ANALYTICAL QUALITY ASSOCIATES, INC.
616 Maxine NE
Albuquerque, NM 87123
505-299-5201
www.aqainc.net

Data Validation Report for CH2M Hill
Plateau Remediation Company

VSR10-023
Project SURV/LTMC05, RCRA05

Chemical & Radiochemical Validation - Level C

Validation Performed By: Carl Schlosser **Date:** 8-10-2010

Validation Reviewed By: Cheryl A. Schlosser **Date:** 8-10-2010

TABLE OF CONTENTS

Semivolatile Organics

Memorandum	1
Appendix 1 – Glossary of Data Reporting Qualifiers	4
Appendix 2 – Summary of Data Qualification	6
Appendix 3 – Annotated Laboratory Reports	8
Appendix 4 – Laboratory Narrative and Chain-of-Custody Documentation	16
Appendix 5 – Data Validation Supporting Documentation	69
Appendix 6 – Additional Documentation Requested By Client	74

Inorganics

Memorandum	81
Appendix 1 – Glossary of Data Reporting Qualifiers	85
Appendix 2 – Summary of Data Qualification	87
Appendix 3 – Annotated Laboratory Reports	89
Appendix 4 – Laboratory Narrative and Chain-of-Custody Documentation	138
Appendix 5 – Data Validation Supporting Documentation	191
Appendix 6 – Additional Documentation Requested By Client	197

General Chemistry

Memorandum	204
Appendix 1 – Glossary of Data Reporting Qualifiers	211
Appendix 2 – Summary of Data Qualification	213
Appendix 3 – Annotated Laboratory Reports	215
Appendix 4 – Laboratory Narrative and Chain-of-Custody Documentation	315
Appendix 5 – Data Validation Supporting Documentation	370
Appendix 6 – Additional Documentation Requested By Client	375

Date: 10 August 2010
To: CH2M Hill (technical representative)
From: Analytical Quality Associates, Inc.
Project: SURV/LTMC05, RCRA05
Subject: Semivolatile Organics - Sample Data Group (SDG) SL429

INTRODUCTION

This memorandum presents the results of data validation for SDG SL429 prepared by TestAmerica. A list of samples validated along with the analytical method is provided in the following table.

Sample ID	Sample Date	Media	Validation Level	Analytical Methods
B1BT17	12/09/2004	Water	C	8040A
B1BT02	12/09/2004	Water	C	8040A
B1BT38	12/10/2004	Water	C	8040A
B1BT32	12/10/2004	Water	C	8040A
B1BT41	12/13/2004	Water	C	8040A

Data validation was conducted in accordance with the CHPRC validation statement of work and the Remedial Investigation/Feasibility Study Work Plan for the 200-BP-5 Groundwater Operable Unit, DOE/RL-2007-18, Rev. 1 (SAP). Appendices 1 through 6 provide the following information as indicated below:

Appendix 1. Glossary of Data Reporting Qualifiers
Appendix 2. Summary of Data Qualification
Appendix 3. Annotated Laboratory Reports
Appendix 4. Laboratory Narrative and Chain-of-Custody Documentation
Appendix 5. Data Validation Supporting Documentation
Appendix 6. Additional Documentation Requested By Client

DATA QUALITY OBJECTIVES

- **Holding Times and Sample Preservation**

Holding times are calculated from Chain-of-Custody forms to determine the validity of the results. The holding time requirements for phenols in water are extraction within 7 days of sample collection and analysis within 40 days of sample extraction. Sample preservation requires addition of sodium thiosulfate and chilling to 4 degrees Celsius.

The samples were extracted and analyzed within the prescribed holding times and properly preserved.

- **Blanks**

The blank data results are reviewed to assess the extent of contamination introduced through sampling, sample preparation, and analysis.

Laboratory Blanks

All laboratory blank results were acceptable.

Trip Blanks

No trip blanks were submitted for analysis.

Field Blanks

No field blanks were submitted for analysis.

Equipment Blanks

No equipment blanks were submitted for analysis.

- **Accuracy**

Accuracy is evaluated by reviewing surrogate results, matrix spike sample results, and laboratory control sample results. Phenol accuracy limits were not provided in the SAP. Therefore, the accuracy limits specified in the DV procedure were used for data validation.

Surrogates

All surrogate recoveries were acceptable.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Samples

All MS/MSD recoveries were acceptable.

Laboratory Control Samples (LCSs)

All LCS recoveries were acceptable.

- **Precision**

Precision is evaluated by reviewing MS/MSD results, field duplicate sample results, and field split sample results. These QC results provide information on the laboratory reproducibility and whether sampling activities are adequate to acquire consistent sample results. Phenol precision limits were not provided in the SAP. Therefore, the precision limits specified in the DV procedure were used for data validation.

MS/MSD Samples

All MS/MSD relative percent difference values were acceptable.

Field Duplicate Samples

No field duplicates were submitted for analysis.

Field Split Samples

No field splits were submitted for analysis.

- **Detection Limits**

Reported MDLs are compared against the contractually required detection limits (CRDLs) to ensure that laboratory detection limits meet the required criteria.

CRDLs for phenols were not provided in the SAP.

- **Completeness**

SDG SL429 was submitted for validation and verified for completeness. Completeness is based on the percentage of data determined to be valid (i.e., not rejected). The completion percentage was 100%.

MAJOR DEFICIENCIES

None found.

MINOR DEFICIENCIES

None found.

REFERENCES

HNF-20433, Rev. 0, *Data Validation Procedure for Chemical Analyses*, June 2004.

DOE/RL-2007-18, Rev. 1, *Remedial Investigation/Feasibility Study Work Plan for the 200-BP-5 Groundwater Operable Unit*, December 2008.

Appendix 1

Glossary of Data Reporting Qualifiers

Qualifiers that may be applied by data validators in compliance with the CHPRC statement of work are as follows:

- **U** — The constituent was analyzed for and was not detected. The data should be considered usable for decision-making purposes.

- **UJ** — The constituent was analyzed for and was not detected. Due to a quality control deficiency identified during data validation the value reported may not accurately reflect the MDL. The data should be considered usable for decision-making purposes.

- **J** — Indicates the constituent was analyzed for and detected. The associated value is estimated due to a quality control deficiency identified during data validation. The data should be considered usable for decision-making purposes.

- **UR** — Indicates the constituent was analyzed for and not detected; however, due to an identified quality control deficiency the data should be considered unusable for decision-making purposes.

- **R** — Indicates the constituent was analyzed for and detected; however, due to an identified quality control deficiency the data should be considered unusable for decision-making purposes.

Appendix 2

Summary of Data Qualification

Semivolatile Organics Data Qualification Summary			
SDG: SL429	Reviewer: AQA	Project: SURV/LTMC05, RCRA05	Page 1 of 1
Analyte(s)	**Qualifier**	**Samples Affected**	**Reason**
Phenols	None	N/A	N/A

Comments: None

Appendix 3

Annotated Laboratory Reports

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BT17

GC Semivolatiles

Lot-Sample #...: F4L100169-012 **Work Order #...:** G0P931AL **Matrix.....:** WATER
Date Sampled...: 12/09/04 **Date Received..:** 12/10/04
Prep Date.....: 12/14/04 **Analysis Date..:** 12/16/04
Prep Batch #...: 4349321
Dilution Factor: 1 **Method.....:** SW846 8040A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
2-Chlorophenol	ND	5.0	ug/L	2.9
4-Chloro-3-methylphenol	ND	5.0	ug/L	3.2
3-Methylphenol & 4-Methylphenol	ND	5.0	ug/L	2.9
2-Methylphenol	ND	5.0	ug/L	3.0
2,4-Dichlorophenol	ND	5.0	ug/L	3.1
2,6-Dichlorophenol	ND	5.0	ug/L	3.1
2,4-Dimethylphenol	ND	5.0	ug/L	2.9
2,4-Dinitrophenol	ND	5.0	ug/L	2.9
4,6-Dinitro-2-methylphenol	ND	5.0	ug/L	2.6
Dinoseb	ND	5.0	ug/L	3.7
2-Nitrophenol	ND	5.0	ug/L	3.3
4-Nitrophenol	ND	5.0	ug/L	2.3
Pentachlorophenol	ND	5.0	ug/L	2.8
Phenol	ND	5.0	ug/L	2.8
2,3,4,6-Tetrachlorophenol	ND	5.0	ug/L	2.8
2,4,5-Trichloro-phenol	ND	5.0	ug/L	3.0
2,4,6-Trichloro-phenol	ND	5.0	ug/L	3.2

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2,4,6-Tribromophenol	76	(34 - 142)
2-Fluorophenol	61	(17 - 115)

MATRIX SPIKE SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: SL429 **Work Order #...:** G0P931AM-MS **Matrix.....:** WATER
MS Lot-Sample #: F4L100169-012 G0P931AN-MSD
Date Sampled...: 12/09/04 **Date Received..:** 12/10/04
Prep Date.....: 12/14/04 **Analysis Date..:** 12/16/04
Prep Batch #...: 4349321
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
2-Chlorophenol	ND	100	60.5	ug/L	61		SW846 8040A
	ND	100	69.0	ug/L	69	13	SW846 8040A
4-Chloro-3-methylphenol	ND	100	66.3	ug/L	66		SW846 8040A
	ND	100	76.5	ug/L	76	14	SW846 8040A
3-Methylphenol & 4-Methylphenol	ND	100	57.9	ug/L	58		SW846 8040A
	ND	100	67.3	ug/L	67	15	SW846 8040A
2-Methylphenol	ND	100	68.7	ug/L	69		SW846 8040A
	ND	100	79.3	ug/L	79	14	SW846 8040A
2,4-Dichlorophenol	ND	100	63.2	ug/L	63		SW846 8040A
	ND	100	72.9	ug/L	73	14	SW846 8040A
2,6-Dichlorophenol	ND	100	62.8	ug/L	63		SW846 8040A
	ND	100	72.3	ug/L	72	14	SW846 8040A
2,4-Dimethylphenol	ND	100	49.4	ug/L	49		SW846 8040A
	ND	100	58.1	ug/L	58	16	SW846 8040A
2,4-Dinitrophenol	ND	100	75.3	ug/L	75		SW846 8040A
	ND	100	94.8	ug/L	95	23	SW846 8040A
4,6-Dinitro-2-methylphenol	ND	100	83.0	ug/L	83		SW846 8040A
	ND	100	94.6	ug/L	95	13	SW846 8040A
Dinoseb	ND	100	95.8	ug/L	96		SW846 8040A
	ND	100	108	ug/L	108 p	12	SW846 8040A
2-Nitrophenol	ND	100	63.8	ug/L	64		SW846 8040A
	ND	100	73.8	ug/L	74	15	SW846 8040A
4-Nitrophenol	ND	100	82.7	ug/L	83		SW846 8040A
	ND	100	99.0	ug/L	99	18	SW846 8040A
Pentachlorophenol	ND	100	85.3	ug/L	85		SW846 8040A
	ND	100	96.7	ug/L	97	12	SW846 8040A
Phenol	ND	100	59.4	ug/L	59		SW846 8040A
	ND	100	70.2	ug/L	70	17	SW846 8040A
2,3,4,6-Tetrachlorophenol	ND	100	68.3	ug/L	68		SW846 8040A
	ND	100	80.1	ug/L	80	16	SW846 8040A
2,4,5-Trichloro-phenol	ND	100	65.7	ug/L	66		SW846 8040A
	ND	100	75.4	ug/L	75	14	SW846 8040A

(Continued on next page)

MATRIX SPIKE SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: SL429 **Work Order #...:** G0P931AM-MS **Matrix.....:** WATER
MS Lot-Sample #: F4L100169-012 G0P931AN-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
2,4,6-Trichloro-phenol	**ND**	**100**	**72.1**	**ug/L**	**72**		**SW846 8040A**
	ND	**100**	**84.4**	**ug/L**	**84**	**16**	**SW846 8040A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2,4,6-Tribromophenol	78	(34 - 142)
	89	(34 - 142)
2-Fluorophenol	59	(17 - 115)
	68	(17 - 115)

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.

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BT02

GC Semivolatiles

Lot-Sample #...: F4L100169-017 **Work Order #...:** G0QC11AL **Matrix.....:** WATER
Date Sampled...: 12/09/04 **Date Received..:** 12/10/04
Prep Date.....: 12/14/04 **Analysis Date..:** 12/16/04
Prep Batch #...: 4349321
Dilution Factor: 1 **Method.....:** SW846 8040A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
2-Chlorophenol	ND	5.0	ug/L	2.9
4-Chloro-3-methylphenol	ND	5.0	ug/L	3.2
3-Methylphenol & 4-Methylphenol	ND	5.0	ug/L	2.9
2-Methylphenol	ND	5.0	ug/L	3.0
2,4-Dichlorophenol	ND	5.0	ug/L	3.1
2,6-Dichlorophenol	ND	5.0	ug/L	3.1
2,4-Dimethylphenol	ND	5.0	ug/L	2.9
2,4-Dinitrophenol	ND	5.0	ug/L	2.9
4,6-Dinitro-2-methylphenol	ND	5.0	ug/L	2.6
Dinoseb	ND	5.0	ug/L	3.7
2-Nitrophenol	ND	5.0	ug/L	3.3
4-Nitrophenol	ND	5.0	ug/L	2.3
Pentachlorophenol	ND	5.0	ug/L	2.8
Phenol	ND	5.0	ug/L	2.8
2,3,4,6-Tetrachlorophenol	ND	5.0	ug/L	2.8
2,4,5-Trichloro-phenol	ND	5.0	ug/L	3.0
2,4,6-Trichloro-phenol	ND	5.0	ug/L	3.2

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2,4,6-Tribromophenol	55	(34 - 142)
2-Fluorophenol	42	(17 - 115)

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BT38

GC Semivolatiles

Lot-Sample #...: F4L130171-032 **Work Order #...:** G0XCW1AM **Matrix.....:** WATER
Date Sampled...: 12/10/04 **Date Received..:** 12/11/04
Prep Date.....: 12/14/04 **Analysis Date..:** 12/16/04
Prep Batch #...: 4349321
Dilution Factor: 1 **Method.....:** SW846 8040A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
2-Chlorophenol	ND	5.0	ug/L	2.9
4-Chloro-3-methylphenol	ND	5.0	ug/L	3.2
3-Methylphenol & 4-Methylphenol	ND	5.0	ug/L	2.9
2-Methylphenol	ND	5.0	ug/L	3.0
2,4-Dichlorophenol	ND	5.0	ug/L	3.1
2,6-Dichlorophenol	ND	5.0	ug/L	3.1
2,4-Dimethylphenol	ND	5.0	ug/L	2.9
2,4-Dinitrophenol	ND	5.0	ug/L	2.9
4,6-Dinitro-2-methylphenol	ND	5.0	ug/L	2.6
Dinoseb	ND	5.0	ug/L	3.7
2-Nitrophenol	ND	5.0	ug/L	3.3
4-Nitrophenol	ND	5.0	ug/L	2.3
Pentachlorophenol	ND	5.0	ug/L	2.8
Phenol	ND	5.0	ug/L	2.8
2,3,4,6-Tetrachlorophenol	ND	5.0	ug/L	2.8
2,4,5-Trichlorophenol	ND	5.0	ug/L	3.0
2,4,6-Trichlorophenol	ND	5.0	ug/L	3.2

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2,4,6-Tribromophenol	67	(34 - 142)
2-Fluorophenol	53	(17 - 115)

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BT32

GC Semivolatiles

Lot-Sample #...: F4L130171-047 **Work Order #...:** G0XD11AM **Matrix.....:** WATER
Date Sampled...: 12/10/04 **Date Received..:** 12/11/04
Prep Date.....: 12/14/04 **Analysis Date..:** 12/16/04
Prep Batch #...: 4349321
Dilution Factor: 1 **Method.....:** SW846 8040A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
2-Chlorophenol	ND	5.0	ug/L	2.9
4-Chloro-3-methylphenol	ND	5.0	ug/L	3.2
3-Methylphenol & 4-Methylphenol	ND	5.0	ug/L	2.9
2-Methylphenol	ND	5.0	ug/L	3.0
2,4-Dichlorophenol	ND	5.0	ug/L	3.1
2,6-Dichlorophenol	ND	5.0	ug/L	3.1
2,4-Dimethylphenol	ND	5.0	ug/L	2.9
2,4-Dinitrophenol	ND	5.0	ug/L	2.9
4,6-Dinitro-2-methylphenol	ND	5.0	ug/L	2.6
Dinoseb	ND	5.0	ug/L	3.7
2-Nitrophenol	ND	5.0	ug/L	3.3
4-Nitrophenol	ND	5.0	ug/L	2.3
Pentachlorophenol	ND	5.0	ug/L	2.8
Phenol	ND	5.0	ug/L	2.8
2,3,4,6-Tetrachlorophenol	ND	5.0	ug/L	2.8
2,4,5-Trichlorophenol	ND	5.0	ug/L	3.0
2,4,6-Trichlorophenol	ND	5.0	ug/L	3.2

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2,4,6-Tribromophenol	60	(34 - 142)
2-Fluorophenol	51	(17 - 115)

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BT41

GC Semivolatiles

Lot-Sample #...: F4L140259-016 **Work Order #...:** G017X1AM **Matrix.....:** WATER
Date Sampled...: 12/13/04 **Date Received..:** 12/14/04
Prep Date.....: 12/17/04 **Analysis Date..:** 12/21/04
Prep Batch #...: 4352288
Dilution Factor: 1 **Method.....:** SW846 8040A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
2-Chlorophenol	ND	5.0	ug/L	2.9
4-Chloro-3-methylphenol	ND	5.0	ug/L	3.2
3-Methylphenol & 4-Methylphenol	ND	5.0	ug/L	2.9
2-Methylphenol	ND	5.0	ug/L	3.0
2,4-Dichlorophenol	ND	5.0	ug/L	3.1
2,6-Dichlorophenol	ND	5.0	ug/L	3.1
2,4-Dimethylphenol	ND	5.0	ug/L	2.9
2,4-Dinitrophenol	ND	5.0	ug/L	2.9
4,6-Dinitro-2-methylphenol	ND	5.0	ug/L	2.6
Dinoseb	ND	5.0	ug/L	3.7
2-Nitrophenol	ND	5.0	ug/L	3.3
4-Nitrophenol	ND	5.0	ug/L	2.3
Pentachlorophenol	ND	5.0	ug/L	2.8
Phenol	ND	5.0	ug/L	2.8
2,3,4,6-Tetrachlorophenol	ND	5.0	ug/L	2.8
2,4,5-Trichlorophenol	ND	5.0	ug/L	3.0
2,4,6-Trichlorophenol	ND	5.0	ug/L	3.2

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2,4,6-Tribromophenol	68	(34 - 142)
2-Fluorophenol	57	(17 - 115)

Appendix 4

Laboratory Narrative and Chain-of-Custody Documentation

SEVERN TRENT STL

STL St. Louis
13715 Rider Trail North
Earth City, MO 63045

Tel: 314 298 8566 Fax: 314 298 8757
www.stl-inc.com

CASE NARRATIVE

Pacific Northwest National Laboratories
P.O. Box 1970
Richland, Washington 99352
January 13, 2005
Attention: Dot Stewart

Project Number	:	519.145
SDG	:	SL429
Number of Samples	:	118
Sample Matrix	:	water
Data Deliverable	:	Summary
Date SDG Closed	:	December 14, 2004

II. Introduction

Between December 10 and December 14, 2004, one hundred and eighteen 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

SEVERN TRENT STL

Pacific Northwest National Laboratories
January 13, 2005
Project Number: 519.145
SDG: SL429

STL St. Louis
13715 Rider Trail North
Earth City, MO 63045

Tel: 314 298 8566 Fax: 314 298 8757
www.stl-inc.com

V. Comments

General

The following SAFs are associated with this SDG: S05-012, W05-012

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.

MS/MSD/Dup analysis was done per the client requirements. Analytical batches that did not contain matrix QC were analyzed with a LCS/LCS duplicate.

Wet Chemistry

The MS recovery for Cyanide (4351381) is outside the QC limits. The associated data has been flagged with an "N" qualifier. Method performance is demonstrated by acceptable LCS recovery.

Metals

There were no comments or non-conformances associated with this data.

Phenols

The MS/MSD RPD for dinoseb is outside criteria for batch 4349321. Individual spike recoveries met criteria.

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:

Marti Ward
St. Louis Project Manager

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-123

Page 1 of 2

Collector: DURATEK L. D. WALL	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: RCRA GW MONITORING, DECEMBER 2004	logbook DTS-SAWS-H82	Ice Chest No.: SAW-711 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 7903 6202 7607
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BRV5 (F)		W	12-9-04	1110	1x500-mL G/P	7421_PB_GFAA: Lead (1)	HNO3 to pH <2
B1BRV5 (F)		W			1x500-mL G	7470_HG_CVAA: Mercury (1)	HNO3 to pH <2
B1BRV5 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BRV6		W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool 4C
B1BRV6		W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BRV6		W			1x20-mL P	Activity Scan	None
B1BRV6		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BRV6		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVF4		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVF4		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVF5		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVF5		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
DURATEK L. D. WALL	L. D. Wall		DEC 09 2004 1400	FED EX			
FED EX				Gil Clark	STL		12-10-04 0900

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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-123

Page 2 of 2

SAF No.	Contact/Requestor	Telephone No.	MSIN	FAX
W05-012	DL STEWART	509-376-5056		

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BVF6		W	12-9-04	1110	1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVF6		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
DURATEK	L. D. WALL	L.D. Wall	DEC 09 2004 1400	FED EX			
FED EX				Jill Clark STL			12-10-04 0900

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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-119

Page 1 of 2

Collector: DURATEK L. D. WALL	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: RCRA GW MONITORING, DECEMBER 2004	Logbook DTS-SAWS-1482	Ice Chest No. SAWS-211 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No. 7903 6202 7607
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BRV2 (F)		W	12-9-04	1218	1x500-mL G/P	7421_PB_GFAA: Lead (1)	HNO3 to pH <2
B1BRV2 (F)		W			1x500-mL G	7470_HG_CVAA: Mercury (1)	HNO3 to pH <2
B1BRV2 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BRV3		W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BRV3		W			1x20-mL P	Activity Scan	None
B1BRV3		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BRV3		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVF1		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVF1		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVF2		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVF2		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVF3		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
DURATEK L. D. WALL	L. D. Wall		DEC 09 2004 1400	FEDEX			
FED Ex				Gill Clark		STL	12-10-04 0900

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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-119

Page 2 of 2

SAF No. W05-012

Contact/Requestor DL STEWART

Telephone No. 509-376-5056

MSIN

FAX

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BVF3		W	12-9-04	1218	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
DURATEK L.D. WALL	L.D. Wall		DEC 09 2004 1400	FED EX			
Relinquished By			Date/Time	Received By			Date/Time
FED EX				Gill Clark	STL		12-10-04 0800
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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-31

Page 1 of 2

Collector: R.T SICKLE	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: RCRA GW MONITORING, DECEMBER 2004	OTS- SAWS H83	Ice Chest No.: SAWS 119 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 7203 6204 1026
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BT16 (F)		W	12-9-04	1209	1x500-mL G/P	7060_AS_GFAA: Arsenic (1)	HNO3 to pH <2
B1BT16 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BT17		W			3x1000-mL aG	8040_PHENOLIC_GC: List-1 (17)	Residual Chlorine 0.0008%
B1BT17		W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool 4C
B1BT17		W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BT17		W			1x20-mL P	Activity Scan	None
B1BT17		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BT17		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVL6		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVL6		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVL7		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVL7		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
R.T SICKLE			DEC 09 2004 1400	FED EX			
FEDEX				Jill Clark		STL	12.10.04 0900

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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-31

Page 2 of 2

SAF No. W05-012

Contact/Requestor DL STEWART

Telephone No. 509-376-5056

MSIN

FAX

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BVL8		W	12-9-04	1209	1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVL8		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
	D.T. SICKLE		DEC 09 2004 1400	FED EX			
Relinquished By			Date/Time	Received By			Date/Time
	FED EX			Dell Clarke STL			12-10-04 0900
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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-11

Page 1 of 2

Collector: D. P. CONNOLLY	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: RCRA GW MONITORING, DECEMBER 2004	DTS SAWS-1484	Ice Chest No.: SML-526 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 7903-6199-9144
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BT01 (F)		W	12-09-04	0941	1x500-mL G/P	7060_AS_GFAA: Arsenic (1)	HNO3 to pH <2
B1BT01 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BT02		W			3x1000-mL aG	8040_PHENOLIC_GC: List-1 (17)	Residual Chlorine 0.0008%
B1BT02		W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool 4C
B1BT02		W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BT02		W			1x20-mL P	Activity Scan	None
B1BT02		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BT02		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVK1		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVK1		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVK2		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVK2		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
D. P. CONNOLLY	DEC 0 9 2004 1400	FedEX	
FEDEX		Gill Clark STL	12-10-04 0900

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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-11

Page 2 of 2

SAF No. W05-012

Contact/Requestor DL STEWART

Telephone No. 509-376-5056

MSIN

FAX

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BVK3		W	12-9-04	0941	1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVK3		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
	D.P. CONNOLLY		DEC 0 9 2004 1400	Fed EX			
Relinquished By	FEDEX		Date/Time	Received By			Date/Time 12-10-04 0900
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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-96

Page 1 of 1

Collector: DURATEK L. D. WALL	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: RCRA GW MONITORING, DECEMBER 2004	Logbook DTS-SAWS-1482	Ice Chest No. SAWS-118 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No. 7903 6202 7618
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BRR5 (F)		W	12-9-04	0950	1x500-mL G/P	7421_PB_GFAA: Lead (1)	HNO3 to pH <2
B1BRR5 (F)		W			1x500-mL G	7470_HG_CVAA: Mercury (1)	HNO3 to pH <2
B1BRR5 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BRR6		W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BRR6		W			1x20-mL P	Activity Scan	None
~~B1BRR6~~		~~W~~			~~1x1000-mL aGs*~~	~~9020_TOX: TOX (1)~~ 12-6-04 DF	H2SO4 to pH <2 Cool 4C
~~B1BRR6~~		~~W~~			~~1x250-mL aGs*~~	~~9060_TOC: TOC (1)~~	HCl or H2SO4 to pH <2 Cool 4C

L. Wall 12/9/04

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
DURATEK L. D. WALL	L.D. Wall		DEC 09 2004 1400	FED EX			
Relinquished By: FED EX			Date/Time	Received By: Jill Clark STL			Date/Time: 12.10.04 0900
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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-95

Page 1 of 2

Collector: DURATEK L. D. WALL	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: RCRA GW MONITORING, DECEMBER 2004	Logbook DTS-SAWS-182	Ice Chest No. SAWS-118 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No. 7903 6202 7618
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BRR1 (F)		W	12-9-04	0950	1x500-mL G/P	7421_PB_GFAA: Lead (1)	HNO3 to pH <2
B1BRR1 (F)		W			1x500-mL G	7470_HG_CVAA: Mercury (1)	HNO3 to pH <2
B1BRR1 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BRR2		W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BRR2		W			1x20-mL P	Activity Scan	None
B1BRR2		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BRR2		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVC3		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVC3		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVC4		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVC4		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVC5		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
DURATEK L. D. WALL	L. D. Wall		DEC 09 2004 1400	FED EX			
FED EX				Gill Clark		STL	12-10-04 0900

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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-95

Page 2 of 2

SAF No. W05-012

Contact/Requestor DL STEWART

Telephone No. 509-376-5056

MSIN

FAX

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BVC5		W	12-9-04	0950	1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C

D. Wall 12/9/04

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
DURATEK	L.D. Wall		DEC 09 2004 1400	FED EX			
L.D. WALL							
FED Ex				Jill Clark		STL	12.10.04 0900

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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-75

Collector: D.P. CONNOLLY	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: RCRA GW MONITORING, DECEMBER 2004	DTS-SAWS-1484	Ice Chest No.: SAWS-117 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 7921-5581-4832
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BRN3 (F)		W	12-9-04	1107	1x500-mL G/P	7421_PB_GFAA: Lead (1)	HNO3 to pH <2
B1BRN3 (F)		W			1x500-mL G	7470_HG_CVAA: Mercury (1)	HNO3 to pH <2
B1BRN3 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BRN4		W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BRN4		W			1x20-mL P	Activity Scan	None
B1BRN4		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BRN4		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BV95		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BV95		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BV96		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BV96		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BV97		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
D.P. CONNOLLY	DEC 0 9 2004 1400	FedEX	
FED EX		Jill Clark STL	12-10-04 0900

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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-75

Page 2 of 2

SAF No. W05-012 | Contact/Requestor DL STEWART | Telephone No. 509-376-5056 | MSIN | FAX

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BV97		W	12-9-04	1107	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
D.P. CONNOLLY	D.P. CONNOLLY		DEC 0 9 2004 1400	FedEX			
Relinquished By			Date/Time	Received By			Date/Time
				Jill Clarke STL			12-10-04 0900
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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-79

Collector: D.P. CONNOLLY	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: RCRA GW MONITORING, DECEMBER 2004	DTS-SAWS-484	Ice Chest No.: SAWS-219 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 7921-5581-4810
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BRN6 (F)		W	12-9-04	1210	1x500-mL G/P	7421_PB_GFAA: Lead (1)	HNO3 to pH <2
B1BRN6 (F)		W			1x500-mL G	7470_HG_CVAA: Mercury (1)	HNO3 to pH <2
B1BRN6 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BRN7		W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool 4C
B1BRN7		W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BRN7		W			1x20-mL P	Activity Scan	None
B1BRN7		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BRN7		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BV98		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BV98		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BV99		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BV99		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
D.P. CONNOLLY	DEC 0 9 2004 1400	FedEx	
FED EX		Jill Clark STL	12.10.04 @ 0900

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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-79

Page 2 of 2

SAF No. W05-012

Contact/Requestor DL STEWART

Telephone No. 509-376-5056

MSIN

FAX

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BVB0		W	12-9-04	1210	1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVB0		W	↓	↓	1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C

Relinquished By	Date/Time	Received By	Date/Time
Print D. P. CONNOLLY Sign	1400 DEC 0 9 2004	Print FedEX Sign	
Relinquished By FED Ex		Received By Jill Clark STL	12-10-04 0900
Relinquished By		Received By	
Relinquished By		Received By	

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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-111

Page 1 of 2

Collector DURATEK R. R. FOX	Contact/Requester DL STEWART	Telephone No. 509-376-5056 MSIN FAX
SAF No. W05-012	Sampling Origin HANFORD SITE	Purchase Order/Charge Code
Project Title RCRA GW MONITORING, DECEMBER 2004	SAW5-H83	Ice Chest No. SAW5-114 Temp.
Shipped To (Lab) Severn Trent St. Louis	Method of Shipment GOVT. VEHICLE	Bill of Lading/Air Bill No. 7908 5577 7006
Protocol RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BRT6 (F)	1	W	12.10.04	1133	1x500-mL G/P	7421_PB_GFAA: Lead (1)	HNO3 to pH <2
B1BRT6 (F)		W			1x500-mL G	7470_HG_CVAA: Mercury (1)	HNO3 to pH <2
B1BRT6 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BRT7	2	W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool 4C
B1BRT7		W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BRT7		W			1x20-mL P	Activity Scan	None
B1BRT7		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BRT7		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVD5	3	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVD5		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVD6	4	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVD6		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
DURATEK R. R. FOX			DEC 10 2004 1300	Fed Ex			
Relinquished By FED Ex			Date/Time	Received By Gil Clarke STL			Date/Time 12-11-04 0840
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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-111

Page 2 of 2

SAF No. W05-012 | Contact/Requestor DL STEWART | Telephone No. 509-376-5056 | MSIN | FAX

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BVD7	5	W	12.10.04	1133	1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVD7		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
SUMATER R. R. FOX			DEC 10 2004 1300	FedEx			
Relinquished By			Date/Time	Received By			Date/Time
FED Ex				Jill Clark STL			12-11-04 0840
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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-127

Page 1 of 2

Collector DUHATER R.R. FOX	Contact/Requester DL STEWART	Telephone No. 509-376-5056 MSIN FAX
SAF No. W05-012	Sampling Origin HANFORD SITE	Purchase Order/Charge Code
Project Title RCRA GW MONITORING, DECEMBER 2004	SAWS-1483	Ice Chest No. SAWS 213 Temp.
Shipped To (Lab) Severn Trent St. Louis	Method of Shipment GOVT. VEHICLE	Bill of Lading/Air Bill No. 790855776981
Protocol RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BRV8 (F)	6	W	12-10-04	0923	1x500-mL G/P	7421_PB_GFAA: Lead (1)	HNO3 to pH <2
B1BRV8 (F)		W			1x500-mL G	7470_HG_CVAA: Mercury (1)	HNO3 to pH <2
B1BRV8 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BRV9	7	W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BRV9		W			1x20-mL P	Activity Scan	None
B1BRV9		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BRV9		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVF7	8	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVF7		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVF8	9	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVF8		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVF9	10	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
DUHATER R.R. FOX			DEC 10 2004 1300	FedEx			
FEDEX				Gill Clarke	STL		12-11-04 0840

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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-127

Page 2 of 2

SAF No. W05-012 | Contact/Requestor DL STEWART | Telephone No. 509-376-5056 | MSIN | FAX

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BVF9		W	12.10.04	0923	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
		DEC 10 2004	1300	FedEx			
Relinquished By			Date/Time	Received By			Date/Time
FEDEX				Jill Clarke STL			12-11-04 0840
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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-87

Page 1 of 2

Collector: DURATEK L. D. WALL	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: RCRA GW MONITORING, DECEMBER 2004	Logbook DTS-SAWS-1482	Ice Chest No.: SAWS-108 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 7908-5558-4377
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BRP5 (F)	11	W	12-10-04	1115	1x500-mL G/P	7421_PB_GFAA: Lead (1)	HNO3 to pH <2
B1BRP5 (F)		W			1x500-mL G	7470_HG_CVAA: Mercury (1)	HNO3 to pH <2
B1BRP5 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BRP6	12	W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool 4C
B1BRP6		W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BRP6		W			1x20-mL P	Activity Scan	None
B1BRP6		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BRP6		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVB7	13	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVB7		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVB8	14	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVB8		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
DURATEK L. D. Wall	DEC 10 2004 1300	FED EX	
L. D. WALL FED EX		Jill Clarke STL	12-11-04 08:40

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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-87

Page 2 of 2

SAF No. W05-012

Contact/Requestor DL STEWART

Telephone No. 509-376-5056

MSIN

FAX

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BVB9	15	W	12-10-04	1115	1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVB9		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
DURATEK L.D. WALL	L.D. Wall		DEC 10 2004 1300	FED EX			
Relinquished By			Date/Time	Received By			Date/Time
FED EX				Jill Clarke STL			12-11-04 08:40
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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-103

Page 1 of 2

Collector: DURATEK L. D. WALL	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: RCRA GW MONITORING, DECEMBER 2004	Logbook DTS-SAWS-482	Ice Chest No. SAW5-108 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No. 7908-5558-4377
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BRT0 (F)	16	W	12-10-04	0030	1x500-mL G/P	7421_PB_GFAA: Lead (1)	HNO3 to pH <2
B1BRT0 (F)		W			1x500-mL G	7470_HG_CVAA: Mercury (1)	HNO3 to pH <2
B1BRT0 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BRT1	17	W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BRT1		W			1x250-mL G/P	9012_CYANIDE: Cyanide (1)	NaOH to pH >= 12 Cool 4C
B1BRT1		W			1x20-mL P	Activity Scan	None
B1BRT1		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BRT1		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVC9	18	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVC9		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVD0	19	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVD0		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
DURATEK L. D. WALL	L. D. Wall		DEC 10 2004 1300	FED EX			
Relinquished By			Date/Time	Received By			Date/Time
FED EX				Gill Clarke STL			12-11-04 08:40
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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-103

Page 2 of 2

SAF No. W05-012

Contact/Requestor DL STEWART

Telephone No. 509-376-5056

MSIN

FAX

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BVD1	20	W	12-10-04	1030	1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVD1		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
DURATEK	L. D. WALL	L.D. Wall	DEC 10 2004 1300	FED EX			
FED EX				Jill Clarke		STL	12.11.04 08:40

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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-71

Page 1 of 2

Collector: D. P. CONNOLLY	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: RCRA GW MONITORING, DECEMBER 2004	DTS 3HWS-H84	Ice Chest No.: 3HWS-115 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 7921-5698-0269
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BRN0 (F)	21	W	12-10-04	1006	1x500-mL G/P	7421_PB_GFAA: Lead (1)	HNO3 to pH <2
B1BRN0 (F)		W			1x500-mL G	7470_HG_CVAA: Mercury (1)	HNO3 to pH <2
B1BRN0 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BRN1	22	W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BRN1		W			1x20-mL P	Activity Scan	None
B1BRN1		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BRN1		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BV92	23	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BV92		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BV93	24	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BV93		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BV94	25	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
D. P. CONNOLLY	DEC 10 2004 1400	FedEx	
FEDEX		Jill Clarke STL	12-11-04 0840

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liquid	
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

LOT# F4110069 SDG# SL429 35 of 277

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-71

Page 2 of 2

SAF No. W05-012

Contact/Requestor DL STEWART

Telephone No. 509-376-5056

MSIN

FAX

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BV94		W	12/8/04	1006	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
D. P. CONNOLLY			DEC 10 2004 1400	FedEX			
FEDEX				Jill Clarke STL			12-11-04 0840

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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-107

Page 1 of 2

Collector DURATEK R. R. FOX	Contact/Requester DL STEWART	Telephone No. 509-376-5056 MSIN FAX
SAF No. W05-012	Sampling Origin HANFORD SITE	Purchase Order/Charge Code
Project Title RCRA GW MONITORING, DECEMBER 2004	SAWS 483	Ice Chest No. SAWS 210 Temp.
Shipped To (Lab) Severn Trent St. Louis	Method of Shipment GOVT. VEHICLE	Bill of Lading/Air Bill No. 7908 5577 6959
Protocol RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BRT3 (F)	26	W	12.10.04	1032	1x500-mL G/P	7421_PB_GFAA: Lead (1)	HNO3 to pH <2
B1BRT3 (F)		W			1x500-mL G	7470_HG_CVAA: Mercury (1)	HNO3 to pH <2
B1BRT3 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BRT4	27	W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool 4C
B1BRT4		W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BRT4		W			1x250-mL G/P	9012_CYANIDE: Cyanide (1)	NaOH to pH >= 12 Cool 4C
B1BRT4		W			1x20-mL P	Activity Scan	None
B1BRT4		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BRT4		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVD2	28	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVD2		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVD3	29	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)
DURATEK R. R. FOX — DEC 10 2004 1300	Fed Ex
Relinquished By: FED Ex — Date/Time	Received By: Gil Clarke STL 12.11.04 08:40
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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-107

Page 2 of 2

SAF No. W05-012

Contact/Requestor DL STEWART

Telephone No. 509-376-5056

MSIN

FAX

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BVD3		W	12.10.04	1032	1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVD4	30	W	↓	↓	1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVD4		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
JUPITER R.R. FOX			DEC 10 2004 1400	FedEx			
Relinquished By	FED Ex		Date/Time	Received By	Jill Clarke	STL	12.11.04 0840
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

PNNL S429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-59

Collector: D.P. CONNOLLY	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: RCRA GW MONITORING, DECEMBER 2004	DTS-SAWS-H84	Ice Chest No.: SMC-550 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 7921-5698-0236
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BT37 (F)	31	W	12-10-04	1224	1x500-mL G/P	7060_AS_GFAA: Arsenic (1)	HNO3 to pH <2
B1BT37 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BT38	32	W			3x1000-mL aG	8040_PHENOLIC_GC: List-1 (17)	Residual Chlorine 0.0008%
B1BT38		W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool 4C
B1BT38		W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BT38		W			1x250-mL G/P	9012_CYANIDE: Cyanide (1)	NaOH to pH >= 12 Cool 4C
B1BT38		W			1x20-mL P	Activity Scan	None
B1BT38		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BT38		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVN7	33	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVN7		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVN8	34	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
D.P. CONNOLLY			DEC 10 2004 1400	FedEx			
FEDEX				Gil Clarke STL			12-11-04 08:40

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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-59

Page 2 of 2

SAF No. W05-012

Contact/Requestor DL STEWART

Telephone No. 509-376-5056

MSIN

FAX

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BVN8		W	12-10-04	1224	1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVN9	35	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVN9		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
D. P. CONNOLLY			DEC 10 2004 1400	Fed EX			
Relinquished By			Date/Time	Received By			Date/Time
FEDEX				Jill Clarke STL			12-11-04 08:40
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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-99

Collector: DURATEK L. D. WALL	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code: ~~SAL~~ 12-10-04
Project Title: RCRA GW MONITORING, DECEMBER 2004	Logbook DTS-SAWS-1482	Ice Chest No.: ~~SAW3-08~~ FRC 96-050 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 7908-5558-4360
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BRR7 (F)	34	W	12-10-04	0855	1x500-mL G/P	7421_PB_GFAA: Lead (1)	HNO3 to pH <2
B1BRR7 (F)		W			1x500-mL G	7470_HG_CVAA: Mercury (1)	HNO3 to pH <2
B1BRR7 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BRR8	37	W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool 4C
B1BRR8		W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BRR8		W			1x20-mL P	Activity Scan	None
B1BRR8		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BRR8		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVC6	38	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVC6		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVC7	39	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVC7		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
DURATEK L. D. WALL / L. D. Wall	DEC 10 2004 1300	FED EX	
FED Ex		Jill Clarke STL	12-11-04 08:40

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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-99

Page 2 of 2

SAF No. W05-012

Contact/Requestor DL STEWART

Telephone No. 509-376-5056

MSIN

FAX

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BVC8	40	W	12-10-04	0855	1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVC8		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
DURATEK	L. D. WALL	L.D. Wall	DEC 10 2004 1300	FED EX			
FED Ex				Jill Clarke STL			12-11-04 0840

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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-91

Page 1 of 2

Collector: DURATEK L. D. WALL	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: RCRA GW MONITORING, DECEMBER 2004	Logbook DTS-SAWS-1482	Ice Chest No.: EKC96-050 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 7908-5558-4366
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BRP8 (F)	41	W	12-10-04	0940	1x500-mL G/P	7421_PB_GFAA: Lead (1)	HNO3 to pH <2
B1BRP8 (F)		W			1x500-mL G	7470_HG_CVAA: Mercury (1)	HNO3 to pH <2
B1BRP8 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BRP9	42	W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool 4C
B1BRP9		W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BRP9		W			1x20-mL P	Activity Scan	None
B1BRP9		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BRP9		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVC0	43	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVC0		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVC1	44	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVC1		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
DURATEK L. D. WALL L.D. Wall	DEC 10 2004 1300	FED EX	
FED Ex		Jill Clarke STL	12-11-04 0854

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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-91

Page 2 of 2

SAF No. W05-012 | Contact/Requestor DL STEWART | Telephone No. 509-376-5056 | MSIN | FAX

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BVC2	45	W	12.10.04	0940	1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVC2		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
DURATEK L.D. WALL	L.D. Wall		DEC 10 2004 1300	FED EX			
FED Ex				Jill Clarke STL			12.11.04 0840

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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-51

Collector: D. P. CONNOLLY	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: RCRA GW MONITORING, DECEMBER 2004	DTS-SHWS-HS4	Ice Chest No.: SMC-443 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 7921-5698 0247
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BT31 (F)	46	W	12-10-04	1120	1x500-mL G/P	7060_AS_GFAA: Arsenic (1)	HNO3 to pH <2
B1BT31 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BT32	47	W			3x1000-mL aG	8040_PHENOLIC_GC: List-1 (17)	Residual Chlorine 0.0008%
B1BT32		W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool 4C
B1BT32		W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BT32		W			1x250-mL G/P	9012_CYANIDE: Cyanide (1)	NaOH to pH >= 12 Cool 4C
B1BT32		W			1x20-mL P	Activity Scan	None
B1BT32		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BT32		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVN1	48	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVN1		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVN2	49	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
D. P. CONNOLLY			DEC 10 2004 1400	FedEx			
Relinquished By			Date/Time	Received By			Date/Time
FED EX				Gil Clarke STL			12-11-04 0840
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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-51

Page 2 of 2

SAF No. W05-012

Contact/Requestor DL STEWART

Telephone No. 509-376-5056

MSIN

FAX

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BVN2		W	12-10-04	1120	1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVN3	50	W	↓	↓	1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVN3		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
D. P. CONNOLLY			DEC 10 2004 1400	Fed Ex			
Relinquished By			Date/Time	Received By			Date/Time
FED Ex				Gill Clarke STL			12-11-04 0840
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

PNNL SL429 cer 43446

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-84

Page 1 of 2

Collector: DURATEK F. M. HALL	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: RCRA GW MONITORING, DECEMBER 2004	DTS - SALS H82	Ice Chest No.: ERC 99-056 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 79141560 6127
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BRP3 (F)	1	W	12-13-04	0745	1x500-mL G/P	7421_PB_GFAA: Lead (1)	HNO3 to pH <2
B1BRP3 (F)		W			1x500-mL G	7470_HG_CVAA: Mercury (1)	HNO3 to pH <2
B1BRP3 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BRP4	2	W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool 4C
B1BRP4		W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BRP4		W			1x20-mL P	Activity Scan	None
B1BRP4		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BRP4		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVB4	27	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVB4		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVB5	3	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVB5		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
DURATEK F. M. HALL			DEC 13 2004 1400	FED EX			
FED EX							12-14-04 0900

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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-84

Page 2 of 2

SAF No. W05-012 | Contact/Requestor DL STEWART | Telephone No. 509-376-5056 | MSIN | FAX

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BVB6	4	W	12-13-04	0745	1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVB6		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
BURNTEX F. M. HALL		DEC 13 2004	1400	FED Ex			
Relinquished By			Date/Time	Received By			Date/Time
FED Ex							12-14-04 0900
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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-83

Collector: DURATEK F.M.HALL	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: RCRA GW MONITORING, DECEMBER 2004	DTS-SHWS H 82	Ice Chest No.: ERC99-056 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 7914 1560 6127
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BRN9 (F)	5	W	12-13-04	0954	1x500-mL G/P	7421_PB_GFAA: Lead (1)	HNO3 to pH <2
B1BRN9 (F)		W			1x500-mL G	7470_HG_CVAA: Mercury (1)	HNO3 to pH <2
B1BRN9 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BRP0	6	W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool 4C
B1BRP0		W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BRP0		W			1x20-mL P	Activity Scan	None
B1BRP0		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BRP0		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVB1	7	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVB1		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVB2	8	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVB2		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
DURATEK F.M.HALL			DEC 13 2004 1400	FED EX			
Relinquished By			Date/Time	Received By			Date/Time
FED EX						12-14-04	0900
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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-83

Page 2 of 2

SAF No.	Contact/Requestor	Telephone No.	MSIN	FAX
W05-012	DL STEWART	509-376-5056		

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BVB3	9	W	12-13-04	0954	1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVB3		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
DYNATEK F. M. HALL	[signature]	DEC 13 2004 1400	FED EX		
Relinquished By		Date/Time	Received By		Date/Time
FEDEX			[signature]		12-14-04 0900
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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-115

Page 1 of 2

Collector: DURATEK F. M. HALL	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: RCRA GW MONITORING, DECEMBER 2004	DTS - SAWS H 82	Ice Chest No.: SML 382 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 7914156066090
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BRT9 (F)	10	W	12-13-04	1058	1x500-mL G/P	7421_PB_GFAA: Lead (1)	HNO3 to pH <2
B1BRT9 (F)		W			1x500-mL G	7470_HG_CVAA: Mercury (1)	HNO3 to pH <2
B1BRT9 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BRV0	11	W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BRV0		W			1x20-mL P	Activity Scan	None
B1BRV0		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BRV0		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVD8	12	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVD8		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVD9	13	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVD9		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVF0	14	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
DURATEK F. M. HALL	DEC 13 2004 1400	FED EX	
FED EX			12-14-04 0900

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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-115

Page 2 of 2

SAF No.	Contact/Requestor	Telephone No.	MSIN	FAX
W05-012	DL STEWART	509-376-5056		

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BVF0		W	12-13-04	1058	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
DURATEK F. M. HALL			DEC 13 2004 1400	FED EX			
Relinquished By			Date/Time	Received By			Date/Time
FED EX							12-14-04 0900
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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-63

Page 1 of 2

Collector: DURATEK ~~F. M. HALL~~	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: RCRA GW MONITORING, DECEMBER 2004	DTS - SAWS H82	Ice Chest No.: SML 382 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 7914156066090
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BT40 (F)	15	W	12-13-04	1157	1x500-mL G/P	7060_AS_GFAA: Arsenic (1)	HNO3 to pH <2
B1BT40 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BT41	16	W			3x1000-mL aG	8040_PHENOLIC_GC: List-1 (17)	Residual Chlorine 0.0008%
B1BT41		W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool 4C
B1BT41		W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BT41		W			1x250-mL G/P	9012_CYANIDE: Cyanide (1)	NaOH to pH >= 12 Cool 4C
B1BT41		W			1x20-mL P	Activity Scan	None
B1BT41		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BT41		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVP0	17	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVP0		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVP1	18	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
~~DURATEK~~ ~~F. M. HALL~~	DEC 13 2004 1400	FED EX	
FED EX			12-14-04 0900

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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-63

Page 2 of 2

SAF No. W05-012 | Contact/Requestor DL STEWART | Telephone No. 509-376-5056 | MSIN | FAX

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BVP1		W	12-13-04	1157	1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVP2	19	W	↓	↓	1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVP2		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
DORATEK F. M. HALL			DEC 13 2004 1400	FED EX			
Relinquished By			Date/Time	Received By			Date/Time
FED EX							021434 0950
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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-135

