

0012368

SINGLE-SHELL TANK WASTE CHARACTERIZATION FOR TANK 241-U-110 CORE 12

SEGMENT 2 3 4

DATA PACKAGE

SECTION

10 OF 10

OSM RCRA LEVEL C DATA ASSESSMENT

DATE 12-16-90 SAMPLES/MATRIX Seq# 89-070
 REVIEWED BY C.J. Simiele (Configured Samples) LAB ID: untreated: F0417
 LABORATORY WHC-222S Fusion: F4022^{04 WS}
 CASE # SST-241-U-110 Awd Digest: F0432
 SDG # * 89-070 Water Leach: F0427
 (Core 12 Segment 2)

DATA ASSESSMENT SUMMARY

QUALITY CONTROL CHECK	ANALYSIS	IC	TOC	ICP
1. <u>Holding Time</u>		<u>X</u>	<u>X</u>	<u>X</u>
2. <u>Calibration</u>		<u>0</u>	<u>0</u>	<u>0</u>
3. <u>Analytical Blank</u>		<u>0</u>	<u>0</u>	<u>X</u>
4. <u>LCS</u>		<u>*</u>	<u>*</u>	<u>*</u>
5. <u>ICS (ICP ONLY)</u>		<u>N/A</u>	<u>N/A</u>	<u>*</u>
6. <u>Matrix Spike</u>		<u>0</u>	<u>0</u>	<u>M</u>
7. <u>Duplicate Analyses</u>		<u>0</u>	<u>0</u>	<u>X</u>
8. <u>_____</u>		<u>/</u>	<u>/</u>	<u>/</u>
9. <u>_____</u>		<u>/</u>	<u>/</u>	<u>/</u>
10. <u>_____</u>		<u>/</u>	<u>/</u>	<u>/</u>

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 ASSESSMENT: (Samples were not qualified based on exceeded holding times.)

NOTES: * = no data provided with data package.

No Radiochemistry Validation completed on data package.

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

DATA SUMMARY
Report results are wet sample weight.

Single Shell Tank Project

Tank: 241-U-110
Core: 12
Segment: 2
Customer ID: 89-070

ICP Results

Undigested Results

	Sample	Duplicate
pH	12.99	12.84
% Water	38.19%	43.60%

FUSION ANALYSIS

	Sample	Duplicate
Fusion Digestion	2.72 g/L	2.32 g/L
Total Alpha	1.03 uci/g	8.32E-01 uci/g
Total Beta	1.23E+03 uci/g	1.46E+03 uci/g
GEA		
Cs-137	3.18E+01 uci/g	3.33E+01 uci/g
Uranium	1.19E+04 ug/g	1.33E+04 ug/g

Water Digestion

	Sample	Duplicate
Water Digestion	10.39 g/L	10.59 g/L
Ion Chromatograph		
Fluoride	1.66E+03 ug/g	1.47E+03 ug/g
Chloride	1.64E+03 ug/g	1.65E+03 ug/g
Nitrate	2.92E+04 ug/g	3.32E+04 ug/g
Phosphate	<9.72E+03 ug/g	<9.54E+03 ug/g
Sulfate	2.90E+03 ug/g	2.98E+03 ug/g
Total Organic Carbon	7.94E+02 ug/g	7.79E+02 ug/g

	Sample	Duplicate
Aluminum	134047 ug/g	138868 ug/g
Antimony	LT	1492 ug/g
Arsenic	LT	LT
Barium	169 ug/g	166 ug/g
Beryllium	LT	LT
Bismuth	7660 ug/g	7283 ug/g
Boron	LT	LT
Cadmium	LT	LT
Calcium	942 ug/g	956 ug/g
Cerium	2352 ug/g	2473 ug/g
Chromium	1306 ug/g	1245 ug/g
Cobalt	LT	LT
Copper	LT	LT
Europium	54 ug/g	56 ug/g
Iron	21473 ug/g	34058 ug/g
Lanthanum	307 ug/g	300 ug/g
Lead	2501 ug/g	2942 ug/g
Lithium	85 ug/g	97 ug/g
Magnesium	3262 ug/g	3077 ug/g
Manganese	9208 ug/g	8516 ug/g
Mercury	LT	LT
Molybdenum	96 ug/g	106 ug/g
Neodymium	LT	LT
Nickel	371 ug/g	324 ug/g
Potassium	LT	LT
Samarium	2962 ug/g	3127 ug/g
Selenium	1703 ug/g	1507 ug/g
Silver	LT	LT
Sodium	81120 ug/g	79479 ug/g
Strontium	1257 ug/g	1219 ug/g
Tantalum	LT	LT
Thallium	4339 ug/g	4313 ug/g
Thorium	1805 ug/g	1949 ug/g
Tin	LT	LT
Titanium	226 ug/g	240 ug/g
Uranium	38459 ug/g	37872 ug/g
Vanadium	231 ug/g	242 ug/g
Zinc	274 ug/g	462 ug/g
Zirconium	460 ug/g	445 ug/g

LT: Less Than
NC: Not Calibrated
NOT CALC: Not Calculated
Instrument Standards Outside Control Limits

