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Westinghouse
Hanford Company

OSM RCRA LEVEL C DATA ASSESSMENT

DATE 10-8-90

REVIEWED BY C.J. Simiele

LABORATORY WHC 222-S

CASE # SST-241-U-110

SDG # Core 16 Seq. 4
89-045

SAMPLES/MATRIX Seq #-89-045

LAB ID #:
fusion- F0106
water- F0111
acid digest- F0116
untreated- F0101

DATA ASSESSMENT SUMMARY

QUALITY CONTROL CHECK	ANALYSIS	IC	TOC	ICP
1.	Holding Time	X	X	O
2.	Calibration	O	O	X
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	O
7.	Duplicate Analyses	X	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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OSM RCRA LEVEL C DATA ASSESSMENT

DATE 10-8-90

REVIEWED BY C.J. Simiele

LABORATORY WHC 222-S

CASE # SST-241-U-110

SDG # Core 6 Seg (4) 89-045

SAMPLES/MATRIX Seg(4)# 89-045
LAB ID.)
fusion - F0106
water leach - F0111
Acid digest - F0116
Untreated - F0101

DATA ASSESSMENT SUMMARY

QUALITY CONTROL CHECK	ANALYSIS	pH (Duplicate Analyses)	%H2O (Duplicate Analyses)	(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.

9 1 1 2 5 1 0 9

SUMMARY DATA REPORT

Tank	241-U-110
Core	6
Segment	4
Customer ID	89-045

Untreated Sample

	Sample	Duplicate
pH	11.96	12.22
Percent Water	38.50 %	37.30 %

Fusion Analysis

Total Alpha	<0.517 uci/g	<0.873 uci/g
Total Beta	84.6 uci/g	86.0 uci/g
GEA		
Cs-137	18.7 uci/g	23.4 uci/g
Uranium	1390 ug/g	1310 ug/g
	1080 ug/g	

Water Digestion

Fluoride	17200 ug/g	18600 ug/g
Chloride	<953 ug/g	<979 ug/g
Nitrate	25500 ug/g	26600 ug/g
Phosphate	146000 ug/g	159000 ug/g
Sulfate	4060 ug/g J	<9790 ug/g
Total Organic Carbon *		
	726 ug/g	693 ug/g

*Samples were acidified before analysis

Acid Digestion

	Wet Weight Sample	Wet Weight Sample Duplicate
Aluminum	45520 ug/g	52568 ug/g
Antimony	LT	LT
Arsenic	LT	LT
Barium	LT UJ	LT
Beryllium	LT	LT
Bismuth	21590 ug/g J	26620 ug/g
Boron	LT	LT
Cadmium	LT	LT
Calcium	295 ug/g UJ	1113 ug/g
Cerium	LT UJ	LT
Chromium	119 ug/g J	188 ug/g
Copper	LT	LT
Iron	14837 ug/g	16885 ug/g
Lanthanum	LT	LT
Lead	LT UJ	602 ug/g
Magnesium	479 ug/g	449 ug/g
Manganese	156 ug/g J	269 ug/g
Mercury	LT	LT
Molybdenum	LT	LT
Nickel	LT	LT
Phosphorous	53626 ug/g	47284 ug/g
Potassium	LT	LT
Samarium	LT	LT
Selenium	LT	LT
Silver	LT	LT
Sodium	187906 ug/g J	168975 ug/g
Strontium	120 ug/g	106 ug/g
Sulfur	113 ug/g J	278 ug/g
Tantalum	LT UJ	LT
Thallium	LT	LT
Thorium	LT	LT
Tin	LT	LT
Titanium	LT	LT
Uranium	LT	LT
Vanadium	LT	LT
Zinc	142 ug/g J	5380 ug/g
Zirconium	LT UJ	97 ug/g

