H1072

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Recra LabNet - Lionville Laboratory
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD B00-054 H1072

DATE RECEIVED: 10/04/00 RFW LOT # :0010L864

CLIENT ID /ANALYSIS	RFW #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
B10D77						
% SOLIDS	001	S	00L%S163	10/02/00	10/16/00	10/17/00
NITRITE BY IC	001	S	00LEC063	10/02/00	10/19/00	10/19/00
NITRATE BY IC	001	S	00LDC063	10/02/00	10/19/00	10/19/00
CHROMIUM VI	001	S	00LVI058	10/02/00	10/23/00	10/23/00
SULFATE BY IC	001	S	00LEC063	10/02/00	10/19/00	10/19/00
NITRATE NITRITE	001	S	00LN3A53	10/02/00	10/19/00	10/19/00
PH	001	S	00LPH084	10/02/00	10/11/00	10/11/00
PH	001 REP	S	00LPH084	10/02/00	10/11/00	10/11/00
B10D78						
% SOLIDS	002	S	00L%S163	10/02/00	10/16/00	10/17/00
% SOLIDS	002 REP	S	00L%S163	10/02/00	10/16/00	10/17/00
NITRITE BY IC	002	S	00LBC064	10/02/00	10/24/00	10/24/00
NITRITE BY IC	002 REP	S	00LBC064	10/02/00	10/24/00	10/24/00
NITRITE BY IC	002 MS	S	00LEC065	10/02/00	10/25/00	10/25/00
NITRATE BY IC	002	S	00LAC064	10/02/00	10/24/00	10/24/00
NITRATE BY IC	002 REP	S	00LAC064	10/02/00	10/24/00	10/24/00
NITRATE BY IC	002 MS	S	00LBC065	10/02/00	10/25/00	10/25/00
CHROMIUM VI	002	S	00LVI058	10/02/00	10/23/00	10/23/00
CHROMIUM VI	002 REP	S	00LVI058	10/02/00	10/23/00	10/23/00
CHROMIUM VI	002 MS	S	00LVI058	10/02/00	10/23/00	10/23/00
CHROMIUM VI	002 MSD	S	00LVI058	10/02/00	10/23/00	10/23/00
SULFATE BY IC	002	S	00LBC064	10/02/00	10/24/00	10/24/00
SULFATE BY IC	002 REP	S	00LBC064	10/02/00	10/24/00	10/24/00
SULFATE BY IC	002 MS	S	00LCC065	10/02/00	10/25/00	10/25/00
NITRATE NITRITE	002	S	00LN3A53	10/02/00	10/19/00	10/19/00
NITRATE NITRITE	002 REP	S	00LN3A53	10/02/00	10/19/00	10/19/00
NITRATE NITRITE	002 MS	S	00LN3A53	10/02/00	10/19/00	10/19/00
PH	002	S	00LPH084	10/02/00	10/11/00	10/11/00

LAB QC:

NITRITE BY IC	MB1	S	00LEC063	N/A	10/19/00	10/19/00
NITRITE BY IC	MB1 BS	S	00LEC063	N/A	10/19/00	10/19/00

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Recra LabNet - Lionville Laboratory
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD B00-054 H1072

DATE RECEIVED: 10/04/00 RFW LOT # :0010L864

CLIENT ID /ANALYSIS	RFW #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
NITRATE BY IC	MB1	S	00LDC063	N/A	10/19/00	10/19/00
NITRATE BY IC	MB1 BS	S	00LDC063	N/A	10/19/00	10/19/00
CHROMIUM VI	MB1	S	00LVI058	N/A	10/23/00	10/23/00
CHROMIUM VI	MB1 BS	S	00LVI058	N/A	10/23/00	10/23/00
CHROMIUM VI	MB1 BSD	S	00LVI058	N/A	10/23/00	10/23/00
SULFATE BY IC	MB1	S	00LEC063	N/A	10/19/00	10/19/00
SULFATE BY IC	MB1 BS	S	00LEC063	N/A	10/19/00	10/19/00
NITRATE NITRITE	MB1	S	00LN3A53	N/A	10/19/00	10/19/00
NITRATE NITRITE	MB1 BS	S	00LN3A53	N/A	10/19/00	10/19/00
NITRITE BY IC	MB1	S	00LBC064	N/A	10/24/00	10/24/00
NITRITE BY IC	MB1 BS	S	00LBC064	N/A	10/24/00	10/24/00
NITRITE BY IC	MB1	S	00LEC065	N/A	10/25/00	10/25/00
NITRITE BY IC	MB1 BS	S	00LEC065	N/A	10/25/00	10/25/00
NITRATE BY IC	MB1	S	00LAC064	N/A	10/24/00	10/24/00
NITRATE BY IC	MB1 BS	S	00LAC064	N/A	10/24/00	10/24/00
NITRATE BY IC	MB1	S	00LBC065	N/A	10/25/00	10/25/00
NITRATE BY IC	MB1 BS	S	00LBC065	N/A	10/25/00	10/25/00
SULFATE BY IC	MB1	S	00LBC064	N/A	10/24/00	10/24/00
SULFATE BY IC	MB1 BS	S	00LBC064	N/A	10/24/00	10/24/00
SULFATE BY IC	MB1	S	00LCC065	N/A	10/25/00	10/25/00
SULFATE BY IC	MB1 BS	S	00LCC065	N/A	10/25/00	10/25/00

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11.31.00

RECRA
ENVIRONMENTAL
INC.

Chemical and Environmental Measurement Information

NOV 2000
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Recra LabNet Philadelphia
Analytical Report

Client : TNU HANFORD B00-054 H1072
RFW# : 0010L864

W.O. # : 10985-001-001-9999-00
Date Received: 10-04-00

INORGANIC CASE NARRATIVE

1. This narrative covers the analyses of 2 samples.

2. The samples were prepared and analyzed in accordance with the methods indicated on the attached glossary.

3. Sample holding times as required by the method and/or contract were met.

4. The cooler temperatures were recorded on the chain-of-custody.

5. The method blanks were within method criteria.

6. The Laboratory Control Samples (LCS) were within the laboratory control limits.

7. The matrix spike recoveries were within the 75-125% control limits.

8. The replicate analyses were within the 20% Relative Percent Difference (RPD) control limit.

9. Results for solid samples are reported on a dry weight basis.

10. Sample B10D77 has a reduced reporting limit for Chromium VI due to the inability to reduce sample size to aliquot a 2.5 gram portion which is typically used for this analysis.

