40119-T/W

RECRA LabNet

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Virtual Laboratories Everywhere

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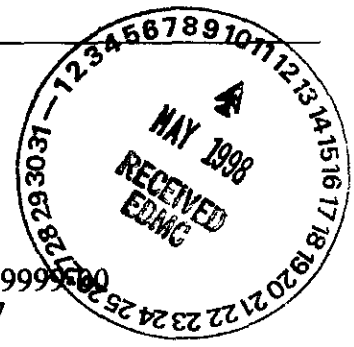

Recra LabNet Philadelphia
Analytical Report
REVISION

Client : TNU-HANFORD
RFW# : 9711L183

W.O.# : 10985-001-001-9999-00
Date Received: 11-06-97

METALS CASE NARRATIVE

This report is revised to include duplicate Chromium analysis as per client request. Pages 007A, 008 and 009 are included and should replace same pages in original report.

1. This narrative covers the Chromium analysis of 1 TCLP leachate sample.

2. The sample was prepared and analyzed in accordance with methods checked on the attached glossary.

3. The analysis was 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 control limits.

6. All Initial and Continuing Calibration Blanks (ICB/CCBs) were within control limits.

7. All preparation/method blanks were within method criteria. Refer to the Inorganics Method Blank Data Summary.

8. All ICP Interference Check Standards were within control limits.

9. The laboratory control sample (LCS) was within the laboratory control limits. Refer to the Inorganics Laboratory Control Standards Report.

10. The TCLP extract from sample BOM9C5 was selected for the matrix spike (MS) for this analytical batch. The MS recovery was greater than 50% as per method criteria.

11. The duplicate analysis was within the 20% Relative Percent Difference (RPD) control limits. Refer to the Inorganics Precision Report.

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.

Bruce C Taylor unit leader
for J. Michael Taylor
Vice President and Laboratory Manager
Lionville Analytical Laboratory

2-5-98
Date

skl\m11-183

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

SDG#: H0119
Laboratory Batch: 9711L183

W.O.#: 10985-001-001-9999-00
Collection Dates: 11-06-97

SAMPLE ID	LABORATORY ID
BOM9C5	9711L183-002

skl/m11-183.CP

METALS METHODS GLOSSARY

The following methods are used as reference for the digestion and analysis of samples contained within this RFW Lot#: 9711L183

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	__6010A	__200.7			__99
Antimony	__6010A __7041 [5]	__200.7 __204.2			__99
Arsenic	__6010A __7060A [5]	__200.7 __206.2	__3113B		__99
Barium	__6010A	__200.7			__99
Beryllium	__6010A	__200.7			__99
Bismuth	__6010A [1]	__200.7 [1]		__1620	__99
Boron	__6010A [1]	__200.7			__99
Cadmium	__6010A __7131A [5]	__200.7 __213.2			__99
Calcium	__6010A	__200.7			__99
Chromium	✓6010A __7191 [5]	__200.7 __218.2			__SS17
Cobalt	__6010A	__200.7			__99
Copper	__6010A __7211 [5]	__200.7 __220.2			__99
Iron	__6010A	__200.7			__99
Lead	__6010A __7421 [5]	__200.7 __239.2	__3113B		__99
Lithium	__6010A __7430 [4]	__200.7		__1620	__99
Magnesium	__6010A	__200.7			__99
Manganese	__6010A	__200.7			__99
Mercury	__7470A [3] __7471A [3]	__245.1 [2] __245.5 [2]			__99
Molybdenum	__6010A	__200.7			__99
Nickel	__6010A	__200.7			__99
Potassium	__6010A __7610 [4]	__200.7 __258.1 [4]			__99
Rare Earths	__6010A [1]	__200.7 [1]		__1620	__99
Selenium	__6010A __7740 [5]	__200.7 __270.2	__3113B		__99
Silicon	__6010A [1]	__200.7		__1620	__99
Silica	__6010A [1]	__200.7		__1620	__99
Silver	__6010A __7761 [5]	__200.7 __272.2			__99
Sodium	__6010A __7770 [4]	__200.7 __273.1 [4]			__99
Strontium	__6010A	__200.7			__99
Thallium	__6010A __7841 [5]	__200.7 __279.2 __200.9			__99
Tin	__6010A [1]	__200.7			__99
Titanium	__6010A [1]	__200.7			__99
Uranium	__6010A [1]	__200.7 [1]		__1620	__99
Vanadium	__6010A	__200.7			__99
Zinc	__6010A	__200.7			__99
Zirconium	__6010A [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.

