START 9613404.0584

B01B79-DAT-257

0043177

DATACHEM LABORATORIES
960 WEST LEVOY DRIVE
SALT LAKE CITY, UTAH 84123

Westinghouse Hanford

****

Case: WHC36 SDG: WHCM36 SF-1013-AE,BE,CE

CLIENT SAMPLE #	EPA SAMPLE #	LAB SAMPLE #
B01-B79	MC9385	CLP9385
MATRIX SPIKE	MC9385S	CLP9385
MATRIX DUPLICATE	MC9385D	CLP9385

FEB 1996
RECEIVED
EDMC

9613404.0585

ENVIROFORMS/INORGANIC CLP

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

MC9385

Lab Name: DATACHEM LABORATORIES Contract:

Lab Code: DATAC Case No.: WHC36 SAS No.: SDG No.: WHCM36

Matrix (soil/water): SOIL Lab Sample ID: CLP9385

Level (low/med): LOW Date Received: 11/23/91

% Solids: 97.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4310			P
7440-36-0	Antimony	5.1	U	N	P
7440-38-2	Arsenic	0.66	B	W	F
7440-39-3	Barium	65.0			P
7440-41-7	Beryllium	0.21	U		P
7440-43-9	Cadmium	0.62	U		P
7440-70-2	Calcium	4780		*	P
7440-47-3	Chromium	3.9			P
7440-48-4	Cobalt	11.6			P
7440-50-8	Copper	15.0			P
	Cyanide				NR
7439-89-6	Iron	20300			P
7439-92-1	Lead	1.9		*	F
7439-95-4	Magnesium	3130			P
7439-96-5	Manganese	221		N	P
7439-97-6	Mercury	0.10	U		CV
	Molybdenu	0.71	B		F
7440-02-0	Nickel	6.1	B		P
7440-09-7	Potassium	722	B		P
7782-49-2	Selenium	0.21	U		F
7440-22-4	Silver	0.62	U		P
7440-23-5	Sodium	278	B		P
7440-28-0	Thallium	0.21	U		F
	Titanium	1930		N	P
7440-62-2	Vanadium	53.4			P
7440-66-6	Zinc	37.2			P
	Zirconium	23.9		N	P

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:

FORM I - IN

9613404.0586

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EMERY WORLDWIDE — A CF Company

FORM OF PAYMENT	SERVICES
SH ☐ GBL CBL ☐ ☐ FCCOD ☐	UNITED STATES / CANADA: ☐ Same Day ☐ AM ☐ PM ☐ Second Day ☒ Saturday Delivery
PD ☒ COL ☐ OTH ☐ COMAT ☐	INTERNATIONAL: Express ☐ Preferred ☐ Standard ☐ Busine Docum Custo Cleara Deli

Shipper's Account Number: 850281585

Date: 11-22-91 | Origin: PSC | Shipment Number: 247425288

From:
WESTINGHOUSE SHIPPING DEPT (509) 376-6665
US DEPARTMENT OF ENERGY C/O
ESTINGHOUSE HANFORD
BLDG 1163
355 STEVENS DRIVE
ICHLAND WA ☐ Canada

To:
ATTN: JIM JOHNSTON
DATA-CHEM
960 W. LEVOY DRIVE
SALT LAKE CITY UT ☐ Canada

Hold for Pick Up ☐

Tariff Dest. | Ga

Check to Shipper $

EMERY WORLD will collect cons check made pa only to the ship for the value of goods in the ar shown above.

Customer's Reference Numbers: W81223 PK1BB W92-0-0018#7 | Zip: 99352

E | Consignee's Account Number | Zip: 84123

Description	Dimensions Pcs.	L	W	H	Total Pieces	Total Weight (in Lbs.)
ICE CHEST SOIL AMPLES B01B79 92-0-0018#7	1	27	16	17	1	21

FOR INFORMATION OR RATES CALL 1-800 HI EMERY (1-800-443-6379)

Declared Valu $

ODSR ☐ Haz Mat ☐ Edit ☐ A B C D E F G H I J K

1 2 3 4 5 6 / 7 8 9 0 1 2

ATURDAY DELIVERY

Envelope 9X12 ☒ Pack 12X15 ☒

ers ature X 11/22/91

International Shipments: Free Domicile ☐ | Commodity Code

Third party Account Number mandatory for Third party billing. | E | Third Party Account Number

International Customs Value | International Insurance

e Charge

Total Transportation Charges | Other Charges/Advance at Origin ☐ OC/AO- $

SLC-5

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Terms and Conditions on Back

9613404.0587

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

Priority Samples Project 91-075

PART I: FIELD SECTION

Collector C. Kramer Date Sampled 11/20/91 Time 12:30 hours

Company Contact Chris Kramer Telephone (509) 376-4186

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B01B79	(3) 120-ml	Soil	See attached Tables A-1, A-2 Each sample is to be analyzed for all analytes by the method shown except for fluoride. Fluoride may be done by ion chromatography.