LT Less Than Detection Limit

10-8-90
C.J. Surgeon

revised August 24, 1990

RCRA LEVEL C QC

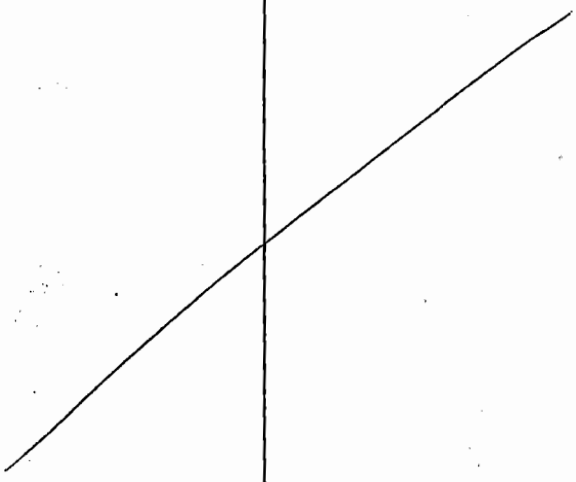
Name C.J. Simiele Date 10-8-90

QC Check: Holding Times

COMMENTS: Holding times were not met for IC, Toc and U 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



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9-15-92 0056

RCRA LEVEL C QC

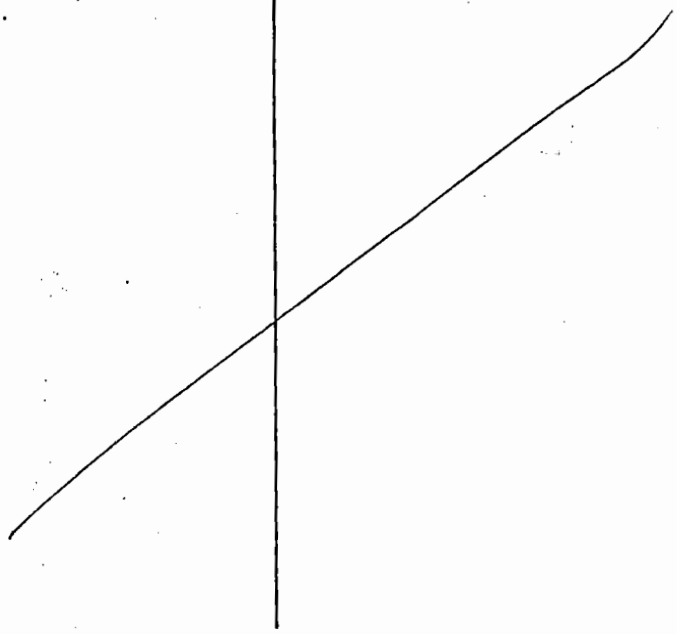
Name C.J. Simiele Date 10-8-90

QC Check: Calibration

COMMENTS: All IC initial and continuing calibration within control limits.

