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Virtual Laboratories Everywhere

0051504

**Recra LabNet Philadelphia
Analytical Report**

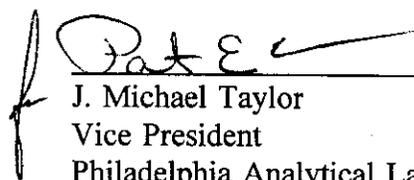
Client : TNU-HANFORD C99-029
RFW# : 9904L650
SDG# : H0378
SAF# : C99-029

W.O. # : 10985-001-001-9999-00
Date Received: 04-09-99

INORGANIC CASE NARRATIVE

1. This narrative covers the analysis of 3 water samples; sample B0V3J8 was not analyzed for Ammonia. A copy of the Sample Discrepancy Report (SDR) is enclosed.
2. The samples were prepared and analyzed in accordance with the method checked on the attached glossary.
3. Sample holding times as required by the method and/or contract were met.
4. The cooler temperature was recorded on the chain-of-custody.
5. The method blank was above the reporting limit.
6. The Laboratory Control Samples (LCS) were within the laboratory control limits. The duplicate LCS was within the 20% Relative Percent Difference (RPD) control limit.
7. The replicate analysis was outside the 20% RPD control limit which may be attributed to sample inhomogeneity.





 J. Michael Taylor
 Vice President
 Philadelphia Analytical Laboratory

5-21-99
 Date

njp&pef\04-650

The results presented in this report relate only to the analytical testing and conditions of the samples at receipt and during storage. All pages of this report are integral parts of the analytical data. Therefore, this report should only be reproduced in its entirety of 15 pages (includes 002A).

WET CHEMISTRY METHODS GLOSSARY FOR ANALYSIS OF WATER SAMPLES

	<u>EPA 600</u>	<u>SW846</u>	<u>OTHER</u>
Acidity	_305.1		
_Alkalinity _Bicarbonate _Carbonate	_310.1		
BOD	_405.1		_5210B (b)
Ion Chromatography:			
_Bromide _Chloride _Fluoride	_300.0	_9056	
_Nitrite _Nitrate _Phosphate	_300.0	_9056	
_Sulfate _Formate _Acetate _Oxalate	_300.0	_9056	
Chloride	_325.2	_9251	
Chlorine Residual	_330.5 (mod)		
Cyanide Amenable to Chlorination	_335.2	_9010A	
Cyanide (Total)	_335.2	_9010A _9012	_ILM04.0 (e)
Cyanide, Weak Acid Dissociable			_412 (a) _4500CN-I (b)
COD	_410.4 (mod)		_5220 C (b)
Color	_110.2		
Corrosivity (by Coupon)		_1110 (mod)	
Chromium VI		_7196A	_3500Cr-D (b)
Fluoride	_340.2		
Hardness, Calcium	_215.2		
Hardness, Total	_130.2		
Iodide			_ASTM D19P202 (1)
Surfactant	_425.1		
_Nitrate-Nitrite _Nitrate _Nitrite	_353.2		
Ammonia	_350.3		
Total _Kjeldahl Nitrogen _Organic Nitrogen	_351.4		
Total _Organic _Inorganic Carbon	_415.1	_9060	
Oil and Grease	_413.1	_9070	
_pH _pH, Paper	_150.1	_9040A _9041A	
Petroleum Hydrocarbons, Total Recoverable	_418.1		
Phenol	_420.1 _420.2	_9065 _9066	
_Ortho Phosphate _Total Phosphate	_365.2		_4500-P B _C
Salinity			_210A (a) _2520B (b)
Settleable Solids	_160.5		
Sulfide	_376.2 _376.1	_9030A	
Reactive _Cyanide _Sulfide		_Sec 7.3	
Silica	_370.1		
Sulfite	_377.1		
Sulfate	_375.4	_9038	
Specific Conductance	_120.1	_9050	
Specific Gravity			_213E (a)
_TCLP _TCLV		_1311	
Synthetic Precipitation Leach		_1312	
Total _Dissolved _Suspended _Solids	160 _1 _2 _3		
Total Organic Halides	_450.1	_9020B	
Turbidity	_180.1		
Volatile Solids _Total _Dissolved _Suspended	_160.4		
Other: _____		Method: _____	

