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5 of 5

Westinghouse Hanford Company

OSM RCRA LEVEL C DATA ASSESSMENT

DATE 10-3-90 SAMPLES/MATRIX Seg. #4- 89-041

REVIEWED BY C.J. Simiele Acid digests: F5048

LABORATORY 222-S fusion prep- F5038

CASE # SST-241-U-110 water digest- F5033

SDG # Segment #4-Core 5 89-041

DATA ASSESSMENT SUMMARY

BEST AVAILABLE COPY

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

JAN 1991 RECEIVED EDMC

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

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Westinghouse
Hanford Company

OSM RCRA LEVEL C DATA ASSESSMENT

DATE 10-3-90

REVIEWED BY C.J. Simiele

LABORATORY 222-S

CASE # SST 241-U-110

SDG # Segment #4

SAMPLES/MATRIX Seg (4) #89-041
acid digest - F5048
fusion - F5038
water digest - F5033

DATA ASSESSMENT SUMMARY

QUALITY CONTROL CHECK	ANALYSIS	DH	% H_2O	
		(Duplicate Analyses only)		
1. —				
2. Duplicate Analyses		0	0	
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				

0 = 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.

9 1 1 2 1 5 1 0 7 0

SUMMARY DATA REPORT

Tank	241-U-110
Core	5
Segment	4
Customer Id.	89-041

Untreated Sample

	Sample	Duplicate
pH	12.71	12.92
Percent Water	38.80%	39.10%

Fusion Analysis

Total Alpha	0.36 uci/g	0.44 uci/g
Total Beta	1080 uci/g	1140 uci/g
GEA		
Cs-137	48.40 uci/g	42.90 uci/g
Uranium	2200 ug/g	2900 ug/g

Water Digestion

Fluoride	23200 ug/g J	20400 ug/g
Chloride	<1050 ug/g	<1120 ug/g
Nitrate	64900 ug/g	60500 ug/g
Phosphate	4980 ug/g J	39600 ug/g
Sulfate	5610 ug/g	5110 ug/g

Total Organic Carbon/Carbonate

4710 ug/g	5030 ug/g

Samples were not acidified before analysis

Total Organic Carbon (Second analysis)

859 ug/g J	1100 ug/g

Samples were acidified before analysis

Acid Digestion Results

	Sample	Duplicate
Aluminum	34730 ug/g R	37858 ug/g
Barium	22 ug/g	16 ug/g
Bismuth	20942 ug/g	19470 ug/g
Boron	LT UJ	LT
Cadmium	LT	LT
Calcium	155 ug/g J	152 ug/g
Chromium	446 ug/g J	429 ug/g
Copper	27 ug/g	15 ug/g
Iron	7927 ug/g	8145 ug/g
Lanthanum	LT UJ	LT
Lead	131 ug/g J	LT
Lithium	4 ug/g J	LT
Magnesium	103 ug/g	116 ug/g
Manganese	1993 ug/g J	2048 ug/g
Molybdenum	20 ug/g J	11 ug/g
Nickel	59 ug/g J	44 ug/g
Phosphorous	9243 ug/g	9534 ug/g
Potassium	198 ug/g J	LT
Silver	LT	LT
Sodium	65496 ug/g	65413 ug/g
Strontium	243 ug/g	245 ug/g
Tantalum	63 ug/g J	13 ug/g
Tin	31 ug/g J	17 ug/g
Titanium	11 ug/g	LT
Zinc	57 ug/g	LT
Zirconium	44 ug/g J	LT

LT: Less Than

10-3-90
C.J. Simpell

RCRA LEVEL C QC

Name C.J. Simiele Date 10-3-90

QC Check: Holding Time

COMMENTS: Holding times were not met for NO_3 on T.C., the second TOC analyses, and the ICP analyses. All other holding times were met.

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

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

___ of ___

RCRA LEVEL C QC

Name C.J. Simiele Date 10-3-90

QC Check: Calibration

COMMENTS: All initial ICP calibration within control limits. In continuing calibration standard, one element outside control limits. (Mo). Three elements in acid digested standard outside control limits. (Ca, Pb).

ACTION: Qualify all associated data as per OSM guidelines

sample #	constituent	value/qual	sample #	constituent	value/qual
F5048	Mo	J			
	Ca	J			
	Pb	J			

___ of ___

RCRA LEVEL C QC

Name C. J. Simiele Date 10-3-90

QC Check: Analytical Blank

COMMENTS: No preparation Blank analyzed with SDG.

ACTION: Qualify associated samples as per OSM guidelines

sample #	constituent	value/qual	sample #	constituent	value/qual
F5048	Al	R	F5048	Na	R
	Ba			Sr	
	Bi			Ta	
	B			Sn	
	Cd			Ti	
	Ca			Zn	
	Cr			Zr	
	Cu				
	Fe				
	La				
	Pb				
	Li				
	Mg				
	Mn				
	Mo				
	Ni				
	P				
	K				
	Ag				

___ of ___

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RCRA LEVEL C QC

Name C.J. Simiele Date 10-3-90

QC Check: LCS

COMMENTS: No LCS data provided with data package.

