11/07
BLANK	Nitrogen in Nitrite	NO2-N	<1e-2	n/a	mg/L	0.000	0.020			U	12/11/07
BLANK	Nitrogen in Nitrite	NO2-N	<1e-2	n/a	mg/L	0.000	0.020			U	12/11/07
BLANK	Nitrogen in Nitrate	NO3-N	<5e-3	n/a	mg/L	0.000	0.040			U	12/11/07
BLANK	Nitrogen in Nitrate	NO3-N	<5e-3	n/a	mg/L	0.000	0.040			U	12/11/07
BLANK	Sulfate	14808-79-8	<7e-2	n/a	mg/L	0.000	0.200			U	12/11/07
BLANK	Sulfate	14808-79-8	<7e-2	n/a	mg/L	0.000	0.200			U	12/11/07
LCS	Chloride	16887-00-6	199.5033	99.752	% Recov	80.000	120.000				12/11/07
LCS	Fluoride	16984-48-8	106.1648	105.114	% Recov	80.000	120.000				12/11/07
LCS	Nitrogen in Nitrite	NO2-N	98.4883	98.488	% Recov	80.000	120.000				12/11/07
LCS	Nitrogen in Nitrate	NO3-N	92.032	100.912	% Recov	80.000	120.000				12/11/07

WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Inorganic**

SDG Number: WSCF20072171
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
LCS	Sulfate	14808-79-8	392.0702	98.018	% Recov	80.000	120.000				12/11/07

M4W41-SLF-07-995

ATTACHMENT 3

SAMPLE RECEIPT ACKNOWLEDGEMENT

Consisting of 2 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

ACKNOWLEDGMENT OF SAMPLES RECEIVED

GPAP

Richland, WA 99352
Attn: Steve Trent E6-35

Customer Code: PNNL-GPP
PO#: 122543
Group#: 20072171

The following samples were received from you on 07/02/07. 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
W07P003567	B1NJY6	IC RERUN @IC-30	Water	07/02/07
W07P003568	B1PKN5	IC RERUN @IC-30	Water	10/10/07
W07P003569	B1PKN6	IC RERUN @IC-30	Water	10/10/07
W07P003570	B1PKN7	IC RERUN @IC-30	Water	10/10/07

Test Acronym Description

Test Acronym	Description
@IC-30	Anions by Ion Chromatography

M4W41-SLF-07-995

ATTACHMENT 4

RECHECK, RECOUNT, OR REANALYSIS ORDERS

Consisting of 4 pages
Including cover page

11/06/2007
RECHECK, RECOUNT, OR REANALYSIS ORDER
CONTRACT NO MW6-SBB-A19981

Waste Sampling &
600 AREA Hanford, MSIN
Richland, WA 99352

Battelle PNNL Order Number: 071106WSCF-R4397

Sample Delivery Group: WSCF20071117 **(WSCF20072171)**

Special Instructions Please make sure dilution is checked during the recheck.

Samples(s)

Lab Sample ID	PNNL Sample	Action	TAT	METHOD_NAME:
W07P001294	B1NJY6	~~Recheck~~ **Reanalysis**	15/15	300.0_ANIONS_IC
W07P001294	B1NJY6	~~Recheck~~ **Reanalysis**	15/15	300.0_ANIONS_IC
W07P001294	B1NJY6	~~Recheck~~ **Reanalysis**	15/15	300.0_ANIONS_IC

WSCF Response

- Recheck revealed data discrepancies. WSCF recommends sample be re-analyzed at no cost to client.
- Anions were re-analyzed and revised report was submitted to client.

Deliver Report Results to:Fluor Hanford, Inc.
1200 Jadwin Ave.
Richland, WA 99352
C/O Mr. Steve Trent

The report results must reference the Battelle PNNL-order number, SDG number, and the Battelle PNNL sample identification number shown above.

