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ANALYTICAL REPORT

X07-013

Lot #: F7D050256
SDG #: SL681

Dot Stewart

Pacific Northwest National Lab
3110 Port of Benton Blvd.
Sigma 5 MS K694
Richland, WA 99352

SEVERN TRENT LABORATORIES, INC.

James M. Klyce
for
Brian O'Donnell
Project Manager

May 24, 2007

Rec 5/24/07

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CASE NARRATIVE

Pacific Northwest National Laboratories
P.O. Box 1970
Richland, Washington 99352
May 24, 2007
Attention: Dot Stewart

SDG	:	SL681
Number of Samples	:	3
Sample Matrix	:	Water
Data Deliverable	:	Summary
Date SDG Closed	:	April 5, 2007

II. Introduction

On April 5, 2007, three (3) water samples were received by STL St. Louis for chemical analysis. The samples were received within temperature criteria. See the COC and CUR forms for documentation of any variations on receipt conditions and temperature. Upon receipt, the samples were given laboratory Ids to correspond with specific client Ids. Please refer to the Sample Summary sheets attached to this case narrative. This report is incomplete without the narrative.

III. Analytical Results/ Methodology

The analytical results for this report are presented by analytical test. Each set of data includes sample identification information, analytical results and the appropriate detection limits. All results are based upon samples as they were received, i.e. wet weight, unless otherwise noted on the data sheets. See the attached Methods Summary Form for the methods used in this SDG.

Deviation from Request: None

IV. Definitions

QCBLK-	Quality Control Blank, Method Blank
QCLCS-	Quality Control Laboratory Control Sample, Blank Spike
DUP-	Laboratory Duplicate
MS-	Matrix Spike
MSD-	Matrix Spike Duplicate

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Pacific Northwest National Laboratories
May 24, 2007
SDG: SL681

V. Comments

General

The following SAFs are associated with this SDG: X07-013.

The term "Detection Limit" used in the analytical data report refers to either the lab's standard reporting limits or contractually required reporting limits, whichever is applicable.

Volatiles

The MS and/or MSD recoveries for three compounds are outside the established QC limits. Their RPDs are within method acceptance criteria. The MS/MSD RPD for one compound is outside of the QC limit. Its recoveries are within the QC limits.

Batch:
7107374
Affected Samples:
F7D050256 (3): B1M512

Ion Chromatography

The MS recovery for Chloride in batch 7096130, Sulfate in batch 7096132, and Nitrite in batch 7096133 is outside the established QC limits. A matrix interference is physically evident in the sample. Method performance is demonstrated by acceptable LCS recovery.

The Fluoride MS and duplicate performed on the associated sample are not reportable in hard copy or electronic formats. Due to a CCV failure in the original analysis, the MS and duplicate were reanalyzed in a separate batch on a later date, however the parent sample was not reanalyzed. This has caused a conflict in the reporting software which is prohibiting the reporting of the QC results in either format. The sample itself was bracketed by acceptable QC in the original analysis and is reportable. Please refer to included IRF 07-050. The QC results are as follows for batch 7109189 (analysis date = 4/18/07):

Blank
Not detected

Laboratory Control Sample
Measured amount = 0.9287938 mg/L
Spike amount = 1.0 mg/L
Percent recovery = 93

Laboratory Control Sample Duplicate
Measured amount = 0.945511 mg/L
Spike amount = 1.0 mg/L
Percent recovery = 95
RPD = 1.8

Matrix Spike
Sample amount = 0.2800127 mg/L
Spike amount = 2.0 mg/L
Measured amount = 2.588862 mg/L
Percent recovery = 115.44

Sample Duplicate
Sample amount = 0.2800127 mg/L
Duplicate result = 0.3086813 mg/L
RPD = 9.7

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Pacific Northwest National Laboratories
May 24, 2007
SDG: SL681

The MS recovery for Fluoride in batch 7109189 is outside the established QC limits due to potential matrix interference. Method performance is demonstrated by acceptable LCS recovery.
Affected Samples:
F7D050256 (2): B1M507

There were no observations or nonconformances to report for the following analyses:

Cyanide
ICP Metals
Total Organic Carbon
Total Organic Halogens

I certify that this Summary Package is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed above. The Laboratory Manager or a designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Reviewed and approved:

for
Brian O'Donnell
St. Louis Project Manager

STL – St Louis ISSUE RESOLUTION FORM FOR CONTRACT 615 WITH BHI/WMH/PNNL

PNNL TRACKING NUMBER: 07-050

Date: May 18, 2007 SAF Nos. X07-013

SDG: **SL681** LOGIN No.: **F7D050256** TEST: Fluoride

Sample No.(s) B1M507

Submitted By: Brian O'Donnell (JMK) Submitted To: Dot Stewart (PNNL)

Phone No. 314-298-8566 x206 Phone No. 509-376-5056 (Stewart)

Fax No. 314-298-8757 Fax No. 509-372-1704

ISSUE	PROPOSED RESOLUTION
The Fluoride MS and duplicate performed on the associated sample are not reportable in hard copy or electronic formats. Due to a CCV failure in the original analysis, the MS and duplicate were reanalyzed in a separate batch on a later date, however the parent sample was not reanalyzed. This has caused a conflict in the reporting software which is prohibiting the reporting of the QC results in either format. The sample itself was bracketed by acceptable QC in the original analysis and is reportable. Also note that the MS was outside QC limits (biased high at 115%) when it was analyzed.	1) Report original sample result. Report the MS and duplicate results in the case narrative. a) N qualify the result. b) Do not N qualify the result. 2) Reanalyze the sample with QC for Fluoride. The sample is currently within 2X the holding time.

BHI/WMH/PNNL COMMENTS

Accept resolution 1a – explain the situation in the narrative and N qualify the result.

Heidi Hampt for Dot Stewart 5/24/07
Signature and Date

XC: Ron Butler

METHODS SUMMARY

SL681

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Chloride	MCAWW 300.0A	MCAWW 300.0A
Fluoride	MCAWW 300.0A	MCAWW 300.0A
Inductively Coupled Plasma (ICP) Metals	SW846 6010B	
Nitrate as NO3	MCAWW 300.0A	
Nitrite as N	MCAWW 300.0A	MCAWW 300.0A
Sulfate	MCAWW 300.0A	MCAWW 300.0A
Total Cyanide	SW846 9012	SW846 9012
Total Organic Carbon	SW846 9060	SW846 9060
Total Organic Halogens	SW846 9020B	SW846 9020B
Volatile Organics by GC/MS	SW846 8260B	SW846 5030B/826

References:

MCAWW "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

SL681 : F7D050256

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
JTERF	001	B1LX31	04/04/07	10:42
JTERG	002	B1M507	04/04/07	10:42
JTERM	003	B1M512	04/04/07	13:01