Recra LabNet Philadelphia Sample Discrepancy Report (SDR) SDR #:

99WC029

Initiator: R D BRANE RFW Batch: 9904L650
 Date: 4/15/99 Samples: -003
 Client: TNU-HANFORD C99-029 Method: SWB46/MCAWW/CLPI

Parameter: NH3
 Matrix: H2O
 Prep Batch: _____

1. Reason for SDR

a. COC Discrepancy Tech Profile Error Client Request Sampler Error on C-O-C
 Transcription Error Wrong Test Code Other _____

b. General Discrepancy

Missing Sample/Extract Container Broken Wrong Sample Pulled Label ID's Illegible
 Hold Time Exceeded Insufficient Sample Preservation Wrong Received Past Hold
 Improper Bottle Type Not Amenable to Analysis

Note: Verified by [Log-In] or [Prep Group] (circle)...signature/date: _____

c. QC Problem (Include all relevant specific results; attach data if necessary)

2. Known or Probable Causes(s)

Did we actually receive it?
 yes - verified by login

3. Discussion and Proposed Action

Other Description:

Re-log
 Entire Batch
 Following Samples: _____
 Re-leach
 Re-extract
 Re-digest
 Revise EDD
 Change Test Code to _____
 Place On/Take Off Hold (circle)

Cancel -003

4. Project Manager Instructions...signature/date:

Concur with Proposed Action
 Disagree with Proposed Action; See Instruction
 Include in Case Narrative
 Client Contacted:
 Date/Person Larry Johnson 5/5/99
 Add
 Cancel

[Signature] 5/5/99

5. Final Action...signature/date:

Verified re-[log][leach][extract][digest][analysis] (circle)
 Included in Case Narrative
 Hard Copy COC Revised
 Electronic COC Revised
 EDD Corrections Completed

Other Explanation:

5/5/99

When Final Action has been recorded, forward original to QA Specialist for distribution and filing.

Route Distribution of Completed SDR
 Initiator
 Lab Manager: C. Stefanosky
 Project Mgr: O. Johnson
 Section Mgr: Siery/Wesson/Daniels
 QA (file): Racioppi
 Data Management: Feldman
 Sample Prep: Schnell/Doughty/Kauffman

Route Distribution of Completed SDR
 Metals: Doughty
 Inorganic: Perrone
 GC/LC: Rycklak/Schnell
 MS: LeMin/Taylor/Kasdras
 Log-in: Toder
 Admin: Soos
 Other: _____

METHOD REFERENCES AND DATA QUALIFIERS

DATA QUALIFIERS

U = Indicates that the parameter was not detected at or above the reported limit. The associated numerical value is the sample detection limit.

* = Indicates that the original sample result is greater than 4x the spike amount added.

ABBREVIATIONS

MB = Method or Preparation Blank.

MS = Matrix Spike.

MSD = Matrix Spike Duplicate.

REP = Sample Replicate

LC = Laboratory Control Sample.

NC = Not calculated.

A suffix of -R, -S, or -T following these codes indicate a replicate, spike or sample duplicate analysis respectively.

ANALYTICAL WET CHEMISTRY METHODS

1. ASTM Standard Methods.
2. USEPA Methods for Chemical Analysis of Water and Wastes (USEPA 600/4-79-020).
3. Test Methods for Evaluating Solid Waste (USEPA SW-846).
 - a. Standard Methods for the Examination of Water and Waste, 16 ed., (1989).
 - b. Standard Methods for the Examination of Water and Waste, 17 ed., (1983)
 - c. Method of Soil Analysis, Part 1, Physical and Mineralogical Methods, 2nd. Ed. (1986)
 - d. Method of Soil Analysis, Part 2, Chemical and Microbiological Properties, Am. Soc. Agron., Madison, WI (1965)
 - e. USEPA Contract Laboratory Program, Statement of Work for Inorganic Analysis.
 - f. Code of Federal Regulations.

