0081829

RECEIVED OCTOBER 22, 2008

Fluor Hanford
WSCF Analytical Lab
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FLUOR

Memorandum

M4W41-SLF-08-1167

To:	M. A. Neely	B6-06	Date:	October 22, 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 WSCF20082051

Reference:
(1) Memorandum of Agreement #MOA-FH-CHPRC-2008, Rev. 0, for the Performance & Payment of Services, dated October 1, 2008

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

This transmittal contains the following information for sample delivery group WSCF20082051:

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

SLF/grf

Attachments 4

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ATTACHMENT 1

COVER SHEET

Consisting of 2 pages
Including cover page

WSCF SAF NUMBER CROSS REFERENCE

Group#: WSCF20082051
Data Deliverable Date: 23-oct-2008
Data Deliverable: Cover Sheet

SAF#	Sample ID	WSCF#	Matrix
G08-009	B1WRM3	W08P004482	WATER
I08-058	B1WTN9	W08P004483	WATER
	B1WTP2	W08P004484	WATER
I08-061	B1WY42	W08P004485	WATER
S08-008	B1WMW0	W08P004486	WATER
S08-009	B1WYD6	W08P004479	WATER
	B1WYF0	W08P004480	WATER
	B1WYF6	W08P004481	WATER
	B1WYH7	W08P004489	WATER
	B1WYH9	W08P004490	WATER
	B1WYJ3	W08P004488	WATER
	B1WYK1	W08P004487	WATER

M4W41-SLF-08-1167

ATTACHMENT 2

NARRATIVE

Consisting of 3 pages
Including cover page

Introduction

Twelve (12) groundwater samples were received at the WSCF Laboratory on September 23, 2008. Samples were analyzed for the analytes indicated on the attached copy of the chain of custody (COC) form in accordance with the *Memorandum of Agreement (MOA-FH-CHPRC-2008, Rev.0),* 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,* pages 13 through 15, for a complete listing of approved analytical methods.

Inorganic Comments

Anions – Hold time requirements for this analysis were 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 27 through 29 for QC details. Analytical Note(s):

- Sample results were D flagged if dilution(s) were required.

All QC controls are within the established limits.

ICP-MS Metals – The hold time requirements for this analysis were met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group per the GRP Letter of Instruction. See page 30 for QC details. Analytical Note(s):

- Matrix Spikes and Matrix Spike Duplicates were analyzed on samples B1WJK1 and B1WKW1 (SDG# 20081993)

- Uranium (B1WJK1) – Sample concentration exceeded spiking levels > 10 times the spiking levels. Spike recoveries are not valid. Affected sample results in this batch were X flagged.

All other QC controls are within the established limits.

Total Alkalinity – The hold time requirement for this analysis was met. A Duplicate and Laboratory Control Sample were analyzed with this delivery group per GRP Letter of Instruction. See page 31 for QC details. Analytical Note(s):

- Duplicates were analyzed on samples B1WPV4 (SDG# 20082055, SAF# F08-154), B1X0V7 (SDG# 20082025) and B1WYJ3 of this SDG.

All QC controls are within the established limits.

Organic Comments

VOA – 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 38 through 40 for QC details.

All QC controls are within the established limits.

Radiochemistry Comments

Rad Chem – There are no hold times associated with WSCF's radiochemical methods. A Duplicate, Matrix Spike, Blank and Laboratory Control Sample were analyzed with this delivery group. See page 46 through 50 for QC details. Analytical Note(s):

- Gamma Energy Analysis – Duplicate QC was analyzed on sample# B1WTJ6 (SDG# 20082039).
- Gross Alpha/Gross Beta – Duplicate QC was analyzed on sample# B1WRJ3 (SDG# 20082039). Gross Beta was also analyzed on sample# B1X183 (SDG# 20082000).
- Tritium – Duplicate and Matrix Spike were analyzed on sample# B1WRH2 (SDG# 20082039).

All QC controls are within the established limits.

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

Scot L. Fitzgerald
WSCF Analytical Laboratory Manager

Pauline D. Mix
WSCF Client Services

M4W41-SLF-08-1167

ATTACHMENT 3

ANALYTICAL RESULTS

Consisting of 44 pages
Including cover page

WSCF
ANALYTICAL RESULTS REPORT

for

GPAP
Richland, WA 99352

Attention: Steve Trent E6-35

Analytical: S.F. Fitzgerald 10/22/08

Client Services: P.D. Ellis 10/22/2008

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

This information is intended for the use of the addressee only. If the reader of this report is not the intended recipient or is not authorized by the recipient to receive the report, you are hereby notified that any dissemination, distribution or copying of this report is strictly prohibited. If you have received this report in error, please notify WSCF Laboratory immediately by telephone at (509) 373-7020 or (509) 531-8004. Information designation of this report is the responsibility of the customer.

Report#: WSCF20082051
Report Date: 20-oct-2008
Report WGPP/ver. 5.2
GPAP

w13qlog v4.2 20-oct-2008 12:50:01

Department: Inorganic

W13q Worklist/Batch/QC Report for Group# WSCF20082051

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
38138	2	38562	42985	BLANK		Anions by Ion Chromatography
38138	15	38562	42985	BLANK		Anions by Ion Chromatography
38138	23	38562	42985	BLANK		Anions by Ion Chromatography
38138	3	38562	42985	LCS		Anions by Ion Chromatography
38138	16	38562	42985	LCS		Anions by Ion Chromatography
38138	9	38562	42985	SAMPLE	W08P004480	Anions by Ion Chromatography
38138	18	38562	42985	DUP	W08P004481	Anions by Ion Chromatography
38138	19	38562	42985	MS	W08P004481	Anions by Ion Chromatography
38138	21	38562	42985	MSD	W08P004481	Anions by Ion Chromatography
38138	17	38562	42985	SAMPLE	W08P004481	Anions by Ion Chromatography
38138	21	38562	42985	SPK-RPD	W08P004481	Anions by Ion Chromatography
38138	10	38562	42985	SAMPLE	W08P004483	Anions by Ion Chromatography
38138	11	38562	42985	SAMPLE	W08P004484	Anions by Ion Chromatography
38138	12	38562	42985	SAMPLE	W08P004485	Anions by Ion Chromatography
38138	13	38562	42985	SAMPLE	W08P004487	Anions by Ion Chromatography
38138	5	38562	42985	DUP	W08P004488	Anions by Ion Chromatography
38138	6	38562	42985	MS	W08P004488	Anions by Ion Chromatography
38138	7	38562	42985	MSD	W08P004488	Anions by Ion Chromatography
38138	4	38562	42985	SAMPLE	W08P004488	Anions by Ion Chromatography
38138	7	38562	42985	SPK-RPD	W08P004488	Anions by Ion Chromatography
38138	14	38562	42985	SAMPLE	W08P004489	Anions by Ion Chromatography
38138	22	38562	42985	SAMPLE	W08P004490	Anions by Ion Chromatography
38188	1	38613	43038	BLANK		ICP-200.8 MS All possible meta
38188	2	38613	43038	BLANK		ICP-200.8 MS All possible meta
38188	3	38613	43038	LCS		ICP-200.8 MS All possible meta
38188	4	38613	43038	LCS		ICP-200.8 MS All possible meta
38188	6	38613	43038	MS	W08P004399	ICP-200.8 MS All possible meta
38188	7	38613	43038	MSD	W08P004399	ICP-200.8 MS All possible meta
38188	7	38613	43038	SPK-RPD	W08P004399	ICP-200.8 MS All possible meta
38188	9	38613	43038	MS	W08P004401	ICP-200.8 MS All possible meta
38188	10	38613	43038	MSD	W08P004401	ICP-200.8 MS All possible meta
38188	10	38613	43038	SPK-RPD	W08P004401	ICP-200.8 MS All possible meta
38188	31	38613	43038	SAMPLE	W08P004479	ICP-200.8 MS All possible meta
38188	32	38613	43038	SAMPLE	W08P004480	ICP-200.8 MS All possible meta
38188	33	38613	43038	SAMPLE	W08P004481	ICP-200.8 MS All possible meta
38188	34	38613	43038	SAMPLE	W08P004487	ICP-200.8 MS All possible meta
38188	35	38613	43038	SAMPLE	W08P004488	ICP-200.8 MS All possible meta
38188	36	38613	43038	SAMPLE	W08P004489	ICP-200.8 MS All possible meta
38188	37	38613	43038	SAMPLE	W08P004490	ICP-200.8 MS All possible meta
38235	1	38656	43078	LCS		Total Alkalinity as mg/L CaCO3
38235	14	38656	43078	LCS		Total Alkalinity as mg/L CaCO3
38235	25	38656	43078	LCS		Total Alkalinity as mg/L CaCO3
38235	3	38656	43078	DUP	W08GR03862	Total Alkalinity as mg/L CaCO3
38235	7	38656	43078	DUP	W08P004444	Total Alkalinity as mg/L CaCO3
38235	19	38656	43078	SAMPLE	W08P004479	Total Alkalinity as mg/L CaCO3
38235	20	38656	43078	SAMPLE	W08P004480	Total Alkalinity as mg/L CaCO3
38235	21	38656	43078	SAMPLE	W08P004481	Total Alkalinity as mg/L CaCO3
38235	22	38656	43078	SAMPLE	W08P004483	Total Alkalinity as mg/L CaCO3
38235	23	38656	43078	SAMPLE	W08P004484	Total Alkalinity as mg/L CaCO3
38235	24	38656	43078	SAMPLE	W08P004487	Total Alkalinity as mg/L CaCO3