*12-16-90
C.V. Surpud*

RCRA LEVEL C QC

Name C.J. Simiele

Date 12-16-90

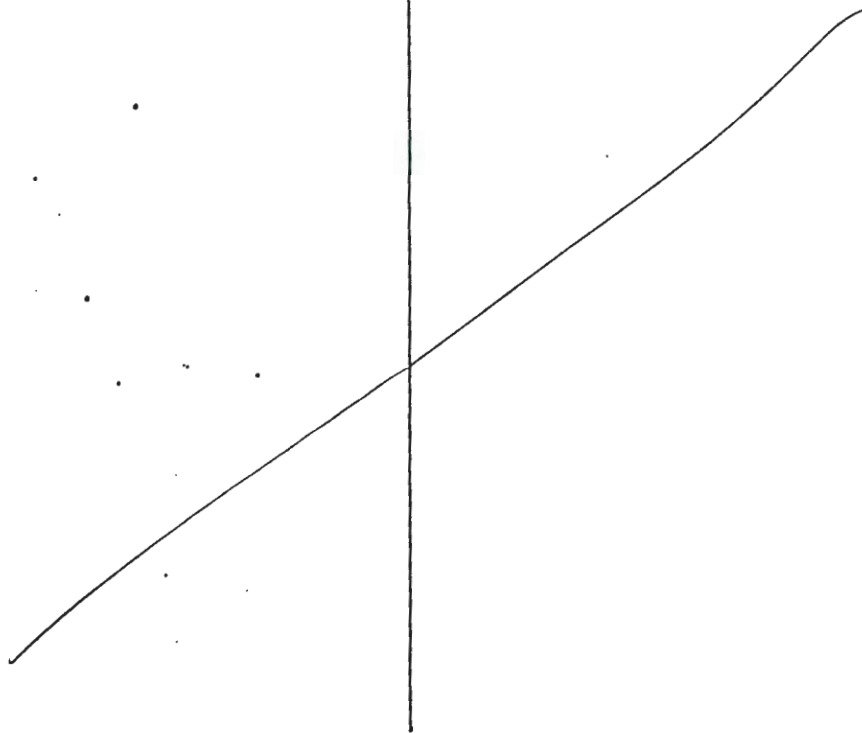
QC check: Holding Time

COMMENTS: 10 analyses (water leach) holding time
of two days for nitrate was exceeded by 132
days and 28 days for all other anions was
exceeded by 106 days.

ACTION: None

sample # constituent value/qual

sample # constituent value/qual



RCRA LEVEL C QC

Name C.J. Simiele

Date 12-16-90

QC check: Calibration

COMMENTS: IC analyses calibration standards are within $\pm 10\%$ control limits for both IC runs. Calibration frequency met.

ACTION: None

<u>sample #</u>	<u>constituent</u>	<u>value/qual</u>	<u>sample #</u>	<u>constituent</u>	<u>value/qual</u>
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RCRA LEVEL C QC

Name C.J. Simiele

Date 12-16-90

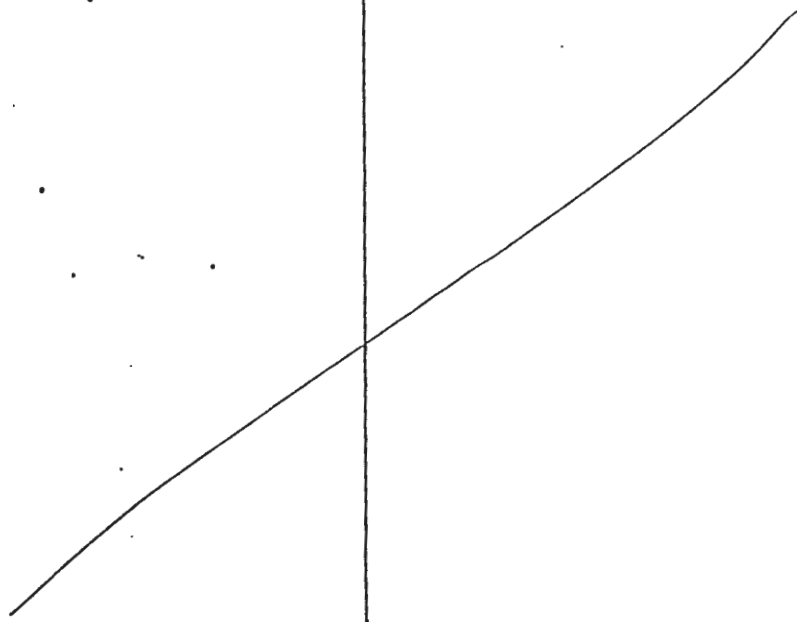
QC check: Analytical Blank

COMMENTS: IC analyses preparation blank and
associated sample contaminant free.