Field Information** Site #3, Wye Barricade rerun

Special Handling and/or Storage Sieve samples. Use the less-than 2 mm size fraction in analytical aliquots. Exclude stones, etc. larger than 2mm

Possible Sample Hazards None.

PART II: LABORATORY SECTION

Received by _____ Title _____ Date _____

Analysis Required _____

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*Indicate whether sample is soil, sludge, water, etc.

**Use back of page for additional information relative to sample location.

A-6000-406 (05/90)

Table A-1. Primary Inorganic Analytes.

Element	Typical expected (mg/kg)	Requested soil detection (mg/kg)	Requested method
Antimony	0 - 3	12	204.2 CLP-M
Arsenic	0 - 8	2	206.2 CLP-M
Barium	44 - 229	40	200.7 CLP-M
Beryllium	0 - 0.8	1	200.7 CLP-M
Cadmium	0 - 8	1	213.2 CLP-M
Chromium	2 - 48	2	200.7 CLP-M
Cobalt	0 - 15	10	200.7 CLP-M
Copper	0 - 20	5	200.7 CLP-M
Lead	1 - 13	0.6	239.2 CLP-M
Mercury	< 0.2	0.1	245.5 CLP-M
Nickel	6 - 25	8	200.7 CLP-M
Selenium	0 - 0.1	1	270.2 CLP-M
Silver	0 - 1.5	2	272.2 CLP-M
Thallium	0 - 0.2	2	279.2 CLP-M
Vanadium	24 - 96	10	200.7 CLP-M
Zinc	27 - 112	4	200.7 CLP-M

9613404.0589

Table A-2. Secondary Inorganic Analytes.

Element	Typical expected (mg/kg)	Requested soil detection (mg/kg)	Requested method
Aluminum	3600 - 13300	40	200.7 CLP-M
Calcium	2000 - 14000	1000	200.7 CLP-M
Iron	19000 - 29000	20	200.7 CLP-M
Magnesium	2780 - 6910	1000	200.7 CLP-M
Manganese	164 - 2870	3	200.7 CLP-M
Molybdenum	< 4	0.5	7481
Potassium	455 - 2600	1000	200.7 CLP-M
Sodium	125 - 1710	1000	200.7 CLP-M
Silicon	200 - 2900	20	200.7 CLP-M
Titanium	500 - 3500	50	Any method capable of meeting the requested DL
Zirconium	15 - 65	5	Any method capable of meeting the requested DL
Chloride	0 - 20	1	300.0
Nitrate and nitrite	0 - 15	1	300.0
Phosphate	0 - 3	2	300.0
Sulfate	0 - 35	2	300.0
Fluoride	0 - 8	1	~~Extraction by~~ 300.0, ~~Analysis by ASTM D 3868~~ ~~[illegible]~~ CK 11/22/91
Ammonium	0 - 4	1	Any method capable of meeting the requested DL
~~Carbonate~~	~~Highly Variable~~	~~1.0%~~	~~ASTM D 1070-[illegible]~~

Westinghouse Hanford Company 9613404.0590

CHAIN OF CUSTODY

Priority Sample

Project 91-075

Custody Form Initiator C.D. Kramer

Company Contact Chris Kramer

Telephone (509) 376-4186

Project Designation/Sampling Locations Site-wide Background - Site #3, Wye Pit rerun

Collection Date 11/20/91

Ice Chest No. RM#5

Field Logbook No. WHC-N-438

Bill of Lading/Airbill No. 247425288 0

Offsite Property No. W92-0-0018 #7

Method of Shipment Emery

Shipped to Data-Chem Salt Lake City, Utah

Possible Sample Hazards/Remarks None

Airbill # 247425288 0 11-25-91

Cooler T = < 4°C 11-25-91

Sample Identification

CLP 09385

B01B79 (3) 120-ml jars ~~EKS733~~ 11-25-91

☐ Field Transfer of Custody

CHAIN OF POSSESSION

(Sign and Print Names)