38309	1	38730	43159	LCS		Total Alkalinity as mg/L CaCO3
38309	13	38730	43159	LCS		Total Alkalinity as mg/L CaCO3
38309	24	38730	43159	LCS		Total Alkalinity as mg/L CaCO3
38309	4	38730	43159	DUP	W08P004488	Total Alkalinity as mg/L CaCO3
38309	3	38730	43159	SAMPLE	W08P004488	Total Alkalinity as mg/L CaCO3
38309	5	38730	43159	SAMPLE	W08P004489	Total Alkalinity as mg/L CaCO3
38309	6	38730	43159	SAMPLE	W08P004490	Total Alkalinity as mg/L CaCO3

w13qlog v4.2 20-oct-2008 12:50:01

Department: Organic

W13q Worklist/Batch/QC Report for Group# WSCF20082051

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
			43162	BLANK		VOA Ground Water Protection
			43162	LCS		VOA Ground Water Protection
			43162	MS	W08P004486	VOA Ground Water Protection
			43162	MSD	W08P004486	VOA Ground Water Protection
			43162	SAMPLE	W08P004486	VOA Ground Water Protection
			43162	SPK-RPD	W08P004486	VOA Ground Water Protection
			43162	SURR	W08P004486	VOA Ground Water Protection
			43162	SAMPLE	W08P004487	VOA Ground Water Protection
			43162	SURR	W08P004487	VOA Ground Water Protection
			43162	SAMPLE	W08P004488	VOA Ground Water Protection
			43162	SURR	W08P004488	VOA Ground Water Protection

w13qlog v4.2 20-oct-2008 12:50:01

Department: Radiochemistry

W13q Worklist/Batch/QC Report for Group# WSCF20082051

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
38267	1	38688	43210	BLANK		Tritium by Liq Sct column prep
38267	2	38688	43210	LCS		Tritium by Liq Sct column prep
38267	4	38688	43210	DUP	W08P004459	Tritium by Liq Sct column prep
38267	3	38688	43210	MS	W08P004459	Tritium by Liq Sct column prep
38267	9	38688	43210	SAMPLE	W08P004483	Tritium by Liq Sct column prep
38267	10	38688	43210	SAMPLE	W08P004484	Tritium by Liq Sct column prep
38316	1	38737	43224	BLANK		Gamma Energy Analysis-grd H2O
38316	2	38737	43224	LCS		Gamma Energy Analysis-grd H2O
38316	3	38737	43224	DUP	W08P004456	Gamma Energy Analysis-grd H2O
38316	5	38737	43224	SAMPLE	W08P004483	Gamma Energy Analysis-grd H2O
38316	6	38737	43224	SAMPLE	W08P004484	Gamma Energy Analysis-grd H2O
38345	1	38766	43267	BLANK		Gross Alpha/Gross Beta (AB32)
38345	2	38766	43267	LCS		Gross Alpha/Gross Beta (AB32)
38345	3	38766	43267	DUP	W08P004461	Gross Alpha/Gross Beta (AB32)
38345	7	38766	43267	SAMPLE	W08P004484	Gross Alpha/Gross Beta (AB32)
38345	8	38766	43267	SAMPLE	W08P004487	Gross Alpha/Gross Beta (AB32)
38345	9	38766	43267	SAMPLE	W08P004488	Gross Alpha/Gross Beta (AB32)
38382	1	38801	43274	BLANK		Gross Alpha on Alpha Plateau
38382	2	38801	43274	LCS		Gross Alpha on Alpha Plateau
38382	3	38801	43274	DUP	W08P004461	Gross Alpha on Alpha Plateau
38382	7	38801	43274	SAMPLE	W08P004484	Gross Alpha on Alpha Plateau
38382	8	38801	43274	SAMPLE	W08P004487	Gross Alpha on Alpha Plateau
38382	9	38801	43274	SAMPLE	W08P004488	Gross Alpha on Alpha Plateau
38372	1	38793	43284	BLANK		Gross Alpha/Gross Beta (AB32)
38372	2	38793	43284	LCS		Gross Alpha/Gross Beta (AB32)
38372	3	38793	43284	DUP	W08P004424	Gross Alpha/Gross Beta (AB32)
38372	6	38793	43284	SAMPLE	W08P004483	Gross Alpha/Gross Beta (AB32)
38348	1	38769	43323	BLANK		Strontium 89/90
38348	2	38769	43323	LCS		Strontium 89/90
38348	3	38769	43323	DUP	W08P004482	Strontium 89/90
38348	4	38769	43323	SAMPLE	W08P004482	Strontium 89/90
38348	5	38769	43323	SURR	W08P004482	Strontium 89/90
38348	6	38769	43323	SAMPLE	W08P004484	Strontium 89/90
38348	7	38769	43323	SURR	W08P004484	Strontium 89/90
38348	8	38769	43323	SAMPLE	W08P004488	Strontium 89/90
38348	9	38769	43323	SURR	W08P004488	Strontium 89/90

WSCF
METHOD REFERENCES REPORT

Department: Inorganic

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

LA-505-412	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-531-411	LA-531-411: ALKALINITY (TITRIMETRIC)	
	HEIS 2320B	Alkalinity
	Standard Methods 2320B	Alkalinity
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
METHOD REFERENCES REPORT

Department: Organic

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-523-455 LA-523-455: VOLATILE SAMPLE ANALYSIS BY SW-846

EPA SW-846 8000B	DETERMINATIVE CHROMATOGRAPHIC SEPARATIONS
EPA SW-846 8260B	VOLATILE ORGANIC COMPOUNDS BY GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)
HEIS 8260_VOA_GCMS	Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

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
METHOD REFERENCES REPORT

Department: Radiochemistry

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

LA-508-415 LA-508-415: OPERATION OF THE PROTEAN 2-INCH ALPHA/BETA COUNTING SYSTEM FOR GROSS

HEIS ALPHA_GPC	GROSS ALPHA GPC
HEIS BETA_GPC	GROSS BETA GPC
HEIS SRTOT_SEP_PRECIP_GPC	Strontium 89/90

LA-508-421 LA-508-421: OPERATION OF THE TRI-CARB MODEL 2500TR LIQUID SCINTILLATION ANALYZER

HEIS ALPHA_LSC	A/B Liquid Scintilillation
HEIS BETA_LSC	A/B Liquid Scintilallation
HEIS TC99_3MDSK_LSC	TC99 by Liquid Scintillation
HEIS TRITIUM_EIE_LSC	Tritium Liquid Scintillation

LA-508-481 LA-508-481: GAMMA ENERGY ANALYSIS USING PROCOUNT SOFTWARE

HEIS GAMMA_GS	Gamma Emmision Spectrometry

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 E6-35
SAF Number: S08-009
Sample # W08P004479
Client ID: B1WYD6 GPP-PNNL WSCF TRENT **Matrix:** WATER

Group #: WSCF20082051
Department: Inorganic
Sampled: 09/23/08
Received: 09/23/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
ICP-200.8 MS All possible meta Prep											**09/25/08**
ICP-200.8 MS All possible meta											
Uranium	7440-61-1	LA-505-412	X	43.5	ug/L			1.00	0.0500		09/25/08
Total Alkalinity as mg/L CaCO3											
Total Alkalinity as mg/L CaCO3	ALKALINITY	LA-531-411		120	mg/L			1.00	1.0		09/26/08

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

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)

D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)
X - Other flags/notes described in the comments/narrative(inorg)

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: S08-009
Sample # W08P004480
Client ID: B1WYF0 GPP-PNNL WSCF TRENT **Matrix:** WATER

Group #: WSCF20082051
Department: Inorganic
Sampled: 09/23/08
Received: 09/23/08

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	D	0.110	mg/L			2.00	0.046		09/23/08
Chloride	16887-00-6	LA-533-410	D	19.9	mg/L			2.00	0.094		09/23/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.0256	mg/L			2.00	0.026		09/23/08
Nitrogen in Nitrate	NO3-N	LA-533-410	D	6.02	mg/L			2.00	0.024		09/23/08
Sulfate	14808-79-8	LA-533-410	D	54.9	mg/L			2.00	0.26		09/23/08
ICP-200.8 MS All possible meta Prep											**09/25/08**
ICP-200.8 MS All possible meta											
Uranium	7440-61-1	LA-505-412	X	57.4	ug/L			1.00	0.0500		09/25/08
Total Alkalinity as mg/L CaCO3											
Total Alkalinity as mg/L CaCO3	ALKALINITY	LA-531-411		120	mg/L			1.00	1.0		09/26/08

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

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J - Analyte < lowest calibration but > = MDL.(org)
U - Analyzed for but not detected above limiting criteria.(org)

D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)
X - Other flags/notes described in the comments/narrative(inorg)

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: S08-009
Sample # W08P004481
Client ID: B1WYF6 GPP-PNNL WSCF TRENT **Matrix:** WATER

Group #: WSCF20082051
Department: Inorganic
Sampled: 09/23/08
Received: 09/23/08

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	D	0.173	mg/L			2.00	0.046		09/23/08
Chloride	16887-00-6	LA-533-410	D	15.5	mg/L			2.00	0.094		09/23/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.0256	mg/L			2.00	0.026		09/23/08
Nitrogen in Nitrate	NO3-N	LA-533-410	D	4.62	mg/L			2.00	0.024		09/23/08
Sulfate	14808-79-8	LA-533-410	D	40.4	mg/L			2.00	0.26		09/23/08
ICP-200.8 MS All possible meta Prep											**09/25/08**
ICP-200.8 MS All possible meta											
Uranium	7440-61-1	LA-505-412	X	184	ug/L			1.00	0.0500		09/25/08
Total Alkalinity as mg/L CaCO3											
Total Alkalinity as mg/L CaCO3	ALKALINITY	LA-531-411		110	mg/L			1.00	1.0		09/26/08

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

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)

D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)
X - Other flags/notes described in the comments/narrative(inorg)

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-058
Sample # W08P004483
Client ID: B1WTN9 GPP-PNNL WSCF TRENT **Matrix:** WATER

Group #: WSCF20082051
Department: Inorganic
Sampled: 09/23/08
Received: 09/23/08

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	< 0.0464	mg/L			2.00	0.046		09/23/08
Chloride	16887-00-6	LA-533-410	D	17.6	mg/L			2.00	0.094		09/23/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.0256	mg/L			2.00	0.026		09/23/08
Nitrogen in Nitrate	NO3-N	LA-533-410	D	13.4	mg/L			10.00	0.12		09/23/08
Sulfate	14808-79-8	LA-533-410	D	79.2	mg/L			2.00	0.26		09/23/08
Total Alkalinity as mg/L CaCO3											
Total Alkalinity as mg/L CaCO3	ALKALINITY	LA-531-411		65.0	mg/L			1.00	1.0		09/26/08

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

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)

D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)
X - Other flags/notes described in the comments/narrative(inorg)

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-058
Sample # W08P004484
Client ID: B1WTP2 GPP-PNNL WSCF TRENT **Matrix:** WATER

Group #: WSCF20082051
Department: Inorganic
Sampled: 09/23/08
Received: 09/23/08

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	D	0.160	mg/L			2.00	0.046		09/23/08
Chloride	16887-00-6	LA-533-410	D	3.23	mg/L			2.00	0.094		09/23/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.0256	mg/L			2.00	0.026		09/23/08
Nitrogen in Nitrate	NO3-N	LA-533-410	D	2.24	mg/L			2.00	0.024		09/23/08
Sulfate	14808-79-8	LA-533-410	D	54.1	mg/L			2.00	0.26		09/23/08
Total Alkalinity as mg/L CaCO3											
Total Alkalinity as mg/L CaCO3	ALKALINITY	LA-531-411		130	mg/L			1.00	1.0		09/26/08

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

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)

D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)
X - Other flags/notes described in the comments/narrative(inorg)