Page 1 of 2

Collector: R.T. SICKLE	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: RCRA GW MONITORING, DECEMBER 2004	DTS - SAWS HF3	Ice Chest No.: SAWJ-101 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 7914 1531 1676
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BRW4 (F)	20	W	12-13-04	0900	1x500-mL G/P	7421_PB_GFAA: Lead (1)	HNO3 to pH <2
B1BRW4 (F)		W			1x500-mL G	7470_HG_CVAA: Mercury (1)	HNO3 to pH <2
B1BRW4 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BRW5	21	W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BRW5		W			1x20-mL P	Activity Scan	None
B1BRW5		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BRW5		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVH3	22	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVH3		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVH4	23	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVH4		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVH5	24	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
R.T. SICKLE	DEC 13 2004 1400	Fed Ex	
FED EX		12.14.04	0900

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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-135

Page 2 of 2

SAF No. W05-012 | Contact/Requestor DL STEWART | Telephone No. 509-376-5056 | MSIN | FAX

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BVH5		W	12-13-04	0900	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
R.T. SICKLE			1400 DEC 13 2004	Fed EX			
Relinquished By			Date/Time	Received By			Date/Time
FEDEX							12-14-04 0900
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

60165

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-233

Page 1 of 1

Collector R.T. SICKLE	Contact/Requester DL STEWART	Telephone No. 509-376-5056 MSIN FAX
SAF No. W05-012	Sampling Origin HANFORD SITE	Purchase Order/Charge Code
Project Title RCRA GW MONITORING, DECEMBER 2004	DTS-SAWS-HS3	Ice Chest No. SAWS-101 Temp.
Shipped To (Lab) Severn Trent St. Louis	Method of Shipment GOVT. VEHICLE	Bill of Lading/Air Bill No. 7914 1531 1676
Protocol RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BT96 (F)	25	W	12-13-04	1054	1x500-mL G/P	7060_AS_GFAA: Arsenic (1)	HNO3 to pH <2
B1BT96 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BT97	26	W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool 4C
B1BT97		W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BT97		W			1x20-mL P	Activity Scan	None
B1BT97		W			1x500-mL G/P	120.1_CONDUCT: Conductivity (1)	Cool 4C
B1BT97		W			1x500-mL G/P	160.1_TDS: TDS (1)	Cool 4C

Relinquished By	Received By
Print R.T. SICKLE Sign Date/Time 1405 DEC 13 2004	Print Sign Date/Time Fed Ex
Relinquished By Date/Time	Received By Date/Time 12/14/04 0900
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

PNNL SL429 Cert 43346

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # S05-012-32

Page 1 of 1

Collector: DURATEK F.M. HALL	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: S05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: SURV/LTMC GW MONITORING, DECEMBER 2004	DTS-SAWS H82	Ice Chest No.: SML 382 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 7914156060 90
Protocol: LTMC	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BTV5	1	W	12-13-04	1058	1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool 4C
B1BTV5		W	↓	↓	1x250-mL G/P	9012_CYANIDE: Cyanide (1)	NaOH to pH >= 12 Cool 4C
B1BTV5		W	↓	↓	1x20-mL P	Activity Scan	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
DURATEK F.M. HALL			DEC 13 2004 1400	FED EX			
Relinquished By			Date/Time	Received By			Date/Time
FED EX							12-14-04 0900
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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # S05-012-20

Page 1 of 1

Collector: DURATEK F. M. HALL	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: S05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: SURV/LTMC GW MONITORING, DECEMBER 2004	DTS-SALWS H82	Ice Chest No.: ERC 99-056 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 7914156061 27
Protocol: LTMC	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BTT6	V	W	12-13-04	0954	1x250-mL G/P	9012_CYANIDE: Cyanide (1)	NaOH to pH >= 12 Cool 4C
B1BTT6		W	↓	↓	1x20-mL P	Activity Scan	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
DURATEK F. M. HALL			DEC 13 2004 1400	FED EX			
Relinquished By			Date/Time	Received By			Date/Time
FED EX							12-14-04 0900
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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # S05-012-21

Page 1 of 1

Collector: DURATEK F. M. HALL	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: S05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: SURV/LTMC GW MONITORING, DECEMBER 2004	DTS - SALVI H 82	Ice Chest No.: EIC 99-056 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 79141560 6127
Protocol: LTMC	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BTT7	3	W	12-13-04	0745	1x250-mL G/P	9012_CYANIDE: Cyanide (1)	NaOH to pH >= 12 Cool 4C
B1BTT7		W	↓	↓	1x20-mL P	Activity Scan	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
DURATEK F. M. HALL			DEC 13 2004 1400	FED EX			
Relinquished By		FED Ex	Date/Time	Received By		12.14.04	Date/Time 0900
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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # S05-012-48

Page 1 of 1

Collector: R.T. SICKLE	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: S05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: SURV/LTMC GW MONITORING, DECEMBER 2004	DTS-SAWS-HF3	Ice Chest No.: SAWS-101 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 7914 1531 1676
Protocol: LTMC	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BTW3	4	W	12-13-04	0900	1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool 4C
B1BTW3		W	↓	↓	1x250-mL G/P	9012_CYANIDE: Cyanide (1)	NaOH to pH >= 12 Cool 4C
B1BTW3		W	↓	↓	1x20-mL P	Activity Scan	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
R.T. SICKLE			DEC 13 2004 1405	Fed Ex			
Relinquished By			Date/Time	Received By			Date/Time
FED Ex							12-14-04 0900
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

Appendix 5

Data Validation Supporting Documentation

GENERAL ORGANIC ANALYSIS DATA VALIDATION CHECKLIST

VALIDATION LEVEL:	A	B	C	D	E
PROJECT: SURV/LTMC05, RCRA05			DATA PACKAGE: VSR10-023		
VALIDATOR: Carl Schloesslin		LAB: TestAmerica		DATE: 8-10-2010	
			SDG: SL429		
ANALYSES PERFORMED					
8015	8021	8141	8151	8315	8310
	8040 Phenols X	WTPH-HCID	WTPH-G	WTPH-D	

SAMPLES/MATRIX:
Water samples: B1BT17, B1BT02, B1BT38, B1BT32, BIBT41

1. DATA PACKAGE COMPLETENESS AND CASE NARRATIVE

Technical verification documentation present? ..... Yes (No) N/A

Comments: None

2. INSTRUMENT TUNING AND CALIBRATION (Levels D and E)

Initial calibrations acceptable? ..... Yes No (N/A)

Continuing calibrations acceptable? ..... Yes No (N/A)

Standards traceable? ..... Yes No (N/A)

Standards expired? ..... Yes No (N/A)

Calculation check acceptable? ..... Yes No (N/A)

Comments:

GENERAL ORGANIC ANALYSIS DATA VALIDATION CHECKLIST

3. BLANKS (Levels B, C, D, and E)

Calibration blanks analyzed? (Levels D, E) ..... Yes No N/A

Calibration blank results acceptable? (Levels D, E) ..... Yes No N/A

Laboratory blanks analyzed? ..... Yes No N/A

Laboratory blank results acceptable? ..... Yes No N/A

Field/trip blanks analyzed? (Levels C, D, E) ..... Yes No N/A

Field/trip blank results acceptable? (Levels C, D, E) ..... Yes No N/A

Transcription/calculation errors? (Levels D, E) ..... Yes No N/A

Comments: None

4. ACCURACY (Levels C, D, and E)

Surrogates/system monitoring compounds analyzed? ..... Yes No N/A

Surrogate/system monitoring compound recoveries acceptable? ..... Yes No N/A

Surrogates traceable? (Levels D, E) ..... Yes No N/A

Surrogates expired? (Levels D, E) ..... Yes No N/A

MS/MSD samples analyzed? ..... Yes No N/A

MS/MSD results acceptable? ..... Yes No N/A

MS/MSD standards NIST traceable? (Levels D, E) ..... Yes No N/A

MS/MSD standards expired? (Levels D, E) ..... Yes No N/A

LCS/BSS samples analyzed? ..... Yes No N/A

LCS/BSS results acceptable? ..... Yes No N/A

Standards traceable? (Levels D, E) ..... Yes No N/A

Standards expired? (Levels D, E) ..... Yes No N/A

Transcription/calculation errors? (Levels D, E) ..... Yes No N/A

Performance audit sample(s) analyzed? ..... Yes No N/A

Performance audit sample results acceptable? ..... Yes No N/A

Comments: None

GENERAL ORGANIC ANALYSIS DATA VALIDATION CHECKLIST

5. PRECISION (Levels C, D, and E)

Duplicate RPD values acceptable? ..... Yes No N/A

Duplicate results acceptable? ..... Yes No N/A

MS/MSD standards NIST traceable? (Levels D, E) ..... Yes No N/A

MS/MSD standards expired? (Levels D, E) ..... Yes No N/A

Field duplicate RPD values acceptable? ..... Yes No N/A

Field split RPD values acceptable? ..... Yes No N/A

Transcription/calculation errors? (Levels D, E) ..... Yes No N/A

Comments: None

6. HOLDING TIMES (all levels)

Samples properly preserved? ..... Yes No N/A

Sample holding times acceptable? ..... Yes No N/A

Comments: None

GENERAL ORGANIC ANALYSIS DATA VALIDATION CHECKLIST

8. COMPOUND IDENTIFICATION, QUANTITATION, AND DETECTION LIMITS (all levels)

Results reported for all requested analyses? ..... Yes No N/A

Rresults supported in the raw data? (Levels D, E) ..... Yes No N/A

Samples properly prepared? (Levels D, E) ..... Yes No N/A

Detection limits meet RDL? ..... Yes No N/A

Transcription/calculation errors? (Levels D, E) ..... Yes No N/A

Comments:

Phenol water CRDLs not provided in the SAP.

9. SAMPLE CLEANUP (Levels D and E)

Fluoricil ® (or other aborbant) cleanup performed? ..... Yes No N/A

Lot check performed? ..... Yes No N/A

Check recoveries aceptable? ..... Yes No N/A

Check materials traceable? ..... Yes No N/A

Check materials Expired? ..... Yes No N/A

Analytical batch QC given similar cleanup? ..... Yes No N/A

Transcription/Calculation Errors? ..... Yes No N/A

Comments:

Appendix 6

Additional Documentation Requested By Client

MATRIX SPIKE SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: SL429 **Work Order #...:** G05JK1AN-MS **Matrix.....:** WATER
MS Lot-Sample #: F4L150301-003 G05JK1AP-MSD
Date Sampled...: 12/14/04 **Date Received..:** 12/15/04
Prep Date.....: 12/17/04 **Analysis Date..:** 12/21/04
Prep Batch #...: 4352288
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
2-Chlorophenol	ND	100	69.8	ug/L	70		SW846 8040A
	ND	100	64.5	ug/L	65	7.8	SW846 8040A
4-Chloro-3-methylphenol	ND	100	76.1	ug/L	76		SW846 8040A
	ND	100	71.0	ug/L	71	6.8	SW846 8040A
3-Methylphenol & 4-Methylphenol	ND	100	68.0	ug/L	68		SW846 8040A
	ND	100	61.7	ug/L	62	9.8	SW846 8040A
2-Methylphenol	ND	100	80.9	ug/L	81		SW846 8040A
	ND	100	73.8	ug/L	74	9.1	SW846 8040A
2,4-Dichlorophenol	ND	100	73.4	ug/L	73		SW846 8040A
	ND	100	68.1	ug/L	68	7.5	SW846 8040A
2,6-Dichlorophenol	ND	100	72.9	ug/L	73		SW846 8040A
	ND	100	67.8	ug/L	68	7.2	SW846 8040A
2,4-Dimethylphenol	ND	100	71.5	ug/L	72		SW846 8040A
	ND	100	66.0	ug/L	66	8.1	SW846 8040A
2,4-Dinitrophenol	ND	100	82.2	ug/L	82		SW846 8040A
	ND	100	79.8	ug/L	80	3.0	SW846 8040A
4,6-Dinitro-2-methylphenol	ND	100	86.2	ug/L	86		SW846 8040A
	ND	100	86.2	ug/L	86	0.02	SW846 8040A
Dinoseb	ND	100	98.0	ug/L	98		SW846 8040A
	ND	100	98.5	ug/L	99	0.51	SW846 8040A
2-Nitrophenol	ND	100	73.4	ug/L	73		SW846 8040A
	ND	100	68.8	ug/L	69	6.5	SW846 8040A
4-Nitrophenol	ND	100	86.2	ug/L	86		SW846 8040A
	ND	100	79.3	ug/L	79	8.3	SW846 8040A
Pentachlorophenol	ND	100	86.8	ug/L	87		SW846 8040A
	ND	100	87.7	ug/L	88	1.0	SW846 8040A
Phenol	ND	100	69.8	ug/L	70		SW846 8040A
	ND	100	60.0	ug/L	60	15	SW846 8040A
2,3,4,6-Tetrachlorophenol	ND	100	72.2	ug/L	72		SW846 8040A
	ND	100	72.4	ug/L	72	0.24	SW846 8040A
2,4,5-Trichloro-phenol	ND	100	75.3	ug/L	75		SW846 8040A
	ND	100	70.8	ug/L	71	6.2	SW846 8040A

(Continued on next page)

MATRIX SPIKE SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: SL429 **Work Order #...:** G05JK1AN-MS **Matrix.....:** WATER
MS Lot-Sample #: F4L150301-003 G05JK1AP-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
2,4,6-Trichloro-phenol	**ND**	**100**	**76.8**	**ug/L**	**77**		**SW846 8040A**
	ND	**100**	**72.0**	**ug/L**	**72**	**6.4**	**SW846 8040A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2,4,6-Tribromophenol	84	(34 - 142)
	83	(34 - 142)
2-Fluorophenol	69	(17 - 115)
	62	(17 - 115)

NOTE(S):

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

Bold print denotes control parameters

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: SL429 **Work Order #...:** G00891AA **Matrix.....:** WATER
MB Lot-Sample #: F4L140000-321

Prep Date.....: 12/14/04
Analysis Date..: 12/16/04 **Prep Batch #...:** 4349321
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
2-Chlorophenol	ND	5.0	ug/L	SW846 8040A
4-Chloro-3-methylphenol	ND	5.0	ug/L	SW846 8040A
3-Methylphenol & 4-Methylphenol	ND	5.0	ug/L	SW846 8040A
2-Methylphenol	ND	5.0	ug/L	SW846 8040A
2,4-Dichlorophenol	ND	5.0	ug/L	SW846 8040A
2,6-Dichlorophenol	ND	5.0	ug/L	SW846 8040A
2,4-Dimethylphenol	ND	5.0	ug/L	SW846 8040A
2,4-Dinitrophenol	ND	5.0	ug/L	SW846 8040A
4,6-Dinitro-2-methylphenol	ND	5.0	ug/L	SW846 8040A
Dinoseb	ND	5.0	ug/L	SW846 8040A
2-Nitrophenol	ND	5.0	ug/L	SW846 8040A
4-Nitrophenol	ND	5.0	ug/L	SW846 8040A
Pentachlorophenol	ND	5.0	ug/L	SW846 8040A
Phenol	ND	5.0	ug/L	SW846 8040A
2,3,4,6-Tetrachlorophenol	ND	5.0	ug/L	SW846 8040A
2,4,5-Trichloro-phenol	ND	5.0	ug/L	SW846 8040A
2,4,6-Trichloro-phenol	ND	5.0	ug/L	SW846 8040A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2,4,6-Tribromophenol	58	(34 - 142)
2-Fluorophenol	46	(17 - 115)

NOTE(S):

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

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: SL429 **Work Order #...:** G1CNV1AA **Matrix.....:** WATER
MB Lot-Sample #: F4L170000-288

Prep Date.....: 12/17/04
Analysis Date..: 12/21/04 **Prep Batch #...:** 4352288
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
2-Chlorophenol	ND	5.0	ug/L	SW846 8040A
4-Chloro-3-methylphenol	ND	5.0	ug/L	SW846 8040A
3-Methylphenol & 4-Methylphenol	ND	5.0	ug/L	SW846 8040A
2-Methylphenol	ND	5.0	ug/L	SW846 8040A
2,4-Dichlorophenol	ND	5.0	ug/L	SW846 8040A
2,6-Dichlorophenol	ND	5.0	ug/L	SW846 8040A
2,4-Dimethylphenol	ND	5.0	ug/L	SW846 8040A
2,4-Dinitrophenol	ND	5.0	ug/L	SW846 8040A
4,6-Dinitro-2-methylphenol	ND	5.0	ug/L	SW846 8040A
Dinoseb	ND	5.0	ug/L	SW846 8040A
2-Nitrophenol	ND	5.0	ug/L	SW846 8040A
4-Nitrophenol	ND	5.0	ug/L	SW846 8040A
Pentachlorophenol	ND	5.0	ug/L	SW846 8040A
Phenol	ND	5.0	ug/L	SW846 8040A
2,3,4,6-Tetrachlorophenol	ND	5.0	ug/L	SW846 8040A
2,4,5-Trichloro-phenol	ND	5.0	ug/L	SW846 8040A
2,4,6-Trichloro-phenol	ND	5.0	ug/L	SW846 8040A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2,4,6-Tribromophenol	71	(34 - 142)
2-Fluorophenol	58	(17 - 115)

NOTE(S):

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

LABORATORY CONTROL SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: SL429 **Work Order #...:** G00891AC **Matrix.....:** WATER
LCS Lot-Sample#: F4L140000-321
Prep Date.....: 12/14/04 **Analysis Date..:** 12/16/04
Prep Batch #...: 4349321
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
2-Chlorophenol	**100**	**61.3**	**ug/L**	**61**	**SW846 8040A**
4-Chloro-3-methylphenol	**100**	**66.4**	**ug/L**	**66**	**SW846 8040A**
3-Methylphenol & 4-Methylphenol	**100**	**58.9**	**ug/L**	**59**	**SW846 8040A**
2-Methylphenol	**100**	**70.3**	**ug/L**	**70**	**SW846 8040A**
2,4-Dichlorophenol	**100**	**63.8**	**ug/L**	**64**	**SW846 8040A**
2,6-Dichlorophenol	**100**	**63.5**	**ug/L**	**63**	**SW846 8040A**
2,4-Dimethylphenol	**100**	**62.4**	**ug/L**	**62**	**SW846 8040A**
2,4-Dinitrophenol	**100**	**74.0**	**ug/L**	**74**	**SW846 8040A**
4,6-Dinitro-2-methylphenol	**100**	**82.0**	**ug/L**	**82**	**SW846 8040A**
Dinoseb	**100**	**93.5**	**ug/L**	**94**	**SW846 8040A**
2-Nitrophenol	**100**	**64.5**	**ug/L**	**65**	**SW846 8040A**
4-Nitrophenol	**100**	**77.8**	**ug/L**	**78**	**SW846 8040A**
Pentachlorophenol	**100**	**82.6**	**ug/L**	**83**	**SW846 8040A**
Phenol	**100**	**58.6**	**ug/L**	**59**	**SW846 8040A**
2,3,4,6-Tetrachlorophenol	**100**	**69.2**	**ug/L**	**69**	**SW846 8040A**
2,4,5-Trichlorophenol	**100**	**65.6**	**ug/L**	**66**	**SW846 8040A**
2,4,6-Trichlorophenol	**100**	**67.2**	**ug/L**	**67**	**SW846 8040A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2,4,6-Tribromophenol	78	(50 - 132)
2-Fluorophenol	60	(27 - 112)

NOTE(S):

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

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: SL429 **Work Order #...:** G1CNV1AC **Matrix.....:** WATER
LCS Lot-Sample#: F4L170000-288
Prep Date.....: 12/17/04 **Analysis Date..:** 12/21/04
Prep Batch #...: 4352288
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
2-Chlorophenol	**100**	**63.0**	**ug/L**	**63**	**SW846 8040A**
4-Chloro-3-methylphenol	**100**	**66.9**	**ug/L**	**67**	**SW846 8040A**
3-Methylphenol & 4-Methylphenol	**100**	**59.6**	**ug/L**	**60**	**SW846 8040A**
2-Methylphenol	**100**	**71.6**	**ug/L**	**72**	**SW846 8040A**
2,4-Dichlorophenol	**100**	**65.2**	**ug/L**	**65**	**SW846 8040A**
2,6-Dichlorophenol	**100**	**65.0**	**ug/L**	**65**	**SW846 8040A**
2,4-Dimethylphenol	**100**	**63.4**	**ug/L**	**63**	**SW846 8040A**
2,4-Dinitrophenol	**100**	**73.2**	**ug/L**	**73**	**SW846 8040A**
4,6-Dinitro-2-methylphenol	**100**	**77.6**	**ug/L**	**78**	**SW846 8040A**
Dinoseb	**100**	**90.6**	**ug/L**	**91**	**SW846 8040A**
2-Nitrophenol	**100**	**65.6**	**ug/L**	**66**	**SW846 8040A**
4-Nitrophenol	**100**	**74.1**	**ug/L**	**74**	**SW846 8040A**
Pentachlorophenol	**100**	**80.0**	**ug/L**	**80**	**SW846 8040A**
Phenol	**100**	**59.0**	**ug/L**	**59**	**SW846 8040A**
2,3,4,6-Tetrachlorophenol	**100**	**64.2**	**ug/L**	**64**	**SW846 8040A**
2,4,5-Trichloro-phenol	**100**	**66.6**	**ug/L**	**67**	**SW846 8040A**
2,4,6-Trichloro-phenol	**100**	**68.1**	**ug/L**	**68**	**SW846 8040A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2,4,6-Tribromophenol	75	(50 - 132)
2-Fluorophenol	61	(27 - 112)

NOTE(S):

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

Bold print denotes control parameters

Date: 10 August 2010
To: CH2M Hill (technical representative)
From: Analytical Quality Associates, Inc.
Project: SURV/LTMC05, RCRA05
Subject: Inorganics - Sample Data Group (SDG) SL429

INTRODUCTION

This memorandum presents the results of data validation for SDG SL429 prepared by TestAmerica. A list of samples validated along with the analytical methods is provided in the following table.

Sample ID	Sample Date	Media	Validation Level	Analytical Methods
B1BRV5	12/09/2004	Water	C	7421 (Pb), 7470A (Hg)
B1BRV2	12/09/2004	Water	C	7421 (Pb), 7470A (Hg)
B1BT16	12/09/2004	Water	C	7060 (As)
B1BT01	12/09/2004	Water	C	7060 (As)
B1BRR5	12/09/2004	Water	C	7421 (Pb), 7470A (Hg)
B1BRR1	12/09/2004	Water	C	7421 (Pb), 7470A (Hg)
B1BRN3	12/09/2004	Water	C	7421 (Pb), 7470A (Hg)
B1BRN6	12/09/2004	Water	C	7421 (Pb), 7470A (Hg)
B1BRT6	12/10/2004	Water	C	7421 (Pb), 7470A (Hg)
B1BRV8	12/10/2004	Water	C	7421 (Pb), 7470A (Hg)
B1BRP5	12/10/2004	Water	C	7421 (Pb), 7470A (Hg)
B1BRT0	12/10/2004	Water	C	7421 (Pb), 7470A (Hg)
B1BRN0	12/10/2004	Water	C	7421 (Pb), 7470A (Hg)
B1BRT3	12/10/2004	Water	C	7421 (Pb), 7470A (Hg)
B1BT37	12/10/2004	Water	C	7060 (As)
B1BRR7	12/10/2004	Water	C	7421 (Pb), 7470A (Hg)
B1BRP8	12/10/2004	Water	C	7421 (Pb), 7470A (Hg)
B1BT31	12/10/2004	Water	C	7060 (As)
B1BRP3	12/13/2004	Water	C	7421 (Pb), 7470A (Hg)
B1BRN9	12/13/2004	Water	C	7421 (Pb), 7470A (Hg)
B1BRT9	12/13/2004	Water	C	7421 (Pb), 7470A (Hg)
B1BT40	12/13/2004	Water	C	7060 (As)
B1BRW4	12/13/2004	Water	C	7421 (Pb), 7470A (Hg)
B1BT96	12/13/2004	Water	C	7060 (As)

Data validation was conducted in accordance with the CHPRC validation statement of work and the Remedial Investigation/Feasibility Study Work Plan for the 200-BP-5 Groundwater Operable Unit, DOE/RL-2007-18, Rev. 1 (SAP). Appendices 1 through 6 provide the following information as indicated below:

Appendix 1. Glossary of Data Reporting Qualifiers
Appendix 2. Summary of Data Qualification
Appendix 3. Annotated Laboratory Reports

Appendix 4. Laboratory Narrative and Chain-of-Custody Documentation
Appendix 5. Data Validation Supporting Documentation
Appendix 6. Additional Documentation Requested By Client

DATA QUALITY OBJECTIVES

- **Holding Times and Sample Preservation**

Holding times are calculated from Chain-of-Custody forms to determine the validity of the results. The holding time requirement for As and Pb is analysis within 180 days of sample collection, and the holding time requirement for Hg is analysis within 28 days of sample collection. Sample preservation requires acid preservation with nitric acid to pH <2.

The samples were analyzed within the prescribed holding times and properly preserved.

- **Blanks**

The blank data results are reviewed to assess the extent of contamination introduced through sampling, sample preparation, and analysis.

Laboratory Blanks

All laboratory blank results were acceptable.

Trip Blanks

All trip blank results were acceptable.

Field Blanks

No field blanks were submitted for analysis.

Equipment Blanks

No equipment blanks were submitted for analysis.

- **Accuracy**

Accuracy is evaluated by reviewing matrix spike sample results and laboratory control sample results. According to the SAP, the matrix spike sample accuracy limits are 70% to 130%. The laboratory control sample accuracy limits are ones specified by the DV procedure. The limits for reported analytes not listed in the SAP are specified by the DV procedure.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Samples

All MS/MSD recoveries were acceptable.

Laboratory Control Samples (LCSs)

All LCS recoveries were acceptable.

- **Precision**

Precision is evaluated by reviewing MS/MSD results, field duplicate sample results, and field split sample results. These QC results provide information on the laboratory reproducibility and whether sampling activities are adequate to acquire consistent sample results. According to the SAP, the relative percent difference (RPD) limits are ±30%. The RPD limits for reported analytes not listed in the SAP are specified by the DV procedure. When duplicate RPDs exceed the limits and have associated results <5X the SAP required detection limits (or <5X the laboratory required detection limits for analytes not listed in the SAP) with differences <1X the required detection limits no precision infraction occurred.

MS/MSD Samples

All MS/MSD RPD values were acceptable.

Field Duplicate Samples

All field duplicate results were acceptable.

Field Split Samples

No field splits were submitted for analysis.

- **Detection Limits**

Reported MDLs are compared against the contractually required detection limits (CRDLs) to ensure that laboratory detection limits meet the required criteria.

All reported sample MDLs were below the CRDLs.

- **Completeness**

SDG SL429 was submitted for validation and verified for completeness. Completeness is based on the percentage of data determined to be valid (i.e., not rejected). The completion percentage was 100%.

MAJOR DEFICIENCIES

None found.

MINOR DEFICIENCIES

None found.

REFERENCES

HNF-20433, Rev. 0, *Data Validation Procedure for Chemical Analyses*, June 2004.

DOE/RL-2007-18, Rev. 1, *Remedial Investigation/Feasibility Study Work Plan for the 200-BP-5 Groundwater Operable Unit*, December 2008.

Appendix 1

Glossary of Data Reporting Qualifiers

Qualifiers that may be applied by data validators in compliance with the CHPRC statement of work are as follows:

- **U** — The constituent was analyzed for and was not detected. The data should be considered usable for decision-making purposes.

- **UJ** — The constituent was analyzed for and was not detected. Due to a quality control deficiency identified during data validation the value reported may not accurately reflect the MDL. The data should be considered usable for decision-making purposes.

- **J** — Indicates the constituent was analyzed for and detected. The associated value is estimated due to a quality control deficiency identified during data validation. The data should be considered usable for decision-making purposes.

- **UR** — Indicates the constituent was analyzed for and not detected; however, due to an identified quality control deficiency the data should be considered unusable for decision-making purposes.

- **R** — Indicates the constituent was analyzed for and detected; however, due to an identified quality control deficiency the data should be considered unusable for decision-making purposes.

Appendix 2

Summary of Data Qualification

Inorganic Data Qualification Summary			
SDG: SL429	Reviewer: AQA	Project: SURV/LTMC05, RCRA05	Page 1 of 1
Analyte(s)	**Qualifier**	**Samples Affected**	**Reason**
Metals	None	N/A	N/A

Comments: None

Appendix 3

Annotated Laboratory Reports

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BRV5

DISSOLVED Metals

Lot-Sample #...: F4L100169-001 **Matrix.....:** WATER
Date Sampled...: 12/09/04 **Date Received..:** 12/10/04

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4351184						
Silver	ND	10.0	ug/L	SW846 6010B	12/16-12/17/04	G0P5X1AQ
		Dilution Factor: 1		MDL.....: 4.1		
Aluminum	ND	200	ug/L	SW846 6010B	12/16-12/17/04	G0P5X1AA
		Dilution Factor: 1		MDL.....: 45.5		
Barium	**55.8 B**	**200**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0P5X1AD**
		Dilution Factor: 1		MDL.....: 3.7		
Beryllium	ND	5.0	ug/L	SW846 6010B	12/16-12/17/04	G0P5X1AE
		Dilution Factor: 1		MDL.....: 0.29		
Calcium	**46000**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0P5X1AG**
		Dilution Factor: 1		MDL.....: 111		
Cadmium	ND	5.0	ug/L	SW846 6010B	12/16-12/17/04	G0P5X1AF
		Dilution Factor: 1		MDL.....: 2.0		
Cobalt	ND	50.0	ug/L	SW846 6010B	12/16-12/17/04	G0P5X1AH
		Dilution Factor: 1		MDL.....: 3.3		
Chromium	**3.6 B**	**10.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0P5X1AW**
		Dilution Factor: 1		MDL.....: 3.3		
Copper	ND	25.0	ug/L	SW846 6010B	12/16-12/17/04	G0P5X1AJ
		Dilution Factor: 1		MDL.....: 2.4		
Iron	**18.4 B**	**100**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0P5X1AK**
		Dilution Factor: 1		MDL.....: 6.9		
Potassium	**6070**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0P5X1AP**
		Dilution Factor: 1		MDL.....: 1950		
Magnesium	**14200**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0P5X1AL**
		Dilution Factor: 1		MDL.....: 125		
Manganese	ND	15.0	ug/L	SW846 6010B	12/16-12/17/04	G0P5X1AM
		Dilution Factor: 1		MDL.....: 0.99		
Sodium	**26200**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0P5X1AR**
		Dilution Factor: 1		MDL.....: 94.3		

(Continued on next page)

Method 6010 not validated per VSR instructions LS 8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BRV5

DISSOLVED Metals

Lot-Sample #...: F4L100169-001 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Nickel	ND	40.0	ug/L	SW846 6010B	12/16-12/17/04	G0P5X1AN
		Dilution Factor: 1		MDL.....: 8.6		
Antimony	ND	60.0	ug/L	SW846 6010B	12/16-12/17/04	G0P5X1AC
		Dilution Factor: 1		MDL.....: 21.3		
Strontium	**253**	**50.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0P5X1AT**
		Dilution Factor: 1		MDL.....: 0.72		
Vanadium	**17.4 B**	**20.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0P5X1AU**
		Dilution Factor: 1		MDL.....: 5.0		
Zinc	**3.0 B,C**	**20.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0P5X1AV**
		Dilution Factor: 1		MDL.....: 1.5		
Prep Batch #...: 4351622						
Mercury	ND	0.20	ug/L	SW846 7470A	12/16-12/17/04	G0P5X1A0
		Dilution Factor: 1		MDL.....: 0.046		
Prep Batch #...: 4352210						
Lead	ND	3.0	ug/L	SW846 7421	12/17-12/20/04	G0P5X1AX
		Dilution Factor: 1		MDL.....: 1.3		

NOTE(S):

B Estimated result. Result is less than RL.

C Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Method 6010 not validated per VSR instructions LS 8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BRV2

DISSOLVED Metals

Lot-Sample #...: F4L100169-006 **Matrix.....:** WATER
Date Sampled...: 12/09/04 **Date Received..:** 12/10/04

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4351184						
Silver	ND	10.0	ug/L	SW846 6010B	12/16-12/17/04	G0P8L1AR
		Dilution Factor: 1		MDL.....: 4.1		
Aluminum	ND	200	ug/L	SW846 6010B	12/16-12/17/04	G0P8L1AC
		Dilution Factor: 1		MDL.....: 45.5		
Barium	**57.1 B**	**200**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0P8L1AE**
		Dilution Factor: 1		MDL.....: 3.7		
Beryllium	ND	5.0	ug/L	SW846 6010B	12/16-12/17/04	G0P8L1AF
		Dilution Factor: 1		MDL.....: 0.29		
Calcium	**50200**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0P8L1AH**
		Dilution Factor: 1		MDL.....: 111		
Cadmium	ND	5.0	ug/L	SW846 6010B	12/16-12/17/04	G0P8L1AG
		Dilution Factor: 1		MDL.....: 2.0		
Cobalt	ND	50.0	ug/L	SW846 6010B	12/16-12/17/04	G0P8L1AJ
		Dilution Factor: 1		MDL.....: 3.3		
Chromium	**3.8 B**	**10.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0P8L1AX**
		Dilution Factor: 1		MDL.....: 3.3		
Copper	ND	25.0	ug/L	SW846 6010B	12/16-12/17/04	G0P8L1AK
		Dilution Factor: 1		MDL.....: 2.4		
Iron	**20.3 B**	**100**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0P8L1AL**
		Dilution Factor: 1		MDL.....: 6.9		
Potassium	**6030**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0P8L1AQ**
		Dilution Factor: 1		MDL.....: 1950		
Magnesium	**14900**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0P8L1AM**
		Dilution Factor: 1		MDL.....: 125		
Manganese	ND	15.0	ug/L	SW846 6010B	12/16-12/17/04	G0P8L1AN
		Dilution Factor: 1		MDL.....: 0.99		
Sodium	**25000**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0P8L1AT**
		Dilution Factor: 1		MDL.....: 94.3		

(Continued on next page)

Method 6010 not validated per VSR instructions LS 8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BRV2

DISSOLVED Metals

Lot-Sample #...: F4L100169-006 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Nickel	ND	40.0	ug/L	SW846 6010B	12/16-12/17/04	G0P8L1AP
		Dilution Factor: 1		MDL.....: 8.6		
Antimony	ND	60.0	ug/L	SW846 6010B	12/16-12/17/04	G0P8L1AD
		Dilution Factor: 1		MDL.....: 21.3		
Strontium	**268**	**50.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0P8L1AU**
		Dilution Factor: 1		MDL.....: 0.72		
Vanadium	**16.7 B**	**20.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0P8L1AV**
		Dilution Factor: 1		MDL.....: 5.0		
Zinc	**2.5 B,C**	**20.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0P8L1AW**
		Dilution Factor: 1		MDL.....: 1.5		
Prep Batch #...: 4351622						
Mercury	ND	0.20	ug/L	SW846 7470A	12/16-12/17/04	G0P8L1AA
		Dilution Factor: 1		MDL.....: 0.046		
Prep Batch #...: 4352210						
Lead	ND	3.0	ug/L	SW846 7421	12/17-12/20/04	G0P8L1A0
		Dilution Factor: 1		MDL.....: 1.3		

NOTE(S):

B Estimated result. Result is less than RL.

C Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Method 6010 not validated per VSR instructions LS 8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BT16

DISSOLVED Metals

Lot-Sample #...: F4L100169-011 **Matrix.....:** WATER
Date Sampled...: 12/09/04 **Date Received..:** 12/10/04

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4350060						
Arsenic	**5.2 B**	**10.0**	**ug/L**	**SW846 7060**	**12/15-12/20/04**	**G0P8X1AA**
		Dilution Factor: 1		MDL.....: 2.5		
Prep Batch #...: 4351184						
Silver	ND	10.0	ug/L	SW846 6010B	12/16-12/17/04	G0P8X1AR
		Dilution Factor: 1		MDL.....: 4.1		
Aluminum	ND	200	ug/L	SW846 6010B	12/16-12/17/04	G0P8X1AC
		Dilution Factor: 1		MDL.....: 45.5		
Barium	**48.0 B**	**200**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0P8X1AE**
		Dilution Factor: 1		MDL.....: 3.7		
Beryllium	ND	5.0	ug/L	SW846 6010B	12/16-12/17/04	G0P8X1AF
		Dilution Factor: 1		MDL.....: 0.29		
Calcium	**51500**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0P8X1AH**
		Dilution Factor: 1		MDL.....: 111		
Cadmium	ND	5.0	ug/L	SW846 6010B	12/16-12/17/04	G0P8X1AG
		Dilution Factor: 1		MDL.....: 2.0		
Cobalt	ND	50.0	ug/L	SW846 6010B	12/16-12/17/04	G0P8X1AJ
		Dilution Factor: 1		MDL.....: 3.3		
Chromium	ND	10.0	ug/L	SW846 6010B	12/16-12/17/04	G0P8X1AX
		Dilution Factor: 1		MDL.....: 3.3		
Copper	ND	25.0	ug/L	SW846 6010B	12/16-12/17/04	G0P8X1AK
		Dilution Factor: 1		MDL.....: 2.4		
Iron	ND	100	ug/L	SW846 6010B	12/16-12/17/04	G0P8X1AL
		Dilution Factor: 1		MDL.....: 6.9		
Potassium	**7040**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0P8X1AQ**
		Dilution Factor: 1		MDL.....: 1950		
Magnesium	**14800**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0P8X1AM**
		Dilution Factor: 1		MDL.....: 125		

(Continued on next page)

Method 6010 not validated per VSR instructions <5 8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BT16

DISSOLVED Metals

Lot-Sample #...: F4L100169-011 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Manganese	**54.8**	**15.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0P8X1AN**
		Dilution Factor: 1		MDL.....: 0.99		
Sodium	**18100**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0P8X1AT**
		Dilution Factor: 1		MDL.....: 94.3		
Nickel	ND	40.0	ug/L	SW846 6010B	12/16-12/17/04	G0P8X1AP
		Dilution Factor: 1		MDL.....: 8.6		
Antimony	ND	60.0	ug/L	SW846 6010B	12/16-12/17/04	G0P8X1AD
		Dilution Factor: 1		MDL.....: 21.3		
Strontium	**279**	**50.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0P8X1AU**
		Dilution Factor: 1		MDL.....: 0.72		
Vanadium	**18.7 B**	**20.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0P8X1AV**
		Dilution Factor: 1		MDL.....: 5.0		
Zinc	**4.9 B,C**	**20.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0P8X1AW**
		Dilution Factor: 1		MDL.....: 1.5		

NOTE(S):

B Estimated result. Result is less than RL.

C Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Method 6010 not validated per VSR instructions LS 8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BT01

DISSOLVED Metals

Lot-Sample #...: F4L100169-016 **Matrix.....:** WATER
Date Sampled...: 12/09/04 **Date Received..:** 12/10/04

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4350060						
Arsenic	**7.0 B**	**10.0**	**ug/L**	**SW846 7060**	**12/15-12/20/04**	**G0QC01AA**
		Dilution Factor: 1		MDL.....: 2.5		
Prep Batch #...: 4351184						
Silver	ND	10.0	ug/L	SW846 6010B	12/16-12/17/04	G0QC01AR
		Dilution Factor: 1		MDL.....: 4.1		
Aluminum	ND	200	ug/L	SW846 6010B	12/16-12/17/04	G0QC01AC
		Dilution Factor: 1		MDL.....: 45.5		
Barium	**28.8 B**	**200**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0QC01AE**
		Dilution Factor: 1		MDL.....: 3.7		
Beryllium	ND	5.0	ug/L	SW846 6010B	12/16-12/17/04	G0QC01AF
		Dilution Factor: 1		MDL.....: 0.29		
Calcium	**43500**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0QC01AH**
		Dilution Factor: 1		MDL.....: 111		
Cadmium	ND	5.0	ug/L	SW846 6010B	12/16-12/17/04	G0QC01AG
		Dilution Factor: 1		MDL.....: 2.0		
Cobalt	ND	50.0	ug/L	SW846 6010B	12/16-12/17/04	G0QC01AJ
		Dilution Factor: 1		MDL.....: 3.3		
Chromium	ND	10.0	ug/L	SW846 6010B	12/16-12/17/04	G0QC01AX
		Dilution Factor: 1		MDL.....: 3.3		
Copper	ND	25.0	ug/L	SW846 6010B	12/16-12/17/04	G0QC01AK
		Dilution Factor: 1		MDL.....: 2.4		
Iron	ND	100	ug/L	SW846 6010B	12/16-12/17/04	G0QC01AL
		Dilution Factor: 1		MDL.....: 6.9		
Potassium	**5930**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0QC01AQ**
		Dilution Factor: 1		MDL.....: 1950		
Magnesium	**12300**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0QC01AM**
		Dilution Factor: 1		MDL.....: 125		

(Continued on next page)

Method 6010 not validated per VSR instructions LS 8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BT01

DISSOLVED Metals

Lot-Sample #...: F4L100169-016 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Manganese	**2.0 B**	**15.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0QC01AN**
		Dilution Factor: 1		MDL.....: 0.99		
Sodium	**14200**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0QC01AT**
		Dilution Factor: 1		MDL.....: 94.3		
Nickel	ND	40.0	ug/L	SW846 6010B	12/16-12/17/04	G0QC01AP
		Dilution Factor: 1		MDL.....: 8.6		
Antimony	ND	60.0	ug/L	SW846 6010B	12/16-12/17/04	G0QC01AD
		Dilution Factor: 1		MDL.....: 21.3		
Strontium	**251**	**50.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0QC01AU**
		Dilution Factor: 1		MDL.....: 0.72		
Vanadium	**24.5**	**20.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0QC01AV**
		Dilution Factor: 1		MDL.....: 5.0		
Zinc	**6.1 B,C**	**20.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0QC01AW**
		Dilution Factor: 1		MDL.....: 1.5		

NOTE(S):

B Estimated result. Result is less than RL.

C Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Method 6010 not validated per VSR instructions LS 8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BRR5

DISSOLVED Metals

Lot-Sample #...: F4L100169-021 **Matrix.....:** WATER
Date Sampled...: 12/09/04 **Date Received..:** 12/10/04

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4351184						
Silver	ND	10.0	ug/L	SW846 6010B	12/16-12/17/04	G0QE01AQ
		Dilution Factor: 1		MDL.....: 4.1		
Aluminum	ND	200	ug/L	SW846 6010B	12/16-12/17/04	G0QE01AA
		Dilution Factor: 1		MDL.....: 45.5		
Barium	**77.4 B**	**200**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0QE01AD**
		Dilution Factor: 1		MDL.....: 3.7		
Beryllium	ND	5.0	ug/L	SW846 6010B	12/16-12/17/04	G0QE01AE
		Dilution Factor: 1		MDL.....: 0.29		
Calcium	**41400**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0QE01AG**
		Dilution Factor: 1		MDL.....: 111		
Cadmium	ND	5.0	ug/L	SW846 6010B	12/16-12/17/04	G0QE01AF
		Dilution Factor: 1		MDL.....: 2.0		
Cobalt	ND	50.0	ug/L	SW846 6010B	12/16-12/17/04	G0QE01AH
		Dilution Factor: 1		MDL.....: 3.3		
Chromium	**3.6 B**	**10.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0QE01AW**
		Dilution Factor: 1		MDL.....: 3.3		
Copper	ND	25.0	ug/L	SW846 6010B	12/16-12/17/04	G0QE01AJ
		Dilution Factor: 1		MDL.....: 2.4		
Iron	**16.7 B**	**100**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0QE01AK**
		Dilution Factor: 1		MDL.....: 6.9		
Potassium	**6310**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0QE01AP**
		Dilution Factor: 1		MDL.....: 1950		
Magnesium	**13400**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0QE01AL**
		Dilution Factor: 1		MDL.....: 125		
Manganese	ND	15.0	ug/L	SW846 6010B	12/16-12/17/04	G0QE01AM
		Dilution Factor: 1		MDL.....: 0.99		
Sodium	**23400**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0QE01AR**
		Dilution Factor: 1		MDL.....: 94.3		

(Continued on next page)

Method 6010 not validated per VSR instructions LS 8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BRR5

DISSOLVED Metals

Lot-Sample #...: F4L100169-021 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Nickel	ND	40.0	ug/L	SW846 6010B	12/16-12/17/04	G0QE01AN
		Dilution Factor: 1		MDL.....: 8.6		
Antimony	ND	60.0	ug/L	SW846 6010B	12/16-12/17/04	G0QE01AC
		Dilution Factor: 1		MDL.....: 21.3		
Strontium	**233**	**50.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0QE01AT**
		Dilution Factor: 1		MDL.....: 0.72		
Vanadium	**18.6 B**	**20.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0QE01AU**
		Dilution Factor: 1		MDL.....: 5.0		
Zinc	**2.9 B,C**	**20.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0QE01AV**
		Dilution Factor: 1		MDL.....: 1.5		
Prep Batch #...: 4351622						
Mercury	ND	0.20	ug/L	SW846 7470A	12/16-12/17/04	G0QE01A0
		Dilution Factor: 1		MDL.....: 0.046		
Prep Batch #...: 4352210						
Lead	ND	3.0	ug/L	SW846 7421	12/17-12/20/04	G0QE01AX
		Dilution Factor: 1		MDL.....: 1.3		

NOTE(S):

B Estimated result. Result is less than RL.

C Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Method 6010 not validated per VSR instructions LS 8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BRR1

DISSOLVED Metals

Lot-Sample #...: F4L100169-023 **Matrix.....:** WATER
Date Sampled...: 12/09/04 **Date Received..:** 12/10/04

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4351184						
Silver	ND	10.0	ug/L	SW846 6010B	12/16-12/17/04	G0QFV1AQ
		Dilution Factor: 1		MDL.....: 4.1		
Aluminum	ND	200	ug/L	SW846 6010B	12/16-12/17/04	G0QFV1AA
		Dilution Factor: 1		MDL.....: 45.5		
Barium	**76.5 B**	**200**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0QFV1AD**
		Dilution Factor: 1		MDL.....: 3.7		
Beryllium	ND	5.0	ug/L	SW846 6010B	12/16-12/17/04	G0QFV1AE
		Dilution Factor: 1		MDL.....: 0.29		
Calcium	**40800**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0QFV1AG**
		Dilution Factor: 1		MDL.....: 111		
Cadmium	ND	5.0	ug/L	SW846 6010B	12/16-12/17/04	G0QFV1AF
		Dilution Factor: 1		MDL.....: 2.0		
Cobalt	ND	50.0	ug/L	SW846 6010B	12/16-12/17/04	G0QFV1AH
		Dilution Factor: 1		MDL.....: 3.3		
Chromium	**3.7 B**	**10.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0QFV1AW**
		Dilution Factor: 1		MDL.....: 3.3		
Copper	ND	25.0	ug/L	SW846 6010B	12/16-12/17/04	G0QFV1AJ
		Dilution Factor: 1		MDL.....: 2.4		
Iron	**22.0 B**	**100**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0QFV1AK**
		Dilution Factor: 1		MDL.....: 6.9		
Potassium	**5800**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0QFV1AP**
		Dilution Factor: 1		MDL.....: 1950		
Magnesium	**13200**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0QFV1AL**
		Dilution Factor: 1		MDL.....: 125		
Manganese	ND	15.0	ug/L	SW846 6010B	12/16-12/17/04	G0QFV1AM
		Dilution Factor: 1		MDL.....: 0.99		
Sodium	**22900**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0QFV1AR**
		Dilution Factor: 1		MDL.....: 94.3		

(Continued on next page)

Method 6010 not validated per VSR instructions LS 8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BRR1

DISSOLVED Metals

Lot-Sample #...: F4L100169-023 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Nickel	ND	40.0	ug/L	SW846 6010B	12/16-12/17/04	G0QFV1AN
		Dilution Factor: 1		MDL.....: 8.6		
Antimony	ND	60.0	ug/L	SW846 6010B	12/16-12/17/04	G0QFV1AC
		Dilution Factor: 1		MDL.....: 21.3		
Strontium	**229**	**50.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0QFV1AT**
		Dilution Factor: 1		MDL.....: 0.72		
Vanadium	**18.2 B**	**20.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0QFV1AU**
		Dilution Factor: 1		MDL.....: 5.0		
Zinc	**3.2 B,C**	**20.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0QFV1AV**
		Dilution Factor: 1		MDL.....: 1.5		
Prep Batch #...: 4351622						
Mercury	ND	0.20	ug/L	SW846 7470A	12/16-12/17/04	G0QFV1A0
		Dilution Factor: 1		MDL.....: 0.046		
Prep Batch #...: 4352210						
Lead	ND	3.0	ug/L	SW846 7421	12/17-12/20/04	G0QFV1AX
		Dilution Factor: 1		MDL.....: 1.3		

NOTE(S):

B Estimated result. Result is less than RL.

C Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Method 6010 not validated per VSR instructions LS 8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BRN3

DISSOLVED Metals

Lot-Sample #...: F4L100169-028 **Matrix.....:** WATER
Date Sampled...: 12/09/04 **Date Received..:** 12/10/04

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4351184						
Silver	ND	10.0	ug/L	SW846 6010B	12/16-12/17/04	G0QJL1AQ
		Dilution Factor: 1		MDL.....: 4.1		
Aluminum	ND	200	ug/L	SW846 6010B	12/16-12/17/04	G0QJL1AA
		Dilution Factor: 1		MDL.....: 45.5		
Barium	**84.8 B**	**200**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0QJL1AD**
		Dilution Factor: 1		MDL.....: 3.7		
Beryllium	ND	5.0	ug/L	SW846 6010B	12/16-12/17/04	G0QJL1AE
		Dilution Factor: 1		MDL.....: 0.29		
Calcium	**57900**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0QJL1AG**
		Dilution Factor: 1		MDL.....: 111		
Cadmium	ND	5.0	ug/L	SW846 6010B	12/16-12/17/04	G0QJL1AF
		Dilution Factor: 1		MDL.....: 2.0		
Cobalt	ND	50.0	ug/L	SW846 6010B	12/16-12/17/04	G0QJL1AH
		Dilution Factor: 1		MDL.....: 3.3		
Chromium	ND	10.0	ug/L	SW846 6010B	12/16-12/17/04	G0QJL1AW
		Dilution Factor: 1		MDL.....: 3.3		
Copper	ND	25.0	ug/L	SW846 6010B	12/16-12/17/04	G0QJL1AJ
		Dilution Factor: 1		MDL.....: 2.4		
Iron	**21.4 B**	**100**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0QJL1AK**
		Dilution Factor: 1		MDL.....: 6.9		
Potassium	**6850**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0QJL1AP**
		Dilution Factor: 1		MDL.....: 1950		
Magnesium	**18000**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0QJL1AL**
		Dilution Factor: 1		MDL.....: 125		
Manganese	ND	15.0	ug/L	SW846 6010B	12/16-12/17/04	G0QJL1AM
		Dilution Factor: 1		MDL.....: 0.99		
Sodium	**31400**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0QJL1AR**
		Dilution Factor: 1		MDL.....: 94.3		

(Continued on next page)

Method 6010 not validated per VSR instructions LS 8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BRN3

DISSOLVED Metals

Lot-Sample #...: F4L100169-028 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Nickel	ND	40.0	ug/L	SW846 6010B	12/16-12/17/04	G0QJL1AN
		Dilution Factor: 1		MDL.....: 8.6		
Antimony	ND	60.0	ug/L	SW846 6010B	12/16-12/17/04	G0QJL1AC
		Dilution Factor: 1		MDL.....: 21.3		
Strontium	**316**	**50.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0QJL1AT**
		Dilution Factor: 1		MDL.....: 0.72		
Vanadium	**16.4 B**	**20.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0QJL1AU**
		Dilution Factor: 1		MDL.....: 5.0		
Zinc	**2.6 B,C**	**20.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0QJL1AV**
		Dilution Factor: 1		MDL.....: 1.5		
Prep Batch #...: 4351622						
Mercury	ND	0.20	ug/L	SW846 7470A	12/16-12/17/04	G0QJL1A0
		Dilution Factor: 1		MDL.....: 0.046		
Prep Batch #...: 4352210						
Lead	ND	3.0	ug/L	SW846 7421	12/17-12/20/04	G0QJL1AX
		Dilution Factor: 1		MDL.....: 1.3		

NOTE(S):

B Estimated result. Result is less than RL.

C Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Method 6010 not validated per VSR instructions LS 8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BRN6

DISSOLVED Metals

Lot-Sample #...: F4L100169-033 **Matrix.....:** WATER
Date Sampled...: 12/09/04 **Date Received..:** 12/10/04

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4351184						
Silver	ND	10.0	ug/L	SW846 6010B	12/16-12/17/04	G0QTC1AQ
		Dilution Factor: 1		MDL.....: 4.1		
Aluminum	ND	200	ug/L	SW846 6010B	12/16-12/17/04	G0QTC1AA
		Dilution Factor: 1		MDL.....: 45.5		
Barium	**53.6 B**	**200**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0QTC1AD**
		Dilution Factor: 1		MDL.....: 3.7		
Beryllium	ND	5.0	ug/L	SW846 6010B	12/16-12/17/04	G0QTC1AE
		Dilution Factor: 1		MDL.....: 0.29		
Calcium	**44600**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0QTC1AG**
		Dilution Factor: 1		MDL.....: 111		
Cadmium	ND	5.0	ug/L	SW846 6010B	12/16-12/17/04	G0QTC1AF
		Dilution Factor: 1		MDL.....: 2.0		
Cobalt	ND	50.0	ug/L	SW846 6010B	12/16-12/17/04	G0QTC1AH
		Dilution Factor: 1		MDL.....: 3.3		
Chromium	ND	10.0	ug/L	SW846 6010B	12/16-12/17/04	G0QTC1AW
		Dilution Factor: 1		MDL.....: 3.3		
Copper	ND	25.0	ug/L	SW846 6010B	12/16-12/17/04	G0QTC1AJ
		Dilution Factor: 1		MDL.....: 2.4		
Iron	**8.4 B**	**100**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0QTC1AK**
		Dilution Factor: 1		MDL.....: 6.9		
Potassium	**5260**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0QTC1AP**
		Dilution Factor: 1		MDL.....: 1950		
Magnesium	**12500**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0QTC1AL**
		Dilution Factor: 1		MDL.....: 125		
Manganese	ND	15.0	ug/L	SW846 6010B	12/16-12/17/04	G0QTC1AM
		Dilution Factor: 1		MDL.....: 0.99		
Sodium	**23700**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0QTC1AR**
		Dilution Factor: 1		MDL.....: 94.3		

(Continued on next page)

Method 6010 not validated per VSR instructions LS 8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BRN6

DISSOLVED Metals

Lot-Sample #...: F4L100169-033 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Nickel	ND	40.0	ug/L	SW846 6010B	12/16-12/17/04	G0QTC1AN
		Dilution Factor: 1		MDL.....: 8.6		
Antimony	ND	60.0	ug/L	SW846 6010B	12/16-12/17/04	G0QTC1AC
		Dilution Factor: 1		MDL.....: 21.3		
Strontium	**210**	**50.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0QTC1AT**
		Dilution Factor: 1		MDL.....: 0.72		
Vanadium	**16.7 B**	**20.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0QTC1AU**
		Dilution Factor: 1		MDL.....: 5.0		
Zinc	**3.4 B,C**	**20.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0QTC1AV**
		Dilution Factor: 1		MDL.....: 1.5		
Prep Batch #...: 4351622						
Mercury	ND	0.20	ug/L	SW846 7470A	12/16-12/17/04	G0QTC1A0
		Dilution Factor: 1		MDL.....: 0.046		
Prep Batch #...: 4352210						
Lead	ND	3.0	ug/L	SW846 7421	12/17-12/20/04	G0QTC1AX
		Dilution Factor: 1		MDL.....: 1.3		

NOTE(S):

B Estimated result. Result is less than RL.

C Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Method 6010 not validated per VSR instructions LS 8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BRT6

DISSOLVED Metals

Lot-Sample #...: F4L130171-001 **Matrix.....:** WATER
Date Sampled...: 12/10/04 **Date Received..:** 12/11/04

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4351184						
Silver	ND	10.0	ug/L	SW846 6010B	12/16-12/17/04	G0W631AQ
		Dilution Factor: 1		MDL.....: 4.1		
Aluminum	ND	200	ug/L	SW846 6010B	12/16-12/17/04	G0W631AA
		Dilution Factor: 1		MDL.....: 45.5		
Barium	**47.2 B**	**200**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0W631AD**
		Dilution Factor: 1		MDL.....: 3.7		
Beryllium	ND	5.0	ug/L	SW846 6010B	12/16-12/17/04	G0W631AE
		Dilution Factor: 1		MDL.....: 0.29		
Calcium	**46600**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0W631AG**
		Dilution Factor: 1		MDL.....: 111		
Cadmium	ND	5.0	ug/L	SW846 6010B	12/16-12/17/04	G0W631AF
		Dilution Factor: 1		MDL.....: 2.0		
Cobalt	ND	50.0	ug/L	SW846 6010B	12/16-12/17/04	G0W631AH
		Dilution Factor: 1		MDL.....: 3.3		
Chromium	ND	10.0	ug/L	SW846 6010B	12/16-12/17/04	G0W631AW
		Dilution Factor: 1		MDL.....: 3.3		
Copper	ND	25.0	ug/L	SW846 6010B	12/16-12/17/04	G0W631AJ
		Dilution Factor: 1		MDL.....: 2.4		
Iron	**15.2 B**	**100**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0W631AK**
		Dilution Factor: 1		MDL.....: 6.9		
Potassium	**6850**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0W631AP**
		Dilution Factor: 1		MDL.....: 1950		
Magnesium	**14400**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0W631AL**
		Dilution Factor: 1		MDL.....: 125		
Manganese	ND	15.0	ug/L	SW846 6010B	12/16-12/17/04	G0W631AM
		Dilution Factor: 1		MDL.....: 0.99		
Sodium	**26300**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0W631AR**
		Dilution Factor: 1		MDL.....: 94.3		

(Continued on next page)

Method 6010 not validated per VSR instructions LS 8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BRT6

DISSOLVED Metals

Lot-Sample #...: F4L130171-001 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Nickel	ND	40.0	ug/L	SW846 6010B	12/16-12/17/04	G0W631AN
		Dilution Factor: 1		MDL.....: 8.6		
Antimony	ND	60.0	ug/L	SW846 6010B	12/16-12/17/04	G0W631AC
		Dilution Factor: 1		MDL.....: 21.3		
Strontium	**242**	**50.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0W631AT**
		Dilution Factor: 1		MDL.....: 0.72		
Vanadium	**16.9 B**	**20.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0W631AU**
		Dilution Factor: 1		MDL.....: 5.0		
Zinc	**2.9 B,C**	**20.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0W631AV**
		Dilution Factor: 1		MDL.....: 1.5		
Prep Batch #...: 4351622						
Mercury	ND	0.20	ug/L	SW846 7470A	12/16-12/17/04	G0W631A0
		Dilution Factor: 1		MDL.....: 0.046		
Prep Batch #...: 4352210						
Lead	ND	3.0	ug/L	SW846 7421	12/17-12/20/04	G0W631AX
		Dilution Factor: 1		MDL.....: 1.3		

NOTE(S):

B Estimated result. Result is less than RL.

C Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Method 6010 not validated per VSR instructions LS 8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BRV8

DISSOLVED Metals

Lot-Sample #...: F4L130171-006 **Matrix.....:** WATER
Date Sampled...: 12/10/04 **Date Received..:** 12/11/04

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4351184						
Silver	ND	10.0	ug/L	SW846 6010B	12/16-12/17/04	G0W7L1AR
		Dilution Factor: 1		MDL.....: 4.1		
Aluminum	ND	200	ug/L	SW846 6010B	12/16-12/17/04	G0W7L1AC
		Dilution Factor: 1		MDL.....: 45.5		
Barium	**41.8 B**	**200**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0W7L1AE**
		Dilution Factor: 1		MDL.....: 3.7		
Beryllium	ND	5.0	ug/L	SW846 6010B	12/16-12/17/04	G0W7L1AF
		Dilution Factor: 1		MDL.....: 0.29		
Calcium	**45000**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0W7L1AH**
		Dilution Factor: 1		MDL.....: 111		
Cadmium	ND	5.0	ug/L	SW846 6010B	12/16-12/17/04	G0W7L1AG
		Dilution Factor: 1		MDL.....: 2.0		
Cobalt	ND	50.0	ug/L	SW846 6010B	12/16-12/17/04	G0W7L1AJ
		Dilution Factor: 1		MDL.....: 3.3		
Chromium	**4.2 B**	**10.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0W7L1AX**
		Dilution Factor: 1		MDL.....: 3.3		
Copper	ND	25.0	ug/L	SW846 6010B	12/16-12/17/04	G0W7L1AK
		Dilution Factor: 1		MDL.....: 2.4		
Iron	**10.2 B**	**100**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0W7L1AL**
		Dilution Factor: 1		MDL.....: 6.9		
Potassium	**6640**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0W7L1AQ**
		Dilution Factor: 1		MDL.....: 1950		
Magnesium	**14000**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0W7L1AM**
		Dilution Factor: 1		MDL.....: 125		
Manganese	ND	15.0	ug/L	SW846 6010B	12/16-12/17/04	G0W7L1AN
		Dilution Factor: 1		MDL.....: 0.99		
Sodium	**26800**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0W7L1AT**
		Dilution Factor: 1		MDL.....: 94.3		

(Continued on next page)

Method 6010 not validated per VSR instructions LS 8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BRV8

DISSOLVED Metals

Lot-Sample #...: F4L130171-006 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Nickel	ND	40.0	ug/L	SW846 6010B	12/16-12/17/04	G0W7L1AP
		Dilution Factor: 1		MDL.....: 8.6		
Antimony	ND	60.0	ug/L	SW846 6010B	12/16-12/17/04	G0W7L1AD
		Dilution Factor: 1		MDL.....: 21.3		
Strontium	**244**	**50.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0W7L1AU**
		Dilution Factor: 1		MDL.....: 0.72		
Vanadium	**17.5 B**	**20.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0W7L1AV**
		Dilution Factor: 1		MDL.....: 5.0		
Zinc	**3.1 B,C**	**20.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0W7L1AW**
		Dilution Factor: 1		MDL.....: 1.5		
Prep Batch #...: 4351622						
Mercury	ND	0.20	ug/L	SW846 7470A	12/16-12/17/04	G0W7L1AA
		Dilution Factor: 1		MDL.....: 0.046		
Prep Batch #...: 4352210						
Lead	ND	3.0	ug/L	SW846 7421	12/17-12/20/04	G0W7L1A0
		Dilution Factor: 1		MDL.....: 1.3		

NOTE(S):

B Estimated result. Result is less than RL.

C Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Method 6010 not validated per VSR instructions LS 8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BRP5

DISSOLVED Metals

Lot-Sample #...: F4L130171-011 **Matrix.....:** WATER
Date Sampled...: 12/10/04 **Date Received..:** 12/11/04

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4351184						
Silver	ND	10.0	ug/L	SW846 6010B	12/16-12/17/04	G0W8E1AR
		Dilution Factor: 1		MDL.....: 4.1		
Aluminum	ND	200	ug/L	SW846 6010B	12/16-12/17/04	G0W8E1AC
		Dilution Factor: 1		MDL.....: 45.5		
Barium	**64.8 B**	**200**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0W8E1AE**
		Dilution Factor: 1		MDL.....: 3.7		
Beryllium	ND	5.0	ug/L	SW846 6010B	12/16-12/17/04	G0W8E1AF
		Dilution Factor: 1		MDL.....: 0.29		
Calcium	**60500**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0W8E1AH**
		Dilution Factor: 1		MDL.....: 111		
Cadmium	ND	5.0	ug/L	SW846 6010B	12/16-12/17/04	G0W8E1AG
		Dilution Factor: 1		MDL.....: 2.0		
Cobalt	ND	50.0	ug/L	SW846 6010B	12/16-12/17/04	G0W8E1AJ
		Dilution Factor: 1		MDL.....: 3.3		
Chromium	**4.0 B**	**10.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0W8E1AX**
		Dilution Factor: 1		MDL.....: 3.3		
Copper	ND	25.0	ug/L	SW846 6010B	12/16-12/17/04	G0W8E1AK
		Dilution Factor: 1		MDL.....: 2.4		
Iron	**26.5 B**	**100**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0W8E1AL**
		Dilution Factor: 1		MDL.....: 6.9		
Potassium	**6430**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0W8E1AQ**
		Dilution Factor: 1		MDL.....: 1950		
Magnesium	**17700**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0W8E1AM**
		Dilution Factor: 1		MDL.....: 125		
Manganese	ND	15.0	ug/L	SW846 6010B	12/16-12/17/04	G0W8E1AN
		Dilution Factor: 1		MDL.....: 0.99		
Sodium	**27000**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0W8E1AT**
		Dilution Factor: 1		MDL.....: 94.3		

(Continued on next page)

Method 6010 not validated per VSR instructions LS 8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BRP5

DISSOLVED Metals

Lot-Sample #...: F4L130171-011 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Nickel	ND	40.0	ug/L	SW846 6010B	12/16-12/17/04	G0W8E1AP
		Dilution Factor: 1		MDL.....: 8.6		
Antimony	ND	60.0	ug/L	SW846 6010B	12/16-12/17/04	G0W8E1AD
		Dilution Factor: 1		MDL.....: 21.3		
Strontium	**309**	**50.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0W8E1AU**
		Dilution Factor: 1		MDL.....: 0.72		
Vanadium	**15.5 B**	**20.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0W8E1AV**
		Dilution Factor: 1		MDL.....: 5.0		
Zinc	**3.3 B,C**	**20.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0W8E1AW**
		Dilution Factor: 1		MDL.....: 1.5		
Prep Batch #...: 4351622						
Mercury	ND	0.20	ug/L	SW846 7470A	12/16-12/17/04	G0W8E1AA
		Dilution Factor: 1		MDL.....: 0.046		
Prep Batch #...: 4352210						
Lead	ND	3.0	ug/L	SW846 7421	12/17-12/20/04	G0W8E1A0
		Dilution Factor: 1		MDL.....: 1.3		

NOTE(S):

B Estimated result. Result is less than RL.

C Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Method 6010 not validated per VSR instructions LS 8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BRT0

DISSOLVED Metals

Lot-Sample #...: F4L130171-016 **Matrix.....:** WATER
Date Sampled...: 12/10/04 **Date Received..:** 12/11/04

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4351184						
Silver	ND	10.0	ug/L	SW846 6010B	12/16-12/17/04	G0W9C1AR
		Dilution Factor: 1		MDL.....: 4.1		
Aluminum	ND	200	ug/L	SW846 6010B	12/16-12/17/04	G0W9C1AC
		Dilution Factor: 1		MDL.....: 45.5		
Barium	**62.0 B**	**200**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0W9C1AE**
		Dilution Factor: 1		MDL.....: 3.7		
Beryllium	ND	5.0	ug/L	SW846 6010B	12/16-12/17/04	G0W9C1AF
		Dilution Factor: 1		MDL.....: 0.29		
Calcium	**57900**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0W9C1AH**
		Dilution Factor: 1		MDL.....: 111		
Cadmium	ND	5.0	ug/L	SW846 6010B	12/16-12/17/04	G0W9C1AG
		Dilution Factor: 1		MDL.....: 2.0		
Cobalt	ND	50.0	ug/L	SW846 6010B	12/16-12/17/04	G0W9C1AJ
		Dilution Factor: 1		MDL.....: 3.3		
Chromium	**3.4 B**	**10.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0W9C1AX**
		Dilution Factor: 1		MDL.....: 3.3		
Copper	ND	25.0	ug/L	SW846 6010B	12/16-12/17/04	G0W9C1AK
		Dilution Factor: 1		MDL.....: 2.4		
Iron	**11.2 B**	**100**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0W9C1AL**
		Dilution Factor: 1		MDL.....: 6.9		
Potassium	**6470**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0W9C1AQ**
		Dilution Factor: 1		MDL.....: 1950		
Magnesium	**17000**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0W9C1AM**
		Dilution Factor: 1		MDL.....: 125		
Manganese	ND	15.0	ug/L	SW846 6010B	12/16-12/17/04	G0W9C1AN
		Dilution Factor: 1		MDL.....: 0.99		
Sodium	**26300**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0W9C1AT**
		Dilution Factor: 1		MDL.....: 94.3		

(Continued on next page)

Method 6010 not validated per VSR instructions

LS
8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BRT0

DISSOLVED Metals

Lot-Sample #...: F4L130171-016 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Nickel	ND	40.0	ug/L	SW846 6010B	12/16-12/17/04	G0W9C1AP
		Dilution Factor: 1		MDL.....: 8.6		
Antimony	ND	60.0	ug/L	SW846 6010B	12/16-12/17/04	G0W9C1AD
		Dilution Factor: 1		MDL.....: 21.3		
Strontium	**298**	**50.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0W9C1AU**
		Dilution Factor: 1		MDL.....: 0.72		
Vanadium	**15.2 B**	**20.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0W9C1AV**
		Dilution Factor: 1		MDL.....: 5.0		
Zinc	**12.5 B,C**	**20.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0W9C1AW**
		Dilution Factor: 1		MDL.....: 1.5		
Prep Batch #...: 4351622						
Mercury	ND	0.20	ug/L	SW846 7470A	12/16-12/17/04	G0W9C1AA
		Dilution Factor: 1		MDL.....: 0.046		
Prep Batch #...: 4352210						
Lead	ND	3.0	ug/L	SW846 7421	12/17-12/20/04	G0W9C1A0
		Dilution Factor: 1		MDL.....: 1.3		

NOTE(S):

B Estimated result. Result is less than RL.

C Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Method 6010 not validated per VSR instructions LS 8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BRN0

DISSOLVED Metals

Lot-Sample #...: F4L130171-021 **Matrix.....:** WATER
Date Sampled...: 12/10/04 **Date Received..:** 12/11/04

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4351184						
Silver	ND	10.0	ug/L	SW846 6010B	12/16-12/17/04	G0XAC1AR
		Dilution Factor: 1		MDL.....: 4.1		
Aluminum	ND	200	ug/L	SW846 6010B	12/16-12/17/04	G0XAC1AC
		Dilution Factor: 1		MDL.....: 45.5		
Barium	**46.7 B**	**200**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0XAC1AE**
		Dilution Factor: 1		MDL.....: 3.7		
Beryllium	ND	5.0	ug/L	SW846 6010B	12/16-12/17/04	G0XAC1AF
		Dilution Factor: 1		MDL.....: 0.29		
Calcium	**51600**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0XAC1AH**
		Dilution Factor: 1		MDL.....: 111		
Cadmium	ND	5.0	ug/L	SW846 6010B	12/16-12/17/04	G0XAC1AG
		Dilution Factor: 1		MDL.....: 2.0		
Cobalt	ND	50.0	ug/L	SW846 6010B	12/16-12/17/04	G0XAC1AJ
		Dilution Factor: 1		MDL.....: 3.3		
Chromium	**3.4 B**	**10.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0XAC1AX**
		Dilution Factor: 1		MDL.....: 3.3		
Copper	ND	25.0	ug/L	SW846 6010B	12/16-12/17/04	G0XAC1AK
		Dilution Factor: 1		MDL.....: 2.4		
Iron	**19.4 B**	**100**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0XAC1AL**
		Dilution Factor: 1		MDL.....: 6.9		
Potassium	**4640 B**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0XAC1AQ**
		Dilution Factor: 1		MDL.....: 1950		
Magnesium	**14900**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0XAC1AM**
		Dilution Factor: 1		MDL.....: 125		
Manganese	ND	15.0	ug/L	SW846 6010B	12/16-12/17/04	G0XAC1AN
		Dilution Factor: 1		MDL.....: 0.99		
Sodium	**23200**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0XAC1AT**
		Dilution Factor: 1		MDL.....: 94.3		

(Continued on next page)

Method 6010 not validated per VSR instructions LS 8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BRN0

DISSOLVED Metals

Lot-Sample #...: F4L130171-021 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Nickel	ND	40.0	ug/L	SW846 6010B	12/16-12/17/04	G0XAC1AP
		Dilution Factor: 1		MDL.....: 8.6		
Antimony	ND	60.0	ug/L	SW846 6010B	12/16-12/17/04	G0XAC1AD
		Dilution Factor: 1		MDL.....: 21.3		
Strontium	**239**	**50.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0XAC1AU**
		Dilution Factor: 1		MDL.....: 0.72		
Vanadium	**16.5 B**	**20.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0XAC1AV**
		Dilution Factor: 1		MDL.....: 5.0		
Zinc	**3.1 B,C**	**20.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0XAC1AW**
		Dilution Factor: 1		MDL.....: 1.5		
Prep Batch #...: 4351622						
Mercury	ND	0.20	ug/L	SW846 7470A	12/16-12/17/04	G0XAC1AA
		Dilution Factor: 1		MDL.....: 0.046		
Prep Batch #...: 4352210						
Lead	ND	3.0	ug/L	SW846 7421	12/17-12/20/04	G0XAC1A0
		Dilution Factor: 1		MDL.....: 1.3		

NOTE(S):

B Estimated result. Result is less than RL.

C Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Method 6010 not validated per VSR instructions LS 8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BRT3

DISSOLVED Metals

Lot-Sample #...: F4L130171-026 **Matrix.....:** WATER
Date Sampled...: 12/10/04 **Date Received..:** 12/11/04

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4351184						
Silver	ND	10.0	ug/L	SW846 6010B	12/16-12/17/04	G0XAV1AR
		Dilution Factor: 1		MDL.....: 4.1		
Aluminum	ND	200	ug/L	SW846 6010B	12/16-12/17/04	G0XAV1AC
		Dilution Factor: 1		MDL.....: 45.5		
Barium	**65.6 B**	**200**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0XAV1AE**
		Dilution Factor: 1		MDL.....: 3.7		
Beryllium	ND	5.0	ug/L	SW846 6010B	12/16-12/17/04	G0XAV1AF
		Dilution Factor: 1		MDL.....: 0.29		
Calcium	**59700**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0XAV1AH**
		Dilution Factor: 1		MDL.....: 111		
Cadmium	ND	5.0	ug/L	SW846 6010B	12/16-12/17/04	G0XAV1AG
		Dilution Factor: 1		MDL.....: 2.0		
Cobalt	ND	50.0	ug/L	SW846 6010B	12/16-12/17/04	G0XAV1AJ
		Dilution Factor: 1		MDL.....: 3.3		
Chromium	**6.5 B**	**10.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0XAV1AX**
		Dilution Factor: 1		MDL.....: 3.3		
Copper	ND	25.0	ug/L	SW846 6010B	12/16-12/17/04	G0XAV1AK
		Dilution Factor: 1		MDL.....: 2.4		
Iron	**28.7 B**	**100**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0XAV1AL**
		Dilution Factor: 1		MDL.....: 6.9		
Potassium	**7180**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0XAV1AQ**
		Dilution Factor: 1		MDL.....: 1950		
Magnesium	**18300**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0XAV1AM**
		Dilution Factor: 1		MDL.....: 125		
Manganese	ND	15.0	ug/L	SW846 6010B	12/16-12/17/04	G0XAV1AN
		Dilution Factor: 1		MDL.....: 0.99		
Sodium	**27900**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0XAV1AT**
		Dilution Factor: 1		MDL.....: 94.3		

(Continued on next page)

Method 6010 not validated per VSR instructions LS 8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BRT3

DISSOLVED Metals

Lot-Sample #...: F4L130171-026 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Nickel	ND	40.0	ug/L	SW846 6010B	12/16-12/17/04	G0XAV1AP
		Dilution Factor: 1		MDL.....: 8.6		
Antimony	ND	60.0	ug/L	SW846 6010B	12/16-12/17/04	G0XAV1AD
		Dilution Factor: 1		MDL.....: 21.3		
Strontium	**321**	**50.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0XAV1AU**
		Dilution Factor: 1		MDL.....: 0.72		
Vanadium	**15.5 B**	**20.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0XAV1AV**
		Dilution Factor: 1		MDL.....: 5.0		
Zinc	**4.4 B,C**	**20.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0XAV1AW**
		Dilution Factor: 1		MDL.....: 1.5		
Prep Batch #...: 4351622						
Mercury	ND	0.20	ug/L	SW846 7470A	12/16-12/17/04	G0XAV1AA
		Dilution Factor: 1		MDL.....: 0.046		
Prep Batch #...: 4352210						
Lead	ND	3.0	ug/L	SW846 7421	12/17-12/20/04	G0XAV1A0
		Dilution Factor: 1		MDL.....: 1.3		

NOTE(S):

B Estimated result. Result is less than RL.

C Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Method 6010 not validated per VSR instructions LS 8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BT37

DISSOLVED Metals

Lot-Sample #...: F4L130171-031 **Matrix.....:** WATER
Date Sampled...: 12/10/04 **Date Received..:** 12/11/04

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4350060						
Arsenic	**6.9 B**	**10.0**	**ug/L**	**SW846 7060**	**12/15-12/20/04**	**G0XCN1AA**
		Dilution Factor: 1		MDL.....: 2.5		
Prep Batch #...: 4351184						
Silver	ND	10.0	ug/L	SW846 6010B	12/16-12/17/04	G0XCN1AR
		Dilution Factor: 1		MDL.....: 4.1		
Aluminum	ND	200	ug/L	SW846 6010B	12/16-12/17/04	G0XCN1AC
		Dilution Factor: 1		MDL.....: 45.5		
Barium	**31.8 B**	**200**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0XCN1AE**
		Dilution Factor: 1		MDL.....: 3.7		
Beryllium	ND	5.0	ug/L	SW846 6010B	12/16-12/17/04	G0XCN1AF
		Dilution Factor: 1		MDL.....: 0.29		
Calcium	**46300**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0XCN1AH**
		Dilution Factor: 1		MDL.....: 111		
Cadmium	ND	5.0	ug/L	SW846 6010B	12/16-12/17/04	G0XCN1AG
		Dilution Factor: 1		MDL.....: 2.0		
Cobalt	ND	50.0	ug/L	SW846 6010B	12/16-12/17/04	G0XCN1AJ
		Dilution Factor: 1		MDL.....: 3.3		
Chromium	**3.7 B**	**10.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0XCN1AX**
		Dilution Factor: 1		MDL.....: 3.3		
Copper	ND	25.0	ug/L	SW846 6010B	12/16-12/17/04	G0XCN1AK
		Dilution Factor: 1		MDL.....: 2.4		
Iron	ND	100	ug/L	SW846 6010B	12/16-12/17/04	G0XCN1AL
		Dilution Factor: 1		MDL.....: 6.9		
Potassium	**5970**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0XCN1AQ**
		Dilution Factor: 1		MDL.....: 1950		
Magnesium	**13200**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0XCN1AM**
		Dilution Factor: 1		MDL.....: 125		

(Continued on next page)

Method 6010 not validated per VSR instructions LS 8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BT37

DISSOLVED Metals

Lot-Sample #...: F4L130171-031 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Manganese	ND	15.0	ug/L	SW846 6010B	12/16-12/17/04	G0XCN1AN
		Dilution Factor: 1		MDL.....: 0.99		
Sodium	**13000**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0XCN1AT**
		Dilution Factor: 1		MDL.....: 94.3		
Nickel	ND	40.0	ug/L	SW846 6010B	12/16-12/17/04	G0XCN1AP
		Dilution Factor: 1		MDL.....: 8.6		
Antimony	ND	60.0	ug/L	SW846 6010B	12/16-12/17/04	G0XCN1AD
		Dilution Factor: 1		MDL.....: 21.3		
Strontium	**243**	**50.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0XCN1AU**
		Dilution Factor: 1		MDL.....: 0.72		
Vanadium	**19.8 B**	**20.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0XCN1AV**
		Dilution Factor: 1		MDL.....: 5.0		
Zinc	**7.5 B,C**	**20.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0XCN1AW**
		Dilution Factor: 1		MDL.....: 1.5		

NOTE(S):

B Estimated result. Result is less than RL.

C Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Method 6010 not validated per VSR instructions LS 8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BRR7

DISSOLVED Metals

Lot-Sample #...: F4L130171-036 **Matrix.....:** WATER
Date Sampled...: 12/10/04 **Date Received..:** 12/11/04

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4351184						
Silver	ND	10.0	ug/L	SW846 6010B	12/16-12/17/04	G0XC81AR
		Dilution Factor: 1		MDL.....: 4.1		
Aluminum	ND	200	ug/L	SW846 6010B	12/16-12/17/04	G0XC81AC
		Dilution Factor: 1		MDL.....: 45.5		
Barium	**54.0 B**	**200**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0XC81AE**
		Dilution Factor: 1		MDL.....: 3.7		
Beryllium	ND	5.0	ug/L	SW846 6010B	12/16-12/17/04	G0XC81AF
		Dilution Factor: 1		MDL.....: 0.29		
Calcium	**49500**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0XC81AH**
		Dilution Factor: 1		MDL.....: 111		
Cadmium	ND	5.0	ug/L	SW846 6010B	12/16-12/17/04	G0XC81AG
		Dilution Factor: 1		MDL.....: 2.0		
Cobalt	ND	50.0	ug/L	SW846 6010B	12/16-12/17/04	G0XC81AJ
		Dilution Factor: 1		MDL.....: 3.3		
Chromium	**5.0 B**	**10.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0XC81AX**
		Dilution Factor: 1		MDL.....: 3.3		
Copper	ND	25.0	ug/L	SW846 6010B	12/16-12/17/04	G0XC81AK
		Dilution Factor: 1		MDL.....: 2.4		
Iron	**20.8 B**	**100**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0XC81AL**
		Dilution Factor: 1		MDL.....: 6.9		
Potassium	**5430**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0XC81AQ**
		Dilution Factor: 1		MDL.....: 1950		
Magnesium	**14400**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0XC81AM**
		Dilution Factor: 1		MDL.....: 125		
Manganese	ND	15.0	ug/L	SW846 6010B	12/16-12/17/04	G0XC81AN
		Dilution Factor: 1		MDL.....: 0.99		
Sodium	**24500**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0XC81AT**
		Dilution Factor: 1		MDL.....: 94.3		

(Continued on next page)

Method 6010 not validated per VSR instructions LS 8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BRR7

DISSOLVED Metals

Lot-Sample #...: F4L130171-036 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Nickel	ND	40.0	ug/L	SW846 6010B	12/16-12/17/04	G0XC81AP
		Dilution Factor: 1		MDL.....: 8.6		
Antimony	ND	60.0	ug/L	SW846 6010B	12/16-12/17/04	G0XC81AD
		Dilution Factor: 1		MDL.....: 21.3		
Strontium	**242**	**50.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0XC81AU**
		Dilution Factor: 1		MDL.....: 0.72		
Vanadium	**15.8 B**	**20.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0XC81AV**
		Dilution Factor: 1		MDL.....: 5.0		
Zinc	**2.9 B,C**	**20.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0XC81AW**
		Dilution Factor: 1		MDL.....: 1.5		
Prep Batch #...: 4351622						
Mercury	ND	0.20	ug/L	SW846 7470A	12/16-12/17/04	G0XC81AA
		Dilution Factor: 1		MDL.....: 0.046		
Prep Batch #...: 4352210						
Lead	ND	3.0	ug/L	SW846 7421	12/17-12/20/04	G0XC81A0
		Dilution Factor: 1		MDL.....: 1.3		

NOTE(S):

B Estimated result. Result is less than RL.

C Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Method 6010 not validated per VSR instructions LS 8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BRP8

DISSOLVED Metals

Lot-Sample #...: F4L130171-041 **Matrix.....:** WATER
Date Sampled...: 12/10/04 **Date Received..:** 12/11/04

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4351184						
Silver	ND	10.0	ug/L	SW846 6010B	12/16-12/17/04	G0XDK1AR
		Dilution Factor: 1		MDL.....: 4.1		
Aluminum	ND	200	ug/L	SW846 6010B	12/16-12/17/04	G0XDK1AC
		Dilution Factor: 1		MDL.....: 45.5		
Barium	**65.1 B**	**200**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0XDK1AE**
		Dilution Factor: 1		MDL.....: 3.7		
Beryllium	ND	5.0	ug/L	SW846 6010B	12/16-12/17/04	G0XDK1AF
		Dilution Factor: 1		MDL.....: 0.29		
Calcium	**58700**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0XDK1AH**
		Dilution Factor: 1		MDL.....: 111		
Cadmium	ND	5.0	ug/L	SW846 6010B	12/16-12/17/04	G0XDK1AG
		Dilution Factor: 1		MDL.....: 2.0		
Cobalt	ND	50.0	ug/L	SW846 6010B	12/16-12/17/04	G0XDK1AJ
		Dilution Factor: 1		MDL.....: 3.3		
Chromium	ND	10.0	ug/L	SW846 6010B	12/16-12/17/04	G0XDK1AX
		Dilution Factor: 1		MDL.....: 3.3		
Copper	ND	25.0	ug/L	SW846 6010B	12/16-12/17/04	G0XDK1AK
		Dilution Factor: 1		MDL.....: 2.4		
Iron	**18.0 B**	**100**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0XDK1AL**
		Dilution Factor: 1		MDL.....: 6.9		
Potassium	**5400**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0XDK1AQ**
		Dilution Factor: 1		MDL.....: 1950		
Magnesium	**16700**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0XDK1AM**
		Dilution Factor: 1		MDL.....: 125		
Manganese	ND	15.0	ug/L	SW846 6010B	12/16-12/17/04	G0XDK1AN
		Dilution Factor: 1		MDL.....: 0.99		
Sodium	**26000**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0XDK1AT**
		Dilution Factor: 1		MDL.....: 94.3		

(Continued on next page)

Method 6010 not validated per VSR instructions LS 8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BRP8

DISSOLVED Metals

Lot-Sample #...: F4L130171-041 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Nickel	ND	40.0	ug/L	SW846 6010B	12/16-12/17/04	G0XDK1AP
		Dilution Factor: 1		MDL.....: 8.6		
Antimony	ND	60.0	ug/L	SW846 6010B	12/16-12/17/04	G0XDK1AD
		Dilution Factor: 1		MDL.....: 21.3		
Strontium	**281**	**50.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0XDK1AU**
		Dilution Factor: 1		MDL.....: 0.72		
Vanadium	**16.2 B**	**20.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0XDK1AV**
		Dilution Factor: 1		MDL.....: 5.0		
Zinc	**2.7 B,C**	**20.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0XDK1AW**
		Dilution Factor: 1		MDL.....: 1.5		
Prep Batch #...: 4351622						
Mercury	ND	0.20	ug/L	SW846 7470A	12/16-12/17/04	G0XDK1AA
		Dilution Factor: 1		MDL.....: 0.046		
Prep Batch #...: 4352210						
Lead	ND	3.0	ug/L	SW846 7421	12/17-12/20/04	G0XDK1A0
		Dilution Factor: 1		MDL.....: 1.3		

NOTE(S):

B Estimated result. Result is less than RL.

C Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Method 6010 not validated per VSR instructions LS 8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BT31

DISSOLVED Metals

Lot-Sample #...: F4L130171-046 **Matrix.....:** WATER
Date Sampled...: 12/10/04 **Date Received..:** 12/11/04

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4350060						
Arsenic	**7.3 B**	**10.0**	**ug/L**	**SW846 7060**	**12/15-12/20/04**	**G0XDX1AA**
		Dilution Factor: 1		MDL.....: 2.5		
Prep Batch #...: 4351184						
Silver	ND	10.0	ug/L	SW846 6010B	12/16-12/17/04	G0XDX1AR
		Dilution Factor: 1		MDL.....: 4.1		
Aluminum	ND	200	ug/L	SW846 6010B	12/16-12/17/04	G0XDX1AC
		Dilution Factor: 1		MDL.....: 45.5		
Barium	**27.9 B**	**200**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0XDX1AE**
		Dilution Factor: 1		MDL.....: 3.7		
Beryllium	ND	5.0	ug/L	SW846 6010B	12/16-12/17/04	G0XDX1AF
		Dilution Factor: 1		MDL.....: 0.29		
Calcium	**41300**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0XDX1AH**
		Dilution Factor: 1		MDL.....: 111		
Cadmium	ND	5.0	ug/L	SW846 6010B	12/16-12/17/04	G0XDX1AG
		Dilution Factor: 1		MDL.....: 2.0		
Cobalt	ND	50.0	ug/L	SW846 6010B	12/16-12/17/04	G0XDX1AJ
		Dilution Factor: 1		MDL.....: 3.3		
Chromium	ND	10.0	ug/L	SW846 6010B	12/16-12/17/04	G0XDX1AX
		Dilution Factor: 1		MDL.....: 3.3		
Copper	ND	25.0	ug/L	SW846 6010B	12/16-12/17/04	G0XDX1AK
		Dilution Factor: 1		MDL.....: 2.4		
Iron	**8.3 B**	**100**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0XDX1AL**
		Dilution Factor: 1		MDL.....: 6.9		
Potassium	**4720 B**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0XDX1AQ**
		Dilution Factor: 1		MDL.....: 1950		
Magnesium	**11700**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0XDX1AM**
		Dilution Factor: 1		MDL.....: 125		

(Continued on next page)

Method 6010 not validated per VSR instructions LS 8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BT31

DISSOLVED Metals

Lot-Sample #...: F4L130171-046 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Manganese	ND	15.0	ug/L	SW846 6010B	12/16-12/17/04	G0XDX1AN
		Dilution Factor: 1		MDL.....: 0.99		
Sodium	**13500**	**5000**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0XDX1AT**
		Dilution Factor: 1		MDL.....: 94.3		
Nickel	ND	40.0	ug/L	SW846 6010B	12/16-12/17/04	G0XDX1AP
		Dilution Factor: 1		MDL.....: 8.6		
Antimony	ND	60.0	ug/L	SW846 6010B	12/16-12/17/04	G0XDX1AD
		Dilution Factor: 1		MDL.....: 21.3		
Strontium	**212**	**50.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0XDX1AU**
		Dilution Factor: 1		MDL.....: 0.72		
Vanadium	**21.6**	**20.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0XDX1AV**
		Dilution Factor: 1		MDL.....: 5.0		
Zinc	**4.0 B,C**	**20.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G0XDX1AW**
		Dilution Factor: 1		MDL.....: 1.5		

NOTE(S):

B Estimated result. Result is less than RL.

C Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Method 6010 not validated per VSR instructions LS 8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BRP3

DISSOLVED Metals

Lot-Sample #...: F4L140259-001 **Matrix.....:** WATER
Date Sampled...: 12/13/04 **Date Received..:** 12/14/04

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4351622						
Mercury	ND	0.20	ug/L	SW846 7470A	12/16-12/17/04	G01VX1A0
		Dilution Factor: 1		MDL.....: 0.046		
Prep Batch #...: 4352210						
Lead	ND	3.0	ug/L	SW846 7421	12/17-12/20/04	G01VX1AX
		Dilution Factor: 1		MDL.....: 1.3		
Prep Batch #...: 4355193						
Silver	ND	10.0	ug/L	SW846 6010B	12/20-12/21/04	G01VX1AQ
		Dilution Factor: 1		MDL.....: 4.1		
Aluminum	**72.4 B,C**	**200**	**ug/L**	**SW846 6010B**	**12/20-12/21/04**	**G01VX1AA**
		Dilution Factor: 1		MDL.....: 45.5		
Barium	ND	200	ug/L	SW846 6010B	12/20-12/22/04	G01VX1AD
		Dilution Factor: 1		MDL.....: 3.7		
Beryllium	**0.57 B,C**	**5.0**	**ug/L**	**SW846 6010B**	**12/20-12/21/04**	**G01VX1AE**
		Dilution Factor: 1		MDL.....: 0.29		
Calcium	ND	5000	ug/L	SW846 6010B	12/20-12/21/04	G01VX1AG
		Dilution Factor: 1		MDL.....: 111		
Cadmium	ND	5.0	ug/L	SW846 6010B	12/20-12/21/04	G01VX1AF
		Dilution Factor: 1		MDL.....: 2.0		
Cobalt	ND	50.0	ug/L	SW846 6010B	12/20-12/21/04	G01VX1AH
		Dilution Factor: 1		MDL.....: 3.3		
Chromium	ND	10.0	ug/L	SW846 6010B	12/20-12/21/04	G01VX1AW
		Dilution Factor: 1		MDL.....: 3.3		
Copper	ND	25.0	ug/L	SW846 6010B	12/20-12/21/04	G01VX1AJ
		Dilution Factor: 1		MDL.....: 2.4		
Iron	**9.0 B**	**100**	**ug/L**	**SW846 6010B**	**12/20-12/21/04**	**G01VX1AK**
		Dilution Factor: 1		MDL.....: 6.9		
Potassium	ND	5000	ug/L	SW846 6010B	12/20-12/22/04	G01VX1AP
		Dilution Factor: 1		MDL.....: 1950		

(Continued on next page)

Method 6010 not validated per VSR instructions LS 8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BRP3

DISSOLVED Metals

Lot-Sample #...: F4L140259-001 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Magnesium	ND	5000	ug/L	SW846 6010B	12/20-12/21/04	G01VX1AL
		Dilution Factor: 1		MDL.....: 125		
Manganese	ND	15.0	ug/L	SW846 6010B	12/20-12/21/04	G01VX1AM
		Dilution Factor: 1		MDL.....: 0.99		
Sodium	ND	5000	ug/L	SW846 6010B	12/20-12/22/04	G01VX1AR
		Dilution Factor: 1		MDL.....: 94.3		
Nickel	ND	40.0	ug/L	SW846 6010B	12/20-12/21/04	G01VX1AN
		Dilution Factor: 1		MDL.....: 8.6		
Antimony	ND	60.0	ug/L	SW846 6010B	12/20-12/21/04	G01VX1AC
		Dilution Factor: 1		MDL.....: 21.3		
Strontium	ND	50.0	ug/L	SW846 6010B	12/20-12/21/04	G01VX1AT
		Dilution Factor: 1		MDL.....: 0.72		
Vanadium	ND	20.0	ug/L	SW846 6010B	12/20-12/21/04	G01VX1AU
		Dilution Factor: 1		MDL.....: 5.0		
Zinc	**2.8 B,C**	**20.0**	**ug/L**	**SW846 6010B**	**12/20-12/21/04**	**G01VX1AV**
		Dilution Factor: 1		MDL.....: 1.5		

NOTE(S):

B Estimated result. Result is less than RL.

C Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Method 6010 not validated per VSR instructions LS 8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BRN9

DISSOLVED Metals

Lot-Sample #...: F4L140259-005 **Matrix.....:** WATER
Date Sampled...: 12/13/04 **Date Received..:** 12/14/04

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4351622						
Mercury	ND	0.20	ug/L	SW846 7470A	12/16-12/17/04	G014R1AA
		Dilution Factor: 1		MDL.....: 0.046		
Prep Batch #...: 4352210						
Lead	ND	3.0	ug/L	SW846 7421	12/17-12/20/04	G014R1A0
		Dilution Factor: 1		MDL.....: 1.3		
Prep Batch #...: 4355193						
Silver	ND	10.0	ug/L	SW846 6010B	12/20-12/21/04	G014R1AR
		Dilution Factor: 1		MDL.....: 4.1		
Aluminum	**81.9 B,C**	**200**	**ug/L**	**SW846 6010B**	**12/20-12/21/04**	**G014R1AC**
		Dilution Factor: 1		MDL.....: 45.5		
Barium	**53.1 B**	**200**	**ug/L**	**SW846 6010B**	**12/20-12/22/04**	**G014R1AE**
		Dilution Factor: 1		MDL.....: 3.7		
Beryllium	**0.52 B,C**	**5.0**	**ug/L**	**SW846 6010B**	**12/20-12/21/04**	**G014R1AF**
		Dilution Factor: 1		MDL.....: 0.29		
Calcium	**70300**	**5000**	**ug/L**	**SW846 6010B**	**12/20-12/21/04**	**G014R1AH**
		Dilution Factor: 1		MDL.....: 111		
Cadmium	ND	5.0	ug/L	SW846 6010B	12/20-12/21/04	G014R1AG
		Dilution Factor: 1		MDL.....: 2.0		
Cobalt	ND	50.0	ug/L	SW846 6010B	12/20-12/21/04	G014R1AJ
		Dilution Factor: 1		MDL.....: 3.3		
Chromium	**6.7 B**	**10.0**	**ug/L**	**SW846 6010B**	**12/20-12/21/04**	**G014R1AX**
		Dilution Factor: 1		MDL.....: 3.3		
Copper	ND	25.0	ug/L	SW846 6010B	12/20-12/21/04	G014R1AK
		Dilution Factor: 1		MDL.....: 2.4		
Iron	**26.3 B**	**100**	**ug/L**	**SW846 6010B**	**12/20-12/21/04**	**G014R1AL**
		Dilution Factor: 1		MDL.....: 6.9		
Potassium	**8480**	**5000**	**ug/L**	**SW846 6010B**	**12/20-12/22/04**	**G014R1AQ**
		Dilution Factor: 1		MDL.....: 1950		

(Continued on next page)

Method 6010 not validated per VSR instructions LS 8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BRN9

DISSOLVED Metals

Lot-Sample #...: F4L140259-005 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Magnesium	**21700**	**5000**	**ug/L**	**SW846 6010B**	**12/20-12/21/04**	**G014R1AM**
		Dilution Factor: 1		MDL.....: 125		
Manganese	ND	15.0	ug/L	SW846 6010B	12/20-12/21/04	G014R1AN
		Dilution Factor: 1		MDL.....: 0.99		
Sodium	**37300**	**5000**	**ug/L**	**SW846 6010B**	**12/20-12/22/04**	**G014R1AT**
		Dilution Factor: 1		MDL.....: 94.3		
Nickel	ND	40.0	ug/L	SW846 6010B	12/20-12/21/04	G014R1AP
		Dilution Factor: 1		MDL.....: 8.6		
Antimony	ND	60.0	ug/L	SW846 6010B	12/20-12/21/04	G014R1AD
		Dilution Factor: 1		MDL.....: 21.3		
Strontium	**365**	**50.0**	**ug/L**	**SW846 6010B**	**12/20-12/21/04**	**G014R1AU**
		Dilution Factor: 1		MDL.....: 0.72		
Vanadium	**14.3 B**	**20.0**	**ug/L**	**SW846 6010B**	**12/20-12/21/04**	**G014R1AV**
		Dilution Factor: 1		MDL.....: 5.0		
Zinc	**3.1 B,C**	**20.0**	**ug/L**	**SW846 6010B**	**12/20-12/21/04**	**G014R1AW**
		Dilution Factor: 1		MDL.....: 1.5		

NOTE(S):

B Estimated result. Result is less than RL.

C Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Method 6010 not validated per VSR instructions LS 8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BRT9

DISSOLVED Metals

Lot-Sample #...: F4L140259-010 **Matrix.....:** WATER
Date Sampled...: 12/13/04 **Date Received..:** 12/14/04

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4351622						
Mercury	ND	0.20	ug/L	SW846 7470A	12/16-12/17/04	G015L1AA
		Dilution Factor: 1		MDL.....: 0.046		
Prep Batch #...: 4352210						
Lead	ND	3.0	ug/L	SW846 7421	12/17-12/20/04	G015L1A0
		Dilution Factor: 1		MDL.....: 1.3		
Prep Batch #...: 4355193						
Silver	ND	10.0	ug/L	SW846 6010B	12/20-12/21/04	G015L1AR
		Dilution Factor: 1		MDL.....: 4.1		
Aluminum	**88.9 B,C**	**200**	**ug/L**	**SW846 6010B**	**12/20-12/21/04**	**G015L1AC**
		Dilution Factor: 1		MDL.....: 45.5		
Barium	**34.8 B**	**200**	**ug/L**	**SW846 6010B**	**12/20-12/22/04**	**G015L1AE**
		Dilution Factor: 1		MDL.....: 3.7		
Beryllium	**0.53 B,C**	**5.0**	**ug/L**	**SW846 6010B**	**12/20-12/21/04**	**G015L1AF**
		Dilution Factor: 1		MDL.....: 0.29		
Calcium	**48300**	**5000**	**ug/L**	**SW846 6010B**	**12/20-12/21/04**	**G015L1AH**
		Dilution Factor: 1		MDL.....: 111		
Cadmium	ND	5.0	ug/L	SW846 6010B	12/20-12/21/04	G015L1AG
		Dilution Factor: 1		MDL.....: 2.0		
Cobalt	ND	50.0	ug/L	SW846 6010B	12/20-12/21/04	G015L1AJ
		Dilution Factor: 1		MDL.....: 3.3		
Chromium	**3.4 B**	**10.0**	**ug/L**	**SW846 6010B**	**12/20-12/21/04**	**G015L1AX**
		Dilution Factor: 1		MDL.....: 3.3		
Copper	ND	25.0	ug/L	SW846 6010B	12/20-12/21/04	G015L1AK
		Dilution Factor: 1		MDL.....: 2.4		
Iron	ND	100	ug/L	SW846 6010B	12/20-12/21/04	G015L1AL
		Dilution Factor: 1		MDL.....: 6.9		
Potassium	**7000**	**5000**	**ug/L**	**SW846 6010B**	**12/20-12/22/04**	**G015L1AQ**
		Dilution Factor: 1		MDL.....: 1950		

(Continued on next page)

Method 6010 not validated per VSR instructions LS 8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BRT9

DISSOLVED Metals

Lot-Sample #...: F4L140259-010 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Magnesium	**14600**	**5000**	**ug/L**	**SW846 6010B**	**12/20-12/21/04**	**G015L1AM**
		Dilution Factor: 1		MDL.....: 125		
Manganese	ND	15.0	ug/L	SW846 6010B	12/20-12/21/04	G015L1AN
		Dilution Factor: 1		MDL.....: 0.99		
Sodium	**27600**	**5000**	**ug/L**	**SW846 6010B**	**12/20-12/22/04**	**G015L1AT**
		Dilution Factor: 1		MDL.....: 94.3		
Nickel	ND	40.0	ug/L	SW846 6010B	12/20-12/21/04	G015L1AP
		Dilution Factor: 1		MDL.....: 8.6		
Antimony	ND	60.0	ug/L	SW846 6010B	12/20-12/21/04	G015L1AD
		Dilution Factor: 1		MDL.....: 21.3		
Strontium	**243**	**50.0**	**ug/L**	**SW846 6010B**	**12/20-12/21/04**	**G015L1AU**
		Dilution Factor: 1		MDL.....: 0.72		
Vanadium	**16.1 B**	**20.0**	**ug/L**	**SW846 6010B**	**12/20-12/21/04**	**G015L1AV**
		Dilution Factor: 1		MDL.....: 5.0		
Zinc	**4.0 B,C**	**20.0**	**ug/L**	**SW846 6010B**	**12/20-12/21/04**	**G015L1AW**
		Dilution Factor: 1		MDL.....: 1.5		

NOTE(S):

B Estimated result. Result is less than RL.

C Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Method 6010 not validated per VSR instructions LS 8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BT40

DISSOLVED Metals

Lot-Sample #...: F4L140259-015 **Matrix.....:** WATER
Date Sampled...: 12/13/04 **Date Received..:** 12/14/04

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4350060						
Arsenic	**6.2 B**	**10.0**	**ug/L**	**SW846 7060**	**12/15-12/20/04**	**G017N1AA**
		Dilution Factor: 1		MDL.....: 2.5		
Prep Batch #...: 4355193						
Silver	ND	10.0	ug/L	SW846 6010B	12/20-12/21/04	G017N1AR
		Dilution Factor: 1		MDL.....: 4.1		
Aluminum	**85.6 B,C**	**200**	**ug/L**	**SW846 6010B**	**12/20-12/21/04**	**G017N1AC**
		Dilution Factor: 1		MDL.....: 45.5		
Barium	**33.6 B**	**200**	**ug/L**	**SW846 6010B**	**12/20-12/22/04**	**G017N1AE**
		Dilution Factor: 1		MDL.....: 3.7		
Beryllium	**0.56 B,C**	**5.0**	**ug/L**	**SW846 6010B**	**12/20-12/21/04**	**G017N1AF**
		Dilution Factor: 1		MDL.....: 0.29		
Calcium	**43900**	**5000**	**ug/L**	**SW846 6010B**	**12/20-12/21/04**	**G017N1AH**
		Dilution Factor: 1		MDL.....: 111		
Cadmium	ND	5.0	ug/L	SW846 6010B	12/20-12/21/04	G017N1AG
		Dilution Factor: 1		MDL.....: 2.0		
Cobalt	**3.5 B**	**50.0**	**ug/L**	**SW846 6010B**	**12/20-12/21/04**	**G017N1AJ**
		Dilution Factor: 1		MDL.....: 3.3		
Chromium	ND	10.0	ug/L	SW846 6010B	12/20-12/21/04	G017N1AX
		Dilution Factor: 1		MDL.....: 3.3		
Copper	ND	25.0	ug/L	SW846 6010B	12/20-12/21/04	G017N1AK
		Dilution Factor: 1		MDL.....: 2.4		
Iron	ND	100	ug/L	SW846 6010B	12/20-12/21/04	G017N1AL
		Dilution Factor: 1		MDL.....: 6.9		
Potassium	**6660**	**5000**	**ug/L**	**SW846 6010B**	**12/20-12/22/04**	**G017N1AQ**
		Dilution Factor: 1		MDL.....: 1950		
Magnesium	**12000**	**5000**	**ug/L**	**SW846 6010B**	**12/20-12/21/04**	**G017N1AM**
		Dilution Factor: 1		MDL.....: 125		

(Continued on next page)

Method 6010 not validated per VSR instructions LS 8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BT40

DISSOLVED Metals

Lot-Sample #...: F4L140259-015 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Manganese	**5.6 B**	**15.0**	**ug/L**	**SW846 6010B**	**12/20-12/21/04**	**G017N1AN**
		Dilution Factor: 1		MDL.....: 0.99		
Sodium	**12900**	**5000**	**ug/L**	**SW846 6010B**	**12/20-12/22/04**	**G017N1AT**
		Dilution Factor: 1		MDL.....: 94.3		
Nickel	ND	40.0	ug/L	SW846 6010B	12/20-12/21/04	G017N1AP
		Dilution Factor: 1		MDL.....: 8.6		
Antimony	ND	60.0	ug/L	SW846 6010B	12/20-12/21/04	G017N1AD
		Dilution Factor: 1		MDL.....: 21.3		
Strontium	**221**	**50.0**	**ug/L**	**SW846 6010B**	**12/20-12/21/04**	**G017N1AU**
		Dilution Factor: 1		MDL.....: 0.72		
Vanadium	**19.1 B**	**20.0**	**ug/L**	**SW846 6010B**	**12/20-12/21/04**	**G017N1AV**
		Dilution Factor: 1		MDL.....: 5.0		
Zinc	**5.9 B,C**	**20.0**	**ug/L**	**SW846 6010B**	**12/20-12/21/04**	**G017N1AW**
		Dilution Factor: 1		MDL.....: 1.5		

NOTE(S):

B Estimated result. Result is less than RL.

C Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Method 6010 not validated per VSR instructions LS 8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BRW4

DISSOLVED Metals

Lot-Sample #...: F4L140259-020 **Matrix.....:** WATER
Date Sampled...: 12/13/04 **Date Received..:** 12/14/04

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4351622						
Mercury	ND	0.20	ug/L	SW846 7470A	12/16-12/17/04	G019L1AA
		Dilution Factor: 1		MDL.....: 0.046		
Prep Batch #...: 4352210						
Lead	ND	3.0	ug/L	SW846 7421	12/17-12/20/04	G019L1A0
		Dilution Factor: 1		MDL.....: 1.3		
Prep Batch #...: 4355193						
Silver	ND	10.0	ug/L	SW846 6010B	12/20-12/21/04	G019L1AR
		Dilution Factor: 1		MDL.....: 4.1		
Aluminum	**107 B,C**	**200**	**ug/L**	**SW846 6010B**	**12/20-12/21/04**	**G019L1AC**
		Dilution Factor: 1		MDL.....: 45.5		
Barium	**67.2 B**	**200**	**ug/L**	**SW846 6010B**	**12/20-12/22/04**	**G019L1AE**
		Dilution Factor: 1		MDL.....: 3.7		
Beryllium	**0.56 B,C**	**5.0**	**ug/L**	**SW846 6010B**	**12/20-12/21/04**	**G019L1AF**
		Dilution Factor: 1		MDL.....: 0.29		
Calcium	**63800**	**5000**	**ug/L**	**SW846 6010B**	**12/20-12/21/04**	**G019L1AH**
		Dilution Factor: 1		MDL.....: 111		
Cadmium	ND	5.0	ug/L	SW846 6010B	12/20-12/21/04	G019L1AG
		Dilution Factor: 1		MDL.....: 2.0		
Cobalt	ND	50.0	ug/L	SW846 6010B	12/20-12/21/04	G019L1AJ
		Dilution Factor: 1		MDL.....: 3.3		
Chromium	**8.2 B**	**10.0**	**ug/L**	**SW846 6010B**	**12/20-12/21/04**	**G019L1AX**
		Dilution Factor: 1		MDL.....: 3.3		
Copper	ND	25.0	ug/L	SW846 6010B	12/20-12/21/04	G019L1AK
		Dilution Factor: 1		MDL.....: 2.4		
Iron	**30.9 B**	**100**	**ug/L**	**SW846 6010B**	**12/20-12/21/04**	**G019L1AL**
		Dilution Factor: 1		MDL.....: 6.9		
Potassium	**7260**	**5000**	**ug/L**	**SW846 6010B**	**12/20-12/22/04**	**G019L1AQ**
		Dilution Factor: 1		MDL.....: 1950		

(Continued on next page)

Method 6010 not validated per VSR instructions LS 8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BRW4

DISSOLVED Metals

Lot-Sample #...: F4L140259-020 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Magnesium	**18700**	**5000**	**ug/L**	**SW846 6010B**	**12/20-12/21/04**	**G019L1AM**
		Dilution Factor: 1		MDL.....: 125		
Manganese	**2.2 B**	**15.0**	**ug/L**	**SW846 6010B**	**12/20-12/21/04**	**G019L1AN**
		Dilution Factor: 1		MDL.....: 0.99		
Sodium	**23100**	**5000**	**ug/L**	**SW846 6010B**	**12/20-12/22/04**	**G019L1AT**
		Dilution Factor: 1		MDL.....: 94.3		
Nickel	ND	40.0	ug/L	SW846 6010B	12/20-12/21/04	G019L1AP
		Dilution Factor: 1		MDL.....: 8.6		
Antimony	ND	60.0	ug/L	SW846 6010B	12/20-12/21/04	G019L1AD
		Dilution Factor: 1		MDL.....: 21.3		
Strontium	**339**	**50.0**	**ug/L**	**SW846 6010B**	**12/20-12/21/04**	**G019L1AU**
		Dilution Factor: 1		MDL.....: 0.72		
Vanadium	**13.4 B**	**20.0**	**ug/L**	**SW846 6010B**	**12/20-12/21/04**	**G019L1AV**
		Dilution Factor: 1		MDL.....: 5.0		
Zinc	**4.0 B,C**	**20.0**	**ug/L**	**SW846 6010B**	**12/20-12/21/04**	**G019L1AW**
		Dilution Factor: 1		MDL.....: 1.5		

NOTE(S):

B Estimated result. Result is less than RL.

C Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Method 6010 not validated per VSR instructions LS 8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BT96

DISSOLVED Metals

Lot-Sample #...: F4L140259-025 **Matrix.....:** WATER
Date Sampled...: 12/13/04 **Date Received..:** 12/14/04

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4350060						
Arsenic	ND	10.0	ug/L	SW846 7060	12/15-12/20/04	G02AN1AA
		Dilution Factor: 1		MDL.....: 2.5		
Prep Batch #...: 4355193						
Silver	ND	10.0	ug/L	SW846 6010B	12/20-12/21/04	G02AN1AR
		Dilution Factor: 1		MDL.....: 4.1		
Aluminum	**83.7 B,C**	**200**	**ug/L**	**SW846 6010B**	**12/20-12/21/04**	**G02AN1AC**
		Dilution Factor: 1		MDL.....: 45.5		
Barium	**64.3 B**	**200**	**ug/L**	**SW846 6010B**	**12/20-12/22/04**	**G02AN1AE**
		Dilution Factor: 1		MDL.....: 3.7		
Beryllium	**0.56 B,C**	**5.0**	**ug/L**	**SW846 6010B**	**12/20-12/21/04**	**G02AN1AF**
		Dilution Factor: 1		MDL.....: 0.29		
Calcium	**50600**	**5000**	**ug/L**	**SW846 6010B**	**12/20-12/21/04**	**G02AN1AH**
		Dilution Factor: 1		MDL.....: 111		
Cadmium	ND	5.0	ug/L	SW846 6010B	12/20-12/21/04	G02AN1AG
		Dilution Factor: 1		MDL.....: 2.0		
Cobalt	ND	50.0	ug/L	SW846 6010B	12/20-12/21/04	G02AN1AJ
		Dilution Factor: 1		MDL.....: 3.3		
Chromium	**4.4 B**	**10.0**	**ug/L**	**SW846 6010B**	**12/20-12/21/04**	**G02AN1AX**
		Dilution Factor: 1		MDL.....: 3.3		
Copper	ND	25.0	ug/L	SW846 6010B	12/20-12/21/04	G02AN1AK
		Dilution Factor: 1		MDL.....: 2.4		
Iron	**22.0 B**	**100**	**ug/L**	**SW846 6010B**	**12/20-12/21/04**	**G02AN1AL**
		Dilution Factor: 1		MDL.....: 6.9		
Potassium	**4200 B**	**5000**	**ug/L**	**SW846 6010B**	**12/20-12/22/04**	**G02AN1AQ**
		Dilution Factor: 1		MDL.....: 1950		
Magnesium	**15600**	**5000**	**ug/L**	**SW846 6010B**	**12/20-12/21/04**	**G02AN1AM**
		Dilution Factor: 1		MDL.....: 125		

(Continued on next page)

Method 6010 not validated per VSR instructions LS 8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BT96

DISSOLVED Metals

Lot-Sample #...: F4L140259-025 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Manganese	ND	15.0	ug/L	SW846 6010B	12/20-12/21/04	G02AN1AN
		Dilution Factor: 1		MDL.....: 0.99		
Sodium	**21000**	**5000**	**ug/L**	**SW846 6010B**	**12/20-12/22/04**	**G02AN1AT**
		Dilution Factor: 1		MDL.....: 94.3		
Nickel	ND	40.0	ug/L	SW846 6010B	12/20-12/21/04	G02AN1AP
		Dilution Factor: 1		MDL.....: 8.6		
Antimony	ND	60.0	ug/L	SW846 6010B	12/20-12/21/04	G02AN1AD
		Dilution Factor: 1		MDL.....: 21.3		
Strontium	**232**	**50.0**	**ug/L**	**SW846 6010B**	**12/20-12/21/04**	**G02AN1AU**
		Dilution Factor: 1		MDL.....: 0.72		
Vanadium	**25.7**	**20.0**	**ug/L**	**SW846 6010B**	**12/20-12/21/04**	**G02AN1AV**
		Dilution Factor: 1		MDL.....: 5.0		
Zinc	**3.2 B,C**	**20.0**	**ug/L**	**SW846 6010B**	**12/20-12/21/04**	**G02AN1AW**
		Dilution Factor: 1		MDL.....: 1.5		

NOTE(S):

B Estimated result. Result is less than RL.

C Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Method 6010 not validated per VSR instructions LS 8-10-2010

Appendix 4

Laboratory Narrative and Chain-of-Custody Documentation

SEVERN TRENT STL

STL St. Louis
13715 Rider Trail North
Earth City, MO 63045

Tel: 314 298 8566 Fax: 314 298 8757
www.stl-inc.com

CASE NARRATIVE

Pacific Northwest National Laboratories
P.O. Box 1970
Richland, Washington 99352
January 13, 2005
Attention: Dot Stewart

Project Number	:	519.145
SDG	:	SL429
Number of Samples	:	118
Sample Matrix	:	water
Data Deliverable	:	Summary
Date SDG Closed	:	December 14, 2004

II. Introduction

Between December 10 and December 14, 2004, one hundred and eighteen 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

SEVERN TRENT STL

Pacific Northwest National Laboratories
January 13, 2005
Project Number: 519.145
SDG: SL429

STL St. Louis
13715 Rider Trail North
Earth City, MO 63045

Tel: 314 298 8566 Fax: 314 298 8757
www.stl-inc.com

V. Comments

General

The following SAFs are associated with this SDG: S05-012, W05-012

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.

MS/MSD/Dup analysis was done per the client requirements. Analytical batches that did not contain matrix QC were analyzed with a LCS/LCS duplicate.

Wet Chemistry

The MS recovery for Cyanide (4351381) is outside the QC limits. The associated data has been flagged with an "N" qualifier. Method performance is demonstrated by acceptable LCS recovery.

Metals

There were no comments or non-conformances associated with this data.

Phenols

The MS/MSD RPD for dinoseb is outside criteria for batch 4349321. Individual spike recoveries met criteria.

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:

Marti Ward
St. Louis Project Manager

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-123

Page 1 of 2

Collector: DURATEK L. D. WALL	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: RCRA GW MONITORING, DECEMBER 2004	logbook DTS-SAWS-H82	Ice Chest No.: SAW-711 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 7903 6202 7607
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BRV5 (F)		W	12-9-04	1110	1x500-mL G/P	7421_PB_GFAA: Lead (1)	HNO3 to pH <2
B1BRV5 (F)		W			1x500-mL G	7470_HG_CVAA: Mercury (1)	HNO3 to pH <2
B1BRV5 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BRV6		W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool 4C
B1BRV6		W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BRV6		W			1x20-mL P	Activity Scan	None
B1BRV6		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BRV6		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVF4		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVF4		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVF5		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVF5		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C

Relinquished By	Received By
DURATEK L. D. WALL Print L. D. Wall Sign DEC 09 2004 Date/Time 1400	FED EX Print Sign Date/Time
FED EX Date/Time	Gil Clark STL 12-10-04 0900 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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-123

Page 2 of 2

SAF No.	Contact/Requestor	Telephone No.	MSIN	FAX
W05-012	DL STEWART	509-376-5056		

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BVF6		W	12-9-04	1110	1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVF6		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
DURATEK	L. D. WALL	L.D. Wall	DEC 09 2004 1400	FED EX			
FED EX				Jill Clark	STL		12-10-04 0900

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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-119

Collector: DURATEK L. D. WALL	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: RCRA GW MONITORING, DECEMBER 2004	Logbook DTS-SAWS-1482	Ice Chest No. SAWS-211 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No. 7903 6202 7607
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BRV2 (F)		W	12-9-04	1218	1x500-mL G/P	7421_PB_GFAA: Lead (1)	HNO3 to pH <2
B1BRV2 (F)		W			1x500-mL G	7470_HG_CVAA: Mercury (1)	HNO3 to pH <2
B1BRV2 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BRV3		W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BRV3		W			1x20-mL P	Activity Scan	None
B1BRV3		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BRV3		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVF1		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVF1		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVF2		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVF2		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVF3		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
DURATEK L. D. WALL	L. D. Wall		DEC 09 2004 1400	FEDEX			
FED Ex				Gill Clark		STL	12-10-04 0900

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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-119

Page 2 of 2

SAF No. W05-012

Contact/Requestor DL STEWART

Telephone No. 509-376-5056

MSIN

FAX

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BVF3		W	12-9-04	1218	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
DURATEK L.D. WALL	L.D. Wall		DEC 09 2004 1400	FED EX			
Relinquished By			Date/Time	Received By			Date/Time
FED EX				Gill Clark	STL		12-10-04 0800
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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-31

Collector: R.T SICKLE	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: RCRA GW MONITORING, DECEMBER 2004	OTS- SAWS H83	Ice Chest No.: SAWS 119 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 7203 6204 1026
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BT16 (F)		W	12-9-04	1209	1x500-mL G/P	7060_AS_GFAA: Arsenic (1)	HNO3 to pH <2
B1BT16 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BT17		W			3x1000-mL aG	8040_PHENOLIC_GC: List-1 (17)	Residual Chlorine 0.0008%
B1BT17		W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool 4C
B1BT17		W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BT17		W			1x20-mL P	Activity Scan	None
B1BT17		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BT17		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVL6		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVL6		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVL7		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVL7		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
R.T SICKLE			DEC 09 2004 1400	FED EX			
FEDEX				Jill Clark		STL	12.10.04 0900

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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-31

Page 2 of 2

SAF No. W05-012

Contact/Requestor DL STEWART

Telephone No. 509-376-5056

MSIN

FAX

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BVL8		W	12-9-04	1209	1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVL8		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
	D.T. SICKLE		DEC 09 2004 1400	FED EX			
Relinquished By			Date/Time	Received By			Date/Time
	FED EX			Dell Clarke STL			12-10-04 0900
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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-11

Collector: D. P. CONNOLLY	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: RCRA GW MONITORING, DECEMBER 2004	DTS SAWS-1484	Ice Chest No.: SML-526 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 7903-6199-9144
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BT01 (F)		W	12-09-04	0941	1x500-mL G/P	7060_AS_GFAA: Arsenic (1)	HNO3 to pH <2
B1BT01 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BT02		W			3x1000-mL aG	8040_PHENOLIC_GC: List-1 (17)	Residual Chlorine 0.0008%
B1BT02		W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool 4C
B1BT02		W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BT02		W			1x20-mL P	Activity Scan	None
B1BT02		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BT02		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVK1		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVK1		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVK2		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVK2		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
D. P. CONNOLLY	DEC 0 9 2004 1400	FedEX	
FEDEX		Gill Clark STL	12-10-04 0900

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

LOT# F411060116 SDG# SL429 17 OF 277

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-11

Page 2 of 2

SAF No. W05-012

Contact/Requestor DL STEWART

Telephone No. 509-376-5056

MSIN

FAX

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BVK3		W	12-9-04	0941	1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVK3		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
	D.P. CONNOLLY		DEC 0 9 2004 1400	Fed EX			
Relinquished By	FEDEX		Date/Time	Received By			Date/Time 12-10-04 0900
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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-96

Page 1 of 1

Collector: DURATEK L. D. WALL	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: RCRA GW MONITORING, DECEMBER 2004	Logbook DTS-SAWS-1482	Ice Chest No. SAWS-118 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No. 7903 6202 7618
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BRR5 (F)		W	12-9-04	0950	1x500-mL G/P	7421_PB_GFAA: Lead (1)	HNO3 to pH <2
B1BRR5 (F)		W			1x500-mL G	7470_HG_CVAA: Mercury (1)	HNO3 to pH <2
B1BRR5 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BRR6		W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BRR6		W			1x20-mL P	Activity Scan	None
~~B1BRR6~~		~~W~~			~~1x1000-mL aGs*~~	~~9020_TOX: TOX (1)~~ 12-6-04 DF	H2SO4 to pH <2 Cool 4C
~~B1BRR6~~		~~W~~			~~1x250-mL aGs*~~	~~9060_TOC: TOC (1)~~	HCl or H2SO4 to pH <2 Cool 4C

L. Wall 12/9/04

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
DURATEK L. D. WALL	L.D. Wall		DEC 09 2004 1400	FED EX			
Relinquished By: FED EX			Date/Time	Received By: Jill Clark STL			Date/Time: 12.10.04 0900
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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-95

Page 1 of 2

Collector: DURATEK L. D. WALL	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: RCRA GW MONITORING, DECEMBER 2004	Logbook DTS-SAWS-182	Ice Chest No. SAWS-118 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No. 7903 6202 7618
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BRR1 (F)		W	12-9-04	0950	1x500-mL G/P	7421_PB_GFAA: Lead (1)	HNO3 to pH <2
B1BRR1 (F)		W			1x500-mL G	7470_HG_CVAA: Mercury (1)	HNO3 to pH <2
B1BRR1 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BRR2		W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BRR2		W			1x20-mL P	Activity Scan	None
B1BRR2		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BRR2		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVC3		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVC3		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVC4		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVC4		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVC5		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
DURATEK L. D. WALL / L.D. Wall	DEC 09 2004 1400	FED EX	
FED EX		Gill Clark STL	12-10-04 0900

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

LOT# F4110196 SDG# ST429 20 OF 277

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-95

Page 2 of 2

SAF No. W05-012

Contact/Requestor DL STEWART

Telephone No. 509-376-5056

MSIN

FAX

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BVC5		W	12-9-04	0950	1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C

D. Wall 12/9/04

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
DURATEK	L.D. Wall		DEC 09 2004 1400	FED EX			
L.D. WALL							
FED Ex				Jill Clark	STL		12.10.04 0900

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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-75

Collector: D.P. CONNOLLY	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: RCRA GW MONITORING, DECEMBER 2004	DTS-SAWS-1484	Ice Chest No.: SAWS-117 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 7921-5581-4832
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BRN3 (F)		W	12-9-04	1107	1x500-mL G/P	7421_PB_GFAA: Lead (1)	HNO3 to pH <2
B1BRN3 (F)		W			1x500-mL G	7470_HG_CVAA: Mercury (1)	HNO3 to pH <2
B1BRN3 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BRN4		W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BRN4		W			1x20-mL P	Activity Scan	None
B1BRN4		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BRN4		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BV95		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BV95		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BV96		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BV96		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BV97		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
D.P. CONNOLLY	DEC 0 9 2004 1400	FedEX	
FED EX		Jill Clark STL	12-10-04 0900

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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-75

Page 2 of 2

SAF No. W05-012

Contact/Requestor DL STEWART

Telephone No. 509-376-5056

MSIN

FAX

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BV97		W	12-9-04	1107	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
D.P. CONNOLLY	D.P. CONNOLLY		DEC 0 9 2004 1400	FedEX			
Relinquished By			Date/Time	Received By			Date/Time
				Jill Clarke STL			12-10-04 0900
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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-79

Collector: D.P. CONNOLLY	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: RCRA GW MONITORING, DECEMBER 2004	DTS-SAWS-484	Ice Chest No.: SAWS-219 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 7921-5581-4810
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BRN6 (F)		W	12-9-04	1210	1x500-mL G/P	7421_PB_GFAA: Lead (1)	HNO3 to pH <2
B1BRN6 (F)		W			1x500-mL G	7470_HG_CVAA: Mercury (1)	HNO3 to pH <2
B1BRN6 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BRN7		W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool 4C
B1BRN7		W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BRN7		W			1x20-mL P	Activity Scan	None
B1BRN7		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BRN7		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BV98		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BV98		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BV99		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BV99		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
D.P. CONNOLLY	DEC 0 9 2004 1400	FedEx	
FED EX		Jill Clark STL	12.10.04 @ 0900

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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-79

Page 2 of 2

SAF No. W05-012

Contact/Requestor DL STEWART

Telephone No. 509-376-5056

MSIN

FAX

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BVB0		W	12-9-04	1210	1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVB0		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
D. P. CONNOLLY			1400 DEC 0 9 2004	FedEx			
Relinquished By			Date/Time	Received By			Date/Time
FED Ex				Joel Clark	STL		12-10-04 0900
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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-111

Page 1 of 2

Collector: DURATEK R. R. FOX	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: RCRA GW MONITORING, DECEMBER 2004	SAW5-H83	Ice Chest No.: SAW5-114 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 7908 5577 7006
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BRT6 (F)	1	W	12.10.04	1133	1x500-mL G/P	7421_PB_GFAA: Lead (1)	HNO3 to pH <2
B1BRT6 (F)		W			1x500-mL G	7470_HG_CVAA: Mercury (1)	HNO3 to pH <2
B1BRT6 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BRT7	2	W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool 4C
B1BRT7		W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BRT7		W			1x20-mL P	Activity Scan	None
B1BRT7		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BRT7		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVD5	3	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVD5		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVD6	4	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVD6		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
DURATEK R. R. FOX			DEC 10 2004 1300	Fed Ex			
Relinquished By: FED Ex			Date/Time	Received By: Gil Clarke STL			Date/Time 12-11-04 0840
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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-111

Page 2 of 2

SAF No. W05-012 | Contact/Requestor DL STEWART | Telephone No. 509-376-5056 | MSIN | FAX

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BVD7	5	W	12.10.04	1133	1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVD7		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
SUPATEK R. R. FOX			DEC 10 2004 1300	FedEx			
Relinquished By			Date/Time	Received By			Date/Time
FED Ex				Jill Clark STL			12-11-04 0840
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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-127

Page 1 of 2

Collector DUHATER R.R. FOX	Contact/Requester DL STEWART	Telephone No. 509-376-5056 MSIN FAX
SAF No. W05-012	Sampling Origin HANFORD SITE	Purchase Order/Charge Code
Project Title RCRA GW MONITORING, DECEMBER 2004	SAWS-1483	Ice Chest No. SAWS 213 Temp.
Shipped To (Lab) Severn Trent St. Louis	Method of Shipment GOVT. VEHICLE	Bill of Lading/Air Bill No. 790855776981
Protocol RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BRV8 (F)	6	W	12-10-04	0923	1x500-mL G/P	7421_PB_GFAA: Lead (1)	HNO3 to pH <2
B1BRV8 (F)		W			1x500-mL G	7470_HG_CVAA: Mercury (1)	HNO3 to pH <2
B1BRV8 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BRV9	7	W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BRV9		W			1x20-mL P	Activity Scan	None
B1BRV9		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BRV9		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVF7	8	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVF7		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVF8	9	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVF8		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVF9	10	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
DUHATER R.R. FOX			DEC 10 2004 1300	FedEx			
Relinquished By			Date/Time	Received By			Date/Time
FEDEX				Gill Clarke	STL		12-11-04 0840
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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-127

Page 2 of 2

SAF No. W05-012 | Contact/Requestor DL STEWART | Telephone No. 509-376-5056 | MSIN | FAX

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BVF9		W	12.10.04	0923	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
		DEC 10 2004	1300	FedEx			
Relinquished By			Date/Time	Received By			Date/Time
FEDEX				Jill Clarke STL			12-11-04 0840
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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-87

Page 1 of 2

Collector: DURATEK L. D. WALL	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: RCRA GW MONITORING, DECEMBER 2004	Logbook DTS-SAWS-1482	Ice Chest No.: SAWS-108 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 7908-5558-4377
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BRP5 (F)	11	W	12-10-04	1115	1x500-mL G/P	7421_PB_GFAA: Lead (1)	HNO3 to pH <2
B1BRP5 (F)		W			1x500-mL G	7470_HG_CVAA: Mercury (1)	HNO3 to pH <2
B1BRP5 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BRP6	12	W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool 4C
B1BRP6		W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BRP6		W			1x20-mL P	Activity Scan	None
B1BRP6		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BRP6		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVB7	13	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVB7		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVB8	14	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVB8		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
DURATEK L. D. Wall	DEC 10 2004 1300	FED EX	
L. D. WALL FED EX		Jill Clarke STL	12-11-04 08:40

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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-87

Page 2 of 2

SAF No. W05-012

Contact/Requestor DL STEWART

Telephone No. 509-376-5056

MSIN

FAX

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BVB9	15	W	12-10-04	1115	1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVB9		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
DURATEK L.D. WALL	L.D. Wall		DEC 10 2004 1300	FED EX			
Relinquished By			Date/Time	Received By			Date/Time
FED EX				Jill Clarke	STL		12-11-04 08:40
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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-103

Page 1 of 2

Collector: DURATEK L. D. WALL	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: RCRA GW MONITORING, DECEMBER 2004	Logbook DTS-SAWS-482	Ice Chest No. SAWS-108 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No. 7908-5558-4377
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BRT0 (F)	16	W	12-10-04	0030	1x500-mL G/P	7421_PB_GFAA: Lead (1)	HNO3 to pH <2
B1BRT0 (F)		W			1x500-mL G	7470_HG_CVAA: Mercury (1)	HNO3 to pH <2
B1BRT0 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BRT1	17	W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BRT1		W			1x250-mL G/P	9012_CYANIDE: Cyanide (1)	NaOH to pH >= 12 Cool 4C
B1BRT1		W			1x20-mL P	Activity Scan	None
B1BRT1		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BRT1		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVC9	18	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVC9		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVD0	19	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVD0		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
DURATEK L. D. WALL	L. D. Wall		DEC 10 2004 1300	FED EX			
Relinquished By			Date/Time	Received By			Date/Time
FED EX				Gill Clarke STL			12-11-04 08:40
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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-103

Page 2 of 2

SAF No. W05-012

Contact/Requestor DL STEWART

Telephone No. 509-376-5056

MSIN

FAX

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BVD1	20	W	12-10-04	1030	1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVD1		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
DURATEK	L. D. WALL	L.D. Wall	DEC 10 2004 1300	FED EX			
FED Ex				Jill Clarke		STL	12.11.04 08:40

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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-71

Page 1 of 2

Collector: D. P. CONNOLLY	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: RCRA GW MONITORING, DECEMBER 2004	DTS 3HWS-H84	Ice Chest No.: 3HWS-115 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 7921-5698-0269
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BRN0 (F)	21	W	12-10-04	1006	1x500-mL G/P	7421_PB_GFAA: Lead (1)	HNO3 to pH <2
B1BRN0 (F)		W			1x500-mL G	7470_HG_CVAA: Mercury (1)	HNO3 to pH <2
B1BRN0 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BRN1	22	W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BRN1		W			1x20-mL P	Activity Scan	None
B1BRN1		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BRN1		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BV92	23	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BV92		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BV93	24	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BV93		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BV94	25	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
D. P. CONNOLLY	DEC 10 2004 1400	FedEx	
FED EX		Bill Clarke STL	12-11-04 0840

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

LOT# F4110069 SDG# SL429 35 of 277

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-71

Page 2 of 2

SAF No. W05-012

Contact/Requestor DL STEWART

Telephone No. 509-376-5056

MSIN

FAX

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BV94		W	12/8/04	1006	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
D. P. CONNOLLY			DEC 10 2004 1400	FedEX			
Relinquished By			Date/Time	Received By			Date/Time
FEDEX				Jill Clarke STL			12-11-04 0840
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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-107

Collector DURATEK R. R. FOX	Contact/Requester DL STEWART	Telephone No. 509-376-5056 MSIN FAX
SAF No. W05-012	Sampling Origin HANFORD SITE	Purchase Order/Charge Code
Project Title RCRA GW MONITORING, DECEMBER 2004	SAWS 483	Ice Chest No. SAWS 210 Temp.
Shipped To (Lab) Severn Trent St. Louis	Method of Shipment GOVT. VEHICLE	Bill of Lading/Air Bill No. 7908 5577 6959
Protocol RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BRT3 (F)	26	W	12.10.04	1032	1x500-mL G/P	7421_PB_GFAA: Lead (1)	HNO3 to pH <2
B1BRT3 (F)		W			1x500-mL G	7470_HG_CVAA: Mercury (1)	HNO3 to pH <2
B1BRT3 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BRT4	27	W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool 4C
B1BRT4		W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BRT4		W			1x250-mL G/P	9012_CYANIDE: Cyanide (1)	NaOH to pH >= 12 Cool 4C
B1BRT4		W			1x20-mL P	Activity Scan	None
B1BRT4		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BRT4		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVD2	28	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVD2		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVD3	29	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C

Relinquished By (DURATEK R. R. FOX) Print Sign	Date/Time DEC 10 2004 1300	Received By Print Sign (FedEx)	Date/Time
Relinquished By (FED Ex)	Date/Time	Received By (Gil Clarke STL)	Date/Time 12.11.04 08:40
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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-107

Page 2 of 2

SAF No. W05-012

Contact/Requestor DL STEWART

Telephone No. 509-376-5056

MSIN

FAX

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BVD3		W	12.10.04	1032	1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVD4	30	W	↓	↓	1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVD4		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
SUPATER R.R. FOX			DEC 10 2004 1400	FedEx			
Relinquished By	FED Ex		Date/Time	Received By	Jill Clarke	STL	12.11.04 0840
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

LOT# F4I10109

SDG# SL429

38 of 277

PNNL S429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-59

Page 1 of 2

Collector: D.P. CONNOLLY	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: RCRA GW MONITORING, DECEMBER 2004	DTS-SAWS-H84	Ice Chest No.: SML-550 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 7921-5698-0236
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BT37 (F)	31	W	12-10-04	1224	1x500-mL G/P	7060_AS_GFAA: Arsenic (1)	HNO3 to pH <2
B1BT37 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BT38	32	W			3x1000-mL aG	8040_PHENOLIC_GC: List-1 (17)	Residual Chlorine 0.0008%
B1BT38		W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool 4C
B1BT38		W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BT38		W			1x250-mL G/P	9012_CYANIDE: Cyanide (1)	NaOH to pH >= 12 Cool 4C
B1BT38		W			1x20-mL P	Activity Scan	None
B1BT38		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BT38		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVN7	33	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVN7		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVN8	34	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
D.P. CONNOLLY			DEC 10 2004 1400	FedEx			
FedEx				Gil Clarke		STL	12-11-04 08:40

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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-59

Page 2 of 2

SAF No. W05-012

Contact/Requestor DL STEWART

Telephone No. 509-376-5056

MSIN

FAX

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BVN8		W	12-10-04	1224	1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVN9	35	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVN9		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
D. P. CONNOLLY			DEC 10 2004 1400	Fed EX			
Relinquished By			Date/Time	Received By			Date/Time
FEDEX				Jill Clarke STL			12-11-04 08:40
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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-99

Page 1 of 2

Collector: DURATEK L. D. WALL	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code: ~~SAL~~ 12-10-04
Project Title: RCRA GW MONITORING, DECEMBER 2004	Logbook DTS-SAWS-1482	Ice Chest No.: ~~SAW3-08~~ FRC 96-050 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 7908-5558-4360
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BRR7 (F)	34	W	12-10-04	0855	1x500-mL G/P	7421_PB_GFAA: Lead (1)	HNO3 to pH <2
B1BRR7 (F)		W			1x500-mL G	7470_HG_CVAA: Mercury (1)	HNO3 to pH <2
B1BRR7 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BRR8	37	W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool 4C
B1BRR8		W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BRR8		W			1x20-mL P	Activity Scan	None
B1BRR8		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BRR8		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVC6	38	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVC6		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVC7	39	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVC7		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
DURATEK L. D. WALL / L. D. Wall	DEC 10 2004 1300	FED EX	
FED Ex		Jill Clarke STL	12-11-04 08:40

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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-99

Page 2 of 2

SAF No. W05-012

Contact/Requestor DL STEWART

Telephone No. 509-376-5056

MSIN

FAX

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BVC8	40	W	12-10-04	0855	1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVC8		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
DURATEK	L. D. WALL	L.D. Wall	DEC 10 2004 1300	FED EX			
FED Ex				Jill Clarke STL			12-11-04 0840

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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-91

Page 1 of 2

Collector: DURATEK L. D. WALL	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: RCRA GW MONITORING, DECEMBER 2004	Logbook DTS-SAWS-1482	Ice Chest No.: EKC96-050 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 7908-5558-4366
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BRP8 (F)	41	W	12-10-04	0940	1x500-mL G/P	7421_PB_GFAA: Lead (1)	HNO3 to pH <2
B1BRP8 (F)		W			1x500-mL G	7470_HG_CVAA: Mercury (1)	HNO3 to pH <2
B1BRP8 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BRP9	42	W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool 4C
B1BRP9		W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BRP9		W			1x20-mL P	Activity Scan	None
B1BRP9		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BRP9		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVC0	43	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVC0		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVC1	44	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVC1		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
DURATEK L. D. WALL L.D. Wall	DEC 10 2004 1300	FED EX	
FED Ex		Jill Clarke STL	12-11-04 0854

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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-91

Page 2 of 2

SAF No. W05-012 | Contact/Requestor DL STEWART | Telephone No. 509-376-5056 | MSIN | FAX

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BVC2	45	W	12.10.04	0940	1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVC2		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
DURATEK L.D. WALL	L.D. Wall		DEC 10 2004 1300	FED EX			
FED Ex				Jill Clarke STL			12.11.04 0840

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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-51

Collector: D. P. CONNOLLY	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: RCRA GW MONITORING, DECEMBER 2004	DTS-SHWS-HS4	Ice Chest No.: SMC-443 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 7921-5698 0247
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BT31 (F)	46	W	12-10-04	1120	1x500-mL G/P	7060_AS_GFAA: Arsenic (1)	HNO3 to pH <2
B1BT31 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BT32	47	W			3x1000-mL aG	8040_PHENOLIC_GC: List-1 (17)	Residual Chlorine 0.0008%
B1BT32		W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool 4C
B1BT32		W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BT32		W			1x250-mL G/P	9012_CYANIDE: Cyanide (1)	NaOH to pH >= 12 Cool 4C
B1BT32		W			1x20-mL P	Activity Scan	None
B1BT32		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BT32		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVN1	48	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVN1		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVN2	49	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
D. P. CONNOLLY			DEC 10 2004 1400	FedEx			
Relinquished By			Date/Time	Received By			Date/Time
FED EX				Gil Clarke STL			12-11-04 0840
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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-51

Page 2 of 2

SAF No. W05-012

Contact/Requestor DL STEWART

Telephone No. 509-376-5056

MSIN

FAX

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BVN2		W	12-10-04	1120	1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVN3	50	W	↓	↓	1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVN3		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
D. P. CONNOLLY			DEC 10 2004 1400	Fed Ex			
Relinquished By			Date/Time	Received By			Date/Time
FED Ex				Gill Clarke STL			12-11-04 0840
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

PNNL SL429 cer 43446

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-84

Page 1 of 2

Collector: DURATEK F. M. HALL	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056	MSIN / FAX
SAF No.: W05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code	
Project Title: RCRA GW MONITORING, DECEMBER 2004	DTS - SALS H82	Ice Chest No.: ERC 99-056	Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 7914156061 27	
Protocol: RCRA	Priority: 45 Days	Offsite Property No.	

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BRP3 (F)	1	W	12-13-04	0745	1x500-mL G/P	7421_PB_GFAA: Lead (1)	HNO3 to pH <2
B1BRP3 (F)		W			1x500-mL G	7470_HG_CVAA: Mercury (1)	HNO3 to pH <2
B1BRP3 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BRP4	2	W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool 4C
B1BRP4		W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BRP4		W			1x20-mL P	Activity Scan	None
B1BRP4		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BRP4		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVB4	27	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVB4		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVB5	3	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVB5		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
DURATEK F. M. HALL		DEC 13 2004 1400	FED EX		
FED EX				12-14-04	0900

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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-84

Page 2 of 2

SAF No. W05-012 | Contact/Requestor DL STEWART | Telephone No. 509-376-5056 | MSIN | FAX

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BVB6	4	W	12-13-04	0745	1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVB6		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
BURNTEX F. M. HALL		DEC 13 2004	1400	FED Ex			
Relinquished By			Date/Time	Received By			Date/Time
FED Ex							12-14-04 0900
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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-83

Collector: DURATEK F.M.HALL	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: RCRA GW MONITORING, DECEMBER 2004	DTS-SHWS H 82	Ice Chest No.: ERC99-056 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 7914 1560 6127
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BRN9 (F)	5	W	12-13-04	0954	1x500-mL G/P	7421_PB_GFAA: Lead (1)	HNO3 to pH <2
B1BRN9 (F)		W			1x500-mL G	7470_HG_CVAA: Mercury (1)	HNO3 to pH <2
B1BRN9 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BRP0	6	W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool 4C
B1BRP0		W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BRP0		W			1x20-mL P	Activity Scan	None
B1BRP0		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BRP0		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVB1	7	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVB1		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVB2	8	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVB2		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
DURATEK F.M.HALL	DEC 13 2004 1400	FED EX	
FED EX			12-14-04 0900

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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-83

Page 2 of 2

SAF No. W05-012

Contact/Requestor DL STEWART

Telephone No. 509-376-5056

MSIN

FAX

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BVB3	9	W	12-13-04	0954	1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVB3		W	↓	↓	1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C

Relinquished By DYNATEK F. M. HALL	Print / Sign	Date/Time 1400 DEC 13 2004	Received By FED EX / Print / Sign / Date/Time
Relinquished By FEDEX		Date/Time	Received By 12-14-04 0900 / 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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-115

Page 1 of 2

Collector: DURATEK F. M. HALL	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: RCRA GW MONITORING, DECEMBER 2004	DTS - SAWS H 82	Ice Chest No.: SML 382 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 7914156066090
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BRT9 (F)	10	W	12-13-04	1058	1x500-mL G/P	7421_PB_GFAA: Lead (1)	HNO3 to pH <2
B1BRT9 (F)		W			1x500-mL G	7470_HG_CVAA: Mercury (1)	HNO3 to pH <2
B1BRT9 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BRV0	11	W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BRV0		W			1x20-mL P	Activity Scan	None
B1BRV0		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BRV0		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVD8	12	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVD8		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVD9	13	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVD9		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVF0	14	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
DURATEK F. M. HALL	DEC 13 2004 1400	FED EX	
FED EX			12-14-04 0900

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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-115

Page 2 of 2

SAF No.	Contact/Requestor	Telephone No.	MSIN	FAX
W05-012	DL STEWART	509-376-5056		

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BVF0		W	12-13-04	1058	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
DURATEK F. M. HALL			DEC 13 2004 1400	FED EX			
Relinquished By			Date/Time	Received By			Date/Time
FED EX							12-14-04 0900
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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-63

Page 1 of 2

Collector: DURATEK ~~F. M. HALL~~	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: RCRA GW MONITORING, DECEMBER 2004	DTS - SAWS H82	Ice Chest No.: SML 382 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 7914156066090
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BT40 (F)	15	W	12-13-04	1157	1x500-mL G/P	7060_AS_GFAA: Arsenic (1)	HNO3 to pH <2
B1BT40 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BT41	16	W			3x1000-mL aG	8040_PHENOLIC_GC: List-1 (17)	Residual Chlorine 0.0008%
B1BT41		W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool 4C
B1BT41		W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BT41		W			1x250-mL G/P	9012_CYANIDE: Cyanide (1)	NaOH to pH >= 12 Cool 4C
B1BT41		W			1x20-mL P	Activity Scan	None
B1BT41		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BT41		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVP0	17	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVP0		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVP1	18	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
~~DURATEK~~ ~~F. M. HALL~~	DEC 13 2004 1400	FED EX	
FED EX			12-14-04 0900

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	

Relinquished By	Date/Time	Received By	Date/Time

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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-63

Page 2 of 2

SAF No. W05-012 | Contact/Requestor DL STEWART | Telephone No. 509-376-5056 | MSIN | FAX

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BVP1		W	12-13-04	1157	1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVP2	19	W	↓	↓	1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVP2		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
DORATEK F. M. HALL			DEC 13 2004 1400	FED EX			
Relinquished By			Date/Time	Received By			Date/Time
FED EX							021434 0950
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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-135

Page 1 of 2

Collector: R.T. SICKLE	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: RCRA GW MONITORING, DECEMBER 2004	DTS - SAWS HF3	Ice Chest No.: SAWJ-101 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 7914 1531 1676
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BRW4 (F)	20	W	12-13-04	0900	1x500-mL G/P	7421_PB_GFAA: Lead (1)	HNO3 to pH <2
B1BRW4 (F)		W			1x500-mL G	7470_HG_CVAA: Mercury (1)	HNO3 to pH <2
B1BRW4 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BRW5	21	W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BRW5		W			1x20-mL P	Activity Scan	None
B1BRW5		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BRW5		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVH3	22	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVH3		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVH4	23	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVH4		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVH5	24	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
R.T. SICKLE	DEC 13 2004 1400	Fed Ex	
FED EX		12.14.04	0900

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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-135

Page 2 of 2

SAF No. W05-012

Contact/Requestor DL STEWART

Telephone No. 509-376-5056

MSIN

FAX

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BVH5		W	12-13-04	0900	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
R.T. SICKLE			1400 DEC 13 2004	Fed EX			
Relinquished By			Date/Time	Received By			Date/Time
FEDEX							12-14-04 0900
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

60165

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-233

Page 1 of 1

Collector R.T. SICKLE	Contact/Requester DL STEWART	Telephone No. 509-376-5056 MSIN FAX
SAF No. W05-012	Sampling Origin HANFORD SITE	Purchase Order/Charge Code
Project Title RCRA GW MONITORING, DECEMBER 2004	DTS-SAWS-HS3	Ice Chest No. SAWS-101 Temp.
Shipped To (Lab) Severn Trent St. Louis	Method of Shipment GOVT. VEHICLE	Bill of Lading/Air Bill No. 7914 1531 1676
Protocol RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BT96 (F)	25	W	12-13-04	1054	1x500-mL G/P	7060_AS_GFAA: Arsenic (1)	HNO3 to pH <2
B1BT96 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BT97	26	W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool 4C
B1BT97		W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BT97		W			1x20-mL P	Activity Scan	None
B1BT97		W			1x500-mL G/P	120.1_CONDUCT: Conductivity (1)	Cool 4C
B1BT97		W			1x500-mL G/P	160.1_TDS: TDS (1)	Cool 4C

Relinquished By	Received By
Print R.T. SICKLE Sign Date/Time 1405 DEC 13 2004	Print Sign Date/Time Fed Ex
Relinquished By Date/Time	Received By Date/Time 12/14/04 0900
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

PNNL SL429 Cert 43346

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # S05-012-32

Page 1 of 1

Collector: DURATEK F.M. HALL	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: S05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: SURV/LTMC GW MONITORING, DECEMBER 2004	DTS-SAWS H82	Ice Chest No.: SML 382 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 7914156060 90
Protocol: LTMC	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BTV5	1	W	12-13-04	1058	1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool 4C
B1BTV5		W	↓	↓	1x250-mL G/P	9012_CYANIDE: Cyanide (1)	NaOH to pH >= 12 Cool 4C
B1BTV5		W	↓	↓	1x20-mL P	Activity Scan	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
DURATEK F.M. HALL			DEC 13 2004 1400	FED EX			
Relinquished By			Date/Time	Received By			Date/Time
FED EX							12-14-04 0900
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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # S05-012-20

Page 1 of 1

Collector: DURATEK F.M.HALL	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: S05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: SURV/LTMC GW MONITORING, DECEMBER 2004	DTS-SALWS H82	Ice Chest No.: ERC 99-056 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 7914156061 27
Protocol: LTMC	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BTT6	V	W	12-13-04	0954	1x250-mL G/P	9012_CYANIDE: Cyanide (1)	NaOH to pH >= 12 Cool 4C
B1BTT6		W	↓	↓	1x20-mL P	Activity Scan	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
DURATEK F.M.HALL			DEC 13 2004 1400	FED EX			
FED EX							12-14-04 0900

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	

Relinquished By	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time

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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # S05-012-21

Page 1 of 1

Collector: DURATEK F. M. HALL	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: S05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: SURV/LTMC GW MONITORING, DECEMBER 2004	DTS - SALWI H 82	Ice Chest No.: EIC 99-056 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 79141560 6127
Protocol: LTMC	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BTT7	3	W	12-13-04	0745	1x250-mL G/P	9012_CYANIDE: Cyanide (1)	NaOH to pH >= 12 Cool 4C
B1BTT7		W	↓	↓	1x20-mL P	Activity Scan	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
DURATEK F. M. HALL			DEC 13 2004 1400	FED EX			
FED Ex							12.14.04 0900

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

LOT# F4I160169 SDG# SL429 62 OF 277

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # S05-012-48

Page 1 of 1

Collector: R.T. SICKLE	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: S05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: SURV/LTMC GW MONITORING, DECEMBER 2004	DTS-SAWS-HF3	Ice Chest No.: SAWS-101 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 7914 1531 1676
Protocol: LTMC	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BTW3	4	W	12-13-04	0900	1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool 4C
B1BTW3		W	↓	↓	1x250-mL G/P	9012_CYANIDE: Cyanide (1)	NaOH to pH >= 12 Cool 4C
B1BTW3		W	↓	↓	1x20-mL P	Activity Scan	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
R.T. SICKLE			DEC 13 2004 1405	Fed Ex			
Relinquished By			Date/Time	Received By			Date/Time
FED EX							12-14-04 0900
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

Appendix 5

Data Validation Supporting Documentation

INORGANIC ANALYSIS DATA VALIDATION CHECKLIST

ALIDATION LEVEL:	A	B	C	D	E
PROJECT: SURV/LTMC05, RCRA05			DATA PACKAGE: VSR10-023		
VALIDATOR: Carl Schloesslin		LAB: TestAmerica		DATE: 8-10-2010	
			SDG: SL429		
ANALYSES PERFORMED					
SW-846/ICP	SW-846/GFAA X	SW-846/Hg X	SW-846 Cyanide	EPA 200.8 ICP/MS	

SAMPLES/MATRIX

Water samples: B1BRV5, B1BRV2, B1BT16, B1BT01, B1BRR5, B1BRR1, B1BRN3, B1BRN6, B1BRT6, B1BRV8, B1BRP5, B1BRT0, B1BRN0, B1BRT3, B1BT37, B1BRR7, B1BRP8, B1BT31, B1BRP3, B1BRN9, B1BRT9, B1BT40, B1BRW4, B1BT96

Method 6010 not validated per VSR instructions.

