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Westinghouse Hanford Company

OSM RCRA LEVEL C DATA ASSESSMENT

DATE 10-8-90

SAMPLES/MATRIX Seq# 89-044

REVIEWED BY C.J. Simiele

Lab ID:
fusion - F0082
water prep - F0087
Acid digest - F0092
untreated - F0078

LABORATORY WHC 222-S

CASE # SST-241-U-110

SDG # Core 10 Seq. 3 89-044

DATA ASSESSMENT SUMMARY

QUALITY CONTROL CHECK	ANALYSIS	IC	TOC	ICP
1.	Holding Time	X	X	O
2.	Calibration	O	O	M
3.	Analytical Blank	O	O	X
4.	LCS	N/A	N/A	N/A
5.	ICS (ICP only)	N/A	N/A	N/A
6.	Matrix Spike	O	O	M
7.	Duplicate Analyses	O	O	X
8.				
9.				
10.				

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:

NOTES:

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

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9 1 1 2 6 5 1 4 0 8

Westinghouse
Hanford Company

OSM RCRA LEVEL C DATA ASSESSMENT

DATE 10-8-90

REVIEWED BY C.J. Sumiela

LABORATORY WHC 222-S

CASE # SST-241-U-110

SDG # Lorg Le-Sag(3) 89-044

SAMPLES/MATRIX Sag(3) # 89-044
LAB ID#
fusion F0082
water prep: F0087
Acid digest: F0092
untreated: F0077

DATA ASSESSMENT SUMMARY

QUALITY CONTROL CHECK	ANALYSIS	pH	% water	
		(Duplicate Analyses only)		
1. —				
2. Duplicate Analyses		O	O	
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				

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: _____

NOTES: _____

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

9112120169

SUMMARY DATA REPORT

Tank	241-U-110
Core	6
Segment	3
Customer Id.	89-044

Untreated Sample

	Sample	Duplicate
pH	12.00	12.89
Percent Water	44.60 %	44.40 %

Fusion Analysis

Total Alpha	0.19 uci/g	0.35 uci/g
Total Beta	1330 uci/g	1460 uci/g
GEA Cs-137	20.6 uci/g	25.8 uci/g
Uranium	5060 ug/g	6120 ug/g

Water Digestion

Fluoride	2910 ug/g	3400 ug/g
Chloride	<1130 ug/g	<1130 ug/g
Nitrate	53500 ug/g	51000 ug/g
Phosphate	21700 ug/g	25900 ug/g
Sulfate	<11300 ug/g	<11300 ug/g
Total Organic Carbon	10800 ug/g	9230 ug/g

Acid Digestion Results

	Sample	Duplicate
Aluminum	90269 ug/g	89127 ug/g
Antimony	LT ug/g UJ	470 ug/g
Barium	21 ug/g J	40 ug/g
Beryllium	LT ug/g	1 ug/g
Bismuth	17746 ug/g	21187 ug/g
Boron	LT ug/g UJ	LT ug/g
Cadmium	LT ug/g	LT ug/g
Calcium	521 ug/g UJ	492 ug/g
Chromium	531 ug/g ~~J~~ UJ	529 ug/g
Cobalt	LT ug/g UJ	LT ug/g
Copper	LT ug/g	LT ug/g
Europium	LT ug/g	LT ug/g
Iron	12927 ug/g	12762 ug/g
Lanthanum	LT ug/g UJ	52 ug/g
Lead	212 ug/g J	601 ug/g
Lithium	LT ug/g	LT ug/g
Magnesium	886 ug/g J	3118 ug/g
Manganese	5691 ug/g	5569 ug/g
Mercury	54 ug/g J	28 ug/g
Molybdenum	LT ug/g UJ	29 ug/g
Nickel	107 ug/g J	138 ug/g
Potassium	LT ug/g UJ	LT ug/g
Samarium	LT ug/g	LT ug/g
Selenium	411 ug/g J	522 ug/g
Silicon	3877 ug/g UJ	4760 ug/g
Silver	LT ug/g UJ	LT ug/g
Sodium	86491 ug/g	88734 ug/g
Strontium	517 ug/g	577 ug/g
Sulfur	413 ug/g	456 ug/g
Tantalum	LT ug/g ~~UJ~~ R UJ	LT ug/g
Thallium	LT ug/g R	260 ug/g
Thorium	LT ug/g	LT ug/g
Tin	LT ug/g UJ	52 ug/g
Titanium	LT ug/g UJ	22 ug/g
Uranium	LT ug/g UJ	5655 ug/g
Vanadium	LT ug/g	LT ug/g
Zinc	193 ug/g UJ	283 ug/g
Zirconium	LT ug/g UJ	83 ug/g

10-8-90 CJSimpiell

** All reported results are wet sample weight.

LT : Less than instrument detection limit.

revised August 13, 1990

RCRA LEVEL C QC

Name C.J. Simiele Date 10-8-90

QC Check: Holding Times

COMMENTS: Holding times were not met for TOC and IC analyses. All other holding times were met.

ACTION: None- Due to the unusual circumstances under which SST-241-U-110 samples were analyzed any analyses which did not meet holding times will not be qualified

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

___ of ___

RCRA LEVEL C QC

Name C.J. Simiele Date 10-8-90

QC Check: Calibration

COMMENTS: all IC initial and continuing calibration with in control limits.