Relinquished by:	Received by:	Date/Time:
C.D. Kramer C.D. Kramer	Emery Worldwide	?Date received by shipper is Unknown ~~11-23-91 0930~~ 11-25-91
Relinquished by: Emery Worldwide	Received by:	Date/Time: 11-23-91 / 0930
Relinquished by:	Received by:	Date/Time:
Relinquished by:	Received by:	Date/Time:

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Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

A-6000-407 (12/90)

For Data-Chem

RECEIVED: 11/22/91 8:13

EXT.	DETER.	RESULTS OR STATUS	OUT OF RANGE?	GOOD ANS?	CHARGE CODE
****	********	**********	***	***	******
4271	TOT-ACT	< 5.00000E 01 PICI/G	N	Y	PK1BB

11/22/91 09:09 222 S COUNTING ROOM 010

SAMPLE STATUS REPORT FOR E 9107. E-BLANK B01B79 TIME: 11/22/91 8:37
DISPATCHED: 11/21/91 8:49 SAMPLE HAS NOT BEEN SLURPED
RECEIVED: 11/22/91 8:11

EXT.	DETER.	RESULTS OR STATUS	OUT OF RANGE?	GOOD ANS?	CHARGE CODE
****	********	**********	***	***	******
4271	TOT-ACT	< 5.00000E 01 PICI/G	N	Y	PK1BB

END OF REPORT

SAMPLE LOG-IN SHEET

SF- 1013

Lab Name: Datachem Laboratories

Page ____ of ____

Received By (Print Name): Stephen R. Black

Log-In Date: 11-23-91

Received By (Signature): Stephen R. Black

Case Number: WHC 36

Sample Delivery Group No.: 11-25-91 ~~EPA-Sm~~ Westinghouse

SAS Number: ____

CIRCLE THE APPROPRIATE RESPONSE:

1. Custody Seal(s) Present/Absent* Intact/Broken*
2. Custody Seal Nos.: ____
3. Chain-of-Custody Records Present/Absent*
4. Traffic Reports or Packing List Present/Absent*
5. Airbill Airbill/Sticker Present/Absent*
6. Airbill No.: 2474252880
7. Sample Tags Present/Absent*
   Sample Tag Numbers Listed/Not Listed on Chain-of-Custody
8. Sample Condition: Intact/Broken*/Leaking*
9. Does information on custody records, traffic reports, and sample tags agree? Yes/No*
10. Date Received at Lab: 11-23-91
11. Time Received: 0430

SAMPLE TRANSFER

Fraction: mtls Anions

Area #: walkin walkin

By: SM →

On: 4-25-91 →

SAMPLE #	CORRESPONDING SAMPLE TAG #	CORRESPONDING ASSIGNED LAB #	MATRIX	REMARKS: CONDITION OF SAMPLE SHIPMENT, ETC.
B01B79		CLP09385		Acceptable <4°C

SM 11-25-91

* If Circled, contact SMO and attach record of resolution.

11/89 Rev.

Reviewed By: [signature]

Logbook No.: ____

Date: November 26, 1991

Logbook Page No.: ____

FORM DC-1

9613404.0593

DATA CHEM LABORATORIES

ENVIRONMENTAL SOIL REPORT

Form EPRS-A
Page 1 of 2
Part 1 of 1

Date _____
Agency Identification Number SF-1013-EE
Account No. 3534C

Westinghouse Hanford Company
2355 Stevens Drive
MSIN T6-08
Richland,, WA 99352
Attention: Jeanette Duncan

DEC 1991 RECEIVED OSM DMO

Telephone (509) 373-3225

Sampling Collection and Shipment

Sampling Site _____ Date of Collection November 20, 1991

Date Samples Received at DataChem November 23, 1991

Analytical Results

Parameter Name / Analysis Date / Units / Method / Prep Method	Field Number / Lab Number	B01 B79 CLP 9385							* Limit of Detection
Ammonia (NH_3 - N) 12/02/1991 350.1 [1]	µg/g	ND*							0.5

* See comment on last page.
ND Parameter not detected.
NR Parameter not requested.
[1] Analyses completed on or before this date.

** Parameter not analyzed (See comment page).
( ) Parameter between LOD and LOQ.
[ ] Method Reference (See comments page.)