1. DATA PACKAGE COMPLETENESS AND CASE NARRATIVE

Technical verification documentation present? ..... Yes (No) N/A

Comments: None

2. INSTRUMENT PERFORMANCE AND CALIBRATIONS (Levels D and E)

Initial calibrations performed on all instruments? ..... Yes No (N/A)

Initial calibrations acceptable? ..... Yes No (N/A)

ICP interference checks acceptable? ..... Yes No (N/A)

ICV and CCV checks performed on all instruments? ..... Yes No (N/A)

ICV and CCV checks acceptable? ..... Yes No (N/A)

Standards traceable? ..... Yes No (N/A)

Standards expired? ..... Yes No (N/A)

Calculation check acceptable? ..... Yes No (N/A)

Comments:

INORGANIC ANALYSIS DATA VALIDATION CHECKLIST

3. BLANKS (Levels B, C, D, and E)

ICB and CCB checks performed for all applicable analyses? (Levels D, E) ..... Yes No N/A

ICB and CCB results acceptable? (Levels D, E) ..... Yes No N/A

Laboratory blanks analyzed? ..... Yes No N/A

Laboratory blank results acceptable? ..... Yes No N/A

Field blanks analyzed? (Levels C, D, E) ..... Yes No N/A

Field blank results acceptable? (Levels C, D, E) ..... Yes No N/A

Transcription/calculation errors? (Levels D, E) ..... Yes No N/A

Comments: None

4. ACCURACY (Levels C, D, and E)

MS/MSD samples analyzed? ..... Yes No N/A

MS/MSD results acceptable? ..... Yes No N/A

MS/MSD standards NIST traceable? (Levels D, E) ..... Yes No N/A

MS/MSD standards expired? (Levels D, E) ..... Yes No N/A

LCS/BSS samples analyzed? ..... Yes No N/A

LCS/BSS results acceptable? ..... Yes No N/A

Standards traceable? (Levels D, E) ..... Yes No N/A

Standards expired? (Levels D, E) ..... Yes No N/A

Transcription/calculation errors? (Levels D, E) ..... Yes No N/A

Performance audit sample(s) analyzed? ..... Yes No N/A

Performance audit sample results acceptable? ..... Yes No N/A

Comments: None

INORGANIC ANALYSIS DATA VALIDATION CHECKLIST

5. PRECISION (Levels C, D, and E)

Duplicate RPD values acceptable? ..... Yes No N/A

Duplicate results acceptable? ..... Yes No N/A

MS/MSD standards NIST traceable? (Levels D, E) ..... Yes No N/A

MS/MSD standards expired? (Levels D, E) ..... Yes No N/A

Field duplicate RPD values acceptable? ..... Yes No N/A

Field split RPD values acceptable? ..... Yes No N/A

Transcription/calculation errors? (Levels D, E) ..... Yes No N/A

Comments: None

6. ICP QUALITY CONTROL (Levels D and E)

ICP serial dilution samples analyzed? ..... Yes No N/A

ICP serial dilution %D values acceptable? ..... Yes No N/A

ICP post digestion spike required? ..... Yes No N/A

ICP post digestion spike values acceptable? ..... Yes No N/A

Standards traceable? ..... Yes No N/A

Standards expired? ..... Yes No N/A

Transcription/calculation errors? ..... Yes No N/A

Comments:

INORGANIC ANALYSIS DATA VALIDATION CHECKLIST

7. FURNACE AA QUALITY CONTROL (Levels D and E)

Duplicate injections performed as required? ..... Yes No N/A

Duplicate injection %RSD values acceptable? ..... Yes No N/A

Analytical spikes performed as required? ..... Yes No N/A

Analytical spike recoveries acceptable? ..... Yes No N/A

Standards traceable? ..... Yes No N/A

Standards expired? ..... Yes No N/A

MSA performed as required? ..... Yes No N/A

MSA results acceptable? ..... Yes No N/A

Transcription/calculation errors? ..... Yes No N/A

Comments:

8. HOLDING TIMES (all levels)

Samples properly preserved? ..... Yes No N/A

Sample holding times acceptable? ..... Yes No N/A

Comments: None

INORGANIC ANALYSIS DATA VALIDATION CHECKLIST

9. RESULT QUANTITATION AND DETECTION LIMITS (all levels)

Results reported for all requested analyses? ..... Yes No N/A

Rresults supported in the raw data? (Levels D, E) ..... Yes No N/A

Samples properly prepared? (Levels D, E) ..... Yes No N/A

Detection limits meet RDL? ..... Yes No N/A

Transcription/calculation errors? (Levels D, E) ..... Yes No N/A

Comments: None

Appendix 6

Additional Documentation Requested By Client

MATRIX SPIKE SAMPLE DATA REPORT

DISSOLVED Metals

Client Lot #...: SL429 **Matrix.....:** WATER
Date Sampled...: 12/09/04 **Date Received..:** 12/10/04

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Vanadium									
	17.4	500	509	ug/L	98		SW846 6010B	12/16-12/17/04	G0P5X1C5
	17.4	500	513	ug/L	99	0.73	SW846 6010B	12/16-12/17/04	G0P5X1C6
			Dilution Factor: 1						
Zinc									
	3.0	500	500	ug/L	99		SW846 6010B	12/16-12/17/04	G0P5X1C7
	3.0	500	515	ug/L	102	3.0	SW846 6010B	12/16-12/17/04	G0P5X1C8
			Dilution Factor: 1						

MS Lot-Sample #: F4L100169-001 **Prep Batch #...:** 4351622

Mercury									
	ND	1.00	1.09	ug/L	109		SW846 7470A	12/16-12/17/04	G0P5X1A1
	ND	1.00	1.08	ug/L	108	0.92	SW846 7470A	12/16-12/17/04	G0P5X1A2
			Dilution Factor: 1						

MS Lot-Sample #: F4L100169-001 **Prep Batch #...:** 4352210

Lead									
	ND	20.0	20.2	ug/L	101		SW846 7421	12/17-12/20/04	G0P5X1DC
	ND	20.0	21.4	ug/L	107	5.9	SW846 7421	12/17-12/20/04	G0P5X1DD
			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 #...: SL429 **Matrix.....:** WATER
Date Sampled...: 12/09/04 **Date Received..:** 12/10/04

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: F4L100169-011 **Prep Batch #...:** 4350060									
Arsenic									
	5.2	40.0	48.6	ug/L	109		SW846 7060	12/15-12/20/04	G0P8X1A0
	5.2	40.0	48.2	ug/L	108	0.77	SW846 7060	12/15-12/20/04	G0P8X1A1
			Dilution Factor: 1						

NOTE(S):

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

METHOD BLANK REPORT

DISSOLVED Metals

Client Lot #...: SL429 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: F4L150000-060 **Prep Batch #...:** 4350060						
Arsenic	ND	10.0	ug/L	SW846 7060	12/15-12/20/04	G03EW1AA
		Dilution Factor: 1				
MB Lot-Sample #: F4L160000-184 **Prep Batch #...:** 4351184						
Aluminum	ND	200	ug/L	SW846 6010B	12/16-12/17/04	G07FN1AA
		Dilution Factor: 1				
Antimony	ND	60.0	ug/L	SW846 6010B	12/16-12/17/04	G07FN1AC
		Dilution Factor: 1				
Barium	ND	200	ug/L	SW846 6010B	12/16-12/17/04	G07FN1AD
		Dilution Factor: 1				
Beryllium	ND	5.0	ug/L	SW846 6010B	12/16-12/17/04	G07FN1AE
		Dilution Factor: 1				
Cadmium	ND	5.0	ug/L	SW846 6010B	12/16-12/17/04	G07FN1AF
		Dilution Factor: 1				
Calcium	ND	5000	ug/L	SW846 6010B	12/16-12/17/04	G07FN1AG
		Dilution Factor: 1				
Chromium	ND	10.0	ug/L	SW846 6010B	12/16-12/17/04	G07FN1AW
		Dilution Factor: 1				
Cobalt	ND	50.0	ug/L	SW846 6010B	12/16-12/17/04	G07FN1AH
		Dilution Factor: 1				
Copper	ND	25.0	ug/L	SW846 6010B	12/16-12/17/04	G07FN1AJ
		Dilution Factor: 1				
Iron	ND	100	ug/L	SW846 6010B	12/16-12/17/04	G07FN1AK
		Dilution Factor: 1				
Magnesium	ND	5000	ug/L	SW846 6010B	12/16-12/17/04	G07FN1AL
		Dilution Factor: 1				
Manganese	ND	15.0	ug/L	SW846 6010B	12/16-12/17/04	G07FN1AM
		Dilution Factor: 1				
Nickel	ND	40.0	ug/L	SW846 6010B	12/16-12/17/04	G07FN1AN
		Dilution Factor: 1				

(Continued on next page)

METHOD BLANK REPORT

DISSOLVED Metals

Client Lot #...: SL429 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Potassium	ND	5000	ug/L	SW846 6010B	12/16-12/17/04	G07FN1AP
		Dilution Factor: 1				
Silver	ND	10.0	ug/L	SW846 6010B	12/16-12/17/04	G07FN1AQ
		Dilution Factor: 1				
Sodium	ND	5000	ug/L	SW846 6010B	12/16-12/17/04	G07FN1AR
		Dilution Factor: 1				
Strontium	ND	50.0	ug/L	SW846 6010B	12/16-12/17/04	G07FN1AT
		Dilution Factor: 1				
Vanadium	ND	20.0	ug/L	SW846 6010B	12/16-12/17/04	G07FN1AU
		Dilution Factor: 1				
Zinc	**1.7 B**	**20.0**	**ug/L**	**SW846 6010B**	**12/16-12/17/04**	**G07FN1AV**
		Dilution Factor: 1				
MB Lot-Sample #: F4L160000-622 **Prep Batch #...:** 4351622						
Mercury	ND	0.20	ug/L	SW846 7470A	12/16-12/17/04	G1AFT1AA
		Dilution Factor: 1				
MB Lot-Sample #: F4L170000-210 **Prep Batch #...:** 4352210						
Lead	ND	3.0	ug/L	SW846 7421	12/17-12/20/04	G1CAM1AA
		Dilution Factor: 1				
MB Lot-Sample #: F4L200000-193 **Prep Batch #...:** 4355193						
Aluminum	**63.0 B**	**200**	**ug/L**	**SW846 6010B**	**12/20-12/21/04**	**G1HE01AA**
		Dilution Factor: 1				
Antimony	ND	60.0	ug/L	SW846 6010B	12/20-12/21/04	G1HE01AC
		Dilution Factor: 1				
Barium	ND	200	ug/L	SW846 6010B	12/20-12/22/04	G1HE01AD
		Dilution Factor: 1				
Beryllium	**0.34 B**	**5.0**	**ug/L**	**SW846 6010B**	**12/20-12/21/04**	**G1HE01AE**
		Dilution Factor: 1				
Cadmium	ND	5.0	ug/L	SW846 6010B	12/20-12/21/04	G1HE01AF
		Dilution Factor: 1				

(Continued on next page)

LABORATORY CONTROL SAMPLE DATA REPORT

DISSOLVED Metals

Client Lot #...: SL429 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: F4L150000-060 **Prep Batch #...:** 4350060							
Arsenic	40.0	42.0	ug/L	105	SW846 7060	12/15-12/20/04	G03EW1AC
			Dilution Factor: 1				
LCS Lot-Sample#: F4L160000-184 **Prep Batch #...:** 4351184							
Aluminum	1000	1070	ug/L	107	SW846 6010B	12/16-12/17/04	G07FN1A0
			Dilution Factor: 1				
Antimony	1000	1010	ug/L	101	SW846 6010B	12/16-12/17/04	G07FN1A1
			Dilution Factor: 1				
Barium	1000	1020	ug/L	102	SW846 6010B	12/16-12/17/04	G07FN1A2
			Dilution Factor: 1				
Beryllium	1000	1020	ug/L	102	SW846 6010B	12/16-12/17/04	G07FN1A3
			Dilution Factor: 1				
Cadmium	1000	982	ug/L	98	SW846 6010B	12/16-12/17/04	G07FN1A4
			Dilution Factor: 1				
Calcium	20000	20300	ug/L	102	SW846 6010B	12/16-12/17/04	G07FN1A5
			Dilution Factor: 1				
Cobalt	1000	983	ug/L	98	SW846 6010B	12/16-12/17/04	G07FN1A6
			Dilution Factor: 1				
Copper	1000	1020	ug/L	102	SW846 6010B	12/16-12/17/04	G07FN1A7
			Dilution Factor: 1				
Iron	1000	1120	ug/L	112	SW846 6010B	12/16-12/17/04	G07FN1A8
			Dilution Factor: 1				
Magnesium	20000	20000	ug/L	100	SW846 6010B	12/16-12/17/04	G07FN1A9
			Dilution Factor: 1				
Manganese	1000	985	ug/L	98	SW846 6010B	12/16-12/17/04	G07FN1CA
			Dilution Factor: 1				
Nickel	1000	999	ug/L	100	SW846 6010B	12/16-12/17/04	G07FN1CC
			Dilution Factor: 1				

(Continued on next page)

LABORATORY CONTROL SAMPLE DATA REPORT

DISSOLVED Metals

Client Lot #...: SL429 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Potassium	20000	19400	ug/L	97	SW846 6010B	12/16-12/17/04	G07FN1CD
			Dilution Factor: 1				
Silver	250	249	ug/L	100	SW846 6010B	12/16-12/17/04	G07FN1CE
			Dilution Factor: 1				
Sodium	20000	20900	ug/L	105	SW846 6010B	12/16-12/17/04	G07FN1CF
			Dilution Factor: 1				
Strontium	1000	1040	ug/L	104	SW846 6010B	12/16-12/17/04	G07FN1CG
			Dilution Factor: 1				
Vanadium	1000	1010	ug/L	101	SW846 6010B	12/16-12/17/04	G07FN1CH
			Dilution Factor: 1				
Zinc	1000	1020	ug/L	102	SW846 6010B	12/16-12/17/04	G07FN1CJ
			Dilution Factor: 1				
Chromium	1000	1010	ug/L	101	SW846 6010B	12/16-12/17/04	G07FN1CK
			Dilution Factor: 1				
LCS Lot-Sample#: F4L160000-622 **Prep Batch #...:** 4351622							
Mercury	1.00	1.13	ug/L	113	SW846 7470A	12/16-12/17/04	G1AFT1AC
			Dilution Factor: 1				
LCS Lot-Sample#: F4L170000-210 **Prep Batch #...:** 4352210							
Lead	40.0	43.8	ug/L	109	SW846 7421	12/17-12/20/04	G1CAM1AC
			Dilution Factor: 1				
LCS Lot-Sample#: F4L200000-193 **Prep Batch #...:** 4355193							
Aluminum	1000	1040	ug/L	104	SW846 6010B	12/20-12/21/04	G1HE01AX
			Dilution Factor: 1				
Antimony	1000	948	ug/L	95	SW846 6010B	12/20-12/21/04	G1HE01A0
			Dilution Factor: 1				
Barium	1000	974	ug/L	97	SW846 6010B	12/20-12/22/04	G1HE01A1
			Dilution Factor: 1				
Beryllium	1000	937	ug/L	94	SW846 6010B	12/20-12/21/04	G1HE01A2
			Dilution Factor: 1				

(Continued on next page)

Date: 10 August 2010
To: CH2M Hill (technical representative)
From: Analytical Quality Associates, Inc.
Project: SURV/LTMC05, RCRA05
Subject: General Chemistry - Sample Data Group (SDG) SL429

INTRODUCTION

This memorandum presents the results of data validation for SDG SL429 prepared by TestAmerica. A list of samples validated along with the analytical methods is provided in the following table.

Sample ID	Sample Date	Media	Validation Level	Analytical Methods
B1BRV6	12/09/2004	Water	C	300.0 (anions), 310.1 (alkalinity), 9020 (TOX), 9060 (TOC)
B1BVF4	12/09/2004	Water	C	9020, 9060
B1BVF5	12/09/2004	Water	C	9020, 9060
B1BVF6	12/09/2004	Water	C	9020, 9060
B1BRV3	12/09/2004	Water	C	310.1, 9020, 9060
B1BVF1	12/09/2004	Water	C	9020, 9060
B1BVF2	12/09/2004	Water	C	9020, 9060
B1BVF3	12/09/2004	Water	C	9020, 9060
B1BT17	12/09/2004	Water	C	300.0, 310.1, 9020, 9060
B1BVL6	12/09/2004	Water	C	9020, 9060
B1BVL7	12/09/2004	Water	C	9020, 9060
B1BVL8	12/09/2004	Water	C	9020, 9060
B1BT02	12/09/2004	Water	C	300.0, 310.1, 9020, 9060
B1BVK1	12/09/2004	Water	C	9020, 9060
B1BVK2	12/09/2004	Water	C	9020, 9060
B1BVK3	12/09/2004	Water	C	9020, 9060
B1BRR6	12/09/2004	Water	C	310.1
B1BRR2	12/09/2004	Water	C	310.1, 9020, 9060
B1BVC3	12/09/2004	Water	C	9020, 9060
B1BVC4	12/09/2004	Water	C	9020, 9060
B1BVC5	12/09/2004	Water	C	9020, 9060
B1BRN4	12/09/2004	Water	C	300.0, 310.1, 9020, 9060
B1BV95	12/09/2004	Water	C	9020, 9060
B1BV96	12/09/2004	Water	C	9020, 9060
B1BV97	12/09/2004	Water	C	9020, 9060
B1BRN7	12/09/2004	Water	C	300.0, 310.1, 9020, 9060
B1BV98	12/09/2004	Water	C	9020, 9060
B1BV99	12/09/2004	Water	C	9020, 9060
B1BVB0	12/09/2004	Water	C	9020, 9060
B1BRT7	12/10/2004	Water	C	300.0, 310.1, 9020, 9060
B1BVD5	12/10/2004	Water	C	9020, 9060

Sample ID	Sample Date	Media	Validation Level	Analytical Methods
B1BVD6	12/10/2004	Water	C	9020, 9060
B1BVD7	12/10/2004	Water	C	9020, 9060
B1BRV9	12/10/2004	Water	C	300.0, 310.1, 9020, 9060
B1BVF7	12/10/2004	Water	C	9020, 9060
B1BVF8	12/10/2004	Water	C	9020, 9060
B1BVF9	12/10/2004	Water	C	9020, 9060
B1BRP6	12/10/2004	Water	C	300.0, 310.1, 9020, 9060
B1BVB7	12/10/2004	Water	C	9020, 9060
B1BVB8	12/10/2004	Water	C	9020, 9060
B1BVB9	12/10/2004	Water	C	9020, 9060
B1BRT1	12/10/2004	Water	C	310.1, 9012 (CN), 9020, 9060
B1BVC9	12/10/2004	Water	C	9020, 9060
B1BVD0	12/10/2004	Water	C	9020, 9060
B1BVD1	12/10/2004	Water	C	9020, 9060
B1BRN1	12/10/2004	Water	C	310.1, 9020, 9060
B1BV92	12/10/2004	Water	C	9020, 9060
B1BV93	12/10/2004	Water	C	9020, 9060
B1BV94	12/10/2004	Water	C	9020, 9060
B1BRT4	12/10/2004	Water	C	300.0, 310.1, 9012, 9020, 9060
B1BVD2	12/10/2004	Water	C	9020, 9060
B1BVD3	12/10/2004	Water	C	9020, 9060
B1BVD4	12/10/2004	Water	C	9020, 9060
B1BT38	12/10/2004	Water	C	300.0, 310.1, 9012, 9020, 9060
B1BVN7	12/10/2004	Water	C	9020, 9060
B1BVN8	12/10/2004	Water	C	9020, 9060
B1BVN9	12/10/2004	Water	C	9020, 9060
B1BRR8	12/10/2004	Water	C	300.0, 310.1, 9020, 9060
B1BVC6	12/10/2004	Water	C	9020, 9060
B1BVC7	12/10/2004	Water	C	9020, 9060
B1BVC8	12/10/2004	Water	C	9020, 9060
B1BRP9	12/10/2004	Water	C	300.0, 310.1, 9020, 9060
B1BVC0	12/10/2004	Water	C	9020, 9060
B1BVC1	12/10/2004	Water	C	9020, 9060
B1BVC2	12/10/2004	Water	C	9020, 9060
B1BT32	12/10/2004	Water	C	300.0, 310.1, 9012, 9020, 9060
B1BVN1	12/10/2004	Water	C	9020, 9060
B1BVN2	12/10/2004	Water	C	9020, 9060
B1BVN3	12/10/2004	Water	C	9020, 9060
B1BRP4	12/13/2004	Water	C	300.0, 310.1, 9020, 9060
B1BVB5	12/13/2004	Water	C	9020, 9060
B1BVB6	12/13/2004	Water	C	9020, 9060
B1BRP0	12/13/2004	Water	C	300.0, 310.1, 9020, 9060
B1BVB1	12/13/2004	Water	C	9020, 9060
B1BVB2	12/13/2004	Water	C	9020, 9060

Sample ID	Sample Date	Media	Validation Level	Analytical Methods
B1BVB3	12/13/2004	Water	C	9020, 9060
B1BRV0	12/13/2004	Water	C	310.1, 9020, 9060
B1BVD8	12/13/2004	Water	C	9020, 9060
B1BVD9	12/13/2004	Water	C	9020, 9060
B1BVF0	12/13/2004	Water	C	9020, 9060
B1BT41	12/13/2004	Water	C	300.0, 310.1, 9012, 9020, 9060
B1BVP0	12/13/2004	Water	C	9020, 9060
B1BVP1	12/13/2004	Water	C	9020, 9060
B1BVP2	12/13/2004	Water	C	9020, 9060
B1BRW5	12/13/2004	Water	C	310.1, 9020, 9060
B1BVH3	12/13/2004	Water	C	9020, 9060
B1BVH4	12/13/2004	Water	C	9020, 9060
B1BVH5	12/13/2004	Water	C	9020, 9060
B1BT97	12/13/2004	Water	C	120.1 (conductivity), 160.1 (TDS), 300.0, 310.1
B1BVB4	12/13/2004	Water	C	9020, 9060
B1BTV5	12/13/2004	Water	C	300.0, 9012
B1BTT6	12/13/2004	Water	C	9012
B1BTT7	12/13/2004	Water	C	9012
B1BTW3	12/13/2004	Water	C	300.0, 9012

Data validation was conducted in accordance with the CHPRC validation statement of work and the Remedial Investigation/Feasibility Study Work Plan for the 200-BP-5 Groundwater Operable Unit, DOE/RL-2007-18, Rev. 1 (SAP). Appendices 1 through 6 provide the following information as indicated below:

Appendix 1. Glossary of Data Reporting Qualifiers
Appendix 2. Summary of Data Qualification
Appendix 3. Annotated Laboratory Reports
Appendix 4. Laboratory Narrative and Chain-of-Custody Documentation
Appendix 5. Data Validation Supporting Documentation
Appendix 6. Additional Documentation Requested By Client

DATA QUALITY OBJECTIVES

- **Holding Times and Sample Preservation**

Holding times are calculated from Chain-of-Custody forms to determine the validity of the results. The holding time requirements are as follows:

- All anions except nitrate, nitrite, and phosphate – analysis within 28 days of sample collection
- Nitrate, nitrite, and phosphate – analysis within 48 hours of sample collection
- Alkalinity – analysis within 14 days of sample collection
- Conductivity – analysis within 28 days of sample collection

- Cyanide – analysis within 14 days of sample collection
- Total dissolved solids (TDS) – analysis within 7 days of sample collection
- Total organic carbon (TOC) – analysis within 28 days of sample collection
- Total organic halides (TOX) – analysis within 28 days of sample collection

Sample preservation for the above analyses requires chilling to 4 degrees Celsius. In addition, ammonia, TOC and TOX are brought to pH<2 with sulfuric acid, and cyanide is brought to pH>12 with sodium hydroxide.

The samples were analyzed within the prescribed holding times and properly preserved with the following exceptions.

For cyanide reanalysis batch 5167123, samples B1BTW3, B1BTV5, B1BTT6, B1BRT4 and B1BRT1 were analyzed beyond 2X the holding time. The cyanide results for samples B1BTW3, B1BTV5, B1BRT4 and B1BRT1 were non-detects and should be qualified as unusable and flagged "UR." The cyanide result for sample B1BTT6 was a detect and should be qualified as an estimate and flagged "J."

- **Blanks**

The blank data results are reviewed to assess the extent of contamination introduced through sampling, sample preparation, and analysis.

Laboratory Blanks

All laboratory blank results were acceptable with the following exceptions.

For batches 4346026 and 4348541 the chloride laboratory blank results were > the method detection limit, and for batch 4348545 the sulfate laboratory blank result was > the method detection limit. All associated sample results were detects >5X the blank results and should not be qualified.

Trip Blanks

All trip blank results were acceptable with the following exceptions. TOC was detected in trip blanks B1BRP4, B1BVB4, B1BVB5 and B1BVB6, and TOX was detected in trip blank B1BVB4.

Field Blanks

No field blanks were submitted for analysis.

Equipment Blanks

No equipment blanks were submitted for analysis.

- **Accuracy**

Accuracy is evaluated by reviewing matrix spike sample results and laboratory control sample results. According to the SAP, the matrix spike sample accuracy limits are 70% to 130%. The laboratory control sample accuracy limits are ones specified by the DV procedure. The limits for reported analytes not listed in the SAP are specified by the DV procedure.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Samples

All MS/MSD recoveries were acceptable with the following exceptions.

For batch 4351381, the MS recovery for cyanide was <30%. The cyanide results for samples B1BRT1, B1BRT4, B1BT38 and B1BT32 were non-detects and should be qualified as unusable and flagged "UR."

For cyanide reanalysis batch 5167123 no MS was performed. The cyanide results for samples B1BTW3, B1BTV5, B1BRT4 and B1BRT1 were non-detects and would be qualified as estimates and flagged "UJ," but have been further qualified as unusable and flagged "UR" due to severe holding time infractions. The cyanide result for sample B1BTT6 was a detect and should be qualified as an estimate and flagged "J."

It should be noted that for anions batches 4350142 to 4350146, TOC batch 4353081, and TOX batch 4364310, trip blank sample B1BRP4 was used as the parent sample for the matrix spikes.

Laboratory Control Samples (LCSs)

All LCS recoveries were acceptable.

- **Precision**

Precision is evaluated by reviewing MS/MSD results, laboratory duplicate sample results, field duplicate sample results, and field split sample results. These QC results provide information on the laboratory reproducibility and whether sampling activities are adequate to acquire consistent sample results. According to the SAP, the relative percent difference (RPD) limits are ±30%. The RPD limits for reported analytes not listed in the SAP are specified by the DV procedure. When duplicate RPDs exceed the limits and have associated results <5X the SAP required detection limits (or <5X the laboratory required detection limits for analytes not listed in the SAP) with differences <1X the required detection limits no precision infraction occurred.

MS/MSD Samples

All MS/MSD RPD values were acceptable.

Laboratory Duplicate Samples

All laboratory duplicate results were acceptable with the following exceptions.

For batches 4355091 and 4356570, the laboratory duplicates and their parent samples had TOX differences > the laboratory reporting limit. All associated sample results should be qualified as estimates and flagged "UJ" for non-detects and "J" for detects. See the table in Appendix 2 for a listing of all affected sample results.

It should be noted that for anions batches 4350142 to 4350146, TOC batch 4353081, and TOX batch 4364310, trip blank sample B1BRP4 was used as the parent sample for the laboratory duplicates.

Field Duplicate Samples

All field duplicate results were acceptable.

Field Split Samples

No field splits were submitted for analysis.

- **Detection Limits**

Reported MDLs are compared against the contractually required detection limits (CRDLs) to ensure that laboratory detection limits meet the required criteria.

All reported sample MDLs were below the CRDLs. It should be noted that CRDLs for fluoride, phosphate, TOC and TOX were not provided in the SAP.

- **Completeness**

SDG SL429 was submitted for validation and verified for completeness. Completeness is based on the percentage of data determined to be valid (i.e., not rejected). The completion percentage for cyanide was 47%. The completion percentages for all remaining analyses were 100%.

MAJOR DEFICIENCIES

Major deficiencies leading to qualification of cyanide sample results as unusable were due to holding time infractions and a very low MS recovery infraction. See the table in Appendix 2 for a listing of all affected sample results.

MINOR DEFICIENCIES

Multiple minor deficiencies leading to qualification of sample results as estimates occurred. See the table in Appendix 2 for a listing of all affected sample results.

REFERENCES

HNF-20433, Rev. 0, *Data Validation Procedure for Chemical Analyses*, June 2004.

DOE/RL-2007-18, Rev. 1, *Remedial Investigation/Feasibility Study Work Plan for the 200-BP-5 Groundwater Operable Unit*, December 2008.

Appendix 1

Glossary of Data Reporting Qualifiers

Qualifiers that may be applied by data validators in compliance with the CHPRC statement of work are as follows:

- **U** ─ The constituent was analyzed for and was not detected. The data should be considered usable for decision-making purposes.

- **UJ** ─ The constituent was analyzed for and was not detected. Due to a quality control deficiency identified during data validation the value reported may not accurately reflect the MDL. The data should be considered usable for decision-making purposes.

- **J** ─ Indicates the constituent was analyzed for and detected. The associated value is estimated due to a quality control deficiency identified during data validation. The data should be considered usable for decision-making purposes.

- **UR** ─ Indicates the constituent was analyzed for and not detected; however, due to an identified quality control deficiency the data should be considered unusable for decision-making purposes.

- **R** ─ Indicates the constituent was analyzed for and detected; however, due to an identified quality control deficiency the data should be considered unusable for decision-making purposes.

Appendix 2

Summary of Data Qualification

General Chemistry Data Qualification Summary			
SDG: SL429	Reviewer: AQA	Project: SURV/LTMC05, RCRA05	Page 1 of 1
Analyte(s)	**Qualifier**	**Samples Affected**	**Reason**
Cyanide	**UR**	B1BTW3, B1BTV5, B1BRT4, B1BRT1 (reanalysis)	Analysis beyond 2X the holding time and lack of MS data
Cyanide	J	B1BTT6 (reanalysis)	Analysis beyond 2X the holding time and lack of MS data
Cyanide	**UR**	B1BRT1, B1BRT4, B1BT38, B1BT32	Very low MS recovery
TOX	UJ	B1BRW5	Poor laboratory duplicate precision
TOX	J	BIBRV6, BIBVF4, BIBVF5, BIBRV3, B1BVF1, B1BVF3, B1BT02, B1BVK1, B1BVK2, B1BVK3, B1BRR2, B1BVH3, B1BVH4, B1BVH5, B1BVB4	Poor laboratory duplicate precision

Comments: None

Appendix 3

Annotated Laboratory Reports

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BRV6

General Chemistry

Lot-Sample #...: F4L100169-002 Work Order #...: G0P7D Matrix.....: WATER
Date Sampled...: 12/09/04 Date Received..: 12/10/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride	15.5 C,D	2.0	mg/L	MCAWW 300.0A	12/10/04	4346026
		Dilution Factor: 10		MDL.....: 0.43		
Fluoride	0.33	0.10	mg/L	MCAWW 300.0A	12/10/04	4346027
		Dilution Factor: 1		MDL.....: 0.010		
Nitrate	6.5 D	0.20	mg/L	MCAWW 300.0A	12/10/04	4346028
		Dilution Factor: 10		MDL.....: 0.040		
Nitrite	ND	0.020	mg/L	MCAWW 300.0A	12/10/04	4346029
		Dilution Factor: 1		MDL.....: 0.0040		
Sulfate	71.8 D	5.0	mg/L	MCAWW 300.0A	12/10/04	4346030
		Dilution Factor: 10		MDL.....: 0.37		
Total Alkalinity	110	5.0	mg/L	MCAWW 310.1	12/16-12/20/04	4352481
		Dilution Factor: 1		MDL.....: 1.8		
Total Organic Carbon	0.91 B	1.0	mg/L	SW846 9060	12/16-12/18/04	4351511
		Dilution Factor: 1		MDL.....: 0.43		
TOX J	5.2	5.0	ug/L	SW846 9020B	12/17/04	4355091
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

C Method blank contamination. The associated method blank contains the target analyte at a reportable level.

D Result was obtained from the analysis of a dilution.

B Estimated result. Result is less than RL.

LS
8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BVF4

General Chemistry

Lot-Sample #...: F4L100169-003 Work Order #...: G0P7G Matrix.....: WATER
Date Sampled...: 12/09/04 Date Received..: 12/10/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	0.65 B	1.0	mg/L	SW846 9060	12/16-12/18/04	4351511
		Dilution Factor: 1		MDL.....: 0.43		
TOX J	14.0	5.0	ug/L	SW846 9020B	12/17/04	4355091
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

LS
8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BVF5

General Chemistry

Lot-Sample #...: F4L100169-004 **Work Order #...:** G0P7K **Matrix.....:** WATER
Date Sampled...: 12/09/04 **Date Received..:** 12/10/04

PARAMETER		RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon		0.57 B	1.0	mg/L	SW846 9060	12/16-12/18/04	4351511
			Dilution Factor: 1		MDL.....: 0.43		
TOX	J	3.6 B	5.0	ug/L	SW846 9020B	12/18/04	4355092
			Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

LS
8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BVF6

General Chemistry

Lot-Sample #...: F4L100169-005 **Work Order #...:** G0P7N **Matrix.....:** WATER
Date Sampled...: 12/09/04 **Date Received..:** 12/10/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	0.54 B	1.0	mg/L	SW846 9060	12/16/04	4351511
		Dilution Factor: 1		MDL.....: 0.43		
TOX	5.2	5.0	ug/L	SW846 9020B	12/17/04	4355091
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BRV3

General Chemistry

Lot-Sample #...: F4L100169-007 **Work Order #...:** G0P8P **Matrix.....:** WATER
Date Sampled...: 12/09/04 **Date Received..:** 12/10/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Alkalinity	114	5.0	mg/L	MCAWW 310.1	12/16-12/20/04	4352481
		Dilution Factor: 1		MDL.....: 1.8		
Total Organic Carbon	0.54 B	1.0	mg/L	SW846 9060	12/16/04	4351511
		Dilution Factor: 1		MDL.....: 0.43		
TOX J	8.4	5.0	ug/L	SW846 9020B	12/17/04	4355091
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

LS
8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BVF1

General Chemistry

Lot-Sample #...: F4L100169-008 **Work Order #...:** G0P8T **Matrix.....:** WATER
Date Sampled...: 12/09/04 **Date Received..:** 12/10/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	0.53 B	1.0	mg/L	SW846 9060	12/16/04	4351511
		Dilution Factor: 1		MDL.....: 0.43		
TOX J	15.0	5.0	ug/L	SW846 9020B	12/17/04	4355091
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

LS
8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BVF2

General Chemistry

Lot-Sample #...: F4L100169-009 **Work Order #...:** G0P8V **Matrix.....:** WATER
Date Sampled...: 12/09/04 **Date Received..:** 12/10/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	**0.58 B**	**1.0**	**mg/L**	**SW846 9060**	**12/16/04**	**4351511**
		Dilution Factor: 1		MDL.....: 0.43		
TOX	ND	5.0	ug/L	SW846 9020B	12/22-12/29/04	4364378
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BVF3

General Chemistry

Lot-Sample #...: F4L100169-010 Work Order #...: G0P8W Matrix.....: WATER
Date Sampled...: 12/09/04 Date Received..: 12/10/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	0.98 B	1.0	mg/L	SW846 9060	12/16/04	4351511
		Dilution Factor: 1		MDL.....: 0.43		
TOX J	29.8	5.0	ug/L	SW846 9020B	12/17/04	4355091
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

LS
8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BT17

General Chemistry

Lot-Sample #...: F4L100169-012 Work Order #...: G0P93 Matrix.....: WATER
Date Sampled...: 12/09/04 Date Received..: 12/10/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride	18.0 C,D	4.0	mg/L	MCAWW 300.0A	12/10/04	4346026
		Dilution Factor: 20		MDL.....: 0.87		
Fluoride	0.22	0.10	mg/L	MCAWW 300.0A	12/10/04	4346027
		Dilution Factor: 1		MDL.....: 0.010		
Nitrate	7.8 D	0.40	mg/L	MCAWW 300.0A	12/10/04	4346028
		Dilution Factor: 20		MDL.....: 0.079		
Nitrite	0.16	0.020	mg/L	MCAWW 300.0A	12/10/04	4346029
		Dilution Factor: 1		MDL.....: 0.0040		
Sulfate	82.7 D	10.0	mg/L	MCAWW 300.0A	12/10/04	4346030
		Dilution Factor: 20		MDL.....: 0.75		
Total Alkalinity	88.0	5.0	mg/L	MCAWW 310.1	12/16-12/20/04	4352481
		Dilution Factor: 1		MDL.....: 1.8		
Total Organic Carbon	0.86 B	1.0	mg/L	SW846 9060	12/16/04	4351512
		Dilution Factor: 1		MDL.....: 0.43		
TOX	6.6	5.0	ug/L	SW846 9020B	12/18/04	4355092
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

C Method blank contamination. The associated method blank contains the target analyte at a reportable level.

D Result was obtained from the analysis of a dilution.

B Estimated result. Result is less than RL.

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BVL6

General Chemistry

Lot-Sample #...: F4L100169-013 **Work Order #...:** G0QAA **Matrix.....:** WATER
Date Sampled...: 12/09/04 **Date Received..:** 12/10/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	**0.77 B**	**1.0**	**mg/L**	**SW846 9060**	**12/16/04**	**4351512**
		Dilution Factor: 1		MDL.....: 0.43		
TOX	**4.2 B**	**5.0**	**ug/L**	**SW846 9020B**	**12/18/04**	**4355092**
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BVL7

General Chemistry

Lot-Sample #...: F4L100169-014 **Work Order #...:** G0QAD **Matrix.....:** WATER
Date Sampled...: 12/09/04 **Date Received..:** 12/10/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	0.84 B	1.0	mg/L	SW846 9060	12/16/04	4351512
		Dilution Factor: 1		MDL.....: 0.43		
TOX	4.6 B	5.0	ug/L	SW846 9020B	12/18/04	4355092
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BVL8

General Chemistry

Lot-Sample #...: F4L100169-015 **Work Order #...:** G0QAE **Matrix.....:** WATER
Date Sampled...: 12/09/04 **Date Received..:** 12/10/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	0.86 B	1.0	mg/L	SW846 9060	12/16/04	4351512
		Dilution Factor: 1		MDL.....: 0.43		
TOX	6.0	5.0	ug/L	SW846 9020B	12/18/04	4355092
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BT02

General Chemistry

Lot-Sample #...: F4L100169-017 **Work Order #...:** G0QC1 **Matrix.....:** WATER
Date Sampled...: 12/09/04 **Date Received..:** 12/10/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride	**15.8 C,D**	**2.0**	**mg/L**	**MCAWW 300.0A**	**12/10/04**	**4346026**
		Dilution Factor: 10		MDL.....: 0.43		
Fluoride	**0.17**	**0.10**	**mg/L**	**MCAWW 300.0A**	**12/10/04**	**4346027**
		Dilution Factor: 1		MDL.....: 0.010		
Nitrate	**2.6 D**	**0.20**	**mg/L**	**MCAWW 300.0A**	**12/10/04**	**4346028**
		Dilution Factor: 10		MDL.....: 0.040		
Nitrite	ND	0.020	mg/L	MCAWW 300.0A	12/10/04	4346029
		Dilution Factor: 1		MDL.....: 0.0040		
Sulfate	**63.8 D**	**5.0**	**mg/L**	**MCAWW 300.0A**	**12/10/04**	**4346030**
		Dilution Factor: 10		MDL.....: 0.37		
Total Alkalinity	**93.0**	**5.0**	**mg/L**	**MCAWW 310.1**	**12/21/04**	**4355446**
		Dilution Factor: 1		MDL.....: 1.8		
Total Organic Carbon	**0.68 B**	**1.0**	**mg/L**	**SW846 9060**	**12/16/04**	**4351512**
		Dilution Factor: 1		MDL.....: 0.43		
TOX J	**9.0**	**5.0**	**ug/L**	**SW846 9020B**	**12/20/04**	**4356570**
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

C Method blank contamination. The associated method blank contains the target analyte at a reportable level.

D Result was obtained from the analysis of a dilution.

B Estimated result. Result is less than RL.

LS
8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BVK1

General Chemistry

Lot-Sample #...: F4L100169-018 Work Order #...: G0QDL Matrix.....: WATER
Date Sampled...: 12/09/04 Date Received..: 12/10/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	0.72 B	1.0	mg/L	SW846 9060	12/16/04	4351512
		Dilution Factor: 1		MDL.....: 0.43		
TOX J	8.0	5.0	ug/L	SW846 9020B	12/20/04	4356570
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

LS
8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BVK2

General Chemistry

Lot-Sample #...: F4L100169-019 Work Order #...: G0QDR Matrix.....: WATER
Date Sampled...: 12/09/04 Date Received..: 12/10/04

PARAMETER		RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon		0.71 B	1.0	mg/L	SW846 9060	12/18-12/20/04	4353079
			Dilution Factor: 1		MDL.....: 0.43		
TOX	J	7.5	5.0	ug/L	SW846 9020B	12/20/04	4356570
			Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

LS
8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BVK3

General Chemistry

Lot-Sample #...: F4L100169-020 **Work Order #...:** G0QET **Matrix.....:** WATER
Date Sampled...: 12/09/04 **Date Received..:** 12/10/04

PARAMETER		RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon		0.59 B	1.0	mg/L	SW846 9060	12/18-12/20/04	4353079
			Dilution Factor: 1		MDL.....: 0.43		
TOX	J	7.7	5.0	ug/L	SW846 9020B	12/20/04	4356570
			Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

LS
8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BRR6

General Chemistry

Lot-Sample #...: F4L100169-022 **Work Order #...:** G0QFC **Matrix.....:** WATER
Date Sampled...: 12/09/04 **Date Received..:** 12/10/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Alkalinity	**116**	**5.0**	**mg/L**	**MCAWW 310.1**	**12/21/04**	**4355446**

Dilution Factor: 1 MDL.....: 1.8

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BRR2

General Chemistry

Lot-Sample #...: F4L100169-024 Work Order #...: G0QF6 Matrix.....: WATER
Date Sampled...: 12/09/04 Date Received..: 12/10/04

PARAMETER		RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Alkalinity		117	5.0	mg/L	MCAWW 310.1	12/21/04	4355446
			Dilution Factor: 1		MDL.....: 1.8		
Total Organic Carbon		0.43 B	1.0	mg/L	SW846 9060	12/18-12/20/04	4353079
			Dilution Factor: 1		MDL.....: 0.43		
TOX	J	8.2	5.0	ug/L	SW846 9020B	12/20/04	4356570
			Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

LS
8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BVC3

General Chemistry

Lot-Sample #...: F4L100169-025 **Work Order #...:** G0QH8 **Matrix.....:** WATER
Date Sampled...: 12/09/04 **Date Received..:** 12/10/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	ND	1.0	mg/L	SW846 9060	12/18-12/20/04	4353079
		Dilution Factor: 1		MDL.....: 0.43		
TOX	ND	5.0	ug/L	SW846 9020B	12/21-12/29/04	4364310
		Dilution Factor: 1		MDL.....: 3.2		

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BVC4

General Chemistry

Lot-Sample #...: F4L100169-026 **Work Order #...:** G0QJC **Matrix.....:** WATER
Date Sampled...: 12/09/04 **Date Received..:** 12/10/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	**0.94 B**	**1.0**	**mg/L**	**SW846 9060**	**12/18-12/20/04**	**4353079**
		Dilution Factor: 1		MDL.....: 0.43		
TOX	ND	5.0	ug/L	SW846 9020B	12/22-12/29/04	4364378
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BVC5

General Chemistry

Lot-Sample #...: F4L100169-027 **Work Order #...:** G0QJJ **Matrix.....:** WATER
Date Sampled...: 12/09/04 **Date Received..:** 12/10/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	ND	1.0	mg/L	SW846 9060	12/18-12/20/04	4353079
		Dilution Factor: 1		MDL.....: 0.43		
TOX	ND	5.0	ug/L	SW846 9020B	12/21-12/29/04	4364310
		Dilution Factor: 1		MDL.....: 3.2		

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BRN4

General Chemistry

Lot-Sample #...: F4L100169-029 **Work Order #...:** G0QJN **Matrix.....:** WATER
Date Sampled...: 12/09/04 **Date Received..:** 12/10/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Alkalinity	**122**	**5.0**	**mg/L**	**MCAWW 310.1**	**12/21/04**	**4355446**
		Dilution Factor: 1		MDL.....: 1.8		
Total Organic Carbon	**1.0**	**1.0**	**mg/L**	**SW846 9060**	**12/18-12/20/04**	**4353079**
		Dilution Factor: 1		MDL.....: 0.43		
TOX	ND	5.0	ug/L	SW846 9020B	12/21-12/29/04	4364310
		Dilution Factor: 1		MDL.....: 3.2		

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BV95

General Chemistry

Lot-Sample #...: F4L100169-030 **Work Order #...:** G0QR3 **Matrix.....:** WATER
Date Sampled...: 12/09/04 **Date Received..:** 12/10/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	**0.50 B**	**1.0**	**mg/L**	**SW846 9060**	**12/18-12/20/04**	**4353079**
		Dilution Factor: 1		MDL.....: 0.43		
TOX	ND	5.0	ug/L	SW846 9020B	12/21-12/29/04	4364310
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BV96

General Chemistry

Lot-Sample #...: F4L100169-031 **Work Order #...:** G0QR7 **Matrix.....:** WATER
Date Sampled...: 12/09/04 **Date Received..:** 12/10/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	ND	1.0	mg/L	SW846 9060	12/18-12/20/04	4353079
		Dilution Factor: 1		MDL.....: 0.43		
TOX	ND	5.0	ug/L	SW846 9020B	12/22-12/29/04	4364378
		Dilution Factor: 1		MDL.....: 3.2		

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BV97

General Chemistry

Lot-Sample #...: F4L100169-032 **Work Order #...:** G0QR9 **Matrix.....:** WATER
Date Sampled...: 12/09/04 **Date Received..:** 12/10/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	**0.49 B**	**1.0**	**mg/L**	**SW846 9060**	**12/18-12/20/04**	**4353079**
		Dilution Factor: 1		MDL.....: 0.43		
TOX	ND	5.0	ug/L	SW846 9020B	12/22-12/29/04	4364378
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BRN7

General Chemistry

Lot-Sample #...: F4L100169-034 **Work Order #...:** G0QTD **Matrix.....:** WATER
Date Sampled...: 12/09/04 **Date Received..:** 12/10/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride	**11.6 C,D**	**4.0**	**mg/L**	**MCAWW 300.0A**	**12/10/04**	**4346026**
		Dilution Factor: 20		MDL.....: 0.87		
Fluoride	**0.46**	**0.10**	**mg/L**	**MCAWW 300.0A**	**12/10/04**	**4346027**
		Dilution Factor: 1		MDL.....: 0.010		
Nitrate	**9.7 D**	**0.40**	**mg/L**	**MCAWW 300.0A**	**12/10/04**	**4346028**
		Dilution Factor: 20		MDL.....: 0.079		
Nitrite	ND	0.020	mg/L	MCAWW 300.0A	12/10/04	4346029
		Dilution Factor: 1		MDL.....: 0.0040		
Sulfate	**44.2 D**	**10.0**	**mg/L**	**MCAWW 300.0A**	**12/10/04**	**4346030**
		Dilution Factor: 20		MDL.....: 0.75		
Total Alkalinity	**118**	**5.0**	**mg/L**	**MCAWW 310.1**	**12/21/04**	**4355446**
		Dilution Factor: 1		MDL.....: 1.8		
Total Organic Carbon	**0.70 B**	**1.0**	**mg/L**	**SW846 9060**	**12/18-12/20/04**	**4353079**
		Dilution Factor: 1		MDL.....: 0.43		
TOX	ND	5.0	ug/L	SW846 9020B	12/22-12/29/04	4364378
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

C Method blank contamination. The associated method blank contains the target analyte at a reportable level.