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-061
Sample # W08P004485
Client ID: B1WY42 GPP-PNNL WSCF TRENT **Matrix:** WATER

Group #: WSCF20082051
Department: Inorganic
Sampled: 09/23/08
Received: 09/23/08

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	< 0.0464	mg/L			2.00	0.046		09/23/08
Chloride	16887-00-6	LA-533-410	D	31.8	mg/L			2.00	0.094		09/23/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.0256	mg/L			2.00	0.026		09/23/08
Nitrogen in Nitrate	NO3-N	LA-533-410	D	14.3	mg/L			10.00	0.12		09/23/08
Sulfate	14808-79-8	LA-533-410	D	135	mg/L			10.00	1.3		09/23/08

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

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)

D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)
X - Other flags/notes described in the comments/narrative(inorg)

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: S08-009
Sample # W08P004487
Client ID: B1WYK1 GPP-PNNL WSCF TRENT **Matrix:** WATER

Group #: WSCF20082051
Department: Inorganic
Sampled: 09/23/08
Received: 09/23/08

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	D	0.112	mg/L			2.00	0.046		09/23/08
Chloride	16887-00-6	LA-533-410	D	21.0	mg/L			2.00	0.094		09/23/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.0256	mg/L			2.00	0.026		09/23/08
Nitrogen in Nitrate	NO3-N	LA-533-410	D	5.97	mg/L			2.00	0.024		09/23/08
Sulfate	14808-79-8	LA-533-410	D	46.1	mg/L			2.00	0.26		09/23/08
ICP-200.8 MS All possible meta Prep											**09/25/08**
ICP-200.8 MS All possible meta											
Uranium	7440-61-1	LA-505-412	X	108	ug/L			1.00	0.0500		09/25/08
Total Alkalinity as mg/L CaCO3											
Total Alkalinity as mg/L CaCO3	ALKALINITY	LA-531-411		130	mg/L			1.00	1.0		09/26/08

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

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)

D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)
X - Other flags/notes described in the comments/narrative(inorg)

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: S08-009
Sample # W08P004488
Client ID: B1WYJ3 GPP-PNNL WSCF TRENT **Matrix:** WATER

Group #: WSCF20082051
Department: Inorganic
Sampled: 09/23/08
Received: 09/23/08

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	D	0.435	mg/L			2.00	0.046		09/23/08
Chloride	16887-00-6	LA-533-410	D	8.57	mg/L			2.00	0.094		09/23/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.0256	mg/L			2.00	0.026		09/23/08
Nitrogen in Nitrate	NO3-N	LA-533-410	DU	< 0.0242	mg/L			2.00	0.024		09/23/08
Sulfate	14808-79-8	LA-533-410	D	9.74	mg/L			2.00	0.26		09/23/08
ICP-200.8 MS All possible meta Prep											**09/25/08**
ICP-200.8 MS All possible meta											
Uranium	7440-61-1	LA-505-412	X	0.102	ug/L			1.00	0.0500		09/25/08
Total Alkalinity as mg/L CaCO3											
Total Alkalinity as mg/L CaCO3	ALKALINITY	LA-531-411		160	mg/L			1.00	1.0		10/02/08

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

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)

D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)
X - Other flags/notes described in the comments/narrative(inorg)

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: S08-009
Sample # W08P004489
Client ID: B1WYH7 GPP-PNNL WSCF TRENT **Matrix:** WATER

Group #: WSCF20082051
Department: Inorganic
Sampled: 09/23/08
Received: 09/23/08

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	D	0.130	mg/L			2.00	0.046		09/23/08
Chloride	16887-00-6	LA-533-410	D	21.9	mg/L			2.00	0.094		09/23/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.0256	mg/L			2.00	0.026		09/23/08
Nitrogen in Nitrate	NO3-N	LA-533-410	D	6.82	mg/L			2.00	0.024		09/23/08
Sulfate	14808-79-8	LA-533-410	D	42.0	mg/L			2.00	0.26		09/23/08
ICP-200.8 MS All possible meta Prep											**09/25/08**
ICP-200.8 MS All possible meta											
Uranium	7440-61-1	LA-505-412	X	19.1	ug/L			1.00	0.0500		09/25/08
Total Alkalinity as mg/L CaCO3											
Total Alkalinity as mg/L CaCO3	ALKALINITY	LA-531-411		110	mg/L			1.00	1.0		10/02/08

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

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)

D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)
X - Other flags/notes described in the comments/narrative(inorg)

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: S08-009
Sample # W08P004490
Client ID: B1WYH9 GPP-PNNL WSCF TRENT **Matrix:** WATER

Group #: WSCF20082051
Department: Inorganic
Sampled: 09/23/08
Received: 09/23/08

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	D	0.136	mg/L			2.00	0.046		09/23/08
Chloride	16887-00-6	LA-533-410	D	22.0	mg/L			2.00	0.094		09/23/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.0256	mg/L			2.00	0.026		09/23/08
Nitrogen in Nitrate	NO3-N	LA-533-410	D	6.10	mg/L			2.00	0.024		09/23/08
Sulfate	14808-79-8	LA-533-410	D	53.7	mg/L			2.00	0.26		09/23/08
ICP-200.8 MS All possible meta Prep											**09/25/08**
ICP-200.8 MS All possible meta											
Uranium	7440-61-1	LA-505-412	X	104	ug/L			1.00	0.0500		09/25/08
Total Alkalinity as mg/L CaCO3											
Total Alkalinity as mg/L CaCO3	ALKALINITY	LA-531-411		130	mg/L			1.00	1.0		10/02/08

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

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)

D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)
X - Other flags/notes described in the comments/narrative(inorg)

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WSCF
ANALYTICAL COMMENT REPORT

Attention: Steve Trent E6-35

Group #: WSCF20082051
Department: Inorganic

Sample #	Client ID	Lab Area	Test	Comment
		VALGROUP		ICP-MS:Sample result for sample P-4399 more than 10 times the spike amount. Recovery data not valid.

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

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WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20082051
Matrix: WATER
Test: Anions by Ion Chromatography

Sample Date: 09/23/08
Receive Date:09/23/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08P004481											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Chloride	16887-00-6	15.6982		RPD			1.099	20.000		09/23/08
DUP	Fluoride	16984-48-8	0.1984		RPD			13.851	20.000		09/23/08
DUP	Nitrogen in Nitrite	NO2-N	<2.56e-2		RPD			n/a	20.000	U	09/23/08
DUP	Nitrogen in Nitrate	NO3-N	4.6478		RPD			0.641	20.000		09/23/08
DUP	Sulfate	14808-79-8	40.5991		RPD			0.422	20.000		09/23/08
MS	Chloride	16887-00-6	1.0779	108.332	% Recov	80.000	120.000				09/23/08
MS	Fluoride	16984-48-8	0.55115	111.795	% Recov	80.000	120.000				09/23/08
MS	Nitrogen in Nitrite	NO2-N	0.5245	106.606	% Recov	80.000	120.000				09/23/08
MS	Nitrogen in Nitrate	NO3-N	0.45	100.897	% Recov	80.000	120.000				09/23/08
MS	Sulfate	14808-79-8	1.96195	100.099	% Recov	80.000	120.000				09/23/08
MSD	Chloride	16887-00-6	0.94635	95.111	% Recov	80.000	120.000				09/23/08
MSD	Fluoride	16984-48-8	0.51785	105.041	% Recov	80.000	120.000				09/23/08
MSD	Nitrogen in Nitrite	NO2-N	0.5087	103.394	% Recov	80.000	120.000				09/23/08
MSD	Nitrogen in Nitrate	NO3-N	0.459	102.915	% Recov	80.000	120.000				09/23/08
MSD	Sulfate	14808-79-8	1.82715	93.222	% Recov	80.000	120.000				09/23/08
SPK-RPD	Chloride	16887-00-6	95.111		RPD			12.997	20.000		09/23/08
SPK-RPD	Fluoride	16984-48-8	105.041		RPD			6.230	20.000		09/23/08
SPK-RPD	Nitrogen in Nitrite	NO2-N	103.394		RPD			3.059	20.000		09/23/08
SPK-RPD	Nitrogen in Nitrate	NO3-N	102.915		RPD			1.980	20.000		09/23/08
SPK-RPD	Sulfate	14808-79-8	93.222		RPD			7.115	20.000		09/23/08
Lab ID: W08P004488											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Chloride	16887-00-6	8.5264		RPD			0.463	20.000		09/23/08
DUP	Fluoride	16984-48-8	0.4514		RPD			3.677	20.000		09/23/08
DUP	Nitrogen in Nitrite	NO2-N	<2.56e-2		RPD			n/a	20.000	U	09/23/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20082051
Matrix: WATER
Test: Anions by Ion Chromatography

Sample Date: 09/23/08
Receive Date:09/23/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
DUP	Nitrogen in Nitrate	NO3-N	<2.42e-2		RPD			n/a	20.000	U	09/23/08
DUP	Sulfate	14808-79-8	9.7342		RPD			0.023	20.000		09/23/08
MS	Chloride	16887-00-6	1.0462	105.146	% Recov	80.000	120.000				09/23/08
MS	Fluoride	16984-48-8	0.5224	105.963	% Recov	80.000	120.000				09/23/08
MS	Nitrogen in Nitrite	NO2-N	0.4453	90.508	% Recov	80.000	120.000				09/23/08
MS	Nitrogen in Nitrate	NO3-N	0.44715	100.258	% Recov	80.000	120.000				09/23/08
MS	Sulfate	14808-79-8	1.9797	101.005	% Recov	80.000	120.000				09/23/08
MSD	Chloride	16887-00-6	0.87345	87.784	% Recov	80.000	120.000				09/23/08
MSD	Fluoride	16984-48-8	0.52685	106.866	% Recov	80.000	120.000				09/23/08
MSD	Nitrogen in Nitrite	NO2-N	0.42445	86.270	% Recov	80.000	120.000				09/23/08
MSD	Nitrogen in Nitrate	NO3-N	0.4086	91.614	% Recov	80.000	120.000				09/23/08
MSD	Sulfate	14808-79-8	2.00565	102.329	% Recov	80.000	120.000				09/23/08
SPK-RPD	Chloride	16887-00-6	87.784		RPD			17.998	20.000		09/23/08
SPK-RPD	Fluoride	16984-48-8	106.866		RPD			0.849	20.000		09/23/08
SPK-RPD	Nitrogen in Nitrite	NO2-N	86.270		RPD			4.795	20.000		09/23/08
SPK-RPD	Nitrogen in Nitrate	NO3-N	91.614		RPD			9.010	20.000		09/23/08
SPK-RPD	Sulfate	14808-79-8	102.329		RPD			1.302	20.000		09/23/08
BATCH QC											
BLANK	Chloride	16887-00-6	<4.69e-2	n/a	mg/L	0.000	0.030			U	09/23/08
BLANK	Chloride	16887-00-6	<4.69e-2	n/a	mg/L	0.000	0.030			U	09/23/08
BLANK	Chloride	16887-00-6	<4.69e-2	n/a	mg/L	0.000	0.030			U	09/23/08
BLANK	Fluoride	16984-48-8	<2.32e-2	n/a	mg/L	0.000	0.030			U	09/23/08
BLANK	Fluoride	16984-48-8	<2.32e-2	n/a	mg/L	0.000	0.030			U	09/23/08
BLANK	Fluoride	16984-48-8	<2.32e-2	n/a	mg/L	0.000	0.030			U	09/23/08
BLANK	Nitrogen in Nitrite	NO2-N	<1.28e-2	n/a	mg/L	0.000	0.020			U	09/23/08
BLANK	Nitrogen in Nitrite	NO2-N	<1.28e-2	n/a	mg/L	0.000	0.020			U	09/23/08
BLANK	Nitrogen in Nitrite	NO2-N	<1.28e-2	n/a	mg/L	0.000	0.020			U	09/23/08
BLANK	Nitrogen in Nitrate	NO3-N	<1.21e-2	n/a	mg/L	0.000	0.040			U	09/23/08
BLANK	Nitrogen in Nitrate	NO3-N	<1.21e-2	n/a	mg/L	0.000	0.040			U	09/23/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Inorganic**