ACTION: None

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

___ of ___

9 1 1 2 1 5 9 1 0 7 5

RCRA LEVEL C QC

Name C. J. Simiele Date 10-3-90

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 5 1 0 7 6

RCRA LEVEL C QC

Name C.J. Simiele Date 10-3-90

QC Check: Matrix Spike

COMMENTS: ~~Nine~~ Ten elements in matrix spike out of control limits. (B, Ca, Cr, La, Mn, Ni, K, Ta, Sn & Zr)

ACTION: Qualify associated data as per OSM guidelines.

sample #	constituent	value/qual	sample #	constituent	value/qual
F 5048	Ca	J			
	Cr	J			
	La	UJ			
	Mn	J			
	Ni	J			
	K	J			
	Ta	J			
	B	UJ			
	Sn	J			
	Zr	J			

___ of ___

RCRA LEVEL C QC

Name C. J. Simiele Date 10-3-90

QC Check: Duplicate Analyses

COMMENTS: ICP duplicate analyses out of ±20% control limits include: Ba (27.3%); Cu (44%); Pb (57%); Mo (45%); Ni (25%); Ta (79%); Sn (45%); Ti (360%); Zn (93%); & Zr (32%). *

ACTION: Qualify associated data as per OSM guidelines

sample #	constituent	value/qual	sample #	constituent	value/qual
F5048	Ba	J			
	Cu				
	Pb				
	Mo				
	Ni				
	Ta				
	Sn				
	Ti				
	Zn				
	Zr				

* LESS THEN values assumed to equal detection limit to determine of RPD.

RCRA LEVEL C QC

Name C.J. Simiele Date 10-3-90

QC Check: Calibration

COMMENTS: All intial IC calibration within control limits, one element (F) of a continuing calibration standard out of control limits.

ACTION: Qualify associated data as per OSM guidelines.

sample #	constituent	value/qual	sample #	constituent	value/qual
F5043	F	J			

___ of ___

RCRA LEVEL C QC

Name C.J. Simiele Date 10-3-90

QC Check: Analytical Blank

COMMENTS: all I.C. anion preparation blanks contaminant free.

ACTION: None

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

___ of ___

RCRA LEVEL C QC

Name C.J. Simiele Date 10-3-90

QC Check: LCS

COMMENTS: No LCS data provide with data package.

ACTION: None

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

___ of ___

RCRA LEVEL C QC

Name C.J. Simiele Date 10-3-90

QC Check: Matrix Spike

COMMENTS: One anion of IC spike out of Control limit. (PO_4)

ACTION: Qualify associated data as per DSM guidelines.

sample #	constituent	value/qual	sample #	constituent	value/qual
F5043	PO_4	J			

___ of ___

RCRA LEVEL C QC

Name C.J. Simiele Date 10-3-90

QC Check: Duplicate Analyses

COMMENTS: One anion duplicate result on the IC out of control limits. (PO4)

ACTION: Qualify associated data as per QSM guidelines.

sample #	constituent	value/qual	sample #	constituent	value/qual
F5043	PO4	J			

___ of ___

RCRA LEVEL C QC

Name C.J. Simiele Date 10-3-90

QC Check: Calibration

COMMENTS: All intial and continuing calibration checks with in control limits for both TOC sets.

ACTION: None

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

___ of ___

RCRA LEVEL C QC

Name C.J. Simiele Date 10-3-90

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 10-3-90

QC Check: LCS

COMMENTS: No LCS data provided with data package.

ACTION: None

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

___ of ___

9 1 1 2 5 7 1 0 4 6

RCRA LEVEL C QC

Name C. J. Simiele Date 10-3-90

QC Check: Matrix Spike

COMMENTS: Matrix spike on both TOC analyses sets with in control limits.

ACTION: None

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

___ of ___

9 1 1 2 0 5 9 1 0 1 7

RCRA LEVEL C QC

Name C.J. Simiele Date 10-3-90

QC Check: Duplicate Analyses

COMMENTS: Duplicate analyses on first TOC within control limits. Duplicate analyses on second TOC out of control limits.

ACTION: Qualify associated data as per OSM guidelines.

sample #	constituent	value/qual	sample #	constituent	value/qual
F5033	TOC (2nd set)	J			

___ of ___

RCRA LEVEL C QC

Name C.J. Simiele Date 10-3-90

QC Check: Duplicate Analysis

COMMENTS: Both pH and % Water within ±20% Control Limits.

ACTION: None

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

___ of ___

9 1 1 2 5 1 0 1 9