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

J. Michael Taylor
VP, Laboratory General Manager
Lionville Laboratory

11-13-00
Date

njp\i10-864

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 12 pages.

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Recra LabNet Philadelphia

WET CHEMISTRY
METHODS GLOSSARY FOR SOIL/SOLIDS SAMPLE ANALYSIS

	ASTM	SW846	OTHER
% Ash	__ D2216-80		
% Moisture	__ D2216-80		__ ILMO4.0 (e)
% Solids	✓ D2216-80		__ ILMO4.0 (e)
% Volatile Solids	__ D2216-80		
ASTM Extraction in Water	__ D3987-81/85		
BTU	__ D240-87		
CEC		__ 9081	__ c
Chromium VI		✓ 3060A/7196A	
Corrosivity __ by coupon __ by pH		__ 1110(mod) __ 9045C	
Cyanide, Total		__ 9010B	__ ILMO4.0 (e)
Cyanide, Reactive		__ Section 7.3/9014	
Halides, Extractable Organic		__ 9020B	__ EPA 600/4/84-008
Halides, Total		__ 9020B	__ EPA 600/4/84-008
EP Toxicity		__ 1310A	
Flash Point		__ 1010	
Ignitability		__ 1010	
Oil & Grease		__ 9071A	
Carbon, Total Organic		__ 9060	__ Lloyd Kahn (mod)
Oxygen Bomb Prep for Anions	__ D240-87(mod)	__ 5050	
Petroleum Hydrocarbons, Total Recoverable		__ 9071	__ EPA 418.1
pH, Soil		✓ 9045C	
Sulfide, Reactive		__ Section 7.3/9030B	
Sulfide		__ 9030B(mod)	
Specific Gravity	__ D1429-76C/	__ D5057-90	
Sulfur, Total		__ 9056	
Synthetic Preparation Leach		__ 1312	
Paint Filter		9095A	

Other: Nitrate, Nitrite and Sulfate **Method:** EPA 300.0 (Mod)

Other: Nitrate Nitrite / **Method** EPA 353.2 (Mod)

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Recra LabNet Philadelphia
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, (1983).

b. Standard Methods for the Examination of Water and Waste, 17 ed, (1989)/18ed (1992).

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.

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1/13/00

Recra LabNet - Lionville

INORGANICS DATA SUMMARY REPORT 11/13/00

CLIENT: TNUHANFORD B00-054 H1072 RECRA LOT #: 0010L864

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

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-001	B10D77	% Solids	99.0	%	0.01	1.0
		Nitrite by IC	1.3 u	MG/KG	1.3	1.0
		Nitrate by IC	1.5	MG/KG	1.3	1.0
		Chromium VI	0.13 u	MG/KG	0.13	1.0
		Sulfate by IC	3.6	MG/KG	1.3	1.0
		Nitrate Nitrite	0.20	MG/KG	0.19	1.0
		pH	6.5	SOIL PH	0.01	1.0
-002	B10D78	% Solids	98.6	%	0.01	1.0
		Nitrite by IC	1.3 u	MG/KG	1.3	1.0
		Nitrate by IC	63	MG/KG	6.3	5.0
		Chromium VI	0.41 u	MG/KG	0.41	1.0
		Sulfate by IC	457	MG/KG	25.3	20.0
		Nitrate Nitrite	15.9	MG/KG	0.95	5.0
		pH	8.5	SOIL PH	0.01	1.0

Recra LabNet - Lionville

INORGANICS METHOD BLANK DATA SUMMARY PAGE 11/13/00

CLIENT: TNUHANFORD B00-054 H1072 RECRA LOT #: 0010L864

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

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT	DILUTION FACTOR
BLANK10	00LBC063-MB1	Nitrite by IC	1.2	u	MG/KG	1.2	1.0
		Sulfate by IC	1.2	u	MG/KG	1.2	1.0
BLANK10	00LDC063-MB1	Nitrate by IC	1.2	u	MG/KG	1.2	1.0
BLANK10	00LVI058-MB1	Chromium VI	0.40	u	MG/KG	0.40	1.0
BLANK10	00LN3A53-MB1	Nitrate Nitrite	0.20	u	MG/KG	0.20	1.0
BLANK10	00LBC064-MB1	Nitrite by IC	1.2	u	MG/KG	1.2	1.0
		Sulfate by IC	1.2	u	MG/KG	1.2	1.0
BLANK10	00LEC065-MB1	Nitrite by IC	1.2	u	MG/KG	1.2	1.0
BLANK10	00LAC064-MB1	Nitrate by IC	1.2	u	MG/KG	1.2	1.0
BLANK10	00LBC065-MB1	Nitrate by IC	1.2	u	MG/KG	1.2	1.0
BLANK10	00LCC065-MB1	Sulfate by IC	1.2	u	MG/KG	1.2	1.0