ACTION: None

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



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9120563

RCRA LEVEL C QC

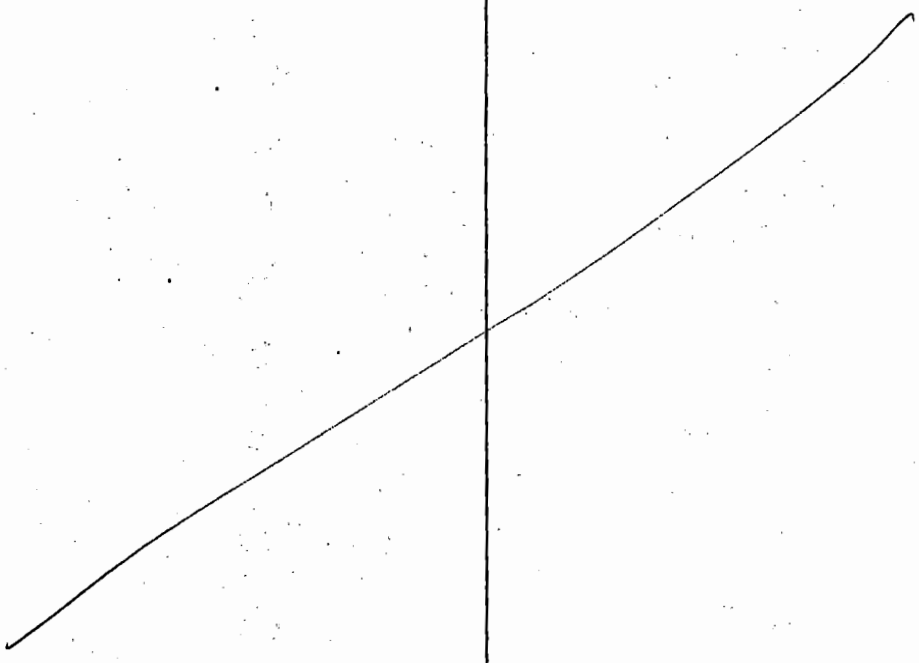
Name C.J. Simicle Date 10-8-90

QC Check: Analytical Blank

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

ACTION: None

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



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9112856

RCRA LEVEL C QC

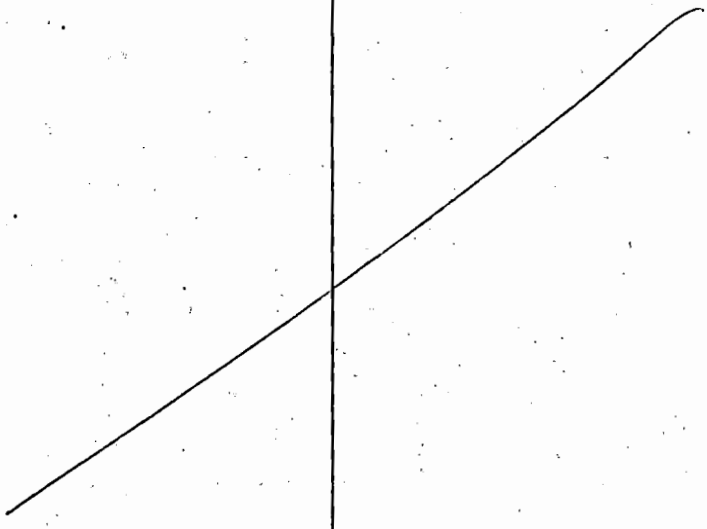
Name C.J. Simiele Date 10-8-90

QC Check: LCS

COMMENTS: No LCS data provided with data package.

ACTION: None

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



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8-12-96-C-15-E

RCRA LEVEL C QC

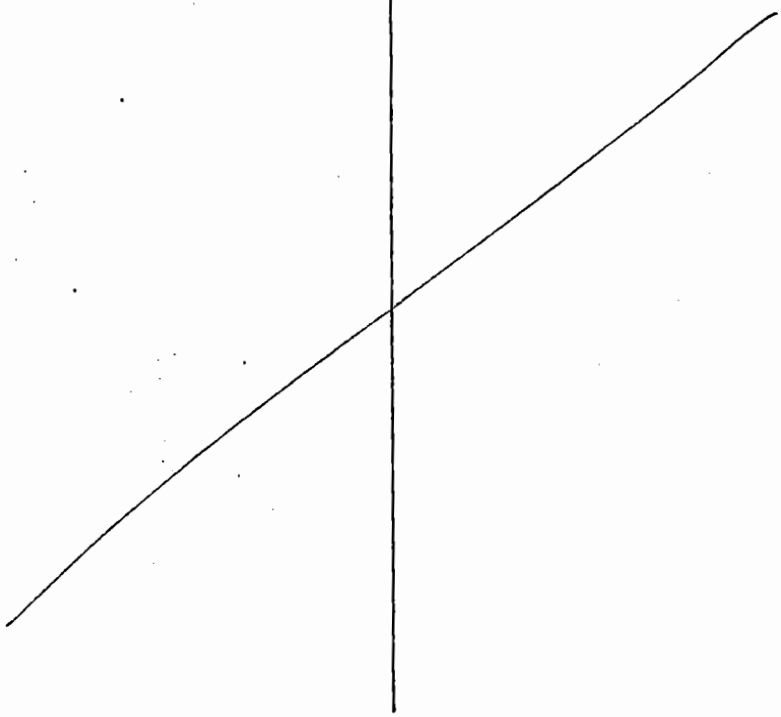
Name C.J. Simiele Date 10-8-90

QC Check: Matrix Spike

COMMENTS: IC matrix spike within control limits.

ACTION: None

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



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0135056

RCRA LEVEL C QC

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

QC Check: Duplicate Analyses

COMMENTS: One anion (SO4) in IC duplicate analyses out of control limits.