D Result was obtained from the analysis of a dilution.

B Estimated result. Result is less than RL.

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BV98

General Chemistry

Lot-Sample #...: F4L100169-035 **Work Order #...:** G0QTH **Matrix.....:** WATER
Date Sampled...: 12/09/04 **Date Received..:** 12/10/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	**0.50 B**	**1.0**	**mg/L**	**SW846 9060**	**12/18-12/20/04**	**4353079**
		Dilution Factor: 1		MDL.....: 0.43		
TOX	ND	5.0	ug/L	SW846 9020B	12/22-12/29/04	4364378
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BV99

General Chemistry

Lot-Sample #...: F4L100169-036 **Work Order #...:** G0QT7 **Matrix.....:** WATER
Date Sampled...: 12/09/04 **Date Received..:** 12/10/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	ND	1.0	mg/L	SW846 9060	12/18-12/20/04	4353079
		Dilution Factor: 1		MDL.....: 0.43		
TOX	ND	5.0	ug/L	SW846 9020B	12/22-12/29/04	4364378
		Dilution Factor: 1		MDL.....: 3.2		

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BVB0

General Chemistry

Lot-Sample #...: F4L100169-037 **Work Order #...:** G0QT8 **Matrix.....:** WATER
Date Sampled...: 12/09/04 **Date Received..:** 12/10/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	**0.43 B**	**1.0**	**mg/L**	**SW846 9060**	**12/18-12/20/04**	**4353079**
		Dilution Factor: 1		MDL.....: 0.43		
TOX	ND	5.0	ug/L	SW846 9020B	12/22-12/29/04	4364378
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BRT7

General Chemistry

Lot-Sample #...: F4L130171-002 **Work Order #...:** G0W66 **Matrix.....:** WATER
Date Sampled...: 12/10/04 **Date Received..:** 12/11/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride	**14.5 C,D**	**2.0**	**mg/L**	**MCAWW 300.0A**	**12/11/04**	**4348541**
		Dilution Factor: 10		MDL.....: 0.43		
Fluoride	**0.34**	**0.10**	**mg/L**	**MCAWW 300.0A**	**12/11/04**	**4348542**
		Dilution Factor: 1		MDL.....: 0.010		
Nitrate	**6.9 D**	**0.20**	**mg/L**	**MCAWW 300.0A**	**12/11/04**	**4348543**
		Dilution Factor: 10		MDL.....: 0.040		
Nitrite	ND	0.020	mg/L	MCAWW 300.0A	12/11/04	4348544
		Dilution Factor: 1		MDL.....: 0.0040		
Sulfate	**75.2 C,D**	**5.0**	**mg/L**	**MCAWW 300.0A**	**12/11/04**	**4348545**
		Dilution Factor: 10		MDL.....: 0.37		
Total Alkalinity	**112**	**5.0**	**mg/L**	**MCAWW 310.1**	**12/21/04**	**4355446**
		Dilution Factor: 1		MDL.....: 1.8		
Total Organic Carbon	**0.46 B**	**1.0**	**mg/L**	**SW846 9060**	**12/18-12/20/04**	**4353079**
		Dilution Factor: 1		MDL.....: 0.43		
TOX	ND	5.0	ug/L	SW846 9020B	12/22-12/29/04	4364378
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

C Method blank contamination. The associated method blank contains the target analyte at a reportable level.

D Result was obtained from the analysis of a dilution.

B Estimated result. Result is less than RL.

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BVD5

General Chemistry

Lot-Sample #...: F4L130171-003 **Work Order #...:** G0W7F **Matrix.....:** WATER
Date Sampled...: 12/10/04 **Date Received..:** 12/11/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	**0.65 B**	**1.0**	**mg/L**	**SW846 9060**	**12/18-12/20/04**	**4353079**
		Dilution Factor: 1		MDL.....: 0.43		
TOX	ND	5.0	ug/L	SW846 9020B	12/22-12/29/04	4364378
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BVD6

General Chemistry

Lot-Sample #...: F4L130171-004 **Work Order #...:** G0W7J **Matrix.....:** WATER
Date Sampled...: 12/10/04 **Date Received..:** 12/11/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	**0.58 B**	**1.0**	**mg/L**	**SW846 9060**	**12/18-12/20/04**	**4353079**
		Dilution Factor: 1		MDL.....: 0.43		
TOX	ND	5.0	ug/L	SW846 9020B	12/22-12/29/04	4364378
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BVD7

General Chemistry

Lot-Sample #...: F4L130171-005 **Work Order #...:** G0W7K **Matrix.....:** WATER
Date Sampled...: 12/10/04 **Date Received..:** 12/11/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	**0.65 B**	**1.0**	**mg/L**	**SW846 9060**	**12/18-12/20/04**	**4353079**
		Dilution Factor: 1		MDL.....: 0.43		
TOX	ND	5.0	ug/L	SW846 9020B	12/22-12/29/04	4364378
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BRV9

General Chemistry

Lot-Sample #...: F4L130171-007 **Work Order #...:** G0W7M **Matrix.....:** WATER
Date Sampled...: 12/10/04 **Date Received..:** 12/11/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Alkalinity	112	5.0	mg/L	MCAWW 310.1	12/21/04	4355446
		Dilution Factor: 1		MDL.....: 1.8		
Total Organic Carbon	0.69 B	1.0	mg/L	SW846 9060	12/18-12/20/04	4353079
		Dilution Factor: 1		MDL.....: 0.43		
TOX	3.8 B	5.0	ug/L	SW846 9020B	12/23-12/29/04	4364415
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BVF7

General Chemistry

Lot-Sample #...: F4L130171-008 **Work Order #...:** G0W7R **Matrix.....:** WATER
Date Sampled...: 12/10/04 **Date Received..:** 12/11/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	**0.55 B**	**1.0**	**mg/L**	**SW846 9060**	**12/18-12/20/04**	**4353080**
		Dilution Factor: 1		MDL.....: 0.43		
TOX	ND	5.0	ug/L	SW846 9020B	12/22-12/29/04	4364378
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BVF8

General Chemistry

Lot-Sample #...: F4L130171-009 **Work Order #...:** G0W7V **Matrix.....:** WATER
Date Sampled...: 12/10/04 **Date Received..:** 12/11/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	0.59 B	1.0	mg/L	SW846 9060	12/18-12/20/04	4353080
		Dilution Factor: 1		MDL.....: 0.43		
TOX	4.5 B	5.0	ug/L	SW846 9020B	12/22-12/29/04	4364378
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BVF9

General Chemistry

Lot-Sample #...: F4L130171-010 **Work Order #...:** G0W7W **Matrix.....:** WATER
Date Sampled...: 12/10/04 **Date Received..:** 12/11/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	0.52 B	1.0	mg/L	SW846 9060	12/18-12/20/04	4353080
		Dilution Factor: 1		MDL.....: 0.43		
TOX	5.0	5.0	ug/L	SW846 9020B	12/22-12/29/04	4364378
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BRP6

General Chemistry

Lot-Sample #...: F4L130171-012 **Work Order #...:** G0W8M **Matrix.....:** WATER
Date Sampled...: 12/10/04 **Date Received..:** 12/11/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride	**16.8 C,D**	**10.0**	**mg/L**	**MCAWW 300.0A**	**12/11/04**	**4348541**
		Dilution Factor: 50		MDL.....: 2.2		
Fluoride	**0.43**	**0.10**	**mg/L**	**MCAWW 300.0A**	**12/11/04**	**4348542**
		Dilution Factor: 1		MDL.....: 0.010		
Nitrate	**14.8 D**	**1.0**	**mg/L**	**MCAWW 300.0A**	**12/11/04**	**4348543**
		Dilution Factor: 50		MDL.....: 0.20		
Nitrite	ND	0.020	mg/L	MCAWW 300.0A	12/11/04	4348544
		Dilution Factor: 1		MDL.....: 0.0040		
Sulfate	**81.7 C,D**	**25.0**	**mg/L**	**MCAWW 300.0A**	**12/11/04**	**4348545**
		Dilution Factor: 50		MDL.....: 1.9		
Total Alkalinity	**120**	**5.0**	**mg/L**	**MCAWW 310.1**	**12/21/04**	**4355446**
		Dilution Factor: 1		MDL.....: 1.8		
Total Organic Carbon	**0.66 B**	**1.0**	**mg/L**	**SW846 9060**	**12/18-12/20/04**	**4353080**
		Dilution Factor: 1		MDL.....: 0.43		
TOX	ND	5.0	ug/L	SW846 9020B	12/22-12/29/04	4364378
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

C Method blank contamination. The associated method blank contains the target analyte at a reportable level.

D Result was obtained from the analysis of a dilution.

B Estimated result. Result is less than RL.

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BVB7

General Chemistry

Lot-Sample #...: F4L130171-013 **Work Order #...:** G0W8V **Matrix.....:** WATER
Date Sampled...: 12/10/04 **Date Received..:** 12/11/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	**0.56 B**	**1.0**	**mg/L**	**SW846 9060**	**12/18-12/20/04**	**4353080**
		Dilution Factor: 1		MDL.....: 0.43		
TOX	ND	5.0	ug/L	SW846 9020B	12/22-12/29/04	4364378
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BVB8

General Chemistry

Lot-Sample #...: F4L130171-014 **Work Order #...:** G0W81 **Matrix.....:** WATER
Date Sampled...: 12/10/04 **Date Received..:** 12/11/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	**0.66 B**	**1.0**	**mg/L**	**SW846 9060**	**12/18-12/20/04**	**4353080**
		Dilution Factor: 1		MDL.....: 0.43		
TOX	**7.4**	**5.0**	**ug/L**	**SW846 9020B**	**12/23-12/29/04**	**4364415**
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BVB9

General Chemistry

Lot-Sample #...: F4L130171-015 **Work Order #...:** G0W83 **Matrix.....:** WATER
Date Sampled...: 12/10/04 **Date Received..:** 12/11/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	**0.53 B**	**1.0**	**mg/L**	**SW846 9060**	**12/18-12/20/04**	**4353080**
		Dilution Factor: 1		MDL.....: 0.43		
TOX	ND	5.0	ug/L	SW846 9020B	12/23-12/29/04	4364415
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BRT1

General Chemistry

Lot-Sample #...: F4L130171-017 **Work Order #...:** G0W9L **Matrix.....:** WATER
Date Sampled...: 12/10/04 **Date Received..:** 12/11/04

PARAMETER		RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Alkalinity		**121**	**5.0**	**mg/L**	**MCAWW 310.1**	**12/21/04**	**4355446**
			Dilution Factor: 1		MDL.....: 1.8		
Total Cyanide	UR	ND N	5.0	ug/L	SW846 9012	12/14/04	4351381
			Dilution Factor: 1		MDL.....: 2.0		
Total Organic Carbon		**0.45 B**	**1.0**	**mg/L**	**SW846 9060**	**12/18-12/20/04**	**4353080**
			Dilution Factor: 1		MDL.....: 0.43		
TOX		**5.0**	**5.0**	**ug/L**	**SW846 9020B**	**12/23-12/29/04**	**4364415**
			Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

N Spiked analyte recovery is outside stated control limits.

B Estimated result. Result is less than RL.

LS
8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BVC9

General Chemistry

Lot-Sample #...: F4L130171-018 **Work Order #...:** G0W9V **Matrix.....:** WATER
Date Sampled...: 12/10/04 **Date Received..:** 12/11/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	0.49 B	1.0	mg/L	SW846 9060	12/18-12/20/04	4353080
		Dilution Factor: 1		MDL.....: 0.43		
TOX	4.6 B	5.0	ug/L	SW846 9020B	12/23-12/29/04	4364415
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BVD0

General Chemistry

Lot-Sample #...: F4L130171-019 **Work Order #...:** G0W9X **Matrix.....:** WATER
Date Sampled...: 12/10/04 **Date Received..:** 12/11/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	0.53 B	1.0	mg/L	SW846 9060	12/18-12/20/04	4353080
		Dilution Factor: 1		MDL.....: 0.43		
TOX	6.2	5.0	ug/L	SW846 9020B	12/23-12/29/04	4364415
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BVD1

General Chemistry

Lot-Sample #...: F4L130171-020 **Work Order #...:** G0W96 **Matrix.....:** WATER
Date Sampled...: 12/10/04 **Date Received..:** 12/11/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	0.50 B	1.0	mg/L	SW846 9060	12/18-12/20/04	4353080
		Dilution Factor: 1		MDL.....: 0.43		
TOX	6.8	5.0	ug/L	SW846 9020B	12/23-12/29/04	4364415
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BRN1

General Chemistry

Lot-Sample #...: F4L130171-022 **Work Order #...:** G0XAF **Matrix.....:** WATER
Date Sampled...: 12/10/04 **Date Received..:** 12/11/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Alkalinity	119	5.0	mg/L	MCAWW 310.1	12/21/04	4355446
		Dilution Factor: 1		MDL.....: 1.8		
Total Organic Carbon	0.47 B	1.0	mg/L	SW846 9060	12/18-12/20/04	4353080
		Dilution Factor: 1		MDL.....: 0.43		
TOX	4.8 B	5.0	ug/L	SW846 9020B	12/23-12/29/04	4364415
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BV92

General Chemistry

Lot-Sample #...: F4L130171-023 **Work Order #...:** G0XAN **Matrix.....:** WATER
Date Sampled...: 12/10/04 **Date Received..:** 12/11/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	0.59 B	1.0	mg/L	SW846 9060	12/18-12/20/04	4353080
		Dilution Factor: 1		MDL.....: 0.43		
TOX	6.6	5.0	ug/L	SW846 9020B	12/23-12/29/04	4364415
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BV93

General Chemistry

Lot-Sample #...: F4L130171-024 **Work Order #...:** G0XAQ **Matrix.....:** WATER
Date Sampled...: 12/10/04 **Date Received..:** 12/11/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	0.44 B	1.0	mg/L	SW846 9060	12/18-12/20/04	4353080
		Dilution Factor: 1		MDL.....: 0.43		
TOX	8.2	5.0	ug/L	SW846 9020B	12/23-12/29/04	4364415
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BV94

General Chemistry

Lot-Sample #...: F4L130171-025 Work Order #...: G0XAR Matrix.....: WATER
Date Sampled...: 12/10/04 Date Received..: 12/11/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	0.49 B	1.0	mg/L	SW846 9060	12/18-12/20/04	4353080
		Dilution Factor: 1		MDL.....: 0.43		
TOX	3.5 B	5.0	ug/L	SW846 9020B	12/23-12/29/04	4364415
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BRT4

General Chemistry

Lot-Sample #...: F4L130171-027 **Work Order #...:** G0XAX **Matrix.....:** WATER
Date Sampled...: 12/10/04 **Date Received..:** 12/11/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride	**14.6 C,D**	**4.0**	**mg/L**	**MCAWW 300.0A**	**12/11/04**	**4348541**
		Dilution Factor: 20		MDL.....: 0.87		
Fluoride	**0.40**	**0.10**	**mg/L**	**MCAWW 300.0A**	**12/11/04**	**4348542**
		Dilution Factor: 1		MDL.....: 0.010		
Nitrate	**14.1 D**	**0.40**	**mg/L**	**MCAWW 300.0A**	**12/11/04**	**4348543**
		Dilution Factor: 20		MDL.....: 0.079		
Nitrite	ND	0.020	mg/L	MCAWW 300.0A	12/11/04	4348544
		Dilution Factor: 1		MDL.....: 0.0040		
Sulfate	**89.8 C,D**	**10.0**	**mg/L**	**MCAWW 300.0A**	**12/11/04**	**4348545**
		Dilution Factor: 20		MDL.....: 0.75		
Total Alkalinity	**124**	**5.0**	**mg/L**	**MCAWW 310.1**	**12/21/04**	**4355446**
		Dilution Factor: 1		MDL.....: 1.8		
Total Cyanide UR	ND N	5.0	ug/L	SW846 9012	12/14/04	4351381
		Dilution Factor: 1		MDL.....: 2.0		
Total Organic Carbon	**0.60 B**	**1.0**	**mg/L**	**SW846 9060**	**12/18-12/20/04**	**4353080**
		Dilution Factor: 1		MDL.....: 0.43		
TOX	**8.1**	**5.0**	**ug/L**	**SW846 9020B**	**12/24-12/29/04**	**4364445**
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

C Method blank contamination. The associated method blank contains the target analyte at a reportable level.

D Result was obtained from the analysis of a dilution.

N Spiked analyte recovery is outside stated control limits.

B Estimated result. Result is less than RL.

LS
8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BVD2

General Chemistry

Lot-Sample #...: F4L130171-028 **Work Order #...:** G0XCA **Matrix.....:** WATER
Date Sampled...: 12/10/04 **Date Received..:** 12/11/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	0.65 B	1.0	mg/L	SW846 9060	12/18-12/20/04	4353080
		Dilution Factor: 1		MDL.....: 0.43		
TOX	4.6 B	5.0	ug/L	SW846 9020B	12/23-12/29/04	4364415
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BVD3

General Chemistry

Lot-Sample #...: F4L130171-029 **Work Order #...:** G0XCE **Matrix.....:** WATER
Date Sampled...: 12/10/04 **Date Received..:** 12/11/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	**0.63 B**	**1.0**	**mg/L**	**SW846 9060**	**12/18-12/20/04**	**4353080**
		Dilution Factor: 1		MDL.....: 0.43		
TOX	ND	5.0	ug/L	SW846 9020B	12/23-12/29/04	4364415
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BVD4

General Chemistry

Lot-Sample #...: F4L130171-030 **Work Order #...:** G0XCF **Matrix.....:** WATER
Date Sampled...: 12/10/04 **Date Received..:** 12/11/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	**0.64 B**	**1.0**	**mg/L**	**SW846 9060**	**12/18-12/20/04**	**4353081**
		Dilution Factor: 1		MDL.....: 0.43		
TOX	ND	5.0	ug/L	SW846 9020B	12/23-12/29/04	4364415
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BT38

General Chemistry

Lot-Sample #...: F4L130171-032 **Work Order #...:** G0XCW **Matrix.....:** WATER
Date Sampled...: 12/10/04 **Date Received..:** 12/11/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride	**12.4 C,D**	**4.0**	**mg/L**	**MCAWW 300.0A**	**12/11/04**	**4348541**
		Dilution Factor: 20		MDL.....: 0.87		
Fluoride	**0.20**	**0.10**	**mg/L**	**MCAWW 300.0A**	**12/11/04**	**4348542**
		Dilution Factor: 1		MDL.....: 0.010		
Nitrate	**5.8 D**	**0.40**	**mg/L**	**MCAWW 300.0A**	**12/11/04**	**4348543**
		Dilution Factor: 20		MDL.....: 0.079		
Nitrite	ND	0.020	mg/L	MCAWW 300.0A	12/11/04	4348544
		Dilution Factor: 1		MDL.....: 0.0040		
Sulfate	**81.1 C,D**	**10.0**	**mg/L**	**MCAWW 300.0A**	**12/11/04**	**4348545**
		Dilution Factor: 20		MDL.....: 0.75		
Total Alkalinity	**83.0**	**5.0**	**mg/L**	**MCAWW 310.1**	**12/21/04**	**4355446**
		Dilution Factor: 1		MDL.....: 1.8		
Total Cyanide UR	ND N	5.0	ug/L	SW846 9012	12/14/04	4351381
		Dilution Factor: 1		MDL.....: 2.0		
Total Organic Carbon	**0.89 B**	**1.0**	**mg/L**	**SW846 9060**	**12/18-12/20/04**	**4353081**
		Dilution Factor: 1		MDL.....: 0.43		
TOX	**8.9**	**5.0**	**ug/L**	**SW846 9020B**	**12/23-12/29/04**	**4364415**
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

C Method blank contamination. The associated method blank contains the target analyte at a reportable level.

D Result was obtained from the analysis of a dilution.

N Spiked analyte recovery is outside stated control limits.

B Estimated result. Result is less than RL.

LS
8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BVN7

General Chemistry

Lot-Sample #...: F4L130171-033 **Work Order #...:** G0XC4 **Matrix.....:** WATER
Date Sampled...: 12/10/04 **Date Received..:** 12/11/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	0.88 B	1.0	mg/L	SW846 9060	12/18-12/20/04	4353081
		Dilution Factor: 1		MDL.....: 0.43		
TOX	13.1	5.0	ug/L	SW846 9020B	12/23-12/29/04	4364415
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BVN8

General Chemistry

Lot-Sample #...: F4L130171-034 **Work Order #...:** G0XC5 **Matrix.....:** WATER
Date Sampled...: 12/10/04 **Date Received..:** 12/11/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	0.85 B	1.0	mg/L	SW846 9060	12/18-12/20/04	4353081
		Dilution Factor: 1		MDL.....: 0.43		
TOX	14.5	5.0	ug/L	SW846 9020B	12/23-12/29/04	4364415
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BVN9

General Chemistry

Lot-Sample #...: F4L130171-035 **Work Order #...:** G0XC6 **Matrix.....:** WATER
Date Sampled...: 12/10/04 **Date Received..:** 12/11/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	**0.94 B**	**1.0**	**mg/L**	**SW846 9060**	**12/18-12/20/04**	**4353081**
		Dilution Factor: 1		MDL.....: 0.43		
TOX	**13.5**	**5.0**	**ug/L**	**SW846 9020B**	**12/23-12/29/04**	**4364415**
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BRR8

General Chemistry

Lot-Sample #...: F4L130171-037 **Work Order #...:** G0XC9 **Matrix.....:** WATER
Date Sampled...: 12/10/04 **Date Received..:** 12/11/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride	**12.6 C,D**	**4.0**	**mg/L**	**MCAWW 300.0A**	**12/11/04**	**4348541**
		Dilution Factor: 20		MDL.....: 0.87		
Fluoride	**0.48**	**0.10**	**mg/L**	**MCAWW 300.0A**	**12/11/04**	**4348542**
		Dilution Factor: 1		MDL.....: 0.010		
Nitrate	**12.7 D**	**0.40**	**mg/L**	**MCAWW 300.0A**	**12/11/04**	**4348543**
		Dilution Factor: 20		MDL.....: 0.079		
Nitrite	ND	0.020	mg/L	MCAWW 300.0A	12/11/04	4348544
		Dilution Factor: 1		MDL.....: 0.0040		
Sulfate	**58.5 C,D**	**10.0**	**mg/L**	**MCAWW 300.0A**	**12/11/04**	**4348545**
		Dilution Factor: 20		MDL.....: 0.75		
Total Alkalinity	**119**	**5.0**	**mg/L**	**MCAWW 310.1**	**12/21/04**	**4355446**
		Dilution Factor: 1		MDL.....: 1.8		
Total Organic Carbon	**0.63 B**	**1.0**	**mg/L**	**SW846 9060**	**12/18-12/20/04**	**4353081**
		Dilution Factor: 1		MDL.....: 0.43		
TOX	**4.0 B**	**5.0**	**ug/L**	**SW846 9020B**	**12/23-12/29/04**	**4364415**
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

C Method blank contamination. The associated method blank contains the target analyte at a reportable level.

D Result was obtained from the analysis of a dilution.

B Estimated result. Result is less than RL.

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BVC6

General Chemistry

Lot-Sample #...: F4L130171-038 **Work Order #...:** G0XDC **Matrix.....:** WATER
Date Sampled...: 12/10/04 **Date Received..:** 12/11/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	0.57 B	1.0	mg/L	SW846 9060	12/18-12/20/04	4353081
		Dilution Factor: 1		MDL.....: 0.43		
TOX	7.4	5.0	ug/L	SW846 9020B	12/24-12/29/04	4364445
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BVC7

General Chemistry

Lot-Sample #...: F4L130171-039 **Work Order #...:** G0XDE **Matrix.....:** WATER
Date Sampled...: 12/10/04 **Date Received..:** 12/11/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	0.64 B	1.0	mg/L	SW846 9060	12/18-12/20/04	4353081
		Dilution Factor: 1		MDL.....: 0.43		
TOX	4.8 B	5.0	ug/L	SW846 9020B	12/24-12/29/04	4364445
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BVC8

General Chemistry

Lot-Sample #...: F4L130171-040 **Work Order #...:** G0XDF **Matrix.....:** WATER
Date Sampled...: 12/10/04 **Date Received..:** 12/11/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	**0.61 B**	**1.0**	**mg/L**	**SW846 9060**	**12/18-12/20/04**	**4353081**
		Dilution Factor: 1		MDL.....: 0.43		
TOX	ND	5.0	ug/L	SW846 9020B	12/26-12/29/04	4364463
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BRP9

General Chemistry

Lot-Sample #...: F4L130171-042 **Work Order #...:** G0XDL **Matrix.....:** WATER
Date Sampled...: 12/10/04 **Date Received..:** 12/11/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride	**13.7 C,D**	**4.0**	**mg/L**	**MCAWW 300.0A**	**12/11/04**	**4348541**
		Dilution Factor: 20		MDL.....: 0.87		
Fluoride	**0.44**	**0.10**	**mg/L**	**MCAWW 300.0A**	**12/11/04**	**4348542**
		Dilution Factor: 1		MDL.....: 0.010		
Nitrate	**14.3 D**	**0.40**	**mg/L**	**MCAWW 300.0A**	**12/11/04**	**4348543**
		Dilution Factor: 20		MDL.....: 0.079		
Nitrite	ND	0.020	mg/L	MCAWW 300.0A	12/11/04	4348544
		Dilution Factor: 1		MDL.....: 0.0040		
Sulfate	**80.0 C,D**	**10.0**	**mg/L**	**MCAWW 300.0A**	**12/11/04**	**4348545**
		Dilution Factor: 20		MDL.....: 0.75		
Total Alkalinity	**118**	**5.0**	**mg/L**	**MCAWW 310.1**	**12/21/04**	**4355446**
		Dilution Factor: 1		MDL.....: 1.8		
Total Organic Carbon	**0.54 B**	**1.0**	**mg/L**	**SW846 9060**	**12/18-12/20/04**	**4353081**
		Dilution Factor: 1		MDL.....: 0.43		
TOX	ND	5.0	ug/L	SW846 9020B	12/26-12/29/04	4364463
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

C Method blank contamination. The associated method blank contains the target analyte at a reportable level.

D Result was obtained from the analysis of a dilution.

B Estimated result. Result is less than RL.

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BVC0

General Chemistry

Lot-Sample #...: F4L130171-043 **Work Order #...:** G0XDQ **Matrix.....:** WATER
Date Sampled...: 12/10/04 **Date Received..:** 12/11/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	**0.60 B**	**1.0**	**mg/L**	**SW846 9060**	**12/18-12/20/04**	**4353081**
		Dilution Factor: 1		MDL.....: 0.43		
TOX	ND	5.0	ug/L	SW846 9020B	12/26-12/29/04	4364463
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BVC1

General Chemistry

Lot-Sample #...: F4L130171-044 **Work Order #...:** G0XDR **Matrix.....:** WATER
Date Sampled...: 12/10/04 **Date Received..:** 12/11/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	**0.70 B**	**1.0**	**mg/L**	**SW846 9060**	**12/18-12/20/04**	**4353081**
		Dilution Factor: 1		MDL.....: 0.43		
TOX	ND	5.0	ug/L	SW846 9020B	12/26-12/29/04	4364463
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BVC2

General Chemistry

Lot-Sample #...: F4L130171-045 **Work Order #...:** G0XDV **Matrix.....:** WATER
Date Sampled...: 12/10/04 **Date Received..:** 12/11/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	0.44 B	1.0	mg/L	SW846 9060	12/18-12/20/04	4353081
		Dilution Factor: 1		MDL.....: 0.43		
TOX	6.0	5.0	ug/L	SW846 9020B	12/26-12/29/04	4364463
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BT32

General Chemistry

Lot-Sample #...: F4L130171-047 **Work Order #...:** G0XD1 **Matrix.....:** WATER
Date Sampled...: 12/10/04 **Date Received..:** 12/11/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride	**8.8 C,D**	**4.0**	**mg/L**	**MCAWW 300.0A**	**12/11/04**	**4348541**
		Dilution Factor: 20		MDL.....: 0.87		
Fluoride	**0.21**	**0.10**	**mg/L**	**MCAWW 300.0A**	**12/11/04**	**4348542**
		Dilution Factor: 1		MDL.....: 0.010		
Nitrate	**4.4 D**	**0.40**	**mg/L**	**MCAWW 300.0A**	**12/11/04**	**4348543**
		Dilution Factor: 20		MDL.....: 0.079		
Nitrite	ND	0.020	mg/L	MCAWW 300.0A	12/11/04	4348544
		Dilution Factor: 1		MDL.....: 0.0040		
Sulfate	**66.9 C,D**	**10.0**	**mg/L**	**MCAWW 300.0A**	**12/11/04**	**4348545**
		Dilution Factor: 20		MDL.....: 0.75		
Total Alkalinity	**84.0**	**5.0**	**mg/L**	**MCAWW 310.1**	**12/21/04**	**4355446**
		Dilution Factor: 1		MDL.....: 1.8		
Total Cyanide UR	ND N	5.0	ug/L	SW846 9012	12/14/04	4351381
		Dilution Factor: 1		MDL.....: 2.0		
Total Organic Carbon	**0.78 B**	**1.0**	**mg/L**	**SW846 9060**	**12/18-12/20/04**	**4353081**
		Dilution Factor: 1		MDL.....: 0.43		
TOX	**3.2 B**	**5.0**	**ug/L**	**SW846 9020B**	**12/26-12/29/04**	**4364463**
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

C Method blank contamination. The associated method blank contains the target analyte at a reportable level.

D Result was obtained from the analysis of a dilution.

N Spiked analyte recovery is outside stated control limits.

B Estimated result. Result is less than RL.

LS
8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BVN1

General Chemistry

Lot-Sample #...: F4L130171-048 **Work Order #...:** G0XD7 **Matrix.....:** WATER
Date Sampled...: 12/10/04 **Date Received..:** 12/11/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	**0.73 B**	**1.0**	**mg/L**	**SW846 9060**	**12/18-12/20/04**	**4353081**
		Dilution Factor: 1		MDL.....: 0.43		
TOX	ND	5.0	ug/L	SW846 9020B	12/26-12/29/04	4364463
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BVN2

General Chemistry

Lot-Sample #...: F4L130171-049 **Work Order #...:** G0XEA **Matrix.....:** WATER
Date Sampled...: 12/10/04 **Date Received..:** 12/11/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	**0.84 B**	**1.0**	**mg/L**	**SW846 9060**	**12/18-12/20/04**	**4353081**
		Dilution Factor: 1		MDL.....: 0.43		
TOX	ND	5.0	ug/L	SW846 9020B	12/26-12/29/04	4364463
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BVN3

General Chemistry

Lot-Sample #...: F4L130171-050 **Work Order #...:** G0XEC **Matrix.....:** WATER
Date Sampled...: 12/10/04 **Date Received..:** 12/11/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	**0.86 B**	**1.0**	**mg/L**	**SW846 9060**	**12/18-12/20/04**	**4353081**
		Dilution Factor: 1		MDL.....: 0.43		
TOX	ND	5.0	ug/L	SW846 9020B	12/27-12/29/04	4364470
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BRP4

General Chemistry

Lot-Sample #...: F4L140259-002 **Work Order #...:** G01W4 **Matrix.....:** WATER
Date Sampled...: 12/13/04 **Date Received..:** 12/14/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride	ND	0.20	mg/L	MCAWW 300.0A	12/14/04	4350142
		Dilution Factor: 1		MDL.....: 0.043		
Fluoride	ND	0.10	mg/L	MCAWW 300.0A	12/14/04	4350143
		Dilution Factor: 1		MDL.....: 0.010		
Nitrate	ND	0.020	mg/L	MCAWW 300.0A	12/14/04	4350144
		Dilution Factor: 1		MDL.....: 0.0040		
Nitrite	ND	0.020	mg/L	MCAWW 300.0A	12/14/04	4350145
		Dilution Factor: 1		MDL.....: 0.0040		
Sulfate	ND	0.50	mg/L	MCAWW 300.0A	12/14/04	4350146
		Dilution Factor: 1		MDL.....: 0.037		
Total Alkalinity	ND	5.0	mg/L	MCAWW 310.1	12/21/04	4355446
		Dilution Factor: 1		MDL.....: 1.8		
Total Organic Carbon	**0.58 B**	**1.0**	**mg/L**	**SW846 9060**	**12/18-12/20/04**	**4353081**
		Dilution Factor: 1		MDL.....: 0.43		
TOX	ND	5.0	ug/L	SW846 9020B	12/21-12/29/04	4364310
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BVB5

General Chemistry

Lot-Sample #...: F4L140259-003 **Work Order #...:** G01XT **Matrix.....:** WATER
Date Sampled...: 12/13/04 **Date Received..:** 12/14/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	**0.57 B**	**1.0**	**mg/L**	**SW846 9060**	**12/18-12/20/04**	**4353081**
		Dilution Factor: 1		MDL.....: 0.43		
TOX	ND	5.0	ug/L	SW846 9020B	12/21-12/29/04	4364310
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BVB6

General Chemistry

Lot-Sample #...: F4L140259-004 **Work Order #...:** G01X0 **Matrix.....:** WATER
Date Sampled...: 12/13/04 **Date Received..:** 12/14/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	**0.51 B**	**1.0**	**mg/L**	**SW846 9060**	**12/18-12/20/04**	**4353082**
		Dilution Factor: 1		MDL.....: 0.43		
TOX	ND	5.0	ug/L	SW846 9020B	12/21-12/29/04	4364310
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BRP0

General Chemistry

Lot-Sample #...: F4L140259-006 **Work Order #...:** G0141 **Matrix.....:** WATER
Date Sampled...: 12/13/04 **Date Received..:** 12/14/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride	**22.7**	**10.0**	**mg/L**	**MCAWW 300.0A**	**12/14/04**	**4350142**
		Dilution Factor: 50		MDL.....: 2.2		
Fluoride	**0.29**	**0.10**	**mg/L**	**MCAWW 300.0A**	**12/14/04**	**4350143**
		Dilution Factor: 1		MDL.....: 0.010		
Nitrate	**34.3**	**1.0**	**mg/L**	**MCAWW 300.0A**	**12/14/04**	**4350144**
		Dilution Factor: 50		MDL.....: 0.20		
Nitrite	ND	0.020	mg/L	MCAWW 300.0A	12/14/04	4350145
		Dilution Factor: 1		MDL.....: 0.0040		
Sulfate	**115**	**25.0**	**mg/L**	**MCAWW 300.0A**	**12/14/04**	**4350146**
		Dilution Factor: 50		MDL.....: 1.9		
Total Alkalinity	**110**	**5.0**	**mg/L**	**MCAWW 310.1**	**12/21/04**	**4355446**
		Dilution Factor: 1		MDL.....: 1.8		
Total Organic Carbon	**0.94 B**	**1.0**	**mg/L**	**SW846 9060**	**12/18-12/20/04**	**4353082**
		Dilution Factor: 1		MDL.....: 0.43		
TOX	ND	5.0	ug/L	SW846 9020B	12/21-12/29/04	4364310
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BVB1

General Chemistry

Lot-Sample #...: F4L140259-007 **Work Order #...:** G0145 **Matrix.....:** WATER
Date Sampled...: 12/13/04 **Date Received..:** 12/14/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	**1.0**	**1.0**	**mg/L**	**SW846 9060**	**12/18-12/20/04**	**4353082**
		Dilution Factor: 1		MDL.....: 0.43		
TOX	ND	5.0	ug/L	SW846 9020B	12/21-12/29/04	4364310
		Dilution Factor: 1		MDL.....: 3.2		

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BVB2

General Chemistry

Lot-Sample #...: F4L140259-008 **Work Order #...:** G0148 **Matrix.....:** WATER
Date Sampled...: 12/13/04 **Date Received..:** 12/14/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	**0.98 B**	**1.0**	**mg/L**	**SW846 9060**	**12/27-12/28/04**	**4362154**
		Dilution Factor: 1		MDL.....: 0.43		
TOX	ND	5.0	ug/L	SW846 9020B	12/21-12/29/04	4364310
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BVB3

General Chemistry

Lot-Sample #...: F4L140259-009 **Work Order #...:** G015H **Matrix.....:** WATER
Date Sampled...: 12/13/04 **Date Received..:** 12/14/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	**0.98 B**	**1.0**	**mg/L**	**SW846 9060**	**12/27-12/28/04**	**4362154**
		Dilution Factor: 1		MDL.....: 0.43		
TOX	ND	5.0	ug/L	SW846 9020B	12/21-12/29/04	4364310
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BRV0

General Chemistry

Lot-Sample #...: F4L140259-011 **Work Order #...:** G016P **Matrix.....:** WATER
Date Sampled...: 12/13/04 **Date Received..:** 12/14/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Alkalinity	**111**	**5.0**	**mg/L**	**MCAWW 310.1**	**12/21/04**	**4355446**
		Dilution Factor: 1		MDL.....: 1.8		
Total Organic Carbon	**0.77 B**	**1.0**	**mg/L**	**SW846 9060**	**12/27-12/28/04**	**4362154**
		Dilution Factor: 1		MDL.....: 0.43		
TOX	ND	5.0	ug/L	SW846 9020B	12/21-12/29/04	4364310
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BVD8

General Chemistry

Lot-Sample #...: F4L140259-012 **Work Order #...:** G0168 **Matrix.....:** WATER
Date Sampled...: 12/13/04 **Date Received..:** 12/14/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	**0.78 B**	**1.0**	**mg/L**	**SW846 9060**	**12/27-12/28/04**	**4362154**
		Dilution Factor: 1		MDL.....: 0.43		
TOX	ND	5.0	ug/L	SW846 9020B	12/21-12/29/04	4364310
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BVD9

General Chemistry

Lot-Sample #...: F4L140259-013 **Work Order #...:** G017E **Matrix.....:** WATER
Date Sampled...: 12/13/04 **Date Received..:** 12/14/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	**0.83 B**	**1.0**	**mg/L**	**SW846 9060**	**12/27-12/28/04**	**4362154**
		Dilution Factor: 1		MDL.....: 0.43		
TOX	ND	5.0	ug/L	SW846 9020B	12/21-12/29/04	4364310
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BVF0

General Chemistry

Lot-Sample #...: F4L140259-014 **Work Order #...:** G017G **Matrix.....:** WATER
Date Sampled...: 12/13/04 **Date Received..:** 12/14/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	**0.85 B**	**1.0**	**mg/L**	**SW846 9060**	**12/27-12/28/04**	**4362154**
		Dilution Factor: 1		MDL.....: 0.43		
TOX	ND	5.0	ug/L	SW846 9020B	12/21-12/29/04	4364310
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BT41

General Chemistry

Lot-Sample #...: F4L140259-016 **Work Order #...:** G017X **Matrix.....:** WATER
Date Sampled...: 12/13/04 **Date Received..:** 12/14/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride	**9.9**	**2.0**	**mg/L**	**MCAWW 300.0A**	**12/14/04**	**4350142**
		Dilution Factor: 10		MDL.....: 0.43		
Fluoride	**0.20**	**0.10**	**mg/L**	**MCAWW 300.0A**	**12/14/04**	**4350143**
		Dilution Factor: 1		MDL.....: 0.010		
Nitrate	**3.9**	**0.20**	**mg/L**	**MCAWW 300.0A**	**12/14/04**	**4350144**
		Dilution Factor: 10		MDL.....: 0.040		
Nitrite	ND	0.020	mg/L	MCAWW 300.0A	12/14/04	4350145
		Dilution Factor: 1		MDL.....: 0.0040		
Sulfate	**67.3**	**5.0**	**mg/L**	**MCAWW 300.0A**	**12/14/04**	**4350146**
		Dilution Factor: 10		MDL.....: 0.37		
Total Alkalinity	**91.0**	**5.0**	**mg/L**	**MCAWW 310.1**	**12/21/04**	**4355446**
		Dilution Factor: 1		MDL.....: 1.8		
Total Cyanide	ND	5.0	ug/L	SW846 9012	12/20-12/21/04	4362283
		Dilution Factor: 1		MDL.....: 2.0		
Total Organic Carbon	**0.93 B**	**1.0**	**mg/L**	**SW846 9060**	**12/27-12/28/04**	**4362154**
		Dilution Factor: 1		MDL.....: 0.43		
TOX	**4.4 B**	**5.0**	**ug/L**	**SW846 9020B**	**12/21-12/29/04**	**4364310**
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BVP0

General Chemistry

Lot-Sample #...: F4L140259-017 **Work Order #...:** G0182 **Matrix.....:** WATER
Date Sampled...: 12/13/04 **Date Received..:** 12/14/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	1.2	1.0	mg/L	SW846 9060	12/27-12/28/04	4362154
		Dilution Factor: 1		MDL.....: 0.43		
TOX	4.3 B	5.0	ug/L	SW846 9020B	12/21-12/29/04	4364310
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BVP1

General Chemistry

Lot-Sample #...: F4L140259-018 Work Order #...: G019A Matrix.....: WATER
Date Sampled...: 12/13/04 Date Received..: 12/14/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	1.0	1.0	mg/L	SW846 9060	12/27-12/28/04	4362154
		Dilution Factor: 1		MDL.....: 0.43		
TOX	5.2	5.0	ug/L	SW846 9020B	12/21-12/29/04	4364310
		Dilution Factor: 1		MDL.....: 3.2		

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BVP2

General Chemistry

Lot-Sample #...: F4L140259-019 **Work Order #...:** G019F **Matrix.....:** WATER
Date Sampled...: 12/13/04 **Date Received..:** 12/14/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	0.99 B	1.0	mg/L	SW846 9060	12/27-12/28/04	4362154
		Dilution Factor: 1		MDL.....: 0.43		
TOX	5.9	5.0	ug/L	SW846 9020B	12/21-12/29/04	4364310
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BRW5

General Chemistry

Lot-Sample #...: F4L140259-021 **Work Order #...:** G019T **Matrix.....:** WATER
Date Sampled...: 12/13/04 **Date Received..:** 12/14/04

PARAMETER		RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Alkalinity		**103**	**5.0**	**mg/L**	**MCAWW 310.1**	**12/23/04**	**4355450**
			Dilution Factor: 1		MDL.....: 1.8		
Total Organic Carbon		**0.72 B**	**1.0**	**mg/L**	**SW846 9060**	**12/27-12/28/04**	**4362154**
			Dilution Factor: 1		MDL.....: 0.43		
TOX	UJ	ND	5.0	ug/L	SW846 9020B	12/20/04	4356570
			Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

LS
8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BVH3

General Chemistry

Lot-Sample #...: F4L140259-022 Work Order #...: G0192 Matrix.....: WATER
Date Sampled...: 12/13/04 Date Received..: 12/14/04

PARAMETER		RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon		0.71 B	1.0	mg/L	SW846 9060	12/27-12/28/04	4362154
			Dilution Factor: 1		MDL.....: 0.43		
TOX	J	6.2	5.0	ug/L	SW846 9020B	12/20/04	4356570
			Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

LS
8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BVH4

General Chemistry

Lot-Sample #...: F4L140259-023 **Work Order #...:** G02AE **Matrix.....:** WATER
Date Sampled...: 12/13/04 **Date Received..:** 12/14/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	0.68 B	1.0	mg/L	SW846 9060	12/27-12/28/04	4362154
		Dilution Factor: 1		MDL.....: 0.43		
TOX J	10.0	5.0	ug/L	SW846 9020B	12/20/04	4356570
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

LS
8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BVH5

General Chemistry

Lot-Sample #...: F4L140259-024 **Work Order #...:** G02AH **Matrix.....:** WATER
Date Sampled...: 12/13/04 **Date Received..:** 12/14/04

PARAMETER		RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon		0.78 B	1.0	mg/L	SW846 9060	12/27-12/28/04	4362154
			Dilution Factor: 1		MDL.....: 0.43		
TOX	J	7.6	5.0	ug/L	SW846 9020B	12/20/04	4356570
			Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

LS
8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BT97

General Chemistry

Lot-Sample #...: F4L140259-026 **Work Order #...:** G02A5 **Matrix.....:** WATER
Date Sampled...: 12/13/04 **Date Received..:** 12/14/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride	**19.4**	**10.0**	**mg/L**	**MCAWW 300.0A**	**12/14/04**	**4350142**
		Dilution Factor: 50		MDL.....: 2.2		
Conductivity	**465**	**1.0**	~~**umhos**~~ US **/cm**	**MCAWW 120.1**	**12/23/04**	**4358140**
		Dilution Factor: 1		MDL.....: 0.22		
Fluoride	**0.36**	**0.10**	**mg/L**	**MCAWW 300.0A**	**12/14/04**	**4350143**
		Dilution Factor: 1		MDL.....: 0.010		
Nitrate	**16.8**	**1.0**	**mg/L**	**MCAWW 300.0A**	**12/14/04**	**4350144**
		Dilution Factor: 50		MDL.....: 0.20		
Nitrite	ND	0.020	mg/L	MCAWW 300.0A	12/14/04	4350145
		Dilution Factor: 1		MDL.....: 0.0040		
Sulfate	**30.7**	**25.0**	**mg/L**	**MCAWW 300.0A**	**12/14/04**	**4350146**
		Dilution Factor: 50		MDL.....: 1.9		
Total Alkalinity	**116**	**5.0**	**mg/L**	**MCAWW 310.1**	**12/23/04**	**4355450**
		Dilution Factor: 1		MDL.....: 1.8		
Total Dissolved Solids	**319**	**5.0**	**mg/L**	**MCAWW 160.1**	**12/16-12/21/04**	**4351461**
		Dilution Factor: 1		MDL.....: 3.6		

MW 1.13.05

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BVB4

General Chemistry

Lot-Sample #...: F4L140259-027 **Work Order #...:** G02C7 **Matrix.....:** WATER
Date Sampled...: 12/13/04 **Date Received..:** 12/14/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	0.44 B	1.0	mg/L	SW846 9060	12/27-12/28/04	4362154
		Dilution Factor: 1		MDL.....: 0.43		
TOX J	3.6 B	5.0	ug/L	SW846 9020B	12/20/04	4356570
		Dilution Factor: 1		MDL.....: 3.2		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

LS
8-10-2010

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BTV5

General Chemistry

Lot-Sample #...: F4L140297-001 **Work Order #...:** G02D0 **Matrix.....:** WATER
Date Sampled...: 12/13/04 **Date Received..:** 12/14/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride	**15.9**	**4.0**	**mg/L**	**MCAWW 300.0A**	**12/14/04**	**4350142**
		Dilution Factor: 20		MDL.....: 0.87		
Fluoride	**0.32**	**0.10**	**mg/L**	**MCAWW 300.0A**	**12/14/04**	**4350143**
		Dilution Factor: 1		MDL.....: 0.010		
Nitrate	**9.1**	**0.40**	**mg/L**	**MCAWW 300.0A**	**12/14/04**	**4350144**
		Dilution Factor: 20		MDL.....: 0.079		
Nitrite	ND	0.020	mg/L	MCAWW 300.0A	12/14/04	4350145
		Dilution Factor: 1		MDL.....: 0.0040		
Sulfate	**75.2**	**10.0**	**mg/L**	**MCAWW 300.0A**	**12/14/04**	**4350146**
		Dilution Factor: 20		MDL.....: 0.75		
Total Cyanide	ND	5.0	ug/L	SW846 9012	12/16/04	4352237
		Dilution Factor: 1		MDL.....: 2.0		

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BTT6

General Chemistry

Lot-Sample #...: F4L140297-002 **Work Order #...:** G02ER **Matrix.....:** WATER
Date Sampled...: 12/13/04 **Date Received..:** 12/14/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Cyanide	ND	5.0	ug/L	SW846 9012	12/16/04	4352237

Dilution Factor: 1 MDL.....: 2.0

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BTT7

General Chemistry

Lot-Sample #...: F4L140297-003 **Work Order #...:** G02E2 **Matrix.....:** WATER
Date Sampled...: 12/13/04 **Date Received..:** 12/14/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Cyanide	ND	5.0	ug/L	SW846 9012	12/16/04	4352237

Dilution Factor: 1 MDL.....: 2.0

PACIFIC NORTHWEST NATIONAL LABORATORIES

Client Sample ID: B1BTW3

General Chemistry

Lot-Sample #...: F4L140297-004 **Work Order #...:** G02E7 **Matrix.....:** WATER
Date Sampled...: 12/13/04 **Date Received..:** 12/14/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride	**15.9**	**10.0**	**mg/L**	**MCAWW 300.0A**	**12/14/04**	**4350142**
		Dilution Factor: 50		MDL.....: 2.2		
Fluoride	**0.25**	**0.10**	**mg/L**	**MCAWW 300.0A**	**12/14/04**	**4350143**
		Dilution Factor: 1		MDL.....: 0.010		
Nitrate	**27.4**	**1.0**	**mg/L**	**MCAWW 300.0A**	**12/14/04**	**4350144**
		Dilution Factor: 50		MDL.....: 0.20		
Nitrite	ND	0.020	mg/L	MCAWW 300.0A	12/14/04	4350145
		Dilution Factor: 1		MDL.....: 0.0040		
Sulfate	**67.9**	**25.0**	**mg/L**	**MCAWW 300.0A**	**12/14/04**	**4350146**
		Dilution Factor: 50		MDL.....: 1.9		
Total Cyanide	ND	5.0	ug/L	SW846 9012	12/16/04	4352237
		Dilution Factor: 1		MDL.....: 2.0		

Pacific Northwest National Labortories

Client Sample ID: B1BTW3

General Chemistry

Lot-Sample #...: F5F090325-001 Work Order #...: HDAC1 Matrix.....: WATER
Date Sampled...: 12/13/04 Date Received..: 06/09/05

PARAMETER		RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Cyanide	UR	ND	5.0	ug/L	SW846 9012	06/13-06/14/05	5167123

Dilution Factor: 1 MDL.....: 2.0

<5
8-10-2010

Pacific Northwest National Labortories

Client Sample ID: B1BTV5

General Chemistry

Lot-Sample #...: F5F090325-002 Work Order #...: HDAC7 Matrix.....: WATER
Date Sampled...: 12/13/04 Date Received..: 06/09/05

PARAMETER		RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Cyanide	UR	ND	5.0	ug/L	SW846 9012	06/13-06/14/05	5167123

Dilution Factor: 1 MDL.....: 2.0

LS
8-10-2010

Pacific Northwest National Labortories

Client Sample ID: B1BTT6

General Chemistry

Lot-Sample #...: F5F090325-003 Work Order #...: HDAC9 Matrix.....: WATER
Date Sampled...: 12/13/04 Date Received..: 06/09/05

PARAMETER		RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Cyanide	J	17.2	5.0	ug/L	SW846 9012	06/13-06/14/05	5167123

Dilution Factor: 1 MDL.....: 2.0

LS
8-10-2010

Pacific Northwest National Labortories

Client Sample ID: B1BRT4

General Chemistry

Lot-Sample #...: F5F090325-004 Work Order #...: HDADX Matrix.....: WATER
Date Sampled...: 12/10/04 Date Received..: 06/09/05

PARAMETER		RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Cyanide	UR	ND	5.0	ug/L	SW846 9012	06/13-06/14/05	5167123

Dilution Factor: 1 MDL.....: 2.0

LS
8-10-2010

Pacific Northwest National Labortories

Client Sample ID: B1BRT1

General Chemistry

Lot-Sample #...: F5F090325-005 **Work Order #...:** HDAD1 **Matrix.....:** WATER
Date Sampled...: 12/10/04 **Date Received..:** 06/09/05

PARAMETER		RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Cyanide	UR	ND	5.0	ug/L	SW846 9012	06/13-06/14/05	5167123

Dilution Factor: 1 MDL.....: 2.0

LS
8-10-2010

Appendix 4

Laboratory Narrative and Chain-of-Custody Documentation

SEVERN TRENT STL

STL St. Louis
13715 Rider Trail North
Earth City, MO 63045

Tel: 314 298 8566 Fax: 314 298 8757
www.stl-inc.com

CASE NARRATIVE

Pacific Northwest National Laboratories
P.O. Box 1970
Richland, Washington 99352
January 13, 2005
Attention: Dot Stewart

Project Number	:	519.145
SDG	:	SL429
Number of Samples	:	118
Sample Matrix	:	water
Data Deliverable	:	Summary
Date SDG Closed	:	December 14, 2004

II. Introduction

Between December 10 and December 14, 2004, one hundred and eighteen 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

SEVERN TRENT STL

Pacific Northwest National Laboratories
January 13, 2005
Project Number: 519.145
SDG: SL429

STL St. Louis
13715 Rider Trail North
Earth City, MO 63045

Tel: 314 298 8566 Fax: 314 298 8757
www.stl-inc.com

V. Comments

General

The following SAFs are associated with this SDG: S05-012, W05-012

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.

