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Westinghouse Hanford Company

OSM RCRA LEVEL C DATA ASSESSMENT

DATE 10-2-90

SAMPLES/MATRIX Seq #3- 89-040

REVIEWED BY C.J. Simiela

fusion prep- E5006

LABORATORY 222-S

water digest- E5011

CASE # SST 241-U-110

acid digest.- E5016

SDG # Segment 3-Core5 89-040

DATA ASSESSMENT SUMMARY

BEST AVAILABLE COPY

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

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 10-2-90 SAMPLES/MATRIX Seg (3) 89-040

REVIEWED BY C.J. Simiele fusion prep: F5006

LABORATORY 222-S WHC water digest: F5011

CASE # SST 241-U-110 Acid digest: F5016

SDG # Segment 3-Core 5 89-040

DATA ASSESSMENT SUMMARY

QUALITY CONTROL CHECK	ANALYSIS	pH (Duplicate Analyses only)	% Water	
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.

9 1 1 2 2 5 1 6 0 0 9

SUMMARY DATA REPORT

Tank	241-U-110
Core	5
Segment	3
Customer ID	89-040

Untreated Sample

	Sample	Duplicate
pH	12.28	12.94
Percent Water	39.20%	39.06%

Fusion Analysis

Total Alpha	0.79 uci/g	0.69 uci/g
Total Beta	1930 uci/g	1830 uci/g
GEA		
Cs-137	36.3 uci/g	32.9 uci/g
Uranium	13900 ug/g	11700 ug/g

Water Digestion

Fluoride	825 ug/g J	2020 ug/g
Chloride	1600 ug/g J	1490 ug/g
Nitrate	7480 ug/g	72800 ug/g
Phosphate	3640 ug/g J	17300 ug/g
Sulfate	2500 ug/g	2380 ug/g

Total Organic Carbon and Carbonate (First Analysis*)

2923 ug/g J	1730 ug/g

Total Oranic Carbon (Second Analysis*)

<530 ug/g	<530 ug/g

*See introduction

Acid Digestion

	Sample	Duplicate
Aluminum	119471 ug/g	133517 ug/g
Barium	3 ug/g UJ	747 ug/g
Bismuth	3537 ug/g	3534 ug/g
Boron	LT UJ	804 ug/g
Cadmium	LT UJ	741 ug/g
Calcium	212 ug/g J	91 ug/g
Cerium	LT ~~UJ~~ R	LT
Chromium	593 ug/g J	1494 ug/g
Copper	69 ug/g J	923 ug/g
Iron	8124 ug/g	8330 ug/g
Lanthanum	LT ug/g UJ	576 ug/g
Lead	709 ug/g J	1192 ug/g
Lithium	LT UJ	980 ug/g
Magnesium	915 ug/g J	988 ug/g
Manganese	5067 ug/g	5340 ug/g
Molybdenum	41 ug/g J	846 ug/g
Nickel	51 ug/g J	28 ug/g
Silver	LT UJ	527 ug/g
Sodium	75687 ug/g	80622 ug/g
Strontium	692 ug/g	726 ug/g
Tantalum	LT UJ	791 ug/g
Tin	50 ug/g J	17 ug/g
Titanium	100 ug/g UJ	62 ug/g
Zinc	59 ug/g UJ	904 ug/g
Zirconium	104 ug/g J	866 ug/g

LT Less Than Detection Limit

10-3-90
C.V. Sumfield

RCRA LEVEL C QC

Name C.J. Simiele Date 10-2-90

QC Check: Holding Time

COMMENTS: All holding times were met except for ICP(on acid digestion), NO_3^- Nitrate (on water digestion and TOC on the second water Leach.

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

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

___ of ___

A

/

RCRA LEVEL C QC

Name C.J. Simiele Date 10-2-90

QC Check: Calibration

COMMENTS: All non-digested ICP initial and continuing calibration within control limits. Four digested ICP standards outside of control limits.

ACTION: Qualify associated data as per OSWI guidelines.

sample #	constituent	value/qual
F5016	Ce	~~J~~ UJ
	Cr	J
	La	UJ
	Pb	J

sample #	constituent	value/qual

___ of ___

RCRA LEVEL C QC

Name C.J. Simiele Date 10-2-90

QC Check: Analytical Blank

COMMENTS: Possible contaminants detected in preparation blank and associated sample for: Ti and Zn.