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

SDG# SL681

STL ST. LOUIS

PNNL SL681

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X07-013-58

Page 1 of 1

Collector: Fluor Hanford F. M. HALL	Contact/Requester: Dot Stewart	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: X07-013	Sampling Origin: Hanford Site	Purchase Order/Charge Code: GRP-03-019
Project Title: SPECIAL SAMPLING, JANUARY 2007	HNF-M-506-2	Ice Chest No. ~~SAL-4050~~ Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: Govt. Vehicle	Bill of Lading/Air Bill No. 7916 6418 7296
Protocol: SURV	Priority: 45 Days	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 ☐
Do not combine X SAF samples with other sets. Need SDG to be stand alone.
All labs except WSCF: Do not exceed SDG closure of 14 days.
WSCF: SDG will close on a daily basis; X SAF samples into own SDG.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1LX31 (F)		W	4/4/7	1042	1x500-mL G/P	6010_METALS_ICP: List-3 (18)	HNO3 to pH <2
B1M507		W	↓	↓	1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool 4C
B1M507		W			1x250-mL G/P	9012_CYANIDE: Cyanide (1)	NaOH to pH >= 12 Cool 4C
B1M507		W			1x20-mL P	Activity Scan	None
B1M507		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Fluor Hanford F. M. HALL			APR 04 2007/1400	FED EX		APR 04 2007	
Relinquished By			Date/Time	Received By			Date/Time
FEDEX			4-5-07 0845			04-05-07	0845
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

SDG# SL681

STL ST. LOUIS

PNNL SL681 Cur 6466

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X07-013-62

Page 1 of 1

Collector Fluor Hanford F. M. HALL	Contact/Requester Dot Stewart	Telephone No. 509-376-5056 MSIN FAX
SAF No. X07-013	Sampling Origin Hanford Site	Purchase Order/Charge Code GRP-03-019
Project Title SPECIAL SAMPLING, JANUARY 2007	HNF-N-506-1	Ice Chest No. ~~SXL-4050~~ Temp. 7916 6418 7296
Shipped To (Lab) Severn Trent St. Louis	Method of Shipment Govt. Vehicle	Bill of Lading/Air Bill No.
Protocol SURV	Priority: 45 Days	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 ☐
Do not combine X SAF samples with other sets. Need SDG to be stand alone.
All labs except WSCF: Do not exceed SDG closure of 14 days.
WSCF: SDG will close on a daily basis; X SAF samples into own SDG.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1M512		W	4/4/7	1301	4x40-mL aGs*	8260_VOA_GCMS: List-2 (26)	HCl or H2SO4 to pH <2 Cool 4C
B1M512		W	↓	↓	1x20-mL P	Activity Scan	None
B1M512		W	↓	↓	1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Fluor Hanford F. M. HALL	[signature]		APR 04 2007 / 1400	FED Ex			APR 04 2007
FEDEX			4/5/07 0845	[signature]			04.05.07 0845

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

Track Shipments
Detailed Results

Quick Help

Tracking number	791664182596	**Reference**	GRP-03-019
Signed for by	B.DANIELS	**Destination**	Earth City, MO
Ship date	Apr 4, 2007	**Delivered to**	Shipping/Receiving
Delivery date	Apr 5, 2007 8:53 AM	**Service type**	Priority Overnight
		Weight	76.0 lbs.

Status Delivered

Signature image available Yes

Date/Time		Activity	Location	Details
Apr 5, 2007	8:53 AM	**Delivered**	Earth City, MO	
	7:30 AM	On FedEx vehicle for delivery	EARTH CITY, MO	
	6:52 AM	At local FedEx facility	EARTH CITY, MO	
	5:36 AM	At dest sort facility	BERKELEY, MO	
	3:51 AM	Departed FedEx location	MEMPHIS, TN	
	12:45 AM	Arrived at FedEx location	MEMPHIS, TN	
Apr 4, 2007	5:32 PM	Left origin	PASCO, WA	
	4:14 PM	Package data transmitted to FedEx		
	3:53 PM	Picked up	PASCO, WA	

Signature proof | E-mail results | Track more shipments

Subscribe to tracking updates (optional)

Your Name: _____ **Your E-mail Address:** _____

E-mail address	Language	Exception updates	Delivery updates
	English	☐	☐
	English	☐	☐
	English	☐	☐
	English	☐	☐

Select format: ◉ HTML ○ Text ○ Wireless

Add personal message:

Not available for Wireless or non-English characters.

☐ By selecting this check box and the Submit button, I agree to these Terms and Conditions

Submit

STL ST. LOUIS

STL St. Louis

- 6466 -

Lot #(s): F706501 10, 111, 112, 256

Condition Upon Receipt Form

Client: PNNL COC/RFA No: see below Date 04.05.07

Quote No: 74805, 73443, 74337, 74597 Initiated By: SJ Time: 0845

Shipping Information

Shipper Name: FedX

Multiple Packages Y (N) N/A

Shipping # (s):*

1. 7946 0418 2596
2.
3.
4.
5.
6.
7.
8.
9.
10.

Sample Temperature (s):**

1. 2°
2.
3.
4.
5.
6.
7.
8.
9.
10.

*Numbered shipping lines correspond to Numbered Sample Temp lines

**Sample must be received at 4°C ± 2°C- If not, note contents below. Temperature variance does NOT affect the following: Metals-Liquid or Rad tests- Liquid or Solids

Condition (Circle "Y" for yes, "N" for no and "N/A" for not applicable):

1.	Y (N)	Was sample received broken?	8.	(Y) N	Sample received with Chain of Custody?
2.	(Y) N N/A	Was sample received with proper pH[1] ? (If not, make note below)	9.	(Y) N	Chain of Custody matches sample ID's on container(s)?
3.	Y N	If N/A-Was pH taken by original STL Lab?	10.	(Y) N	Are there custody seals present on cooler?
4.	(Y) N	Sample received in proper containers?	11.	Y (N) N/A	Do custody seals on cooler appear to be tampered with?
5.	(Y) N	Sample volume sufficient for analysis?	12.	(Y) N	Are there custody seals present on bottles?
6.	Y (N) N/A	Headspace in VOA or TOX liquid samples? (If Yes, note sample ID's below)	13.	Y (N) N/A	Do custody seals on bottles appear to be tampered with?
7.	(Y) N	Were contents of the cooler frisked after opening	14.	Y N	Was Internal COC/Workshare received?

[1] For DOE-AL (Pantex, LANL, Sandia) sites, pH of ALL containers received must be verified, EXCEPT VOA, TOX and soils.

Notes: W07-003-6523
X07-013-6258
S07-012-642, 359

note! FedEx tracking # on COCs does not match actual package tracking #s
KD 4/11/07

Corrective Action:

☐ Client Contact Name: Informed by:

☐ Sample(s) processed "as is"

☐ Sample(s) on hold until: If released, notify:

Project Management Review: Date: 4/10/07

THIS FORM MUST BE COMPLETED AT THE TIME THE ITEMS ARE BEING CHECKED IN. IF ANY ITEM IS COMPLETED BY SOMEONE OTHER THAN THE INITIATOR, THEN THAT PERSON IS REQUIRED TO APPLY THEIR INITIAL AND THE DATE NEXT TO THAT ITEM.