11/30/2007
RECHECK, RECOUNT, OR REANALYSIS ORDER
CONTRACT NO MW6-SBB-A19981

Waste Sampling & Characterization
600 AREA Hanford, MSIN S3-30
Richland, WA 99352

Battelle PNNL Order Number: 113007WSCF-R_ANIONS

Sample Delivery Group: WSCF20071799 **(WSCF20072171)**

Special Instructions: Report all anions.

Samples(s)

Lab Sample ID	PNNL Sample	Action	TAT	METHOD_NAME:
W07P002388	B1PKN5	Reanalysis	7/7*	300.0_ANIONS_IC
W07P002389	B1PKN6	Reanalysis	7/7*	300.0_ANIONS_IC
W07P002390	B1PKN7	Reanalysis	7/7*	300.0_ANIONS_IC

*Please expedite analysis to support year-end report.

WSCF Response

- Compliant to client request, anions were re-analyzed and revised report was submitted to client.

Deliver Report Results to:Fluor Hanford, Inc.
1200 Jadwin Ave.
Richland, WA 99352
C/O Mr. Steve Trent

The report results must reference the Battelle PNNL-order number, SDG number, and the Battelle PNNL sample identification number shown above.

12/05/2007
RECHECK, RECOUNT, OR REANALYSIS ORDER
CONTRACT NO MW6-SBB-A19981

Waste Sampling &
600 AREA Hanford, MSIN
Richland, WA 99352

Battelle PNNL Order Number: 071205WSCF-R4451

Sample Delivery Group: WSCF20071799 **(WSCF20072171)**

Special Instructions None

Samples(s)

Lab Sample ID	PNNL Sample	Action	TAT	METHOD_NAME:
W07P002403	B1PKT8	Reanalysis	7/7	BETA_GPC
W07P002388	**B1PKN5**	**Reanalysis**	**7/7**	**300.0_ANIONS_IC**
W07P002389	**B1PKN6**	**Reanalysis**	**7/7**	**300.0_ANIONS_IC**
W07P002389	**B1PKN6**	**Reanalysis**	**7/7**	**300.0_ANIONS_IC** ⇦
W07P002390	**B1PKN7**	**Reanalysis**	**7/7**	**300.0_ANIONS_IC**
W07P002390	**B1PKN7**	**Reanalysis**	**7/7**	**300.0_ANIONS_IC**
W07P002401	B1PKT6	Reanalysis	7/7	ALPHA_GPC
W07P002388	**B1PKN5**	**Reanalysis**	**7/7**	**300.0_ANIONS_IC** ⇦
W07P002402	B1PKT7	Reanalysis	7/7	BETA_GPC
W07P002380	B1PKW2	Reanalysis	7/7	TC99_3MDSK_LSC
W07P002404	B1PKT9	Reanalysis	7/7	ALPHA_GPC
W07P002368	B1PKV0	Reanalysis	7/7	ALPHA_GPC
~~W07P002373~~	~~B1PKV5~~	~~Reanalysis~~	~~15/15~~	~~SRTOT_SEP_PRECIP~~
W07P002374	B1PKV6	Reanalysis	Due 12/12	SRTOT_SEP_PRECIP
W07P002375	B1PKV7	Reanalysis	Due 12/12	SRTOT_SEP_PRECIP
W07P002379	B1PKW1	Reanalysis	7/7	TC99_3MDSK_LSC
W07P002401	B1PKT6	Reanalysis	7/7	BETA_GPC

WSCF Response

Compliant to client request, samples were re-analyzed and revised report was submitted to client. Reanalysis results are valid and reveal that a probable dilution error was made on sample B1NJY6 during the first (original) analysis.

Deliver Report Results to: Fluor Hanford, Inc.
1200 Jadwin Ave.
Richland, WA 99352
C/O Mr. Steve Trent

The report results must reference the Battelle PNNL-order number, SDG number, and the Battelle PNNL sample identification number shown above.