ACTION: None

sample # constituent value/qual

sample # constituent value/qual



RCRA LEVEL C QC

Name C.J. Simiele

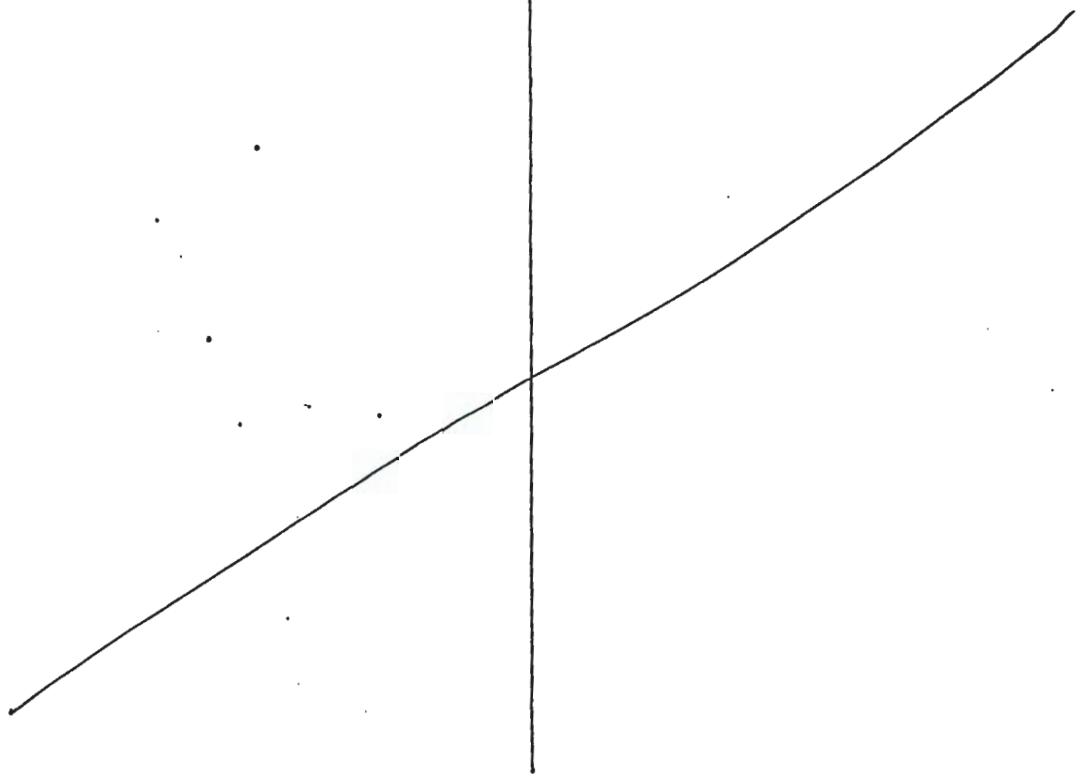
Date 12-16-90

QC Check: LCS

COMMENTS: No LCS data provided with data package.

ACTION: None

<u>sample #</u>	<u>constituent</u>	<u>value/qual</u>	<u>sample #</u>	<u>constituent</u>	<u>value/qual</u>
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RCRA LEVEL C QC

Name C.J. Simiele

Date 12-16-90

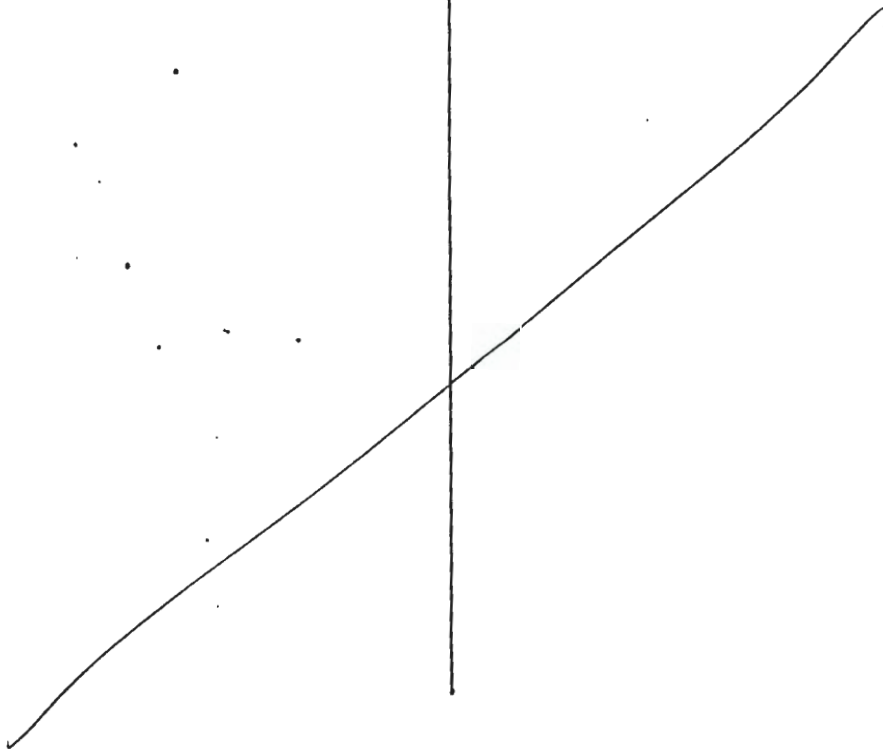
QC Check: Matrix Spike

COMMENTS: 10 matrix spike % Rec. is within $\pm 25\%$ control limits for all anions.