ADMIN-0004, REVISED 03/01/06\\Slsvr01\QA\FORMS\ST-LOUIS\ADMIN\Admin004030106.doc

VOLATILES

Pacific Northwest National Laboratory

Client Sample ID: B1M512

GC/MS Volatiles

Lot-Sample #...: F7D050256-003 **Work Order #...:** JTERM1AC **Matrix.....:** WATER
Date Sampled...: 04/04/07 **Date Received..:** 04/05/07
Prep Date.....: 04/13/07 **Analysis Date..:** 04/13/07
Prep Batch #...: 7107374
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1-Dichloroethene	ND	1.0	ug/L	0.045
1,4-Dioxane	ND	80	ug/L	12
Ethylbenzene	ND	1.0	ug/L	0.064
Vinyl chloride	ND	2.0	ug/L	0.044
Acetone	ND	2.0	ug/L	0.80
Methylene chloride	ND	1.0	ug/L	0.60
Carbon disulfide	ND	1.0	ug/L	0.031
1,1-Dichloroethane	ND	1.0	ug/L	0.046
2-Butanone	ND	5.0	ug/L	1.8
Chloroform	ND	1.0	ug/L	0.048
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.048
Propionitrile	ND N	5.0	ug/L	1.7
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.016
1,1,1-Trichloroethane	ND	1.0	ug/L	0.035
Carbon tetrachloride	ND N	1.0	ug/L	0.039
1,2-Dichloroethane	ND	1.0	ug/L	0.11
Benzene	ND	1.0	ug/L	0.064
Trichloroethene	ND	1.0	ug/L	0.037
4-Methyl-2-pentanone	ND	5.0	ug/L	0.21
1,1,2-Trichloroethane	ND	1.0	ug/L	0.092
Tetrachloroethene	ND	1.0	ug/L	0.17
Tetrahydrofuran	ND N	10	ug/L	1.2
Xylenes (total)	ND	3.0	ug/L	0.13
1,4-Dichlorobenzene	ND	1.0	ug/L	0.047
1-Butanol	ND	40	ug/L	14
Toluene	ND	1.0	ug/L	0.025

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	88	(76 - 117)
Dibromofluoromethane	125	(82 - 130)
1,2-Dichloroethane-d4	133	(73 - 137)
4-Bromofluorobenzene	102	(75 - 114)

NOTE(S):

N Spike sample recovery is outside control limits.

Pacific Northwest National Laboratory

B1M512

GC/MS Volatiles

Lot-Sample #: F7D050256-003 **Work Order #:** JTERM1AC **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT		RETENTION TIME	UNITS
Unknown		1.4	M	6.46	ug/L

NOTE(S):

M: Result was measured against nearest internal standard assuming a response factor of 1.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: SL681 **Work Order #...:** JT33C1AA **Matrix.....:** WATER
MB Lot-Sample #: F7D170000-374

Prep Date.....: 04/13/07
Analysis Date..: 04/13/07 **Prep Batch #...:** 7107374
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,4-Dioxane	ND	80	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	2.0	ug/L	SW846 8260B
Acetone	ND	2.0	ug/L	SW846 8260B
Methylene chloride	ND	1.0	ug/L	SW846 8260B
Carbon disulfide	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
2-Butanone	ND	5.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
Propionitrile	ND	5.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	ND	5.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Tetrahydrofuran	ND	10	ug/L	SW846 8260B
Xylenes (total)	ND	3.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1-Butanol	ND	40	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	87	(76 - 117)
Dibromofluoromethane	121	(82 - 130)
1,2-Dichloroethane-d4	127	(73 - 137)
4-Bromofluorobenzene	105	(75 - 114)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Pacific Northwest National Laboratory

Method Blank Report

GC/MS Volatiles

Lot-Sample #: F7D170000-374 B **Work Order #:** JT33C1AA **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT	RETENTION TIME	UNITS
None				ug/L

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: SL681 **Work Order #...:** JT33C1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: F7D170000-374 JT33C1AD-LCSD
Prep Date.....: 04/13/07 **Analysis Date..:** 04/13/07
Prep Batch #...: 7107374
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
1,1-Dichloroethene	10.0	11.6	ug/L	116		SW846 8260B
	10.0	11.6	ug/L	116	0.25	SW846 8260B
Ethylbenzene	10.0	9.16	ug/L	92		SW846 8260B
	10.0	9.23	ug/L	92	0.83	SW846 8260B
1,4-Dioxane	200	205	ug/L	103		SW846 8260B
	200	202	ug/L	101	1.3	SW846 8260B
Vinyl chloride	10.0	10.3	ug/L	103		SW846 8260B
	10.0	10.5	ug/L	105	1.7	SW846 8260B
Acetone	10.0	8.53	ug/L	85		SW846 8260B
	10.0	8.00	ug/L	80	6.4	SW846 8260B
Methylene chloride	10.0	10.8	ug/L	108		SW846 8260B
	10.0	10.6	ug/L	106	1.6	SW846 8260B
Carbon disulfide	10.0	10.0	ug/L	100		SW846 8260B
	10.0	9.64	ug/L	96	3.7	SW846 8260B
1,1-Dichloroethane	10.0	9.97	ug/L	100		SW846 8260B
	10.0	10.4	ug/L	104	4.0	SW846 8260B
2-Butanone	10.0	10.3	ug/L	103		SW846 8260B
	10.0	10.4	ug/L	104	1.4	SW846 8260B
Chloroform	10.0	9.83	ug/L	98		SW846 8260B
	10.0	10.2	ug/L	102	3.5	SW846 8260B
cis-1,2-Dichloroethene	10.0	10.6	ug/L	106		SW846 8260B
	10.0	10.9	ug/L	109	3.0	SW846 8260B
Propionitrile	50.0	54.6	ug/L	109		SW846 8260B
	50.0	52.6	ug/L	105	3.7	SW846 8260B
trans-1,2-Dichloroethene	10.0	10.0	ug/L	100		SW846 8260B
	10.0	9.72	ug/L	97	3.2	SW846 8260B
1,1,1-Trichloroethane	10.0	10.1	ug/L	101		SW846 8260B
	10.0	10.2	ug/L	102	1.3	SW846 8260B
Carbon tetrachloride	10.0	10.3	ug/L	103		SW846 8260B
	10.0	10.7	ug/L	107	3.5	SW846 8260B
1,2-Dichloroethane	10.0	10.5	ug/L	105		SW846 8260B
	10.0	10.6	ug/L	106	0.75	SW846 8260B
Benzene	10.0	9.78	ug/L	98		SW846 8260B
	10.0	10.1	ug/L	101	3.4	SW846 8260B
Trichloroethene	10.0	9.77	ug/L	98		SW846 8260B
	10.0	9.90	ug/L	99	1.3	SW846 8260B
4-Methyl-2-pentanone	10.0	10.2	ug/L	102		SW846 8260B
	10.0	10.5	ug/L	105	3.1	SW846 8260B
1,1,2-Trichloroethane	10.0	9.72	ug/L	97		SW846 8260B
	10.0	10.1	ug/L	101	4.1	SW846 8260B