ACTION: Qualify associated data as per OSM guidelines.

sample #	constituent	value/qual	sample #	constituent	value/qual
F0111	SO4	J			

___ of ___

9150217

RCRA LEVEL C QC

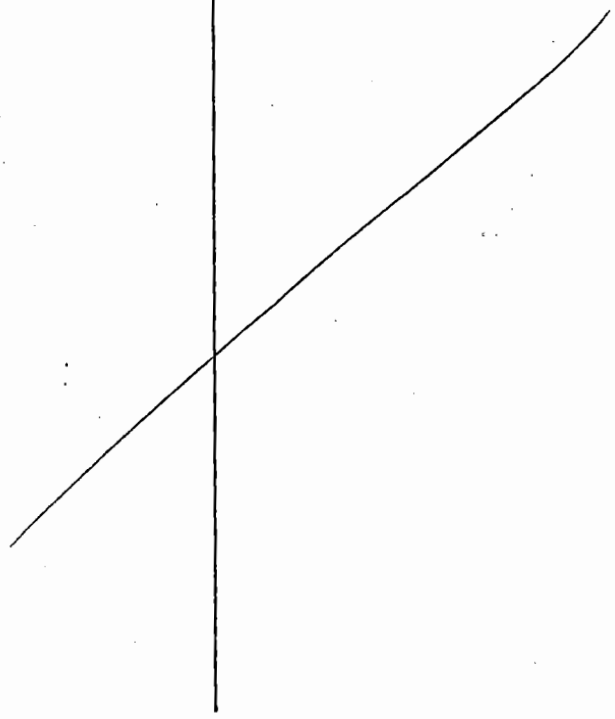
Name C.J. Simiele Date 10-8-90

QC Check: Calibration

COMMENTS: All TOC inital and continuing Calibration with in control limits.

ACTION: None

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



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9112056

RCRA LEVEL C QC

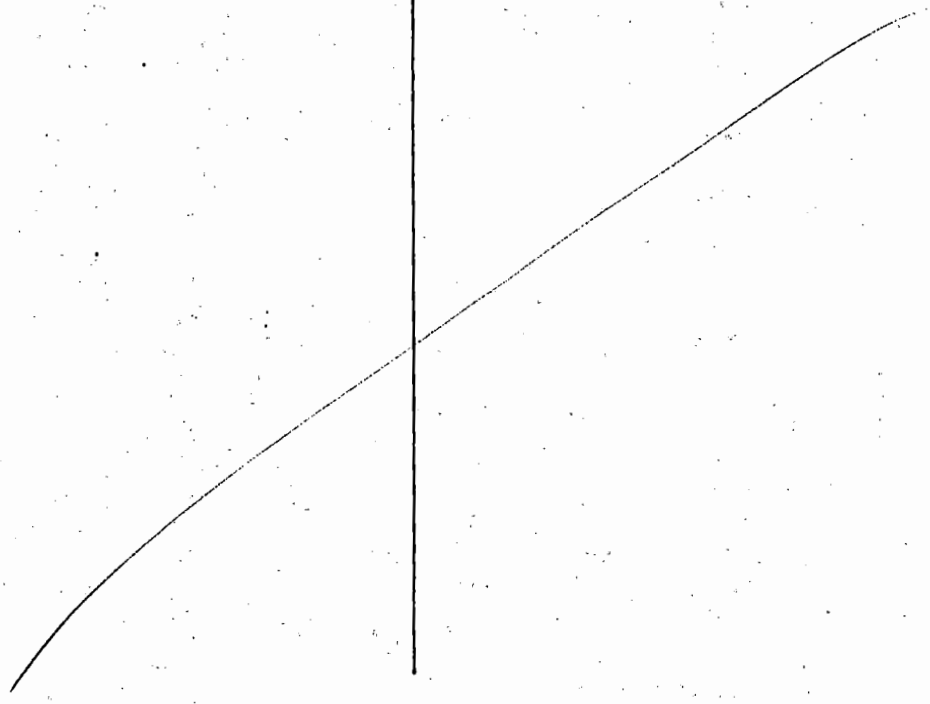
Name C.J. Simiele Date 10-8-90

QC Check: Analytical Blank

COMMENTS: TOC preparation blank contaminant free.