RFW 21-21L-034/D-06/96

Recra LabNet - Lionville

INORGANICS DATA SUMMARY REPORT 05/11/99

CLIENT: TNU-HANFORD C99-029

RECRA LOT #: 9904L650

WORK ORDER: 10985-001-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-----	-----	-----	-----	-----	-----	-----
-001	B0V2H0	Oil & Grease Gravimetri	5.6	MG/L	1.0	1.0
-002	B0V2H1	Oil & Grease Gravimetri	6.2	MG/L	1.0	1.0
-004	B0V3K1	Oil & Grease Gravimetri	1.8	MG/L	1.0	1.0

Recra LabNet - Lionville

INORGANICS METHOD BLANK DATA SUMMARY PAGE 05/11/99

CLIENT: TNU-HANFORD C99-029
WORK ORDER: 10985-001-001-9999-00

RECRA LOT #: 9904L650

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
BLANK10	99LOG009-MB1	Oil & Grease Gravimetri	1.6	MG/L	1.0	1.0

Recra LabNet - Lionville

INORGANICS ACCURACY REPORT 05/11/99

CLIENT: TNU-HANFORD C99-029

RECRA LOT #: 9904L650

WORK ORDER: 10985-001-001-9999-00

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	INITIAL RESULT	SPIKED AMOUNT	%RECOV	DILUTION FACTOR (SPK)
BLANK10	99LOG009-MB1	Oil & Grease Gravimetr	33.0	1.6	35.4	88.8	1.0
		Oil & Grease - Grav M	36.6	1.6	36.1	97.0	1.0

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INORGANICS DUPLICATE SPIKE REPORT 05/11/99

CLIENT: TNU-HANFORD C99-029
WORK ORDER: 10985-001-001-9999-00

RECRA LOT #: 9904L650

SAMPLE	SITE ID	ANALYTE	SPIKE#1 %RECOV	SPIKE#2 %RECOV	%DIFF
BLANK10	99LOG009-MB1	Oil & Grease - Grav	88.8	97.0	8.9

Recra LabNet - Lionville

INORGANICS PRECISION REPORT 05/11/99

CLIENT: TNU-HANFORD C99-029
WORK ORDER: 10985-001-001-9999-00

RECRA LOT #: 9904L650

SAMPLE	SITE ID	ANALYTE	INITIAL RESULT	REPLICATE	RPD	DILUTION FACTOR (REP)
-001REP	BOV2H0	Oil & Grease Gravimetri	5.6	3.8	38.3	1.0

Recra LabNet - Lionville Laboratory
 INORGANIC ANALYTICAL DATA PACKAGE FOR
 TNU-HANFORD C99-029

DATE RECEIVED: 04/09/99

RFW LOT # :9904L650

CLIENT ID /ANALYSIS	RFW #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
BOV2H0						
OIL & GREASE BY GRAV	001	W	99LOG009	04/06/99	04/30/99	05/03/99
OIL AND GREASE BY GR	001 REP	W	99LOG009	04/06/99	04/30/99	05/03/99
BOV2H1						
OIL & GREASE BY GRAV	002	W	99LOG009	04/06/99	04/30/99	05/03/99
BOV3K1						
OIL & GREASE BY GRAV	004	W	99LOG009	04/06/99	04/30/99	05/03/99

LAB QC:

OIL & GREASE BY GRAV	MB1	W	99LOG009	N/A	04/30/99	05/03/99
OIL AND GREASE BY GR	MB1 BS	W	99LOG009	N/A	04/30/99	05/03/99
OIL AND GREASE BY GR	MB1 BSD	W	99LOG009	N/A	04/30/99	05/03/99