ACTION: None

sample # constituent value/qual

sample # constituent value/qual



RCRA LEVEL C QC

Name C.J. Simiele

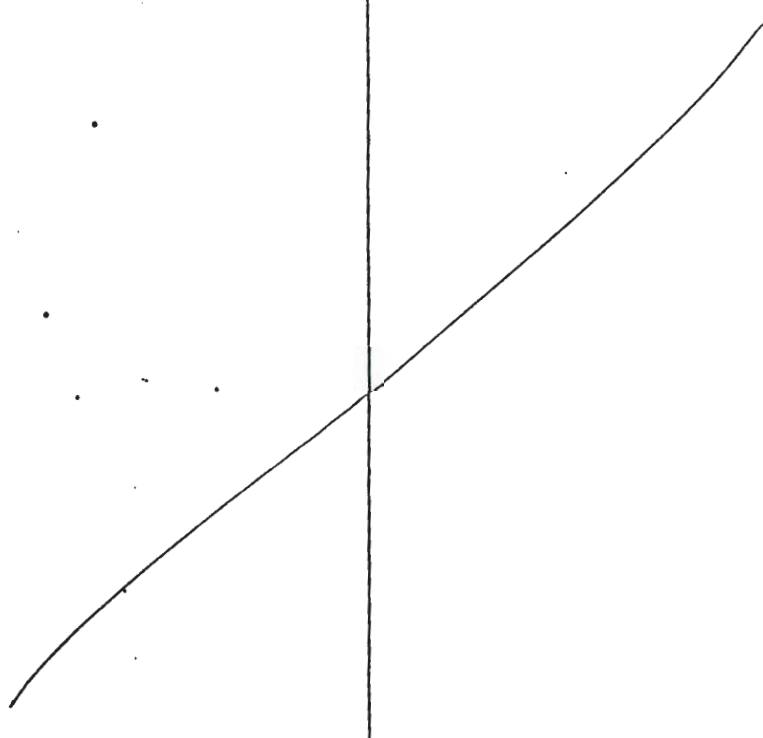
Date 12-11-90

QC check: Duplicate Analyses

COMMENTS: 10 duplicate analyses, RPD within
±20 control limits for all anions.

ACTION: None

<u>sample #</u>	<u>constituent</u>	<u>value/qual</u>	<u>sample #</u>	<u>constituent</u>	<u>value/qual</u>
/					



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RCRA LEVEL C QC

Name C.J. Simiele

Date 12-16-90

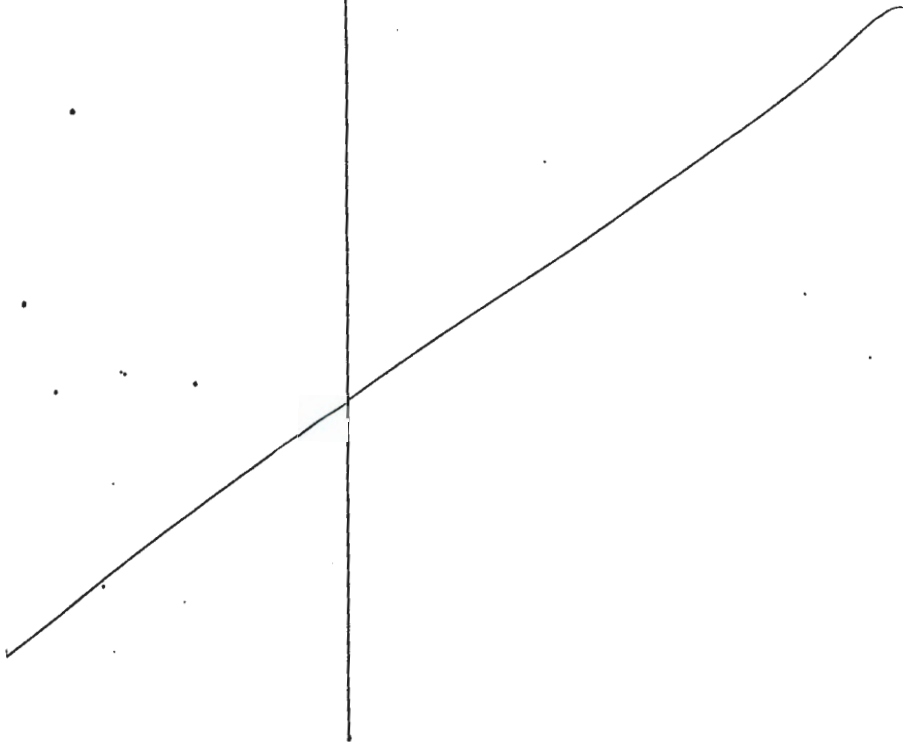
QC check: Holding Time

COMMENTS: TOC (water leach) holding time of 28 days
exceeded by 90 days.