MS/MSD/Dup analysis was done per the client requirements. Analytical batches that did not contain matrix QC were analyzed with a LCS/LCS duplicate.

Wet Chemistry

The MS recovery for Cyanide (4351381) is outside the QC limits. The associated data has been flagged with an "N" qualifier. Method performance is demonstrated by acceptable LCS recovery.

Metals

There were no comments or non-conformances associated with this data.

Phenols

The MS/MSD RPD for dinoseb is outside criteria for batch 4349321. Individual spike recoveries met criteria.

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:

Marti Ward
St. Louis Project Manager

SEVERN TRENT STL

STL St. Louis
13715 Rider Trail North
Earth City, MO 63045

Tel: 314 298 8566 Fax: 314 298 8757
www.stl-inc.com

CASE NARRATIVE

Pacific Northwest National Laboratories
P.O. Box 1970
Richland, Washington 99352

June 22, 2005

Attention: Dot Stewart

SDG	:	SL429A
Number of Samples	:	5
Sample Matrix	:	Water
Data Deliverable	:	RDR 2994
Date SDG Closed	:	June 8, 2005

II. Introduction

On June 8, 2005, data reanalysis orders were received at STL-St. Louis.

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.

Analyses requested: see attached copy of RDR

Deviation from Request: No Deviation from requested methods.

IV. Definitions

The following codes are used to denote laboratory quality control samples and can be found in the data summary section of this report:
QCBLK- Quality Control Blank, Method Blank
QCLCS- Quality Control Laboratory Control Sample, Blank Spike

V. Comments

General: The reanalysis request consists of RDR# 050608STLSL-R2994. A copy of the request is included in this package for reference.

SEVERN TRENT STL

STL St. Louis
13715 Rider Trail North
Earth City, MO 63045

Tel: 314 298 8566 Fax: 314 298 8757
www.stl-inc.com

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

Cyanide: The sample reanalysis confirm the original non-detect results for four of the five samples requested.

The re-analysis of sample **B1BTT6** in this request does not match those originally reported. In the latter part of February into March, we began observing sporadic LCS recovery excursions. Sample associated with these low LCS and/or HCS were re-digested as per corrective action for recovery excursions. Recovery excursions, although sporadic, appeared to occur more frequently than normal statistical method deviation. We initiated an evaluation/investigation. After a series of tests and the process of elimination, it was determined that the digestion hot block was inconsistently heating thus not maintaining the proper temperature. The hot block was removed from service to be repaired. We have instituted a procedure of verifying the hot block temperature; we have adopted the procedure successfully performed for metals digestion. QA is currently evaluating all Cyanide batches performed prior to removing the hot block from service to determine the effected results and corrective actions.

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:

Marti Ward
St. Louis Project Manager

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-123

Page 1 of 2

Collector: DURATEK L. D. WALL	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: RCRA GW MONITORING, DECEMBER 2004	logbook DTS-SAWS-H82	Ice Chest No.: SAW-711 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 7903 6202 7607
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BRV5 (F)		W	12-9-04	1110	1x500-mL G/P	7421_PB_GFAA: Lead (1)	HNO3 to pH <2
B1BRV5 (F)		W			1x500-mL G	7470_HG_CVAA: Mercury (1)	HNO3 to pH <2
B1BRV5 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BRV6		W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool 4C
B1BRV6		W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BRV6		W			1x20-mL P	Activity Scan	None
B1BRV6		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BRV6		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVF4		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVF4		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVF5		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVF5		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
DURATEK L. D. WALL	L. D. Wall		DEC 09 2004 1400	FED EX			
FED EX				Gil Clark	STL		12-10-04 0900

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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-123

Page 2 of 2

SAF No.	Contact/Requestor	Telephone No.	MSIN	FAX
W05-012	DL STEWART	509-376-5056		

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BVF6		W	12-9-04	1110	1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVF6		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
DURATEK	L. D. WALL	L.D. Wall	DEC 09 2004 1400	FED EX			
FED EX				Jill Clark STL			12-10-04 0900

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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-119

Collector: DURATEK L. D. WALL	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: RCRA GW MONITORING, DECEMBER 2004	Logbook DTS-SAWS-1482	Ice Chest No. SAWS-211 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No. 7903 6202 7607
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BRV2 (F)		W	12-9-04	1218	1x500-mL G/P	7421_PB_GFAA: Lead (1)	HNO3 to pH <2
B1BRV2 (F)		W			1x500-mL G	7470_HG_CVAA: Mercury (1)	HNO3 to pH <2
B1BRV2 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BRV3		W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BRV3		W			1x20-mL P	Activity Scan	None
B1BRV3		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BRV3		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVF1		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVF1		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVF2		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVF2		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVF3		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
DURATEK L. D. WALL	L. D. Wall		DEC 09 2004 1400	FEDEX			
FED Ex				Gill Clark		STL	12-10-04 0900

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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-119

Page 2 of 2

SAF No. W05-012 | Contact/Requestor DL STEWART | Telephone No. 509-376-5056 | MSIN | FAX

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BVF3		W	12-9-04	1218	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
DURATEK L. D. WALL	L. D. Wall		DEC 09 2004 1400	FED EX			
Relinquished By			Date/Time	Received By			Date/Time
FED EX				Jill Clark	STL		12-10-04 0800
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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-31

Page 1 of 2

Collector: R.T SICKLE	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: RCRA GW MONITORING, DECEMBER 2004	DTS- SAWS H83	Ice Chest No.: SAWS 119 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 7203 6204 1026
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BT16 (F)		W	12-9-04	1209	1x500-mL G/P	7060_AS_GFAA: Arsenic (1)	HNO3 to pH <2
B1BT16 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BT17		W			3x1000-mL aG	8040_PHENOLIC_GC: List-1 (17)	Residual Chlorine 0.0008%
B1BT17		W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool 4C
B1BT17		W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BT17		W			1x20-mL P	Activity Scan	None
B1BT17		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BT17		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVL6		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVL6		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVL7		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVL7		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
R.T SICKLE			DEC 09 2004 1400	FED EX			
FEDEX				Jill Clark		STL	12.10.04 0900

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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-31

Page 2 of 2

SAF No. W05-012

Contact/Requestor DL STEWART

Telephone No. 509-376-5056

MSIN

FAX

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BVL8		W	12-9-04	1209	1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVL8		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
	D.T. SICKLE		DEC 09 2004 1400	FED EX			
Relinquished By			Date/Time	Received By			Date/Time
	FED EX			Dell Clarke STL			12-10-04 0900
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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-11

Collector: D. P. CONNOLLY	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: RCRA GW MONITORING, DECEMBER 2004	DTS SAWS-1484	Ice Chest No.: SML-526 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 7903-6199-9144
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BT01 (F)		W	12-09-04	0941	1x500-mL G/P	7060_AS_GFAA: Arsenic (1)	HNO3 to pH <2
B1BT01 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BT02		W			3x1000-mL aG	8040_PHENOLIC_GC: List-1 (17)	Residual Chlorine 0.0008%
B1BT02		W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool 4C
B1BT02		W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BT02		W			1x20-mL P	Activity Scan	None
B1BT02		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BT02		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVK1		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVK1		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVK2		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVK2		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
D. P. CONNOLLY	DEC 0 9 2004 1400	FedEX	
FEDEX		Gill Clark STL	12-10-04 0900

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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-11

Page 2 of 2

SAF No. W05-012

Contact/Requestor DL STEWART

Telephone No. 509-376-5056

MSIN

FAX

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BVK3		W	12-9-04	0941	1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVK3		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
	D.P. CONNOLLY		DEC 0 9 2004 1400	Fed EX			
Relinquished By	FEDEX		Date/Time	Received By			12-10-04 0900
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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-96

Page 1 of 1

Collector: DURATEK L. D. WALL	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: RCRA GW MONITORING, DECEMBER 2004	Logbook DTS-SAWS-1482	Ice Chest No. SAWS-118 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No. 7903 6202 7618
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BRR5 (F)		W	12-9-04	0950	1x500-mL G/P	7421_PB_GFAA: Lead (1)	HNO3 to pH <2
B1BRR5 (F)		W			1x500-mL G	7470_HG_CVAA: Mercury (1)	HNO3 to pH <2
B1BRR5 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BRR6		W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BRR6		W			1x20-mL P	Activity Scan	None
~~B1BRR6~~		~~W~~			~~1x1000-mL aGs*~~	~~9020_TOX: TOX (1)~~ 12-6-04 DF	H2SO4 to pH <2 Cool 4C
~~B1BRR6~~		~~W~~			~~1x250-mL aGs*~~	~~9060_TOC: TOC (1)~~	HCl or H2SO4 to pH <2 Cool 4C

L. Wall 12/9/04

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
DURATEK L. D. WALL	L.D. Wall		DEC 09 2004 1400	FED EX			
Relinquished By: FED EX			Date/Time	Received By: Jill Clark STL			Date/Time: 12.10.04 0900
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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-95

Page 1 of 2

Collector: DURATEK L. D. WALL	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: RCRA GW MONITORING, DECEMBER 2004	Logbook DTS-SAWS-H82	Ice Chest No. SAWS-118 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No. 7903 6202 7618
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BRR1 (F)		W	12-9-04	0950	1x500-mL G/P	7421_PB_GFAA: Lead (1)	HNO3 to pH <2
B1BRR1 (F)		W			1x500-mL G	7470_HG_CVAA: Mercury (1)	HNO3 to pH <2
B1BRR1 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BRR2		W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BRR2		W			1x20-mL P	Activity Scan	None
B1BRR2		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BRR2		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVC3		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVC3		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVC4		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVC4		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVC5		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
DURATEK L. D. WALL	L. D. Wall		DEC 09 2004 1400	FED EX			
FED EX				Gill Clark		STL	12-10-04 0900

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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-95

Page 2 of 2

SAF No. W05-012

Contact/Requestor DL STEWART

Telephone No. 509-376-5056

MSIN

FAX

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BVC5		W	12-9-04	0950	1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C

D. Wall 12/9/04

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
DURATEK	L.D. Wall		DEC 09 2004 1400	FED EX			
L.D. WALL							
FED Ex				Jill Clark	STL		12.10.04 0900

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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-75

Page 1 of 2

Collector: D.P. CONNOLLY	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: RCRA GW MONITORING, DECEMBER 2004	DTS-SAWS-1484	Ice Chest No.: SAWS-117 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 7921-5581-4832
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BRN3 (F)		W	12-9-04	1107	1x500-mL G/P	7421_PB_GFAA: Lead (1)	HNO3 to pH <2
B1BRN3 (F)		W			1x500-mL G	7470_HG_CVAA: Mercury (1)	HNO3 to pH <2
B1BRN3 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BRN4		W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BRN4		W			1x20-mL P	Activity Scan	None
B1BRN4		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BRN4		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BV95		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BV95		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BV96		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BV96		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BV97		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
D.P. CONNOLLY	DEC 0 9 2004 1400	FedEX	
FED EX		Jill Clark STL	12-10-04 0900

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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-75

Page 2 of 2

SAF No. W05-012

Contact/Requestor DL STEWART

Telephone No. 509-376-5056

MSIN

FAX

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BV97		W	12-9-04	1107	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
D.P. CONNOLLY	D.P. CONNOLLY		DEC 0 9 2004 1400	FedEX			
Relinquished By			Date/Time	Received By			Date/Time
				Jill Clarke STL			12-10-04 0900
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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-79

Collector: D.P. CONNOLLY	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: RCRA GW MONITORING, DECEMBER 2004	DTS-SAWS-484	Ice Chest No.: SAWS-219 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 7921-5581-4810
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BRN6 (F)		W	12-9-04	1210	1x500-mL G/P	7421_PB_GFAA: Lead (1)	HNO3 to pH <2
B1BRN6 (F)		W			1x500-mL G	7470_HG_CVAA: Mercury (1)	HNO3 to pH <2
B1BRN6 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BRN7		W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool 4C
B1BRN7		W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BRN7		W			1x20-mL P	Activity Scan	None
B1BRN7		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BRN7		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BV98		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BV98		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BV99		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BV99		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
D.P. CONNOLLY	DEC 0 9 2004 1400	FedEx	
FED EX		Jill Clark STL	12.10.04 @ 0900

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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-79

Page 2 of 2

SAF No. W05-012

Contact/Requestor DL STEWART

Telephone No. 509-376-5056

MSIN

FAX

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BVB0		W	12-9-04	1210	1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVB0		W	↓	↓	1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C

Relinquished By	Date/Time	Received By	Date/Time
Print D. P. CONNOLLY Sign [signature]	DEC 0 9 2004 1400	Print FedEX Sign	
Relinquished By FED EX		Received By [signature] STL	12-10-04 0900
Relinquished By		Received By	
Relinquished By		Received By	

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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-111

Page 1 of 2

Collector DURATEK R. R. FOX	Contact/Requester DL STEWART	Telephone No. 509-376-5056 MSIN FAX
SAF No. W05-012	Sampling Origin HANFORD SITE	Purchase Order/Charge Code
Project Title RCRA GW MONITORING, DECEMBER 2004	SAW5-H83	Ice Chest No. SAW5-114 Temp.
Shipped To (Lab) Severn Trent St. Louis	Method of Shipment GOVT. VEHICLE	Bill of Lading/Air Bill No. 7908 5577 7006
Protocol RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BRT6 (F)	1	W	12.10.04	1133	1x500-mL G/P	7421_PB_GFAA: Lead (1)	HNO3 to pH <2
B1BRT6 (F)		W			1x500-mL G	7470_HG_CVAA: Mercury (1)	HNO3 to pH <2
B1BRT6 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BRT7	2	W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool 4C
B1BRT7		W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BRT7		W			1x20-mL P	Activity Scan	None
B1BRT7		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BRT7		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVD5	3	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVD5		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVD6	4	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVD6		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
DURATEK R. R. FOX			DEC 10 2004 1300	Fed Ex			
Relinquished By			Date/Time	Received By			Date/Time
FED Ex				Gil Clarke STL			12-11-04 0840
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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-111

Page 2 of 2

SAF No. W05-012 | Contact/Requestor DL STEWART | Telephone No. 509-376-5056 | MSIN | FAX

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BVD7	5	W	12.10.04	1133	1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVD7		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
SUPATER R. R. FOX			DEC 10 2004 1300	FedEx			
Relinquished By			Date/Time	Received By			Date/Time
FED Ex				Jill Clark STL			12-11-04 0840
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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-127

Page 1 of 2

Collector DUHATER R.R. FOX	Contact/Requester DL STEWART	Telephone No. 509-376-5056 MSIN FAX
SAF No. W05-012	Sampling Origin HANFORD SITE	Purchase Order/Charge Code
Project Title RCRA GW MONITORING, DECEMBER 2004	SAWS-1483	Ice Chest No. SAWS 213 Temp.
Shipped To (Lab) Severn Trent St. Louis	Method of Shipment GOVT. VEHICLE	Bill of Lading/Air Bill No. 790855776981
Protocol RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BRV8 (F)	6	W	12-10-04	0923	1x500-mL G/P	7421_PB_GFAA: Lead (1)	HNO3 to pH <2
B1BRV8 (F)		W			1x500-mL G	7470_HG_CVAA: Mercury (1)	HNO3 to pH <2
B1BRV8 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BRV9	7	W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BRV9		W			1x20-mL P	Activity Scan	None
B1BRV9		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BRV9		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVF7	8	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVF7		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVF8	9	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVF8		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVF9	10	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
DUHATER R.R. FOX			DEC 10 2004 1300	FedEx			
FEDEX				Gill Clarke	STL		12-11-04 0840

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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-127

Page 2 of 2

SAF No. W05-012 | Contact/Requestor DL STEWART | Telephone No. 509-376-5056 | MSIN | FAX

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BVF9		W	12.10.04	0923	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
		DEC 10 2004	1300	FedEx			
Relinquished By			Date/Time	Received By			Date/Time
FEDEX				Jill Clarke STL			12-11-04 0840
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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-87

Page 1 of 2

Collector: DURATEK L. D. WALL	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: RCRA GW MONITORING, DECEMBER 2004	Logbook DTS-SAWS-1482	Ice Chest No.: SAWS-108 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 7908-5558-4377
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BRP5 (F)	11	W	12-10-04	1115	1x500-mL G/P	7421_PB_GFAA: Lead (1)	HNO3 to pH <2
B1BRP5 (F)		W			1x500-mL G	7470_HG_CVAA: Mercury (1)	HNO3 to pH <2
B1BRP5 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BRP6	12	W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool 4C
B1BRP6		W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BRP6		W			1x20-mL P	Activity Scan	None
B1BRP6		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BRP6		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVB7	13	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVB7		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVB8	14	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVB8		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
DURATEK L. D. Wall	DEC 10 2004 1300	FED EX	
L. D. WALL FED EX		Jill Clarke STL	12-11-04 08:40

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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-87

Page 2 of 2

SAF No. W05-012

Contact/Requestor DL STEWART

Telephone No. 509-376-5056

MSIN

FAX

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BVB9	15	W	12-10-04	1115	1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVB9		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
DURATEK L.D. WALL	L.D. Wall		DEC 10 2004 1300	FED EX			
Relinquished By			Date/Time	Received By			Date/Time
FED EX				Jill Clarke	STL		12-11-04 08:40
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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-103

Page 1 of 2

Collector: DURATEK L. D. WALL	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: RCRA GW MONITORING, DECEMBER 2004	Logbook DTS-SAWS-482	Ice Chest No. SAWS-108 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No. 7908-5558-4377
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BRT0 (F)	16	W	12-10-04	0030	1x500-mL G/P	7421_PB_GFAA: Lead (1)	HNO3 to pH <2
B1BRT0 (F)		W			1x500-mL G	7470_HG_CVAA: Mercury (1)	HNO3 to pH <2
B1BRT0 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BRT1	17	W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BRT1		W			1x250-mL G/P	9012_CYANIDE: Cyanide (1)	NaOH to pH >= 12 Cool 4C
B1BRT1		W			1x20-mL P	Activity Scan	None
B1BRT1		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BRT1		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVC9	18	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVC9		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVD0	19	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVD0		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C

Relinquished By	Received By
Print: DURATEK L. D. WALL Sign: L. D. Wall Date/Time: DEC 10 2004 1300	Print: FED EX Sign: Date/Time:
Relinquished By: FED EX Date/Time:	Received By: Gill Clarke STL Date/Time: 12-11-04 08:40
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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-103

Page 2 of 2

SAF No. W05-012

Contact/Requestor DL STEWART

Telephone No. 509-376-5056

MSIN

FAX

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BVD1	20	W	12-10-04	1030	1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVD1		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
DURATEK	L. D. WALL	L.D. Wall	DEC 10 2004 1300	FED EX			
FED EX				Jill Clarke		STL	12.11.04 08:40

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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-71

Page 1 of 2

Collector: D. P. CONNOLLY	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: RCRA GW MONITORING, DECEMBER 2004	DTS 3HWS-H84	Ice Chest No.: 3HWS-115 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 7921-5698-0269
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BRN0 (F)	21	W	12-10-04	1006	1x500-mL G/P	7421_PB_GFAA: Lead (1)	HNO3 to pH <2
B1BRN0 (F)		W			1x500-mL G	7470_HG_CVAA: Mercury (1)	HNO3 to pH <2
B1BRN0 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BRN1	22	W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BRN1		W			1x20-mL P	Activity Scan	None
B1BRN1		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BRN1		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BV92	23	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BV92		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BV93	24	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BV93		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BV94	25	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
D. P. CONNOLLY	DEC 10 2004 1400	FedEx	
FEDEX		Jill Clarke STL	12-11-04 0840

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liquid	
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

LOT# F4110069 SDG# SL429 35 of 277

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-71

SAF No. W05-012

Contact/Requestor DL STEWART

Telephone No. 509-376-5056

MSIN

FAX

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BV94		W	12/8/04	1006	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
D. P. CONNOLLY			DEC 10 2004 1400	FedEX			
FEDEX				Jill Clarke STL			12-11-04 0840

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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-107

Collector DURATEK R. R. FOX	Contact/Requester DL STEWART	Telephone No. 509-376-5056 MSIN FAX
SAF No. W05-012	Sampling Origin HANFORD SITE	Purchase Order/Charge Code
Project Title RCRA GW MONITORING, DECEMBER 2004	SAWS 483	Ice Chest No. SAWS 210 Temp.
Shipped To (Lab) Severn Trent St. Louis	Method of Shipment GOVT. VEHICLE	Bill of Lading/Air Bill No. 7908 5577 6959
Protocol RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BRT3 (F)	26	W	12.10.04	1032	1x500-mL G/P	7421_PB_GFAA: Lead (1)	HNO3 to pH <2
B1BRT3 (F)		W			1x500-mL G	7470_HG_CVAA: Mercury (1)	HNO3 to pH <2
B1BRT3 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BRT4	27	W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool 4C
B1BRT4		W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BRT4		W			1x250-mL G/P	9012_CYANIDE: Cyanide (1)	NaOH to pH >= 12 Cool 4C
B1BRT4		W			1x20-mL P	Activity Scan	None
B1BRT4		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BRT4		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVD2	28	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVD2		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVD3	29	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C

Relinquished By (DURATEK R. R. FOX) Print Sign	Date/Time DEC 10 2004 1300	Received By Print Sign (FedEx)	Date/Time
Relinquished By (FED Ex)	Date/Time	Received By (Gil Clarke STL)	Date/Time 12.11.04 08:40
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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-107

Page 2 of 2

SAF No. W05-012 | Contact/Requestor DL STEWART | Telephone No. 509-376-5056 | MSIN | FAX

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BVD3		W	12.10.04	1032	1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVD4	30	W	↓	↓	1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVD4		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
SUPATER R.R. FOX			DEC 10 2004 1400	FedEx			
Relinquished By	FED Ex		Date/Time	Received By	Jill Clarke	STL	12.11.04 0840
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

PNNL S429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-59

Collector: D.P. CONNOLLY	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: RCRA GW MONITORING, DECEMBER 2004	DTS-SAWS-H84	Ice Chest No.: SMC-550 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 7921-5698-0236
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BT37 (F)	31	W	12-10-04	1224	1x500-mL G/P	7060_AS_GFAA: Arsenic (1)	HNO3 to pH <2
B1BT37 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BT38	32	W			3x1000-mL aG	8040_PHENOLIC_GC: List-1 (17)	Residual Chlorine 0.0008%
B1BT38		W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool 4C
B1BT38		W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BT38		W			1x250-mL G/P	9012_CYANIDE: Cyanide (1)	NaOH to pH >= 12 Cool 4C
B1BT38		W			1x20-mL P	Activity Scan	None
B1BT38		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BT38		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVN7	33	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVN7		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVN8	34	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
D.P. CONNOLLY			DEC 10 2004 1400	FedEx			
FedEx				Gil Clarke	STL		12-11-04 08:40

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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-59

Page 2 of 2

SAF No. W05-012

Contact/Requestor DL STEWART

Telephone No. 509-376-5056

MSIN

FAX

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BVN8		W	12-10-04	1224	1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVN9	35	W	↓	↓	1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVN9		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
D. P. CONNOLLY			DEC 10 2004 1400	Fed EX			
Relinquished By			Date/Time	Received By			Date/Time
FEDEX				Jill Clarke STL			12-11-04 08:40
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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-99

Collector: DURATEK L. D. WALL	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code: ~~SAL~~ 12-10-04
Project Title: RCRA GW MONITORING, DECEMBER 2004	Logbook DTS-SAWS-1482	Ice Chest No.: ~~SAW3-08~~ FRC 96-050 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 7908-5558-4360
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BRR7 (F)	34	W	12-10-04	0855	1x500-mL G/P	7421_PB_GFAA: Lead (1)	HNO3 to pH <2
B1BRR7 (F)		W			1x500-mL G	7470_HG_CVAA: Mercury (1)	HNO3 to pH <2
B1BRR7 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BRR8	37	W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool 4C
B1BRR8		W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BRR8		W			1x20-mL P	Activity Scan	None
B1BRR8		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BRR8		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVC6	38	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVC6		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVC7	39	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVC7		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
DURATEK L. D. WALL / L. D. Wall	DEC 10 2004 1300	FED EX	
FED Ex		Jill Clarke STL	12-11-04 08:40

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

PNNL S1429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-99

Page 2 of 2

SAF No. W05-012

Contact/Requestor DL STEWART

Telephone No. 509-376-5056

MSIN

FAX

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BVC8	40	W	12-10-04	0855	1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVC8		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
DURATEK	L. D. WALL	L.D. Wall	DEC 10 2004 1300	FED EX			
FED Ex				Jill Clarke STL			12-11-04 0840

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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-91

Page 1 of 2

Collector: DURATEK L. D. WALL	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: RCRA GW MONITORING, DECEMBER 2004	Logbook DTS-SAWS-1482	Ice Chest No.: EKC96-050 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 7908-5558-4366
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BRP8 (F)	41	W	12-10-04	0940	1x500-mL G/P	7421_PB_GFAA: Lead (1)	HNO3 to pH <2
B1BRP8 (F)		W			1x500-mL G	7470_HG_CVAA: Mercury (1)	HNO3 to pH <2
B1BRP8 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BRP9	42	W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool 4C
B1BRP9		W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BRP9		W			1x20-mL P	Activity Scan	None
B1BRP9		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BRP9		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVC0	43	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVC0		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVC1	44	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVC1		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
DURATEK L. D. WALL L.D. Wall	DEC 10 2004 1300	FED EX	
FED Ex		Jill Clarke STL	12-11-04 0854

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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-91

Page 2 of 2

SAF No.	Contact/Requestor	Telephone No.	MSIN	FAX
W05-012	DL STEWART	509-376-5056		

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BVC2	45	W	12.10.04	0940	1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVC2		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
DURATEK	L.D. WALL	L.D. Wall	DEC 10 2004 1300	FED EX			
Relinquished By			Date/Time	Received By			Date/Time
FED Ex				Jill Clarke STL			12.11.04 0840
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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-51

Collector: D. P. CONNOLLY	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: RCRA GW MONITORING, DECEMBER 2004	DTS-SHWS-HS4	Ice Chest No.: SMC-443 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 7921-5698 0247
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BT31 (F)	46	W	12-10-04	1120	1x500-mL G/P	7060_AS_GFAA: Arsenic (1)	HNO3 to pH <2
B1BT31 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BT32	47	W			3x1000-mL aG	8040_PHENOLIC_GC: List-1 (17)	Residual Chlorine 0.0008%
B1BT32		W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool 4C
B1BT32		W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BT32		W			1x250-mL G/P	9012_CYANIDE: Cyanide (1)	NaOH to pH >= 12 Cool 4C
B1BT32		W			1x20-mL P	Activity Scan	None
B1BT32		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BT32		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVN1	48	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVN1		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVN2	49	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
D. P. CONNOLLY			DEC 10 2004 1400	FedEx			
Relinquished By			Date/Time	Received By			Date/Time
FED EX				Gil Clarke STL			12-11-04 0840
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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-51

Page 2 of 2

SAF No. W05-012

Contact/Requestor DL STEWART

Telephone No. 509-376-5056

MSIN

FAX

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BVN2		W	12-10-04	1120	1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVN3	50	W	↓	↓	1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVN3		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
D. P. CONNOLLY			DEC 10 2004 1400	Fed Ex			
Relinquished By	FED Ex		Date/Time	Received By	Gill Clarke STL		Date/Time 12-11-04 0840
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

PNNL SL429 cer 43446

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-84

Page 1 of 2

Collector: DURATEK F. M. HALL	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: RCRA GW MONITORING, DECEMBER 2004	DTS - SALS H82	Ice Chest No.: ERC 99-056 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 7914156061 27
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BRP3 (F)	1	W	12-13-04	0745	1x500-mL G/P	7421_PB_GFAA: Lead (1)	HNO3 to pH <2
B1BRP3 (F)		W			1x500-mL G	7470_HG_CVAA: Mercury (1)	HNO3 to pH <2
B1BRP3 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BRP4	2	W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool 4C
B1BRP4		W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BRP4		W			1x20-mL P	Activity Scan	None
B1BRP4		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BRP4		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVB4	27	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVB4		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVB5	3	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVB5		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
DURATEK F. M. HALL			DEC 13 2004 1400	FED EX			
FED EX							12-14-04 0900

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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-84

Page 2 of 2

SAF No. W05-012 | Contact/Requestor DL STEWART | Telephone No. 509-376-5056 | MSIN | FAX

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BVB6	4	W	12-13-04	0745	1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVB6		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
BURNTEX F. M. HALL		DEC 13 2004	1400	FED Ex			
Relinquished By			Date/Time	Received By			Date/Time
FED Ex							12-14-04 0900
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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-83

Page 1 of 2

Collector: DURATEK F.M.HALL	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: RCRA GW MONITORING, DECEMBER 2004	DTS-SAWS H 82	Ice Chest No.: ERC99-056 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 7914 1560 6127
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BRN9 (F)	5	W	12-13-04	0954	1x500-mL G/P	7421_PB_GFAA: Lead (1)	HNO3 to pH <2
B1BRN9 (F)		W			1x500-mL G	7470_HG_CVAA: Mercury (1)	HNO3 to pH <2
B1BRN9 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BRP0	6	W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool 4C
B1BRP0		W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BRP0		W			1x20-mL P	Activity Scan	None
B1BRP0		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BRP0		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVB1	7	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVB1		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVB2	8	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVB2		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
DURATEK F.M.HALL	1400 DEC 13 2004	FED EX	
FED EX		12-14-04	0900

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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-83

Page 2 of 2

SAF No.	Contact/Requestor	Telephone No.	MSIN	FAX
W05-012	DL STEWART	509-376-5056		

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BVB3	9	W	12-13-04	0954	1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVB3		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
~~DIVRATEK~~ F. M. HALL			DEC 13 2004 1400	FED EX			
Relinquished By			Date/Time	Received By			Date/Time
FEDEX						12-14-04	0900
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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-115

Page 1 of 2

Collector: DURATEK F. M. HALL	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: RCRA GW MONITORING, DECEMBER 2004	DTS - SAWS H 82	Ice Chest No.: SML 382 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 7914156066090
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BRT9 (F)	10	W	12-13-04	1058	1x500-mL G/P	7421_PB_GFAA: Lead (1)	HNO3 to pH <2
B1BRT9 (F)		W			1x500-mL G	7470_HG_CVAA: Mercury (1)	HNO3 to pH <2
B1BRT9 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BRV0	11	W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BRV0		W			1x20-mL P	Activity Scan	None
B1BRV0		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BRV0		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVD8	12	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVD8		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVD9	13	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVD9		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVF0	14	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
DURATEK F. M. HALL	DEC 13 2004 1400	FED EX	
FED EX			12-14-04 0900

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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-115

Page 2 of 2

SAF No. W05-012 | Contact/Requestor DL STEWART | Telephone No. 509-376-5056 | MSIN | FAX

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BVF0		W	12-13-04	1058	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
DURATEK F. M. HALL			DEC 13 2004 1400	FED EX			
Relinquished By			Date/Time	Received By			Date/Time
FED EX							12-14-04 0900
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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-63

Page 1 of 2

Collector: DURATEK ~~F. M. HALL~~	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: RCRA GW MONITORING, DECEMBER 2004	DTS - SAWS H82	Ice Chest No.: SML 382 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 7914156066090
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BT40 (F)	15	W	12-13-04	1157	1x500-mL G/P	7060_AS_GFAA: Arsenic (1)	HNO3 to pH <2
B1BT40 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BT41	16	W			3x1000-mL aG	8040_PHENOLIC_GC: List-1 (17)	Residual Chlorine 0.0008%
B1BT41		W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool 4C
B1BT41		W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BT41		W			1x250-mL G/P	9012_CYANIDE: Cyanide (1)	NaOH to pH >= 12 Cool 4C
B1BT41		W			1x20-mL P	Activity Scan	None
B1BT41		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BT41		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVP0	17	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVP0		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVP1	18	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)
~~DURATEK~~ ~~F. M. HALL~~ DEC 13 2004 1400	FED EX
FED EX	12-14-04 0900

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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-63

Page 2 of 2

SAF No. W05-012 | Contact/Requestor DL STEWART | Telephone No. 509-376-5056 | MSIN | FAX

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BVP1		W	12-13-04	1157	1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVP2	19	W	↓	↓	1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVP2		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
DORATEK F. M. HALL		DEC 13 2004	1400	FED EX			
Relinquished By			Date/Time	Received By			Date/Time
FED EX						021434	0900
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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-135

Page 1 of 2

Collector: R.T. SICKLE	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: RCRA GW MONITORING, DECEMBER 2004	DTS - SAWS HF3	Ice Chest No.: SAWJ-101 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 7914 1531 1676
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BRW4 (F)	20	W	12-13-04	0900	1x500-mL G/P	7421_PB_GFAA: Lead (1)	HNO3 to pH <2
B1BRW4 (F)		W			1x500-mL G	7470_HG_CVAA: Mercury (1)	HNO3 to pH <2
B1BRW4 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BRW5	21	W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BRW5		W			1x20-mL P	Activity Scan	None
B1BRW5		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BRW5		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVH3	22	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVH3		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVH4	23	W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool 4C
B1BVH4		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool 4C
B1BVH5	24	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
R.T. SICKLE	DEC 13 2004 1400	Fed Ex	
FED EX		12.14.04	0900

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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-135

Page 2 of 2

SAF No. W05-012

Contact/Requestor DL STEWART

Telephone No. 509-376-5056

MSIN

FAX

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BVH5		W	12-13-04	0900	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
R.T. SICKLE			1400 DEC 13 2004	Fed EX			
Relinquished By			Date/Time	Received By			Date/Time
FEDEX							12-14-04 0900
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

60165

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W05-012-233

Page 1 of 1

Collector R.T. SICKLE	Contact/Requester DL STEWART	Telephone No. 509-376-5056 MSIN FAX
SAF No. W05-012	Sampling Origin HANFORD SITE	Purchase Order/Charge Code
Project Title RCRA GW MONITORING, DECEMBER 2004	DTS-SAWS-HS3	Ice Chest No. SAWS-101 Temp.
Shipped To (Lab) Severn Trent St. Louis	Method of Shipment GOVT. VEHICLE	Bill of Lading/Air Bill No. 7914 1531 1676
Protocol RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BT96 (F)	25	W	12-13-04	1054	1x500-mL G/P	7060_AS_GFAA: Arsenic (1)	HNO3 to pH <2
B1BT96 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 (19)	HNO3 to pH <2
B1BT97	26	W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool 4C
B1BT97		W			1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C
B1BT97		W			1x20-mL P	Activity Scan	None
B1BT97		W			1x500-mL G/P	120.1_CONDUCT: Conductivity (1)	Cool 4C
B1BT97		W			1x500-mL G/P	160.1_TDS: TDS (1)	Cool 4C

Relinquished By	Received By
Print R.T. SICKLE Sign Date/Time 1405 DEC 13 2004	Print Sign Date/Time Fed Ex
Relinquished By Date/Time	Received By Date/Time 12/14/04 0900
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

PNNL SL429 Cert 43346

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # S05-012-32

Page 1 of 1

Collector: DURATEK F.M. HALL	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: S05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: SURV/LTMC GW MONITORING, DECEMBER 2004	DTS-SAWS H82	Ice Chest No.: SML 382 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 7914156060 90
Protocol: LTMC	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BTV5	1	W	12-13-04	1058	1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool 4C
B1BTV5		W	↓	↓	1x250-mL G/P	9012_CYANIDE: Cyanide (1)	NaOH to pH >= 12 Cool 4C
B1BTV5		W	↓	↓	1x20-mL P	Activity Scan	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
DURATEK F.M. HALL			DEC 13 2004 1400	FED EX			
Relinquished By			Date/Time	Received By			Date/Time
FED EX							12-14-04 0900
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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # S05-012-20

Page 1 of 1

Collector: DURATEK F. M. HALL	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: S05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: SURV/LTMC GW MONITORING, DECEMBER 2004	DTS-SALWS H82	Ice Chest No.: ERC 99-056 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 7914156061 27
Protocol: LTMC	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BTT6	V	W	12-13-04	0954	1x250-mL G/P	9012_CYANIDE: Cyanide (1)	NaOH to pH >= 12 Cool 4C
B1BTT6		W	↓	↓	1x20-mL P	Activity Scan	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
DURATEK F. M. HALL			DEC 13 2004 1400	FED EX			
Relinquished By			Date/Time	Received By			Date/Time
FED EX							12-14-04 0900
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

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # S05-012-21

Page 1 of 1

Collector: DURATEK F. M. HALL	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: S05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: SURV/LTMC GW MONITORING, DECEMBER 2004	DTS - SALVI H 82	Ice Chest No.: EIC 99-056 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 79141560 6127
Protocol: LTMC	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BTT7	3	W	12-13-04	0745	1x250-mL G/P	9012_CYANIDE: Cyanide (1)	NaOH to pH >= 12 Cool 4C
B1BTT7		W	↓	↓	1x20-mL P	Activity Scan	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
DURATEK F. M. HALL			DEC 13 2004 1400	FED EX			
FED Ex							12.14.04 0900

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

LOT# F4I160169 SDG# SL429 62 OF 277

PNNL SL429

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # S05-012-48

Page 1 of 1

Collector: R.T. SICKLE	Contact/Requester: DL STEWART	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: S05-012	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: SURV/LTMC GW MONITORING, DECEMBER 2004	DTS-SAWS-HF3	Ice Chest No.: SAWS-101 Temp.
Shipped To (Lab): Severn Trent St. Louis	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.: 7914 1531 1676
Protocol: LTMC	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W05", "A05", "S05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1BTW3	4	W	12-13-04	0900	1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool 4C
B1BTW3		W	↓	↓	1x250-mL G/P	9012_CYANIDE: Cyanide (1)	NaOH to pH >= 12 Cool 4C
B1BTW3		W	↓	↓	1x20-mL P	Activity Scan	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
R.T. SICKLE			DEC 13 2004 1405	Fed Ex			
Relinquished By			Date/Time	Received By			Date/Time
FED Ex							12-14-04 0900
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

Appendix 5

Data Validation Supporting Documentation

GENERAL CHEMISTRY DATA VALIDATION CHECKLISTS

VALIDATION LEVEL:	A	B	C	D	E
PROJECT: SURV/LTMC05, RCRA05			DATA PACKAGE: VSR10-023		
VALIDATOR: Carl Schloesslin		LAB: TestAmerica		DATE: 8-10-2010	
			SDG: SL429		
ANALYSES PERFORMED					
Anions/IC X	TOC X	TOX X	TPH-418.1	Oil and Grease	Alkalinity X
Ammonia	BOD/COD	Chloride	Chromium-VI	pH	NO_3/NO_2
Sulfate	TDS	TKN	Phosphate	Total CN X	Sulfide
Conductivity X					

SAMPLES/MATRIX

Water samples: B1BRV6, B1BVF4, B1BVF5, B1BVF6, B1BRV3, B1BVF1, B1BVF2, B1BVF3, B1BT17, B1BVL6, B1BVL7, B1BVL8, B1BT02, B1BVK1, B1BVK2, B1BVK3, B1BRR6, B1BRR2, B1BVC3, B1BVC4, B1BVC5, B1BRN4, B1BV95, B1BV96, B1BV97, B1BRN7, B1BV98, B1BV99, B1BVB0, B1BRT7, B1BVD5, B1BVD6, B1BVD7, B1BRV9, B1BVF7, B1BVF8, B1BVF9, B1BRP6, B1BVB7, B1BVB8, B1BVB9, B1BRT1, B1BVC9, B1BVD0, B1BVD1, B1BRN1, B1BV92, B1BV93, B1BV94, B1BRT4, B1BVD2, B1BVD3, B1BVD4, B1BT38, B1BVN7, B1BVN8, B1BVN9, B1BRR8, B1BVC6, B1BVC7, B1BVC8, B1BRP9, B1BVC0, B1BVC1, B1BVC2, B1BT32, B1BVN1, B1BVN2, B1BVN3, B1BRP4, B1BVB5, B1BVB6, B1BRP0, B1BVB1, B1BVB2, B1BVB3, B1BRV0, B1BVD8, B1BVD9, B1BVF0, B1BT41, B1BVP0, B1BVP1, B1BVP2, B1BRW5, B1BVH3, B1BVH4, B1BVH5, B1BT97, B1BVB4, B1BTV5, B1BTT6, B1BTT7, B1BTW3

1. DATA PACKAGE COMPLETENESS AND CASE NARRATIVE

Technical verification documentation present? ..... Yes (No) N/A

Comments: None

2. INSTRUMENT PERFORMANCE AND CALIBRATIONS (Levels D and E)

Initial calibrations performed on all instruments? ..... Yes No (N/A)

Initial calibrations acceptable? ..... Yes No (N/A)

ICV and CCV checks performed on all instruments? ..... Yes No (N/A)

ICV and CCV checks acceptable? ..... Yes No (N/A)

Standards traceable? ..... Yes No (N/A)

Standards expired? ..... Yes No (N/A)

Calculation check acceptable? ..... Yes No (N/A)

Comments:

GENERAL CHEMISTRY DATA VALIDATION CHECKLISTS

3. BLANKS (Levels B, C, D, and E)

ICB and CCB checks performed for all applicable analyses? (Levels D, E) ..... Yes No N/A

ICB and CCB results acceptable? (Levels D, E) ..... Yes No N/A

Laboratory blanks analyzed? ..... Yes No N/A

Laboratory blank results acceptable? ..... Yes No N/A

Field blanks analyzed? (Levels C, D, E) ..... Yes No N/A

Field blank results acceptable? (Levels C, D, E) ..... Yes No N/A

Transcription/calculation errors? (Levels D, E) ..... Yes No N/A

Comments:

MB detections: batch 4346026 chloride 0.065 mg/L, batch 4348541 chloride 0.063 mg/L, batch 4348545 sulfate 0.04 mg/L.

Trip blank detections: B1BRP4 TOC 0.58 mg/L; B1BVB4 TOC 0.44 mg/L, TOX 3.6 ug/L; B1BVB5 TOC 0.57 mg/L; B1BVB6 TOC 0.51 mg/L

4. ACCURACY (Levels C, D, and E)

Spike samples analyzed? ..... Yes No N/A

Spike recoveries acceptable? ..... Yes No N/A

Sike standards NIST traceable? (Levels D, E) ..... Yes No N/A

Spike standards expired? (Levels D, E) ..... Yes No N/A

LCS/BSS samples analyzed? ..... Yes No N/A

LCS/BSS results acceptable? ..... Yes No N/A

Standards traceable? (Levels D, E) ..... Yes No N/A

Standards expired? (Levels D, E) ..... Yes No N/A

Transcription/calculation errors? (Levels D, E) ..... Yes No N/A

Performance audit sample(s) analyzed? ..... Yes No N/A

Performance audit sample results acceptable? ..... Yes No N/A

Comments:

Cyanide batch 4351381: MS %R = 9.8%

Cyanide batch 5167123: no MS performed

For anions batches 4350142 to 4350146, TOC batch 4353081, and TOX batch 4364310, trip blank sample B1BRP4 was used as the parent sample for the matrix spikes.

GENERAL CHEMISTRY DATA VALIDATION CHECKLISTS

5. PRECISION (Levels C, D, and E)

Duplicate RPD values acceptable? ..... Yes No N/A

Duplicate results acceptable? ..... Yes No N/A

MS/MSD standards NIST traceable? (Levels D, E) ..... Yes No N/A

MS/MSD standards expired? (Levels D, E) ..... Yes No N/A

Field duplicate RPD values acceptable? ..... Yes No N/A

Field split RPD values acceptable? ..... Yes No N/A

Transcription/calculation errors? (Levels D, E) ..... Yes No N/A

Comments:

TOX batches 4355091 and 4356570 had sample and duplicate differences > the RL.

For anions batches 4350142 to 4350146, TOC batch 4353081, and TOX batch 4364310, trip blank sample B1BRP4 was used as the parent sample for the lab duplicates.

6. HOLDING TIMES (all levels)

Samples properly preserved? ..... Yes No N/A

Sample holding times acceptable? ..... Yes No N/A

Comments:

Cyanide batch 5167123: reanalysis samples B1BTW3, B1BTV5, B1BTT6, B1BRT4 and B1BRT1 collection to analysis times approx. 7 months (HT = 14 days).