Recra LabNet - Lionville

INORGANICS ACCURACY REPORT 11/13/00

CLIENT: TNUHANFORD B00-054 H1072 RECRA LOT #: 0010L864

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

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	INITIAL RESULT	SPIKED AMOUNT	%RECOV	DILUTION FACTOR(SPK)
-002	B10D78	Nitrite by IC	130	1.3 u	130	105.5	5.0
		Nitrate by IC	210	63	130	112.4	5.0
		Soluble Chromium VI	4.7	0.41u	4.1	106.8	1.0
		Insoluble Chromium VI	1210	0.41u	1110	109.2	100
		Sulfate by IC	1830	457	1270	108.1	50.0
		Nitrate Nitrite	20.9	15.9	4.8	105.8	5.0
BLANK10	00LEC063-MB1	Nitrite by IC	25	1.2 u	25	100	1.0
		Sulfate by IC	24.6	1.2 u	25.0	98.5	1.0
BLANK10	00LDC063-MB1	Nitrate by IC	25	1.2 u	25	99.8	1.0
BLANK10	00LVI058-MB1	Soluble Chromium VI	4.3	0.40u	4.0	106.3	1.0
		Insoluble Chromium VI	1080	0.40u	1160	92.8	100
BLANK10	00LN3A53-MB1	Nitrate Nitrite	5.2	0.20u	5.0	103.2	1.0
BLANK10	00LBC064-MB1	Nitrite by IC	25	1.2 u	25	100.2	1.0
		Sulfate by IC	24.6	1.2 u	25.0	98.4	1.0
BLANK10	00LEC065-MB1	Nitrite by IC	25	1.2 u	25	100.6	1.0
BLANK10	00LAC064-MB1	Nitrate by IC	25	1.2 u	25	99.0	1.0
BLANK10	00LBC065-MB1	Nitrate by IC	25	1.2 u	25	99.7	1.0
BLANK10	00LCC065-MB1	Sulfate by IC	24.6	1.2 u	25.0	98.4	1.0

Recra LabNet - Lionville

INORGANICS DUPLICATE SPIKE REPORT 11/13/00

CLIENT: TNUHANFORD B00-054 H1072 RECRA LOT #: 0010L864

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

SAMPLE	SITE ID	ANALYTE	SPIKE#1 %RECOV	SPIKE#2 %RECOV	%DIFF
-002	B10D78	Chromium VI	106.8	109.2	2.2
BLANK10	00LVI058-MB1	Chromium VI	106.3	92.8	13.6

Recra LabNet - Lionville

INORGANICS PRECISION REPORT 11/13/00

CLIENT: TNUHANFORD B00-054 H1072 RECRA LOT #: 0010L864

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

SAMPLE	SITE ID	ANALYTE	INITIAL RESULT	REPLICATE	RPD	DILUTION FACTOR(REP)
-001REP	B10D77	pH	6.5	6.6	1.7	1.0
-002REP	B10D78	% Solids	98.6	98.8	0.12	1.0
		Nitrite by IC	1.3 u	1.3 u	NC	1.0
		Nitrate by IC	63	67	5.8	5.0
		Chromium VI	0.41u	0.41u	NC	1.0
		Sulfate by IC	457	485	6.1	20.0
		Nitrate Nitrite	15.9	15.1	5.1	5.0

RECRA LabNet Use Only
00101864

Custody Transfer Record/Lab Work Request

Page 1 of 1

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

RECRA LabNet

Client: TMU- Hanford B00-054
Est. Final Proj. Sampling Date:
Project #: 10985-001-001-9999-00
Project Contact/Phone #:
RECRA Project Manager: OJ
QC: Spec Del: Std TAT: 15 day
Date Rec'd: 10-4-00 Date Due: 10-19-00
Account #:

		A	B
Refrigerator #		Y	Y
#/Type Container	Liquid		
	Solid	1AG	1AG
Volume	Liquid		
	Solid	120	250
Preservatives		-	-

ANALYSES REQUESTED →

ORGANIC				INORG	
VOA	BNA	Pest/PCB	Herb	Metal	CN

RECRA LabNet Use Only

MATRIX CODES:
S - 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

Lab ID	Client ID/Description	Matrix QC Choosen (✓) MS	MSD	Matrix	Date Collected	Time Collected	MHGTO	Met (1)		ICNO3 ICNO2	ICSO4 IM3N2	IPH ICRLO
001	B10D77			S	10-2-00	1100	✓	✓		✓	✓	✓
002	1 78			1	1	1330	✓	✓		✓	✓	✓

Special Instructions: Saf B00-054

Run Matrix QC

DATE/REVISIONS:
Met (1) 1. Ba, Cd, Cr, Ag, As, Pb, Se, Be, Cu, Mn,
2. Ni, Sb, Ti, V, Zn
3.
4.
5.
6.

RECRA LabNet Use Only

Samples were:
1) Shipped ✓ or Hand Delivered ___
Airbill # See below
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
Cooler Temp 2.9 °C

Relinquished by	Received by	Date	Time
FedEx	JRoppel	10-4-00	0915

Relinquished by	Received by	Date	Time
COMPOSITE WASTE	ORIGINAL REWRITTEN		

Discrepancies Between Samples Labels and COC Record? Y or (N)
NOTES:
4235 7953 9551

Bechtel Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	B00-054-057	Page 1 of 1

Collector: RB Kerkow	Company Contact: RB Kerkow — Telephone No.: 372-2187	Project Coordinator: TRENT, SJ	Price Code: 8K — Data Turnaround: 15 DAYS
Project Designation: 100-NR-1 TSD Sites R. A. Sampling - Soil	Sampling Location: 120 sites - piping (interior scale)	SAF No.: B00-054	Air Quality ☐
Ice Chest No.: ERC96-036 (2 OF 2)	Field Logbook No.: EL-1524 — COA: R120N22600	Method of Shipment: Federal Express	
Shipped To: ~~TMA~~/RECRA	Offsite Property No.: AP00345	Bill of Lading/Air Bill No.: 4235 1953-9551	

RK 9/26/00

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None	Cool 4C
Type of Container	G	G
No. of Container(s)	1	1
Volume	120mL	250mL
SAMPLE ANALYSIS	Mercury - 7471 - (CV)	See item (1) in Special Instructions.

Samples stored in Ref.# 2C at the 3728 Shipping Facility on 10/2/00 Collector not available to relinquish samples on 10/3/00 for shipment.

RT 10/3/00

Sample No.	Matrix *	Sample Date	Sample Time	Mercury - 7471 - (CV)	See item (1) in Special Instructions.	
B10D77	SOIL	10/2/00	1100	X	X	
B10D78	SOIL	10/2/00	1330	X	X	

CHAIN OF POSSESSION — Sign/Print Names

RT 10/3/00

Relinquished By	Date/Time	Received By	Date/Time
RB Kerkow / R. B. Kerkow	1630 10/2/00	Stored in Ref #2C 3728	1630 10/2/00
Removed from Ref 2C 3728	1000 10/3/00	RThoren	1000 10/3/00
RThoren	1000 10/3/00	FEDEX	
FedEx	10-4-00 0915	Thappel	10-4-00 0915

SPECIAL INSTRUCTIONS

Lab COA: R120N2 2F00 NOTE: Samples originated in a Non-RAD controlled area. (<2000pCi/g)
No Total Activity required.