ACTION: None

sample # constituent value/qual

sample # constituent value/qual



Name C. J. Simiele

Date 12-16-90

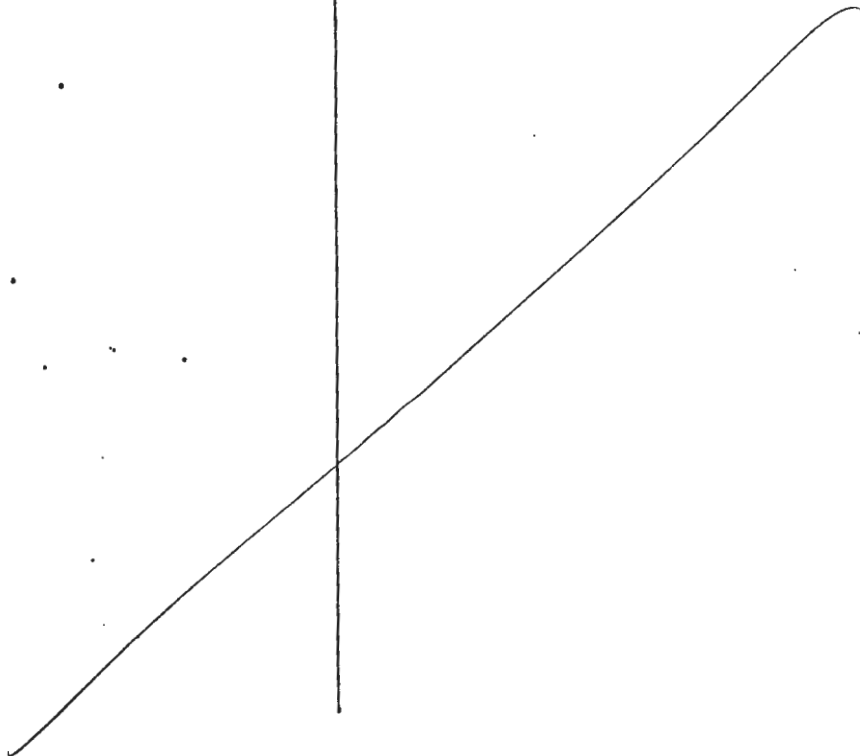
QC check: Calibration

COMMENTS: TOC calibration standards are
within $\pm 10\%$ control limits. Calibration
frequency met

ACTION: None

sample # constituent value/qual

sample # constituent value/qual



___ of ___

RCRA LEVEL C QC

Name C.J. Simiele

Date 12-16-90

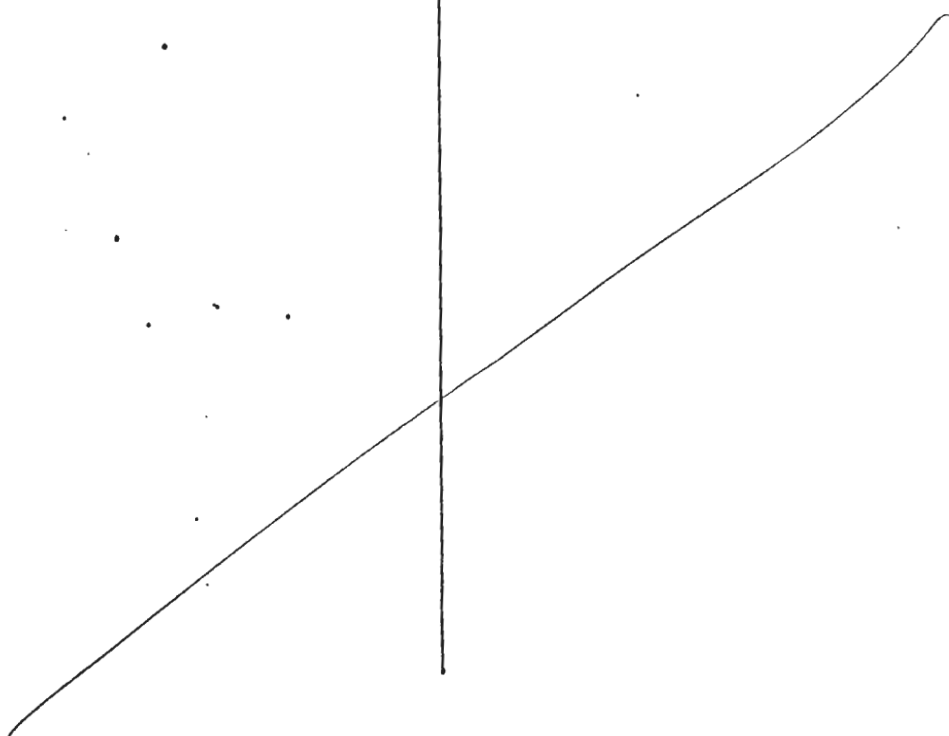
QC check: Analytical Blank

COMMENTS: TOC preparation blank and associated sample are contaminant free.