ACTION: None

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



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9125C1156

RCRA LEVEL C QC

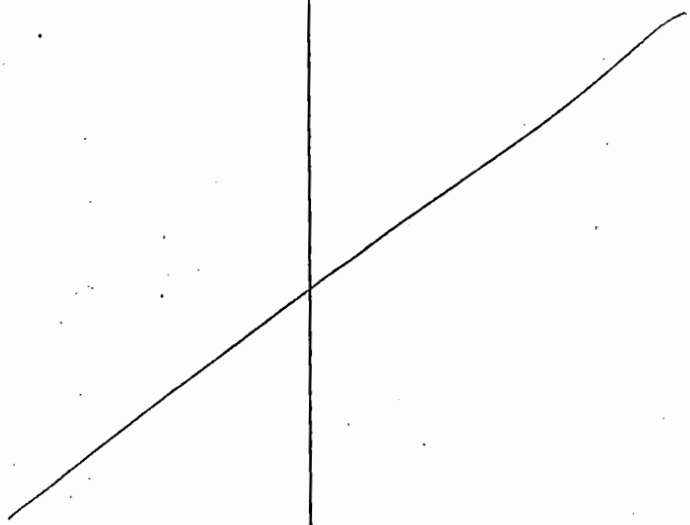
Name C.J. Simiele Date 10-8-90

QC Check: LCS

COMMENTS: No LCS data provided with data package.

ACTION: None

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



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911205150

RCRA LEVEL C QC

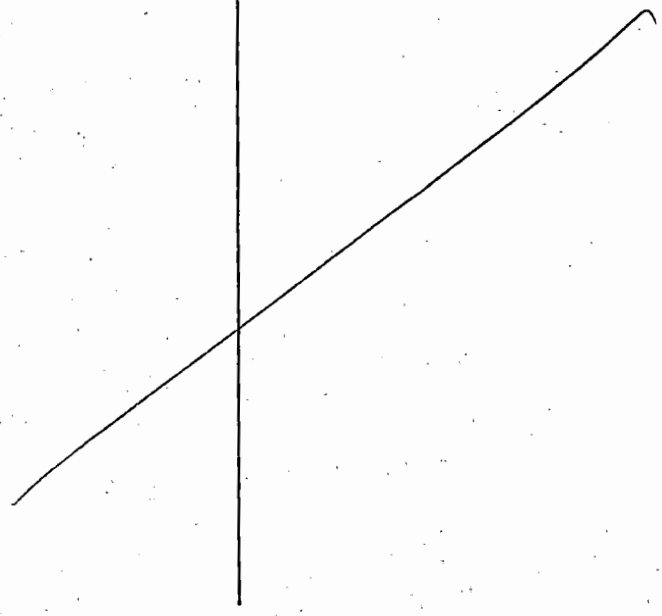
Name C.J. Simiele Date 10-8-90

QC Check: Matrix Spike

COMMENTS: Toc matrix spike with in control limits.