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: SL681 **Work Order #...:** JT33C1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: F7D170000-374 JT33C1AD-LCSD

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Tetrachloroethene	**10.0**	**9.23**	**ug/L**	**92**		**SW846 8260B**
	10.0	**9.37**	**ug/L**	**94**	**1.4**	**SW846 8260B**
Tetrahydrofuran	**50.0**	**58.2**	**ug/L**	**116**		**SW846 8260B**
	50.0	**59.4**	**ug/L**	**119**	**2.1**	**SW846 8260B**
1,4-Dichlorobenzene	**10.0**	**9.07**	**ug/L**	**91**		**SW846 8260B**
	10.0	**9.73**	**ug/L**	**97**	**7.0**	**SW846 8260B**
1-Butanol	**100**	**85.8**	**ug/L**	**86**		**SW846 8260B**
	100	**98.9**	**ug/L**	**99**	**14**	**SW846 8260B**
Toluene	**10.0**	**9.52**	**ug/L**	**95**		**SW846 8260B**
	10.0	**9.84**	**ug/L**	**98**	**3.3**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	102	(90 - 118)
	103	(90 - 118)
Dibromofluoromethane	107	(83 - 125)
	109	(83 - 125)
1,2-Dichloroethane-d4	110	(75 - 135)
	116	(75 - 135)
4-Bromofluorobenzene	96	(78 - 119)
	102	(78 - 119)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: SL681 **Work Order #...:** JTERM1AE-MS **Matrix.....:** WATER
MS Lot-Sample #: F7D050256-003 JTERM1AF-MSD
Date Sampled...: 04/04/07 **Date Received..:** 04/05/07
Prep Date.....: 04/13/07 **Analysis Date..:** 04/13/07
Prep Batch #...: 7107374
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
1,1-Dichloroethene	ND	10.0	12.6	ug/L	126		SW846 8260B
	ND	10.0	13.0	ug/L	130	3.0	SW846 8260B
Ethylbenzene	ND	10.0	8.18	ug/L	82		SW846 8260B
	ND	10.0	8.14	ug/L	81	0.44	SW846 8260B
1,4-Dioxane	ND	200	254	ug/L	127		SW846 8260B
	ND	200	298	ug/L	149	16	SW846 8260B
Vinyl chloride	ND	10.0	12.0	ug/L	120		SW846 8260B
	ND	10.0	12.5	ug/L	125	3.6	SW846 8260B
Acetone	ND	10.0	11.1	ug/L	111		SW846 8260B
	ND	10.0	10.7	ug/L	107	3.0	SW846 8260B
Methylene chloride	ND	10.0	14.6	ug/L	146		SW846 8260B
	ND	10.0	14.5	ug/L	145	0.61	SW846 8260B
Carbon disulfide	ND	10.0	12.2	ug/L	122		SW846 8260B
	ND	10.0	12.3	ug/L	123	0.49	SW846 8260B
1,1-Dichloroethane	ND	10.0	13.9	ug/L	139		SW846 8260B
	ND	10.0	13.8	ug/L	138	1.2	SW846 8260B
2-Butanone	ND	10.0	14.5	ug/L	145		SW846 8260B
	ND	10.0	13.8	ug/L	138	5.4	SW846 8260B
Chloroform	ND	10.0	13.8	ug/L	138		SW846 8260B
	ND	10.0	13.7	ug/L	137	0.94	SW846 8260B
cis-1,2-Dichloroethene	ND	10.0	14.1	ug/L	141		SW846 8260B
	ND	10.0	14.8	ug/L	148	4.7	SW846 8260B
Propionitrile	ND	50.0	75.8	ug/L	152		SW846 8260B
	Qualifiers:	a,N					
	ND	50.0	71.3	ug/L	143	6.0	SW846 8260B
trans-1,2-Dichloroethene	ND	10.0	13.5	ug/L	135		SW846 8260B
	ND	10.0	13.4	ug/L	134	0.74	SW846 8260B
1,1,1-Trichloroethane	ND	10.0	13.8	ug/L	138		SW846 8260B
	ND	10.0	13.5	ug/L	135	1.6	SW846 8260B
Carbon tetrachloride	ND	10.0	15.2	ug/L	152		SW846 8260B
	Qualifiers:	a,N					
	ND	10.0	14.1	ug/L	141	7.4	SW846 8260B
1,2-Dichloroethane	ND	10.0	14.8	ug/L	148		SW846 8260B
	ND	10.0	14.7	ug/L	147	0.74	SW846 8260B
Benzene	ND	10.0	13.7	ug/L	137		SW846 8260B
	ND	10.0	13.5	ug/L	135	1.5	SW846 8260B
Trichloroethene	ND	10.0	13.2	ug/L	132		SW846 8260B
	ND	10.0	13.2	ug/L	132	0.30	SW846 8260B
4-Methyl-2-pentanone	ND	10.0	9.56	ug/L	96		SW846 8260B
	ND	10.0	9.80	ug/L	98	2.5	SW846 8260B

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: SL681 **Work Order #...:** JTERM1AE-MS **Matrix.....:** WATER
MS Lot-Sample #: F7D050256-003 JTERM1AF-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
1,1,2-Trichloroethane	**ND**	**10.0**	**9.21**	**ug/L**	**92**		**SW846 8260B**
	ND	**10.0**	**8.81**	**ug/L**	**88**	**4.5**	**SW846 8260B**
Tetrachloroethene	**ND**	**10.0**	**7.90**	**ug/L**	**79**		**SW846 8260B**
	ND	**10.0**	**9.78**	**ug/L**	**98 p**	**21**	**SW846 8260B**
Tetrahydrofuran	**ND**	**50.0**	**79.0**	**ug/L**	**158**		**SW846 8260B**
	Qualifiers:		a,N				
	ND	**50.0**	**78.5**	**ug/L**	**157**	**0.62**	**SW846 8260B**
	Qualifiers:		a,N				
1,4-Dichlorobenzene	**ND**	**10.0**	**7.78**	**ug/L**	**78**		**SW846 8260B**
	ND	**10.0**	**7.75**	**ug/L**	**78**	**0.27**	**SW846 8260B**
1-Butanol	**ND**	**100**	**123**	**ug/L**	**123**		**SW846 8260B**
	ND	**100**	**114**	**ug/L**	**114**	**7.5**	**SW846 8260B**
Toluene	**ND**	**10.0**	**8.48**	**ug/L**	**85**		**SW846 8260B**
	ND	**10.0**	**8.32**	**ug/L**	**83**	**1.8**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	79	(76 - 117)
	80	(76 - 117)
Dibromofluoromethane	121	(82 - 130)
	123	(82 - 130)
1,2-Dichloroethane-d4	132	(73 - 137)
	127	(73 - 137)
4-Bromofluorobenzene	91	(75 - 114)
	95	(75 - 114)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

p Relative percent difference (RPD) is outside stated control limits.

a Spiked analyte recovery is outside stated control limits.