SDG Number: WSCF20082051
Matrix: WATER
Test: Anions by Ion Chromatography

Sample Date:
Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
BLANK	Nitrogen in Nitrate	NO3-N	<1.21e-2	n/a	mg/L	0.000	0.040			U	09/23/08
BLANK	Sulfate	14808-79-8	<0.132	n/a	mg/L	0.000	0.200			U	09/23/08
BLANK	Sulfate	14808-79-8	<0.132	n/a	mg/L	0.000	0.200			U	09/23/08
BLANK	Sulfate	14808-79-8	<0.132	n/a	mg/L	0.000	0.200			U	09/23/08
LCS	Chloride	16887-00-6	198.0576	98.536	% Recov	80.000	120.000				09/23/08
LCS	Chloride	16887-00-6	200.5333	99.768	% Recov	80.000	120.000				09/23/08
LCS	Fluoride	16984-48-8	105.0078	105.430	% Recov	80.000	120.000				09/23/08
LCS	Fluoride	16984-48-8	108.2577	108.692	% Recov	80.000	120.000				09/23/08
LCS	Nitrogen in Nitrite	NO2-N	98.0632	98.655	% Recov	80.000	120.000				09/23/08
LCS	Nitrogen in Nitrite	NO2-N	99.5878	100.189	% Recov	80.000	120.000				09/23/08
LCS	Nitrogen in Nitrate	NO3-N	93.1235	103.356	% Recov	80.000	120.000				09/23/08
LCS	Nitrogen in Nitrate	NO3-N	91.9698	102.075	% Recov	80.000	120.000				09/23/08
LCS	Sulfate	14808-79-8	402.3725	101.609	% Recov	80.000	120.000				09/23/08
LCS	Sulfate	14808-79-8	394.0748	99.514	% Recov	80.000	120.000				09/23/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20082051
Matrix: WATER
Test: ICP-200.8 MS All possible meta

Sample Date: 09/15/08
Receive Date:09/15/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08P004399											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Uranium	7440-61-1	21.7	54.250	% Recov	70.000	130.000		•		09/25/08
MSD	Uranium	7440-61-1	2.4	6.000	% Recov	70.000	130.000		•		09/25/08
SPK-RPD	Uranium	7440-61-1	6.000		RPD			160.166	20.000 •		09/25/08
Lab ID: W08P004401											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Uranium	7440-61-1	40.8	102.000	% Recov	70.000	130.000				09/25/08
MSD	Uranium	7440-61-1	39.8	99.500	% Recov	70.000	130.000				09/25/08
SPK-RPD	Uranium	7440-61-1	99.500		RPD			2.481	20.000		09/25/08
BATCH QC											
BLANK	Uranium	7440-61-1	<5e-2	n/a	ug/L					U	09/25/08
BLANK	Uranium	7440-61-1	<5e-2	n/a	ug/L					U	09/25/08
LCS	Uranium	7440-61-1	38.49	96.225	% Recov	85.000	115.000				09/25/08
LCS	Uranium	7440-61-1	39.72	99.300	% Recov	85.000	115.000				09/25/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Inorganic**

SDG Number: WSCF20082051
Matrix: WATER
Test: Total Alkalinity as mg/L CaCO3

Sample Date: 09/23/08
Receive Date:09/23/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR03862											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Total Alkalinity as mg/L CaCO3	ALKALINITY	84.03		RPD			4.103	20.000		09/26/08
Lab ID: W08P004444											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Total Alkalinity as mg/L CaCO3	ALKALINITY	76.72		RPD			0.714	20.000		09/26/08
BATCH QC											
LCS	Total Alkalinity as mg/L CaCO3	ALKALINITY	31.45	105.537	%Recove	80.000	120.000				09/26/08
LCS	Total Alkalinity as mg/L CaCO3	ALKALINITY	32.28	108.322	%Recove	80.000	120.000				09/26/08
LCS	Total Alkalinity as mg/L CaCO3	ALKALINITY	32.06	107.584	%Recove	80.000	120.000				09/26/08
Lab ID: W08P004488											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Total Alkalinity as mg/L CaCO3	ALKALINITY	159.1		RPD			0.814	20.000		10/02/08
BATCH QC											
LCS	Total Alkalinity as mg/L CaCO3	ALKALINITY	32.93	110.503	%Recove	80.000	120.000				10/02/08
LCS	Total Alkalinity as mg/L CaCO3	ALKALINITY	32.40	108.725	%Recove	80.000	120.000				10/02/08
LCS	Total Alkalinity as mg/L CaCO3	ALKALINITY	32.60	109.396	%Recove	80.000	120.000				10/02/08

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: S08-008
Sample # W08P004486
Client ID: B1WMW0 GPP-PNNL TRENT WSCF **Matrix:** WATER

Group #: WSCF20082051
Department: Organic
Sampled: 09/23/08
Received: 09/23/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
VOA Ground Water Protection											
1,1-Dichloroethene	75-35-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08
Trichloroethene	79-01-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08
Benzene	71-43-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08
Toluene	108-88-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08
Chlorobenzene	108-90-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08
1,1-Dichloroethane	75-34-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08
Ethylbenzene	100-41-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08
1,2-Dichloroethane	107-06-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08
4-Methyl-2-Pentanone	108-10-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08
Tetrachloroethene	127-18-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08
Xylenes (total)	1330-20-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08
Carbon tetrachloride	56-23-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08
Acetone	67-64-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08
Chloroform	67-66-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08
Vinyl chloride	75-01-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08
Methylenechloride	75-09-2	LA-523-455		11.0	ug/L			1.00	1.0		10/02/08
Carbon disulfide	75-15-0	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08
2-Butanone	78-93-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08
1-Butanol	71-36-3	LA-523-455	U	< 100	ug/L			1.00	1.0e+02		10/02/08
Tetrahydrofuran	109-99-9	LA-523-455	U	< 2.00	ug/L			1.00	2.0		10/02/08
trans-1,2-Dichloroethylene	156-60-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08
cis-1,2-Dichloroethylene	156-59-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08

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

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)

D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)
X - Other flags/notes described in the comments/narrative(inorg)

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: S08-008
Sample # W08P004486
Client ID: B1WMW0 GPP-PNNL TRENT WSCF **Matrix:** WATER

Group #: WSCF20082051
Department: Organic
Sampled: 09/23/08
Received: 09/23/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Ethyl cyanide	107-12-0	LA-523-455	U	< 2.00	ug/L			1.00	2.0		10/02/08
1,4-Dichlorobenzene	106-46-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08

MDL=Minimum Detection Limit
RQ=Result Qualifier
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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: S08-009
Sample # W08P004487
Client ID: B1WYK1 GPP-PNNL WSCF TRENT **Matrix:** WATER

Group #: WSCF20082051
Department: Organic
Sampled: 09/23/08
Received: 09/23/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
VOA Ground Water Protection											
1,1-Dichloroethene	75-35-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08
Trichloroethene	79-01-6	LA-523-455	J	1.00	ug/L			1.00	1.0		10/02/08
Benzene	71-43-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08
Toluene	108-88-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08
Chlorobenzene	108-90-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08
1,1-Dichloroethane	75-34-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08
Ethylbenzene	100-41-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08
1,2-Dichloroethane	107-06-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08
4-Methyl-2-Pentanone	108-10-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08
Tetrachloroethene	127-18-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08
Xylenes (total)	1330-20-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08
Carbon tetrachloride	56-23-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08
Acetone	67-64-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08
Chloroform	67-66-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08
Vinyl chloride	75-01-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08
Methylenechloride	75-09-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08
Carbon disulfide	75-15-0	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08
2-Butanone	78-93-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08
1-Butanol	71-36-3	LA-523-455	U	< 100	ug/L			1.00	1.0e+02		10/02/08
Tetrahydrofuran	109-99-9	LA-523-455	U	< 2.00	ug/L			1.00	2.0		10/02/08
trans-1,2-Dichloroethylene	156-60-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08
cis-1,2-Dichloroethylene	156-59-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08

MDL=Minimum Detection Limit
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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: S08-009
Sample # W08P004487
Client ID: B1WYK1 GPP-PNNL WSCF TRENT **Matrix:** WATER

Group #: WSCF20082051
Department: Organic
Sampled: 09/23/08
Received: 09/23/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Ethyl cyanide	107-12-0	LA-523-455	U	< 2.00	ug/L			1.00	2.0		10/02/08
1,4-Dichlorobenzene	106-46-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08

MDL=Minimum Detection Limit
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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: S08-009
Sample # W08P004488
Client ID: B1WYJ3 GPP-PNNL WSCF TRENT **Matrix:** WATER

Group #: WSCF20082051
Department: Organic
Sampled: 09/23/08
Received: 09/23/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
VOA Ground Water Protection											
1,1-Dichloroethene	75-35-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08
Trichloroethene	79-01-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08
Benzene	71-43-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08
Toluene	108-88-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08
Chlorobenzene	108-90-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08
1,1-Dichloroethane	75-34-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08
Ethylbenzene	100-41-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08
1,2-Dichloroethane	107-06-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08
4-Methyl-2-Pentanone	108-10-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08
Tetrachloroethene	127-18-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08
Xylenes (total)	1330-20-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08
Carbon tetrachloride	56-23-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08
Acetone	67-64-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08
Chloroform	67-66-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08
Vinyl chloride	75-01-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08
Methylenechloride	75-09-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08
Carbon disulfide	75-15-0	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08
2-Butanone	78-93-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08
1-Butanol	71-36-3	LA-523-455	U	< 100	ug/L			1.00	1.0e+02		10/02/08
Tetrahydrofuran	109-99-9	LA-523-455	U	< 2.00	ug/L			1.00	2.0		10/02/08
trans-1,2-Dichloroethylene	156-60-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08
cis-1,2-Dichloroethylene	156-59-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08