SDR # B99-029

Revision #: 0

Date Initiated: 4/7/99

SAMPLE DISPOSITION RECORD

SAF: C99-029

OU: N/A

Project ID: NPDESAPR99

Task ID: N/A

Sampling Event: NPDESAPR99

Laboratory: TMA/RECRA; Quanterra Incorporated

Task Manager: J. V. Borghese

Sampling Information:

Number of Samples: 4

ID Numbers: B0V2H0, B0V2H1, B0V3J9, B0V3K1

Matrix: Water

Collection Date: 04/06/99

Issue Background:

Class: Project Data Use General Laboratory Direction Validation Direction Sample Management Direction

Type: Other General Laboratory Direction

Description: Change of analytical method for iron and chromium

Disposition:

Description:

These samples were originally to be analyzed for iron and chromium using methods 218.2 and 236.2, respectively. The laboratories inquired whether method 200.7 (trace levels) could be substituted for methods 218.2 and 236.2. After consultation with the client and review of project data needs, it was determined that method 200.7 can be substituted for methods 218.2 and 236.2.

Justification:

The NPDES permit allows analysis using 200.7. This method will meet the NPDES permit requirements.

Approval Signatures:

S. J. Trent

Project Coordinator (Print/Sign Name)

4/13/99

Date

J. V. Borghese

Task Manager (Print/Sign Name)

Date



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Virtual Laboratories Everywhere

Recra LabNet Philadelphia Analytical Report

Client : TNU-HANFORD C99-029
RFW# : 9904L650
SDG/SAF# : H0378/C99-029

W.O.# : 10985-001-001-9999-00
Date Received: 04-09-99

METALS CASE NARRATIVE

1. This narrative covers the analyses of 3 water samples.
2. The samples were prepared and analyzed in accordance with methods checked on the attached glossary.
3. All analyses were performed within the required holding times.
4. The cooler temperature has been recorded on the Chain of Custody.
5. All Initial and Continuing Calibration Verifications (ICV/CCVs) were within the 90-110% control limits.
6. All Initial and Continuing Calibration Blanks (ICB/CCBs) were within control limits (less than the PQL).
7. All preparation/method blanks (MB) were within method criteria {less than the Practical Quantitation Limit (3X the IDL) or samples greater than 20X MB value}. Refer to the Inorganics Method Blank Data Summary.
8. All ICP Interference Check Standards were within control limits.
9. All laboratory control samples (LCS) were within the laboratory control limits. Refer to the Inorganics Laboratory Control Standards Report.
10. All matrix spike (MS) recoveries were within the 75-125% control limits. Refer to the Inorganics Accuracy Report.
11. All duplicate analyses were within the 20% Relative Percent Difference (RPD) control limits. Refer to the Inorganics Precision Report.

The results presented in this report relate only to the analytical testing and conditions of the samples at receipt and during storage. All pages of this report are integral parts of the analytical data. Therefore, this report should only be reproduced in its entirety of 15 pages.

12. For the purposes of this report, the data has been reported to the Instrument Detection Limit (IDL). Values between the IDL and the Practical Quantitation Limit (PQL) are acquired in a region of less-certain quantification.

J. Michael Taylor
Vice President
Philadelphia Analytical Laboratory
mld/m04-650

Date



METALS METHOD GLOSSARY

The following methods are used as reference for the digestion and analysis of samples contained within this

Recra Lot#: 9904L650

Leaching Procedure: 1310 1311 1312 Other:_____

CLP Metals Digestion and Analysis Methods: ILM03.0 ILM04.0

Metals Digestion Methods: 3005A 3010A 3015 3020A 3050A 3051 200.7 SS17
 Other: _____