(1) ICP Metals - 6010A (TAL) (Barium, Cadmium, Chromium, Silver); ICP Metals - 6010A (Add-on) (Arsenic, Lead, Selenium); ~~Metals by ICP (TCLP) - 1311/6010; Mercury (TCLP)~~ - 1311/7470; IC Anions - 300.0 (Nitrate, Nitrite, Sulfate); NO2/NO3 - 353.1; pH (Soil) * Delete TCLP RK 9/26/00
Hex Cr - 7196 RK 9/26/00

*ADD THE FOLLOWING ANALYTES TO ICP:
Be, Cu, Mn, Ni, Sb, Ti, V, Zn.
RK 9/26/00

NOTE: SAMPLES FROM NON-RAD CONTROLLED AREA <2000 PCi/g
NO TOTAL ACTIVITY REQUIRED.

Matrix *: S=Soil, SE=Sediment, SO=Solid, S=Sludge, W=Water, O=Oil, A=Air, DS=Drum Solids, DL=Drum Liquids, T=Tissue, WI=Wipe, L=Liquid, V=Vegetation, X=Other

LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

BHI-EE-011 (10/99)

Recra LabNet - Lionville Laboratory
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD B00-054 H1072

DATE RECEIVED: 10/04/00 RFW LOT # :0010L864

CLIENT ID /ANALYSIS	RFW #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
B10D77						
SILVER, TOTAL	001	S	99L1645	10/02/00	10/24/00	10/24/00
ARSENIC, TOTAL	001	S	99L1645	10/02/00	10/24/00	10/24/00
BARIUM, TOTAL	001	S	99L1645	10/02/00	10/24/00	10/24/00
BERYLLIUM, TOTAL	001	S	99L1645	10/02/00	10/24/00	10/24/00
CADMIUM, TOTAL	001	S	99L1645	10/02/00	10/24/00	10/24/00
CHROMIUM, TOTAL	001	S	99L1645	10/02/00	10/24/00	10/24/00
COPPER, TOTAL	001	S	99L1645	10/02/00	10/24/00	10/24/00
MERCURY, TOTAL	001	S	00C0344	10/02/00	10/19/00	10/20/00
MERCURY, TOTAL	001 REP	S	00C0344	10/02/00	10/19/00	10/20/00
MERCURY, TOTAL	001 MS	S	00C0344	10/02/00	10/19/00	10/20/00
MANGANESE, TOTAL	001	S	99L1645	10/02/00	10/24/00	10/24/00
NICKEL, TOTAL	001	S	99L1645	10/02/00	10/24/00	10/24/00
LEAD, TOTAL	001	S	99L1645	10/02/00	10/24/00	10/24/00
ANTIMONY, TOTAL	001	S	99L1645	10/02/00	10/24/00	10/24/00
SELENIUM, TOTAL	001	S	99L1645	10/02/00	10/24/00	10/24/00
THALLIUM, TOTAL	001	S	99L1645	10/02/00	10/24/00	10/24/00
VANADIUM, TOTAL	001	S	99L1645	10/02/00	10/24/00	10/24/00
ZINC, TOTAL	001	S	99L1645	10/02/00	10/24/00	10/24/00
B10D78						
SILVER, TOTAL	002	S	99L1645	10/02/00	10/24/00	10/24/00
SILVER, TOTAL	002 REP	S	99L1645	10/02/00	10/24/00	10/24/00
SILVER, TOTAL	002 MS	S	99L1645	10/02/00	10/24/00	10/24/00
ARSENIC, TOTAL	002	S	99L1645	10/02/00	10/24/00	10/24/00
ARSENIC, TOTAL	002 REP	S	99L1645	10/02/00	10/24/00	10/24/00
ARSENIC, TOTAL	002 MS	S	99L1645	10/02/00	10/24/00	10/24/00
BARIUM, TOTAL	002	S	99L1645	10/02/00	10/24/00	10/24/00
BARIUM, TOTAL	002 REP	S	99L1645	10/02/00	10/24/00	10/24/00
BARIUM, TOTAL	002 MS	S	99L1645	10/02/00	10/24/00	10/24/00
BERYLLIUM, TOTAL	002	S	99L1645	10/02/00	10/24/00	10/24/00
BERYLLIUM, TOTAL	002 REP	S	99L1645	10/02/00	10/24/00	10/24/00
BERYLLIUM, TOTAL	002 MS	S	99L1645	10/02/00	10/24/00	10/24/00
CADMIUM, TOTAL	002	S	99L1645	10/02/00	10/24/00	10/24/00
CADMIUM, TOTAL	002 REP	S	99L1645	10/02/00	10/24/00	10/24/00

Recra LabNet - Lionville Laboratory
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD B00-054 H1072