ACTION: None

sample # constituent value/qual

sample # constituent value/qual



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RCRA LEVEL C QC

Name C.J. Simiele

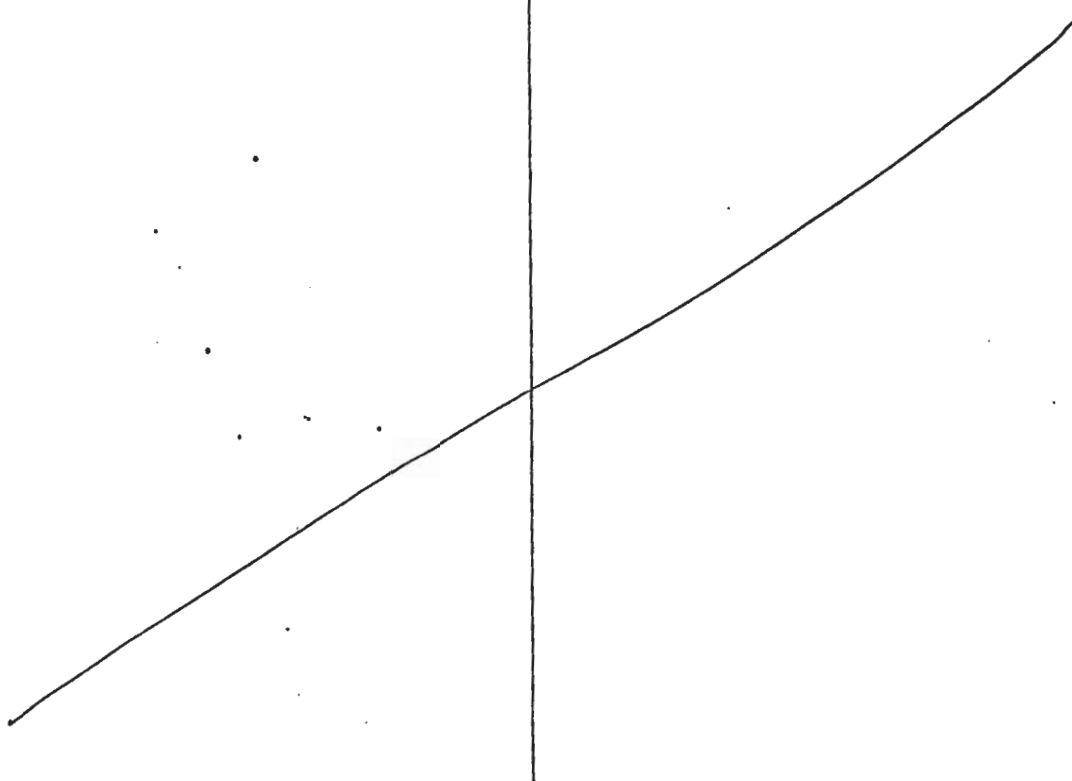
Date 12-16-90

QC check: LCS

COMMENTS: No LCS data provided with data package.

ACTION: None

<u>sample #</u>	<u>constituent</u>	<u>value/qual</u>	<u>sample #</u>	<u>constituent</u>	<u>value/qual</u>
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Name C.J. Simiele

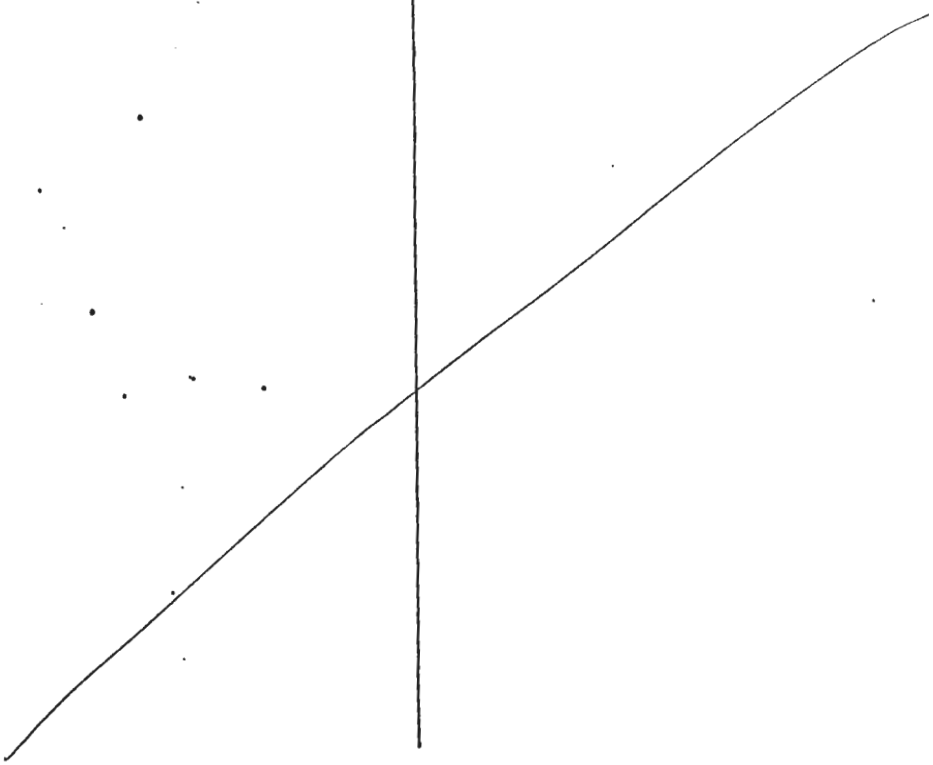
Date 12-16-90

QC check: Matrix Spike

COMMENTS: TOC matrix spike % Rec. is within
±25% control limits.