N Spike sample recovery is outside control limits.

METALS

Pacific Northwest National Laboratory

Client Sample ID: B1LX31

DISSOLVED Metals

Lot-Sample #...: F7D050256-001 **Matrix.....:** WATER
Date Sampled...: 04/04/07 **Date Received..:** 04/05/07

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 7096293						
Antimony	ND	60.0	ug/L	SW846 6010B	04/06-04/18/07	JTERF1AA
		Dilution Factor: 1		MDL.....: 44.8		
Barium	**9.2 B**	**200**	**ug/L**	**SW846 6010B**	**04/06-04/18/07**	**JTERF1AC**
		Dilution Factor: 1		MDL.....: 5.0		
Beryllium	ND	5.0	ug/L	SW846 6010B	04/06-04/18/07	JTERF1AD
		Dilution Factor: 1		MDL.....: 0.51		
Cadmium	ND	5.0	ug/L	SW846 6010B	04/06-04/18/07	JTERF1AE
		Dilution Factor: 1		MDL.....: 2.3		
Calcium	**30100**	**5000**	**ug/L**	**SW846 6010B**	**04/06-04/18/07**	**JTERF1AF**
		Dilution Factor: 1		MDL.....: 36.0		
Chromium	ND	10.0	ug/L	SW846 6010B	04/06-04/18/07	JTERF1AG
		Dilution Factor: 1		MDL.....: 3.1		
Cobalt	ND	50.0	ug/L	SW846 6010B	04/06-04/18/07	JTERF1AH
		Dilution Factor: 1		MDL.....: 5.0		
Copper	ND	25.0	ug/L	SW846 6010B	04/06-04/18/07	JTERF1AJ
		Dilution Factor: 1		MDL.....: 2.8		
Magnesium	**12400**	**5000**	**ug/L**	**SW846 6010B**	**04/06-04/18/07**	**JTERF1AL**
		Dilution Factor: 1		MDL.....: 108		
Manganese	ND	15.0	ug/L	SW846 6010B	04/06-04/18/07	JTERF1AM
		Dilution Factor: 1		MDL.....: 2.5		
Nickel	ND	40.0	ug/L	SW846 6010B	04/06-04/18/07	JTERF1AN
		Dilution Factor: 1		MDL.....: 7.5		
Potassium	**2150 B**	**5000**	**ug/L**	**SW846 6010B**	**04/06-04/20/07**	**JTERF1AP**
		Dilution Factor: 1		MDL.....: 1500		
Silver	ND	10.0	ug/L	SW846 6010B	04/06-04/18/07	JTERF1AQ
		Dilution Factor: 1		MDL.....: 5.2		
Sodium	**12900**	**5000**	**ug/L**	**SW846 6010B**	**04/06-04/20/07**	**JTERF1AR**
		Dilution Factor: 1		MDL.....: 110		

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Pacific Northwest National Laboratory

Client Sample ID: B1LX31

DISSOLVED Metals

Lot-Sample #...: F7D050256-001 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Strontium	**121**	**50.0**	**ug/L**	**SW846 6010B**	**04/06-04/18/07**	**JTERF1AT**
		Dilution Factor: 1		MDL.....: 0.56		
Vanadium	**20.2 B**	**50.0**	**ug/L**	**SW846 6010B**	**04/06-04/18/07**	**JTERF1AU**
		Dilution Factor: 1		MDL.....: 5.9		
Zinc	ND	20.0	ug/L	SW846 6010B	04/06-04/18/07	JTERF1AV
		Dilution Factor: 1		MDL.....: 9.6		
Prep Batch #...: 7110393						
Iron	ND	100	ug/L	SW846 6010B	04/20-04/23/07	JTERF2AK
		Dilution Factor: 1		MDL.....: 25.0		

NOTE(S):

B Estimated result. Result is less than RL.

METHOD BLANK REPORT

DISSOLVED Metals

Client Lot #...: SL681 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: F7D060000-293 **Prep Batch #...:** 7096293						
Antimony	ND	60.0	ug/L	SW846 6010B	04/06-04/18/07	JTG711AA
		Dilution Factor: 1				
Barium	ND	200	ug/L	SW846 6010B	04/06-04/18/07	JTG711AC
		Dilution Factor: 1				
Beryllium	ND	5.0	ug/L	SW846 6010B	04/06-04/18/07	JTG711AD
		Dilution Factor: 1				
Cadmium	ND	5.0	ug/L	SW846 6010B	04/06-04/18/07	JTG711AE
		Dilution Factor: 1				
Calcium	ND	5000	ug/L	SW846 6010B	04/06-04/18/07	JTG711AF
		Dilution Factor: 1				
Chromium	ND	10.0	ug/L	SW846 6010B	04/06-04/18/07	JTG711AG
		Dilution Factor: 1				
Cobalt	ND	50.0	ug/L	SW846 6010B	04/06-04/18/07	JTG711AH
		Dilution Factor: 1				
Copper	ND	25.0	ug/L	SW846 6010B	04/06-04/18/07	JTG711AJ
		Dilution Factor: 1				
Magnesium	ND	5000	ug/L	SW846 6010B	04/06-04/18/07	JTG711AL
		Dilution Factor: 1				
Manganese	ND	15.0	ug/L	SW846 6010B	04/06-04/18/07	JTG711AM
		Dilution Factor: 1				
Nickel	ND	40.0	ug/L	SW846 6010B	04/06-04/18/07	JTG711AN
		Dilution Factor: 1				
Potassium	ND	5000	ug/L	SW846 6010B	04/06-04/20/07	JTG711AP
		Dilution Factor: 1				
Silver	ND	10.0	ug/L	SW846 6010B	04/06-04/18/07	JTG711AQ
		Dilution Factor: 1				
Sodium	ND	5000	ug/L	SW846 6010B	04/06-04/20/07	JTG711AR
		Dilution Factor: 1				
Strontium	ND	50.0	ug/L	SW846 6010B	04/06-04/18/07	JTG711AT
		Dilution Factor: 1				