Analyst: Dorene A. Kley

Reviewer: Wade Sloan

Laboratory Supervisor: Norman K. Christensen

960 West LeVoy Drive / Salt Lake City, Utah 84123-2547 / (801) 266-7700
A Sorenson Company

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DATA CHEM LABORATORIES

ENVIRONMENTAL SOIL REPORT

Date _____

Agency Identification Number SF-1013-EE

Method Index **-- Method Reference --**

[1] EPA-600/4-79-020 "Methods for Chemical Analysis of Water and Wastes", March 1983 (Modified for use with soils.)

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A Sorenson Company

9613404.0595

DATA CHEM LABORATORIES

ENVIRONMENTAL SOIL REPORT

Form EPRS-A
Page 1 of 2
Part 1 of 1

Date _____
Agency Identification Number SF-1013-DE
Account No. 3534C

Westinghouse Hanford Company
2355 Stevens Drive
MSIN T6-08
Richland,, WA 99352
Attention: Jeanette Duncan

DEC 1991 RECEIVED OSM DMO

Telephone (509) 373-3225

Sampling Collection and Shipment

Sampling Site _____ Date of Collection November 20, 1991

Date Samples Received at DataChem November 23, 1991

Analytical Results

Parameter Name / Analysis Date / Method / Prep Method	Units	Field Number / Lab Number	B01 B79 CLP 9385							* Limit of Detection
Chloride (Cl) 12/02/1991 300.0 [1]	µg/g		2.							1.
Nitrate (NO_3-N) 12/02/1991 300.0 [1]	µg/g		1.3							0.3
Nitrite (NO_2-N) 12/02/1991 300.0 [1]	µg/g		0.7							0.4
Phosphate (PO_4-P) 12/02/1991 300.0 [1]	µg/g		ND*							2.
Sulfate (SO_4) 12/02/1991 300.0 [1]	µg/g		1.							1.
Fluoride (F) 12/02/1991 300.0 [1]	µg/g		ND*							1.

* See comment on last page.
ND Parameter not detected.
NR Parameter not requested.
[1] Analyses completed on or before this date.

** Parameter not analyzed (See comment page).
( ) Parameter between LOD and LOQ.
[ ] Method Reference (See comments page.)

Brian W. Motes
Analyst: Brian W. Motes

Debbie A. Christensen
Reviewer: Debbie A. Christensen

Norman K. Christensen
Laboratory Supervisor: Norman K. Christensen

960 West LeVoy Drive / Salt Lake City, Utah 84123-2547 / (801) 266-7700
A Sorenson Company

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DATA CHEM LABORATORIES

ENVIRONMENTAL SOIL REPORT

Date _____

Agency Identification Number SF-1013-DE

Method Index **-- Method Reference --**

[1] EPA-600/4-79-020 "Methods for Chemical Analysis of Water and Wastes", March 1983 (Modified for use with soils.)

960 West LeVoy Drive / Salt Lake City, Utah 84123-2547 / (801) 266-7700
A Sorenson Company

9613404.0597

OSM INORGANIC DATA ASSESSMENT

DATE Feb. 12, 1992

REVIEWED BY L.L. Ames

LABORATORY DataChem

CASE # WHC36

SDG # WHCM36

SAMPLES/MATRIX B01B79

DATA ASSESSMENT SUMMARY

	ICP	AA	Hg	CN
1. Calibrations (Form II)	O	O	O	
2. Blanks (III)	O	X	O	
3. ICS (IV)	O			
4. Matrix Spike (V)	X	O	O	
5. Duplicate Analysis (VI)	O	X	O	
6. LCS (VII)	X	O		
7. Serial Dilution (IX)	O			
8. GFAA		O		
9. Holding Times (XIV)	O	O	O	
10. Other QC	O	O	O	

O = data had no problems
X = data qualified due to minor problems
M = data qualified due to major problems/some data may be unusable

OVERALL ASSESSSMENT: There were no major problems; all results were acceptable with attached qualifications.

NOTES: The WHC sample number can be found on the case narrative and on the Form I.

o Refer to the corresponding attachments for explanation of any problems.

9613404.0598

INORGANIC QC - Calibrations

Name L.L. Ames LLA Date 2/12/92

COMMENTS: All initial and continuing calibration verification %Rs are within control limits. The instruments used (ICP and GFAA) were calibrated with the required blanks and CRDL standard. Cyanide was not requested.