MDL=Minimum Detection Limit
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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: S08-009
Sample # W08P004488
Client ID: B1WYJ3 GPP-PNNL WSCF TRENT **Matrix:** WATER

Group #: WSCF20082051
Department: Organic
Sampled: 09/23/08
Received: 09/23/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Ethyl cyanide	107-12-0	LA-523-455	U	< 2.00	ug/L			1.00	2.0		10/02/08
1,4-Dichlorobenzene	106-46-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		10/02/08

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

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)

D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)
X - Other flags/notes described in the comments/narrative(inorg)

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WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20082051
Matrix: WATER
Test: VOA Ground Water Protection

Sample Date: 09/23/08
Receive Date:09/23/08

Lab ID: W08P004486
BATCH QC ASSOCIATED WITH SAMPLE

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
MS	1,1-Dichloroethene	75-35-4	23.950	95.800	% Recov	63.000	117.000				10/02/08
MS	Benzene	71-43-2	23.220	92.900	% Recov	75.000	129.000				10/02/08
MS	4-Bromofluorobenzene(Surr)	460-00-4	48.460	96.900	% Recov	75.000	125.000				10/02/08
MS	Chlorobenzene	108-90-7	24.300	97.200	% Recov	79.000	119.000				10/02/08
MS	1,2-Dichloroethane-d4(Surr)	17060-07-0	52.540	105.000	% Recov	75.000	125.000				10/02/08
MS	Toluene-d8(Surr)	2037-26-5	47.240	94.500	% Recov	75.000	125.000				10/02/08
MS	Toluene	108-88-3	23.580	94.300	% Recov	76.000	120.000				10/02/08
MS	Trichloroethene	79-01-6	20.240	81.000	% Recov	73.000	123.000				10/02/08
MSD	1,1-Dichloroethene	75-35-4	24.150	96.600	% Recov	63.000	117.000				10/02/08
MSD	Benzene	71-43-2	23.560	94.200	% Recov	75.000	129.000				10/02/08
MSD	4-Bromofluorobenzene(Surr)	460-00-4	48.920	97.800	% Recov	75.000	125.000				10/02/08
MSD	Chlorobenzene	108-90-7	24.880	99.500	% Recov	79.000	119.000				10/02/08
MSD	1,2-Dichloroethane-d4(Surr)	17060-07-0	52.630	105.000	% Recov	75.000	125.000				10/02/08
MSD	Toluene-d8(Surr)	2037-26-5	47.410	94.800	% Recov	75.000	125.000				10/02/08
MSD	Toluene	108-88-3	23.690	94.800	% Recov	76.000	120.000				10/02/08
MSD	Trichloroethene	79-01-6	20.680	82.700	% Recov	73.000	123.000				10/02/08
SPK-RPD	1,1-Dichloroethene	75-35-4	96.600		RPD			0.832	20.000		10/02/08
SPK-RPD	Benzene	71-43-2	94.200		RPD			1.390	20.000		10/02/08
SPK-RPD	4-Bromofluorobenzene(Surr)	460-00-4	97.800		RPD			0.924	20.000		10/02/08
SPK-RPD	Chlorobenzene	108-90-7	99.500		RPD			2.339	20.000		10/02/08
SPK-RPD	1,2-Dichloroethane-d4(Surr)	17060-07-0	105.000		RPD			0.000	20.000		10/02/08
SPK-RPD	Toluene-d8(Surr)	2037-26-5	94.800		RPD			0.317	20.000		10/02/08
SPK-RPD	Toluene	108-88-3	94.800		RPD			0.529	20.000		10/02/08
SPK-RPD	Trichloroethene	79-01-6	82.700		RPD			2.077	20.000		10/02/08
SURR	4-Bromofluorobenzene(Surr)	460-00-4	48.590	97.200	% Recov	75.000	125.000				10/02/08
SURR	1,2-Dichloroethane-d4(Surr)	17060-07-0	53.130	106.000	% Recov	75.000	125.000				10/02/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20082051
Matrix: WATER
Test: VOA Ground Water Protection

Sample Date: 09/23/08
Receive Date:09/23/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
SURR	Toluene-d8(Surr)	2037-26-5	47.700	95.400	% Recov	75.000	125.000				10/02/08
Lab ID: W08P004487											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	4-Bromofluorobenzene(Surr)	460-00-4	49.080	98.200	% Recov	75.000	125.000				10/02/08
SURR	1,2-Dichloroethane-d4(Surr)	17060-07-0	52.540	105.000	% Recov	75.000	125.000				10/02/08
SURR	Toluene-d8(Surr)	2037-26-5	48.090	96.200	% Recov	75.000	125.000				10/02/08
Lab ID: W08P004488											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	4-Bromofluorobenzene(Surr)	460-00-4	48.780	97.600	% Recov	75.000	125.000				10/02/08
SURR	1,2-Dichloroethane-d4(Surr)	17060-07-0	52.070	104.000	% Recov	75.000	125.000				10/02/08
SURR	Toluene-d8(Surr)	2037-26-5	47.950	95.900	% Recov	75.000	125.000				10/02/08
BATCH QC											
BLANK	1,1-Dichloroethane	75-34-3	< 1.0	n/a	ug/L					U	10/02/08
BLANK	1,1,1-Trichloroethane	71-55-6	< 1.0	n/a	ug/L					U	10/02/08
BLANK	1,1,2-Trichloroethane	79-00-5	< 1.0	n/a	ug/L					U	10/02/08
BLANK	1,1-Dichloroethene	75-35-4	< 1.0	n/a	ug/L					U	10/02/08
BLANK	1,2-Dichloroethane	107-06-2	< 1.0	n/a	ug/L					U	10/02/08
BLANK	1,4-Dichlorobenzene	106-46-7	< 1.0	n/a	ug/L					U	10/02/08
BLANK	1-Butanol	71-36-3	< 100	n/a	ug/L					U	10/02/08
BLANK	4-Methyl-2-Pentanone	108-10-1	< 1.0	n/a	ug/L					U	10/02/08
BLANK	Acetone	67-64-1	< 1.0	n/a	ug/L					U	10/02/08
BLANK	Benzene	71-43-2	< 1.0	n/a	ug/L					U	10/02/08
BLANK	4-Bromofluorobenzene(Surr)	460-00-4	48.350	96.700	% Recov	75.000	125.000				10/02/08
BLANK	Carbon disulfide	75-15-0	< 1.0	n/a	ug/L					U	10/02/08
BLANK	Carbon tetrachloride	56-23-5	< 1.0	n/a	ug/L					U	10/02/08
BLANK	Chloroform	67-66-3	< 1.0	n/a	ug/L					U	10/02/08
BLANK	Chlorobenzene	108-90-7	< 1.0	n/a	ug/L					U	10/02/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20082051
Matrix: WATER
Test: VOA Ground Water Protection

Sample Date:
Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
BLANK	cis-1,2-Dichloroethylene	156-59-2	< 1.0	n/a	ug/L					U	10/02/08
BLANK	1,2-Dichloroethane-d4(Surr)	17060-07-0	52.630	105.000	% Recov	75.000	125.000				10/02/08
BLANK	trans-1,2-Dichloroethylene	156-60-5	< 1.0	n/a	ug/L					U	10/02/08
BLANK	Ethylbenzene	100-41-4	< 1.0	n/a	ug/L					U	10/02/08
BLANK	Ethyl cyanide	107-12-0	< 2.0	n/a	ug/L					U	10/02/08
BLANK	2-Butanone	78-93-3	< 1.0	n/a	ug/L					U	10/02/08
BLANK	Methylenechloride	75-09-2	< 1.0	n/a	ug/L					U	10/02/08
BLANK	Tetrachloroethene	127-18-4	< 1.0	n/a	ug/L					U	10/02/08
BLANK	Xylenes (total)	1330-20-7	< 1.0	n/a	ug/L	0.000	5.000			U	10/02/08
BLANK	Tetrahydrofuran	109-99-9	< 2.0	n/a	ug/L					U	10/02/08
BLANK	Toluene-d8(Surr)	2037-26-5	47.810	95.600	% Recov	75.000	125.000				10/02/08
BLANK	Toluene	108-88-3	< 1.0	n/a	ug/L					U	10/02/08
BLANK	Trichloroethene	79-01-6	< 1.0	n/a	ug/L					U	10/02/08
BLANK	Vinyl chloride	75-01-4	< 1.0	n/a	ug/L					U	10/02/08
LCS	1,1-Dichloroethene	75-35-4	21.000	84.000	% Recov	75.000	125.000				10/02/08
LCS	Benzene	71-43-2	22.880	91.500	% Recov	75.000	125.000				10/02/08
LCS	4-Bromofluorobenzene(Surr)	460-00-4	48.400	96.800	% Recov	75.000	125.000				10/02/08
LCS	Chlorobenzene	108-90-7	23.640	94.600	% Recov	75.000	125.000				10/02/08
LCS	1,2-Dichloroethane-d4(Surr)	17060-07-0	52.500	105.000	% Recov	75.000	125.000				10/02/08
LCS	Toluene-d8(Surr)	2037-26-5	47.570	95.100	% Recov	75.000	125.000				10/02/08
LCS	Toluene	108-88-3	22.830	91.300	% Recov	75.000	125.000				10/02/08
LCS	Trichloroethene	79-01-6	20.930	83.700	% Recov	75.000	125.000				10/02/08

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: G08-009
Sample # W08P004482
Client ID: B1WRM3 GPP-PNNL WSCF TRENT **Matrix:** WATER

Group #: WSCF20082051
Department: Radiochemistry
Sampled: 09/23/08
Received: 09/23/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Strontium 89/90											
Strontium-89/90	SR-RAD	LA-508-415		180	pCi/L	+-23.4	pCi/L	1.00	0.85		10/07/08
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		86.0	Percent			1.00	0.0		10/07/08

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

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)

D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)
X - Other flags/notes described in the comments/narrative(inorg)

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-058
Sample # W08P004483
Client ID: B1WTN9 GPP-PNNL WSCF TRENT **Matrix:** WATER