Metals Analysis Methods

	SW846	EPA	STD MTD	EPA OSWR	USATHAMA
Aluminum	6010B	200.7			99
Antimony	6010B 7041 ⁵	200.7 204.2			99
Arsenic	6010B 7060A ⁵	200.7 206.2	3113B		99
Barium	6010B	200.7			99
Beryllium	6010B	200.7			99
Bismuth	6010B ¹	200.7 ¹		1620	99
Boron	6010B	200.7			99
Cadmium	6010B 7131A ⁵	200.7 213.2			99
Calcium	6010B	200.7			99
Chromium	6010B 7191 ⁵	200.7 218.2			SS17
Cobalt	6010B	200.7			99
Copper	6010B 7211 ⁵	200.7 220.2			99
Iron	6010B	200.7			99
Lead	6010B 7421 ⁵	200.7 239.2	3113B		99
Lithium	6010B 7430 ⁴	200.7		1620	99
Magnesium	6010B	200.7			99
Manganese	6010B	200.7			99
Mercury	7470A ³ 7471A ³	245.1 ² 245.5 ²			99
Molybdenum	6010B	200.7			99
Nickel	6010B	200.7			99
Potassium	6010B 7610 ⁴	200.7 258.1 ⁴			99
Rare Earths	6010B ¹	200.7 ¹		1620	99
Selenium	6010B 7740 ⁵	200.7 270.2	3113B		99
Silicon	6010B ¹	200.7		1620	99
Silica	6010B	200.7		1620	99
Silver	6010B 7761 ⁵	200.7 272.2			99
Sodium	6010B 7770 ⁴	200.7 273.1 ⁴			99
Strontium	6010B	200.7			99
Thallium	6010B 7841 ⁵	200.7 279.2 200.9			99
Tin	6010B	200.7			99
Titanium	6010B	200.7			99
Uranium	6010B ¹	200.7 ¹		1620	99
Vanadium	6010B	200.7			99
Zinc	6010B	200.7			99
Zirconium	6010B ¹	200.7 ¹		1620	99

Other: _____

Method: _____

METHOD REFERENCES AND DATA QUALIFIERS

DATA QUALIFIERS

- U = Indicates that the parameter was not detected at or above the reported limit. The associated numerical value is the sample detection limit.
- * = Indicates that the original sample result is greater than 4x the spike amount added.

ABBREVIATIONS

- MB = Method or Preparation Blank.
MS = Matrix Spike.
MSD = Matrix Spike Duplicate.
REP = Sample Replicate
LCS = Laboratory Control Sample.
NC = Not calculated.

ANALYTICAL METAL METHODS

1. Not included in the method element list.
2. Modified Hg: Hg1 and Hg2 require less total volume of digestate due to the autosampler analysis. Sample volumes and reagents for mercury determinations in water and soil have been proportionately scaled down to adapt to this semi-automated technique. The sample volume used for water analysis is 33 mL. For soils, 0.1 grams of sample is taken to a final volume of 50 mL (including all reagents).
3. Modified Hg: Hg1 and Hg2 require less total volume of digestate due to the autosampler analysis. Sample volumes and reagents for mercury determinations in water and soil have been proportionately scaled down to adapt to this semi-automated technique. The sample volume used for water analysis is 33 mL. For soils, three 0.1 gram of sample is taken to a final volume of 50 mL (including all reagents).
4. Flame AA.
5. Graphite Furnace AA.

RFW 21-21L-033/N-10/96

Recra LabNet - Lionville

INORGANICS DATA SUMMARY REPORT 05/13/99

CLIENT: TNU-HANFORD C99-029

RECRA LOT #: 9904L650

WORK ORDER: 10985-001-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-----	-----	-----	-----	-----	-----	-----
-001	B0V2H0	Chromium, Total	3.5	u UG/L	3.5	1.0
		Iron, Total	17.1	UG/L	3.6	1.0
-002	B0V2H1	Chromium, Total	3.5	u UG/L	3.5	1.0
		Iron, Total	12.1	UG/L	3.6	1.0
-004	B0V3K1	Chromium, Total	3.5	u UG/L	3.5	1.0
		Iron, Total	5.9	UG/L	3.6	1.0

Recra LabNet - Lionville

INORGANICS METHOD BLANK DATA SUMMARY PAGE 05/13/99

CLIENT: TNU-HANFORD C99-029
 WORK ORDER: 10985-001-001-9999-00

RECRA LOT #: 9904L650

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
BLANK1	99L0282-MB1	Chromium, Total	3.5	u UG/L	3.5	1.0
		Iron, Total	9.5	UG/L	3.6	1.0