DATE RECEIVED: 10/04/00 RFW LOT # :0010L864

CLIENT ID /ANALYSIS	RFW #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
CADMIUM, TOTAL	002 MS	S	99L1645	10/02/00	10/24/00	10/24/00
CHROMIUM, TOTAL	002	S	99L1645	10/02/00	10/24/00	10/24/00
CHROMIUM, TOTAL	002 REP	S	99L1645	10/02/00	10/24/00	10/24/00
CHROMIUM, TOTAL	002 MS	S	99L1645	10/02/00	10/24/00	10/24/00
COPPER, TOTAL	002	S	99L1645	10/02/00	10/24/00	10/24/00
COPPER, TOTAL	002 REP	S	99L1645	10/02/00	10/24/00	10/24/00
COPPER, TOTAL	002 MS	S	99L1645	10/02/00	10/24/00	10/24/00
MERCURY, TOTAL	002	S	00C0344	10/02/00	10/19/00	10/20/00
MANGANESE, TOTAL	002	S	99L1645	10/02/00	10/24/00	10/24/00
MANGANESE, TOTAL	002 REP	S	99L1645	10/02/00	10/24/00	10/24/00
MANGANESE, TOTAL	002 MS	S	99L1645	10/02/00	10/24/00	10/24/00
NICKEL, TOTAL	002	S	99L1645	10/02/00	10/24/00	10/24/00
NICKEL, TOTAL	002 REP	S	99L1645	10/02/00	10/24/00	10/24/00
NICKEL, TOTAL	002 MS	S	99L1645	10/02/00	10/24/00	10/24/00
LEAD, TOTAL	002	S	99L1645	10/02/00	10/24/00	10/24/00
LEAD, TOTAL	002 REP	S	99L1645	10/02/00	10/24/00	10/24/00
LEAD, TOTAL	002 MS	S	99L1645	10/02/00	10/24/00	10/24/00
ANTIMONY, TOTAL	002	S	99L1645	10/02/00	10/24/00	10/24/00
ANTIMONY, TOTAL	002 REP	S	99L1645	10/02/00	10/24/00	10/24/00
ANTIMONY, TOTAL	002 MS	S	99L1645	10/02/00	10/24/00	10/24/00
SELENIUM, TOTAL	002	S	99L1645	10/02/00	10/24/00	10/24/00
SELENIUM, TOTAL	002 REP	S	99L1645	10/02/00	10/24/00	10/24/00
SELENIUM, TOTAL	002 MS	S	99L1645	10/02/00	10/24/00	10/24/00
THALLIUM, TOTAL	002	S	99L1645	10/02/00	10/24/00	10/24/00
THALLIUM, TOTAL	002 REP	S	99L1645	10/02/00	10/24/00	10/24/00
THALLIUM, TOTAL	002 MS	S	99L1645	10/02/00	10/24/00	10/24/00
VANADIUM, TOTAL	002	S	99L1645	10/02/00	10/24/00	10/24/00
VANADIUM, TOTAL	002 REP	S	99L1645	10/02/00	10/24/00	10/24/00
VANADIUM, TOTAL	002 MS	S	99L1645	10/02/00	10/24/00	10/24/00
ZINC, TOTAL	002	S	99L1645	10/02/00	10/24/00	10/24/00
ZINC, TOTAL	002 REP	S	99L1645	10/02/00	10/24/00	10/24/00
ZINC, TOTAL	002 MS	S	99L1645	10/02/00	10/24/00	10/24/00

LAB QC:

SILVER LABORATORY	LC1 BS	S	99L1645	N/A	10/24/00	10/24/00
SILVER, TOTAL	MB1	S	99L1645	N/A	10/24/00	10/24/00
ARSENIC LABORATORY	LC1 BS	S	99L1645	N/A	10/24/00	10/24/00

Recra LabNet - Lionville Laboratory
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD B00-054 H1072

DATE RECEIVED: 10/04/00 RFW LOT # :0010L864

CLIENT ID /ANALYSIS	RFW #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
ARSENIC, TOTAL	MB1	S	99L1645	N/A	10/24/00	10/24/00
BARIUM LABORATORY	LC1 BS	S	99L1645	N/A	10/24/00	10/24/00
BARIUM, TOTAL	MB1	S	99L1645	N/A	10/24/00	10/24/00
BERYLLIUM LABORATORY	LC1 BS	S	99L1645	N/A	10/24/00	10/24/00
BERYLLIUM, TOTAL	MB1	S	99L1645	N/A	10/24/00	10/24/00
CADMIUM LABORATORY	LC1 BS	S	99L1645	N/A	10/24/00	10/24/00
CADMIUM, TOTAL	MB1	S	99L1645	N/A	10/24/00	10/24/00
CHROMIUM LABORATORY	LC1 BS	S	99L1645	N/A	10/24/00	10/24/00
CHROMIUM, TOTAL	MB1	S	99L1645	N/A	10/24/00	10/24/00
COPPER LABORATORY	LC1 BS	S	99L1645	N/A	10/24/00	10/24/00
COPPER, TOTAL	MB1	S	99L1645	N/A	10/24/00	10/24/00
MERCURY LABORATORY	LC1 BS	S	00C0344	N/A	10/19/00	10/20/00
MERCURY, TOTAL	MB1	S	00C0344	N/A	10/19/00	10/20/00
MANGANESE LABORATORY	LC1 BS	S	99L1645	N/A	10/24/00	10/24/00
MANGANESE, TOTAL	MB1	S	99L1645	N/A	10/24/00	10/24/00
NICKEL LABORATORY	LC1 BS	S	99L1645	N/A	10/24/00	10/24/00
NICKEL, TOTAL	MB1	S	99L1645	N/A	10/24/00	10/24/00
LEAD LABORATORY	LC1 BS	S	99L1645	N/A	10/24/00	10/24/00
LEAD, TOTAL	MB1	S	99L1645	N/A	10/24/00	10/24/00
ANTIMONY LABORATORY	LC1 BS	S	99L1645	N/A	10/24/00	10/24/00
ANTIMONY, TOTAL	MB1	S	99L1645	N/A	10/24/00	10/24/00
SELENIUM LABORATORY	LC1 BS	S	99L1645	N/A	10/24/00	10/24/00
SELENIUM, TOTAL	MB1	S	99L1645	N/A	10/24/00	10/24/00
THALLIUM LABORATORY	LC1 BS	S	99L1645	N/A	10/24/00	10/24/00
THALLIUM, TOTAL	MB1	S	99L1645	N/A	10/24/00	10/24/00
VANADIUM LABORATORY	LC1 BS	S	99L1645	N/A	10/24/00	10/24/00
VANADIUM, TOTAL	MB1	S	99L1645	N/A	10/24/00	10/24/00
ZINC LABORATORY	LC1 BS	S	99L1645	N/A	10/24/00	10/24/00
ZINC, TOTAL	MB1	S	99L1645	N/A	10/24/00	10/24/00

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Recra LabNet Philadelphia
Analytical Report

Client: TNU-HANFORD B00-054
RFW#: 0010L864
SDG/SAF#: H1072/B00-054

W.O.#: 10985-001-001-9999-00
Date Received: 10-04-00

METALS CASE NARRATIVE

1. This narrative covers the analyses of 2 soil 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 (80-120% for Mercury).