Group #: WSCF20082051
Department: Radiochemistry
Sampled: 09/23/08
Received: 09/23/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Gamma Energy Analysis-grd H2O											
Antimony-125	14234-35-6	LA-508-481	U	-1.12	pCi/L	+-11.2	pCi/L	1.00	19		10/06/08
Cobalt-60	10198-40-0	LA-508-481	U	-3.32	pCi/L	+-4.08	pCi/L	1.00	6.8		10/06/08
Cesium-134	13967-70-9	LA-508-481	U	-0.554	pCi/L	+-4.72	pCi/L	1.00	8.0		10/06/08
Cesium-137	10045-97-3	LA-508-481	U	-0.0812	pCi/L	+-0.812	pCi/L	1.00	7.3		10/06/08
Europium-152	14683-23-9	LA-508-481	U	0.607	pCi/L	+-6.07	pCi/L	1.00	22		10/06/08
Europium-154	15585-10-1	LA-508-481	U	3.89	pCi/L	+-12.0	pCi/L	1.00	22		10/06/08
Europium-155	14391-16-3	LA-508-481	U	-10.9	pCi/L	+-13.9	pCi/L	1.00	22		10/06/08
Potassium-40	13966-00-2	LA-508-481	U	-108	pCi/L	+-70.7	pCi/L	1.00	1.2e+02		10/06/08
Ruthenium-106	13967-48-1	LA-508-481	U	-13.4	pCi/L	+-36.5	pCi/L	1.00	63		10/06/08
Be-7 by GEA	13966-02-4	LA-508-481	U	21.9	pCi/L	+-34.4	pCi/L	1.00	60		10/06/08
Gross Alpha/Gross Beta (AB32)											
Gross beta	12587-47-2	LA-508-415		390	pCi/L	+-39.0	pCi/L	1.00	2.9		10/09/08
Tritium by Liq Sct column prep											
Tritium	10028-17-8	LA-508-421		1.40e+04	pCi/L	+-2.80e+03	pCi/L	1.00	2.3e+02		10/06/08

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

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)

D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)
X - Other flags/notes described in the comments/narrative(inorg)

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-058
Sample # W08P004484
Client ID: B1WTP2 GPP-PNNL WSCF TRENT **Matrix:** WATER

Group #: WSCF20082051
Department: Radiochemistry
Sampled: 09/23/08
Received: 09/23/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Gamma Energy Analysis-grd H2O											
Antimony-125	14234-35-6	LA-508-481	U	0.120	pCi/L	+-1.20	pCi/L	1.00	49		10/06/08
Cobalt-60	10198-40-0	LA-508-481	U	0.377	pCi/L	+-3.77	pCi/L	1.00	17		10/06/08
Cesium-134	13967-70-9	LA-508-481	U	-3.52	pCi/L	+-11.1	pCi/L	1.00	19		10/06/08
Cesium-137	10045-97-3	LA-508-481	U	4.14	pCi/L	+-10.7	pCi/L	1.00	19		10/06/08
Europium-152	14683-23-9	LA-508-481	U	6.45	pCi/L	+-30.7	pCi/L	1.00	52		10/06/08
Europium-154	15585-10-1	LA-508-481	U	-0.974	pCi/L	+-9.74	pCi/L	1.00	49		10/06/08
Europium-155	14391-16-3	LA-508-481	U	11.2	pCi/L	+-27.6	pCi/L	1.00	46		10/06/08
Potassium-40	13966-00-2	LA-508-481	U	-41.7	pCi/L	+-229	pCi/L	1.00	3.8e+02		10/06/08
Ruthenium-106	13967-48-1	LA-508-481	U	-38.6	pCi/L	+-92.7	pCi/L	1.00	1.6e+02		10/06/08
Be-7 by GEA	13966-02-4	LA-508-481	U	40.9	pCi/L	+-85.8	pCi/L	1.00	1.4e+02		10/06/08
Gross Alpha on Alpha Plateau											
Gross alpha on alpha plateau	12587-46-1	LA-508-415	U	1.40	pCi/L	+-1.29	pCi/L	1.00	1.9		10/10/08
Gross Alpha/Gross Beta (AB32)											
Gross beta	12587-47-2	LA-508-415		6.60	pCi/L	+-2.38	pCi/L	1.00	3.4		10/08/08
Strontium 89/90											
Strontium-89/90	SR-RAD	LA-508-415	U	0.820	pCi/L	+-2.19	pCi/L	1.00	0.85		10/07/08
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		86.3	Percent			1.00	0.0		10/07/08
Tritium by Liq Sct column prep											
Tritium	10028-17-8	LA-508-421		1.50e+04	pCi/L	+-3.00e+03	pCi/L	1.00	2.3e+02		10/06/08

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

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)

D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)
X - Other flags/notes described in the comments/narrative(inorg)

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: S08-009
Sample # W08P004487
Client ID: B1WYK1 GPP-PNNL WSCF TRENT **Matrix:** WATER

Group #: WSCF20082051
Department: Radiochemistry
Sampled: 09/23/08
Received: 09/23/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Gross Alpha on Alpha Plateau											
Gross alpha on alpha plateau	12587-46-1	LA-508-415		24.0	pCi/L	+-4.32	pCi/L	1.00	2.1		10/10/08
Gross Alpha/Gross Beta (AB32)											
Gross beta	12587-47-2	LA-508-415		30.0	pCi/L	+-4.50	pCi/L	1.00	3.5		10/08/08

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

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)

D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)
X - Other flags/notes described in the comments/narrative(inorg)

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: S08-009
Sample # W08P004488
Client ID: B1WYJ3 GPP-PNNL WSCF TRENT **Matrix:** WATER

Group #: WSCF20082051
Department: Radiochemistry
Sampled: 09/23/08
Received: 09/23/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Gross Alpha on Alpha Plateau											
Gross alpha on alpha plateau	12587-46-1	LA-508-415	U	0.720	pCi/L	+-1.18	pCi/L	1.00	2.0		10/10/08
Gross Alpha/Gross Beta (AB32)											
Gross beta	12587-47-2	LA-508-415	U	3.10	pCi/L	+-2.17	pCi/L	1.00	3.4		10/08/08
Strontium 89/90											
Strontium-89/90	SR-RAD	LA-508-415	U	-1.60	pCi/L	+-1.86	pCi/L	1.00	0.86		10/07/08
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		84.8	Percent			1.00	0.0		10/07/08

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

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)

D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)
X - Other flags/notes described in the comments/narrative(inorg)

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

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20082051
Matrix: WATER
Test: Gamma Energy Analysis-grd H2O

Sample Date: 09/22/08
Receive Date:09/22/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08P004456											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Cobalt-60	10198-40-0	U3.172		RPD			n/a	20.000		10/07/08
DUP	Cesium-134	13967-70-9	U-0.6836		RPD			n/a	20.000		10/07/08
DUP	Cesium-137	10045-97-3	U-0.402		RPD			n/a	20.000		10/07/08
DUP	Europium-152	14683-23-9	U12.81		RPD			n/a	20.000		10/07/08
DUP	Europium-154	15585-10-1	U-1.414		RPD			n/a	20.000		10/07/08
DUP	Europium-155	14391-16-3	U4.66		RPD			n/a	20.000		10/07/08
DUP	Potassium-40	13966-00-2	U-98.17		RPD			n/a	20.000		10/07/08
DUP	Ruthenium-106	13967-48-1	U-1.763		RPD			n/a	20.000		10/07/08
DUP	Antimony-125	14234-35-6	U-4.769		RPD			n/a	20.000		10/07/08
BATCH QC											
BLANK	Cobalt-60	10198-40-0	U1.429	n/a	pCi/L	-10.000	1000.000				10/07/08
BLANK	Cesium-134	13967-70-9	U3.128	n/a	pCi/L	-10.000	1000.000				10/07/08
BLANK	Cesium-137	10045-97-3	U-0.8251	n/a	pCi/L	-10.000	1000.000				10/07/08
BLANK	Europium-152	14683-23-9	U-5.313	n/a	pCi/L	-10.000	1000.000				10/07/08
BLANK	Europium-154	15585-10-1	U-8.93	n/a	pCi/L	-10.000	1000.000				10/07/08
BLANK	Europium-155	14391-16-3	U1.256	n/a	pCi/L	-10.000	1000.000				10/07/08
BLANK	Potassium-40	13966-00-2	U-116.9	n/a	pCi/L	-10.000	1000.000				10/07/08
BLANK	Ruthenium-106	13967-48-1	U21.03	n/a	pCi/L	-10.000	1000.000				10/07/08
BLANK	Antimony-125	14234-35-6	U0.2982	n/a	pCi/L	-10.000	1000.000				10/07/08
LCS	Cobalt-60	10198-40-0	9894	99.537	% Recov	80.000	120.000				10/07/08
LCS	Cesium-137	10045-97-3	6239	103.295	% Recov	80.000	120.000				10/07/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20082051
Matrix: WATER
Test: Gross Alpha on Alpha Plateau

Sample Date: 09/22/08
Receive Date:09/22/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08P004461											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Gross alpha on alpha plateau	12587-46-1	U2.6E-01		RPD			n/a	20.000		10/10/08
BATCH QC											
BLANK	Gross alpha on alpha plateau	12587-46-1-ap	U1.4E-01	n/a	pCi/L	-100.000	100.000				10/10/08
LCS	Gross alpha on alpha plateau	12587-46-1-ap	59.4	95.837	% Recov	80.000	120.000				10/10/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20082051
Matrix: WATER
Test: Gross Alpha/Gross Beta (AB32)

Sample Date: 09/22/08
Receive Date:09/22/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08P004461											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Gross beta	12587-47-2	4.7E+02		RPD			6.186	20.000		10/08/08
BATCH QC											
BLANK	Gross beta	12587-47-2	U8.6E-01	n/a	pCi/L	-10.000	10.000				10/08/08
LCS	Gross beta	12587-47-2	199.0	110.888	% Recov	80.000	120.000				10/08/08
Lab ID: W08P004424											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Gross beta	12587-47-2	4.8E+03		RPD			9.901	20.000		10/09/08
BATCH QC											
BLANK	Gross beta	12587-47-2	U-8.6E-02	n/a	pCi/L	-10.000	10.000				10/09/08
LCS	Gross beta	12587-47-2	192.	106.988	% Recov	80.000	120.000				10/09/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20082051
Matrix: WATER
Test: Strontium 89/90