Recra LabNet - Lionville

INORGANICS ACCURACY REPORT 05/13/99

CLIENT: TNU-HANFORD C99-029

RECRA LOT #: 9904L650

WORK ORDER: 10985-001-001-9999-00

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	INITIAL RESULT	SPIKED AMOUNT	%RECOV	DILUTION FACTOR (SPK)
-----	-----	-----	-----	-----	-----	-----	-----
-001	BOV2H0	Chromium, Total	199	3.5 u	200	99.6	1.0
		Iron, Total	992	17.1	1000	97.5	1.0

Recra LabNet - Lionville

INORGANICS PRECISION REPORT 05/13/99

CLIENT: TNU-HANFORD C99-029

RECRA LOT #: 9904L650

WORK ORDER: 10985-001-001-9999-00

SAMPLE	SITE ID	ANALYTE	INITIAL			DILUTION
			RESULT	REPLICATE	RPD	FACTOR (REP)
-----	-----	-----	-----	-----	-----	-----
-001REP	B0V2H0	Chromium, Total	3.5 u	3.5 u	NC	1.0
		Iron, Total	17.1	18.7	8.9	1.0

Recra LabNet - Lionville

INORGANICS LABORATORY CONTROL STANDARDS REPORT 05/13/99

CLIENT: TNU-HANFORD C99-029

RECRA LOT #: 9904L650

WORK ORDER: 10985-001-001-9999-00

SAMPLE	SITE ID	ANALYTE	SPIKED	SPIKED	UNITS	%RECOV
			SAMPLE	AMOUNT		
*****	*****	*****	*****	*****	*****	*****
LCS1	99L0282-LC1	Chromium, LCS	500	500	UG/L	99.9
		Iron, LCS	5040	5000	UG/L	100.8

Recra LabNet - Lionville Laboratory
 INORGANIC ANALYTICAL DATA PACKAGE FOR
 TNU-HANFORD C99-029

DATE RECEIVED: 04/09/99

RFW LOT # :9904L650

CLIENT ID /ANALYSIS	RFW #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
---------------------	-------	-----	--------	------------	-----------	----------

B0V2H0

CHROMIUM, TOTAL	001	W	99L0282	04/06/99	05/09/99	05/10/99
CHROMIUM, TOTAL	001 REP	W	99L0282	04/06/99	05/09/99	05/10/99
CHROMIUM, TOTAL	001 MS	W	99L0282	04/06/99	05/09/99	05/10/99
IRON, TOTAL	001	W	99L0282	04/06/99	05/09/99	05/10/99
IRON, TOTAL	001 REP	W	99L0282	04/06/99	05/09/99	05/10/99
IRON, TOTAL	001 MS	W	99L0282	04/06/99	05/09/99	05/10/99

B0V2H1

CHROMIUM, TOTAL	002	W	99L0282	04/06/99	05/09/99	05/10/99
IRON, TOTAL	002	W	99L0282	04/06/99	05/09/99	05/10/99

B0V3K1

CHROMIUM, TOTAL	004	W	99L0282	04/06/99	05/09/99	05/10/99
IRON, TOTAL	004	W	99L0282	04/06/99	05/09/99	05/10/99

LAB QC:

CHROMIUM LABORATORY	LC1 BS	W	99L0282	N/A	05/09/99	05/10/99
CHROMIUM, TOTAL	MB1	W	99L0282	N/A	05/09/99	05/10/99
IRON LABORATORY	LC1 BS	W	99L0282	N/A	05/09/99	05/10/99
IRON, TOTAL	MB1	W	99L0282	N/A	05/09/99	05/10/99

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

Collector R.T SICKLE	Contact/Requester JH KESSNER	Telephone No. (509)375-4688	MSIN FAX
SAF No. C99-029	Sampling Origin HANFORD SITE	Purchase Order/Charge Code	
Project Title NPDES GW MONITORING APRIL 1999	Logbook No. W.M. 501-1126	Ice Chest No. 511554	Temp. 4 °C
Shipped To (Lab) TMA/RECRA	Method of Shipment GOVT. VEHICLE	Bill of Lading/Air Bill No. 4435 79 52 4370	
Protocol CERCLA	Data Turnaround 45 Days	Offsite Property No.	