ACTION: None

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



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9125653

RCRA LEVEL C QC

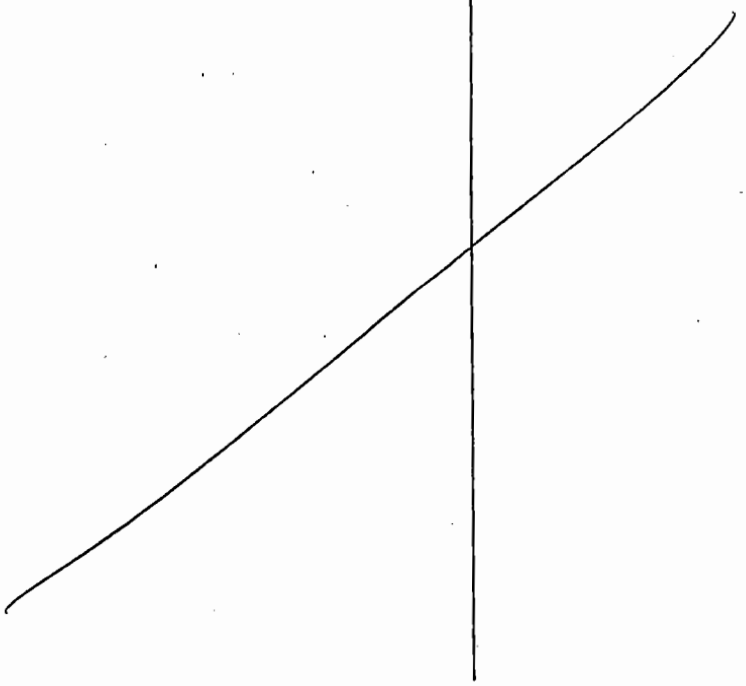
Name C.J. Simiele Date 10-8-90

QC Check: Duplicate Analyses

COMMENTS: Toc duplicate analyses within control limits.

ACTION: None

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



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9-1-2360-1-5-2

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. Eight constituents in ICP digested initial and continuing calibration out of control limits

ACTION: Qualify associated data as per OSM Guidelines.

sample #	constituent	value/qual	sample #	constituent	value/qual
F0116	Ba	UJ			
	Bi	J			
	Ca	J ~~acceptable~~ CLS			
	Ce	UJ			
	Cr	J			
	Na	J ~~acceptable~~ CLS			
	Ta	UJ			
	Zr	UJ			

9112060153

___ of ___

RCRA LEVEL C QC

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

QC Check: Analytical Blank

COMMENTS: Possible contaminants detected in preparation blank and associated sample for: Ca and Sr.

ACTION: Qualify associated samples as per OSM guidelines.

sample #	constituent	value/qual	sample #	constituent	value/qual
F0116	Ca	U			
L	Si	U			

___ of ___

9112906574

RCRA LEVEL C QC

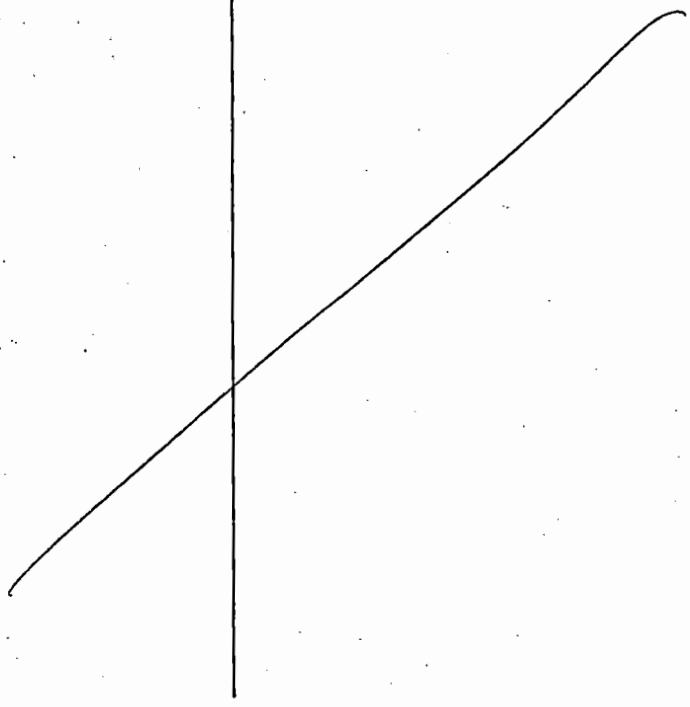
Name C.J. Simiele Date 10-8-90

QC Check: LCS

COMMENTS: No LCS data provided with data package.