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METHOD BLANK REPORT

DISSOLVED Metals

Client Lot #...: SL681 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Vanadium	ND	50.0	ug/L	SW846 6010B	04/06-04/18/07	JTG711AU
		Dilution Factor: 1				
Zinc	ND	20.0	ug/L	SW846 6010B	04/06-04/18/07	JTG711AV
		Dilution Factor: 1				

MB Lot-Sample #: F7D200000-393 **Prep Batch #...:** 7110393

Iron	ND	100	ug/L	SW846 6010B	04/20-04/23/07	JVDJH1AA
		Dilution Factor: 1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

DISSOLVED Metals

Client Lot #...: SL681 **Matrix.....:** WATER

LCS Lot-Sample#: F7D060000-293 **Prep Batch #...:** 7096293

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Antimony	500	546	ug/L	109	SW846 6010B	04/06-04/18/07	JTG711AW
			Dilution Factor: 1				
Barium	500	523	ug/L	105	SW846 6010B	04/06-04/18/07	JTG711AX
			Dilution Factor: 1				
Beryllium	500	561	ug/L	112	SW846 6010B	04/06-04/18/07	JTG711A0
			Dilution Factor: 1				
Cadmium	500	543	ug/L	109	SW846 6010B	04/06-04/18/07	JTG711A1
			Dilution Factor: 1				
Calcium	10000	11100	ug/L	111	SW846 6010B	04/06-04/18/07	JTG711A2
			Dilution Factor: 1				
Chromium	500	533	ug/L	107	SW846 6010B	04/06-04/18/07	JTG711A3
			Dilution Factor: 1				
Cobalt	500	530	ug/L	106	SW846 6010B	04/06-04/18/07	JTG711A4
			Dilution Factor: 1				
Copper	500	517	ug/L	103	SW846 6010B	04/06-04/18/07	JTG711A5
			Dilution Factor: 1				
Magnesium	10000	11300	ug/L	113	SW846 6010B	04/06-04/18/07	JTG711A7
			Dilution Factor: 1				
Manganese	500	535	ug/L	107	SW846 6010B	04/06-04/18/07	JTG711A8
			Dilution Factor: 1				
Nickel	500	525	ug/L	105	SW846 6010B	04/06-04/18/07	JTG711A9
			Dilution Factor: 1				
Potassium	10000	10100	ug/L	101	SW846 6010B	04/06-04/20/07	JTG711CA
			Dilution Factor: 1				
Silver	125	133	ug/L	106	SW846 6010B	04/06-04/18/07	JTG711CC
			Dilution Factor: 1				
Sodium	10000	10500	ug/L	105	SW846 6010B	04/06-04/20/07	JTG711CD
			Dilution Factor: 1				

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LABORATORY CONTROL SAMPLE DATA REPORT

DISSOLVED Metals

Client Lot #...: SL681 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Strontium	500	536	ug/L	107	SW846 6010B	04/06-04/18/07	JTG711CE
			Dilution Factor: 1				
Vanadium	500	524	ug/L	105	SW846 6010B	04/06-04/18/07	JTG711CF
			Dilution Factor: 1				
Zinc	500	507	ug/L	101	SW846 6010B	04/06-04/18/07	JTG711CG
			Dilution Factor: 1				
LCS Lot-Sample#: F7D200000-393 **Prep Batch #...:** 7110393							
Iron	500	538	ug/L	108	SW846 6010B	04/20-04/23/07	JVDJH1AC
			Dilution Factor: 1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE DATA REPORT

DISSOLVED Metals

Client Lot #...: SL681 **Matrix.....:** WATER
Date Sampled...: 04/04/07 **Date Received..:** 04/05/07

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: F7D050256-001 **Prep Batch #...:** 7096293									
Antimony									
	ND	250	260	ug/L	104		SW846 6010B	04/06-04/18/07	JTERF1AW
	ND	250	259	ug/L	104	0.37	SW846 6010B	04/06-04/18/07	JTERF1AX
			Dilution Factor: 1						
Barium									
	9.2	1000	1010	ug/L	100		SW846 6010B	04/06-04/18/07	JTERF1A0
	9.2	1000	1010	ug/L	100	0.60	SW846 6010B	04/06-04/18/07	JTERF1A1
			Dilution Factor: 1						
Beryllium									
	ND	25.0	26.8	ug/L	107		SW846 6010B	04/06-04/18/07	JTERF1A2
	ND	25.0	26.9	ug/L	108	0.33	SW846 6010B	04/06-04/18/07	JTERF1A3
			Dilution Factor: 1						
Cadmium									
	ND	25.0	24.2	ug/L	97		SW846 6010B	04/06-04/18/07	JTERF1A4
	ND	25.0	24.4	ug/L	98	0.86	SW846 6010B	04/06-04/18/07	JTERF1A5
			Dilution Factor: 1						
Calcium									
	30100	25000	54300	ug/L	97		SW846 6010B	04/06-04/18/07	JTERF1A6
	30100	25000	54600	ug/L	98	0.49	SW846 6010B	04/06-04/18/07	JTERF1A7
			Dilution Factor: 1						
Chromium									
	ND	100	103	ug/L	103		SW846 6010B	04/06-04/18/07	JTERF1A8
	ND	100	103	ug/L	103	0.38	SW846 6010B	04/06-04/18/07	JTERF1A9
			Dilution Factor: 1						
Cobalt									
	ND	250	247	ug/L	99		SW846 6010B	04/06-04/18/07	JTERF1CA
	ND	250	249	ug/L	99	0.56	SW846 6010B	04/06-04/18/07	JTERF1CC
			Dilution Factor: 1						
Copper									
	ND	125	125	ug/L	100		SW846 6010B	04/06-04/18/07	JTERF1CD
	ND	125	126	ug/L	100	0.65	SW846 6010B	04/06-04/18/07	JTERF1CE
			Dilution Factor: 1						

(Continued on next page)

MATRIX SPIKE SAMPLE DATA REPORT

DISSOLVED Metals

Client Lot #...: SL681 **Matrix.....:** WATER
Date Sampled...: 04/04/07 **Date Received..:** 04/05/07