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

7. The preparation/method blank for 1 analyte was outside method criteria. {less than the Practical Quantitation Limit (3X the IDL), MB value less than 5% of the RCRA limit, or samples greater than 20X MB value}. Refer to the Inorganics Method Blank Data Summary.

   a.) The MB result for Zinc was greater than the Practical Quantitation Limit (PQL) {3 x the (IDL) Instrument Detection Level} and sample B10D77 read less than 20 times the MB concentration. However, no corrective action criteria for MBs were provided in SW846 method 6010B. The sample result was reported herein "uncorrected" for the levels found in the MB.

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

9. All laboratory control samples (LCS) were within the 80-120% control limits. Refer to the Inorganics Laboratory Control Standards 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 17 pages.

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10. The matrix spike (MS) recoveries for 2 analytes were outside the 75-125% control limits. Refer to the Inorganics Accuracy Report.

11. For analytes where the ICP MS is out-of-control, a post-digestion MS (PDS) and serial dilution are performed. A serial dilution is performed for Mercury. A PDS was prepared at meaningful concentration levels, due to high concentrations of the following analytes:

Sample ID	Element	PDS Concentration (ppb)	PDS % Recovery
B10D78	Antimony	100	100.2
	Zinc	1000	88.2

12. The duplicate analysis for 1 analyte was outside the 20% Relative Percent Difference (RPD) control limits. Refer to the Inorganics Precision Report.

13. 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.

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

J. Michael Taylor
Vice President
Philadelphia Analytical Laboratory

11-13-00
Date

jjw/m10-864

METALS METHOD GLOSSARY

The following methods are used as reference for the digestion and analysis of samples contained within this Recra Lot#: J810L864

Leaching Procedure: __1310 __1311 __1312 __Other:_____

CLP Metals __ Digestion and __ Analysis Methods: __ILM03.0 __ILM04.0

Metals Digestion Methods: __3005A __3010A __3015 __3020A X 3050B __3051 __200.7 __SS17
__Other: _____

Metals Analysis Methods

	SW846		EPA		STD MTD	EPA OSWR	USATHAMA
Aluminum	__6010B		__200.7				__99
Antimony	X 6010B	__7041 [5]	__200.7	__204.2			__99
Arsenic	X 6010B	__7060A [5]	__200.7	__206.2	__3113B		__99
Barium	X 6010B		__200.7				__99
Beryllium	X 6010B		__200.7				__99
Bismuth	__6010B [1]		__200.7 [1]			__1620	__99
Boron	__6010B		__200.7				__99
Cadmium	X 6010B	__7131A [5]	__200.7	__213.2			__99
Calcium	__6010B		__200.7				__99
Chromium	X 6010B	__7191 [5]	__200.7	__218.2			__SS17
Cobalt	__6010B		__200.7				__99
Copper	X 6010B	__7211 [5]	__200.7	__220.2			__99
Iron	__6010B		__200.7				__99
Lead	X 6010B	__7421 [5]	__200.7	__239.2	__3113B		__99
Lithium	__6010B	__7430 [4]	__200.7			__1620	__99
Magnesium	__6010B		__200.7				__99
Manganese	X 6010B		__200.7				__99
Mercury	__7470A [3]	X 7471A [3]	__245.1 [2]	__245.5 [2]			__99
Molybdenum	__6010B		__200.7				__99
Nickel	X 6010B		__200.7				__99
Potassium	__6010B	__7610 [4]	__200.7	__258.1 [4]			__99
Rare Earths	__6010B [1]		__200.7 [1]			__1620	__99
Selenium	X 6010B	__7740 [5]	__200.7	__270.2	__3113B		__99
Silicon	__6010B [1]		__200.7			__1620	__99
Silica	__6010B		__200.7			__1620	__99
Silver	X 6010B	__7761 [5]	__200.7	__272.2			__99
Sodium	__6010B	__7770 [4]	__200.7	__273.1 [4]			__99
Strontium	__6010B		__200.7				__99
Thallium	X 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	X 6010B		__200.7				__99
Zinc	X 6010B		__200.7				__99
Zirconium	__6010B [1]		__200.7 [1]			__1620	__99

Other:_____ Method:_____

L-WI-033/M-11/99

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

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INORGANICS DATA SUMMARY REPORT 11/13/00

CLIENT: TNUHANFORD B00-054 H1072 RECRA LOT #: 0010L864

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

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-001	B10D77	Silver, Total	0.11 u	MG/KG	0.11	1.0
		Arsenic, Total	0.33 u	MG/KG	0.33	1.0
		Barium, Total	31.9	MG/KG	0.02	1.0
		Beryllium, Total	0.28	MG/KG	0.01	1.0
		Cadmium, Total	0.03 u	MG/KG	0.03	1.0
		Chromium, Total	2.6	MG/KG	0.09	1.0
		Copper, Total	2.2	MG/KG	0.08	1.0
		Mercury, Total	0.06	MG/KG	0.02	1.0
		Manganese, Total	3.4	MG/KG	0.02	1.0
		Nickel, Total	1.7	MG/KG	0.12	1.0
		Lead, Total	7.8	MG/KG	0.20	1.0
		Antimony, Total	0.20 u	MG/KG	0.20	1.0
		Selenium, Total	0.53	MG/KG	0.41	1.0
		Thallium, Total	0.35 u	MG/KG	0.35	1.0
		Vanadium, Total	0.47	MG/KG	0.09	1.0
		Zinc, Total	6.4	MG/KG	0.04	1.0

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INORGANICS DATA SUMMARY REPORT 11/13/00