POSSIBLE SAMPLE HAZARDS/REMARKS
* * *

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes No
FAX copies of QES & TMA log-in to DL Stewart (372-1704) & JH Kessner (372-9487)

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
BOV2H0		W	4-6-99	1048	1x500-mL GP	Chromium - 218.2 (GFAA), Iron 236.2	HNO3 to pH <2
BOV2H0		W	↓	↓	1x500-mL GP	Iron - 298.2 <i>SPW 3-23-99</i>	HNO3 to pH <2
BOV2H0		W			1x20-mL P	Activity Scan	None
BOV2H0		W			2x1000-mL G	Oil & Grease - 413.1	H2SO4 to pH <2 Cool 4C

Relinquished By R.T SICKLE	Print	Sign	Date/Time 4-6-99 1430	Received By Fred Ex	Print	Sign	Date/Time 4-6-99	Matrix * S = Soil DS = Drum Solid SE = Sediment DL = Drum Liquid SO = Solid T = Tissue SL = Sludge WT = Wine W = Water L = Liquid O = Oil V = Vegetation A = Air X = Other
Relinquished By Fred Ex			Date/Time 4-7-99 10:30	Received By McLorain JR Carow			Date/Time 4-7-99 10:30	
Relinquished By Fred Ex			Date/Time 4-9-99/0930	Received By D. Ymilt			Date/Time 4-9-99/0930	
Relinquished By			Date/Time	Received By			Date/Time	

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

012

Collector R.T SICKLE	Contact/Requester JH KESSNER	Telephone No. (509)375-4688	MSIN FAX
SAF No. C99-029	Sampling Origin HANFORD SITE	Purchase Order/Charge Code 4235 7982 450	
Project Title NPDES GW MONITORING APRIL 1999	Logbook No. WIN-5M1-1126	Ice Chest No. 5112554	Temp. 4 °C
Shipped To (Lab) TMA/RECRA	Method of Shipment GOVT VEHICLE	Bill of Lading/Air Bill No.	
Protocol CERCLA	Data Turnaround 45 Days	Offsite Property No.	

POSSIBLE SAMPLE HAZARDS/REMARKS	SPECIAL INSTRUCTIONS	Hold Time	Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
	FAX copies of QES & TMA log-in to DL Stewart (372-1704) & JH Kessner (372-9487)		

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
BOV2H1		W	4-6-99	1048	1x500-mL GP	Chromium - 218.2 (GFAA), Iron 236.2	HNO3 to pH <2
BOV2H1		W			1x500-mL GP	Iron 200.2 <i>SM 3-23-99</i>	HNO3 to pH <2
BOV2H1		W			1x20-mL P	Activity Scan	None
BOV2H1		W			2x1000-mL G	Oil & Grease - 413.1	H2SO4 to pH <2 Cool 4C

Relinquished By R.T SICKLE	Print <i>[Signature]</i>	Sign <i>[Signature]</i>	Date/Time 4-6-99 1430	Received By Fed Ex	Print <i>[Signature]</i>	Sign <i>[Signature]</i>	Date/Time 4-6-99	Matrix * S = Soil DS = Drum Solid SB = Sediment DL = Drum Liquid SO = Solid T = Tissue SL = Sludge W = Wine W = Water L = Liquid O = Oil V = Vegetation A = Air X = Other
Relinquished By Fed Ex			Date/Time 4-7-99 10:30	Received By JR Couso			Date/Time 4-7-99 10:30	
Relinquished By Fed Ex			Date/Time 4-7-99 0930	Received By [Signature]			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
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