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Magnesium									
	12400	25000	37900	ug/L	102		SW846 6010B	04/06-04/18/07	JTERF1CH
	12400	25000	38000	ug/L	102	0.32	SW846 6010B	04/06-04/18/07	JTERF1CJ
			Dilution Factor: 1						
Manganese									
	ND	250	253	ug/L	101		SW846 6010B	04/06-04/18/07	JTERF1CK
	ND	250	252	ug/L	101	0.36	SW846 6010B	04/06-04/18/07	JTERF1CL
			Dilution Factor: 1						
Nickel									
	ND	250	243	ug/L	97		SW846 6010B	04/06-04/18/07	JTERF1CM
	ND	250	244	ug/L	98	0.70	SW846 6010B	04/06-04/18/07	JTERF1CN
			Dilution Factor: 1						
Potassium									
	2150	25000	29000	ug/L	107		SW846 6010B	04/06-04/20/07	JTERF1CP
	2150	25000	27400	ug/L	101	5.5	SW846 6010B	04/06-04/20/07	JTERF1CQ
			Dilution Factor: 1						
Silver									
	ND	25.0	25.6	ug/L	102		SW846 6010B	04/06-04/18/07	JTERF1CR
	ND	25.0	26.9	ug/L	108	5.0	SW846 6010B	04/06-04/18/07	JTERF1CT
			Dilution Factor: 1						
Sodium									
	12900	25000	38100	ug/L	101		SW846 6010B	04/06-04/20/07	JTERF1CU
	12900	25000	38000	ug/L	100	0.26	SW846 6010B	04/06-04/20/07	JTERF1CV
			Dilution Factor: 1						
Strontium									
	121	500	626	ug/L	101		SW846 6010B	04/06-04/18/07	JTERF1CW
	121	500	630	ug/L	102	0.65	SW846 6010B	04/06-04/18/07	JTERF1CX
			Dilution Factor: 1						
Vanadium									
	20.2	250	270	ug/L	100		SW846 6010B	04/06-04/18/07	JTERF1C0
	20.2	250	272	ug/L	101	0.76	SW846 6010B	04/06-04/18/07	JTERF1C1
			Dilution Factor: 1						
Zinc									
	ND	250	242	ug/L	97		SW846 6010B	04/06-04/18/07	JTERF1C2
	ND	250	244	ug/L	97	0.55	SW846 6010B	04/06-04/18/07	JTERF1C3
			Dilution Factor: 1						

MS Lot-Sample #: F7D050256-001 **Prep Batch #...:** 7110393

(Continued on next page)

MATRIX SPIKE SAMPLE DATA REPORT

DISSOLVED Metals

Client Lot #...: SL681 **Matrix.....:** WATER
Date Sampled...: 04/04/07 **Date Received..:** 04/05/07

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Iron									
	ND	500	543	ug/L	109		SW846 6010B	04/20-04/23/07	JTERF1C4
	ND	500	526	ug/L	105	3.1	SW846 6010B	04/20-04/23/07	JTERF1C5

Dilution Factor: 1

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

WET CHEMISTRY

Pacific Northwest National Laboratory

Client Sample ID: B1M507

General Chemistry

Lot-Sample #...: F7D050256-002 **Work Order #...:** JTERG **Matrix.....:** WATER
Date Sampled...: 04/04/07 **Date Received..:** 04/05/07

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride	**4.1 C,N**	**0.20**	**mg/L**	**MCAWW 300.0A**	**04/05/07**	**7096130**
		Dilution Factor: 1		MDL.....: 0.023		
Fluoride	**0.28 N**	**0.10**	**mg/L**	**MCAWW 300.0A**	**04/05/07**	**7096131**
		Dilution Factor: 1		MDL.....: 0.020		
Nitrate	**0.37**	**0.020**	**mg/L**	**MCAWW 300.0A**	**04/05/07**	**7096134**
		Dilution Factor: 1		MDL.....: 0.0040		
Nitrite	ND N	0.020	mg/L	MCAWW 300.0A	04/05/07	7096133
		Dilution Factor: 1		MDL.....: 0.0040		
Sulfate	**13.0 N**	**0.50**	**mg/L**	**MCAWW 300.0A**	**04/05/07**	**7096132**
		Dilution Factor: 1		MDL.....: 0.050		
Total Cyanide	**6.5**	**5.0**	**ug/L**	**SW846 9012**	**04/09/07**	**7099306**
		Dilution Factor: 1		MDL.....: 2.4		
Total Organic Carbon	ND	1.0	mg/L	SW846 9060	04/18/07	7102088
		Dilution Factor: 1		MDL.....: 0.76		

NOTE(S):

RL Reporting Limit

C Analyte detected in method blank above the MDL/IDL.

N Spiked analyte recovery is outside stated control limits.

Pacific Northwest National Laboratory

Client Sample ID: B1M512

General Chemistry

Lot-Sample #...: F7D050256-003 **Work Order #...:** JTERM **Matrix.....:** WATER
Date Sampled...: 04/04/07 **Date Received..:** 04/05/07

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
TOX	**3.3 B**	**5.0**	**ug/L**	**SW846 9020B**	**04/20/07**	**7113341**
	Dilution Factor: 1			MDL.....: 2.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

METHOD BLANK REPORT

General Chemistry

Client Lot #...: SL681 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride		Work Order #: JTF621AA		MB Lot-Sample #:	F7D060000-130	
	0.030 B	**0.20**	**mg/L**	**MCAWW 300.0A**	**04/05/07**	**7096130**
		Dilution Factor: 1				
Fluoride		Work Order #: JTF641AA		MB Lot-Sample #:	F7D060000-131	
	ND	0.10	mg/L	MCAWW 300.0A	04/05/07	7096131
		Dilution Factor: 1				
Nitrate		Work Order #: JTF691AA		MB Lot-Sample #:	F7D060000-134	
	ND	0.020	mg/L	MCAWW 300.0A	04/05/07	7096134
		Dilution Factor: 1				
Nitrite		Work Order #: JTF681AA		MB Lot-Sample #:	F7D060000-133	
	ND	0.020	mg/L	MCAWW 300.0A	04/05/07	7096133
		Dilution Factor: 1				
Sulfate		Work Order #: JTF651AA		MB Lot-Sample #:	F7D060000-132	
	ND	0.50	mg/L	MCAWW 300.0A	04/05/07	7096132
		Dilution Factor: 1				
Total Cyanide		Work Order #: JTMAG1AA		MB Lot-Sample #:	F7D090000-306	
	ND	5.0	ug/L	SW846 9012	04/09/07	7099306
		Dilution Factor: 1				
Total Organic Carbon		Work Order #: JTTHX1AA		MB Lot-Sample #:	F7D120000-088	
	ND	1.0	mg/L	SW846 9060	04/18/07	7102088
		Dilution Factor: 1				
TOX		Work Order #: JVGTH1AA		MB Lot-Sample #:	F7D230000-341	
	ND	5.0	ug/L	SW846 9020B	04/20/07	7113341
		Dilution Factor: 1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

B Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE DATA REPORT

General Chemistry

Lot-Sample #...: SL681 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride		WO#:JTF621AC-LCS/JTF621AD-LCSD				LCS Lot-Sample#: F7D060000-130		
	2.00	1.95	mg/L	97		MCAWW 300.0A	04/05/07	7096130
	2.00	1.97	mg/L	98	1.1	MCAWW 300.0A	04/05/07	7096130
		Dilution Factor: 1						
Fluoride		WO#:JTF641AC-LCS/JTF641AD-LCSD				LCS Lot-Sample#: F7D060000-131		
	1.00	0.986	mg/L	99		MCAWW 300.0A	04/05/07	7096131
	1.00	0.929	mg/L	93	5.9	MCAWW 300.0A	04/05/07	7096131
		Dilution Factor: 1						
Nitrate		WO#:JTF691AC-LCS/JTF691AD-LCSD				LCS Lot-Sample#: F7D060000-134		
	0.400	0.395	mg/L	99		MCAWW 300.0A	04/05/07	7096134
	0.400	0.380	mg/L	95	3.8	MCAWW 300.0A	04/05/07	7096134
		Dilution Factor: 1						
Nitrite		WO#:JTF681AC-LCS/JTF681AD-LCSD				LCS Lot-Sample#: F7D060000-133		
	0.160	0.159	mg/L	100		MCAWW 300.0A	04/05/07	7096133
	0.160	0.160	mg/L	100	0.16	MCAWW 300.0A	04/05/07	7096133
		Dilution Factor: 1						
Sulfate		WO#:JTF651AC-LCS/JTF651AD-LCSD				LCS Lot-Sample#: F7D060000-132		
	8.00	7.81	mg/L	98		MCAWW 300.0A	04/05/07	7096132
	8.00	7.60	mg/L	95	2.8	MCAWW 300.0A	04/05/07	7096132
		Dilution Factor: 1						
Total Organic Carbon		WO#:JTTHX1AC-LCS/JTTHX1AD-LCSD				LCS Lot-Sample#: F7D120000-088		
	6.00	5.86	mg/L	98		SW846 9060	04/18/07	7102088
	6.00	5.83	mg/L	97	0.56	SW846 9060	04/18/07	7102088
		Dilution Factor: 1						

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

General Chemistry

Client Lot #...: SL681 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Cyanide			Work Order #: JTMAG1AC		LCS Lot-Sample#:	F7D090000-306	
	200	189	ug/L	94	SW846 9012	04/09/07	7099306
			Dilution Factor: 1				
Total Cyanide			Work Order #: JTMAG1AD		LCS Lot-Sample#:	F7D090000-306	
	400	389	ug/L	97	SW846 9012	04/09/07	7099306
			Dilution Factor: 1				
TOX			Work Order #: JVGTH1AC		LCS Lot-Sample#:	F7D230000-341	
	100	101	ug/L	101	SW846 9020B	04/20/07	7113341
			Dilution Factor: 1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE DATA REPORT

General Chemistry

Client Lot #...: SL681 **Matrix.....:** WATER
Date Sampled...: 04/04/07 **Date Received..:** 04/05/07

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride			Work Order #...:		JTERG1AK	MS Lot-Sample #:		F7D050256-002
	4.1	2.00	6.68 N	mg/L	131	MCAWW 300.0A	04/05-04/06/07	7096130
			Dilution Factor: 1					
Nitrate			Work Order #...:		JTERG1AP	MS Lot-Sample #:		F7D050256-002
	0.37	0.400	0.768	mg/L	100	MCAWW 300.0A	04/05-04/06/07	7096134
			Dilution Factor: 1					
Nitrite			Work Order #...:		JTERG1AN	MS Lot-Sample #:		F7D050256-002
	ND	0.100	0.176 N	mg/L	176	MCAWW 300.0A	04/05-04/06/07	7096133
			Dilution Factor: 1					
Sulfate			Work Order #...:		JTERG1AM	MS Lot-Sample #:		F7D050256-002
	13.0	4.00	17.5 N	mg/L	113	MCAWW 300.0A	04/05-04/06/07	7096132
			Dilution Factor: 1					
Total Cyanide			Work Order #...:		JTERG1AR	MS Lot-Sample #:		F7D050256-002
	6.5	200	188	ug/L	91	SW846 9012	04/09/07	7099306
			Dilution Factor: 1					
Total Organic Carbon			Work Order #...:		JTDP81AC	MS Lot-Sample #:		F7D050112-001
	ND	5.00	5.77	mg/L	115	SW846 9060	04/18/07	7102088
			Dilution Factor: 1					
Total Organic Carbon			Work Order #...:		JTERG1AQ	MS Lot-Sample #:		F7D050256-002
	ND	5.00	5.68	mg/L	114	SW846 9060	04/18/07	7102088
			Dilution Factor: 1					
TOX			Work Order #...:		JTERM1AG	MS Lot-Sample #:		F7D050256-003
	3.3	100	107	ug/L	104	SW846 9020B	04/20/07	7113341
			Dilution Factor: 1					

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: F7D050256 **Work Order #...:** JTERG-SMP JTERG-DUP **Matrix.....:** WATER

Date Sampled...: 04/04/07 **Date Received..:** 04/05/07

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride						SD Lot-Sample #:	F7D050256-002	
	4.1 C,N	4.0 CN	mg/L	0.79	(0-20)	MCAWW 300.0A	04/05-04/06/07	7096130
			Dilution Factor: 1					
Sulfate						SD Lot-Sample #:	F7D050256-002	
	13.0 N	13.0 N	mg/L	0.069	(0-20)	MCAWW 300.0A	04/05-04/06/07	7096132
			Dilution Factor: 1					
Nitrite						SD Lot-Sample #:	F7D050256-002	
	ND N	ND N	mg/L	0	(0-20)	MCAWW 300.0A	04/05-04/06/07	7096133
			Dilution Factor: 1					
	JR 05-24-07							
Nitrate						SD Lot-Sample #:	F7D050256-002	
	0.37	0.37	mg/L	0.091	(0-20)	MCAWW 300.0A	04/05-04/06/07	7096134
			Dilution Factor: 1					
Total Organic Carbon						SD Lot-Sample #:	F7D050256-002	
	ND	ND	mg/L	0	(0-20)	SW846 9060	04/18/07	7102088
			Dilution Factor: 1					
Total Cyanide						SD Lot-Sample #:	F7D050256-002	
	6.5	4.9 B	ug/L	28	(0-20)	SW846 9012	04/09/07	7099306
			Dilution Factor: 1					

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

CN Result in method blank above MDL/RL; associated MS/MSD recovery outside limits.

C Analyte detected in method blank above the MDL/IDL.

N Spiked analyte recovery is outside stated control limits.

B Estimated result. Result is less than RL.

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: F7D050256 **Work Order #...:** JTDP8-SMP JTDP8-DUP **Matrix.....:** WATER

Date Sampled...: 04/04/07 **Date Received..:** 04/05/07

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon						SD Lot-Sample #:	F7D050112-001	
	ND	ND	mg/L	0	(0-20)	SW846 9060	04/18/07	7102088

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: F7D050256 **Work Order #...:** JTERM-SMP JTERM-DUP **Matrix.....:** WATER

Date Sampled...: 04/04/07 **Date Received..:** 04/05/07

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
TOX						SD Lot-Sample #:	F7D050256-003	
	3.3 B	4.2 B	ug/L	24	(0-20)	SW846 9020B	04/20/07	7113341
			Dilution Factor: 1					

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

B Estimated result. Result is less than RL.