Sample Date: 09/23/08
Receive Date:09/23/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08P004482											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Sr-85 Tracer by Beta Counting	SR85	88.0	88.000	% Recov	30.000	105.000				10/07/08
DUP	Strontium-89/90	SR-RAD	1.9E+02		RPD			5.405	20.000		10/07/08
SURR	Sr-85 Tracer by Beta Counting	SR85	86.0	86.000	% Recov	30.000	105.000				10/07/08
Lab ID: W08P004484											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	Sr-85 Tracer by Beta Counting	SR85	86.3	86.300	% Recov	30.000	105.000				10/07/08
Lab ID: W08P004488											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	Sr-85 Tracer by Beta Counting	SR85	84.8	84.800	% Recov	30.000	105.000				10/07/08
BATCH QC											
BLANK	Sr-85 Tracer by Beta Counting	SR85	86.8	86.800	% Recov	30.000	105.000				10/07/08
BLANK	Strontium-89/90	10098-97-2	U-9.2E-01	n/a	pCi/L	-10.000	100.000				10/07/08
LCS	Sr-85 Tracer by Beta Counting	SR85	88.8	88.800	% Recov	30.000	105.000				10/07/08
LCS	Strontium-89/90	10098-97-2	138	99.402	% Recov	80.000	120.000				10/07/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20082051
Matrix: WATER
Test: Tritium by Liq Sct column prep

Sample Date: 09/22/08
Receive Date: 09/22/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08P004459											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Tritium	10028-17-8	U-7.1E+01		RPD			n/a	20.000		10/06/08
MS	Tritium	10028-17-8	19445.9	86.759	% Recov	75.000	125.000				10/06/08
BATCH QC											
BLANK	Tritium	10028-17-8	U-4.6E+01	n/a	pCi/L	-10.000	1000.000				10/06/08
LCS	Tritium	10028-17-8	3230.0	95.667	% Recov	80.000	120.000				10/06/08

M4W41-SLF-08-1167

ATTACHMENT 4

SAMPLE RECEIPT INFORMATION

Consisting of 15 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
11/07/08

ACKNOWLEDGMENT OF SAMPLES RECEIVED

GPAP

Richland, WA 99352
Attn: Steve Trent E6-35

Customer Code: PNNL-GPP
PO#: 122543
Group#: 20082051

The following samples were received from you on 09/23/08. 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
W08P004479	B1WYD6	GPP-PNNL @2008	TRENT ALKALI Water	09/23/08
W08P004480	B1WYF0	GPP-PNNL @2008	TRENT @IC-30 ALKALI Water	09/23/08
W08P004481	B1WYF6	GPP-PNNL @2008	TRENT @IC-30 ALKALI Water	09/23/08
W08P004482	B1WRM3	GPP-PNNL @SR89_90	TRENT Water	09/23/08
W08P004483	B1WTN9	GPP-PNNL @AB-32	TRENT @GEA-GPP @H3-33 @IC-30 ALKALI Water	09/23/08
W08P004484	B1WTP2	GPP-PNNL @AB-32 @SR89_90	TRENT @ALPHA ALKALI @GEA-GPP @H3-33 @IC-30 Water	09/23/08
W08P004485	B1WY42	GPP-PNNL @IC-30	TRENT Water	09/23/08
W08P004486	B1WMW0	GPP-PNNL @VOA-GPP	TRENT Water	09/23/08
W08P004487	B1WYK1	GPP-PNNL @2008 ALKALI	TRENT @AB-32 @ALPHA @IC-30 @VOA-GPP Water	09/23/08
W08P004488	B1WYJ3	GPP-PNNL @2008 @VOA-GPP	TRENT @AB-32 @ALPHA @IC-30 @SR89_90 ALKALI Water	09/23/08
W08P004489	B1WYH7	GPP-PNNL @2008	TRENT @IC-30 ALKALI Water	09/23/08
W08P004490	B1WYH9	GPP-PNNL @2008	TRENT @IC-30 ALKALI Water	09/23/08

Test Acronym Description

Test Acronym	Description
@2008	ICP-200.8 MS All possible meta
@AB-32	Gross Alpha/Gross Beta (AB32)

GPAP

Richland, WA 99352
Attn: Steve Trent E6-35

Customer Code: PNNL-GPP
PO#: 122543
Group#: 20082051

Test Acronym Description

Test Acronym	Description
@ALPHA	Gross Alpha on Alpha Plateau
@GEA-GPP	Gamma Energy Analysis-grd H2O
@H3-33	Tritium by Liq Sct column prep
@IC-30	Anions by Ion Chromatography
@SR89_90	Strontium 89/90
@VOA-GPP	VOA Ground Water Protection
ALKALI	Total Alkalinity as mg/L CaCO3

FLUOR HANFORD

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

S08-009-48

Collector D. J. Sparks	**Contact/Requester** Mike Neely	**Telephone No.** 509-373-0654 **MSIN** **FAX**
SAF No. S08-009	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code**
Project Title SURV, SEPTEMBER 2008	HNF - N - 506 - 17	**Ice Chest No** GWS-036 **Temp.**
Shipped To (Lab) Waste Sampling & Characterization	**Method of Shipment** Govt. Vehicle	**Bill of Lading/Air Bill No.**
Protocol SURV 20082051	**Priority:** 30 Days **PRIORITY**	**Offsite Property No.**

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

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
Site-Wide Generator Knowledge Information Form applies.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B1WYD6	W08P0047	W	9/23/08	0839	1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	14 Days	Cool~4C
B1WYD6		W	↓	0839	1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	6 Months	HNO3 to pH <2

ICED

Relinquished By	Received By
Print: D. J. Sparks Sign: [signature] Date/Time: 1115 SEP 23 2008	Print: [signature] Sign: [signature] Date/Time: 1115 9-23-08
Relinquished By Date/Time	Received By Date/Time
Relinquished By Date/Time	Received By Date/Time
Relinquished By Date/Time	Received By Date/Time

Matrix *

S	= Soil	DS	= Drum Solid
SE	= Sediment	DL	= Drum Liqui
SO	= Solid	T	= Tissue
SL	= Sludge	WI	= Wine
W	= Water	L	= Liquid
O	= Oil	V	= Vegetation
A	= Air	X	= Other

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

FLUOR HANFORD

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

S08-009-56

Page 1 of 1

Collector D. J. Sparks	**Contact/Requester** Mike Neely	**Telephone No.** 509-373-0654 **MSIN** **FAX**
SAF No. S08-009	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code**
Project Title SURV, SEPTEMBER 2008	HNF-N-506-17/48	**Ice Chest No.** GWS-036 **Temp.**
Shipped To (Lab) Waste Sampling & Characterization	**Method of Shipment** Govt. Vehicle	**Bill of Lading/Air Bill No.**
Protocol SURV	**Priority:** 30 Days **PRIORITY**	**Offsite Property No.**

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

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
Site-Wide Generator Knowledge Information Form applies.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B1WYF0	WS8P0094480	W	9/23/08	0917	1x500-mL P	300.0_ANIONS_IC: List-1 (5)	28 Days/48 Hours	Cool~4C
B1WYF0		W	↓	↓	1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	14 Days	Cool~4C
B1WYF0		W	↓	↓	1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	6 Months	HNO3 to pH <2

ICED

Relinquished By Print D. J. Sparks Sign	Date/Time 1115 9-23-08	Received By Print Sign	Date/Time 1115 9-23-08
Relinquished By	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liquid	
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SL = Sludge		WI = Wipe	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

FLUOR HANFORD

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

S08-009-66

Collector D. J. Sparks	**Contact/Requester** Mike Neely	**Telephone No.** 509-373-0654 **MSIN** **FAX**
SAF No. S08-009	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code**
Project Title SURV SEPTEMBER 2008	HNF-N-506-17/48	**Ice Chest No.** GWS-036 **Temp.**
Shipped To (Lab) Waste Sampling & Characterization	**Method of Shipment** Govt. Vehicle	**Bill of Lading/Air Bill No.**
Protocol SURV	**Priority:** 30 Days **PRIORITY**	**Offsite Property No.**

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

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
Site-Wide Generator Knowledge Information Form applies.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B1WYF6	W08P004481	W	9/23/08	1018	1x500-mL P	300.0_ANIONS_IC: List-1 (5)	28 Days/48 Hours	Cool~4C
B1WYF6		W			1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	14 Days	Cool~4C
B1WYF6		W			1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	6 Months	HNO3 to pH <2

ICED

Relinquished By	Received By
Print: D. J. Sparks Sign: [signature] 1115 SEP 23 2008 Date/Time	Print: [signature] Sign: [signature] 1115 Date/Time 9.23.08
Relinquished By Date/Time	Received By Date/Time
Relinquished By Date/Time	Received By Date/Time
Relinquished By Date/Time	Received By Date/Time

Matrix *

S	= Soil	DS	= Drum Solid
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O	= Oil	V	= Vegetation
A	= Air	X	= Other

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

FLUOR HANFORD

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

G08-009-66

Collector: D. Woehle	Contact/Requester: Mike Neely	Telephone No.: 509-373-2265 MSIN FAX
SAF No.: G08-009	Sampling Origin: Hanford Site	Purchase Order/Charge Code
Project Title: INR2-RB, SEPTEMBER 2008	HNF-N-506 19	Ice Chest No.: GW5-029 Temp.
Shipped To (Lab): Waste Sampling & Characterization	Method of Shipment: Govt. Vehicle	Bill of Lading/Air Bill No.
Protocol: SURV	Priority: 30 Days **PRIORITY**	Offsite Property No.

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

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B1WRM3	W08-PR-4482	W	9/24/03	0911	1x1-L G/P	Strontium-89,90 -- Total Sr	6 Months	HNO3 to pH <2

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Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
D. Woehle			SEP 23 2008 1125		Victor Sims		SEP 23 2008 1125
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

FLUOR HANFORD

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

I08-058-70

Collector D. Woehle	**Contact/Requester** Mike Neely	**Telephone No.** 509-373-0654 **MSIN** **FAX**
SAF No. I08-058	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code**
Project Title 100NR2IAM, SEPTEMBER 2008	HWF-W-506-19	**Ice Chest No.** GW5229 **Temp.**
Shipped To (Lab) Waste Sampling & Characterization	**Method of Shipment** Govt. Vehicle	**Bill of Lading/Air Bill No.**
Protocol CERCLA	**Priority:** 30 Days **PRIORITY**	**Offsite Property No.**

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

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B1WTN9	W08P0X483	W	9/23/08	0911	1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	14 Days	Cool~4C
B1WTN9		W	↓	↓	1x500-mL P	300.0_ANIONS_IC: List-1 (5)	28 Days/48 Hours	Cool~4C
B1WTN9		W			1x500-mL G/P	Gross Beta	6 Months	HNO3 to pH <2
B1WTN9		W			1x250-mL G	TRITIUM_EIE_LSC: Tritium (1)	6 Months	None
B1WTN9		W			1x500-mL G/P	GAMMA_GS: List-1 (10)	6 Months	HNO3 to pH <2