ACTION: None

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

___ of ___

9 1 1 2 2 0 5 2

RCRA LEVEL C QC

Name C.J. Simiele Date 10-8-90

QC Check: Analytical Blank

COMMENTS: All I.C. preparation blanks contaminant free.

ACTION: None

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

___ of ___

RCRA LEVEL C QC

Name C.J. Simicle Date 10-8-90

QC Check: LCS

COMMENTS: No LCS data provided with data package.

ACTION: None

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

___ of ___

RCRA LEVEL C QC

Name C. J. Simiele Date 10-8-90

QC Check: Matrix Spike

COMMENTS: All ic matrix spikes with in control limits.

ACTION: None

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

___ of ___

RCRA LEVEL C QC

Name C.J. Simiele Date 10-8-90

QC Check: Duplicate Analyses

COMMENTS: All IC Duplicate Analyses within control limits.

ACTION: None

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

___ of ___

9112205196

RCRA LEVEL C QC

Name C.J. Simiele Date 10-8-90

QC Check: Calibration

COMMENTS: All TOC initial and continuing calibration with in control limits.

ACTION: None

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

___ of ___

9 1 1 2 2 3 1 5 9 7

RCRA LEVEL C QC

Name C.J. Simiele Date 10-8-90

QC Check: Analytical Blank

COMMENTS: TOC preparation blank contaminant free.

ACTION: None

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

___ of ___

RCRA LEVEL C QC

Name C.J. Simiele Date 10-8-90

QC Check: LCS

COMMENTS: No LCS data provided with data package

ACTION: None

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

___ of ___

RCRA LEVEL C QC

Name C.J. Simiele Date 10-8-90

QC Check: Matrix Spike

COMMENTS: TOC matrix spike with in Control Limits.

ACTION: None

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

___ of ___

0 1 3 1 2 1 1 6

RCRA LEVEL C QC

Name C.J. Simiele Date 10-8-90

QC Check: Duplicate Analyses

COMMENTS: Tor duplicate analyses with in Control limits.

ACTION: None

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

___ of ___

RCRA LEVEL C QC

Name C.J. Simiele Date 10-8-90

QC Check: Calibration

COMMENTS: All ICP non-digested initial and continuing Calibration within control limits. ~~All~~ Five Constituents (Cr, Co, K, Ta & Si) in ICP acid digested standards out of control limits.

ACTION: Qualify associated data as per QSM guidelines.

sample #	constituent	value/qual	sample #	constituent	value/qual
F0092	Cr	J			
	Co	UJ			
	K	UJ			
	Si	J			
	Ta	~~UJ R~~ UJ CAS.			

___ of ___

RCRA LEVEL C QC

Name C.J. Simiele Date 10-8-90

QC Check: Analytical Blank

COMMENTS: Possible contaminants detected in blank and associated sample for: Ca, Si, and Zn.

ACTION: Qualify associated samples as per OSM guidelines

sample #	constituent	value/qual	sample #	constituent	value/qual
F0092	Ca	U			
↓	Si	↓			
	Zn				

___ of ___

RCRA LEVEL C QC

Name C. J. Simiele Date 10-8-90

QC Check: LCS

COMMENTS: No LCS data provided with data package.

ACTION: None

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

___ of ___

91120514

RCRA LEVEL C QC

Name C.J. Simiele Date 10-8-90

QC Check: ICS

COMMENTS: No ICS data provided with data package.

ACTION: None

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

___ of ___

9 1 1 2 2 1 5 1 5 1 5

RCRA LEVEL C QC

Name C.J. Simiele Date 10-8-90

QC Check: Matrix Spike

COMMENTS: Ten Constituents in ICP matrix Spike out of control limits.

ACTION: Qualify associated data as per OSM guidelines.

sample #	constituent	value/qual	sample #	constituent	value/qual
F0092	B	UJ			
	Ca	J			
	Cr	UJ ~~UJ acceptable~~			
	Mg	J			
	K	UJ			
	Si	J			
	Ag	UJ			
	Ta	R			
	Zn	J			
	Zr	UJ			

___ of ___

RCRA LEVEL C QC

Name C.J. Simiele Date 10-8-90

QC Check: Duplicate Analyses

COMMENTS: ICP duplicate analyses out of ±20% Control limits include: Ah (57%); Ba (91%); La (79%); Pb (183%); Mg (252%); Hg (48%); Mo (190%); Ni (29%); Se (27%), Si (23%); Tl (93%); Sn (73%); Ti (214%); U (136%); Zn (47%) Zr (177%)

ACTION: Qualify all associated samples as per OSM guidelines.

sample #	constituent	value/qual	sample #	constituent	value/qual
F0092	Ah	UJ			
	Ba	J			
	La	UJ			
	Pb	J			
	Mg	J			
	Hg	J			
	Mo	UJ			
	Ni	J			
	K	UJ			
	Se	J			
	Si	J			
	TL	UJ			
	Sn	UJ			
	Ti	UJ			
	U	UJ			
	Zn	J			
	Zr	UJ			

___ of ___

RCRA LEVEL C QC

Name C. J. Simiele Date 10-8-90

QC Check: Duplicate Analyses

COMMENTS: All pH and % Water duplicate analyses within control limits.

ACTION: None

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

___ of ___

9 1 1 2 0 5 0 1 5 8