ACTION: None

<u>sample #</u>	<u>constituent</u>	<u>value/qual</u>	<u>sample #</u>	<u>constituent</u>	<u>value/qual</u>
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RCRA LEVEL C QC

Name C.J. Simiele

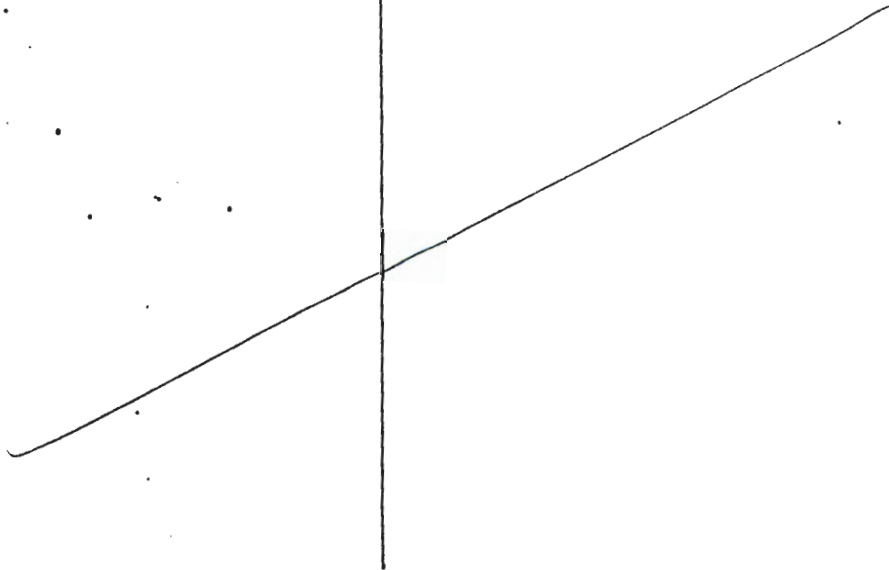
Date 12-10-90

QC check: Duplicate Analyses

COMMENTS: TOC duplicate analyses is within
±20% control limits.

ACTION: None

<u>sample #</u>	<u>constituent</u>	<u>value/qual</u>	<u>sample #</u>	<u>constituent</u>	<u>value/qual</u>
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RCRA LEVEL C QC

Name C.J. Simiele

Date 12-11-90

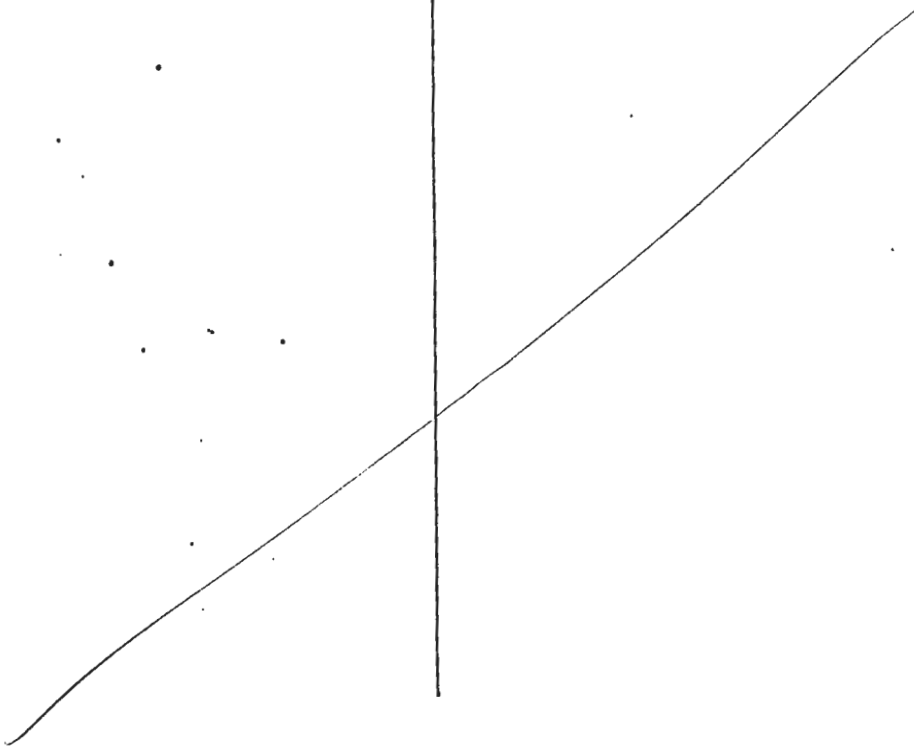
QC check: Holding Time

COMMENTS: ICP (acid digest) holding time of
16 months exceeded by three months.