Recra LabNet - Lionville

INORGANICS DATA SUMMARY REPORT 12/17/97

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

RECRA LOT #: 9711L183

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-002	B0M9C5	Chromium, TCLP Leachate	3840	UG/L	3.1	1.0

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

DATE RECEIVED: 11/06/97 RFW LOT # :9711L183

CLIENT ID /ANALYSIS	RFW #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
B0M9C5						
TCLP	001	SO	97LTO204	10/30/97	11/11/97	11/12/97
CHROMIUM, TCLP LEACH	002	W	97L2355	11/12/97	12/03/97	12/05/97
CHROMIUM, TCLP LEACH	002 REP	W	97L2527	11/12/97	12/31/97	01/08/98
CHROMIUM, TCLP LEACH	002 MS	W	97L2355	11/12/97	12/03/97	12/05/97
LAB QC:						
CHROMIUM LABORATORY	LC1 BS	W	97L2355	N/A	12/03/97	12/05/97
CHROMIUM, TCLP LEACH	MB1	W	97L2355	N/A	12/03/97	12/05/97
CHROMIUM, TCLP LEACH	MB2	W	97L2355	N/A	12/03/97	12/05/97
CHROMIUM, TCLP LEACH	MB3	W	97L2355	N/A	12/03/97	12/05/97
CHROMIUM LABORATORY	LC1 BS	W	97L2527	N/A	12/31/97	01/08/98
CHROMIUM, TCLP LEACH	MB1	W	97L2527	N/A	12/31/97	01/08/98

RECRA LabNet Use Only

97114183

Custody Transfer Record/Lab Work Request

RECRA LabNet

Client TNV HANFORD
Est. Final Proj. Sampling Date
Project # 10985-001-001-9999-00
Project Contact/Phone #
RECRA Project Manager Kyle Clay
QC STD Del STD TAT 30 DAY
Date Rec'd 11/6/97 Date Due 12/6/97
Account # TNVHANFORD

Refrigerator #
#/Type Container Liquid / Solid
Volume Liquid / Solid
Preservatives

ANALYSES REQUESTED → ORGANIC: VOA, BNA, Pest/PCB, Herb; INORG: Metal, CN; Cr; Bomb

MATRIX CODES:	Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected	RECRA LabNet Use Only: Bomb	TCLP	Cr	Bomb
B - Soil, SE - Sediment, SO - Solid, SL - Sludge, W - Water, O - Oil, A - Air, DS - Drum Solids, DL - Drum Liquids, L - EP/TCLP Leachate, WI - Wipe, X - Other, F - Fish	001	B0M9C5	✓	✓	SO	10/29/97	0905	✓	✓		
	002	B0M9C5 TCLP of 001	✓	✓	L	*				X	
	003	B0M9C5 Bomb of 001	✓	✓	SO	*					X

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Special Instructions:

SDG H0119
RSA - Client Info
RMSC - Comp.

3.8°C

DATE/REVISIONS:

1. Airbill w/ 97114184
2. → * See LABCHRON for Leachate Date
3. Collected.
4.
5.
6.

RECRA LabNet Use Only

Samples were: 1) Shipped ✓ or Hand Delivered ___ Airbill # ___
2) Ambient or Chilled
3) Received in Good Condition Y or N
4) Labels Indicate Properly Preserved Y or N
5) Received Within Holding Times Y or N

COC Tape was: 1) Present on Outer Package Y or N; 2) Unbroken on Outer Package Y or N; 3) Present on Sample Y or N; 4) Unbroken on Sample Y or N

COC Record Present Upon Sample Rec't Y or N

Discrepancies Between Samples Lables and COC Record? Y or N

NOTES: *4171415345

Relinquished by	Received by	Date	Time
Jedey	Jeder	11/6/97	1000

Relinquished by	Received by	Date	Time

ORIGINAL REWRITTEN

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