ACTION: No action was required because all of the blank and standard criteria were met.

sample #	constituent	value/qual	sample #	constituent	value/qual

INORGANIC QC - Blanks

Name L.L. Ames LLA Date 2/12/92

COMMENTS: Contamination of the preparation blank with iron, calcium, sodium and potassium was detected. Preparation blank negative values included barium and beryllium. Molybdenum occurred in positive amounts in the initial blank, CCB1 and CCB2. Aluminum occurred in the ICB as a negative and in CCB3 as a contaminant. Manganese occurred as negatives in the initial and fifth blanks. Potassium contaminated the initial blank. Iron contaminated all of the CCBs and calcium the preparation blank.

ACTION: All of the negatives were > the IDL in the samples and hence no action was required. Of the contaminants, only molybdenum required qualification as U because the results were > the IDL but < 5X the blank values.

sample #	constituent	value/qual	sample #	constituent	value/qual
B01B79	molybdenum	U			

9613404.0600

INORGANIC QC - ICS

Name L.L. Ames LLA Date 2/12/92

COMMENTS: An initial and final ICP-ICS was run as required. All analyte %Rs were within the required ± 20% of the true values.

ACTION: No action was required.

sample #	constituent	value/qual	sample #	constituent	value/qual

INORGANIC QC - Matrix Spike

Name L.L. Ames LLA Date 2/12/92

COMMENTS: Matrix spike recovery was high for manganese and titanium and low for antimony and zirconium. All of the above were outside of the 75 to 125% R spike recovery limits.

ACTION: All of the above analytes were present in amounts > the IDL! Hence, all of the manganese, titanium, antimony and zirconium results were qualified as J.

sample #	constituent	value/qual
B0/B79	manganese	J
	titanium	J
	antimony	J
	zirconium	J

sample #	constituent	value/qual

INORGANIC QC - Duplicate Analysis

Name L.L. Ames LLA Date 2/12/92

COMMENTS: Lead was determined to be outside of the ±35% RPD for soil samples with ±2CRDL.

ACTION: Qualify the lead results as estimated (J).

sample #	constituent	value/qual
B01B79	lead	J

sample #	constituent	value/qual

9613404.0603 INORGANIC QC - LCS

Name L.L. Ames LLA Date 2/12/92

COMMENTS: All solid LCS %R were within specified control limits except potassium. The %R for potassium was very high. A liquid LCS was not run.

ACTION: Qualify potassium results as J (estimated).

sample #	constituent	value/qual
B01B79	potassium	J

sample #	constituent	value/qual

9613404.0604 INORGANIC QC - GFAA

Name L.L. Ames LLA Date 2/12/92

COMMENTS: Post digest spike sample recovery was within %R limits for all GFAA-run analytes except arsenic for sample B01B79. No MSA results were reported. Lead and arsenic duplicates are out of limits but are present in amounts < 5x the CRDL and are within ± 2X the CRDL for soil applications.

ACTION: Qualify B01B79 arsenic results as J because arsenic concentration is > the IDL. No action is required for arsenic and lead.

sample #	constituent	value/qual	sample #	constituent	value/qual
B01B79	arsenic	J			

9613404.0605

INORGANIC QC - Holding Times

Name L.L. Ames LLA Date 2/12/92

COMMENTS: Holding times were met for metal analyses.

ACTION: No action was required.

sample #	constituent	value/qual	sample #	constituent	value/qual

9613404.0606

INORGANIC QC - other

Name L.L. Ames LLA Date 2/12/92

COMMENTS: No comments except no case narrative.

ACTION: No action required.

sample #	constituent	value/qual	sample #	constituent	value/qual

9613404.0607

DATACHEM LABORATORIES
960 WEST LEVOY DRIVE
SALT LAKE CITY, UTAH 84123

Westinghouse Hanford

****

Case: WHC36 SDG: WHCM36 SF-1013-AE,BE,CE

CLIENT SAMPLE #	EPA SAMPLE #	LAB SAMPLE #
B01-B79	MC9385	CLP9385
MATRIX SPIKE	MC9385S	CLP9385
MATRIX DUPLICATE	MC9385D	CLP9385

9613404.0608

ENVIROFORMS/INORGANIC CLP

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.
B01B79

MC9385

Lab Name: DATACHEM LABORATORIES Contract:

Lab Code: DATAC Case No.: WHC36 SAS No.: SDG No.: WHCM36

Matrix (soil/water): SOIL Lab Sample ID: CLP9385

Level (low/med): LOW Date Received: 11/23/91

% Solids: 97.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4310			P
7440-36-0	Antimony	5.1	~~U~~	~~N~~ J	P
7440-38-2	Arsenic	0.66	~~B~~	~~W~~ J	F
7440-39-3	Barium	65.0			P
7440-41-7	Beryllium	0.21	U		P
7440-43-9	Cadmium	0.62	U		P
7440-70-2	Calcium	4780		*	P
7440-47-3	Chromium	3.9			P
7440-48-4	Cobalt	11.6			P
7440-50-8	Copper	15.0			P
	Cyanide				NR
7439-89-6	Iron	20300			P
7439-92-1	Lead	1.9	J	*	F
7439-95-4	Magnesium	3130			P
7439-96-5	Manganese	221	J	~~N~~	P
7439-97-6	Mercury	0.10	U		CV
	Molybdenu	0.71	~~B~~	U	F
7440-02-0	Nickel	6.1	B		P
7440-09-7	Potassium	722	~~B~~	J	P
7782-49-2	Selenium	0.21	U		F
7440-22-4	Silver	0.62	U		P
7440-23-5	Sodium	278	B		P
7440-28-0	Thallium	0.21	U		F
	Titanium	1930	J	~~N~~	P
7440-62-2	Vanadium	53.4			P
7440-66-6	Zinc	37.2			P
	Zirconium	23.9	J	~~N~~	P

LKA
2/12/92

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:

FORM I - IN

9613404.0609

OSM RCRA DATA ASSESSMENT

DATE 2/9/92 mdb SAMPLES/MATRIX B01B79

REVIEWED BY Mark A. Beck

LABORATORY Data Chem

CASE # Site Wide Soil

SDG # SF-1013-EE

DATA ASSESSMENT SUMMARY

QUALITY CONTROL CHECK	ANALYSIS	anions by 300.0	ammonia by 350.1	
1.	Holding Times	M	O	
2.	Matrix Spikes	X	X	
3.	Duplicates	O	O	
4.	Blanks	O	O	
5.	Calibration/LCS	O	O	
6.	Other	O	O	
7.				
8.				
9.				
10.				

O = data had no problems
X = minor problems, data may be qualified
M = data qualified due to major problems/some data may be unusable

OVERALL ASSESSMENT: The data are acceptable with the attached qualifiers.

NOTES: "Anions" includes fluoride, chloride, nitrite nitrate, phosphate, and sulfate.

o Refer to the corresponding attachments for explanation of any problems.

This sample is associated with Datachem CLP-metals package WMC36.

9613404.0610

RCRA QC

Name Mark A. Beck Date 2/9/92 m.a.b.

QC Check: Holding Times

COMMENTS: Holding Time requirements were met for fluoride, chloride, sulfate, and ammonia, but were not met for nitrate, nitrite, and phosphate.

ACTION: Qualify nitrite, nitrate, and phosphate results as estimated.

sample #	constituent	value/qual	sample #	constituent	value/qual
1301B79	NO_2^- nitrite	J			
	NO_3^- nitrate	J			
	phosphate	UJ			

___ of ___

9613404.0611

RCRA QC

Name Mark A. Beck Date 2/9/92 MAB

QC Check: Matrix Spike

COMMENTS: Neither ammonia nor the anions had a matrix spike that ~~cosod~~ corresponded to; the matrix of the sample (soil), or the SDG. All laboratory generated spike had acceptable % recoveries.

ACTION: ~~Qo~~ Qualify all results as estimated.

sample #	constituent	value/qual	sample #	constituent	value/qual
all (B01B79)	all	UJ or J			

___ of ___

9613404.0612

RCRA QC

Name Mark A. Beck Date 2/9/92 MAB.

QC Check: Duplicates

COMMENTS: As none of the duplicates were from this SDG, QC duplicates were used for validation purposes. All lab generated QC samples had duplicate analyses for all analytes.

ACTION: none - none needed.

sample #	constituent	value/qual	sample #	constituent	value/qual

___ of ___

9613404.0613

RCRA QC

Name Mark A. Beck Date 2/9/92 mab

QC Check: Blanks

COMMENTS: Ammonia - no contaminants found
blanks labled as init. base, last base and blank.
Anions - no blank found, except initial set-up
calibration blank. This blank was free of
contamination.

