



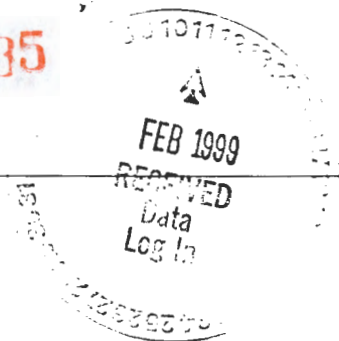
**RECRA
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**Recra LabNet Philadelphia
Analytical Report**

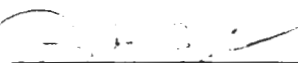
Client : TNU-HANFORD B99-002
RFW# : 9901L006
SDG# : H0341
SAF# : B99-002

W.O. # : 10985-001-001-9999-00
Date Received: 01-28-99



INORGANIC CASE NARRATIVE

1. This narrative covers the analyses of 1 soil sample.
2. The sample was 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 temperature was recorded on the chain-of-custody.
5. The method blank for Chromium VI was 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 Chromium VI samples are reported on a dry weight basis.



J. Michael Taylor
Vice President
Philadelphia Analytical Laboratory

01-28-99
Date

npi01-006

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 10 pages.

001

WET CHEMISTRY METHODS GLOSSARY FOR ANALYSIS OF SOIL/SOLID SAMPLES

	<u>ASTM</u>	<u>SW846</u>	<u>OTHER</u>
%Ash	__ D2216-80		
%Moisture	__ D2216-80		__ ILMO4.0 (e)
%Solids			✓ ILMO4.0 (e)
%Volatile Solids	__ D2216-80		
ASTM Extraction in Water	__ D3987-81/85		
BTU	__ D240-87		
CEC		__ 9081	__ c
Corrosivity __ by coupon __ by pH		__ 1110 (mod) __ 9045	
Cyanide, Total		__ 9010	__ ILMO4.0 (e)
Cyanide, Reactive		__ Sec 7.3	
Density			__ b
Halides, Extractable Organic			__ EPA 600/4/84-008 (mod)
Halides, Total			__ EPA 600/4/84-008 (mod)
EP-Toxicity		__ 1310A	
Flash Point		__ 1010	
Ignitability		__ 1010	
Carbon, Total Organic (by LOI)			__ c
Oil and 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 (mod)
pH, Soil		__ 9045B	
Sulfide, Reactive		__ Sec 7.3	
Specific Gravity	__ D1429-76C		
Sulfur, Total		__ 9056	
TCLP		__ 1311	
TCLV		__ 1311	
Synthetic Precipitation Leach		__ 1312	
Chlorine, Total		__ 9056	
Paint Filter		__ 9095	

Other: Chromium VI

Method: SW 306-03 / 7196A

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

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INORGANICS DATA SUMMARY REPORT 02/04/99

CLIENT: TNU-HANFORD B99-002
WORK ORDER: 10985-001-001-9999-00

RECRA LOT #: 9901L006

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-001	B0TM11	‡ Solids	92.9	‡	0.01	1.0
		Chromium VI	0.86 u	MG/KG	0.86	1.0

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INORGANICS METHOD BLANK DATA SUMMARY PAGE 02/04/99

CLIENT: TNU-HANFORD B99-002
WORK ORDER: 10985-001-001-9999-00

RECRA LOT #: 9901L006

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
BLANK10	99LVI009-MB1	Chromium VI	0.80 u	MG/KG	0.80	1.0

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INORGANICS ACCURACY REPORT 02/04/99

CLIENT: TNU-HANFORD B99-002
 WORK ORDER: 10985-001-001-9999-00

RECRA LOT #: 9901L006

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	INITIAL RESULT	SPIKED AMOUNT	%RECOV	DILUTION FACTOR (SPK)
-001	BOTM11	<i>Soluble</i> Chromium VI	43.4	0.0	43.0	100.7	1.0
		<i>Insoluble</i> Chromium VI MSD	1140	0.0	1260	90.1	20.0
BLANK10	99LVI009-MB1	<i>Soluble</i> Chromium VI	38.6	0.80u	40.0	96.5	1.0
		<i>Insoluble</i> Chromium VI MSD	1140	0.80u	1250	91.4	20.0

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INORGANICS PRECISION REPORT 02/04/99

CLIENT: TNU-HANFORD B99-002

RECRA LOT #: 9901L006

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

SAMPLE	SITE ID	ANALYTE	INITIAL RESULT	REPLICATE	RPD	DILUTION FACTOR (REP)
-001REP	B0TM11	% Solids	92.9	91.6	1.5	1.0
		Chromium VI	0.86u	0.86u	NC	1.0

Recra LabNet - Lionville Laboratory
 INORGANIC ANALYTICAL DATA PACKAGE FOR
 TNU-HANFORD B99-002

DATE RECEIVED: 01/28/99

RFW LOT # :9901L006

CLIENT ID /ANALYSIS	RFW #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
BOTM11						
% SOLIDS	001	S	99L*S019	01/25/99	02/01/99	02/02/99
% SOLIDS	001 REP	S	99L*S019	01/25/99	02/01/99	02/02/99
CHROMIUM VI	001	S	99LVI009	01/25/99	02/01/99	02/01/99
CHROMIUM VI	001 REP	S	99LVI009	01/25/99	02/01/99	02/01/99
CHROMIUM VI	001 MS	S	99LVI009	01/25/99	02/01/99	02/01/99
CHROMIUM VI	001 MSP	S	99LVI009	01/25/99	02/01/99	02/01/99

LAB QC:

CHROMIUM VI	MB1	S	99LVI009	N/A	02/01/99	02/01/99
CHROMIUM VI	MB1 BS	S	99LVI009	N/A	02/01/99	02/01/99
CHROMIUM VI	MB1 BS 35	S	99LVI009	N/A	02/01/99	02/01/99

Bechtel Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				B99-002-60	Page 1 of 1
Collector Fahlberg/Kerkow		Company Contact R Kerkow		Telephone No. 373-5598	Project Coordinator IRENT, SJ	Price Code	Data Turnaround
Project Designation 100 HC Areas - Full Protocol		Sampling Location 100B/C		SAF No. B99-002	7 15 Days APB 1-27-99		
Ice Chest No. IC-001		Field Logbook No. EL 13327-2		Method of Shipment FED EX			
Shipped To APB 1-27-99 FHA/RI/CRA		Offsite Property No. A990 062		Bill of Lading/Air Bill No. 423579521744			
				COA R16B112600			

POSSIBLE SAMPLE HAZARDS/REMARKS	Preservation	None	Cool 4C								
	Type of Container	P	aCi								
	No. of Container(s)	1	1								
	Special Handling and/or Storage	Volume	20mL	125mL							
SAMPLE ANALYSIS		Activity Scan	Chromium Hex - 7196								
Sample No.	Matrix *	Sample Date	Sample Time								
B0TM11	Soil	1-25-99	0856	X	X						BOTL 8?

CHAIN OF POSSESSION		Sign/Print Names		SPECIAL INSTRUCTIONS				Matrix *	
Relinquished By: FAHLBERG FOR		Date/Time: 0930		Received By: FED EX		Date/Time:		Soil Water Vapor Other Solid Other Liquid	
SUGALE		1-27-99							
Relinquished By: Decker		Date/Time:		Received By: Feder		Date/Time: 1/28/99 0930			
Relinquished By:		Date/Time:		Received By:		Date/Time:			
Relinquished By:		Date/Time:		Received By:		Date/Time:			
LABORATORY SECTION		Received By		Title		Date/Time			
FINAL SAMPLE DISPOSITION		Disposal Method		Disposed By		Date/Time			