CLIENT: TNUHANFORD B00-054 H1072 RECRA LOT #: 0010L864

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

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-002	B10D78	Silver, Total	0.11 u	MG/KG	0.11	1.0
		Arsenic, Total	3.3	MG/KG	0.33	1.0
		Barium, Total	64.1	MG/KG	0.02	1.0
		Beryllium, Total	0.42	MG/KG	0.01	1.0
		Cadmium, Total	0.09	MG/KG	0.03	1.0
		Chromium, Total	10.4	MG/KG	0.09	1.0
		Copper, Total	14.4	MG/KG	0.08	1.0
		Mercury, Total	0.08	MG/KG	0.02	1.0
		Manganese, Total	308	MG/KG	0.02	1.0
		Nickel, Total	10.8	MG/KG	0.11	1.0
		Lead, Total	4.3	MG/KG	0.20	1.0
		Antimony, Total	0.20 u	MG/KG	0.20	1.0
		Selenium, Total	0.41 u	MG/KG	0.41	1.0
		Thallium, Total	0.34 u	MG/KG	0.34	1.0
		Vanadium, Total	42.4	MG/KG	0.09	1.0
		Zinc, Total	329	MG/KG	0.04	1.0

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INORGANICS METHOD BLANK DATA SUMMARY PAGE 11/13/00

CLIENT: TNUHANFORD B00-054 H1072 RECRA LOT #: 0010L864

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

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
BLANK1	99L1645-MB1	Silver, Total	0.11 u	MG/KG	0.11	1.0
		Arsenic, Total	0.34 u	MG/KG	0.34	1.0
		Barium, Total	0.06	MG/KG	0.02	1.0
		Beryllium, Total	0.01 u	MG/KG	0.01	1.0
		Cadmium, Total	0.03 u	MG/KG	0.03	1.0
		Chromium, Total	0.09 u	MG/KG	0.09	1.0
		Copper, Total	0.08 u	MG/KG	0.08	1.0
		Manganese, Total	0.02	MG/KG	0.02	1.0
		Nickel, Total	0.12 u	MG/KG	0.12	1.0
		Lead, Total	0.21 u	MG/KG	0.21	1.0
		Antimony, Total	0.21 u	MG/KG	0.21	1.0
		Selenium, Total	0.43 u	MG/KG	0.43	1.0
		Thallium, Total	0.36 u	MG/KG	0.36	1.0
		Vanadium, Total	0.09 u	MG/KG	0.09	1.0
		Zinc, Total	0.43	MG/KG	0.04	1.0
BLANK1	00C0344-MB1	Mercury, Total	0.02 u	MG/KG	0.02	1.0

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INORGANICS ACCURACY REPORT 11/13/00

CLIENT: TNUHANFORD B00-054 H1072

RECRA LOT #: 0010L864

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

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	INITIAL RESULT	SPIKED AMOUNT	%RECOV	DILUTION FACTOR(SPK)
-001	B10D77	Mercury, Total	0.20	0.06	0.17	79.8	1.0

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INORGANICS ACCURACY REPORT 11/13/00

CLIENT: TNUHANFORD B00-054 H1072

RECRA LOT #: 0010L864

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

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	INITIAL RESULT	SPIKED AMOUNT	%RECOV	DILUTION FACTOR(SPK)
-002	B10D78	Silver, Total	4.3	0.11u	4.8	89.6	1.0
		Arsenic, Total	182	3.3	191	93.5	1.0
		Barium, Total	245	64.1	191	94.6	1.0
		Beryllium, Total	4.9	0.42	4.8	93.3	1.0
		Cadmium, Total	4.6	0.09	4.8	93.9	1.0
		Chromium, Total	29.2	10.4	19.1	98.4	1.0
		Copper, Total	37.0	14.4	23.9	94.6	1.0
		Manganese, Total	355	308	47.9	99.0*	1.0
		Nickel, Total	55.3	10.8	47.9	92.9	1.0
		Lead, Total	49.1	4.3	47.9	93.5	1.0
		Antimony, Total	28.2	0.20u	47.9	58.9	1.0
		Selenium, Total	176	0.41u	191	91.9	1.0
		Thallium, Total	177	0.34u	191	92.5	1.0
		Vanadium, Total	88.5	42.4	47.9	96.2	1.0
		Zinc, Total	494	329	47.9	344.7*	1.0

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INORGANICS PRECISION REPORT 11/13/00

CLIENT: TNUHANFORD B00-054 H1072 RECRA LOT #: 0010L864

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

SAMPLE	SITE ID	ANALYTE	INITIAL RESULT	REPLICATE	RPD	DILUTION FACTOR(REP)
-001REP	B10D77	Mercury, Total	0.06	0.02	100	1.0

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INORGANICS PRECISION REPORT 11/13/00

CLIENT: TNUHANFORD B00-054 H1072 RECRA LOT #: 0010L864

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

SAMPLE	SITE ID	ANALYTE	INITIAL RESULT	REPLICATE	RPD	DILUTION FACTOR(REP)
-002REP	B10D78	Silver, Total	0.11u	0.11u	NC	1.0
		Arsenic, Total	3.3	3.1	6.2	1.0
		Barium, Total	64.1	64.4	0.47	1.0
		Beryllium, Total	0.42	0.43	1.6	1.0
		Cadmium, Total	0.09	0.08	12.9	1.0
		Chromium, Total	10.4	10.3	0.97	1.0
		Copper, Total	14.4	13.8	4.3	1.0
		Manganese, Total	308	311	1.1	1.0
		Nickel, Total	10.8	10.9	0.92	1.0
		Lead, Total	4.3	4.1	4.8	1.0
		Antimony, Total	0.20u	0.20u	NC	1.0
		Selenium, Total	0.41u	0.41u	NC	1.0
		Thallium, Total	0.34u	0.34u	NC	1.0
		Vanadium, Total	42.4	41.6	1.9	1.0
		Zinc, Total	329	382	14.9	1.0