ACTION: none, except above comment.

sample #	constituent	value/qual	sample #	constituent	value/qual

___ of ___

9613404.0614

RCRA QC

Name Mark A. Beck Date 2/9/92 MAB

QC Check: Calibration/LCS

COMMENTS: Set-up calibrations were appropriately performed for both ammonia and anions. Continuing calibration checks and LCS for anions and ammonia met acceptance criteria.

ACTION: none - none needed

sample #	constituent	value/qual	sample #	constituent	value/qual

___ of ___

9613404.0615

RCRA QC

Name Mark A. Beck Date 2/6/92 mab.

QC Check: Other

COMMENTS: The use of samples not of the same matrix and of the same SDG for matrix spike and duplicate QC measures degrades the usefulness of those QC measures

ACTION: none – all necessary action ~~previous~~ previously taken

sample #	constituent	value/qual	sample #	constituent	value/qual

___ of ___

9613404.0616

DATA CHEM LABORATORIES

ENVIRONMENTAL SOIL REPORT

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Part 1 of 1

Date _____
Agency Identification Number SF-1013-DE
Account No. 3534C

Westinghouse Hanford Company
2355 Stevens Drive
MSIN T6-08
Richland,, WA 99352
Attention: Jeanette Duncan

DEC 1991 RECEIVED OSM DMO

Telephone (509) 373-3225

Sampling Collection and Shipment

Sampling Site _____ Date of Collection November 20, 1991

Date Samples Received at DataChem November 23, 1991

Analytical Results

Parameter Name / Analysis Date / Method / Prep Method	Units	Field Number / Lab Number	B01 B79 CLP 9385	OSM Qualifier						* Limit of Detection
Chloride (Cl) 12/02/1991 300.0 [1]	µg/g		2.	J						1.
Nitrate (NO_3-N) 12/02/1991 300.0 [1]	µg/g		1.3	J						0.3
Nitrite (NO_2-N) 12/02/1991 300.0 [1]	µg/g		0.7	J						0.4
Phosphate (PO_4-P) 12/02/1991 300.0 [1]	µg/g		ND*	UJ						2.
Sulfate (SO_4) 12/02/1991 300.0 [1]	µg/g		1.	J						1.
Fluoride (F) 12/02/1991 300.0 [1]	µg/g		ND*	UJ						1.

* See comment on last page.
ND Parameter not detected.
NR Parameter not requested.
[1] Analyses completed on or before this date.

** Parameter not analyzed (See comment page).
( ) Parameter between LOD and LOQ.
[ ] Method Reference (See comments page.)

Brian W. Motes
Analyst: Brian W. Motes

Debbie A. Christensen
Reviewer: Debbie A. Christensen

Norman K. Christensen
Laboratory Supervisor: Norman K. Christensen

960 West LeVoy Drive / Salt Lake City, Utah 84123-2547 / (801) 266-7700
A Sorenson Company

9613404.0617

DATA CHEM LABORATORIES

ENVIRONMENTAL SOIL REPORT

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Part 1 of 1

Date _____
Agency Identification Number SF-1013-EE
Account No. 3534C

Westinghouse Hanford Company
2355 Stevens Drive
MSIN T6-08
Richland,, WA 99352
Attention: Jeanette Duncan

DEC 1991 RECEIVED OSM DMO

Telephone (509) 373-3225

Sampling Collection and Shipment

Sampling Site _____ Date of Collection November 20, 1991

Date Samples Received at DataChem November 23, 1991

Analytical Results

Parameter Name / Analysis Date / Method / Prep Method	Units	Field Number / Lab Number	B01 B79 CLP 9385	OSM Qualifier						* Limit of Detection
Ammonia (NH_3 - N) 12/02/1991 350.1 [1]	µg/g		ND*	UJ						0.5

* See comment on last page.
ND Parameter not detected.
NR Parameter not requested.
[1] Analyses completed on or before this date.

** Parameter not analyzed (See comment page).
( ) Parameter between LOD and LOQ.
[ ] Method Reference (See comments page.)

Doreen A. Klay
Analyst: Doreen A. Klay

Wade Sloan
Reviewer: Wade Sloan

Norman K. Christensen
Laboratory Supervisor: Norman K. Christensen

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2/9/92 mab