ACTION: None

sample # constituent value/qual

sample # constituent value/qual



Name C. J. Simiele

Date 12-16-90

QC check: Calibration

COMMENTS: 10P calibration standards are within
 \pm ^{LIS} 10% control limits. Calibration frequency.

ACTION: None

<u>sample #</u>	<u>constituent</u>	<u>value/qual</u>	<u>sample #</u>	<u>constituent</u>	<u>value/qual</u>
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RCRA LEVEL C QC

Name C.J. Simiele

Date 12-16-90

QC check: Analytical Blank

COMMENTS: Contaminants detected in preparation blank and associated sample for: As, B and Cd.

ACTION: Qualify associated samples per OSM guidelines.

<u>sample #</u>	<u>constituent</u>	<u>value/qual</u>
F0432	As	u
↓	B	↓
	Cd	↓

<u>sample #</u>	<u>constituent</u>	<u>value/qual</u>
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RCRA LEVEL C QC

Name C.J. Simiele

Date 12-16-90

QC Check: LCS

COMMENTS: No LCS data provided with data package.

ACTION: None

<u>sample #</u>	<u>constituent</u>	<u>value/qual</u>	<u>sample #</u>	<u>constituent</u>	<u>value/qual</u>
/					

RCRA LEVEL C QC

Name C.J. Simiele

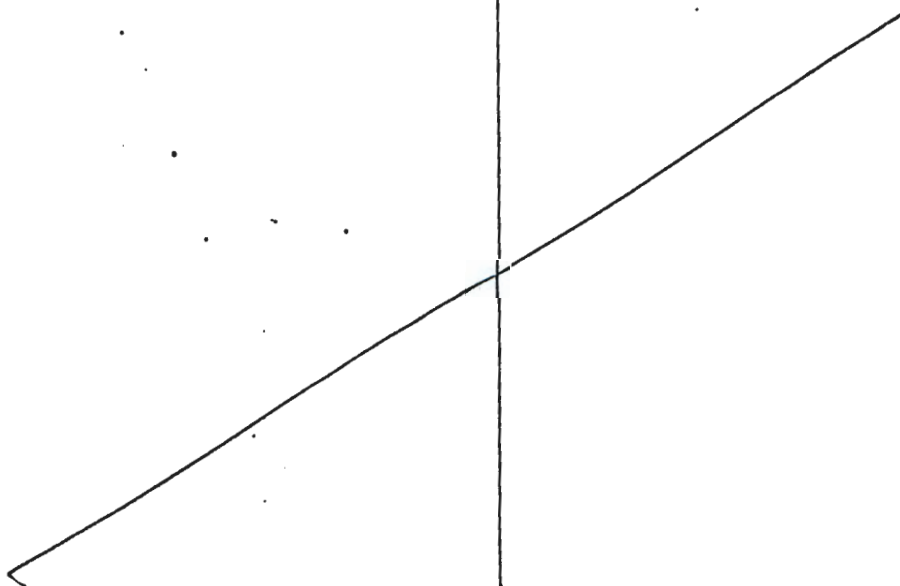
Date 12-16-90

QC Check: ICS

COMMENTS: No ICS data provided with data package.

ACTION: None

<u>sample #</u>	<u>constituent</u>	<u>value/qual</u>	<u>sample #</u>	<u>constituent</u>	<u>value/qual</u>
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Name C.J. Simiele

Date 12-16-90

QC check: Matrix Spike

COMMENTS: No matrix spike analyses results provided with data package for ICP analyses.

ACTION: Qualify associated sample as per DSM guidelines

<u>sample #</u>	<u>constituent</u>	<u>value/qual</u>	<u>sample #</u>	<u>constituent</u>	<u>value/qual</u>
F0432	All elements reported for ICP	R			

Name C.J. Simiele

Date 12-11-90

QC check: Duplicate Analyses

COMMENTS: ICP duplicate analyses RPD out of $\pm 20\%$ control limits for: Sb (399%), Fe (59%), Zn (108%).

ACTION: Qualify associated sample as per OSM guidelines.

<u>sample #</u>	<u>constituent</u>	<u>value/qual</u>
F0432	Sb	UJ
L	Fe	JJ
	Zn	JJ

<u>sample #</u>	<u>constituent</u>	<u>value/qual</u>
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(A large diagonal line is drawn across the left table area, likely indicating that the data is to be qualified or rejected.)

(A large diagonal line is drawn across the right table area, likely indicating that the data is to be qualified or rejected.)



OSH RCRA LEVEL C DATA ASSESSMENT

DATE 12-18-90 SAMPLES/MATRIX _____
 (Compare J. Samples)
 REVIEWED BY C.J. Simiele _____
 LABORATORY WHC-222S _____
 CASE # SST-241-U-110 _____
 SDG # 89-069 _____
 Core 12 Seq #1

DATA ASSESSMENT SUMMARY

QUALITY CONTROL CHECK	ANALYSIS			
1.				
2.				
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 ASSESSMENT: Segment sample was empty.

NOTES: _____

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