ACTION: None

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



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RCRA LEVEL C QC

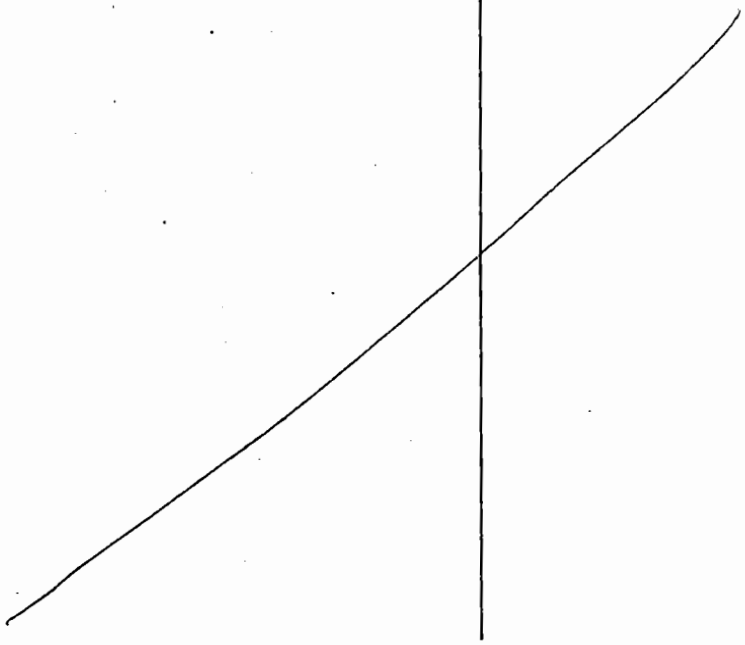
Name C.J. Simiele Date 10-8-90

QC Check: ICS

COMMENTS: No ICS data provided with data package

ACTION: None

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



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9-1-2-0-5-1-5

RCRA LEVEL C QC

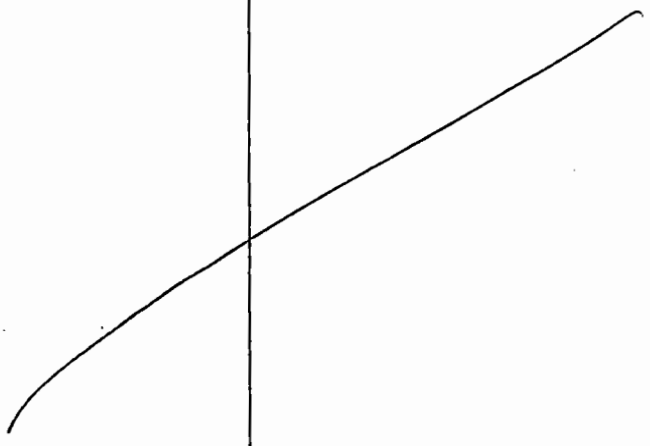
Name C.J. Simiele Date 10-8-90

QC Check: Matrix Spike

COMMENTS: All ICP matrix spike analyses with in control limits.

ACTION: None

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



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SRC-1-0152

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: Bi (23%); Ca (277%); Cr (58%); Pb (938%); Mn (72%); S (146%); Zn (3688%); Zr (223%).
*

ACTION: Qualify associated data as per OSM guidelines.

sample #	constituent	value/qual	sample #	constituent	value/qual
F0116	Bi	J			
	Ca	↓			
	Cr	↓			
	Pb	UJ			
	Mn	J			
	S	↓			
	Zn	↓			
	Zr	↓			

* All Less Than values — of — assume to equal detection limit to calculate RPD.

9112960158

RCRA LEVEL C QC

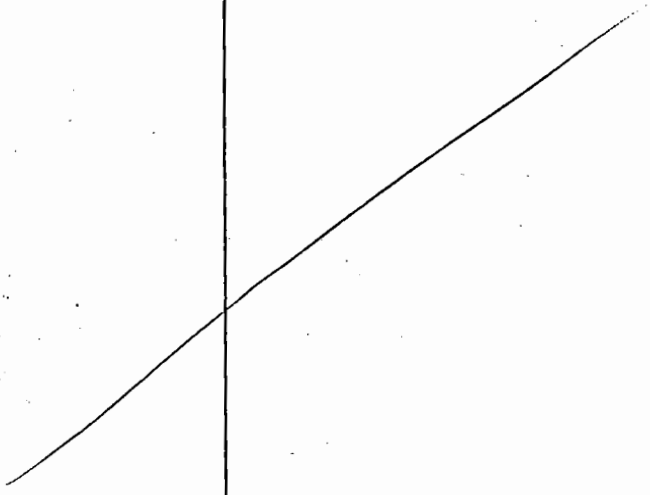
Name C.J. Simiele Date 10-8-90

QC Check: Duplicate Analyses

COMMENTS: pH and % water duplicate analyses within control limits.

ACTION: None

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



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9112060159