GENERAL CHEMISTRY DATA VALIDATION CHECKLISTS

7. RESULT QUANTITATION AND DETECTION LIMITS (all levels)

Results reported for all requested analyses? ..... Yes No N/A

Results supported in the raw data? (Levels D, E) ..... Yes No N/A

Samples properly prepared? (Levels D, E) ..... Yes No N/A

Detection limits meet RDL? ..... Yes No N/A

Transcription/calculation errors? (Levels D, E) ..... Yes No N/A

Comments:

Fluoride, phosphate, TOC and TOX CRDLs not provided in the SAP.

Appendix 6

Additional Documentation Requested By Client

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: F4L100169 **Work Order #...:** G0P7D-SMP G0P7D-DUP **Matrix.....:** WATER

Date Sampled...: 12/09/04 **Date Received..:** 12/10/04

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride						SD Lot-Sample #:	F4L100169-002	
	15.5 C,D	15.6 D	mg/L	0.86	(0-20)	MCAWW 300.0A	12/10/04	4346026
			Dilution Factor: 10					
Fluoride						SD Lot-Sample #:	F4L100169-002	
	0.33	0.31	mg/L	5.8	(0-20)	MCAWW 300.0A	12/10/04	4346027
			Dilution Factor: 1					
Nitrate						SD Lot-Sample #:	F4L100169-002	
	6.5 D	6.5 D	mg/L	0.47	(0-20)	MCAWW 300.0A	12/10/04	4346028
			Dilution Factor: 10					
Nitrite						SD Lot-Sample #:	F4L100169-002	
	ND	ND	mg/L	0	(0-20)	MCAWW 300.0A	12/10/04	4346029
			Dilution Factor: 1					
Sulfate						SD Lot-Sample #:	F4L100169-002	
	71.8 D	72.4 D	mg/L	0.96	(0-20)	MCAWW 300.0A	12/10/04	4346030
			Dilution Factor: 10					
Total Alkalinity						SD Lot-Sample #:	F4L100169-002	
	110	110	mg/L	0.0	(0-20)	MCAWW 310.1	12/16-12/20/04	4352481
			Dilution Factor: 1					

NOTE(S):

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

D Result was obtained from the analysis of a dilution.

C Method blank contamination. The associated method blank contains the target analyte at a reportable level.

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: F4L100169 **Work Order #...:** G0P7N-SMP G0P7N-DUP **Matrix.....:** WATER

Date Sampled...: 12/09/04 **Date Received..:** 12/10/04

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon						SD Lot-Sample #:	F4L100169-005	
	0.54 B	0.63 B	mg/L	15	(0-20)	SW846 9060	12/16/04	4351511
			Dilution Factor: 1					
TOX						SD Lot-Sample #:	F4L100169-005	
	5.2	ND	ug/L	63	(0-20)	SW846 9020B	12/17/04	4355091
			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.

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: F4L100169 **Work Order #...:** G0P8T-SMP G0P8T-DUP **Matrix.....:** WATER

Date Sampled...: 12/09/04 **Date Received..:** 12/10/04

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
TOX						SD Lot-Sample #:	F4L100169-008	
	15.0	5.2	ug/L	96	(0-20)	SW846 9020B	12/17/04	4355091

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: F4L100169 **Work Order #...:** G0QAE-SMP G0QAE-DUP **Matrix.....:** WATER

Date Sampled...: 12/09/04 **Date Received..:** 12/10/04

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
TOX						SD Lot-Sample #:	F4L100169-015	
	6.0	6.1	ug/L	1.8	(0-20)	SW846 9020B	12/18/04	4355092

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: F4L100169 **Work Order #...:** G0QC1-SMP G0QC1-DUP **Matrix.....:** WATER

Date Sampled...: 12/09/04 **Date Received..:** 12/10/04

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Alkalinity						SD Lot-Sample #:	F4L100169-017	
	93.0	96.0	mg/L	3.2	(0-20)	MCAWW 310.1	12/21/04	4355446
			Dilution Factor: 1					
TOX						SD Lot-Sample #:	F4L100169-017	
	9.0	ND	ug/L	120	(0-20)	SW846 9020B	12/20/04	4356570
			Dilution Factor: 1					

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: F4L100169 **Work Order #...:** G0QDR-SMP G0QDR-DUP **Matrix.....:** WATER

Date Sampled...: 12/09/04 **Date Received..:** 12/10/04

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon						SD Lot-Sample #:	F4L100169-019	
	0.71 B	0.54 B	mg/L	27	(0-20)	SW846 9060	12/18-12/20/04	4353079

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.

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: F4L100169 **Work Order #...:** G0QJC-SMP G0QJC-DUP **Matrix.....:** WATER

Date Sampled...: 12/09/04 **Date Received..:** 12/10/04

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
TOX						SD Lot-Sample #:	F4L100169-026	
	ND	ND	ug/L	41	(0-20)	SW846 9020B	12/22-12/29/04	4364378

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: F4L100169 **Work Order #...:** G0QTD-SMP G0QTD-DUP **Matrix.....:** WATER

Date Sampled...: 12/09/04 **Date Received..:** 12/10/04

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon						SD Lot-Sample #:	F4L100169-034	
	0.70 B	0.53 B	mg/L	28	(0-20)	SW846 9060	12/18-12/20/04	4353079

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.

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: F4L100169 **Work Order #...:** G0W66-SMP G0W66-DUP **Matrix.....:** WATER

Date Sampled...: 12/10/04 **Date Received..:** 12/11/04

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon						SD Lot-Sample #:	F4L130171-002	
	0.46 B	0.52 B	mg/L	12	(0-20)	SW846 9060	12/18-12/20/04	4353079

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.

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: F4L100169 **Work Order #...:** G0W7M-SMP G0W7M-DUP **Matrix.....:** WATER

Date Sampled...: 12/10/04 **Date Received..:** 12/11/04

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon						SD Lot-Sample #:	F4L130171-007	
	0.69 B	0.62 B	mg/L	10	(0-20)	SW846 9060	12/18-12/20/04	4353080
			Dilution Factor: 1					
TOX						SD Lot-Sample #:	F4L130171-007	
	3.8 B	3.8 B	ug/L	0.0	(0-20)	SW846 9020B	12/23-12/29/04	4364415
			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.

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: F4L100169 **Work Order #...:** G0W8M-SMP G0W8M-DUP **Matrix.....:** WATER

Date Sampled...: 12/10/04 **Date Received..:** 12/11/04

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride						SD Lot-Sample #:	F4L130171-012	
	16.8 C,D	16.1 D	mg/L	3.8	(0-20)	MCAWW 300.0A	12/11/04	4348541
			Dilution Factor: 50					
Fluoride						SD Lot-Sample #:	F4L130171-012	
	0.43	0.43	mg/L	0.56	(0-20)	MCAWW 300.0A	12/11/04	4348542
			Dilution Factor: 1					
Nitrate						SD Lot-Sample #:	F4L130171-012	
	14.8 D	14.6 D	mg/L	1.2	(0-20)	MCAWW 300.0A	12/11/04	4348543
			Dilution Factor: 50					
Nitrite						SD Lot-Sample #:	F4L130171-012	
	ND	ND	mg/L	0	(0-20)	MCAWW 300.0A	12/11/04	4348544
			Dilution Factor: 1					
Sulfate						SD Lot-Sample #:	F4L130171-012	
	81.7 C,D	94.5 D	mg/L	15	(0-20)	MCAWW 300.0A	12/11/04	4348545
			Dilution Factor: 50					

NOTE(S):

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

D Result was obtained from the analysis of a dilution.

C Method blank contamination. The associated method blank contains the target analyte at a reportable level.

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: F4L100169 **Work Order #...:** G0XAX-SMP G0XAX-DUP **Matrix.....:** WATER

Date Sampled...: 12/10/04 **Date Received..:** 12/11/04

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon						SD Lot-Sample #:	F4L130171-027	
	0.60 B	0.56 B	mg/L	8.0	(0-20)	SW846 9060	12/18-12/20/04	4353080
			Dilution Factor: 1					
TOX						SD Lot-Sample #:	F4L130171-027	
	8.1	4.9 B	ug/L	48	(0-20)	SW846 9020B	12/24-12/29/04	4364445
			Dilution Factor: 1					
Total Cyanide						SD Lot-Sample #:	F4L130171-027	
	ND	ND	ug/L	0	(0-20)	SW846 9012	12/14/04	4351381
			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.

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: F4L100169 **Work Order #...:** G0XDF-SMP G0XDF-DUP **Matrix.....:** WATER

Date Sampled...: 12/10/04 **Date Received..:** 12/11/04

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
TOX						SD Lot-Sample #:	F4L130171-040	
	ND	ND	ug/L	21	(0-20)	SW846 9020B	12/26-12/29/04	4364463

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: F4L100169 **Work Order #...:** G0XEC-SMP G0XEC-DUP **Matrix.....:** WATER

Date Sampled...: 12/10/04 **Date Received..:** 12/11/04

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
TOX						SD Lot-Sample #:	F4L130171-050	
	ND	3.9 B	ug/L	72	(0-20)	SW846 9020B	12/27-12/29/04	4364470

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.

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: F4L100169 **Work Order #...:** G01W4-SMP G01W4-DUP **Matrix.....:** WATER

Date Sampled...: 12/13/04 **Date Received..:** 12/14/04

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride						SD Lot-Sample #:	F4L140259-002	
	ND	ND	mg/L	0	(0-20)	MCAWW 300.0A	12/14/04	4350142
			Dilution Factor: 1					
Fluoride						SD Lot-Sample #:	F4L140259-002	
	ND	ND	mg/L	0	(0-20)	MCAWW 300.0A	12/14/04	4350143
			Dilution Factor: 1					
Nitrate						SD Lot-Sample #:	F4L140259-002	
	ND	ND	mg/L	0	(0-20)	MCAWW 300.0A	12/14/04	4350144
			Dilution Factor: 1					
Nitrite						SD Lot-Sample #:	F4L140259-002	
	ND	ND	mg/L	0	(0-20)	MCAWW 300.0A	12/14/04	4350145
			Dilution Factor: 1					
Sulfate						SD Lot-Sample #:	F4L140259-002	
	ND	ND	mg/L	0	(0-20)	MCAWW 300.0A	12/14/04	4350146
			Dilution Factor: 1					
Total Organic Carbon						SD Lot-Sample #:	F4L140259-002	
	0.58 B	0.66 B	mg/L	14	(0-20)	SW846 9060	12/18-12/20/04	4353081
			Dilution Factor: 1					
TOX						SD Lot-Sample #:	F4L140259-002	
	ND	ND	ug/L	150	(0-20)	SW846 9020B	12/21-12/29/04	4364310
			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.

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: F4L100169 **Work Order #...:** G0148-SMP G0148-DUP **Matrix.....:** WATER

Date Sampled...: 12/13/04 **Date Received..:** 12/14/04

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon						SD Lot-Sample #:	F4L140259-008	
	0.98 B	0.94 B	mg/L	3.8	(0-20)	SW846 9060	12/27-12/28/04	4362154
			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.

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: F4L100169 **Work Order #...:** G02A5-SMP G02A5-DUP **Matrix.....:** WATER

Date Sampled...: 12/13/04 **Date Received..:** 12/14/04

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Conductivity						SD Lot-Sample #:	F4L140259-026	
	465	463	~~umhos~~ uS/cm	0.43	(0-20)	MCAWW 120.1	12/23/04	4358140
			Dilution Factor: 1					
Total Dissolved Solids			mg/L	0.31	(0-20)	SD Lot-Sample #: MCAWW 160.1	F4L140259-026 12/16-12/21/04	4351461
	319	320	Dilution Factor: 1					

mw 1-13-05

MATRIX SPIKE SAMPLE DATA REPORT

General Chemistry

Client Lot #...: SL429 **Matrix.....:** WATER
Date Sampled...: 12/14/04 **Date Received..:** 12/15/04

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Cyanide			WO#: G02D01AJ-MS/G02D01AK-MSD				MS Lot-Sample #: F4L140297-001		
	ND	400	380	ug/L	95		SW846 9012	12/16/04	4352237
	ND	400	381	ug/L	95	0.26	SW846 9012	12/16/04	4352237
			Dilution Factor: 1						
Total Organic Carbon			WO#: G0M341AD-MS/G0M341AE-MSD				MS Lot-Sample #: F4L090314-002		
	2.9	5.00	8.03	mg/L	102		SW846 9060	12/16/04	4351512
	2.9	5.00	8.00	mg/L	101	0.36	SW846 9060	12/16/04	4351512
			Dilution Factor: 1						

NOTE(S):

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

D Result was obtained from the analysis of a dilution.

N Spiked analyte recovery is outside stated control limits.

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: F4L100169 **Work Order #...:** G0QWX-SMP G0QWX-DUP **Matrix.....:** WATER

Date Sampled...: 12/09/04 **Date Received..:** 12/10/04

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride						SD Lot-Sample #:	F4L100262-002	
	0.077 B,C	ND	mg/L	200	(0-20)	MCAWW 300.0A	12/10/04	4346026
			Dilution Factor: 1					
Fluoride						SD Lot-Sample #:	F4L100262-002	
	ND	ND	mg/L	0	(0-20)	MCAWW 300.0A	12/10/04	4346027
			Dilution Factor: 1					
Nitrate						SD Lot-Sample #:	F4L100262-002	
	ND	ND	mg/L	0	(0-20)	MCAWW 300.0A	12/10/04	4346028
			Dilution Factor: 1					
Nitrite						SD Lot-Sample #:	F4L100262-002	
	ND	ND	mg/L	0	(0-20)	MCAWW 300.0A	12/10/04	4346029
			Dilution Factor: 1					
Sulfate						SD Lot-Sample #:	F4L100262-002	
	ND	0.44 B	mg/L	200	(0-20)	MCAWW 300.0A	12/10/04	4346030
			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.

C Method blank contamination. The associated method blank contains the target analyte at a reportable level.

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: F4L100169 **Work Order #...:** G0P46-SMP G0P46-DUP **Matrix.....:** WATER

Date Sampled...: 12/06/04 **Date Received..:** 12/09/04

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon						SD Lot-Sample #:	F4L100166-001	
	2.9	2.8	mg/L	1.4	(0-20)	SW846 9060	12/16/04	4351511

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: F4L100169 **Work Order #...:** G05H4-SMP G05H4-DUP **Matrix.....:** WATER

Date Sampled...: 12/14/04 **Date Received..:** 12/15/04

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Alkalinity						SD Lot-Sample #:	F4L150301-002	
	120	122	mg/L	1.7	(0-20)	MCAWW 310.1	12/23/04	4355450

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: F4L100169 **Work Order #...:** G1JK9-SMP G1JK9-DUP **Matrix.....:** WATER

Date Sampled...: 12/16/04 **Date Received..:** 12/18/04

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Conductivity						SD Lot-Sample #:	F4L200217-002	
	293	291	~~umhos~~ uS/cm	0.68	(0-20)	MCAWW 120.1	12/23/04	4358140

Dilution Factor: 1

MW
1.13.05

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: F4L100169 **Work Order #...:** G05JK-SMP G05JK-DUP **Matrix.....:** WATER

Date Sampled...: 12/14/04 **Date Received..:** 12/15/04

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon						SD Lot-Sample #:	F4L150301-003	
	0.68 B	0.70 B	mg/L	4.0	(0-20)	SW846 9060	12/27-12/28/04	4362154
			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.

MATRIX SPIKE SAMPLE DATA REPORT

General Chemistry

Client Lot #...: SL429 **Matrix.....:** WATER
Date Sampled...: 12/09/04 **Date Received..:** 12/10/04

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride			Work Order #...:		G0P7D1AL	MS Lot-Sample #:		F4L100169-002
	15.5	20.0	36.2 D	mg/L	104	MCAWW 300.0A	12/10/04	4346026
			Dilution Factor: 10					
Chloride			Work Order #...:		G0QWX1A5	MS Lot-Sample #:		F4L100262-002
	0.077	2.00	2.00	mg/L	96	MCAWW 300.0A	12/10/04	4346026
			Dilution Factor: 1					
Chloride			Work Order #...:		G0W8M1AL	MS Lot-Sample #:		F4L130171-012
	16.8	100	114 D	mg/L	98	MCAWW 300.0A	12/11/04	4348541
			Dilution Factor: 50					
Chloride			Work Order #...:		G01W41AQ	MS Lot-Sample #:		F4L140259-002
	ND	2.00	2.01	mg/L	101	MCAWW 300.0A	12/14/04	4350142
			Dilution Factor: 1					
Conductivity			Work Order #...:		G02A51AP	MS Lot-Sample #:		F4L140259-026
	465	1410	1600	uS ~~umhos~~/cm	81	MCAWW 120.1	12/23/04	4358140
			Dilution Factor: 1					
						mu 1-13-05		
Fluoride			Work Order #...:		G0P7D1AM	MS Lot-Sample #:		F4L100169-002
	0.33	2.00	2.55	mg/L	111	MCAWW 300.0A	12/10/04	4346027
			Dilution Factor: 1					
Fluoride			Work Order #...:		G0QWX1A7	MS Lot-Sample #:		F4L100262-002
	ND	2.00	2.08	mg/L	104	MCAWW 300.0A	12/10/04	4346027
			Dilution Factor: 1					
Fluoride			Work Order #...:		G0W8M1AN	MS Lot-Sample #:		F4L130171-012
	0.43	2.00	2.55	mg/L	106	MCAWW 300.0A	12/11/04	4348542
			Dilution Factor: 1					
Fluoride			Work Order #...:		G01W41AT	MS Lot-Sample #:		F4L140259-002
	ND	2.00	2.13	mg/L	106	MCAWW 300.0A	12/14/04	4350143
			Dilution Factor: 1					
Nitrate			Work Order #...:		G0P7D1AN	MS Lot-Sample #:		F4L100169-002
	6.5	8.00	14.6 D	mg/L	101	MCAWW 300.0A	12/10/04	4346028
			Dilution Factor: 20					
Nitrate			Work Order #...:		G0QWX1A9	MS Lot-Sample #:		F4L100262-002
	ND	0.400	0.395	mg/L	99	MCAWW 300.0A	12/10/04	4346028
			Dilution Factor: 1					

(Continued on next page)

MATRIX SPIKE SAMPLE DATA REPORT

General Chemistry

Client Lot #...: SL429 **Matrix.....:** WATER
Date Sampled...: 12/09/04 **Date Received..:** 12/10/04

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Nitrate			Work Order #...:		G0W8M1AQ		MS Lot-Sample #:	F4L130171-012
	14.8	20.0	34.5 D	mg/L	98	MCAWW 300.0A	12/11/04	4348543
			Dilution Factor: 50					
Nitrate			Work Order #...:		G01W41AV		MS Lot-Sample #:	F4L140259-002
	ND	0.400	0.411	mg/L	103	MCAWW 300.0A	12/14/04	4350144
			Dilution Factor: 1					
Nitrite			Work Order #...:		G0P7D1AP		MS Lot-Sample #:	F4L100169-002
	ND	0.100	0.107	mg/L	107	MCAWW 300.0A	12/10/04	4346029
			Dilution Factor: 1					
Nitrite			Work Order #...:		G0QWX1CC		MS Lot-Sample #:	F4L100262-002
	ND	0.100	0.100	mg/L	100	MCAWW 300.0A	12/10/04	4346029
			Dilution Factor: 1					
Nitrite			Work Order #...:		G0W8M1AT		MS Lot-Sample #:	F4L130171-012
	ND	0.100	0.0937	mg/L	94	MCAWW 300.0A	12/11/04	4348544
			Dilution Factor: 1					
Nitrite			Work Order #...:		G01W41AX		MS Lot-Sample #:	F4L140259-002
	ND	0.100	0.104	mg/L	104	MCAWW 300.0A	12/14/04	4350145
			Dilution Factor: 1					
Sulfate			Work Order #...:		G0P7D1AQ		MS Lot-Sample #:	F4L100169-002
	71.8	40.0	112 D	mg/L	101	MCAWW 300.0A	12/10/04	4346030
			Dilution Factor: 10					
Sulfate			Work Order #...:		G0QWX1CE		MS Lot-Sample #:	F4L100262-002
	ND	4.00	3.78	mg/L	95	MCAWW 300.0A	12/10/04	4346030
			Dilution Factor: 1					
Sulfate			Work Order #...:		G0W8M1AV		MS Lot-Sample #:	F4L130171-012
	81.7	200	271 D	mg/L	94	MCAWW 300.0A	12/11/04	4348545
			Dilution Factor: 50					
Sulfate			Work Order #...:		G01W41A1		MS Lot-Sample #:	F4L140259-002
	ND	4.00	3.81	mg/L	95	MCAWW 300.0A	12/14/04	4350146
			Dilution Factor: 1					
Total Alkalinity			Work Order #...:		G0P7D1A0		MS Lot-Sample #:	F4L100169-002
	110	100	192	mg/L	82	MCAWW 310.1	12/16-12/20/04	4352481
			Dilution Factor: 1					

(Continued on next page)

MATRIX SPIKE SAMPLE DATA REPORT

General Chemistry

Client Lot #...: SL429 **Matrix.....:** WATER
Date Sampled...: 12/09/04 **Date Received..:** 12/10/04

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Alkalinity			Work Order #...:		G0QC11AM		MS Lot-Sample #:	F4L100169-017
	93.0	100	180	mg/L	87	MCAWW 310.1	12/21/04	4355446
			Dilution Factor: 1					
Total Alkalinity			Work Order #...:		G05H41A1		MS Lot-Sample #:	F4L150301-002
	120	100	200	mg/L	80	MCAWW 310.1	12/23/04	4355450
			Dilution Factor: 1					
Total Cyanide			Work Order #...:		G0XAX1AP		MS Lot-Sample #:	F4L130171-027
	ND	100	9.77 N	ug/L	9.8	SW846 9012	12/14/04	4351381
			Dilution Factor: 1					
Total Organic Carbon			Work Order #...:		G0P461CU		MS Lot-Sample #:	F4L100166-001
	2.9	5.00	7.92	mg/L	101	SW846 9060	12/16/04	4351511
			Dilution Factor: 1					
Total Organic Carbon			Work Order #...:		G0P7N1AD		MS Lot-Sample #:	F4L100169-005
	0.54	5.00	5.59	mg/L	101	SW846 9060	12/16/04	4351511
			Dilution Factor: 1					
Total Organic Carbon			Work Order #...:		G0QDR1AD		MS Lot-Sample #:	F4L100169-019
	0.71	5.00	5.65	mg/L	99	SW846 9060	12/18-12/20/04	4353079
			Dilution Factor: 1					
Total Organic Carbon			Work Order #...:		G0QTD1AL		MS Lot-Sample #:	F4L100169-034
	0.70	5.00	5.56	mg/L	97	SW846 9060	12/18-12/20/04	4353079
			Dilution Factor: 1					
Total Organic Carbon			Work Order #...:		G0W661AL		MS Lot-Sample #:	F4L130171-002
	0.46	5.00	5.64	mg/L	103	SW846 9060	12/18-12/20/04	4353079
			Dilution Factor: 1					
Total Organic Carbon			Work Order #...:		G0W7M1AF		MS Lot-Sample #:	F4L130171-007
	0.69	5.00	5.83	mg/L	103	SW846 9060	12/18-12/20/04	4353080
			Dilution Factor: 1					
Total Organic Carbon			Work Order #...:		G0XAX1AM		MS Lot-Sample #:	F4L130171-027
	0.60	5.00	5.66	mg/L	101	SW846 9060	12/18-12/20/04	4353080
			Dilution Factor: 1					
Total Organic Carbon			Work Order #...:		G0XAX1AU		MS Lot-Sample #:	F4L130171-027
	0.60	5.00	5.66	mg/L	101	SW846 9060	12/18-12/20/04	4353080
			Dilution Factor: 1					

(Continued on next page)

MATRIX SPIKE SAMPLE DATA REPORT

General Chemistry

Client Lot #...: SL429 **Matrix.....:** WATER
Date Sampled...: 12/09/04 **Date Received..:** 12/10/04

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon			Work Order #...:		G01W41AL		MS Lot-Sample #:	F4L140259-002
	0.58	5.00	6.00	mg/L	108	SW846 9060	12/18-12/20/04	4353081
			Dilution Factor: 1					
Total Organic Carbon			Work Order #...:		G01481AE		MS Lot-Sample #:	F4L140259-008
	0.98	5.00	6.02	mg/L	101	SW846 9060	12/27-12/28/04	4362154
			Dilution Factor: 1					
Total Organic Carbon			Work Order #...:		G05JK1AJ		MS Lot-Sample #:	F4L150301-003
	0.68	5.00	5.78	mg/L	102	SW846 9060	12/27-12/28/04	4362154
			Dilution Factor: 1					
TOX			Work Order #...:		G0P7N1AE		MS Lot-Sample #:	F4L100169-005
	5.2	100	101	ug/L	96	SW846 9020B	12/17/04	4355091
			Dilution Factor: 1					
TOX			Work Order #...:		G0P8T1AD		MS Lot-Sample #:	F4L100169-008
	15.0	100	107	ug/L	92	SW846 9020B	12/17/04	4355091
			Dilution Factor: 1					
TOX			Work Order #...:		G0QAE1AD		MS Lot-Sample #:	F4L100169-015
	6.0	100	105	ug/L	99	SW846 9020B	12/18/04	4355092
			Dilution Factor: 1					
TOX			Work Order #...:		G0QC11AP		MS Lot-Sample #:	F4L100169-017
	9.0	100	96.1	ug/L	87	SW846 9020B	12/20/04	4356570
			Dilution Factor: 1					
TOX			Work Order #...:		G0QJC1AE		MS Lot-Sample #:	F4L100169-026
	ND	100	101	ug/L	99	SW846 9020B	12/22-12/29/04	4364378
			Dilution Factor: 1					
TOX			Work Order #...:		G0QTD1AM		MS Lot-Sample #:	F4L100169-034
	ND	100	101	ug/L	101	SW846 9020B	12/22-12/29/04	4364378
			Dilution Factor: 1					
TOX			Work Order #...:		G0W7M1AG		MS Lot-Sample #:	F4L130171-007
	3.8	100	101	ug/L	97	SW846 9020B	12/23-12/29/04	4364415
			Dilution Factor: 1					
TOX			Work Order #...:		G0XAX1AN		MS Lot-Sample #:	F4L130171-027
	8.1	100	105	ug/L	97	SW846 9020B	12/24-12/29/04	4364445
			Dilution Factor: 1					

(Continued on next page)

MATRIX SPIKE SAMPLE DATA REPORT

General Chemistry

Client Lot #...: SL429 **Matrix.....:** WATER
Date Sampled...: 12/09/04 **Date Received..:** 12/10/04

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
TOX			Work Order #...:		G0XDF1AD		MS Lot-Sample #:	F4L130171-040
	ND	100	101	ug/L	100	SW846 9020B	12/26-12/29/04	4364463
			Dilution Factor: 1					
TOX			Work Order #...:		G0XEC1AD		MS Lot-Sample #:	F4L130171-050
	ND	100	96.8	ug/L	93	SW846 9020B	12/27-12/29/04	4364470
			Dilution Factor: 1					
TOX			Work Order #...:		G01W41AM		MS Lot-Sample #:	F4L140259-002
	ND	100	99.9	ug/L	100	SW846 9020B	12/21-12/29/04	4364310
			Dilution Factor: 1					

NOTE(S):

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

D Result was obtained from the analysis of a dilution.

N Spiked analyte recovery is outside stated control limits.

METHOD BLANK REPORT

General Chemistry

Client Lot #...: SL429 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride		Work Order #: G0T7E1AA		MB Lot-Sample #:	F4L110000-026	
	0.065 B	**0.20**	**mg/L**	**MCAWW 300.0A**	**12/10/04**	**4346026**
		Dilution Factor: 1				
Chloride		Work Order #: G0XT01AA		MB Lot-Sample #:	F4L130000-541	
	0.063 B	**0.20**	**mg/L**	**MCAWW 300.0A**	**12/11/04**	**4348541**
		Dilution Factor: 1				
Chloride		Work Order #: G03RL1AA		MB Lot-Sample #:	F4L150000-142	
	ND	0.20	mg/L	MCAWW 300.0A	12/14/04	4350142
		Dilution Factor: 1				
Conductivity		Work Order #: G1Q1F1AA		MB Lot-Sample #:	F4L230000-140	
	ND	1.0	~~umhos~~ uS/cm	MCAWW 120.1	12/23/04	4358140
		Dilution Factor: 1				
Fluoride		Work Order #: G0T7H1AA		MB Lot-Sample #:	F4L110000-027	mw 1.13.05
	ND	0.10	mg/L	MCAWW 300.0A	12/10/04	4346027
		Dilution Factor: 1				
Fluoride		Work Order #: G0XT11AA		MB Lot-Sample #:	F4L130000-542	
	ND	0.10	mg/L	MCAWW 300.0A	12/11/04	4348542
		Dilution Factor: 1				
Fluoride		Work Order #: G03RM1AA		MB Lot-Sample #:	F4L150000-143	
	ND	0.10	mg/L	MCAWW 300.0A	12/14/04	4350143
		Dilution Factor: 1				
Nitrate		Work Order #: G0T7K1AA		MB Lot-Sample #:	F4L110000-028	
	ND	0.020	mg/L	MCAWW 300.0A	12/10/04	4346028
		Dilution Factor: 1				
Nitrate		Work Order #: G0XT21AA		MB Lot-Sample #:	F4L130000-543	
	ND	0.020	mg/L	MCAWW 300.0A	12/11/04	4348543
		Dilution Factor: 1				
Nitrate		Work Order #: G03RN1AA		MB Lot-Sample #:	F4L150000-144	
	ND	0.020	mg/L	MCAWW 300.0A	12/14/04	4350144
		Dilution Factor: 1				
Nitrite		Work Order #: G0T7M1AA		MB Lot-Sample #:	F4L110000-029	
	ND	0.020	mg/L	MCAWW 300.0A	12/10/04	4346029
		Dilution Factor: 1				

(Continued on next page)

METHOD BLANK REPORT

General Chemistry

Client Lot #...: SL429 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Nitrite		Work Order #: G0XT31AA		MB Lot-Sample #:	F4L130000-544	
	ND	0.020	mg/L	MCAWW 300.0A	12/11/04	4348544
		Dilution Factor: 1				
Nitrite		Work Order #: G03RP1AA		MB Lot-Sample #:	F4L150000-145	
	ND	0.020	mg/L	MCAWW 300.0A	12/14/04	4350145
		Dilution Factor: 1				
Sulfate		Work Order #: G0T7Q1AA		MB Lot-Sample #:	F4L110000-030	
	ND	0.50	mg/L	MCAWW 300.0A	12/10/04	4346030
		Dilution Factor: 1				
Sulfate		Work Order #: G0XT41AA		MB Lot-Sample #:	F4L130000-545	
	0.14 B	**0.50**	**mg/L**	**MCAWW 300.0A**	**12/11/04**	**4348545**
		Dilution Factor: 1				
Sulfate		Work Order #: G03RR1AA		MB Lot-Sample #:	F4L150000-146	
	ND	0.50	mg/L	MCAWW 300.0A	12/14/04	4350146
		Dilution Factor: 1				
Total Alkalinity		Work Order #: G1HAM1AA		MB Lot-Sample #:	F4L170000-481	
	ND	5.0	mg/L	MCAWW 310.1	12/16-12/20/04	4352481
		Dilution Factor: 1				
Total Alkalinity		Work Order #: G1KW91AA		MB Lot-Sample #:	F4L200000-446	
	ND	5.0	mg/L	MCAWW 310.1	12/21/04	4355446
		Dilution Factor: 1				
Total Alkalinity		Work Order #: G1Q1P1AA		MB Lot-Sample #:	F4L200000-450	
	ND	5.0	mg/L	MCAWW 310.1	12/23/04	4355450
		Dilution Factor: 1				
Total Cyanide		Work Order #: G08ED1AA		MB Lot-Sample #:	F4L160000-381	
	ND	5.0	ug/L	SW846 9012	12/14/04	4351381
		Dilution Factor: 1				
Total Cyanide		Work Order #: G1CE61AA		MB Lot-Sample #:	F4L170000-237	
	ND	5.0	ug/L	SW846 9012	12/16/04	4352237
		Dilution Factor: 1				
Total Cyanide		Work Order #: G1R3M1AA		MB Lot-Sample #:	F4L270000-283	
	ND	5.0	ug/L	SW846 9012	12/20-12/21/04	4362283
		Dilution Factor: 1				

(Continued on next page)

METHOD BLANK REPORT

General Chemistry

Client Lot #...: SL429 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Dissolved Solids		Work Order #: G09DK1AA		MB Lot-Sample #:	F4L160000-461	
	ND	5.0	mg/L	MCAWW 160.1	12/16-12/21/04	4351461
		Dilution Factor: 1				
Total Organic Carbon		Work Order #: G09KW1AA		MB Lot-Sample #:	F4L160000-511	
	ND	1.0	mg/L	SW846 9060	12/16/04	4351511
		Dilution Factor: 1				
Total Organic Carbon		Work Order #: G09K21AA		MB Lot-Sample #:	F4L160000-512	
	ND	1.0	mg/L	SW846 9060	12/16/04	4351512
		Dilution Factor: 1				
Total Organic Carbon		Work Order #: G1FQN1AA		MB Lot-Sample #:	F4L180000-079	
	ND	1.0	mg/L	SW846 9060	12/18-12/20/04	4353079
		Dilution Factor: 1				
Total Organic Carbon		Work Order #: G1FQT1AA		MB Lot-Sample #:	F4L180000-080	
	ND	1.0	mg/L	SW846 9060	12/18-12/20/04	4353080
		Dilution Factor: 1				
Total Organic Carbon		Work Order #: G1FQW1AA		MB Lot-Sample #:	F4L180000-081	
	ND	1.0	mg/L	SW846 9060	12/18-12/20/04	4353081
		Dilution Factor: 1				
Total Organic Carbon		Work Order #: G1FQX1AA		MB Lot-Sample #:	F4L180000-082	
	ND	1.0	mg/L	SW846 9060	12/18-12/20/04	4353082
		Dilution Factor: 1				
Total Organic Carbon		Work Order #: G1RGJ1AA		MB Lot-Sample #:	F4L270000-154	
	ND	1.0	mg/L	SW846 9060	12/27-12/28/04	4362154
		Dilution Factor: 1				
TOX		Work Order #: G1L711AA		MB Lot-Sample #:	F4L200000-091	
	ND	5.0	ug/L	SW846 9020B	12/17/04	4355091
		Dilution Factor: 1				
TOX		Work Order #: G1L721AA		MB Lot-Sample #:	F4L200000-092	
	ND	5.0	ug/L	SW846 9020B	12/18/04	4355092
		Dilution Factor: 1				
TOX		Work Order #: G1L731AA		MB Lot-Sample #:	F4L210000-570	
	ND	5.0	ug/L	SW846 9020B	12/20/04	4356570
		Dilution Factor: 1				

(Continued on next page)

METHOD BLANK REPORT

General Chemistry

Client Lot #...: SL429 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
TOX		Work Order #: G1XVM1AA		MB Lot-Sample #:	F4L290000-310	
	ND	5.0	ug/L	SW846 9020B	12/21-12/29/04	4364310
		Dilution Factor: 1				
TOX		Work Order #: G1X2T1AA		MB Lot-Sample #:	F4L290000-378	
	ND	5.0	ug/L	SW846 9020B	12/22-12/29/04	4364378
		Dilution Factor: 1				
TOX		Work Order #: G1X651AA		MB Lot-Sample #:	F4L290000-415	
	ND	5.0	ug/L	SW846 9020B	12/23-12/29/04	4364415
		Dilution Factor: 1				
TOX		Work Order #: G1X8V1AA		MB Lot-Sample #:	F4L290000-445	
	ND	5.0	ug/L	SW846 9020B	12/24-12/29/04	4364445
		Dilution Factor: 1				
TOX		Work Order #: G1X9Q1AA		MB Lot-Sample #:	F4L290000-463	
	ND	5.0	ug/L	SW846 9020B	12/26-12/29/04	4364463
		Dilution Factor: 1				
TOX		Work Order #: G1X9X1AA		MB Lot-Sample #:	F4L290000-470	
	ND	5.0	ug/L	SW846 9020B	12/27-12/29/04	4364470
		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 #...: SL429 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride		WO#:G0T7E1AC-LCS/G0T7E1AD-LCSD				LCS Lot-Sample#: F4L110000-026		
	1.00	0.986	mg/L	99		MCAWW 300.0A	12/10/04	4346026
	1.00	1.02	mg/L	102	3.0	MCAWW 300.0A	12/10/04	4346026
		Dilution Factor: 1						
Chloride		WO#:G0XT01AC-LCS/G0XT01AD-LCSD				LCS Lot-Sample#: F4L130000-541		
	1.00	0.979	mg/L	98		MCAWW 300.0A	12/11/04	4348541
	1.00	1.01	mg/L	101	3.0	MCAWW 300.0A	12/11/04	4348541
		Dilution Factor: 1						
Chloride		WO#:G03RL1AC-LCS/G03RL1AD-LCSD				LCS Lot-Sample#: F4L150000-142		
	1.00	0.992	mg/L	99		MCAWW 300.0A	12/14/04	4350142
	1.00	0.991	mg/L	99	0.18	MCAWW 300.0A	12/14/04	4350142
		Dilution Factor: 1						
Fluoride		WO#:G0T7H1AC-LCS/G0T7H1AD-LCSD				LCS Lot-Sample#: F4L110000-027		
	0.500	0.526	mg/L	105		MCAWW 300.0A	12/10/04	4346027
	0.500	0.515	mg/L	103	2.1	MCAWW 300.0A	12/10/04	4346027
		Dilution Factor: 1						
Fluoride		WO#:G0XT11AC-LCS/G0XT11AD-LCSD				LCS Lot-Sample#: F4L130000-542		
	0.500	0.515	mg/L	103		MCAWW 300.0A	12/11/04	4348542
	0.500	0.516	mg/L	103	0.34	MCAWW 300.0A	12/11/04	4348542
		Dilution Factor: 1						
Fluoride		WO#:G03RM1AC-LCS/G03RM1AD-LCSD				LCS Lot-Sample#: F4L150000-143		
	0.500	0.508	mg/L	102		MCAWW 300.0A	12/14/04	4350143
	0.500	0.514	mg/L	103	1.2	MCAWW 300.0A	12/14/04	4350143
		Dilution Factor: 1						
Nitrate		WO#:G0T7K1AC-LCS/G0T7K1AD-LCSD				LCS Lot-Sample#: F4L110000-028		
	0.200	0.190	mg/L	95		MCAWW 300.0A	12/10/04	4346028
	0.200	0.195	mg/L	97	2.6	MCAWW 300.0A	12/10/04	4346028
		Dilution Factor: 1						
Nitrate		WO#:G0XT21AC-LCS/G0XT21AD-LCSD				LCS Lot-Sample#: F4L130000-543		
	0.200	0.194	mg/L	97		MCAWW 300.0A	12/11/04	4348543
	0.200	0.192	mg/L	96	0.95	MCAWW 300.0A	12/11/04	4348543
		Dilution Factor: 1						

(Continued on next page)

LABORATORY CONTROL SAMPLE DATA REPORT

General Chemistry

Lot-Sample #...: SL429 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Nitrate		WO#:G03RN1AC-LCS/G03RN1AD-LCSD				LCS Lot-Sample#: F4L150000-144		
	0.200	0.191	mg/L	96		MCAWW 300.0A	12/14/04	4350144
	0.200	0.191	mg/L	96	0.09	MCAWW 300.0A	12/14/04	4350144
		Dilution Factor: 1						
Nitrite		WO#:G0T7M1AC-LCS/G0T7M1AD-LCSD				LCS Lot-Sample#: F4L110000-029		
	0.0800	0.0814	mg/L	102		MCAWW 300.0A	12/10/04	4346029
	0.0800	0.0820	mg/L	102	0.69	MCAWW 300.0A	12/10/04	4346029
		Dilution Factor: 1						
Nitrite		WO#:G0XT31AC-LCS/G0XT31AD-LCSD				LCS Lot-Sample#: F4L130000-544		
	0.0800	0.0782	mg/L	98		MCAWW 300.0A	12/11/04	4348544
	0.0800	0.0824	mg/L	103	5.3	MCAWW 300.0A	12/11/04	4348544
		Dilution Factor: 1						
Nitrite		WO#:G03RP1AC-LCS/G03RP1AD-LCSD				LCS Lot-Sample#: F4L150000-145		
	0.0800	0.0794	mg/L	99		MCAWW 300.0A	12/14/04	4350145
	0.0800	0.0831	mg/L	104	4.6	MCAWW 300.0A	12/14/04	4350145
		Dilution Factor: 1						
Sulfate		WO#:G0T7Q1AC-LCS/G0T7Q1AD-LCSD				LCS Lot-Sample#: F4L110000-030		
	4.00	3.83	mg/L	96		MCAWW 300.0A	12/10/04	4346030
	4.00	3.73	mg/L	93	2.8	MCAWW 300.0A	12/10/04	4346030
		Dilution Factor: 1						
Sulfate		WO#:G0XT41AC-LCS/G0XT41AD-LCSD				LCS Lot-Sample#: F4L130000-545		
	4.00	3.70	mg/L	93		MCAWW 300.0A	12/11/04	4348545
	4.00	3.76	mg/L	94	1.4	MCAWW 300.0A	12/11/04	4348545
		Dilution Factor: 1						
Sulfate		WO#:G03RR1AC-LCS/G03RR1AD-LCSD				LCS Lot-Sample#: F4L150000-146		
	4.00	3.74	mg/L	94		MCAWW 300.0A	12/14/04	4350146
	4.00	3.67	mg/L	92	1.8	MCAWW 300.0A	12/14/04	4350146
		Dilution Factor: 1						
Total Alkalinity		WO#:G1KW91AC-LCS/G1KW91AD-LCSD				LCS Lot-Sample#: F4L200000-446		
	200	184	mg/L	92		MCAWW 310.1	12/21/04	4355446
	200	185	mg/L	92	0.54	MCAWW 310.1	12/21/04	4355446
		Dilution Factor: 1						

(Continued on next page)

LABORATORY CONTROL SAMPLE DATA REPORT

General Chemistry

Lot-Sample #...: SL429 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Alkalinity		WO#:G1Q1P1AC-LCS/G1Q1P1AD-LCSD				LCS Lot-Sample#: F4L200000-450		
	200	184	mg/L	92		MCAWW 310.1	12/23/04	4355450
	200	185	mg/L	92	0.54	MCAWW 310.1	12/23/04	4355450
		Dilution Factor: 1						
Total Organic Carbon		WO#:G09KW1AC-LCS/G09KW1AD-LCSD				LCS Lot-Sample#: F4L160000-511		
	6.00	6.00	mg/L	100		SW846 9060	12/16/04	4351511
	6.00	5.96	mg/L	99	0.50	SW846 9060	12/16/04	4351511
		Dilution Factor: 1						
Total Organic Carbon		WO#:G09K21AC-LCS/G09K21AD-LCSD				LCS Lot-Sample#: F4L160000-512		
	6.00	5.96	mg/L	99		SW846 9060	12/16/04	4351512
	6.00	6.09	mg/L	101	2.1	SW846 9060	12/16/04	4351512
		Dilution Factor: 1						
Total Organic Carbon		WO#:G1FQN1AC-LCS/G1FQN1AD-LCSD				LCS Lot-Sample#: F4L180000-079		
	6.00	6.15	mg/L	102		SW846 9060	12/18-12/20/04	4353079
	6.00	6.05	mg/L	101	1.6	SW846 9060	12/18-12/20/04	4353079
		Dilution Factor: 1						
Total Organic Carbon		WO#:G1FQT1AC-LCS/G1FQT1AD-LCSD				LCS Lot-Sample#: F4L180000-080		
	6.00	6.29	mg/L	105		SW846 9060	12/18-12/20/04	4353080
	6.00	6.42	mg/L	107	2.0	SW846 9060	12/18-12/20/04	4353080
		Dilution Factor: 1						
Total Organic Carbon		WO#:G1FQW1AC-LCS/G1FQW1AD-LCSD				LCS Lot-Sample#: F4L180000-081		
	6.00	6.32	mg/L	105		SW846 9060	12/18-12/20/04	4353081
	6.00	6.32	mg/L	105	0.07	SW846 9060	12/18-12/20/04	4353081
		Dilution Factor: 1						
Total Organic Carbon		WO#:G1FQX1AC-LCS/G1FQX1AD-LCSD				LCS Lot-Sample#: F4L180000-082		
	6.00	6.24	mg/L	104		SW846 9060	12/18-12/20/04	4353082
	6.00	6.26	mg/L	104	0.44	SW846 9060	12/18-12/20/04	4353082
		Dilution Factor: 1						
Total Organic Carbon		WO#:G1RGJ1AC-LCS/G1RGJ1AD-LCSD				LCS Lot-Sample#: F4L270000-154		
	6.00	6.17	mg/L	103		SW846 9060	12/27-12/28/04	4362154
	6.00	6.18	mg/L	103	0.14	SW846 9060	12/27-12/28/04	4362154
		Dilution Factor: 1						

(Continued on next page)

LABORATORY CONTROL SAMPLE DATA REPORT

General Chemistry

Lot-Sample #...: SL429 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #

NOTE(S):

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

LABORATORY CONTROL SAMPLE DATA REPORT

General Chemistry

Client Lot #...: SL429 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Conductivity			Work Order #: G1Q1F1AC		LCS Lot-Sample#:	F4L230000-140	
	1410	1290	~~umhos~~ uS/cm	91	MCAWW 120.1	12/23/04	4358140
			Dilution Factor: 1				
Total Alkalinity			Work Order #: G1HAM1AC		LCS Lot-Sample#:	F4L170000-481	
	200	184	mg/L	92	MCAWW 310.1	12/16-12/20/04	4352481
			Dilution Factor: 1				
Total Cyanide			Work Order #: G08ED1AC		LCS Lot-Sample#:	F4L160000-381	
	100	99.5	ug/L	100	SW846 9012	12/14/04	4351381
			Dilution Factor: 1				
Total Cyanide			Work Order #: G1CE61AC		LCS Lot-Sample#:	F4L170000-237	
	100	93.8	ug/L	94	SW846 9012	12/16/04	4352237
			Dilution Factor: 1				
Total Cyanide			Work Order #: G1R3M1AC		LCS Lot-Sample#:	F4L270000-283	
	100	91.0	ug/L	91	SW846 9012	12/20-12/21/04	4362283
			Dilution Factor: 1				
Total Dissolved Solids			Work Order #: G09DK1AC		LCS Lot-Sample#:	F4L160000-461	
	500	511	mg/L	102	MCAWW 160.1	12/16-12/21/04	4351461
			Dilution Factor: 1				
TOX			Work Order #: G1L711AC		LCS Lot-Sample#:	F4L200000-091	
	100	97.2	ug/L	97	SW846 9020B	12/17/04	4355091
			Dilution Factor: 1				
TOX			Work Order #: G1L721AC		LCS Lot-Sample#:	F4L200000-092	
	100	99.3	ug/L	99	SW846 9020B	12/18/04	4355092
			Dilution Factor: 1				
TOX			Work Order #: G1L731AC		LCS Lot-Sample#:	F4L210000-570	
	100	97.3	ug/L	97	SW846 9020B	12/20/04	4356570
			Dilution Factor: 1				
TOX			Work Order #: G1XVM1AC		LCS Lot-Sample#:	F4L290000-310	
	100	96.9	ug/L	97	SW846 9020B	12/21-12/29/04	4364310
			Dilution Factor: 1				
TOX			Work Order #: G1X2T1AC		LCS Lot-Sample#:	F4L290000-378	
	100	96.8	ug/L	97	SW846 9020B	12/22-12/29/04	4364378
			Dilution Factor: 1				

MW 1.13.05

(Continued on next page)

LABORATORY CONTROL SAMPLE DATA REPORT

General Chemistry

Client Lot #...: SL429 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
TOX			Work Order #: G1X651AC		LCS Lot-Sample#: F4L290000-415		
	100	99.5	ug/L	99	SW846 9020B	12/23-12/29/04	4364415
			Dilution Factor: 1				
TOX			Work Order #: G1X8V1AC		LCS Lot-Sample#: F4L290000-445		
	100	98.6	ug/L	99	SW846 9020B	12/24-12/29/04	4364445
			Dilution Factor: 1				
TOX			Work Order #: G1X9Q1AC		LCS Lot-Sample#: F4L290000-463		
	100	108	ug/L	108	SW846 9020B	12/26-12/29/04	4364463
			Dilution Factor: 1				
TOX			Work Order #: G1X9X1AC		LCS Lot-Sample#: F4L290000-470		
	100	101	ug/L	101	SW846 9020B	12/27-12/29/04	4364470
			Dilution Factor: 1				

NOTE(S):

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

METHOD BLANK REPORT

General Chemistry

Client Lot #...: F5F090325 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Cyanide		Work Order #: HDPQ51AA		MB Lot-Sample #:	F5F160000-123	
	ND	5.0	ug/L	SW846 9012	06/13-06/14/05	5167123
		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 #...: F5F090325 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Cyanide			Work Order #: HDPQ51AC LCS Lot-Sample#: F5F160000-123				
	100	96.1	ug/L	96	SW846 9012	06/13-06/14/05	5167123
			Dilution Factor: 1				

NOTE(S):

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

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: F5F090325 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Cyanide		Work Order #: HDPQ51AC		LCS Lot-Sample#: F5F160000-123	
	96	(90 - 110)	SW846 9012	06/13-06/14/05	5167123
		Dilution Factor: 1			

NOTE(S):

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