Recra LabNet - Lionville

INORGANICS LABORATORY CONTROL STANDARDS REPORT 11/13/00

CLIENT: TNUHANFORD B00-054 H1072 RECRA LOT #: 0010L864

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

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	SPIKED AMOUNT	UNITS	%RECOV
LCS1	99L1645-LC1	Silver, LCS	49.4	50.0	MG/KG	98.8
		Arsenic, LCS	963	1000	MG/KG	96.3
		Barium, LCS	492	500	MG/KG	98.3
		Beryllium, LCS	25.0	25.0	MG/KG	100
		Cadmium, LCS	25.0	25.0	MG/KG	100
		Chromium, LCS	50.8	50.0	MG/KG	101.6
		Copper, LCS	124	125	MG/KG	99.0
		Manganese, LCS	78.4	75.0	MG/KG	104.5
		Nickel, LCS	201	200	MG/KG	100.7
		Lead, LCS	248	250	MG/KG	99.2
		Antimony, LCS	297	300	MG/KG	99.0
		Selenium, LCS	944	1000	MG/KG	94.4
		Thallium, LCS	987	1000	MG/KG	98.7
		Vanadium, LCS	260	250	MG/KG	103.8
		Zinc, LCS	99.5	100	MG/KG	99.5
LCS1	00C0344-LC1	Mercury, LCS	0.66	0.7	MG/KG	92.1

RECRA LabNet Use Only
0010L864

Custody Transfer Record/Lab Work Request

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FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

(9) Met Dig

RECRA LabNet

Client: TNU- Hanford B00-054
Est. Final Proj. Sampling Date:
Project #: 10985-001-001-9999-00
Project Contact/Phone #:
RECRA Project Manager: OJ
QC: Spec Del: Std TAT: 15 day
Date Rec'd: 10-4-00 Date Due: 10-19-00
Account #:

		A	B
Refrigerator #		4	4
#/Type Container	Liquid		
	Solid	1AG	1AG
Volume	Liquid		
	Solid	120	250
Preservatives		–	–

ANALYSES REQUESTED →

MATRIX CODES:	Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected	ORGANIC VOA	BNA	Pest/PCB	Herb	INORG Metal	CN	RECRA LabNet Use Only: MHGTO	Met (1)	ICNO3 ICNO2	ICSO4 IN3N2	IPH ICRCO
S - 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	B10D77			S	10-2-00	1100							✓	✓	✓	✓	✓
	002	⊥ 78			⊥	⊥	1330							✓	✓	✓	✓	✓

Special Instructions: Saf B00-054

Run Matrix QC

DATE/REVISIONS:
Met (1) 1. Ba, Cd, Cr, Ag, As, Pb, Se, Be, Cu, Mn,
2. Ni, Sb, ~~Tl~~ TL 10-5-00, V, Zn, TL
10-5-00 3. Ti cancelled, TL added per client
4.
5.
6.

Relinquished by	Received by	Date	Time
FedEx	TBeppel	10-4-00	0915

Relinquished by	Received by	Date	Time
COMPOSITE WASTE	ORIGINAL REWRITTEN		

Discrepancies Between Samples Labels and COC Record? Y or (N)
NOTES:
4235 7953 9551

RECRA LabNet Use Only

Samples were:
1) Shipped ✓ or Hand Delivered ___
Airbill # See below
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
Cooler Temp. 2.9 °C

Bechtel Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		B00-054-057	Page 1 of 4
Collector: RB Kerkow	Company Contact: RB Kerkow	Telephone No.: 372-2187	Project Coordinator: TRENT, SJ	Price Code: 8K; Data Turnaround: 15 DAYS
Project Designation: 100-NR-1 TSD Sites R. A. Sampling - Soil	Sampling Location: 120 sites - piping (interior scale)		SAF No.: B00-054	Air Quality ☐
Ice Chest No.: ERC96-036 (2OF2)	Field Logbook No.: EL-1524	COA: R120N22600	Method of Shipment: Federal Express	
Shipped To: ~~TMA~~/RECRA	Offsite Property No.: A000345		Bill of Lading/Air Bill No.: 42357953-9551	

RK 9/26/00

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None	Cool 4C										
Type of Container	G	G										
No. of Container(s)	1	1										
Volume	120mL	250mL										
SAMPLE ANALYSIS	Mercury - 7471 - (CV)	See item (1) in Special Instructions.										

Samples stored in Ref.# 2C at the 3728 Shipping Facility on 10/2/00 Collector not available to relinquish samples on 10/3/00 for shipment.

RT 10/3

Sample No.	Matrix *	Sample Date	Sample Time										
B10D77	SOIL	10/2/00	1100	X	X								
B10D78	SOIL	10/2/00	1330	X	X								

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By	Date/Time	Received By	Date/Time
RB Kerkow / R.B. KERKOW	1630 10/2/00	RT 10/3/00 Stored in REF #2C 3728	1630 10/2/00
RT 10/3/00 Removed from Ref 2C 3728	1000 10/3/00	RT Thoren	1000 10/3/00
RT Thoren	1000 10/3/00	FEDEX	
FedEx	10-4-00 0915	T Keppel	10-4-00 0915

SPECIAL INSTRUCTIONS

Lab COA: R120N2 2F00 NOTE: Samples originated in a Non-RAD contolled area. (<2000pCi/g) No Total Activity required.

(1) ICP Metals - 6010A (TAL) {Barium, Cadmium, Chromium, Silver}; ICP Metals - 6010A (Add-on) {Arsenic, Lead, Selenium}; ~~Metals by ICP (TCLP) - 1311/6010; Mercury (TCLP)~~ - 1311/7470; IC Anions - 300.0 {Nitrate, Nitrite, Sulfate}; NO2/NO3 - 353.1; pH (Soil) * 6095, Delete TCLP RK 9/26/00

Hex Cr - 7196 RK 9/26/00

*ADD THE FOLLOWING ANALYTES TO ICP: Be, Cu, Mn, Ni, Sb, Ti, V, Zn. RK 9/26/00

NOTE: SAMPLES FROM NON-RAD CONTROLLED AREA <2000 PCi/g NO TOTAL ACTIVITY REQUIRED.

Matrix *: S=Soil, SE=Sediment, SO=Solid, S=Sludge, W=Water, O=Oil, A=Air, DS=Drum Solids, DL=Drum Liquids, T=Tissue, WI=Wipe, L=Liquid, V=Vegetation, X=Other

LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

BHI-EE-011 (10/99)