ACTION: Qualify associated data as per OSM guidelines

sample #	constituent	value/qual	sample #	constituent	value/qual
F5016	Ti	U			
L	Zn	V			

___ of ___

RCRA LEVEL C QC

Name C.J. Simiele Date 10-2-90

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 10-2-90

QC Check: Interference Check Sample

COMMENTS: No ICS data provided with data package.

ACTION: None

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

___ of ___

9112210014

RCRA LEVEL C QC

Name C.J. Simiele Date 10-2-90

QC Check: Matrix Spike

COMMENTS: ~~Six~~ Seven matrix spike analytes out of control limits for ICP analyses. (Ca, Ce, Cr, La, Pb, Mg, Ag). Calibration frequency meets requirements.

ACTION: Qualify associated data as per OSM guidelines

sample #	constituent	value/qual	sample #	constituent	value/qual
F 5016	Ca	J			
	Ce	R			
	Cr	J			
	La	UJ			
	Pb	J			
	Mg	J			
	Ag	UJ			

___ of ___

RCRA LEVEL C QC

Name C.J. Simiele Date 10-2-90

QC Check: Duplicate Analyses

COMMENTS: ICP duplicate analysis out of ±20 control limits include: Ba (24800%); B (97.9%) Cd (9162%); Ca (51.7%); Cr (1519%); Cu (1237%); La (1820%); Pb (68%); Li (12150%); Mo (1963%); Ni (45%); Ag (1287%); Ta (1288%); Sn (66%); Ti (38%); Zn (1432%); Zr (733%).

ACTION: Qualify associated data as per OSM guidelines.

sample #	constituent	value/qual	sample #	constituent	value/qual
F 5016	Ba	UJ			
	B	UJ			
	Cd	UJ			
	Ca	J			
	Cr	J			
	Cu	J			
	La	UJ			
	Pb	J			
	Li	UJ			
	Mo	J			
	Ni	J			
	Ag	UJ			
	Ta	UJ			
	Sn	J			
	Ti				
	Zn				
	Zr				

___ of ___

J.C W

RCRA LEVEL C QC

Name C.J. Simiele Date 10-2-90

QC Check: Calibration

COMMENTS: All intial and continuing calibration IC analyses within control limits.

ACTION: None

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

___ of ___

9112521617

RCRA LEVEL C QC

Name C.J. Simiele Date 10-2-90

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. Simiele Date 10-2-90

QC Check: Laboratory Control Samples (LCS)

COMMENTS: No LCS data provided with data package.

ACTION: None

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

___ of ___

9 1 0 1 6 5 2 1 1 6

RCRA LEVEL C QC

Name C.J. Simiele Date 10-2-90

QC Check: Matrix Spike

COMMENTS: Two anions (F and Cl) out of control limits for I.C. data.

ACTION: Qualify associated data as per OSM guidelines.

sample #	constituent	value/qual	sample #	constituent	value/qual
F5611	F	J			
	Cl	J			

___ of ___

RCRA LEVEL C QC

Name C.J. Simiela Date 10-2-90

QC Check: Duplicate Analyses

COMMENTS: Duplicate results out of control limits for three anions (F, Cl and PO4), on the I.C.

ACTION: Qualify associated data as per OSM guidelines

sample #	constituent	value/qual	sample #	constituent	value/qual
F5011	F	J			
	Cl	J			
	PO4	J			

___ of ___

TOC - W

RCRA LEVEL C QC

Name C.J. Simiele Date 10-2-90

QC Check: Calibration

COMMENTS: Both, first and second TOC initial and continuing calibration with in control limits

ACTION: None

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

___ of ___

9112161202

RCRA LEVEL C QC

Name C.J. Simiele Date 10-7-90

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 10-2-90

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 10-2-90

QC Check: Matrix Spike

COMMENTS: Both first and second TOC matrix spike 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 10-2-90

QC Check: Duplicate Analyses

COMMENTS: The first TOC analyses set duplicate is not in control limits. Second TOC analyses set duplicate with in control limits

ACTION: Qualify associated data as per OSM guidelines.

sample #	constituent	value/qual	sample #	constituent	value/qual
5F5011	TOCCO_3	J			

___ of ___

RCRA LEVEL C QC

Name C.J. Simiele Date 10-2-90

QC Check: Calibration

COMMENTS: All standard checks for pH and % water within a ±10% control limit.

ACTION: None

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

___ of ___

9112150107

RCRA LEVEL C QC

Name C.J. Simiele Date 10-2-90

QC Check: Duplicate Analyses

COMMENTS: All pH and % water analyses within ±20% control limits.

ACTION: None

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

___ of ___