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Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
D. Woehle			SEP 23 2008 1125				SEP 23 2008 1125
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S	= Soil	DS	= Drum Solid
SE	= Sediment	DL	= Drum Liquid
SO	= Solid	T	= Tissue
SL	= Sludge	WI	= Wine
W	= Water	L	= Liquid
O	= Oil	V	= Vegetation
A	= Air	X	= Other

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

FLUOR HANFORD

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

I08-058-74

Collector D. Woehle	**Contact/Requester** Mike Neely	**Telephone No.** 509-373-0654 **MSIN** **FAX**
SAF No. I08-058	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code**
Project Title 100NR2IAM, SEPTEMBER 2008	HNF-N-506-19	**Ice Chest No.** CWS-029 **Temp.**
Shipped To (Lab) Waste Sampling & Characterization	**Method of Shipment** Govt. Vehicle	**Bill of Lading/Air Bill No.**
Protocol CERCLA	**Priority:** 30 Days **PRIORITY**	**Offsite Property No.**

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

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B1WTP2	W08P004484	W	9/23/08	1030	1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	14 Days	Cool~4C
B1WTP2		W	↓	↓	1x500-mL P	300.0_ANIONS_IC: List-1 (5)	28 Days/48 Hours	Cool~4C
B1WTP2		W			1x250-mL G	TRITIUM_EIE_LSC: Tritium (1)	6 Months	None
B1WTP2		W			1x500-mL G/P	GAMMA_GS: List-1 (10)	6 Months	HNO3 to pH <2
B1WTP2		W			1x1-L G/P	Strontium-89,90 -- Total Sr	6 Months	HNO3 to pH <2
B1WTP2		W			1x500-mL G/P	ALPHABETA_GPC: Alpha discrete + Beta (2); ALPHABETA_GPC: Alpha discrete + Beta (2)	6 Months	HNO3 to pH <2

ICED

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
	D. Woehle		SEP 23 2008 1125		Victor Bins		SEP 23 2008 1125
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

FLUOR HANFORD

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

I08-061-4

Collector: Roy Sickle	Contact/Requester: Mike Neely	Telephone No.: 509-373-0654 MSIN FAX
SAF No.: 108-061	Sampling Origin: Hanford Site	Purchase Order/Charge Code
Project Title: ISRM, SEPTEMBER 2008	HNF-N-506-18 Page 21	Ice Chest No. Temp.
Shipped To (Lab): Waste Sampling & Characterization	Method of Shipment: Govt. Vehicle	Bill of Lading/Air Bill No.
Protocol: CERCLA	Priority: 30 Days PRIORITY	Offsite Property No.

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

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B1WY42	W0YP03448	W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	28 Days/48 Hours	Cool~4C

ICED

Relinquished By	Date/Time	Received By	Date/Time
Roy Sickle (Print) (Sign)	SEP 23 2008 1125	(Print) (Sign)	SEP 23 2008 1125

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liquid	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION: Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

FLUOR HANFORD

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

S08-008-93

Collector R. D. Julian	**Contact/Requester** Steve Trent	**Telephone No.** 509-373-5869 **MSIN** **FAX**
SAF No. S08-008	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code**
Project Title SURV. AUGUST 2008	HNF-N-50014	**Ice Chest No.** ERC-1 **Temp.**
Shipped To (Lab) Waste Sampling & Characterization	**Method of Shipment** Govt. Vehicle	**Bill of Lading/Air Bill No.**
Protocol SURV	**Priority:** 30 Days **PRIORITY**	**Offsite Property No.**

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

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
Site-Wide Generator Knowledge Information Form applies.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1WMW0	W08P0014S6	W	9-23-08	0857	1x20-mL P	Activity Scan	None
B1WMW0		W	↓	↓	4x40-mL aGs*	8260_VOA_GCMS: List-2 (25)	HCl or H2SO4 to pH <2 Cool~4C

ICED

Relinquished By	Print / Sign	Date/Time	Received By	Print / Sign	Date/Time
R. D. Julian	R. D. Julian	SEP 23 2008 1155	Victor Rios	Victor Rios	SEP 23 2008 1155
Relinquished By		Date/Time	Received By		Date/Time
Relinquished By		Date/Time	Received By		Date/Time
Relinquished By		Date/Time	Received By		Date/Time

Matrix *

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SE = Sediment		DL = Drum Liquid	
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SL = Sludge		WI = Wine	
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A = Air		X = Other	

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

FLUOR HANFORD

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

S08-009-102

Collector R. D. Julian	Contact/Requester Mike Neely	Telephone No. 509-373-0654 MSIN FAX
SAF No. S08-009	Sampling Origin Hanford Site	Purchase Order/Charge Code
Project Title SURV SEPTEMBER 2008	HNF-N-506-14	Ice Chest No. ERC-1 Temp.
Shipped To (Lab) Waste Sampling & Characterization	Method of Shipment Govt. Vehicle	Bill of Lading/Air Bill No.
Protocol SURV	Priority: 30 Days **PRIORITY**	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
Site-Wide Generator Knowledge Information Form applies.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B1WYK1	W08P004487	W	9-23-08	1101	1x500-mL G/P	ALPHABETA_GPC: Alpha discrete + Beta (2); ALPHABETA_GPC: Alpha discrete + Beta (2)	6 Months	HNO3 to pH <2
B1WYK1		W	↓	↓	1x500-mL P	300.0_ANIONS_IC: List-1 (5)	28 Days/48 Hours	Cool~4C
B1WYK1		W			4x40-mL aGs*	8260_VOA_GCMS: List-2 (25)	14 Days	HCl or H2SO4 to pH <2 Cool~4C
B1WYK1		W			1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	14 Days	Cool~4C
B1WYK1		W			1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	6 Months	HNO3 to pH <2

ICED

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
R. D. Julian	SEP 23 2008 1155	Victor Sims	SEP 23 2008 1155
Relinquished By	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time

Matrix *

S	= Soil	DS	= Drum Solid
SE	= Sediment	DL	= Drum Liqui
SO	= Solid	T	= Tissue
SL	= Sludge	WI	= Wine
W	= Water	L	= Liquid
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FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

FLUOR HANFORD

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

S08-009-90

Collector: R. D. Julian	Contact/Requester: Mike Neely	Telephone No.: 509-373-0654 MSIN FAX
SAF No.: S08-009	Sampling Origin: Hanford Site	Purchase Order/Charge Code
Project Title: SURV, SEPTEMBER 2008	HNF N-526-14	Ice Chest No.: ERC-1 Temp.
Shipped To (Lab): Waste Sampling & Characterization	Method of Shipment: Govt. Vehicle	Bill of Lading/Air Bill No.
Protocol: SURV	Priority: 30 Days PRIORITY	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Site-Wide Generator Knowledge Information Form applies.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B1WYJ3	1x0 KPOC4188	W	9-23-08	0857	1x500-mL G/P	ALPHABETA_GPC: Alpha discrete + Beta (2); ALPHABETA_GPC: Alpha discrete + Beta (2)	6 Months	HNO3 to pH <2
B1WYJ3		W		0857	1x500-mL P	300.0_ANIONS_IC: List-1 (5)	28 Days/48 Hours	Cool~4C
B1WYJ3		W			4x40-mL aGs*	8260_VOA_GCMS: List-2 (25)	14 Days	HCl or H2SO4 to pH <2 Cool~4C
B1WYJ3		W			1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	14 Days	Cool~4C
B1WYJ3		W			1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	6 Months	HNO3 to pH <2
B1WYJ3		W			1x1-L G/P	Strontium-89,90 -- Total Sr	6 Months	HNO3 to pH <2

ICED

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
R. D. Julian			1155 SEP 23 2008	Victor Bins			1155 SEP 23 2008
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wipe	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION: Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

FLUOR HANFORD

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

S08-009-80

Collector R. D. Julian	**Contact/Requester** Mike Neely	**Telephone No.** 509-373-0654 **MSIN** **FAX**
SAF No. S08-009	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code**
Project Title SURV SEPTEMBER 2008	HNF-N-506-14	**Ice Chest No.** ERC-1 **Temp.**
Shipped To (Lab) Waste Sampling & Characterization	**Method of Shipment** Govt. Vehicle	**Bill of Lading/Air Bill No.**
Protocol SURV	**Priority:** 30 Days **PRIORITY**	**Offsite Property No.**

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

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
Site-Wide Generator Knowledge Information Form applies.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B1WYH7	WU8D00 4489	W	9-23-08	1014	1x500-mL P	300.0_ANIONS_IC: List-1 (5)	28 Days/48 Hours	Cool~4C
B1WYH7		W	↓	↓	1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	14 Days	Cool~4C
B1WYH7		W	↓	↓	1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	6 Months	HNO3 to pH <2

ICED

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
R. D. Julian			SEP 23 2008 1155		Victor Bius		SEP 23 2008 1155
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S	= Soil	DS	= Drum Solid
SE	= Sediment	DL	= Drum Liqui
SO	= Solid	T	= Tissue
SL	= Sludge	WI	= Wipe
W	= Water	L	= Liquid
O	= Oil	V	= Vegetation
A	= Air	X	= Other

INAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

FLUOR HANFORD

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

S08-009-84

Collector R. D. Julian	**Contact/Requester** Mike Neely	**Telephone No.** 509-373-0654 **MSIN** **FAX**
SAF No. S08-009	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code**
Project Title SURV. SEPTEMBER 2008	HNF-N-506-14	**Ice Chest No.** ERC-1 **Temp.**
Shipped To (Lab) Waste Sampling & Characterization	**Method of Shipment** Govt. Vehicle	**Bill of Lading/Air Bill No.**
Protocol SURV	**Priority:** 30 Days **PRIORITY**	**Offsite Property No.**

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

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
Site-Wide Generator Knowledge Information Form applies.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B1WYH9	W0S8P0244SU	W	9-22-08	0936	1x500-mL P	300.0_ANIONS_IC: List-1 (5)	28 Days/48 Hours	Cool~4C
B1WYH9		W	↓	↓	1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	14 Days	Cool~4C
B1WYH9		W	✓	✓	1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	6 Months	HNO3 to pH <2

ICED

Relinquished By	Print / Sign	Date/Time	Received By	Print / Sign	Date/Time
R. D. Julian	R. D. Julian	SEP 23 2008 1155	Victor Sims	Victor Sims	SEP 23 2008 1155
Relinquished By		Date/Time	Received By		Date/Time
Relinquished By		Date/Time	Received By		Date/Time
Relinquished By		Date/Time	Received By		Date/Time

Matrix *

S	= Soil	DS	= Drum Solid
SE	= Sediment	DL	= Drum Liqui
SO	= Solid	T	= Tissue
SL	= Sludge	WI	= Wine
W	= Water	L	= Liquid
O	= Oil	V	= Vegetation
A	= Air	X	= Other

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time